APPENDIX A. LOWER PASSAIC RIVER STUDY AREA: REVISED SCREENING LEVEL ECOLOGICAL RISK ASSESSMENT

620401

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Acronyms

AET	apparent effects threshold
ARCS	Assessment and Remediation of Contaminated Sediments
AWQC	ambient water quality criteria
BCF	bioconcentration factor
BEHP	bis(2-ethylhexyl) phthalate
BERA	baseline ecological risk assessment
BHC	benzene hexachloride
BMF	biomagnification factor
bw	body weight
CCME	Canadian Council of Ministers of the Environment
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CF	conversion factor
COI	chemical of interest
COPEC	chemical of potential ecological concern
CPG	Cooperating Parties Group
CSL	cleanup screening level
CSM	conceptual site model
CWCM	chemical water column monitoring
DDD	dichlorodiphenyldichloroethane
DDE	dichlorodiphenyldichloroethylene
DDT	dichlorodiphenyltrichloroethane
DL	detection limit
DQO	data quality objective
dw	dry weight
Eco-SSL	ecological soil screening level
ED50	dose that corresponds to a 50% increase in an adverse effect of an exposed population
EqP	equilibrium partitioning

ERA	ecological risk assessment
ERED	Environmental Residue Effects Database
ERL	effects range–low
ERM	effects range–median
ESL	ecological screening level
FFS	focused feasibility study
FIR	food ingestion rate
FRV	final residue value
FSP	field sampling plan
HHRA	human health risk assessment
HPAH	high-molecular-weight polycyclic aromatic hydrocarbon
HQ	hazard quotient
ISQG	interim sediment quality guideline
LEL	lowest effects level
LOAEL	lowest-observed-adverse-effect level
LOE	line of evidence
LPAH	low-molecular-weight polycyclic aromatic hydrocarbon
LPRSA	Lower Passaic River Study Area
LRC	low-resolution coring
MLLW	mean lower low water
MTBE	methyl tert-butyl ether
NEL	no-effects level
NGVD29	National Geodetic Vertical Datum of 1929
NJDEP	New Jersey Department of Environmental Protection
NOAA	National Oceanic and Atmospheric Administration
NOAEL	no-observed-adverse-effect level
NRC	National Research Council
NY/NJ	New York/New Jersey
OC	organic carbon
ORNL	Oak Ridge National Laboratory

PAH	polycyclic aromatic hydrocarbon
PAR	pathways analysis report
PCB	polychlorinated biphenyl
PCDD	polychlorinated dibenzodioxins
PCDF	polychlorinated dibenzofurans
PFD	problem formulation document
ppm	parts per million
QAPP	quality assurance project plan
RCRA	Resource Conservation and Recovery Act
RI/FS	remedial investigation/feasibility study
RL	reporting limit
RM	river mile
SCO	sediment cleanup objective
SEL	severe effects level
SGV	sediment guidance value
SIR	sediment ingestion rate
SLERA	screening-level ecological risk assessment
SMDP	scientific/management decision point
SMS	Washington State Sediment Management Standards
SQuiRT	Screening Quick Reference Table
SUF	site use factor
SVOC	semivolatile organic compound
T20	20% probability of observing toxicity
T50	50% probability of observing toxicity
TBT	tributyltin
TCDD	tetrachlorodibenzo-*p*-dioxin
TEF	toxic equivalency factor
TEL	threshold effect level
TEQ	toxic equivalent
TOC	total organic carbon

total DDx	sum of all six DDT isomers (2,4′-DDD, 4,4′-DDD, 2,4′-DDE, 4,4′-DDE, 2,4′-DDT and 4,4′-DDT)
TPH	total petroleum hydrocarbons
TSV	toxicity screening value
UCL	upper confidence limit (on the mean)
USACE	US Army Corps of Engineers
USEPA	US Environmental Protection Agency
VOC	volatile organic compound
WHO	World Health Organization
WIR	water ingestion rate
WQG	water quality guideline
ww	wet weight

1 Introduction

This screening-level ecological risk assessment (SLERA) was conducted as part of the Lower Passaic River Study Area (LPRSA) remedial investigation/feasibility study (RI/FS).

This SLERA for the entire 17.4 mi of the LPRSA was conducted and prepared in accordance with Section IX.37.d of the May 2007 Settlement Agreement (USEPA 2007a). This SLERA is consistent with US Environmental Protection Agency (USEPA) responses, comments, and directives received from USEPA on June 30, 2017 (USEPA 2017b), September 18, 2017 (USEPA 2017d), July 10, 2018 (USEPA 2018), January 2, 2019 (CDM 2019), and March 5, 2019 (USEPA 2019); during face-to-face meetings or conference calls on July 24, September 27, October 3, and November 6, 2017, and July 24 and August 16, 2018; and via additional deliverables and communications between the Cooperating Parties Group (CPG) and USEPA from August through December 2017, from July through September 2018, and from January through June 2019.

This document is organized as follows:

- Section 1 presents the objectives of the SLERA, the problem formulation, and the general process used to conduct the SLERA.
- Section 2 presents a summary of the data used in the SLERA.
- Section 3 presents the screening methods used in the SLERA used to identify chemicals of interest (COIs) and COPECs. Exposure assumptions and toxicity screening values (TSVs) are also presented in this section.
- Section 4 presents the screening results for each receptor group by exposure media, including COPECs identified.
- Section 5 presents a summary of the uncertainty associated with the SLERA results.
- Section 6 summarizes the SLERA results and COPECs for further consideration.

These sections are supported by the following attachments:

- Attachment A1. Data Summary Statistics, which includes data summaries and definitions of all the datasets used in the SLERA
- Attachment A2. COPEC Screening Tables, which includes a comparison of SLERA maximum exposure concentrations, TSVs, and hazard quotients (HQs) for all SLERA calculations conducted
- Attachment A3. General Literature TSV Database and References, which provides the details, derivation, and references of all tissue and dietary TSVs reviewed from the primary literature
- Attachment A4. SLERA Uncertainty Calculation Tables, which includes all of the calculations conducted as part of the uncertainty evaluation (as presented in Section 5)
- Attachment A5. Comparison of LPRSA Sediment Concentrations to FFS Sediment Screening Values, which was included at the request of USEPA on June 16, 2016

1.1 Objectives of the SLERA

Conservative assumptions were used in this SLERA to provide a quantitative comparison between conservative exposure and effects levels in order to 1) identify substances that can be eliminated from further consideration because they are unlikely to pose risk to ecological receptors, 2) identify COPECs that warrant further consideration in the BERA, and 3) identify chemicals that will be addressed in the BERA uncertainty section. This SLERA provides information that will allow risk assessors and risk managers to decide the level of evaluation necessary for the next step in the ERA process, referred to as a scientific/management decision point (SMDP).

Per USEPA (1997a), the primary objective of the SLERA was to provide information to the risk manager to confirm one of three scenarios: 1) there is adequate information to conclude that ecological risks are negligible and therefore, there is no need for remediation on the basis of ecological risk; 2) the information is not adequate to make a decision at this point, and the ERA process will continue; or 3) the information indicates the potential for adverse ecological effects, and a more thorough assessment is warranted.

1.2 Summary of Problem Formulation

As described in USEPA guidance (1997a, 1998), a problem formulation provides the roadmap for conducting the assessment and provides a basis for dialogue with stakeholders. The PFD was developed by CPG and approved by USEPA in 2009 (Windward and AECOM 2009). The problem formulation presents the ecological

conceptual site model (CSM) for the LPRSA, including potential exposure pathways, exposure media, and receptors. In the problem formulation, species are selected for evaluation of each particular feeding guild. Assessment endpoints (i.e., the attribute[s] to be protected) and measurement endpoints are selected and evaluated for each receptor group/feeding guild. The assessment endpoints, selected ecological receptor groups, ecological CSM, and lines of evidence (LOEs) are summarized in the following subsections.

1.2.1 Ecological receptors and lines of evidence

Table 1-1 presents the receptor groups and receptor species, categorized by feeding guild, that were evaluated in the SLERA, along with the type of data evaluated. These make up the LOEs evaluated in this SLERA. LOEs refer to the types of analyses used to evaluate each assessment endpoint. For some ecological receptors and exposure pathways that were representative of a select assessment endpoint, multiple LOEs were used. For the SLERA, only LOEs that use chemistry data were evaluated in the identification of COPECs. Other LOEs that incorporate non-chemistry data, including site-specific benthic toxicity data, site-specific community data, and other non-chemical stressors, would be evaluated as part of a future risk assessment.

Table 1-1. Summary of assessment endpoints, ecological receptor groups, species, and data types used for COPEC identification

Assessment Endpoint	Ecological Receptor Group	Feeding Guild	Species	Type of Data				
				Whole-body Tissue Chemistry	Dietary Dose[b]	Surface Water Chemistry	Sediment Chemistry	Egg Tissue Chemistry
Protection and maintenance (i.e., survival, growth, and reproduction) of the benthic invertebrate community, both as an environmental resource in itself and as one that serves as a forage base for fish and wildlife populations	benthic invertebrate community	na	multiple infaunal species, including *Hyalella azteca*, *Chironomus dilutus*, *Ampelisca abdita,* polychaetes (i.e., *Nereis virens*), and oligochaetes (i.e., *Lumbriculus variegatus*)	X[a]		X	X	
Protection and maintenance (i.e., survival, growth, and reproduction) of healthy populations of blue crab and crayfish that serve as a forage base for fish and wildlife populations and as a base for sports fisheries	macroinvertebrate populations	na	blue crab[c]	X		X	X	
Protection and maintenance (i.e., survival, growth, and reproduction) of healthy mollusk populations	bivalve mollusk populations	na	estuarine (ribbed) mussel (*Geukensia demissa*) and freshwater mussel (*Elliptio complanata*)	X		X	X	

Table 1-1. Summary of assessment endpoints, ecological receptor groups, species, and data types used for COPEC identification

Assessment Endpoint	Ecological Receptor Group	Feeding Guild	Species	Type of Data				
				Whole-body Tissue Chemistry	Dietary Dose[b]	Surface Water Chemistry	Sediment Chemistry	Egg Tissue Chemistry
Protection and maintenance (i.e., survival, growth, and reproduction) of omnivorous, invertivorous, and piscivorous fish populations that serve as a forage base for fish and wildlife populations and of fish populations that serve as a base for sports fishery	fish populations	benthic omnivorous	mummichog, other small forage fish (i.e., gizzard shad, mixed forage fish, pumpkinseed, silver shiner, and spottail shiner), and carp	X	X	X	X[b]	X
		invertivorous	white perch, channel catfish, brown bullhead, white catfish, and white sucker	X	X	X	X[b]	
		piscivorous	American eel, largemouth bass, smallmouth bass, and northern pike	X	X	X	X[b]	
Protection and maintenance (i.e., survival, growth, and reproduction) of herbivorous, omnivorous, sediment-probing, and piscivorous bird populations	bird populations	sediment-probing invertivorous	spotted sandpiper		X		X[b]	
		piscivorous	great blue heron, belted kingfisher		X		X[b]	X
Protection and maintenance (i.e., survival, growth, and reproduction) of aquatic mammal populations	mammal populations	piscivorous	river otter[d]		X		X[b]	
		omnivorous	mink[d]		X		X[b]	
Maintenance of zooplankton communities that serve as a food base for juvenile fish	zooplankton community	na	multiple species			X		

Table 1-1. Summary of assessment endpoints, ecological receptor groups, species, and data types used for COPEC identification

Assessment Endpoint	Ecological Receptor Group	Feeding Guild	Species	Type of Data				
				Whole-body Tissue Chemistry	Dietary Dose[b]	Surface Water Chemistry	Sediment Chemistry	Egg Tissue Chemistry
Protection and maintenance (i.e., survival, growth, and reproduction) of healthy amphibian and reptile populations	amphibian and reptile populations	na	multiple species[e]		X[f]	X	X[f]	
Maintenance of healthy aquatic plant populations as a food resource and habitat for fish and wildlife populations	aquatic plant community	na	multiple species, including submerged macrophytes[g]			X[h]		

[a] Laboratory-exposed freshwater and estuarine infaunal invertebrates (i.e., *Nereis virens* and *Lumbriculus variegatus*) are termed estuarine and freshwater worms, respectively.

[b] Dietary LOEs include whole-body tissue chemistry data (for prey ingestion) and sediment chemistry data (for incidental sediment ingestion); bird and mammal dietary LOEs also include surface water chemistry data (for drinking water ingestion).

[c] Crayfish were identified in the PFD as representing freshwater macroinvertebrate populations. However, per agreement between CPG and USEPA (Windward 2010b), blue crab will be the only species used to represent the macroinvertebrate population, for both the estuarine and freshwater portions of the LPRSA, because of the limited number of crayfish collected in the freshwater portion.

[d] The selected semi-piscivorous mammal (i.e., river otter) is expected to be protective of herbivorous mammals (e.g., muskrat) because piscivorous mammals feed on organisms that are higher on the food chain. Mink will also be assessed because possible mink tracks were observed near Dundee Dam during the CPG LPRSA FSP2 biological surveys.

[e] Amphibians and reptiles have a limited presence in the estuarine portion of the LPRSA.

[f] A quantitative screening of dietary doses and/or surface sediment concentrations was not conducted for amphibians and reptiles because TSVs were not available for diet and sediment for amphibians and reptiles. The potential risks to amphibians and reptiles from dietary and direct sediment contact exposure are unknown.

[g] The aquatic plant community in the LPRSA is limited by the physical development of the shoreline and poor light penetration of the water.

[h] Limited sediment toxicity data are available for the development of effects thresholds for sediment and aquatic plants; aquatic plant screening-level effects thresholds for sediment are based on soil-based thresholds.

COPEC – chemical of potential ecological concern
CPG – Cooperating Parties Group
FSP – field sampling plan
LOE – line of evidence
LPRSA – Lower Passaic River Study Area
na – not applicable
PFD – problem formulation document
TSV – toxicity screening value
USEPA – US Environmental Protection Agency

1.2.2 Assessment endpoints

The SLERA is based on a community- or population-level assessment. However, because it is difficult to assess population-level impacts for some receptors (e.g., population studies of birds), population-level impacts will be inferred based on the measures presented in the PFD, and interpretation of the ecological significance of any potential effects.

1.2.3 Ecological conceptual site model

An ecological CSM is used to describe the pathways by which contaminants move from sources, including those resulting from human activities, to ecological receptors at a site. The USEPA-approved ecological CSM (Windward and AECOM 2009) for the LPRSA is based on site-specific information about species typically present at the site or similar urbanized river systems and potential exposure pathways. This SLERA reflects an updated CSM based on the current understanding (using data collected to date) of the connection among the pathways, exposure areas, and the overall ecological system in the LPRSA.

Figure 1-1 presents the general ecological CSM for the LPRSA, which contains exposure pathways inclusive of both estuarine and freshwater organisms. In accordance with USEPA (1997a), complete exposure pathways shown in Figure 1-1 are included in the SLERA; incomplete exposure pathways are not addressed the SLERA process.

The LPRSA includes three salinity zones that are driven by daily and seasonal hydrodynamics. These zones—which are based partly on measured salinity and flow conditions present during the collection of fish tissue and sediment (for benthic community, sediment chemistry, and sediment toxicity analyses) in fall 2009—are the upper estuarine zone (river mile [RM] 0 to RM 4), fluvial estuarine zone (RM 4 to RM 13), and tidal freshwater zone (RM 13 to RM 17.4) (Figure 1-2). The boundaries of these general salinity zones are qualitative because the location of the salt wedge is influenced by freshwater input and tidal flows, as well as the system geometry. Daily and seasonal variations in salinity in the upper estuarine and fluvial estuarine zones of the LPRSA have a significant influence over the benthic invertebrate community.

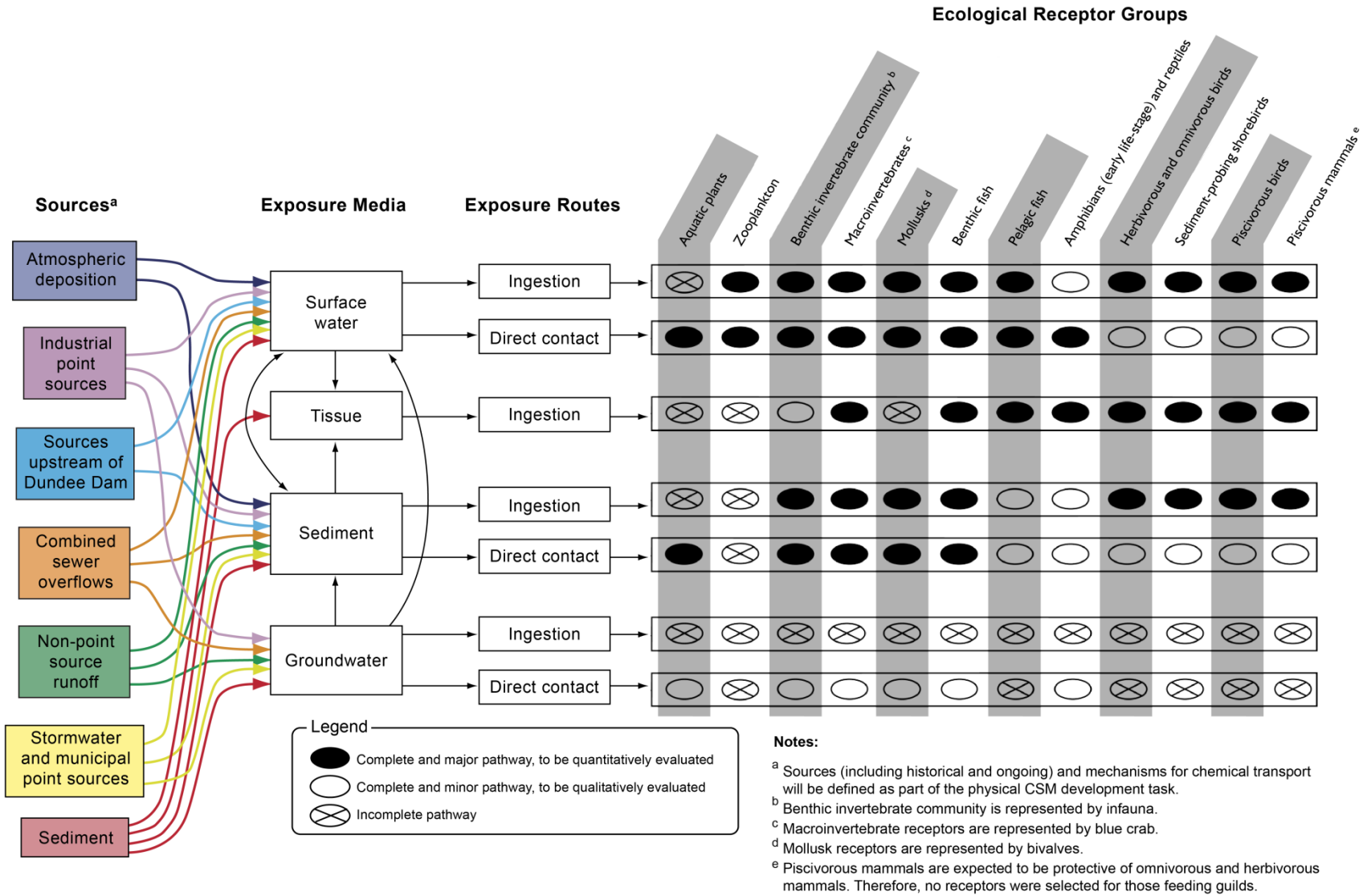


Figure 1-1.General ecological CSM for the LPRSA

Mudflat areas for ecological receptors are those areas where the river bottom slope is ≤ 6° and the depth is ≥ -2 ft MLLW, based on the 2007 CPG bathymetric survey.

Figure 1-2. Benthic salinity zones for the LPRSA
Appendix A. Lower Passaic River Study Area
Baseline Ecological Risk Assessment

FINAL

Prepared by mikey 5/31/2019; W:\Projects\06-58-01 Passaic RI\Data\GIS\Maps_and_Analysis\BERA\Revised BERA 2016\5880_Benthic community salinity in the LPRSA_LSM_20160624.mxd

1.3 General SLERA Screening Assumptions

COPECs for each LOE were defined as chemicals measured in the appropriate exposure media at a concentration greater than or equal to a TSV. The SLERA was designed to ensure that potential ecological risks were not overlooked in the identification of COPECs; therefore, it is a highly conservative assessment. The SLERA parameters were based on the following assumptions:

- Receptors are exposed to the maximum detected concentration or calculated dose from the LPRSA media to which they are exposed.
- Receptors are exposed 100% of the time.
- Receptors obtain 100% of their diet from their exposure area.
- Chemicals are 100% bioavailable to receptors.

Within a specific media, if the maximum concentration (or calculated dose) of a COI was greater than or equal to its respective TSV, it was retained as a COPEC.

2 Data Evaluation

This section presents a summary of data available from the LPRSA and discusses their use in the SLERA.

2.1 Data Availability and Selection

The *Data Usability and Data Evaluation Plan for the Lower Passaic River Study Area Risk Assessment* (Windward and AECOM 2015), hereafter referred to as the Data Usability Plan, describes how the risk assessment dataset was defined, including the rules used to reduce data, calculate sums, and conduct data analyses, as well as the data validation requirements.

Data included in the SLERA were consistent with the Data Usability Plan, and consisted of all current CPG data collected to date that are relevant to ecological exposure, including:

- Surface sediment chemistry from 2008 low-resolution coring (LRC) sampling, 2009 surface sediment sampling, 2010 surface sediment sampling (co-located with tissue samples), 2011/2012 RM 10.9 sediment characterization sampling, 2012 LRC supplemental sampling, 2012 RM 10.9 sediment investigation, and 2013 LRC supplemental sampling
- Surface water chemistry from the chemical water column monitoring (CWCM) samples collected from August 2011 to December 2012 during routine (i.e., neither high- nor low-flow) sampling events, CWCM samples collected in August 2012 during low-flow conditions, and CWCM samples collected in February/March 2013 and June 2013 during high-flow conditions
- Whole-body[1] biota tissue chemistry for blue crab and fish collected from the LPRSA in 2009 and 2010
- Whole-body tissue chemistry for infaunal invertebrates (i.e., freshwater and estuarine worms) from the LPRSA bioaccumulation study
- Whole-body mussel tissue chemistry (i.e., measured concentrations in field-exposed mussels) from the LPRSA caged bivalve study[2]

[1] Whole-body concentrations are represented by measured whole-body concentrations, or by reconstituted whole-body concentrations using fillet and carcass sample concentrations and relative weights.

[2] Mussel tissue data from Day 0 of the caged bivalve study were excluded.

The following data were excluded from the SLERA:

- Surface sediment (0 to 6 in. [0 to 15 cm]) data collected from all dredge locations (including the RM 10.9 and Lister Avenue dredge areas) [3]
- Subsurface sediment data (i.e., sediments below the sediment depth associated with ecological exposure [below 6 in. (15 cm)]) [4]

A summary of the datasets used for each LOE and receptor group in the SLERA is presented in Table 2-1, and the following subsections provide more detail on data used in the SLERA by media type (i.e., sediment, surface water, and tissue).

[3] These areas were excluded because sediment has been dredged; therefore, samples do not represent current conditions, as required by location-level data quality objective (DQO) No. 1 presented in Table 4-1 of the main document.

[4] These data were excluded because only sediment data collected from the depth interval of 0 to 15 cm (0 to 6 in.) below the sediment surface were considered acceptable for inclusion in both risk assessments (Windward and AECOM 2015), as required by sample-level DQO No. 1 presented in Table 4-1 of the main document.

Table 2-1. Summary of SLERA datasets for LPRSA receptor groups

Receptor Group	Media	SLERA Dataset Used		
		Surface sediment	Surface Water	Tissue
Benthic invertebrates	surface sediment	**yes**; RM 0 to RM 13 for comparison to estuarine criteria; RM 4 to RM 17.4 for comparison to freshwater criteria	no	no
	surface water	no	**yes**; < RM 13 for comparison to estuarine criteria; ≥ RM 4 for comparison to freshwater criteria	
	tissue	no	no	**yes**; site-wide
Fish	surface water	no	**yes**; < RM 13 for comparison to estuarine criteria; ≥ RM 4 for comparison to freshwater	no
	tissue	no	no	**yes**; site-wide
	diet	**yes**; site-wide	no	**yes**; site-wide, species-specific prey tissue only[a]
Birds	diet	**yes**; site-wide (belted kingfisher); site-wide mudflats (spotted sandpiper and great blue heron)[b]	**yes**; ≥ RM 4 only (potential freshwater for drinking)	**yes**; site-wide, species-specific prey tissue only[a]
Mammals	diet	**yes**; site-wide	**yes**; ≥ RM 4 only (potential freshwater for drinking)	**yes**; site-wide, species-specific prey tissue only[a]
Aquatic plants	surface sediment	**yes**; site-wide	no	no
	surface water	no	**yes**; < RM 13 for comparison to estuarine criteria; ≥ RM 4 for comparison to freshwater	no
Zooplankton	surface water	no	**yes**; < RM 13 for comparison to estuarine criteria; ≥ RM 4 for comparison to freshwater	no
Amphibians/ Reptiles	surface water	no	**yes**; ≥ RM 4 for comparison to freshwater criteria[c]	no

[a] Wildlife- and fish species-specific prey tissue data are discussed in Section 3.2.2.2 and presented in Table 3-3.

[b] Mudflats are defined as areas within -2 ft MLLW and < 6º slope and include all grain sizes.

[c] The evaluation of exposure to amphibians/reptiles in the LPRSA is limited to the freshwater portion. Several species of sea turtles could be found in the NY/NJ Harbor estuary, which is near the LPRSA. While it is unlikely that sea turtles would spend significant time in the LPRSA, they may be infrequent visitors, although the LPRSA would not provide adequate habitat or conditions to support this ecological group.

LPRSA – Lower Passaic River Study Area
NY/NJ – New York/New Jersey
RM – river mile
MLLW – mean lower low water
SLERA – screening-level risk assessment

2.1.1 Sediment data

Surface (0 to 15 cm) sediment data are described in the sediment data reports (Windward 2015; AECOM 2014), and summary statistics are included in Attachment A1. Table 2-2 summarizes the sediment groups evaluated in the SLERA. Surface sediment chemistry data used in the SLERA were from multiple sampling events, including the 2008 LRC sampling, 2009 surface sediment sampling, 2010 surface sediment sampling (co-located with tissue samples), 2011/2012 RM 10.9 sediment characterization sampling, 2012 LRC supplemental sampling, 2012 RM 10.9 sediment investigation, and 2013 LRC supplemental sampling

Table 2-2. Summary of sediment sample groups used in the SLERA

Sample Group	Description	Sample Location Counts by Type of Screen	
		Sediment	Diet
Site-wide sediment	samples from the entire study area	na	430
Freshwater sediment (≥ RM 4)	samples from the study area at or above RM 4	335	na
Estuarine/marine sediment (< RM 13)	samples from the study area below RM 13	381	na
Mudflat sediment	samples from mudflat locations[a] throughout the entire study area	na	137

[a] Mudflat locations are in areas where the river bottom slope is ≤ 6° and the depth is ≥ -2 ft MLLW.

RM – river mile

SLERA – screening-level ecological risk assessment

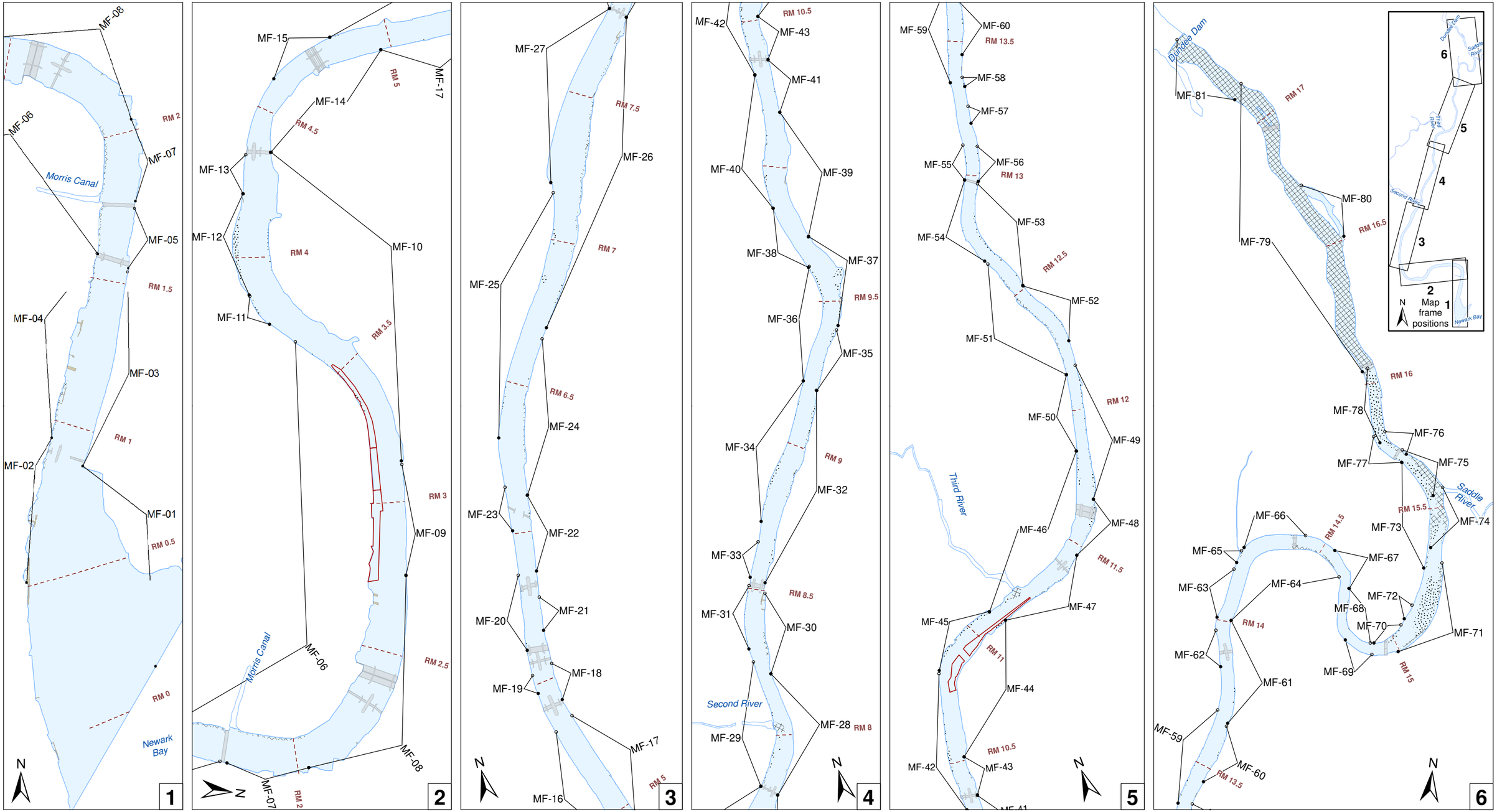
As described in Section 1.2.2, the salinity zones used in the SLERA are based on the zones established for the LPRSA benthic invertebrate community: estuarine (RM 0 to RM 4), fluvial estuarine (RM 4 to RM 13), and freshwater (RM 13 to RM 17.4). For the purposes of screening sediment COPECs, the following freshwater and estuarine areas comparisons were made:

- Sediment concentrations in samples collected above RM 4 were compared to freshwater TSVs.
- Sediment concentrations in samples collected below RM 13 were compared to estuarine/marine TSVs.

Thus, sediment concentrations between RM 4 and RM 13 (i.e, the fluvial estuarine zone) were compared to both freshwater and estuarine/marine TSVs for sediment.

One of the two groups of benthic invertebrate freshwater screening thresholds for 30 COIs are based on organic carbon (OC)-normalized values, which required OC-normalization of the surface sediment concentrations for the benthic invertebrate sediment screen. Surface sediment data were normalized using sample-specific percent total organic carbon (TOC). Maximum OC-normalized concentrations used for screening these COIs and screening thresholds are presented in Attachment A2.

Mudflat areas (used as the exposure area for incidental sediment ingestion for spotted sandpiper and great blue heron) were defined as those areas in the LPRSA (RM 0 to RM 17.4) where the slope is ≤ 6° and the river depth is ≥ -4.5 ft National Geodetic Vertical Datum of 1929 (NGVD29) (i.e., -2 ft mean lower low water [MLLW]), including any grain size (Figure 2-1).



0 0.25 0.5 0.75 Kilometers

0 0.25 0.5 Miles

Mudflat areas for ecological receptors are those areas where the river bottom slope is ≤ 6° and the depth is ≥ -2 ft MLLW, based on the 2007 CPG bathymetric survey. Grain size is based on the 2005 Geophysical Survey. Kearney Point and areas above RM 16.1 were not surveyed; grain size for these areas is based on field experience.
[a]Grain size values shown as a surface weighted average (SWA) of fractions of the total mudflat area.

Grain size SWA[a]
- Rock and coarse gravel
- Gravel and sand
- Sand
- Sand and silt
- Silt
- Unknown

Mudflat area with coarse sediment
- Rock and coarse gravel
- Gravel and sand

Mudflat extent
- ◦ Mudflat upper end
- • Mudflat lower end

- Dredge zone
- River mile
- Bridge
- Abutment
- Dock
- LPRSA

Figure 2-1. LPSRA mudflats

Appendix A. Lower Passaic River Study Area Baseline Ecological Risk Assessment

FINAL

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2.1.2 Surface water data

Surface water data collection methods are described in the water column monitoring data report (AECOM 2012), and summary statistics for samples collected to date are included in Attachment A1. Table 2-3 summarizes the surface water groups evaluated in the SLERA. Surface water data used in the SLERA were from CWCM samples collected from August 2011 to December 2012 during routine (i.e. neither high- nor low-flow) sampling events, CWCM samples collected in August 2012 during low-flow conditions, and CWCM samples collected in February, March, and June 2013 during high-flow conditions. Consistent with surface water quality assurance project plans (QAPPs), there were no surface water samples collected above RM 10.2 (other than background samples above Dundee Dam).

Table 2-3. Summary of surface water groups used in the SLERA

Sample Group	Description	Sample Counts by Type of Screen	
		Surface Water	Diet
Freshwater (≥ RM 4)	all study area samples at or above RM 4; includes near-surface (3 ft [0.9 m] below the surface) and near-bottom (3 ft [0.9 m] above the bottom) samples	165	165
Estuarine/marine surface water (< RM 13)[a]	all study area samples below RM 13; includes near-surface (3 ft [0.9 m] below the surface) and near-bottom (3 ft [0.9 m] above the bottom) samples	320	na

RM – river mile

SLERA – screening-level ecological risk assessment

a. Samples were not collected between RM 10.2 and RM 13. This sample group was defined using the salinity zones established for the BERA, which define RM 13 as the lower limit of the tidal freshwater salinity zone.

For the purposes of screening surface water COPECs, the salinity zones used for surface water in the SLERA are based on the zones established for the LPRSA BERA: upper estuarine (RM 0 to RM 4), fluvial estuarine (RM 4 to RM 13), and tidal freshwater (RM 13 to RM 17.4). As noted above, no samples were collected in the tidal freshwater zone.

Surface water data were evaluated as follows:

- Surface water concentrations in samples collected above RM 4 (no data available upstream of RM 10.2) were compared to freshwater TSVs.
- Surface water concentrations in samples collected below RM 13 (no data available upstream of RM 10.2) were compared to estuarine/marine TSVs.

Thus, surface water chemical concentration data for between RM 4 and RM 13 (i.e., the fluvial estuarine zone) were compared to both freshwater and estuarine/marine surface water TSVs.

2.1.3 Tissue data

Tissue data are described in various data reports (Windward 2018a, b, c, 2019), and summary statistics are included in Attachment A1.

Only whole-body and calculated whole-body tissue data were used in the SLERA. Calculated whole-body chemical concentrations in fish and crab tissue were derived from tissue components (i.e., fillet and carcass for fish; muscle, hepatopancreas, and carcass for crab), as described in Section 2.1.3.1, following the methodology described in the Data Usability Plan (Windward and AECOM 2015).

Table 2-4 summarizes the fish and invertebrate tissue samples obtained from the LPRSA that were used in the tissue and dietary dose LOE evaluations. The tissue data evaluated in the SLERA were limited to those species caught during sampling events.

Table 2-4. Summary of fish and invertebrate tissue used in SLERA

Species	No. Specimens Analyzed[a]	Tissue Sample Type[b]	Composite or Individual Sample	Number of Samples Analyzed
Invertebrates				
Worm (estuarine)	na[c]	whole body	composite	**5**
Worm (freshwater)	na[c]	whole body	composite	**14**
Blue crab[d]	214	whole body (calculated)	composite	**24**
Ribbed mussel (estuarine)	115	soft tissue	composite	**3**
Eastern elliptio mussel (freshwater)	278	soft tissue	composite	**5**
Benthic Omnivorous Fish				
Mummichog	1,416	whole body	composite	**18**
Gizzard shad	115	whole body	composite	**3**
Pumpkinseed	3	whole body	composite	**1**
Silver shiner	62	whole body	composite	**1**
Spottail shiner	136	whole body	composite	**1**
Mixed forage species[g]	187	whole body	composite	**4**
Carp	12	whole body	individual	**12**
Invertivorous Fish				
White perch[f]	318	whole body	composite	**17**
			individual	**4**
	1	whole body (calculated)	individual	**1**
Brown bullhead	6	whole body	individual	**6**

Species	No. Specimens Analyzed[a]	Tissue Sample Type[b]	Composite or Individual Sample	Number of Samples Analyzed
Channel catfish	11	whole body (calculated)	individual	**11**
White catfish	19	whole body (calculated)	individual	**19**
White sucker	5	whole body (calculated)	individual	**5**
Piscivorous Fish				
American eel[g]	39	whole body	composite	**7**
			individual	**12**
	3	whole body (calculated)	composite	**1**
	1		individual	**1**
Largemouth bass	2	whole body (calculated)	individual	**1**
	2		composite	**2**
Smallmouth bass	7	whole body (calculated)	composite	**3**
Northern pike	1	whole body (calculated)	individual	**1**

a Represents the total number of specimens included in the composite samples that were chemically analyzed.

b Whole-body reconstituted sample concentrations were calculated from the individually analyzed tissue components (i.e., fillet and carcass for fish; muscle, hepatopancreas, and carcass for crab) (Windward and AECOM 2015).

c Individual worm specimens were not counted, as sample compositing was based on a minimum tissue mass per sample for chemical analyses.

d In addition to the 214 blue crab specimens analyzed for use in the SLERA, 17 blue crab samples were analyzed for muscle and hepatopancreas, but were not used to calculate whole-body concentrations because carcass samples from these crabs were not analyzed. These 17 samples will be evaluated in the HHRA, along with 7 hepatopancreas-only and 21 muscle-only blue crab samples (not summarized in Table 2-4).

f Fish in the mixed forage fish group included small specimens from the following species: gizzard shad, tessellated darter, striped mullet, smallmouth bass, Atlantic silverside, spottail shiner, striped bass, white perch, inland silverside, and bluegill.

f In addition to the 319 specimens analyzed for use in the SLERA, 18 additional white perch samples (not summarized in Table 2-4) were analyzed as fillets for use in the HHRA only. Composite whole-body white perch samples prepared from fish collected during the small forage fish sampling effort are included in the white perch dataset (not other forage fish dataset).

g In addition to the 43 specimens analyzed for use in the SLERA, 30 American eel samples (not summarized in Table 2-4) were analyzed as fillets for use in the HHRA only.

HHRA – human health risk assessment SLERA – screening-level ecological risk assessment

na – not applicable

Tissue samples were prepared from specimens collected primarily during two sampling efforts: 1) late summer and early fall sampling in 2009, and 2) summer sampling in 2010, which focused on the collection of benthic omnivores (i.e., mummichog and other small forage fish). The tissue chemistry dataset evaluated also included estuarine worm (*Nereis virens)* and freshwater worm (*Lumbriculus*

variegatus) tissue data from 28-day laboratory bioaccumulation studies conducted using sediment collected from throughout the LPRSA in 2010, and Eastern elliptio mussel and ribbed mussel tissue data from an *in situ* caged bivalve study conducted in 2011.

2.1.3.1 Calculation of whole-body tissue concentrations

Results for crab and fish tissues that were analyzed as individual tissue types (i.e., fish fillet, fish carcass, crab muscle and hepatopancreas, and crab carcass) were used to calculate whole-body fish and crab concentrations based on the fraction of the whole-body mass represented by each tissue type (Table 2-4).

Whole-body fish tissue concentrations were calculated using the following equation:

$$\mathbf{C_{WB} = (C_{fillet} \times f_{fillet}) + (C_{carcass} \times f_{carcass})} \qquad \textbf{Equation 2-1}$$

Where:

C_{WB}	=	estimated whole-body tissue concentration (mg/kg ww)
C_{fillet}	=	fillet tissue concentration (mg/kg ww)
f_{fillet}	=	fraction of whole-body weight that is fillet
$C_{carcass}$	=	carcass tissue concentration (mg/kg ww)
$f_{carcass}$	=	fraction of whole-body weight that is carcass (non-fillet)

Whole-body (i.e., edible meat plus hepatopancreas and carcass) crab tissue concentrations were calculated using the following equation:

$$\mathbf{C_{WB} = (C_{muscle+HP} \times f_{muscle+HP}) + (C_{carcass} \times f_{carcass})} \qquad \textbf{Equation 2-2}$$

Where:

C_{WB}	=	estimated whole-body soft-tissue concentration (mg/kg ww)
$C_{muscle+HP}$	=	muscle (edible meat) and hepatopancreas tissue concentration (mg/kg ww)
$f_{muscle+HP}$	=	fraction of whole-body weight that is muscle (edible meat) and hepatopancreas
$C_{carcass}$	=	carcass tissue concentration (mg/kg ww)
$f_{carcass}$	=	fraction of whole-body weight that is carcass (non-muscle, non-hepatopancreas tissue)

For calculated whole-body fish or crab concentrations that included a non-detected value for at least one tissue type, the non-detected value(s) was represented in the calculation by one-half the reporting limit (RL). In cases where both tissue types were non-detected values, the final calculated whole-body result was flagged as a non-detected result (U-qualified). The uncertainties associated with the treatment of

non-detected concentrations in calculating whole-body tissue concentrations are presented in the uncertainty analyses of the BERA, as appropriate.

2.2 DATA REDUCTION

Data reduction refers to computational methods used to aggregate data for use in the SLERA. Procedures related to the averaging of replicate samples, selection of best results, selection of significant figures and rounding procedures, calculation of totals for chemical groupings (e.g., total polychlorinated biphenyl [PCB] congeners, polychlorinated dibenzodioxins/polychlorinated dibenzofurans [PCDD/PCDF] toxic equivalent [TEQ], PCB TEQ), and derivation of screening-level values for congeners based on toxic equivalency factors (TEFs) are described in the Data Usability Plan (Windward and AECOM 2015). HQs, presented in Attachment A2, are rounded to two significant figures.

3 Screening Methods

The SLERA was conducted for all COIs and all species and pathways included in the ecological CSM. Exposure-specific (i.e., sediment, surface water, tissue, and diet) COIs were defined as those chemicals detected in a given exposure media (i.e., sediment, surface water, or tissue) or in prey tissue of the diet of fish, bird, or mammal species. For each COI, maximum detected concentrations or maximum calculated doses were compared to TSVs to identify COPECs. If the maximum detected concentration or calculated dose of a COI equaled or exceeded the TSV, the COI was identified as a COPEC. Figures 3-1 and 3-2 present the screening assessment processes for identifying COPECs.

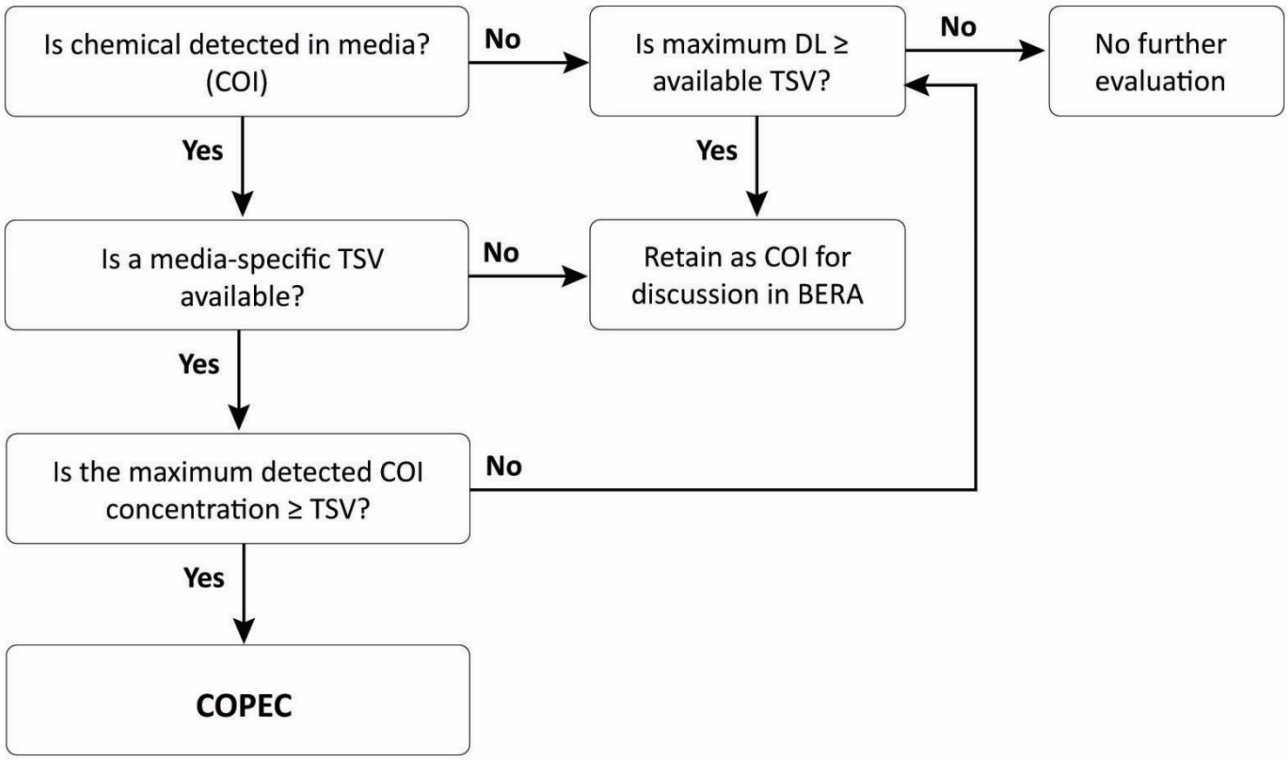

Figure 3-1. COPEC screening process for sediment, surface water, and tissue

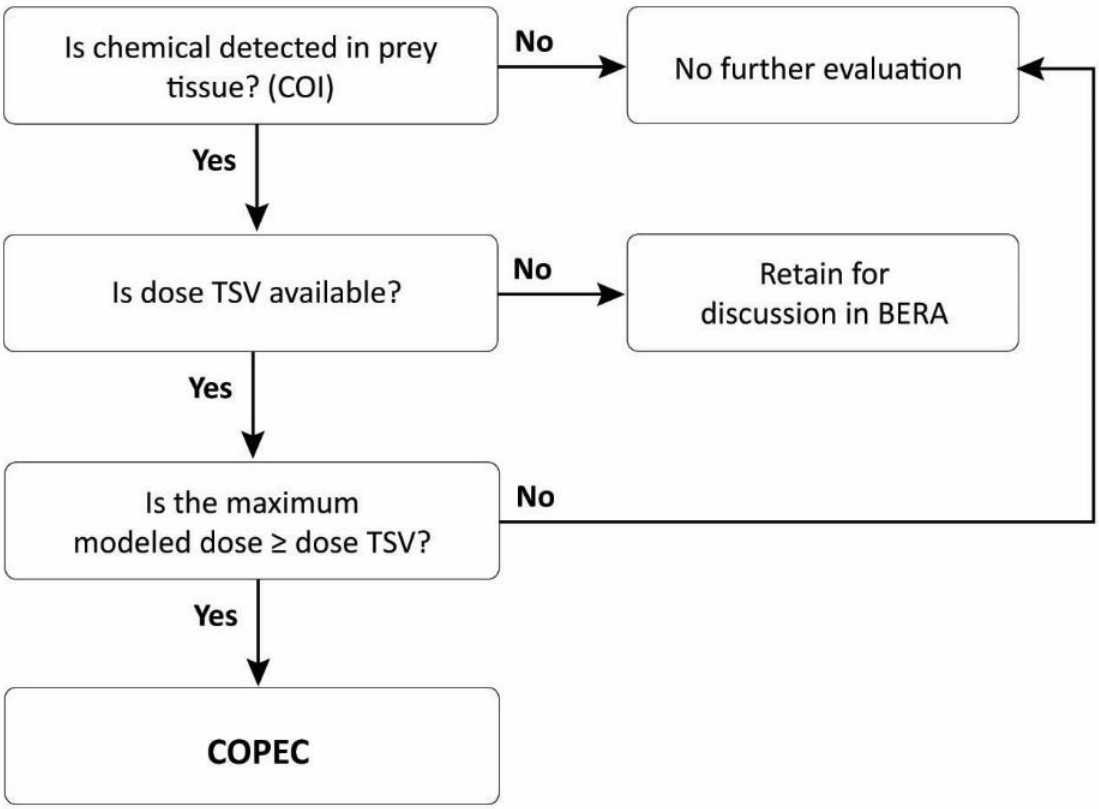

Figure 3-2. COPEC screening process for diet

3.1 COIs

COIs were identified as follows:

- **Surface sediment** – Sediment COIs were defined as all chemicals detected in the LPRSA surface (0 to 6 in.) sediment dataset defined in Section 2.1.1.
- **Surface water** – Surface water COIs were defined as all chemicals detected in the LPRSA surface water dataset defined in Section 2.1.2.
- **Whole-body tissue** – Tissue COIs for fish and invertebrates were defined as all chemicals detected in the LPRSA tissue dataset defined in Section 2.1.3. There is uncertainty regarding the assessment of metals and polycyclic aromatic hydrocarbons (PAHs). While the 2014 draft SLERA (Windward 2014) did not evaluate metals (other than mercury and selenium) in tissue as outlined in problem formulation, additional metals were evaluated in this revised SLERA, consistent with USEPA (2015a, 2015b, 2016). Similarly, the 2014 draft SLERA (Windward 2014) did not evaluate PAHs in fish tissue. PAHs in fish tissue were also evaluated in this revised SLERA, consistent with USEPA (2015a, 2015b, 2016).

- **Diet –** Dietary COIs for fish, birds, and mammals were defined as those chemicals detected in the LPRSA fish and invertebrate tissue dataset defined in Section 2.1.3.
- **Egg tissue** – Fish and bird egg tissue COIs were defined as mercury, total PCBs, PCDDs/PCDFs, and total DDx[5]. Dieldrin was also identified as a COI for bird egg tissue. These chemicals have known, published thresholds for various effects on fish and birds during early life stages (USACE 2003; Jarvinen and Ankley 1999; USEPA 2003a; Wiemeyer et al. 1984).

The following metals were also detected in various LPRSA media but were not included as COIs because the forms of these elemental and essential metals available in the LPRSA environment are not expected to be toxic to ecological receptors: aluminum, barium, calcium, iron, manganese, magnesium, potassium, sodium, and titanium. COIs by media are presented in Table 3-1.

[5] DDx is the sum of all six dichlorodiphenyltrichloroethane (DDT) isomers (2,4′-dichlorodiphenyldichloroethane [DDD], 4,4′-DDD, 2,4′- dichlorodiphenyldichloroethylene [DDE], 4,4′-DDE, 2,4′-DDT and 4,4′-DDT).

Table 3-1. Media-specific COIs

Chemical	COI				
	Surface Sediment	Surface water	Whole-body Tissue	Dietary Dose	Fish/Bird Egg Tissue
Metals[a]					
Antimony	X	X	X	X	
Arsenic	X	X	X	X	
Beryllium	X	X	X	X	
Cadmium	X	X	X	X	
Chromium	X	X	X	X	
Cobalt	X	X	X	X	
Copper	X	X	X	X	
Lead	X	X	X	X	
Mercury/methylmercury	X	X	X[b]	X[b]	X[b]
Nickel	X	X	X	X	
Selenium	X	X	X	X	
Silver	X	X	X	X	
Thallium	X	X	X	X	
Vanadium	X	X	X	X	
Zinc	X	X	X	X	
Butyltins					
Dibutyltin	X	X	X	X	
Monobutyltin	X	X	X	X	
Tetrabutyltin	X		X[c]	X	
TBT	X	X	X	X	
PAHs[d]					
1-Methylnaphthalene	X	X	X	X	
1-Methylphenanthrene	X	X	X	X	
2,3,5-Trimethylnaphthalene	X	X	X	X	
2,6-Dimethylnaphthalene	X	X	X	X	
2-Methylnaphthalene	X	X	X	X	
Acenaphthene	X	X	X	X	
Acenaphthylene	X	X	X	X	
Anthracene	X	X	X	X	
Benzo(a)anthracene	X	X	X	X	
Benzo(a)pyrene	X	X	X	X	
Benzo(b/j)fluoranthene	X	X	X	X	
Benzo(e)pyrene	X	X	X	X	
Benzo(g,h,i)perylene	X	X	X	X	
Benzo(k)fluoranthene	X	X	X	X	
Chrysene	X	X	X	X	

Table 3-1. Media-specific COIs

Chemical	COI				
	Surface Sediment	Surface water	Whole-body Tissue	Dietary Dose	Fish/Bird Egg Tissue
Dibenzo(a,h)anthracene	X	X	X	X	
Dibenzothiophene	X	X	X	X	
Fluoranthene	X	X	X	X	
Fluorene	X	X	X	X	
Indeno(1,2,3-cd)pyrene	X	X	X	X	
Naphthalene	X	X	X	X	
Perylene	X	X	X	X	
Phenanthrene	X	X	X	X	
Pyrene	X	X	X	X	
Total HPAHs	X	X	X	X	
Total LPAHs	X	X	X	X	
Total PAHs	X	X	X	X	
VOCs					
1,1,1-Trichloroethane		X			
1,1-Dichloroethane		X			
1,2,3-Trichlorobenzene	X				
1,2,4-Trichlorobenzene	X	X			
1,2-Dichlorobenzene	X	X			
1,3-Dichlorobenzene	X				
1,4-Dichlorobenzene	X	X			
1,4-Dioxane	X	X			
2-Butanone	X				
4-Methyl-2-pentanone	X				
Acetone	X	X			
Benzene	X	X			
Bromodichloromethane		X			
Carbon disulfide	X	X			
Chlorobenzene	X	X			
Chloroform	X	X			
Chloromethane	X	X			
cis-1,2-Dichloroethylene	X	X			
Cyclohexane	X				
Ethylbenzene	X	X			
Isopropylbenzene	X	X			
m,p-Xylene	X	X			
Methyl acetate	X				
MTBE	X				

Table 3-1. Media-specific COIs

Chemical	COI				
	Surface Sediment	Surface water	Whole-body Tissue	Dietary Dose	Fish/Bird Egg Tissue
Methylcyclohexane	X				
Methylene chloride	X				
o-Xylene	X	X			
Styrene	X				
Tetrachloroethylene	X	X			
Toluene	X	X			
Trichloroethene	X	X			
Vinyl chloride		X			
SVOCs					
1,1′-Biphenyl	X	X			
2,4-Dimethylphenol		X			
2,4-Dinitrotoluene	X	X			
2,6-Dinitrotoluene	X	X			
2-Methylphenol		X			
4-Bromophenyl-phenylether		X			
4-Chloroaniline		X			
4-Methylphenol	X	X	X[e]	X	
Acetophenone	X	X	X[e]	X	
Benzaldehyde	X	X	X	X	
Bis-(2-chloroethoxy)methane		X			
Bis(2-chloroethyl)ether		X			
BEHP	X	X	X[e]	X	
Butyl benzyl phthalate	X	X			
Caprolactam	X	X			
Carbazole	X	X			
Dibenzofuran	X	X			
Diethylphthalate	X	X			
Dimethylphthalate	X				
Di-n-butylphthalate	X	X			
Di-n-octylphthalate	X				
Isophorone	X				
n-Nitroso-di-n-propylamine	X	X			
n-Nitrosodiphenylamine	X	X			
Pentachlorophenol	X				
Phenol	X				
PCDDs/PCDFs					
Individual PCDDs/PCDFs	X	X	X	X	X

Table 3-1. Media-specific COIs

Chemical	COI				
	Surface Sediment	Surface water	Whole-body Tissue	Dietary Dose	Fish/Bird Egg Tissue
PCDD/PCDF TEQ[f]	X	X	X	X	X
Total TEQ[f]	X	X	X	X	X
PCB					
Total PCBs	X[g]	X	X	X	X
PCB TEQ[f]	X	X	X	X	X
Organochlorine Pesticides					
Aldrin	X	X	X	X	
alpha-BHC	X	X	X	X	
beta-BHC	X	X	X	X	
delta-BHC	X	X	X	X	
gamma-BHC (Lindane)	X	X	X	X	
alpha-Chlordane	X	X	X	X	
gamma-Chlordane	X	X	X	X	
Total DDx	X	X	X	X	X
Dieldrin	X	X	X	X	X
Endosulfan I	X	X	X[c]	X	
Endosulfan II	X	X	X[c]	X	
Endosulfan sulfate	X	X	X	X	
Endrin	X	X	X	X	
Endrin aldehyde	X	X	X	X	
Endrin ketone	X	X	X[c]	X	
Heptachlor	X	X	X	X	
Heptachlor epoxide	X	X	X	X	
Hexachlorobenzene	X	X	X	X	
Methoxychlor	X	X	X	X	
cis-Nonachlor	X	X	X	X	
trans-Nonachlor	X	X	X	X	
Octachlorostyrene			X[e,h]		
Oxychlordane	X	X	X	X	
Total chlordane	X	X	X	X	
Total endosulfan	X	X	X	X	
Herbicides					
2,4,5-T	X				
2,4,5-TP (Silvex)	X				
2,4-D	X				
2,4-DB	X				

Table 3-1. Media-specific COIs

Chemical	COI				
	Surface Sediment	Surface water	Whole-body Tissue	Dietary Dose	Fish/Bird Egg Tissue
TPHs					
TPH – alkanes	X				
TPH – purgeable	X				
TPH – extractable	X				
Other					
Cyanide	X	X			

[a] The following metals were also detected but were not included as COIs because the form of these elemental and essential metals available in the LPRSA environment are not expected to be toxic to ecological receptors: aluminum, barium, calcium, iron, manganese, magnesium, potassium, sodium, and titanium.

[b] Total mercury is included as well as methylmercury because some of the TSVs were based on total mercury in tissue. For lower-trophic-level fish and invertebrate tissue, methylmercury is typically only slightly more than 50% of the total mercury. Methylmercury made up 87% of the mercury in LPRSA fish collected in 2009, 84% in blue crab collected in 2009, and 76% in mummichog collected in 2010, but only 14% in bioaccumulation worms.

[c] COI detected in fish tissue, but not detected in benthic invertebrate tissue.

[d] LPRSA sediment has also been analyzed for alkylated PAHs.

[e] COI detected in benthic invertebrate tissue, but not detected in fish.

[f] TEQs are based on fish TEFs from Van den Berg et al. (1998) for sediment exposure for benthic invertebrates and for surface water exposure for invertebrates, fish, aquatic plants, and zooplankton. TEQs for fish, birds, and mammals are based on TEFs for their respective receptor groups from Van den Berg et al. (1998); (2006).

[g] PCB Aroclors 1242, 1254, 1260, and 1268 were also evaluated, in addition to total PCBs, because sediment TSVs were available for these PCB mixtures.

[h] Octachlorostyrene was only analyzed in bioaccumulation worm tissue and was detected. Because worms were the only species for which this COI was analyzed, this chemical was not evaluated as a COI for wildlife.

BEHP – bis(2-ethylhexyl) phthalate
BHC – benzene hexachloride
COI – chemical of interest
DDD – dichlorodiphenyldichloroethane
DDE – dichlorodiphenyldichloroethylene
DDT – dichlorodiphenyltrichloroethane
HPAH – high-molecular-weight polycyclic aromatic hydrocarbon
LPAH – low-molecular-weight polycyclic aromatic hydrocarbon
LPRSA – Lower Passaic River Study Area
MTBE – methyl tert-butyl ether
PAH – polycyclic aromatic hydrocarbon
PCB – polychlorinated biphenyl
PCDD – polychlorinated dibenzo-*p*-dioxin
PCDF – polychlorinated dibenzofuran
SVOC – semivolatile organic compound
TBT – tributyltin
TEQ – toxic equivalent
total DDx – sum of all six DDT isomers (2,4′-DDD, 4,4′-DDD, 2,4′-DDE, 4,4′-DDE, 2,4′-DDT and 4,4′-DDT)
TPH – total petroleum hydrocarbons
TSV – toxicity screening value
VOC – volatile organic compound

3.2 Exposure Assessment

The following subsections describe how screening-level concentrations (Section 3.2.1) and dietary doses (Section 3.2.2) were derived.

3.2.1 Tissue, sediment, and surface water

The maximum detected tissue, surface sediment, or surface water COI concentrations of LPRSA datasets presented in Table 2-1 were used as the screening-level concentrations for selecting tissue, surface sediment, and surface water COPECs, respectively.

3.2.2 Dietary doses

Screening-level dietary doses for fish, birds, and mammals were estimated based on ingestion of biota (i.e., prey), incidental ingestion of sediment, and ingestion of surface water. Dietary doses were estimated as the amount of each COPEC ingested per day on a body weight-normalized basis using the following equation:

$$Dose = \frac{\left[(FIR \times C_{prey}) + (SIR \times C_{sed}) + (WIR \times C_{water})\right]}{BW} \times SUF \qquad \textbf{Equation 3-1}$$

Where:

Dose = daily ingested dose (mg/kg bw/day)
FIR = food ingestion rate (kg ww/day)
C_{prey} = maximum detected chemical concentration in prey tissue (mg/kg ww)
SIR = incidental sediment ingestion rate (kg dw/day)
C_{sed} = maximum detected chemical concentration in sediment (mg/kg dw)
WIR = water ingestion rate (L/day)
C_{water} = maximum detected chemical concentration in water (mg/L)
BW = body weight (kg)
SUF = site use factor (unitless); fraction of time selected species spends foraging in the LPRSA relative to the entire home range; assumed to be 1 (100% use of LPRSA).

The following maximum chemical concentrations were used in Equation 3-1:

- **C_{prey} –** The maximum detected tissue concentration in any prey type consumed by the species
- **C_{sed} –** The maximum detected sediment concentration from the entire site, with the exception of sandpiper and great blue heron. These species feed only in shallow water, so the maximum concentration from mudflat areas was used for sandpiper and great blue heron.
- **C_{water} –** The maximum detected surface water concentration from RM 4 to RM 10.2 (data above RM 4 considered potential freshwater for drinking)

In cases where a chemical was not detected in a given media (e.g., COI was detected in tissue but not in sediment and surface water), the detection limit (DL) was used in deriving the dose concentration for screening.

3.2.2.1 Prey composition

Potential prey types for ecological species evaluated using the dietary dose LOE included only those prey types for which tissue chemistry data from the LPRSA were available: freshwater and estuarine worms (from the bioaccumulation study), blue crab, and fish. Table 3-2 presents the prey types used for each species evaluated in the screening calculations. For each species, the maximum concentration of a given COI in any of the prey types consumed was used as the value for C_{prey} in Equation 3-1. There is uncertainty regarding the modeled diets based on empirical data, especially for invertivorous species such as mummichog, the diet of which is modeled using 100% worms. Limited empirical prey tissue data are available for benthic invertebrates (e.g., no empirical data are available for other items such as grass shrimp, amphipods, and other invertebrates); therefore, screening-level dietary risk estimates may be over- or underestimated.

Table 3-2. Prey types evaluated in the dietary dose for each fish species

Species	Prey Type[a]						
			Fish				
	Worm[b]	Blue Crab	≤ 11 cm[c]	≤ 13 cm[d]	≤ 18 cm[e]	≤ 20 cm[f]	All LPRSA fish[g]
Benthic omnivorous fish							
Mummichog	X						
Common carp	X	X	X				
Invertivorous fish							
White sucker	X	X					
White perch	X	X	X				
Channel catfish	X	X		X			
White catfish	X	X		X			
Piscivorous fish							
American eel	X	X				X	
Largemouth bass	X	X		X			
Smallmouth bass	X			X			
Northern pike		X				X	
Sediment-probing invertivorous birds							
Spotted sandpiper	X						
Piscivorous birds							
Belted kingfisher		X			X		
Great blue heron		X					X
Piscivorous mammals							
Mink		X					X

Table 3-2. Prey types evaluated in the dietary dose for each fish species

Species	Prey Type[a]						
			Fish				
	Worm[b]	Blue Crab	≤ 11 cm[c]	≤ 13 cm[d]	≤ 18 cm[e]	≤ 20 cm[f]	All LPRSA fish[g]
River otter		X					X

[a] The prey type with the highest tissue concentration for a given COI was used for the screening assessment.

[b] Worm prey included the freshwater and estuarine worm datasets from the bioaccumulation study.

[c] Fish ≤ 11 cm long included the following species: gizzard shad, silver shiner, spottail shiner, white perch, and mummichog.

[d] Fish ≤ 13 cm long included the following species: gizzard shad, mixed forage fish, mummichog, silver shiner, spottail shiner, and white perch.

[e] Fish ≤ 18 cm long included the following species: gizzard shad, mixed forage fish, mummichog, pumpkinseed, silver shiner, spottail shiner, and white perch.

[f] Fish ≤ 20 cm long included the following species: brown bullhead, gizzard shad, mixed forage fish, mummichog, pumpkinseed, silver shiner, smallmouth bass, spottail shiner, and white perch.

[g] All fish collected from the LPRSA in 2009 and 2010 for analysis were approximately ≤ 70 cm in length.

COI – chemical of interest

LPRSA – Lower Passaic River Study Area

For fish and wildlife species, the fish species included in the fish portion of their diets were based on size. For fish species, it was assumed that fish would not consume other fish that were greater than one-third their size. For bird and mammal species, the size class categories were conservatively based on information presented in the general scientific literature (Table 3-3). The highest fish concentration from each species-specific fish prey dataset was used to represent the tissue concentration for screening.

Table 3-3. Rationale for selected fish sizes in wildlife prey

Species	Fish Prey Size	Supporting Documentation/Notes
Great blue heron	all fish (up to ~70 cm long)	Great blue heron are reported to eat fish 5 to 30 cm in length (Vennesland and Butler 2011), although the majority of their prey is smaller. Studies report that 95% of fish consumed by great blue heron are ≤ 25 cm in length (in Wisconsin), and fish ≤ 20 cm make up the majority of the diet (in Lake Erie great blue heron) (USEPA 1993). While the most commonly reported size of great blue heron fish prey is < 30 cm, consistent with USEPA (2015a, 2015b, 2016), it is assumed that great blue heron could consume any LPRSA fish, including large fish up to 70 cm long, such as carp.

Species	Fish Prey Size	Supporting Documentation/Notes
Belted kingfisher	≤ 18 cm long	Belted kingfisher are reported to eat fish 2.5 to 17.8 cm, but generally less than 10 cm, in length (Kelly et al. 2009; Salyer and Lagler 1946, as cited in Prose 1985). Fish more than 12.7 cm long are thought to be difficult for this species to swallow (Kelly et al. 2009). Note that including fish up to 18 cm long excludes the following fish species samples from the LPRSA: smallmouth bass, brown bullhead, white sucker, white catfish, American eel, and carp.
Mink	all fish (up to ~70 cm long)	Mink may consume fish up to 70 cm long, although the fish portion of their diet is primarily fish ≤ 30 cm. The results of an analysis of scat from mink in Idaho showed that the mink diet there consisted of fish ranging in length from 7 to 30 cm; neither largescale sucker nor northern squawfish, which ranged from 35 to 45 cm long, were consumed (Melquist et al. 1981). Another study in Great Britain found that most fish consumed by mink were < 30 cm long, although some of the northern pike consumed were up to 70 cm long. However, northern pike were only 1.5% of the mink's diet, so the overall percentage of large fish consumed was small.
River otter	all fish (up to ~70 cm long)	River otter may consume fish up to 50 to 70 cm long, although the fish portion of their diet is primarily fish ≤ 30 cm (USEPA 2003b; Melquist et al. 1981).

LPRSA – Lower Passaic River Study Area

3.2.2.2 Body weight and ingestion rates

For wildlife, screening-level body weights were based on the lowest body weight provided by USEPA (1993), and ingestion rates were based on the highest ingestion rate from USEPA (1993) or the general literature (USEPA 2015a, b, 2016).[6] For fish, body weights were based on LPRSA data collected in 2009 and 2010, and ingestion ranges were based on Arnot and Gobas (2004) or species-specific data from the general literature. The sources of the dietary dose exposure parameters are provided in Table 3-4. An assumed site use factor (SUF) of 1 allowed for calculation of maximum dietary risk, along with the other conservative exposure parameters.

Table 3-4. Sources of dietary dose exposure parameter data

Species	Parameter	Value[a]	Unit	Source
Mummichog	bw	0.0032	kg	2009–2010 LPRSA data for all fish caught during community surveys and collected for chemistry analysis
	FIR	0.00019[b]	kg prey (ww)/day	Weisberg and Lotrich (1982)
	SIR	0.0000037	kg sediment (dw)/day	no empirical data available; value (10% of dw FIR) based on feeding habits and best professional judgment
Common carp	bw	2.7	kg	2009–2010 LPRSA data for all fish caught during community surveys and collected for chemistry analysis

[6] Average ingestion rates were used from USEPA (1993) or the general literature if a range was not provided.

Table 3-4. Sources of dietary dose exposure parameter data

Species	Parameter	Value[a]	Unit	Source
	FIR	0.11	kg prey (ww)/day	Arnot and Gobas (2004); value derived from body weight
	SIR	0.0033	kg sediment (dw)/day	no empirical data available; value (15% of dw FIR (Moermond et al. 2004)) based on feeding habits and best professional judgment
White sucker	bw	0.79	kg	2009–2010 LPRSA data for all fish caught during community surveys and collected for chemistry analysis
	FIR	0.039	kg prey (ww)/day	Arnot and Gobas (2004); value derived from body weight
	SIR	0.00077	kg sediment (dw)/day	no empirical data available; value (10% of dw FIR) based on feeding habits and best professional judgment
White perch	bw	0.057	kg	2009–2010 LPRSA data for all fish caught during community surveys and collected for chemistry analysis
	FIR	0.0041	kg prey (ww)/day	Arnot and Gobas (2004); value derived from body weight
	SIR	0.000041	kg sediment (dw)/day	no empirical data available; value (5% of dw FIR) based on feeding habits and best professional judgment
Channel catfish	bw	0.74	kg	2009–2010 LPRSA data for all fish caught during community surveys and collected for chemistry analysis
	FIR	0.036	kg prey (ww)/day	Arnot and Gobas (2004)
	SIR	0.00073	kg sediment (dw)/day	no empirical data available; value (10% of dw FIR) based on feeding habits and best professional judgment
White catfish	bw	0.75	kg	2009–2010 LPRSA data for all fish caught during community surveys and collected for chemistry analysis
	FIR	0.037	kg prey (ww)/day	Arnot and Gobas (2004); value derived from body weight
	SIR	0.00074	kg sediment (dw)/day	no empirical data available; value (10% of dw FIR) based on feeding habits and best professional judgment
American eel < 50 cm	bw	0.032	kg	2009–2010 LPRSA data for all fish caught during community surveys and collected for chemistry analysis
	FIR	0.0025	kg prey (ww)/day	Arnot and Gobas (2004); value derived from body weight
	SIR	0.000025	kg sediment (dw)/day	Wenner and Musick (1975); value (5% of dw FIR) based on feeding habits and best professional judgment

Table 3-4. Sources of dietary dose exposure parameter data

Species	Parameter	Value[a]	Unit	Source
American eel ≥ 50 cm	bw	0.45	kg	2009–2010 LPRSA data for all fish caught during community surveys and collected for chemistry analysis
	FIR	0.024	kg prey (ww)/day	Arnot and Gobas (2004); value derived from body weight
	SIR	0.00024	kg sediment (dw)/day	Wenner and Musick (1975); value (5% of dw FIR) based on feeding habits and best professional judgment
Largemouth bass	bw	0.078	kg	2009–2010 LPRSA data for all fish caught during community surveys and collected for chemistry analysis
	FIR	0.0054	kg prey (ww)/day	Arnot and Gobas (2004)
	SIR	0.000011	kg sediment (dw)/day	no empirical data available; value (1% of dw FIR) based on feeding habits and best professional judgment
Smallmouth bass	bw	0.14	kg	2009–2010 LPRSA data for all fish caught during community surveys and collected for chemistry analysis
	FIR	0.0089	kg prey (ww)/day	Arnot and Gobas (2004); value derived from body weight
	SIR	0.000018	kg sediment (dw)/day	no empirical data available; value (1% of dw FIR) based on feeding habits and best professional judgment
Northern pike	bw	2.8	kg	2009–2010 LPRSA data for all fish caught during community surveys and collected for chemistry analysis
	FIR	0.11	kg prey (ww)/day	Arnot and Gobas (2004); value derived from body weight
	SIR	0.00023	kg sediment (dw)/day	no empirical data available; value (1% of dw FIR) based on feeding habits and best professional judgment
Spotted sandpiper	bw	0.034	kg	USEPA (1993)
	FIR	0.022	kg prey (ww)/day	Nagy (2001)
	SIR	0.0018	kg sediment (dw)/day	Beyer et al. (1994); maximum value (30% of dw FIR) for sandpiper species
	WIR	0.0061	L/day	Calder and Braun (1983)
Heron/egret	bw	2.2[c]	kg	Gross (1923); Butler (1992); Quinney (1982); Dunning (1993); USEPA (1993); Bayer (1981); Chapman and Howard (1984); Parsons and Master (2000); Rodgers and Smith (1995); Davis and Kushlan (1994)
	FIR	0.39	kg prey (ww)/day	Kushlan (1978), as cited in USEPA (1993)

Table 3-4. Sources of dietary dose exposure parameter data

Species	Parameter	Value[a]	Unit	Source
	SIR	0.00078	kg sediment (dw)/day	no empirical data available; value (1% of dw FIR) based on feeding habits and best professional judgment
	WIR	0.10	L/day	Calder and Braun (1983)
Belted kingfisher	bw	0.125	kg	USEPA (1993)
	FIR	0.063	kg prey (ww)/day	USEPA (1993)
	SIR	0.00013	kg sediment (dw)/day	no empirical data available; value (0.5% of dw FIR) based on feeding habits and best professional judgment
	WIR	0.015	L/day	Calder and Braun (1983)
Mink	bw	0.55	kg	USEPA (1993)
	FIR	0.12	kg prey (ww)/day	Bleavins and Aulerich (1981)
	SIR	0.0023	kg sediment (dw)/day	Beyer et al. (1994), based on raccoon data (none available for mink); value (9.4% of dw FIR) based on feeding habits and best professional judgment
	WIR	0.058	L/day	Calder and Braun (1983)
River otter	bw	4.74	kg	USEPA (1993)
	FIR	0.83	kg prey (ww)/day	Nagy (2001)
	SIR	0.0033	kg sediment (dw)/day	no empirical data available; value (2% of dw FIR) based on feeding habits and best professional judgment
	WIR	0.40	L/day	Calder and Braun (1983)

[a] Body weights for wildlife are the lowest values identified in the literature; fish body weights are based on the averages of LPRSA data collected in 2009 and 2010. Ingestion rates for wildlife are the highest ingestion rates from USEPA (1993) or the general literature; fish ingestion rates are average values from Arnot and Gobas (2004) or based on species-specific data from the general literature.

[b] FIR is 0.0582 g dw/g dw bw/day; wet weight FIR assumes the same moisture content in mummichog tissue and invertebrate prey (so FIR = 0.0582 g ww/g ww bw/day)

[c] Average was calculated as the average of the minimum and maximum values, which were selected from data for black-crowned night heron, great blue heron, great egret, snowy egret, little blue heron, and green heron.

bw – body weight
dw – dry weight
FIR – food ingestion rate
LPRSA – Lower Passaic River Study Area
SIR – sediment ingestion rate
USEPA – US Environmental Protection Agency
WIR – water ingestion rate
ww – wet weight

3.2.3 Modeled egg concentrations

For the egg tissue evaluation, fish and bird egg tissue concentrations for selected species were estimated.

3.2.3.1 Fish egg

Two studies are available for determining the ratios of fish maternal egg tissue concentrations to fish egg tissue concentrations (Niimi 1983; Russell et al. 1999). For the purposes of screening to identify COIs for evaluation in the BERA, mummichog adult tissue concentrations were assumed to be equal to mummichog egg tissue concentration for total PCBs, TEQs, DDE, and mercury.[7] This conservative assumption is consistent with Russell et al. (1999), wherein the authors concluded that the majority of the observed lipid-normalized egg/maternal dorsal muscle tissue concentration ratios for individual organochlorines in six fish species were not significantly different from 1.0.

3.2.3.2 Bird egg

Screening-level bird egg chemical concentrations for piscivorous birds (i.e., belted kingfisher and heron/egret species) were estimated using the following equation:

$$C_{egg} = C_{prey} \times BMF \qquad \textbf{Equation 3-5}$$

Where:

C_{egg} = chemical concentration in bird egg tissue (mg/kg [ww])
C_{prey} = chemical concentration in prey tissue (mg/kg ww)
BMF = biomagnification factor

The maximum concentration for C_{prey} was derived using the methods presented in Section 3.2.2. The most conservative (i.e., highest) biomagnification factor (BMF) per COI was adopted to estimate bird egg exposure. The BMFs used in the bird egg assessment are presented in Table 3-5.

Table 3-5. Avian BMFs

COPEC	Maximum BMF	Source
Metals		
Mercury/methylmercury	2.5[a]	Buck (2004)
PCBs		
Total PCBs	79[a]	Buck (2004)
PCB TEQ[b]	21[c]	Braune and Norstrom (1989)
PCDDs/PCDFs		
PCDD/PCDF TEQ[b]	21[c]	Braune and Norstrom (1989)
Total TEQ[b]	21[c]	Braune and Norstrom (1989)
Organochlorine Pesticides		

[7] Lipid concentrations were assumed to be the same for mummichog adult tissue and mummichog egg tissue for the purposes of screening.

Table 3-5. Avian BMFs

COPEC	Maximum BMF	Source
Dieldrin	7[c]	Braune and Norstrom (1989)
Total DDx	108[a]	Buck (2004)

[a] Reported BMF based on concentrations in bald eagle eggs and fish from Lower Columbia River, Washington.
[b] TEQs were calculated using bird TEFs (Van den Berg et al. 1998).
[c] Reported BMF based on concentrations in herring gull eggs and fish (alewife) from Lake Ontario.

BMF – biomagnification factor
COPEC – chemical of potential ecological concern
DDD – dichlorodiphenyldichloroethane
DDE – dichlorodiphenyldichloroethylene
DDT – dichlorodiphenyltrichloroethane
PCB – polychlorinated biphenyl
PCDD – pentachlorodibenzo-*p*-dioxin
PCDF – pentachlorodibenzofuran
TEF – toxic equivalency factor
TEQ – toxic equivalent
total DDx – sum of all six DDT isomers (2,4′-DDD, 4,4′-DDD, 2,4′-DDE, 4,4′-DDE, 2,4′-DDT and 4,4′-DDT)

3.3 EFFECTS ASSESSMENT

Receptor group pathway-specific TSVs used in the SLERA are presented in this section.

3.3.1 Sediment TSVs

Two types of sediment TSVs were used in this SLERA:

- Benthic invertebrate sediment TSVs
- Plant-specific soil TSVs

3.3.1.1 Benthic invertebrate sediment TSVs

Sediment TSVs were based on the numerous candidate sources of sediment thresholds. The lowest of the freshwater and marine TSVs were selected from the following sources:

- Sediment TSVs for benthic invertebrates based USEPA Region 2's Lower Passaic River Restoration Project focused feasibility study (FFS) (Louis Berger et al. 2014)
- Effects range–low (ERL) and effects range-median (ERM) values presented in Long and Morgan (1990) and Long et al. (1995)
- Threshold effect levels (TELs) and probable effect levels (PELs) from MacDonald et al. (1996)
- No-effects level (NEL), lowest effects level (LEL), and severe effects level (SEL) guidelines for the protection and management of aquatic sediment quality as presented in Persaud et al. (1993)

- Various sediment thresholds as compiled in the National Oceanic and Atmospheric Administration (NOAA) Screening Quick Reference Table (SQuiRT) values (NOAA 2008)
- USEPA Region 5 RCRA ESLs (USEPA 2003c)
- New York Department of Environmental Conservation sediment guidance values (SGVs), including equilibrium partitioning (EqP) SQVs (NYSDEC 2014)
- Washington State Sediment Management Standards (SMS), including freshwater and marine cleanup screening levels (CSLs) and sediment cleanup objectives (SCOs) (Ecology 2013)
- Canadian interim sediment quality guidelines (ISQGs) for the protection of aquatic life (CCME 2002)

Sediment TSVs for benthic invertebrates are presented in Tables 3-6a and 3-6b. In cases where both dry weight (dw)- and OC-normalized TSVs were available, two values were selected (both a dw- and an OC-normalized value).
In addition to the COPEC screen based on the TSVs as described above, an additional comparison of sediment concentrations in the LPRSA to sediment thresholds was conducted (USEPA 2015a, b, 2016). In this comparison, LPRSA sediment concentrations were compared to estuarine sediment thresholds used in the FFS. These are included as Attachment A5.

Table 3-6a. Selected estuarine sediment TSVs for benthic invertebrates

COI	Estuarine Sediment TSV					
	Value (dw)	Unit (dw)	Source (dw)	Value (OC)	Unit (OC)	Source (OC)
Metals						
Antimony	0.63	mg/kg	T20 (NOAA 2008)	na	na	na
Arsenic	6	mg/kg	LEL (Persaud et al. 1993)	na	na	na
Cadmium	0.38	mg/kg	T20 (NOAA 2008)	na	na	na
Chromium	26	mg/kg	LEL (Persaud et al. 1993)	na	na	na
Cobalt	10	mg/kg	AET (NOAA 2008)	na	na	na
Copper	16	mg/kg	LEL (Persaud et al. 1993)	na	na	na
Lead	30	mg/kg	FFS TSV (Louis Berger et al. 2014); T20 (NOAA 2008)	na	na	na
Mercury	130	µg/kg	ISQG (CCME 2002); TEL (MacDonald et al. 1996; NOAA 2008)	na	na	na
Methylmercury	0.01	µg/kg	ESL (USEPA 2003c)	na	na	na
Nickel	15	mg/kg	T20 (NOAA 2008)	na	na	na
Selenium	1	mg/kg	AET (NOAA 2008)	na	na	na
Silver	0.23	mg/kg	T20 (NOAA 2008)	na	na	na
Vanadium	57	mg/kg	AET (NOAA 2008)	na	na	na
Zinc	94	mg/kg	T20 (NOAA 2008)	na	na	na
Organochlorine Pesticides						
4,4'-DDD	1.22	µg/kg	TEL (MacDonald et al. 1996; NOAA 2008)	6	mg/kg OC	SEL (Persaud et al. 1993)
4,4'-DDE	2	µg/kg	ERL (Long and Morgan 1990)	19	mg/kg OC	SEL (Persaud et al. 1993)
4,4'-DDT	1	µg/kg	ERL (Long and Morgan 1990; NOAA 2008)	na	na	na
Aldrin	0.06	µg/kg	Dutch Target (NOAA 2008)	8	mg/kg OC	SEL (Persaud et al. 1993)

Table 3-6a. Selected estuarine sediment TSVs for benthic invertebrates

COI	Estuarine Sediment TSV					
	Value (dw)	Unit (dw)	Source (dw)	Value (OC)	Unit (OC)	Source (OC)
alpha-BHC	3	µg/kg	Dutch Target (NOAA 2008)	10	mg/kg OC	SEL (Persaud et al. 1993)
alpha-Chlordane	0.03	µg/kg	Dutch Target (NOAA 2008)	na	na	na
beta-BHC	5	µg/kg	LEL (Persaud et al. 1993); ESL (USEPA 2003c)	21	mg/kg OC	SEL (Persaud et al. 1993)
delta-BHC	10	µg/kg	Dutch Target (NOAA 2008)	na	na	na
Dieldrin	0.02	µg/kg	ERL (Long and Morgan 1990; NOAA 2008)	91	mg/kg OC	SEL (Persaud et al. 1993)
Endosulfan I	0.01	µg/kg	Dutch Target (NOAA 2008)	na	na	na
Endosulfan II	0.01	µg/kg	Dutch Target (NOAA 2008)	na	na	na
Endosulfan sulfate	34.6	µg/kg	ESL (USEPA 2003c)	na	na	na
Endrin	0.02	µg/kg	ERL (Long and Morgan 1990)	130	mg/kg OC	SEL (Persaud et al. 1993)
Endrin aldehyde	480	µg/kg	ESL (USEPA 2003c)	na	na	na
gamma-BHC (Lindane)	0.05	µg/kg	Dutch Target (NOAA 2008)	1	mg/kg OC	SEL (Persaud et al. 1993)
gamma-Chlordane	0.03	µg/kg	Dutch Target (NOAA 2008)	na	na	na
Heptachlor	0.3	µg/kg	AET (NOAA 2008); NEL (Persaud et al. 1993)	na	na	na
Heptachlor epoxide	0.0002	µg/kg	Dutch Target (NOAA 2008)	5	mg/kg OC	SEL (Persaud et al. 1993)
Hexachlorobenzene	1.4	µg/kg	Dutch Target (NOAA 2008)	0.38	mg/kg OC	Washington SCO (Ecology 2013)
Methoxychlor	13.6	µg/kg	ESL (USEPA 2003c)	na	na	na
Total 2,4' and 4,4' DDD	1.22	µg/kg	ISQG (CCME 2002)	na	na	na
Total 2,4' and 4,4' DDE	2.07	µg/kg	ISQG (CCME 2002)	na	na	na
Total 2,4' and 4,4' DDT	1.19	µg/kg	ISQG (CCME 2002)	71	mg/kg OC	SEL (Persaud et al. 1993)
Total Chlordane	0.03	µg/kg	Dutch Target (NOAA 2008)	6	mg/kg OC	SEL (Persaud et al. 1993)

Table 3-6a. Selected estuarine sediment TSVs for benthic invertebrates

COI	Estuarine Sediment TSV					
	Value (dw)	Unit (dw)	Source (dw)	Value (OC)	Unit (OC)	Source (OC)
Total DDx	1.58	µg/kg	FFS TSV (Louis Berger et al. 2014); ERL (NOAA 2008)	12	mg/kg OC	SEL (Persaud et al. 1993)
PAHs						
1-Methylnaphthalene	21	µg/kg	T20 (NOAA 2008)	na	na	na
1-Methylphenanthrene	18	µg/kg	T20 (NOAA 2008)	na	na	na
2,6-Dimethylnaphthalene	25	µg/kg	T20 (NOAA 2008)	na	na	na
2-Methylnaphthalene	20.2	µg/kg	ESL (USEPA 2003c); ISQG (CCME 2002); TEL (MacDonald et al. 1996; NOAA 2008)	38	mg/kg OC	Washington SCO (Ecology 2013)
Acenaphthene	6.71	µg/kg	ESL (USEPA 2003c); ISQG (CCME 2002); TEL (MacDonald et al. 1996; NOAA 2008)	16	mg/kg OC	Washington SCO (Ecology 2013)
Acenaphthylene	5.87	µg/kg	ESL (USEPA 2003c); ISQG (CCME 2002); TEL (MacDonald et al. 1996; NOAA 2008)	66	mg/kg OC	Washington SCO/CSL (Ecology 2013)
Anthracene	34	µg/kg	T20 (NOAA 2008)	220	mg/kg OC	Washington SCO (Ecology 2013)
Benzo(a)anthracene	25	µg/kg	Dutch Target (NOAA 2008)	110	mg/kg OC	Washington SCO (Ecology 2013)
Benzo(a)pyrene	52	µg/kg	Dutch Target (NOAA 2008)	99	mg/kg OC	Washington SCO (Ecology 2013)
Benzo(b/j)fluoranthene	130	µg/kg	T20 (NOAA 2008)	979	mg/kg OC	SGV (NYSDEC 2014)
Benzo(e)pyrene	19,340	µg/kg	SGV (NYSDEC 2014)	967	mg/kg OC	SGV (NYSDEC 2014)
Benzo(g,h,i)perylene	67	µg/kg	T20 (NOAA 2008)	31	mg/kg OC	Washington SCO (Ecology 2013)
Benzo(k)fluoranthene	70	µg/kg	T20 (NOAA 2008)	980	mg/kg OC	SGV (NYSDEC 2014)

Table 3-6a. Selected estuarine sediment TSVs for benthic invertebrates

COI	Estuarine Sediment TSV					
	Value (dw)	Unit (dw)	Source (dw)	Value (OC)	Unit (OC)	Source (OC)
Chrysene	82	µg/kg	T20 (NOAA 2008)	110	mg/kg OC	Washington SCO (Ecology 2013)
Dibenzo(a,h)anthracene	6.22	µg/kg	ISQG (CCME 2002); TEL (MacDonald et al. 1996; NOAA 2008)	12	mg/kg OC	Washington SCO (Ecology 2013)
Fluoranthene	113	µg/kg	ISQG (CCME 2002); TEL (MacDonald et al. 1996; NOAA 2008)	160	mg/kg OC	Washington SCO (Ecology 2013)
Fluorene	19	µg/kg	ERL (Long et al. 1995; NOAA 2008); T20 (NOAA 2008)	23	mg/kg OC	Washington SCO (Ecology 2013)
Indeno(1,2,3-CD)pyrene	31	µg/kg	Dutch Target (NOAA 2008)	34	mg/kg OC	Washington SCO (Ecology 2013)
Naphthalene	30	µg/kg	T20 (NOAA 2008)	99	mg/kg OC	Washington SCO (Ecology 2013)
Perylene	453	µg/kg	T50 (NOAA 2008)	967	mg/kg OC	SGV (NYSDEC 2014)
Phenanthrene	68	µg/kg	T20 (NOAA 2008)	100	mg/kg OC	Washington SCO (Ecology 2013)
Pyrene	125	µg/kg	T20 (NOAA 2008)	698	mg/kg OC	SGV (NYSDEC 2014)
Total benzofluoranthenes	na	na	na	230	mg/kg OC	Washington SCO (Ecology 2013)
Total HPAHs	655	µg/kg	TEL (MacDonald et al. 1996; NOAA 2008)	960	mg/kg OC	Washington SCO (Ecology 2013)
Total LPAHs	312	µg/kg	TEL (MacDonald et al. 1996; NOAA 2008)	370	mg/kg OC	Washington SCO (Ecology 2013)
Total PAHs	1,000	µg/kg	Dutch Target (NOAA 2008)	10,000	mg/kg OC	SEL (Persaud et al. 1993)
PCBs						
Aroclor-1254	60	µg/kg	LEL (Persaud et al. 1993)	34	mg/kg OC	SEL (Persaud et al. 1993)
Aroclor-1260	5	µg/kg	LEL (Persaud et al. 1993)	24	mg/kg OC	SEL (Persaud et al. 1993)

Table 3-6a. Selected estuarine sediment TSVs for benthic invertebrates

COI	Estuarine Sediment TSV					
	Value (dw)	Unit (dw)	Source (dw)	Value (OC)	Unit (OC)	Source (OC)
Total PCB Congeners	0.3	µg/kg	Dutch Target (NOAA 2008)	12	mg/kg OC	Washington SCO (Ecology 2013)
PCB TEQ[a]	0.85	ng/kg	ISQG (CCME 2002)	na	na	na
PCDDs/PCDFs						
2,3,7,8-TCDD	0.12	ng/kg	ESL (USEPA 2003c)	na	na	na
PCDD/PCDF TEQ[a]	0.85	ng/kg	ISQG (CCME 2002)	na	na	na
Total TEQ[a]	0.85	ng/kg	ISQG (CCME 2002)	na	na	na
SVOCs						
2,4-Dinitrotoluene	14.4	µg/kg	ESL (USEPA 2003c)	na	na	na
2,6-Dinitrotoluene	39.8	µg/kg	ESL (USEPA 2003c)	na	na	na
4-Methylphenol	670	µg/kg	Washington SCO/CSL (Ecology 2013)	na	na	na
Bis-(2-ethylhexyl)phthalate	100	µg/kg	Dutch Target (NOAA 2008)	47	mg/kg OC	Washington SCO (Ecology 2013)
Butylbenzylphthalate	63	µg/kg	AET (NOAA 2008)	4.9	mg/kg OC	Washington SCO (Ecology 2013)
Dibenzofuran	110	µg/kg	AET (NOAA 2008)	15	mg/kg OC	Washington SCO (Ecology 2013)
Diethylphthalate	6	µg/kg	AET (NOAA 2008)	61	mg/kg OC	Washington SCO (Ecology 2013)
Dimethylphthalate	6	µg/kg	AET (NOAA 2008)	53	mg/kg OC	Washington SCO/CSL (Ecology 2013)
Di-n-butylphthalate	58	µg/kg	AET (NOAA 2008)	220	mg/kg OC	Washington SCO (Ecology 2013)
Di-n-octylphthalate	61	µg/kg	AET (NOAA 2008)	58	mg/kg OC	Washington SCO (Ecology 2013)

Table 3-6a. Selected estuarine sediment TSVs for benthic invertebrates

COI	Estuarine Sediment TSV					
	Value (dw)	Unit (dw)	Source (dw)	Value (OC)	Unit (OC)	Source (OC)
Isophorone	432	µg/kg	ESL (USEPA 2003c)	na	na	na
N-Nitrosodiphenylamine	28	µg/kg	AET (NOAA 2008)	na	na	na
Pentachlorophenol	10	µg/kg	Dutch Target (NOAA 2008)	na	na	na
Phenol	49.1	µg/kg	ESL (USEPA 2003c)	na	na	na
VOCs						
1,2,3-Trichlorobenzene	11	µg/kg	Dutch Target (NOAA 2008)	na	na	na
1,2,4-Trichlorobenzene	4.8	µg/kg	AET (NOAA 2008)	0.81	mg/kg OC	Washington SCO (Ecology 2013)
1,2-Dichlorobenzene	13	µg/kg	AET (NOAA 2008)	2.3	mg/kg OC	Washington SCO/CSL (Ecology 2013)
1,3-Dichlorobenzene	30	µg/kg	Dutch Target (NOAA 2008)	na	na	na
1,4-Dichlorobenzene	30	µg/kg	Dutch Target (NOAA 2008)	3.1	mg/kg OC	Washington SCO (Ecology 2013)
1,4-Dioxane	119	µg/kg	ESL (USEPA 2003c)	na	na	na
2-Butanone	35,000	µg/kg	Dutch Target (NOAA 2008)	na	na	na
Acetone	9.9	µg/kg	ESL (USEPA 2003c)	na	na	na
Benzene	10	µg/kg	Dutch Target (NOAA 2008)	na	na	na
Carbon disulfide	23.9	µg/kg	ESL (USEPA 2003c)	na	na	na
Chlorobenzene	291	µg/kg	ESL (USEPA 2003c)	na	na	na
Chloroform	20	µg/kg	Dutch Target (NOAA 2008)	na	na	na
Cyclohexane	100	µg/kg	Dutch Target (NOAA 2008)	na	na	na
Ethylbenzene	4	µg/kg	AET (NOAA 2008)	na	na	na
m, p-Xylene	4	µg/kg	AET (NOAA 2008)	na	na	na

Table 3-6a. Selected estuarine sediment TSVs for benthic invertebrates

COI	Estuarine Sediment TSV					
	Value (dw)	Unit (dw)	Source (dw)	Value (OC)	Unit (OC)	Source (OC)
MTBE	100,000	µg/kg	Dutch Intervention (NOAA 2008)	na	na	na
Methylene chloride	18	µg/kg	Dutch Target (NOAA 2008)	na	na	na
o-Xylene	4	µg/kg	AET (NOAA 2008)	na	na	na
Styrene	200	µg/kg	Dutch Target (NOAA 2008)	na	na	na
Tetrachloroethylene	990	µg/kg	ESL (USEPA 2003c)	na	na	na
Toluene	10	µg/kg	Dutch Target (NOAA 2008)	na	na	na
Trichloroethene	7.8	µg/kg	Dutch Target (NOAA 2008)	na	na	na
Herbicides						
2,4,5-TP (Silvex)	0.675	mg/kg	ESL (USEPA 2003c)	na	na	na
2,4-D	1.273	mg/kg	ESL (USEPA 2003c)	na	na	na
Other						
Cyanide	0.0001	mg/kg	ESL (USEPA 2003c)	na	na	na

[a] TEQs were evaluated based on fish TEFs as COIs for benthic invertebrates (USEPA 2015a, b, 2016). There is high uncertainty in evaluating TEQs for benthic invertebrates because there is limited evidence for ligand activation of the AH (dioxin) cellular receptor in these organisms; as such, they are not susceptible to the dioxin-like effects reported for vertebrates (e.g., fish) (Van den Berg et al. 1998). TEFs needed to derive TEQs are available for only fish, birds, and mammals (Van den Berg et al. 1998), and the fish TEFs were used to derive TEQs for comparison to TSVs for benthic invertebrates. TEQs for PCDDs/PCDFs and coplanar dioxin-like PCBs were not evaluated as COIs for other receptor groups, including amphibians/reptiles and aquatic plants; the evidence for ligand activation of the AH receptor in these receptor groups is unknown.

AET – apparent effects threshold
BHC – benzene hexachloride
COI – chemical of interest
DDD – dichlorodiphenyldichloroethane
DDE – dichlorodiphenyldichloroethylene
DDT – dichlorodiphenyltrichloroethane
dw – dry weight
ERL – effects range–low
LPAH – low-molecular-weight polycyclic aromatic hydrocarbon
LEL – lowest effects level
NOAA – National Oceanic and Atmospheric Administration
OC – organic carbon
PAH – polycyclic aromatic hydrocarbon
PCB – polychlorinated biphenyl
T20 – 20% probability of observing toxicity
T50 – 50% probability of observing toxicity
TBT – tributyltin
TCDD – tetrachlorodibenzo-*p*-dioxin
TEF – toxic equivalency factor
TEL – threshold effects level
TEQ – toxic equivalent
TSV – toxicity screening value

ESL – ecological screening level

FFS – focused feasibility study

HPAH – high-molecular-weight polycyclic aromatic hydrocarbon

ISQG – interim sediment quality guideline

MTBE – methyl tert-butyl ether

PCDD/PCDF – polychlorinated dibenzodioxins/polychlorinated dibenzofurans

SCO – sediment cleanup objective

SEL – severe effects level

SGV – sediment guidance value

SVOC – semivolatile organic compound

total DDx – sum of all six DDT isomers (2,4′-DDD, 4,4′-DDD, 2,4′-DDE, 4,4′-DDE, 2,4′-DDT and 4,4′-DDT)

USEPA – US Environmental Protection Agency

VOC – volatile organic compound

Table 3-6b. Selected freshwater sediment TSVs for benthic invertebrates

COI	Freshwater Sediment TSV					
	Value (dw)	Unit (dw)	Source (dw)	Value (OC)	Unit (OC)	Source (OC)
Metals						
Antimony	2	mg/kg	ERL (Long and Morgan 1990)	na	na	na
Arsenic	5.9	mg/kg	ISQG (CCME 2002); TEL (NOAA 2008)	na	na	na
Cadmium	0.583	mg/kg	ARCS (NOAA 2008)	na	na	na
Chromium	26	mg/kg	LEL (Persaud et al. 1993; NOAA 2008)	na	na	na
Cobalt	50	mg/kg	ESL (USEPA 2003c); LEL (NOAA 2008)	na	na	na
Copper	16	mg/kg	LEL (Persaud et al. 1993; NOAA 2008)	na	na	na
Lead	31	mg/kg	LEL (Persaud et al. 1993; NOAA 2008)	na	na	na
Mercury	150	µg/kg	ERL (Long and Morgan 1990)	na	na	na
Methylmercury	0.01	µg/kg	ESL (USEPA 2003c)	na	na	na
Nickel	16	mg/kg	LEL (Persaud et al. 1993; NOAA 2008)	na	na	na
Selenium	11	mg/kg	Washington SCO (Ecology 2013)	na	na	na
Silver	0.5	mg/kg	LEL (NOAA 2008)	na	na	na
Zinc	98	mg/kg	ARCS (NOAA 2008)	na	na	na
Organochlorine Pesticides						
4,4'-DDD	2	µg/kg	ERL (Long and Morgan 1990)	6	mg/kg OC	SEL (Persaud et al. 1993)
4,4'-DDE	1.42	µg/kg	TEL (NOAA 2008)	19	mg/kg OC	SEL (Persaud et al. 1993)
4,4'-DDT	1	µg/kg	ERL (Long and Morgan 1990)	na	na	na
Aldrin	0.06	µg/kg	Dutch Target (NOAA 2008)	8	mg/kg OC	SEL (Persaud et al. 1993)
alpha-BHC	3	µg/kg	Dutch Target (NOAA 2008)	10	mg/kg OC	SEL (Persaud et al. 1993)
alpha-Chlordane	0.03	µg/kg	Dutch Target (NOAA 2008)	na	na	na
beta-BHC	5	µg/kg	LEL (Persaud et al. 1993; NOAA 2008); ESL (USEPA 2003c)	21	mg/kg OC	SEL (Persaud et al. 1993)

Table 3-6b. Selected freshwater sediment TSVs for benthic invertebrates

COI	Freshwater Sediment TSV					
	Value (dw)	Unit (dw)	Source (dw)	Value (OC)	Unit (OC)	Source (OC)
delta-BHC	10	µg/kg	Dutch Target (NOAA 2008)	na	na	na
Dieldrin	0.02	µg/kg	ERL (Long and Morgan 1990)	91	mg/kg OC	SEL (Persaud et al. 1993)
Endosulfan I	0.01	µg/kg	Dutch Target (NOAA 2008)	na	na	na
Endosulfan II	0.01	µg/kg	Dutch Target (NOAA 2008)	na	na	na
Endosulfan sulfate	34.6	µg/kg	ESL (USEPA 2003c)	na	na	na
Endrin	0.02	µg/kg	ERL (Long and Morgan 1990)	130	mg/kg OC	SEL (Persaud et al. 1993)
Endrin aldehyde	480	µg/kg	ESL (USEPA 2003c)	na	na	na
gamma-BHC (Lindane)	0.05	µg/kg	Dutch Target (NOAA 2008)	1	mg/kg OC	SEL (Persaud et al. 1993)
gamma-Chlordane	0.03	µg/kg	Dutch Target (NOAA 2008)	na	na	na
Heptachlor	0.3	µg/kg	NEL (Persaud et al. 1993)	na	na	na
Heptachlor epoxide	0.0002	µg/kg	Dutch Target (NOAA 2008)	5	mg/kg OC	SEL (Persaud et al. 1993)
Hexachlorobenzene	1.4	µg/kg	Dutch Target (NOAA 2008)	24	mg/kg OC	SEL (Persaud et al. 1993)
Methoxychlor	13.6	µg/kg	ESL (USEPA 2003c)	na	na	na
Total 2,4' and 4,4' DDD	3.54	µg/kg	ISQG (CCME 2002)	na	na	na
Total 2,4' and 4,4' DDE	1.42	µg/kg	ISQG (CCME 2002)	na	na	na
Total 2,4' and 4,4' DDT	1.19	µg/kg	ISQG (CCME 2002)	71	mg/kg OC	SEL (Persaud et al. 1993)
Total chlordane	0.03	µg/kg	Dutch Target (NOAA 2008)	6	mg/kg OC	SEL (Persaud et al. 1993)
Total DDx	3	µg/kg	ERL (Long and Morgan 1990)	12	mg/kg OC	SEL (Persaud et al. 1993)
Organometals						
TBT	47	µg/kg	Washington SCO (Ecology 2013)	na	na	na
PAHs						
2-Methylnaphthalene	20.2	µg/kg	ESL (USEPA 2003c); ISQG (CCME 2002)	na	na	na

Table 3-6b. Selected freshwater sediment TSVs for benthic invertebrates

COI	Freshwater Sediment TSV					
	Value (dw)	Unit (dw)	Source (dw)	Value (OC)	Unit (OC)	Source (OC)
Acenaphthene	6.71	µg/kg	ESL (USEPA 2003c); ISQG (CCME 2002); TEL (NOAA 2008)	491	mg/kg OC	SGV (NYSDEC 2014)
Acenaphthylene	5.87	µg/kg	ESL (USEPA 2003c); ISQG (CCME 2002); T EL (NOAA 2008)	452	mg/kg OC	SGV (NYSDEC 2014)
Anthracene	10	µg/kg	ARCS (NOAA 2008)	370	mg/kg OC	SEL (Persaud et al. 1993)
Benzo(a)anthracene	15.72	µg/kg	ARCS (NOAA 2008)	841	mg/kg OC	SGV (NYSDEC 2014)
Benzo(a)pyrene	31.9	µg/kg	ISQG (CCME 2002); TEL (NOAA 2008)	964	mg/kg OC	SGV (NYSDEC 2014)
Benzo(b/j)fluoranthene	10,400	µg/kg	ESL (USEPA 2003c)	979	mg/kg OC	SGV (NYSDEC 2014)
Benzo(e)pyrene	19,340	µg/kg	SGV (NYSDEC 2014)	967	mg/kg OC	SGV (NYSDEC 2014)
Benzo(g,h,i)perylene	170	µg/kg	LEL (Persaud et al. 1993; NOAA 2008); ESL (USEPA 2003c)	320	mg/kg OC	SEL (Persaud et al. 1993)
Benzo(k)fluoranthene	27.2	µg/kg	ARCS (NOAA 2008)	980	mg/kg OC	SGV (NYSDEC 2014)
Chrysene	26.83	µg/kg	ARCS (NOAA 2008)	460	mg/kg OC	SEL (Persaud et al. 1993)
Dibenzo(a,h)anthracene	6.22	µg/kg	ISQG (CCME 2002); TEL (NOAA 2008)	130	mg/kg OC	SEL (Persaud et al. 1993)
Fluoranthene	31.46	µg/kg	ARCS (NOAA 2008)	708	mg/kg OC	SGV (NYSDEC 2014)
Fluorene	10	µg/kg	ARCS (NOAA 2008)	160	mg/kg OC	SEL (Persaud et al. 1993)
Indeno(1,2,3-CD)pyrene	17.32	µg/kg	ARCS (NOAA 2008)	320	mg/kg OC	SEL (Persaud et al. 1993)
Naphthalene	14.65	µg/kg	ARCS (NOAA 2008)	385	mg/kg OC	SGV (NYSDEC 2014)
Perylene	19,340	µg/kg	SGV (NYSDEC 2014)	967	mg/kg OC	SGV (NYSDEC 2014)
Phenanthrene	18.73	µg/kg	ARCS (NOAA 2008)	597	mg/kg OC	SGV (NYSDEC 2014)
Pyrene	44.27	µg/kg	ARCS (NOAA 2008)	698	mg/kg OC	SGV (NYSDEC 2014)
Total HPAHs	193	µg/kg	ARCS (NOAA 2008)	na	na	na
Total LPAHs	76.42	µg/kg	ARCS (NOAA 2008)	na	na	na

Table 3-6b. Selected freshwater sediment TSVs for benthic invertebrates

COI	Freshwater Sediment TSV					
	Value (dw)	Unit (dw)	Source (dw)	Value (OC)	Unit (OC)	Source (OC)
Total PAHs	264.1	µg/kg	ARCS (NOAA 2008)	10,000	mg/kg OC	SEL (Persaud et al. 1993)
PCBs						
Aroclor-1254	60	µg/kg	ISQG (CCME 2002); LEL (Persaud et al. 1993; NOAA 2008); TEL (NOAA 2008)	34	mg/kg OC	SEL (Persaud et al. 1993)
Aroclor-1260	5	µg/kg	LEL (Persaud et al. 1993)	24	mg/kg OC	SEL (Persaud et al. 1993)
Total PCB Congeners	0.3	µg/kg	Dutch Target (NOAA 2008)	530	mg/kg OC	SEL (Persaud et al. 1993)
PCB TEQ[a]	0.85	ng/kg	ISQG (CCME 2002)	na	na	na
PCDDs/PCDFs						
2,3,7,8-TCDD	0.12	ng/kg	ESL (USEPA 2003c)	na	na	na
PCDD/PCDF TEQ[a]	0.85	ng/kg	ISQG (CCME 2002)	na	na	na
Total TEQ[a]	0.85	ng/kg	ISQG (CCME 2002)	na	na	na
SVOCs						
2,4-Dinitrotoluene	14.4	µg/kg	ESL (USEPA 2003c)	na	na	na
2,6-Dinitrotoluene	39.8	µg/kg	ESL (USEPA 2003c)	na	na	na
4-Methylphenol	260	µg/kg	Washington SCO (Ecology 2013)	na	na	na
Bis-(2-ethylhexyl)phthalate	100	µg/kg	Dutch Target (NOAA 2008)	na	na	na
Butylbenzylphthalate	100	µg/kg	Dutch Target (NOAA 2008)	na	na	na
Dibenzofuran	200	µg/kg	Washington SCO (Ecology 2013)	na	na	na
Diethylphthalate	295	µg/kg	ESL (USEPA 2003c)	na	na	na
Dimethylphthalate	1,000	µg/kg	Dutch Target (NOAA 2008)	na	na	na
Di-n-butylphthalate	110	µg/kg	UET (NOAA 2008)	na	na	na
Di-n-octylphthalate	39	µg/kg	Washington SCO (Ecology 2013)	na	na	na

Table 3-6b. Selected freshwater sediment TSVs for benthic invertebrates

COI	Freshwater Sediment TSV					
	Value (dw)	Unit (dw)	Source (dw)	Value (OC)	Unit (OC)	Source (OC)
Isophorone	432	µg/kg	ESL (USEPA 2003c)	na	na	na
Pentachlorophenol	10	µg/kg	Dutch Target (NOAA 2008)	na	na	na
Phenol	48	µg/kg	UET (NOAA 2008)	na	na	na
VOCs						
1,2,3-Trichlorobenzene	11	µg/kg	Dutch Target (NOAA 2008)	na	na	na
1,2,4-Trichlorobenzene	11	µg/kg	Dutch Target (NOAA 2008)	na	na	na
1,2-Dichlorobenzene	30	µg/kg	Dutch Target (NOAA 2008)	na	na	na
1,3-Dichlorobenzene	30	µg/kg	Dutch Target (NOAA 2008)	na	na	na
1,4-Dichlorobenzene	30	µg/kg	Dutch Target (NOAA 2008)	na	na	na
1,4-Dioxane	119	µg/kg	ESL (USEPA 2003c)	na	na	na
2-Butanone	35,000	µg/kg	Dutch Intervention (NOAA 2008)	na	na	na
Acetone	9.9	µg/kg	ESL (USEPA 2003c)	na	na	na
Benzene	10	µg/kg	Dutch Target (NOAA 2008)	na	na	na
Carbon disulfide	23.9	µg/kg	ESL (USEPA 2003c)	na	na	na
Chlorobenzene	200	µg/kg	EqP SGV (NYSDEC 2014)	na	na	na
Chloroform	20	µg/kg	Dutch Target (NOAA 2008)	na	na	na
Cyclohexane	100	µg/kg	Dutch Target (NOAA 2008)	na	na	na
Ethylbenzene	30	µg/kg	Dutch Target (NOAA 2008)	na	na	na
Isopropylbenzene	210	µg/kg	EqP SGV (NYSDEC 2014)	na	na	na
m, p-Xylene	130	µg/kg	Dutch Target (NOAA 2008)	na	na	na
MTBE	100,000	µg/kg	Dutch Intervention (NOAA 2008)	na	na	na
Methylene chloride	18	µg/kg	Dutch Target (NOAA 2008)	na	na	na

Table 3-6b. Selected freshwater sediment TSVs for benthic invertebrates

COI	Freshwater Sediment TSV					
	Value (dw)	Unit (dw)	Source (dw)	Value (OC)	Unit (OC)	Source (OC)
o-Xylene	89	µg/kg	Dutch Target (NOAA 2008)	na	na	na
Styrene	200	µg/kg	Dutch Target (NOAA 2008)	na	na	na
Tetrachloroethylene	990	µg/kg	ESL (USEPA 2003c)	na	na	na
Toluene	10	µg/kg	Dutch Target (NOAA 2008)	na	na	na
Trichloroethene	7.8	µg/kg	Dutch Target (NOAA 2008)	na	na	na
Herbicides						
2,4,5-TP (Silvex)	0.675	mg/kg	ESL (USEPA 2003c)	na	na	na
2,4-D	1.273	mg/kg	ESL (USEPA 2003c)	na	na	na
Other						
Cyanide	0.0001	mg/kg	ESL (USEPA 2003c)	na	na	na

[a] TEQs based on fish TEFs were evaluated as COIs for benthic invertebrates (USEPA 2015a, b, 2016). There is high uncertainty in evaluating TEQs for benthic invertebrates because there is limited evidence for ligand activation of the AH (dioxin) cellular receptor in these organisms; as such, they are not susceptible to the dioxin-like effects reported for vertebrates (e.g., fish) (Van den Berg et al. 1998). TEFs needed to derive TEQs are available for only fish, birds, and mammals (Van den Berg et al. 1998), and the fish TEFs were used to derive TEQs for comparison to TSVs for benthic invertebrates. TEQs for PCDDs/PCDFs and coplanar dioxin-like PCBs were not evaluated as COIs for other receptor groups, including amphibians/reptiles and aquatic plants; the evidence for ligand activation of the AH receptor in these receptor groups is unknown.

ARCS – Assessment and Remediation of Contaminated Sediments
BHC – benzene hexachloride
COI – chemical of interest
DDD – dichlorodiphenyldichloroethane
DDE – dichlorodiphenyldichloroethylene
DDT – dichlorodiphenyltrichloroethane
dw – dry weight
ERL – effects range–low
ESL – ecological screening level
MTBE – methyl tert-butyl ether
LPAH – low-molecular-weight polycyclic aromatic hydrocarbon
LEL – lowest effects level
na – not applicable
NEL – no-effects level
NOAA – National Oceanic and Atmospheric Administration
OC – organic carbon
PAH – polycyclic aromatic hydrocarbon
PCB – polychlorinated biphenyl
SGV – sediment guidance value
SVOC – semivolatile organic compound
TCDD – tetrachlorodibenzo-*p*-dioxin
TBT – tributyltin
TEF – toxic equivalency factor
TEL – threshold effects level
TEQ – toxic equivalent
TSV – toxicity screening value
total DDx – sum of all six DDT isomers (2,4′-DDD, 4,4′-DDD, 2,4′-DDE, 4,4′-DDE, 2,4′-DDT and 4,4′-DDT)

HPAH – high-molecular-weight polycyclic aromatic hydrocarbon

ISQG – interim sediment quality guideline

PCDD/PCDF – polychlorinated dibenzodioxins/polychlorinated dibenzofurans

SCO – sediment cleanup objective

SEL – severe effects level

USEPA – US Environmental Protection Agency

VOC – volatile organic compound

3.3.1.2 Plant-specific soil TSVs

Because toxicity data for effects on aquatic plants exposed to contaminated sediment are limited, soil-based screening-level effects thresholds were developed to identify sediment COPECs for aquatic plants. There is uncertainty associated with the use of soil-based values to screen potential risks to plants based on exposure to sediment.

These levels were selected based on USEPA's current ecological soil screening levels (Eco-SSLs). Eco-SSLs represent a calculated geometric mean of toxicity values based on a review of soil toxicity data and terrestrial plants. If Eco-SSLs were not available for a particular COI, then the Oak Ridge National Laboratory (ORNL) soil screening benchmarks from Efroymson et al. (1997) were used. ORNL screening benchmarks represent a 10th percentile of lowest-observed-adverse-effect levels (LOAELs) reported in the literature (or the lowest LOAEL available if limited data were available) that are considered conservative for the screening of chemicals in soil (Efroymson et al. 1997). Table 3-7 presents the plant-specific soil TSVs used in the SLERA.

Table 3-7. Selected soil TSVs for plants

Sediment COI	Soil-based TSV (mg/kg dw)	Source
Metals		
Antimony	5	ORNL Efroymson et al. (1997)
Arsenic	18	Eco-SSL
Beryllium	10	ORNL Efroymson et al. (1997)
Cadmium	32	Eco-SSL
Chromium	1	ORNL Efroymson et al. (1997)
Cobalt	13	Eco-SSL
Copper	70	Eco-SSL
Lead	120	Eco-SSL
Mercury	0.3	ORNL Efroymson et al. (1997)
Nickel	38	Eco-SSL
Selenium	0.52	Eco-SSL
Silver	560	Eco-SSL
Thallium	1	ORNL Efroymson et al. (1997)
Vanadium	2	ORNL Efroymson et al. (1997)
Zinc	160	Eco-SSL
Organic Compounds		
Acenaphthene	25	ORNL Efroymson et al. (1997)
Toluene	200	ORNL Efroymson et al. (1997)
Total PCBs	40	ORNL Efroymson et al. (1997)

COI – chemical of interest
dw – dry weight
Eco-SSL – ecological soil screening level
ORNL – Oak Ridge National Laboratory
PCB – polychlorinated biphenyl
TSV – toxicity screening value

3.3.2 Surface water TSVs

Two types of surface water TSVs were used in this SLERA:

- Aquatic life surface water TSVs
- Amphibian/reptile specific surface water TSVs

3.3.2.1 Aquatic life surface water TSVs

Potential chronic aquatic life surface water TSVs (for both freshwater and marine) were compiled from existing published national and regional water quality guidelines (WQGs) and benchmarks:

- **New Jersey Department of Environmental Protection (NJDEP) screening criteria for fresh and marine waters.** The NJDEP screening criteria are based on the numeric water quality criteria adopted under the NJDEP's water quality standards (NJDEP 2009). These water quality criteria have been adopted from USEPA ambient water quality criteria (AWQC), which are intended to be protective of ≥ 95% of aquatic taxa, or an alternative source, such as USEPA Region 5 Resource Conservation and Recovery Act (RCRA) ecological screening levels (ESLs). ESLs were derived from a variety of sources, which are footnoted in the original ESL source table (USEPA 2003c).
- **USEPA AWQC.** If not already selected as NJDEP screening criteria, current available AWQC were compiled for review (US Environmental Protection Agency 2016). AWQC are intended to be protective of ≥ 95% of aquatic taxa. The methodology for deriving USEPA AWQC is detailed in Stephan et al. (1985).
- **Canadian Council of Ministers of the Environmental (CCME) WQGs for the protection of aquatic life.** CCME WQGs for metals were selected as potential screening-level effects thresholds based on total concentrations (CCME 2016).[8]
- **Chronic Tier II values derived by ORNL.** Tier II values were developed Suter and Tsao (1996) as screening benchmarks for chemicals that lack the minimum taxonomic diversity requirements for calculating AWQC. Tier II values were developed for contaminants in freshwater.

For each surface water COI, the lowest available freshwater and saltwater screening value from the above sources was selected as the aquatic life surface water TSV (Table 3-8), with the exception of chromium, lead, nickel, selenium, and TBT, based on communication with USEPA (USEPA 2015a, b, 2016).

[8] A screening-level assessment of metals in surface water was conducted using total metal concentrations, regardless of whether the TSV is expressed as a dissolved or total concentration. The lowest of all available dissolved and total criteria values was selected (USEPA 2015a, b, 2016).

Table 3-8. Selected aquatic life surface water TSVs

COI	Chronic Surface Water Quality Values (µg/L)						
	NJDEP Levels		USEPA AWQC		CCME WQG[a]		Tier II
	Freshwater	Salt Water	Fresh Water	Salt Water	Fresh Water	Salt Water	Freshwater
Metals							
Antimony	80[b]	na	na	na	na	na	**30**
Arsenic	150[c,d]	36[c,d]	150[c,d]	36[c,d]	**5**	**12.5**	na
Beryllium	3.6[b]	na	na	na	na	na	**0.66**
Cadmium	0.18[c,f]	8.8[c]	0.72[c,f]	7.9[c]	**0.09[e]**	**0.12[e]**	na
Chromium	42[b]	na	**11[g, k]**	**50[g, k]**	1[g]	1.5[g]	na
Cobalt	24[b]	na	na	na	na	na	**23**
Copper	9.0[c,f]	**3.1[c]**	9.0[c,f]	3.1[c]	**2[e]**	na	na
Lead	5.4[c]	24[c]	**2.5[c,f, k]**	**8.1[c]**	1	na	na
Mercury	0.77[c]	0.94[c]	0.77[c,h]	0.94[c,h]	**0.026[e]**	**0.016**	1.30
Methylmercury	na	na	na	na	0.004	na	**0.0028**
Nickel	52[c,f]	22[c]	**52[c,f, k]**	**8.2[c, k]**	25	na	na
Selenium	5[c]	71[c]	3.1[c, k]	**71[c, k]**	**1**	na	na
Silver	**0.12[b]**	1.9[i]	3.2[c,f,i,j]	1.9[i]	0.25[e]	na	0.36
Thallium	10[b]	na	na	na	**0.8**	na	12
Vanadium	**12[b]**	na	na	na	na	na	20
Zinc	118[c,f]	**81[b]**	118[c,f]	81[c]	**30**	na	na
Butyltins							
TBT	na	na	**0.072[k]**	**0.0074[k]**	0.008	0.001	na
PAHs							
1-Methylnaphthalene	na	na	na	na	na	na	**2.1**
2-Methylnaphthalene	**330[b]**	na	na	na	na	na	na
Acenaphthene	38[b]	na	na	na	**5.8**	na	na
Acenaphthylene	**4,840[b]**	na	na	na	na	na	na
Anthracene	0.035[b]	na	na	na	**0.012**	na	0.73

Table 3-8. Selected aquatic life surface water TSVs

COI	Chronic Surface Water Quality Values (µg/L)						
	NJDEP Levels		USEPA AWQC		CCME WQG[a]		Tier II
	Freshwater	Salt Water	Fresh Water	Salt Water	Fresh Water	Salt Water	Freshwater
Benzo(a)anthracene	0.025[b]	na	na	na	**0.018**	na	0.027
Benzo(a)pyrene	**0.014[b]**	na	na	na	0.015	na	0.014
Benzo(b)fluoranthene	**9.07[b]**	na	na	na	na	na	na
Benzo(g,h,i)perylene	**7.64[b]**	na	na	na	na	na	na
Fluoranthene	1.9[b]	na	na	na	**0.04**	na	na
Fluorene	19[b]	na	na	na	**3**	na	3.9
Indeno(1,2,3-cd)pyrene	**4.31[b]**	na	na	na	na	na	na
Naphthalene	13[b]	na	na	na	**1.1**	**1.4**	12
Phenanthrene	3.6[b]	na	na	na	**0.4**	na	na
Pyrene	0.30[b]	na	na	na	**0.025**	na	na
VOCs							
1,1,1-Trichloroethane	76[b]	na	na	na	na	na	**11**
1,1-Dichloroethane	na	na	na	na	na	na	**47**
1,2,4-Trichlorobenzene	30[b]	na	na	na	**24**	**5.4**	110
1,2-Dichlorobenzene	14[b]	na	na	na	**0.7**	**42**	14
1,4-Dichlorobenzene	**9.4[b]**	na	na	na	26	na	15
Acetone	na	na	na	na	na	na	**1,500**
Benzene	**114[b]**	na	na	na	370	**110**	130
Carbon disulfide	na	na	na	na	na	na	**0.92**
Chlorobenzene	47[b]	na	na	na	**1.3**	**25**	64
Chloroform	140[b]	na	na	na	**1.8**	na	28
Ethylbenzene	14[b]	na	na	na	90	**25**	**7.3**
m,p-Xylene	27[b,l]	na	na	na	na	na	**13**
Tetrachloroethylene	**45[b]**	na	na	na	110	na	98
Toluene	253[b]	na	na	na	**2**	**215**	9.8

Table 3-8. Selected aquatic life surface water TSVs

COI	Chronic Surface Water Quality Values (µg/L)						
	NJDEP Levels		USEPA AWQC		CCME WQG[a]		Tier II
	Freshwater	Salt Water	Fresh Water	Salt Water	Fresh Water	Salt Water	Freshwater
Trichloroethene	47[b]	na	na	na	**21**	na	47
Vinyl chloride	**930[b]**	na	na	na	na	na	na
o-Xylene	27[b,l]	na	na	na	na	na	**13**
SVOCs							
1,1′-Biphenyl	na	na	na	na	na	na	**14**
2,4-Dimethylphenol	**100[b]**	na	na	na	na	na	na
2,4-Dinitrotoluene	**44[b]**	na	na	na	na	na	na
2-Methylphenol	na	na	na	na	na	na	**13**
4-Bromophenyl-phenylether	na	na	na	na	na	na	**1.5**
Bis(2-chloroethyl)ether	**1,900[b]**	na	na	na	na	na	na
BEHP	**0.3[b]**	na	na	na	16	na	3
Butyl benzyl phthalate	23[b]	na	na	na	na	na	**19**
Dibenzofuran	na	na	na	na	na	na	**3.7**
Diethylphthalate	**110[b]**	na	na	na	na	na	210
Di-n-butylphthalate	**9.7[b]**	na	na	na	19	na	35
n-Nitrosodiphenylamine	na	na	na	na	na	na	**210**
PCBs							
Total PCBs	**0.014**	**0.03**	0.014[m,n]	0.03[m,n]	na	na	0.14
PCB TEQ[q]	**3×10^{-9}[b]**	na	na	na	na	na	na
PCDD/PCDFs					na	na	na
2,3,7,8-TCDD	**3×10^{-9}[b]**	na	na	na	na	na	na
PCDD/PCDF TEQ[q]	**3×10^{-9}[b]**	na	na	na	na	na	na
Total TEQ[q]	**3×10^{-9}[b]**	na	na	na	na	na	na
Organochlorine Pesticides							
2,4′- DDD	na	na	na	na	na	na	**0.011**

Table 3-8. Selected aquatic life surface water TSVs

COI	Chronic Surface Water Quality Values (µg/L)						
	NJDEP Levels		USEPA AWQC		CCME WQG[a]		Tier II
	Freshwater	Salt Water	Fresh Water	Salt Water	Fresh Water	Salt Water	Freshwater
2,4′-DDT	na	na	na	na	na	na	**0.013**
4,4′-DDD	na	na	na	na	na	na	**0.011**
4,4′-DDE	**4.51×10^{-9} [b]**	na	na	na	na	na	na
4,4′-DDT	**0.001**	**0.001**	0.001[m,o]	0.001[m,o]	na	na	0.013
Total DDx	**0.001**	**0.001**	0.001[m,o]	0.001[m,o]	na	na	0.013
Aldrin	**0.017[b]**	na	3[i]	1.3[i]	na	na	na
alpha-BHC	12.4[b]	na	na	na	na	na	**2.2**
beta-BHC	**0.495[b]**	na	na	na	na	na	2.2
Total chlordane	**0.0043**	**0.004**	0.0043[m]	0.004[m]	na	na	na
delta-BHC	na	na	na	na	na	na	**2.2**
Dieldrin	**0.056**	**0.0019**	0.056	0.0019	na	na	na
Endosulfan I	0.056	0.0087	0.056	0.0087	**0.003**	**0.002**	0.051
Endosulfan II	0.056	0.0087	0.056	0.0087	**0.003**	**0.002**	0.051
Endosulfan sulfate	2.22[b]	na	na	na	na	na	**0.051**
Endrin	**0.036[m]**	**0.0023[m]**	0.036[m]	0.0023[m]	na	na	na
Endrin aldehyde	**0.15[b]**	na	na	na	na	na	na
gamma-BHC (Lindane)	0.026[b]	na	0.95[i]	**0.16[i]**	**0.01**	na	na
Heptachlor	**0.0038[m]**	**0.0036[m]**	0.0038[m]	0.0036[m]	na	na	0.0069
Heptachlor epoxide	**0.0038[m]**	**0.0036[m]**	0.0038[m]	0.0036[m]	na	na	na
Hexachlorobenzene	**0.0003[b]**	na	na	na	na	na	na
Methoxychlor	0.03	0.03	0.03	0.03	na	na	**0.019**
Other							
Cyanide	5.2[p]	**1.0[p]**	5.2[p]	1.0[p]	**5**	**na**	na

Bold identifies values selected as TSV for surface water.
Note – Where only a freshwater value is indicated as selected, this value was used as a surrogate for the salt water TSV as well.

[a] The CCME values selected for metals are based on total metal concentrations, unless otherwise noted.

[b] Criterion is based on USEPA Region 5. RCRA ESLs represent a protective benchmark, (e.g., water quality criteria, sediment quality guidelines/criteria, and chronic no adverse effect levels) for 223 contaminants and are not intended to serve as cleanup levels, but function as screening levels (USEPA 2003c). For metals, these criteria are based on total recoverable concentrations.

[c] Dissolved criterion that is presented as a function of the water effect ratio, which is equal to the default value of 1.0.

[d] Criterion derived using data for arsenic (III) but assumes equal parts of arsenic (III) and arsenic (V).

[e] Criterion is hardness dependent; value shown is based on a mid- to low-range hardness concentration selected by CCME for use when actual hardness is unknown (e.g., 50 mg/L as calcium carbonate).

[f] Criterion is hardness dependent; value shown is based on a hardness of 100 mg/L as calcium carbonate.

[g] Criterion is based on chromium (VI).

[h] Criteria based on inorganic mercury but recommended for total mercury.

[i] No chronic value available. Criterion listed is the acute criterion. Because the salt water value is based on acute data, the selected freshwater value (based on chronic) was selected as the salt water TSV.

[j] Dissolved criteria were selected for this COI in addition to the USEPA total criteria for screening.

[k] Selection of criteria to use as TSVs based on USEPA (2015a), USEPA (2015b), USEPA (2016); use of these criteria is therefore an exception to the rule of selecting the lowest available value.

[l] Xylene criteria value is used.

[m] This criterion is based on a 304(a) aquatic life criterion using the FRV procedure issued in 1980 or 1986, which is no longer in use by the USEPA for the derivation of chronic values for new or revised 304(a) aquatic life criteria.

[n] Criterion is applicable to total PCBs, including the sum of all congener or all isomer or homolog or Aroclor analyses.

[o] Criterion is applicable to DDT and its metabolites.

[p] Criterion expressed as free cyanide (as CN)/L.

[q] TEQs based on fish TEFs were evaluated as COIs for benthic invertebrates (USEPA 2015a, b, 2016) and fish. There is high uncertainty in the evaluation of TEQs for benthic invertebrates because there is limited evidence for ligand activation of the AH (dioxin) cellular receptor in these organisms and, as such, they are not susceptible to the dioxin-like effects reported for vertebrates (e.g., fish) (Van den Berg et al. 1998). TEFs needed to derive TEQs are available only for fish, birds, and mammals (Van den Berg et al. 1998), and fish TEFs were used to derive TEQs for comparison to TSVs for benthic invertebrates. TEQs for PCDDs/PCDFs and coplanar dioxin-like PCBs were not evaluated as COIs for other receptor groups, including amphibians/reptiles and aquatic plants; the evidence for ligand activation of the AH receptor in these receptor groups is unknown.

AWQC – ambient water quality criteria
BEHP – bis(2-ethylhexyl) phthalate
BHC – benzene hexachloride
CCME – Canadian Council of Ministers of the Environment
COI – chemical of interest
DDD – dichlorodiphenyldichloroethane
DDE – dichlorodiphenyldichloroethylene
DDT – dichlorodiphenyltrichloroethane
ESL – ecological screening level
FRV – final residue value
LPRSA – Lower Passaic River Study Area
na – not available
NJDEP – New Jersey Department of Environmental Protection
PCB – polychlorinated biphenyl
PCDD – pentachlorodibenzo-*p*-dioxin
PCDF – pentachlorodibenzofuran
RCRA – Resource Conservation and Recovery Act
SVOC – semivolatile organic compound
TBT – tributyltin
TCDD – tetrachlorodibenzo-*p*-dioxin
TEF – toxic equivalency factor
TEQ – toxic equivalent
total DDx – sum of all six DDT isomers (2,4′-DDD, 4,4′-DDD, 2,4′-DDE, 4,4′-DDE, 2,4′-DDT and 4,4′-DDT)
TSV – toxicity screening value
USEPA – US Environmental Protection Agency
VOC – volatile organic compound
WQG – water quality guideline

Amphibian/reptile-specific surface water TSVs

Selected amphibian/reptile-specific surface water TSVs are presented in Table 3-9. These surface water TSVs were selected as the lowest available chronic effect concentrations from a review of the scientific literature. Acute exposure data (i.e., 96 hrs or less) and sub-lethal exposure data (i.e., 7 days) were used to derive TSVs if chronic data were not available. Unlike the no-observed-adverse-effect levels (NOAELs) and LOAELs used to derive TSVs for tissue and diet, the surface water TSVs for amphibians/reptiles include only observed effect concentrations. This method is consistent with the methods used to derive AWQC (Stephan et al. 1985), which are one of the primary sources used to identify aquatic life surface water TSVs. A conservative acute-to-chronic conversion factor of 10 was applied to values based on acute or sub-lethal toxicity thresholds. The TSVs presented in Table 3-9 are expected to provide appropriately conservative screening-level threshold concentrations for use in identifying COPECs because they are concentrations representing effects for the most sensitive species based on a thorough search of available data from the scientific literature based on chronic exposures (when available).

Table 3-9. Selected surface water TSVs for amphibians/reptiles

COI	Test Species	Toxicity Value (µg/L)	Test Type (Duration)	Endpoint	Primary Source	TSV (µg/L)
Metals						
Antimony	eastern narrow-mouthed toad	300	sub-lethal (7 days)	survival	Birge et al. (1979b)	30
Arsenic	eastern narrow-mouthed toad	40	sub-lethal (7 days)	survival	Birge (1978)	4
Beryllium	spotted salamander	3,150	acute (96 hrs)	survival	Slonim and Ray (1975)	315
Cadmium	northern leopard frog	5.0	chronic (154 days)	survival	Gross et al. (2007)	5
Chromium	eastern narrow-mouthed toad	30	sub-lethal (7 days)	survival	Birge (1978)	3
Cobalt	eastern narrow-mouthed toad	50	sub-lethal (7 days)	survival	Birge (1978)	5
Copper	northern leopard frog	25	chronic (154 days)	growth and reproduction (development)	Chen et al. (2007)	25
Lead	eastern narrow-mouthed toad	40	sub-lethal (7 days)	survival	Birge (1978)	4
Mercury	African clawed frog	0.16	sub-lethal (7 days)	survival	Birge et al. (1979a)	0.016
Nickel	eastern narrow-mouthed toad	50	sub-lethal (7 days)	survival	Birge (1978)	5
Selenium	eastern narrow-mouthed toad	90	sub-lethal (7 days)	survival	Birge (1978)	9
Silver	common Indian toad	4.1	acute (96 hrs)	survival	Khangarot and Ray (1987)	0.41
Thallium	eastern narrow-mouthed toad	110	sub-lethal (7 days)	survival	Birge et al. (1979b)	11
Vanadium	eastern narrow-mouthed toad	250	sub-lethal (7 days)	survival	Birge (1978)	25
Zinc	eastern narrow-mouthed toad	10	sub-lethal (7 days)	survival	Birge (1978)	1
Butyltins						
TBT	common European frog	30	sub-lethal (5 days)	growth and survival	Laughlin and Linden (1982)	3
PAHs						
Benzo(a)pyrene	African clawed frog	8,700	acute (96 hours)	growth (development)	Propst et al. (1997)	870
Fluoranthene	African clawed frog	52	acute (96 hrs)	growth (development)	Hatch and Burton (1998)	5.2
Naphthalene	African clawed frog	2,100	acute (96 hrs)	survival	Edmisten and Bantle (1982)	210

Table 3-9. Selected surface water TSVs for amphibians/reptiles

COI	Test Species	Toxicity Value (µg/L)	Test Type (Duration)	Endpoint	Primary Source	TSV (µg/L)
PCBs						
Total PCBs	African clawed frog	0.855	chronic (115 days)	growth and reproduction (development)	Gutleb et al. (2007)	0.855
SVOCs						
2-methylphenol	African clawed frog	38,000	acute (48 hrs)	survival	Slooff and Baerselman (1980)	3,800
4-Chloroaniline	African clawed frog	10,000	chronic (90 days)	reproduction (development)	Dumpert (1987)	10,000
Di-n-butylphthalate	African clawed frog	100	chronic (5 weeks)	growth	Lee and Veeramachaneni (2005)	100
VOCs						
Acetone	African clawed frog	2×10^7	acute (48 hrs)	survival	Slooff and Baerselman (1980)	2×10^6
Benzene	northern leopard frog	3,660	acute (96 hrs)	survival	Birge and Cassidy (1983)	366
Carbon disulfide	ornate narrow-mouthed frog	1.5×10^8	acute (96 hrs)	growth	Ghate (1985)	1.5×10^7
Chlorobenzene	northern leopard frog	1,200	acute (96 hrs)	survival	Birge and Cassidy (1983)	120
Chloroform	northern leopard frog	4,160	acute (96 hrs)	survival	Birge and Cassidy (1983)	416
Tetrachloroethylene	wood frog	7,800	acute (96 hrs)	reproduction (development)	McDaniel et al. (2004)	780
Toluene	northern leopard frog	390	acute (96 hrs)	survival	Birge and Cassidy (1983)	39
Tricloroethene	African clawed frog	2.3	acute (96 hrs)	reproduction (development)	Rayburn et al. (1991)	0.23
m,p-Xylene	African clawed frog	41,000	acute (96 hrs)	reproduction (development)	Kononen and Gorski (1997)	4,100
o-Xylene						
Pesticides						
4,4′-DDD	Fowler's toad	140	acute (96 hrs)	survival	Mayer and Ellersieck (1986)	14
4,4′-DDT	wood frog	25	acute (24 hrs)	survival	Licht (1985)	2.5
Aldrin	Fowler's toad	68	acute (96 hrs)	survival	Mayer and Ellersieck (1986)	6.8
Dieldrin	African clawed frog	1.2	sub-lethal (10 days)	survival	Schuytema et al. (1991)	0.12

Table 3-9. Selected surface water TSVs for amphibians/reptiles

COI	Test Species	Toxicity Value (µg/L)	Test Type (Duration)	Endpoint	Primary Source	TSV (µg/L)
Endosulfan I	yellow-legged frog	0.55	chronic (34 days)	survival	Sparling and Fellers (2009)	0.55
Endosulfan II						
Endrin	Indian green pond frog	0.21	acute (96 hrs)	survival	Khangarot et al. (1985)	0.021
gamma-BHC (Lindane)	African clawed frog	500	chronic (12 weeks)	survival	Marchal-Segault and Ramade (1981)	500
Heptachlor	edible frog	4	chronic (60 days)	survival	Fenoglio et al. (2009)	4
Hexachlorobenzene	Fowler's toad	3,200	acute (96 hrs)	survival	Sanders (1970)	320
Methoxychlor	Fowler's toad	100	acute (48 hrs)	survival	Mayer and Ellersieck (1986)	10

BHC – benzene hexachloride
COI – chemical of interest
DDD – dichlorodiphenyldichloroethane
DDT – dichlorodiphenyltrichloroethane
PAH – polycyclic aromatic hydrocarbon
PCB – polychlorinated biphenyl
SVOC – semivolatile organic compound
TBT – tributyltin
TSV – toxicity screening value
VOC – volatile organic compound

3.3.3 Tissue TSVs

Four types of tissue TSVs were used in the SLERA:

- Invertebrate whole-body tissue TSVs
- Fish whole-body tissue TSVs
- Fish egg tissue TSVs
- Bird egg tissue TSVs

As described in Section 3.3.3.1 (see below), CPG conducted a comprehensive review of the primary literature to develop tissue TSVs for use in the SLERA. In addition, tissue TSVs selected for the SLERA are based on communications with, and previous documents developed by, USEPA Region 2 for the LPRSA (USEPA 2015a, b; 2016; and other communications with USEPA throughout 2015 and 2016). Therefore, as described in Section 3.3.3.2, the tissue TSVs used in this SLERA were based on previous LPRSA Region 2 documents, unless no TSVs were available. In the cases where no TSV was available from previous LPRSA Region 2 documents, TSVs were based on those recommended from the primary literature review. These TSVs are consistent with comments, responses, and directives received from USEPA on June 30, 2017 (USEPA 2017b), September 18, 2017 (USEPA 2017d), July 10, 2018 (USEPA 2018), January 2, 2019 (CDM 2019), and March 5, 2019 (USEPA 2019); during face-to-face meetings or conference calls on July 24, September 27, October 3, and November 6, 2017, and July 24 and August 16, 2018; and via additional deliverables and communications between the CPG and USEPA from August through December 2017, from July through September 2018, and from January through June 2019.

In addition, while the 2014 draft SLERA (Windward 2014) did not evaluate metals (other than mercury and selenium) in tissue due to the highly uncertain nature of their toxicity, 9 additional metals were evaluated in this revised SLERA, consistent with USEPA (2015a, 2015b, 2016). This revised SLERA also includes the evaluation of PAHs in fish tissue, also consistent with USEPA (2015a, 2015b, 2016), although it should be noted that TSVs are highly uncertain for fish and PAHs. The PAH parent compounds

[9] Limiting the tissue residue evaluation for metals to only organic forms is consistent with the findings of the SETAC-sponsored Pellston Workshop entitled *The Tissue Residue Approach for Toxicity Assessment* (Meador et al. 2011). Adams et al. (2011) summarized this workshop's conclusions on the utility of using whole-body tissue concentrations to predict the toxicity of metals. Adam et al. (2011) stated that it is difficult to develop broadly applicable and reliable TSVs for fish or invertebrate tissue and metals (except methylmercury and selenium) and some additional organometallic chemicals (i.e., butlytins) because of the wide range of strategies used by these organisms to store, detoxify, and excrete bioaccumulated metals (e.g., fish and invertebrates may regulate their body burdens of some metals, although metals regulation, and the strategy thereof, is species and metal specific).

are metabolized by fish following uptake, so toxicity is more likely related to some metabolites of the parent compounds that are not detoxified and excreted.

3.3.3.1 TSVs based on the primary literature

TSVs for tissue were based on NOAELs and LOAELs derived from published toxicology studies. These TSVs are intended to provide appropriate and conservative thresholds for use in identifying COPECs as part of a screening assessment. The following describes how these TSVs were derived and recommended.

Primary Literature Search

A review of original published toxicological studies was conducted for all tissue COIs. Original published toxicological studies that reported tissue residue TSVs were identified using the following sources:

- Environmental Residue Effects Database (ERED; USEPA/US Army Corps of Engineers [USACE] electronic database) (USACE 2016)
- ECOTOX database (USEPA electronic database)
- Jarvinen and Ankley (1999) (a compilation of tissue NOAELs and LOAELs)
- Values used in other Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) ERAs (including the draft Newark Bay SLERA (Battelle 2007a)).
- Scientific literature searches using search engines such as TOXNET

Screening-level NOAELs and LOAELs were derived from published toxicity studies and compiled into database tables for those studies that met the TSV acceptability criteria.

TSV Acceptability Criteria

Only studies that met the following TSV acceptability criteria were considered for selection:

- TSVs are based on endpoints that directly measure survival, growth, or reproduction. Adverse effects on populations may be inferred or extrapolated from measures related to impairments of these endpoints (USEPA 1997a); potential population-level impacts on ecological species are the focus of the CERCLA ERA process.
- TSVs are representative of NOAEL and/or LOAEL concentrations or doses. Both NOAELs and LOAELs commonly provide the basis for the TSVs used in ERAs in accordance with USEPA guidance (USEPA 1997a, 1998).
- TSVs are derived from controlled toxicity studies that used standardized and/or peer-reviewed experiment methods, in which a clear concentration- or

dose-response relationship was reported. This principle generally precludes the use of field studies;[10] however, field studies were deemed appropriate for the derivation of NOAELs. Chemical concentrations associated with an adverse effect in field studies (i.e., LOAELs) cannot be exclusively attributed to exposure to a single chemical; other chemicals and/or additional factors in the field may contribute to toxicity. A no-effect concentration from the field (i.e., NOAEL) indicates that regardless of the contribution of toxicity from other chemicals and non-chemical stressors, no effect is observed at that chemical concentration.

- TSVs are based on the exposure of an organism to a single chemical or specific mixtures of related chemicals (i.e., mixtures of chemicals within the same class, such as PCBs, PCDDs/PCDFs, PAHs, or DDTs and DDT metabolites). This principle generally excludes the use of field studies; however, as stated above, field studies were deemed appropriate for the derivation of NOAELs.
- TSVs reflect a preferred exposure route relevant to the TSV type (e.g., ingestion exposure for dietary TSVs)[11] (Appendix C, USEPA 1997a).
- TSVs are not based on bioaccumulation studies that do not measure effects on an appropriate endpoint (i.e., survival, growth, or reproduction). Bioaccumulation studies that report only corresponding uptake and bioaccumulation alone and do not measure effects on specific endpoints are not useful for application as TSVs.
- Unless no other data are available, TSVs for birds are not based on egg productivity or other reproductive endpoints in a domesticated species, such as chickens or Japanese quail, because these species have unnaturally high egg-laying rates and have toxicological and reproductive sensitivities that are very different from those of wild bird species. Comparing toxic threshold effects on reproductive endpoints for these species with reproductive endpoints for non-domesticated species is problematic because of differences in reproductive physiology.
- For tissue, TSVs are based on whole-body or egg tissue concentrations that are reported at the time that the effects are measured. Studies that do not report

[10] The uncertainty associated with field studies should be noted because the presence of multiple chemicals and other environmental factors may result in adverse effects that complicate the interpretation of the study results (USEPA 2003a). The use of toxicity data based on field studies is more appropriate for discussion in a BERA to provide additional information on how dose-response data and toxicity thresholds derived from controlled laboratory studies relate to studies that have been conducted in the field. NOAELs from field studies were considered acceptable for screening.

[11] For dietary TSVs, if dietary ingestion-based TSVs were not available for a particular chemical, other exposure routes (e.g., gavage, injection) were considered.

measured tissue concentrations will not be considered, unless no other studies are available and a tissue concentration can be estimated through the use of water or sediment exposure concentrations and bioconcentration factors (BFs) reported in the study.

The most conservative thresholds available from the published toxicological studies that met the criteria presented above were selected as the screening-level TSVs. For NOAELs and LOAELs based on survival, chronic studies (i.e., a reproductive study and/or a study with an exposure ≥ 28 days) were preferred. If data were not available from chronic studies, then the most conservative thresholds available for data from non-chronic studies (i.e., a study < 28 days duration such as acute mortality studies) were used to derive TSVs.

Recommendation of a NOAEL/LOAEL Value Based on the Primary Literature

The screening-level NOAEL and LOAEL selection process was conducted as follows to determine recommended TSVs based on the primary literature:

- In the first step, the lowest concentration or dose across all TSV studies that met the TSV acceptability criteria at which an effect was observed was selected as the screening-level LOAEL. However, for some screening-level TSVs for mammals, the lowest LOAEL based on an LPRSA-specific receptor (i.e., mink) was selected as the screening-level LOAEL if data were available to more accurately reflect potential toxicity to the LPRSA-specific receptors.[12]
- In the second step, the highest concentration or dose below the selected screening-level LOAEL that was based on the same study as the selected LOAEL was selected as the screening-level NOAEL. If no NOAEL was available from the same study that provided the screening-level LOAEL, no screening-level NOAEL was selected.

Literature-based Recommended TSVs

Screening-level tissue TSVs recommended the general literature are presented in Tables 3-10 through 3-13. All of the studies reviewed from the primary literature are presented in the TSV database, included as Supplement A3-1, which provides the details and derivation of all TSVs reviewed from the primary literature. Supplement A3-2 provides all the primarily literature citations for all TSVs reviewed from the primary literature.

[12] It should be noted that in some cases, selected TSVs are based on surrogate species that are not present in the LPRSA.

Table 3-10. Screening-level TSVs for benthic invertebrate tissue based on general literature review

COI	Test Species	NOAEL (mg/kg ww)	LOAEL (mg/kg ww)	Endpoint	Source
Metals					
Mercury/methylmercury	copepod	0.048	0.095	reproduction	Hook and Fisher (2002)
Selenium	midge	< 0.05[a]	0.51	growth	Malchow et al. (1995)
Butyltins					
TBT	polychaete	0.22	0.54	growth	Meador and Rice (2001)
PAHs					
Benzo(a)pyrene	polychaete	na	23.2	growth	Rice et al. (2000)
Dibenzothiophene	water flea	na	280	survival (48 hrs)	Eastmond et al. (1984)
Fluoranthene	amphipod	8.1	22.2	growth, reproduction[b]	Schuler et al. (2007)
Fluorene	amphipod	na	111	survival (10 days)	Lee et al. (2002)
Naphthalene	amphipod	na	640	survival (10 days)	Landrum et al. (2003)
Phenanthrene	amphipod	na	1,400	survival (28 days)	Landrum et al. (2003)
Pyrene	amphipod	na	770	survival (28 days)	Landrum et al. (2003)
Total PAHs	zebra mussel	6.58[c]	na	survival (34 days)	Roper et al. (1997)
Total PAHs	polychaete	na	25	survival (26 days)	Morales-Caselles et al. (2008)
SVOCs					
BEHP	blue mussel	153	na	survival (28 days)	(Brown and Thompson 1982)
PCDDs/PCDFs					
2,3,7,8-TCDD	crayfish	na	0.003	survival (45 days)	Ashley et al. (1996)
PCBs					
Total PCBs	horseshoe crab	na	31.9	survival (96 days)	(Neff and Giam 1977)
Pesticides					
Aldrin	ostracod	1.7	na	survival (64 weeks)	Kawatski and Schmulbach (1971)
Chlordane	pink shrimp	0.71	1.7	survival (96 hours)	Parrish et al. (1976)

Table 3-10. Screening-level TSVs for benthic invertebrate tissue based on general literature review

COI	Test Species	NOAEL (mg/kg ww)	LOAEL (mg/kg ww)	Endpoint	Source
Total DDx	amphipod	0.060	0.13	survival (56 days)	Nimmo et al. (1970)
Dieldrin	pink shrimp	na	0.080	survival (96 hours)	(Parrish et al. 1973)
Endosulfan	grass shrimp	0.08	0.207	survival (96 hours)	Schimmel et al. (1977a)
Endrin	stonefly	0.031	0.07	survival (28 days)	(Anderson and DeFoe 1980)
Heptachlor	pink shrimp	0.01	0.033	survival (96 hours)	Schimmel et al. (1976)
Heptachlor epoxide	American oyster	0.01[a]	0.14	survival (96 hours)	Schimmel et al. (1976)
gamma-BHC	midge	na	0.015	survival (24 hours)	Fisher (1985)
Hexachlorobenzene	amphipod	10.6	15.8	survival (28 days)	Nebeker et al. (1989)
Methoxychlor	blue crab	na	0.34	survival (63 days – mean duration)	Bookhout et al. (1976)

[a] NOAEL is based on DL reported in study associated with no effect.
[b] Effects on multiple endpoints were observed.
[c] NOAEL is based on a field-derived NOAEL.

BEHP – bis(2-ethylhexyl) phthalate
BHC – benzene hexachloride
COI – chemical of interest
DDD – dichlorodiphenyldichloroethane
DDE – dichlorodiphenyldichloroethylene
DDT – dichlorodiphenyltrichloroethane
DL – detection limit
FFS – focused feasibility study
LOAEL – lowest-observed-adverse-effect level
na – not available
NOAEL – no-observed-adverse-effect level
PAH – polycyclic aromatic hydrocarbon
PCB – polychlorinated biphenyl
PCDD – polychlorinated dibenzo-*p*-dioxin
PCDF – polychlorinated dibenzofuran
SVOC – semivolatile organic compound
TCDD – tetrachlorodibenzo-*p*-dioxin
TBT – tributyltin
total DDx – sum of all six DDT isomers (2,4′-DDD, 4,4′-DDD, 2,4′-DDE, 4,4′-DDE, 2,4′-DDT and 4,4′-DDT)
TSV – toxicity screening value
ww – wet weight

Table 3-11. Screening-level TSVs for fish whole-body tissue based on general literature review

COI	Test Species	NOAEL (mg/kg ww)	LOAEL (mg/kg ww)	Endpoint	Source
Metals					
Mercury/ methylmercury	mummichog	0.2	0.47	survival (42 days)	Matta et al. (2001)
Selenium	chinook salmon	1.1	2.1	growth	Hamilton et al. (1990)
Butyltins					
Dibutyltin	guppy	5.5	na	growth, survival[a]	Wester et al. (1990)
TBT	Japanese medaka	na	2.39	reproduction	Nirmala et al. (1999)
SVOCs					
BEHP	rainbow trout	0.39	na	reproduction	Mehrle and Mayer (1976)
PCDDs/PCDFs					
TEQ[b]	lake whitefish	0.000046	0.000085	growth	Fisk et al. (1997)
PCBs					
TEQ[b]	lake whitefish	0.000046	0.000085	growth	Fisk et al. (1997)
Total PCBs	common barbel	na	0.52–2.64[c]	reproduction	Hugla and Thome (1999)
Organochlorine Pesticides					
Chlordane	pinfish	na	16.6	survival (96 hours)	Parrish et al. (1976)
Total DDx	cutthroat trout	1.8	1.8	survival (612 days)	Allison et al. (1964)
Dieldrin	rainbow trout	0.12	0.2	survival (16 weeks)	Shubat and Curtis (1986)
Endosulfan	spot	na	0.031	survival (96 hours)	Schimmel et al. (1977a)
Endrin	fathead minnow	na	0.24	survival (300 days)	(Jarvinen and Tyo 1978)
gamma-BHC (lindane)	sheepshead minnow	na	79	survival (96 hours)	Schimmel et al. (1977b)
Heptachlor	sheepshead minnow	na	10.4	survival (28 days)	(Goodman et al. 1978)
Heptachlor epoxide	bluegill	na	0.8	growth	Andrews et al. (1966)
Hexachlorobenzene	fathead minnow	468	na	survival (28 days)	Schuytema et al. (1990)
Methoxychlor	brook trout	0.05	0.3	growth	Oladimeji and Leduc (1975)

[a] Effects on multiple endpoints were observed.
[b] TEQs were calculated using fish TEFs (Van den Berg et al. 1998).
[c] A LOAEL range was recommended from this study.

BEHP – bis(2-ethylhexyl) phthalate
BHC – benzene hexachloride
COI – chemical of interest
DDD – dichlorodiphenyldichloroethane
DDE – dichlorodiphenyldichloroethylene
DDT – dichlorodiphenyltrichloroethane
LOAEL – lowest-observed-adverse-effect level
na – not available
NOAEL – no-observed-adverse-effect level
PCB – polychlorinated biphenyl
PCDD – polychlorinated dibenzo-*p*-dioxin
PCDF – polychlorinated dibenzofuran
SVOC – semivolatile organic compound
TBT - tributyltin
TEF – toxic equivalency factor
TEQ – toxic equivalent
total DDx – sum of all six DDT isomers (2,4′-DDD, 4,4′-DDD, 2,4′-DDE, 4,4′-DDE, 2,4′-DDT and 4,4′-DDT)
TSV – toxicity screening value
ww – wet weight

Table 3-12. Screening-level TSVs for fish egg tissue based on general literature review

COI	Test Species	Units (ww)	NOAEL	LOAEL	Endpoint	Source
Metals						
Mercury/ methylmercury	catfish	µg/kg	6.0	60	survival	Birge et al. (1979a)
PCDDs/PCDFs						
TEQ[a]	brook trout, channel catfish, fathead minnow, Japanese medaka, lake herring, lake trout, northern pike, rainbow trout, white sucker and zebrafish	ng/kg	7.2	86	survival, growth, reproduction	Steevens et al. (2005)
PCBs						
Total PCBs	common barbel	µg/kg	25.8	258	reproduction (failure to spawn)	Hugla and Thome (1999)
Pesticides						
Total DDx	mummichog	µg/kg	160	850	reproduction (fertilization rate)	Crawford and Guarino (1976)

[a] TEQ was calculated using fish TEFs (Van den Berg et al. 1998).

COI – chemical of interest
DDD – dichlorodiphenyldichloroethane
DDE – dichlorodiphenyldichloroethylene
DDT – dichlorodiphenyltrichloroethane
LOAEL – lowest-observed-adverse-effect level
na – not available
NOAEL – no-observed-adverse-effect level
PCB – polychlorinated biphenyl
PCDD – polychlorinated dibenzo-p-dioxin
PCDF – polychlorinated dibenzofuran
TEF – toxic equivalency factor
TEQ – toxic equivalent
total DDx – sum of all six DDT isomers (2,4′-DDD, 4,4′-DDD, 2,4′-DDE, 4,4′-DDE, 2,4′-DDT and 4,4′-DDT)
TSV – toxicity screening value
ww – wet weight

Table 3-13. Screening-level TSVs for bird egg tissue based on general literature review

Egg Tissue COI	Test Species	NOAEL (mg/kg ww)	LOAEL (mg/kg ww)	Endpoint	Source
Metals					
Mercury/ methylmercury	mallard	na	0.74	reproduction (embryo development)	Heinz (1979)
PCDDs/PCDFs					
TEQ[a]	pigeon	na	0.001	reproduction (hatchability)	Janz and Bellward (1996)
PCBs					
Total PCBs	ringed turtle dove	na	16	reproduction (hatchability)	Peakall et al. (1972); Peakall and Peakall (1973)
Pesticides					
Dieldrin	pheasant	na	3.0	reproduction (offspring survival, egg production)	Genelly and Rudd (1956)
Total DDx	barn owl	na	12	reproduction (eggshell thickness, nestling mortality)	Mendenhall et al. (1983)

[a] TEQ was calculated using bird TEFs (Van den Berg et al. 1998).

COI – chemical of interest
DDD – dichlorodiphenyldichloroethane
DDE – dichlorodiphenyldichloroethylene
DDT – dichlorodiphenyltrichloroethane
LOAEL – lowest-observed-adverse-effect level
na – not available
NOAEL – no-observed-adverse-effect level
PCB – polychlorinated biphenyl
PCDD – polychlorinated dibenzo-p-dioxin
PCDF – polychlorinated dibenzofuran
TEF – toxic equivalency factor
TEQ – toxic equivalent
total DDx – sum of all six DDT isomers (2,4′-DDD, 4,4′-DDD, 2,4′-DDE, 4,4′-DDE, 2,4′-DDT and 4,4′-DDT)
TSV – toxicity screening value
ww – wet weight

3.3.3.2 Selected TSVs

TSVs from the following Region 2 sources were used to select TSVs for use in this SLERA; specific documents from which USEPA recommended TSVs include:

- USEPA's Lower Passaic River Restoration Project FFS (Louis Berger et al. 2014)
- USEPA's first draft of the LPRSA FFS (Malcolm Pirnie 2007)

If no TSVs were available from the above sources, TSVs were selected based on CPG's general search and review of the scientific toxicological literature, as detailed in Section 3.3.3.1. If no NOAEL paired with the selected LOAEL was available from the toxicological literature, the next lower acceptable NOAEL was selected. If no lower NOAEL was identified, a NOAEL was derived by dividing the LOAEL by an extrapolation factor of 10 (USEPA 2015a, b, 2016). The use of extrapolation factors results in a TSV with higher uncertainty.

For metals other than mercury or selenium that were not evaluated in the FFS, SLERA TSVs were based on the lowest TSVs associated with survival, growth, or reproduction LOAELs in whole-body tissue reported in USACE's ERED database (USACE 2016). This SLERA includes this evaluation of metals (other than mercury and selenium) in tissue or PAHs in fish tissue, consistent with USEPA (2015a, 2015b, 2016), which may have higher uncertainty (Adams et al. 2011).

Tissue TSVs used in this SLERA are summarized in Tables 3-14 through 3-17. Not all of the TSVs met the acceptability criteria described in Section 3.3.3.1; any components of the study that did not meet acceptability criteria or other key uncertainties are noted in Tables 3-14 through 3-17.

Table 3-14. Selected tissue TSVs for benthic invertebrates

Whole-body Tissue COI	Source	Test Species	TSV (mg/kg ww)		Endpoint	Literature Source
			NOAEL	LOAEL		
Metals						
Arsenic	ERED database	mayfly	0.0249	0.249	growth	Irving et al. (2008)
Cadmium	ERED database	water flea	0.11	0.16	reproduction	Sofyan et al. (2007)
Chromium	ERED database	stonefly	0.144	1.44	survival	Poulton et al. (1989)
Cobalt	ERED database	freshwater amphipod	0.1061	1.061	survival	Norwood et al. (2007)
Copper	revised FFS (Louis Berger et al. 2014)	clam	5	12	survival	Absil et al. (1996)
Lead	revised FFS (Louis Berger et al. 2014)	freshwater amphipod	0.52	2.6	survival	Borgmann & Norwood (1999)
Mercury/ methylmercury	revised FFS (Louis Berger et al. 2014)	copepod	0.048	0.095	reproduction	Hook and Fisher (2002)
Nickel	ERED database	freshwater amphipod	0.12	1.2	growth	Borgmann et al. (2001) as cited in ERED
Selenium	general literature search	midge	0.05	0.51	growth	Malchow et al. (1995)
Silver	ERED database	marine copepod	0.0019	0.019	reproduction	Hook and Fisher (2001) as cited in ERED
Thallium	ERED database	freshwater amphipod	1.2	12.06	reproduction	Borgmann et al. (1998) as cited in ERED
Vanadium	ERED database	sea cucumber	0.8	na	mortality	(Miramand et al. 1982) as cited in ERED
Zinc	ERED database	marine copepod	0.13	1.3	reproduction	Hook and Fisher (2002) as cited in ERED
Butyltins						
TBT	general literature search	polychaete	0.22	0.54	growth	Meador and Rice (2001)
PAHs						
LPAHs	revised FFS (Louis Berger et al. 2014)	estuarine polychaete	0.078	0.78	reproduction	Emery and Dillon (1996)

Table 3-14. Selected tissue TSVs for benthic invertebrates

Whole-body Tissue COI	Source	Test Species	TSV (mg/kg ww)		Endpoint	Literature Source
			NOAEL	LOAEL		
HPAHs	revised FFS (Louis Berger et al. 2014); updated by USEPA (2017a)	blue mussel	0.066	0.66	reproduction (ED50)	Eertman et al. (1993); Eertman et al. (1995)
SVOCs						
BEHP	general literature search	blue mussel	153	na	survival	(Brown and Thompson 1982)
PCDDs/PCDFs						
2,3,7,8-TCDD	revised FFS (Louis Berger et al. 2014)	eastern oyster	1.5×10^{-7}	1.3×10^{-6}	reproduction	Wintermyer and Cooper (2003)
PCDD/PCDF TEQ[a]						
Total TEQ[a]						
PCBs						
Total PCBs[b]	revised FFS (Louis Berger et al. 2014)	eastern oyster	0.0064	0.017	reproduction	Chu et al. (2000); Chu et al. (2003) as cited in Louis Berger et al. (2014), updated by USEPA (2017c)
PCB TEQ[a]	revised FFS (Louis Berger et al. 2014)	eastern oyster	1.5×10^{-7}	1.3×10^{-6}	reproduction	Wintermyer and Cooper (2003)
Organochlorine Pesticides						
Aldrin	general literature search	ostracod	1.7	na	survival	Kawatski and Schmulbach (1971)
Chlordane	general literature search	pink shrimp	0.71	1.7	survival	Parrish et al. (1976)
Total DDx[c]	revised FFS (Louis Berger et al. 2014)	amphipod	0.060	0.13	survival	Nimmo et al. (1970)
Dieldrin	revised FFS (Louis Berger et al. 2014)	pink shrimp	0.0016	0.008	survival	Parrish et al. (1973)
Endosulfan I	general literature search	grass shrimp	0.08	0.207	survival	Schimmel et al. (1977a)
Endosulfan II						

Table 3-14. Selected tissue TSVs for benthic invertebrates

Whole-body Tissue COI	Source	Test Species	TSV (mg/kg ww)		Endpoint	Literature Source
			NOAEL	LOAEL		
Endrin	general literature search	stonefly	0.031	0.07	survival	(Anderson and DeFoe 1980)
Heptachlor	general literature search	pink shrimp	0.01	0.033	survival	Schimmel et al. (1976)
Heptachlor epoxide	general literature search	American oyster	0.01	0.14	survival	Schimmel et al. (1976)
gamma-BHC	general literature search	midge	0.0015	0.015	survival	Fisher (1985)
Hexachloro-benzene	general literature search	amphipod	10.6	15.8	survival	Nebeker et al. (1989)
Methoxychlor	general literature search	blue crab	0.034	0.34	survival	Bookhout et al. (1976)

[a] TEQ was calculated using fish TEFs (Van den Berg et al. 1998). The evaluation of PCDDs/PCDFs and PCBs using a TEQ approach is highly uncertain for assessing the toxicity of invertebrates given that TEFs are available only for fish, birds, and mammals. PCDDs/PCDFs were screened by comparing the TSV based on 2,3,7,8-TCDD to benthic invertebrate tissue concentrations of 2,3,7,8-TCDD and fish TEQs (USEPA 2015a, b, 2016).

[b] PCBs were screened by comparing a TSV based on total PCBs with benthic invertebrate tissue concentrations of total PCBs.

[c] DDT and metabolites were screened by comparing a TSV based on total DDx with benthic invertebrate tissue concentrations of total DDx.

BEHP – bis(2-ethylhexyl) phthalate
BHC – benzene hexachloride
COI – chemical of interest
DDD – dichlorodiphenyldichloroethane
DDE – dichlorodiphenyldichloroethylene
DDT – dichlorodiphenyltrichloroethane
DL – detection limit
ED50 – dose that corresponds to a 50% increase in an adverse effect of an exposed population
ERED – Environmental Residue Effects Database
FFS – focused feasibility study
HPAH - high-molecular-weight polycyclic aromatic hydrocarbon
LOAEL – lowest-observed-adverse-effect level
LPAH – low-molecular-weight polycyclic aromatic hydrocarbon
na – not available
NOAEL – no-observed-adverse-effect level
PAH – polycyclic aromatic hydrocarbon
PCB – polychlorinated biphenyl
PCDD – polychlorinated dibenzo-*p*-dioxin
PCDF – polychlorinated dibenzofuran
SVOC – semivolatile organic compound
TBT – tributyltin
TCDD – tetrachlorodibenzo-*p*-dioxin
TEF – toxic equivalency factor
TEQ – toxic equivalent
total DDx – sum of all six DDT isomers (2,4′-DDD, 4,4′-DDD, 2,4′-DDE, 4,4′-DDE, 2,4′-DDT and 4,4′-DDT)
TSV – toxicity screening value
TSV – toxicity screening value
USEPA – US Environmental Protection Agency
ww – wet weight

Table 3-15. Selected tissue TSVs for fish

Whole-body Tissue COI	Source	Test Species	TSV (mg/kg ww)		Endpoint	Source
			NOAEL	LOAEL		
Metals						
Arsenic	ERED database	rainbow trout	0.040	0.40	survival	Tsai et al. (2011) as cited in ERED
Cadmium	ERED database	rainbow trout	0.00254	0.0254	growth	Ng et al. (2009) as cited in ERED
Chromium	ERED database	chinook salmon	0.128	1.28	survival	Farag et al. (2006) as cited in ERED
Copper	revised FFS (Louis Berger et al. 2014)	striped mullet	0.32	1.5	survival	Zyadah and Abdel-Baky (2000)
Lead	revised FFS (Louis Berger et al. 2014)	rainbow trout	0.4	4.0	reproduction	Holcombe et al. (1976)
Mercury/ methylmercury	revised FFS (Louis Berger et al. 2014)	various	0.052	0.26	survival	Beckvar et al. (2005)
Selenium	general literature search	chinook salmon	1.1	2.1	growth	Hamilton et al. (1990)
Silver	ERED database	rainbow trout	0.13	0.24	survival	Naddy et al. (2007) (ET&C 26:9) as cited in ERED
Zinc	ERED database	Atlantic salmon	19	23	survival	Holcombe et al. (1979) as cited in ERED
Butyltins						
Dibutyltin	general literature search	guppy	5.5	na	growth, survival	Wester et al. (1990)
TBT	general literature search	Japanese medaka	0.239	2.39	reproduction	Nirmala et al. (1999)
PAHs						
LPAHs	revised FFS (Louis Berger et al. 2014)	fathead minnow	0.26	2.6	reproduction	Hall and Oris (1991)
HPAHs	revised FFS (Louis Berger et al. 2014)	Pacific sand sole	0.21	2.1	mortality (LD_{51})	Hose et al. (1982)
PCDDs/PCDFs						
2,3,7,8-TCDD	revised FFS (Louis Berger et al. 2014)	mummichog	8.9×10^{-7}	1.8×10^{-6}	behavior (prey capture ability, growth)	Couillard et al. (2011)
PCDD/PCDF TEQ[a]						
Total TEQ[a]						

Table 3-15. Selected tissue TSVs for fish

Whole-body Tissue COI	Source	Test Species	TSV (mg/kg ww)		Endpoint	Source
			NOAEL	LOAEL		
PCBs						
Total PCBs[b]	revised FFS (Louis Berger et al. 2014)	Atlantic salmon	0.17	0.53	behavior (smolt seawater preference)	Lerner et al. (2007)
PCB TEQ[a]	revised FFS (Louis Berger et al. 2014)	mummichog	8.9×10^{-7}	1.8×10^{-6}	behavior (prey capture ability, growth)	Couillard et al. (2011)
Organochlorine Pesticides						
Total chlordane	general literature search	pinfish	1.66	16.6	survival	Parrish et al. (1976)
Total DDx[c]	revised FFS (Louis Berger et al. 2014)	various	0.078	0.39	growth, survival, reproduction, and behavior	Beckvar et al. (2005)
Dieldrin	revised FFS (Louis Berger et al. 2014)	rainbow trout	0.008	0.040	survival	Shubat and Curtis (1986)
Endosulfan I	general literature search	spot	0.0031	0.031	survival	Schimmel et al. (1977a)
Endosulfan II						
Endrin	general literature search	fathead minnow	0.024	0.24	survival	(Jarvinen and Tyo 1978)
gamma-BHC (lindane)	general literature search	sheepshead minnow	7.9	79	survival	Schimmel et al. (1977b)
Heptachlor	general literature search	sheepshead minnow	1.04	10.4	survival	(Goodman et al. 1978)
Heptachlor epoxide	general literature search	bluegill	0.08	0.8	growth	Andrews et al. (1966)
Hexachlorobenzene	general literature search	fathead minnow	468	na	survival	Schuytema et al. (1990)
Methoxychlor	general literature search	brook trout	0.05	0.3	growth	Oladimeji and Leduc (1975)

[a] TSVs are based on 2,3,7,8-TCDD; PCDDs/PCDFs and dioxin-like PCBs were screened based on a comparison of a TEQ screening-level TSV with a calculated TEQ concentration. Fish TEQ concentrations were determined using the most recent WHO-derived TEFs for fish (Van den Berg et al. 1998).

[b] Total PCBs were screened by comparing a TSV based on total PCBs with fish tissue concentrations of total PCBs.

[c] DDT and metabolites were screened by comparing a TSV based on total DDx with fish concentrations of total DDx.

BEHP – bis(2-ethylhexyl) phthalate
BHC – benzene hexachloride
COI – chemical of interest
DDD – dichlorodiphenyldichloroethane
DDE – dichlorodiphenyldichloroethylene
DDT – dichlorodiphenyltrichloroethane
ERED – Environmental Residue Effects Database
FFS – focused feasibility study
LOAEL – lowest-observed-adverse-effect level
LPAH – low-molecular-weight polycyclic aromatic hydrocarbon
LPRSA – Lower Passaic River Study Area
na – not available
NOAEL – no-observed-adverse-effect level
PAH – polycyclic aromatic hydrocarbon
PCB – polychlorinated biphenyl
TBT – tributyltin
TCDD – tetrachlorodibenzo-*p*-dioxin
TEF – toxic equivalency factor
TEQ – toxic equivalent
total DDx – sum of all six DDT isomers (2,4′-DDD, 4,4′-DDD, 2,4′-DDE, 4,4′-DDE, 2,4′-DDT and 4,4′-DDT)
TSV – toxicity screening value

HPAH – high-molecular-weight polycyclic aromatic hydrocarbon

PCDD – polychlorinated dibenzo-*p*-dioxin

PCDF – polychlorinated dibenzofuran

SVOC – semivolatile organic compound

WHO – World Health Organization

ww – wet weight

Table 3-16. Selected tissue TSVs for fish eggs

Fish Egg Tissue COI	Source	Test Species	Units (ww)	TSV		Endpoint	Primary Source
				NOAEL	LOAEL		
Metals							
Mercury/ methylmercury	draft FFS (Battelle 2007b)	catfish	µg/kg	6.0	60	survival	Birge et al. (1979a)
PCDDs/PCDFs							
PCDD/PCDF TEQ[a]	revised FFS (Louis Berger et al. 2014)	various[b]	ng/kg	7.2	86	survival, growth, reproduction	Steevens et al. (2005)
PCBs							
Total PCBs[c]	USEPA draft BERA comments (USEPA 2015b)	common barbel	µg/kg	25.8	258	reproduction (failure to spawn)	Hugla and Thome (1999)
PCB TEQ[a]	revised FFS (Louis Berger et al. 2014)	various[b]	ng/kg	7.2	86	survival, growth, reproduction	Steevens et al. (2005)
Pesticides							
Total DDx[d]	revised FFS (Louis Berger et al. 2014)	mummichog	µg/kg	160	850	reproduction (fertilization rate)	Crawford and Guarino (1976)

[a] TSVs are based on 2,3,7,8-TCDD; PCDDs/PCDFs and dioxin-like PCBs were screened based on a comparison of a TEQ TSV with a calculated TEQ. Fish TEQ concentrations were determined using the most recent WHO-derived TEFs for fish (Van den Berg et al. 1998).

[b] Includes the following species: brook trout, channel catfish, fathead minnow, Japanese medaka, lake herring, lake trout, northern pike, rainbow trout, white sucker, and zebrafish.

[c] Total PCBs were screened by comparing a TSV based on the sum of PCB congeners with fish tissue concentrations of total PCBs.

[d] DDT and metabolites were screened by comparing a TSV based on exposure to total DDx with fish tissue concentrations of total DDx.

BERA – baseline ecological risk assessment
COI – chemical of interest
DDD – dichlorodiphenyldichloroethane
DDE – dichlorodiphenyldichloroethylene
DDT – dichlorodiphenyltrichloroethane
FFS – focused feasibility study
LOAEL – lowest-observed-adverse-effect level
na – not available
NOAEL – no-observed-adverse-effect level
PCB – polychlorinated biphenyl
PCDD – polychlorinated dibenzo-p-dioxin
PCDF – polychlorinated dibenzofuran
TCDD – tetrachlorodibenzo-p-dioxin
TEF – toxic equivalency factor
TEQ – toxic equivalent
TSV – toxicity screening value
total DDx – sum of all six DDT isomers (2,4′-DDD, 4,4′-DDD, 2,4′-DDE, 4,4′-DDE, 2,4′-DDT and 4,4′-DDT)
TSV – toxicity screening value
USEPA – US Environmental Protection Agency
WHO – World Health Organization
ww – wet weight

Table 3-17. Selected tissue TSVs for bird egg

Bird Egg Tissue COI	Source	Test Species	TSV (mg/kg ww)		Endpoint	Source
			NOAEL	LOAEL		
Metals						
Mercury/ methylmercury	general literature search	mallard	0.074	0.74	reproduction	Heinz (1979)
PCDDs/PCDFs						
PCDD/ PCDF TEQ[a]	revised FFS (Louis Berger et al. 2014)	various[b]	0.000059	0.00015	various	USEPA (2003a)
PCBs						
Total PCBs	revised FFS (Louis Berger et al. 2014)	chicken	0.7	1.3	reproduction	Chapman (2003)
PCB TEQ[a]	revised FFS (Louis Berger et al. 2014)	various[b]	0.000059	0.00015	various	USEPA (2003a)
Pesticides						
Dieldrin	revised FFS (Louis Berger et al. 2014)	barn owl	0.20	8.1	eggshell thinning	Mendenhall et al. (1983)
Total DDx	revised FFS (Louis Berger et al. 2014)	brown pelican	0.5	3.0[d]	eggshell thinning	Blus (1984)

[a] TSVs for TEQ are based on 2,3,7,8-TCDD; PCDDs/PCDFs and dioxin-like PCBs were screened based on a comparison of a TEQ screening-level TSV with a calculated TEQ concentration. Bird egg TEQ concentrations were determined using the most recent WHO-derived TEFs for birds (Van den Berg et al. 1998).

[b] Total PCBs were screened by comparing a TSV based on the sum of PCB congeners with bird egg tissue concentrations of total PCBs.

[c] DDT and metabolites were screened by comparing a TSV based on exposure to total DDx with bird egg tissue concentrations of total DDx.

[d] The revised FFS (Louis Berger et al. 2014) cites a LOAEL from Blus (1984) as 3.7 mg/kg ww; however a LOAEL of 3.0 mg/kg ww was cited in Blus (1984).

COI – chemical of interest
DDD – dichlorodiphenyldichloroethane
DDE – dichlorodiphenyldichloroethylene
DDT – dichlorodiphenyltrichloroethane
FFS – focused feasibility study
LOAEL – lowest-observed-adverse-effect level
LPRSA – Lower Passaic River Study Area
na – not available
NOAEL – no-observed-adverse-effect level
PCB – polychlorinated biphenyl
PCDD – polychlorinated dibenzo-p-dioxin
PCDF – polychlorinated dibenzofuran
SSD – species sensitivity distribution
TCDD – tetrachlorodibenzo-*p*-dioxin
TEF – toxic equivalency factor
TEQ – toxic equivalent
total DDx – sum of all six DDT isomers (2,4′-DDD, 4,4′-DDD, 2,4′-DDE, 4,4′-DDE, 2,4′-DDT and 4,4′-DDT)
TSV – toxicity screening value
USEPA – US Environmental Protection Agency
WHO – World Health Organization
ww – wet weight

3.3.4 Dietary TSVs

Three types of dietary TSVs were used in the SLERA:

- Fish dietary dose TSVs
- Bird dietary dose TSVs
- Mammal dietary dose TSVs

Analogous to the tissue TSVs (Section 3.3.3) and as described in Section 3.3.4.1 (see below), a comprehensive review of the primary literature was conducted to develop dietary TSVs for use in this SLERA. Dietary TSVs were also selected based on communications with, and previous documents developed by, USEPA Region 2 for the LPRSA. In cases where no TSV was available from previous USEPA Region 2 documents, TSVs were based on those recommended by the primary literature review. These TSVs are consistent with the comments, responses, and directives received from USEPA on June 30, 2017 (USEPA 2017b), September 18, 2017 (USEPA 2017d), July 10, 2018 (USEPA 2018), January 2, 2019 (CDM 2019), and March 5, 2019 (USEPA 2019); during face-to-face meetings or conference calls on July 24, September 27, October 3, and November 6, 2017, and July 24 and August 16, 2018; and via additional deliverables and communications between the Cooperating Parties Group (CPG) and USEPA from August through December 2017, from July through September 2018, and from January through June 2019.

3.3.4.1 Recommended screening-level TSVs based on the primary literature

Screening-level TSVs for diet were based on NOAELs and LOAELs derived from published toxicology studies. These screening-level TSVs are intended to provide appropriately conservative thresholds for use in identifying COPECs as part of a screening assessment. The following describes how these TSVs were derived and recommended.

Primary Literature Search

A review of original published toxicological studies was conducted for all dietary COIs. Original published toxicological studies that reported dietary dose TSVs were identified using the following sources:

- ECOTOX database (USEPA electronic database)
- US Fish and Wildlife Service Contaminant Review Series electronic database
- ORNL database (Sample et al. 1996)
- Values used in other CERCLA ERAs (including the draft Newark Bay SLERA (Battelle 2007a)).
- Scientific literature searches using search engines such as TOXNET

TSV Acceptability Criteria

Screening-level NOAELs and LOAELs were derived from published toxicity studies and compiled into database tables for those studies that met the TSV acceptability criteria described in Section 3.3.3.1.

Recommendation of a NOAEL/LOAEL Value Based on the Primary Literature

The most conservative thresholds available from the published toxicological studies that met the criteria presented above were selected as the screening-level TSVs. Specifically, the screening-level dietary NOAEL and LOAEL selection process was conducted in the same manner as the NOAEL and LOAEL selection process for tissue, as described in Section 3.3.3.1.

Dietary Dose Derivation Methods

Dietary NOAELs and LOAELs are expressed as a daily dose in mg/kg bw/day. However, most studies reported toxicity results as the chemical concentration in food associated with adverse effects rather than as a daily dose. If the daily exposure dose was not presented in a study, it was derived using the reported concentration in food, the animal's body weight (kg), either the ingestion rate (kg/day) reported in the study or a published value, and the following equation:

$$\mathbf{TSV} = \frac{\mathbf{C_{diet} \times IR}}{\mathbf{BW}} \qquad \textbf{Equation 3-6}$$

Where:

TSV = toxicity reference value (mg/kg bw/day)
C_{diet} = chemical concentration in diet (mg/kg)
IR = ingestion rate (kg/day)
BW = body weight (kg)

Dietary chemical concentrations in toxicity studies are reported as either dry weight or wet weight, depending on the study (see Supplement A3-1 for details on studies evaluated). Chemical concentrations in the diet were converted from wet weight to dry weight or from dry weight to wet weight, as necessary, to correspond with the basis of the food ingestion rate (FIR), using the percent moisture in food. Calculated screening-level TSVs for diet, including the dietary concentrations, body weights, and ingestions rates used, were compiled in a database table. The approaches used to select appropriate values for body weight, percent moisture, and FIR to be used in these calculations are detailed as follows:

- **Body weight** – Body weight data from the primary study were used if reported. If body weight data were presented for different times during the exposure period, these data were used to generate an average body weight. If final body weights were not presented, initial body weights were used. If body weight data were presented for each dietary concentration level, average

body weights were calculated by concentration level, and these weights were used to derive corresponding TSVs. If no body weight data were provided in the study or data provided were not considered representative, species-specific body weights were identified from other literature sources or toxicity studies.

- **Food ingestion rate –** As available, ingestion rate data reported in the primary study for the corresponding NOAEL or LOAEL doses were applied. If only an average for all individuals was provided, it was assumed to be representative and applied. If an ingestion rate was not provided in the study, it was estimated as follows:
  - For fish, FIRs were determined from other literature sources for the same species. Or, if no literature was available, a daily ingestion rate of 2% of the body weight was assumed as a conservative estimate based on the FIRs commonly reported for laboratory toxicity studies.
  - If ingestion rates were not provided for birds, they were calculated using the allometric equation for the appropriate bird guild or taxa from Nagy (2001). For chicks, ingestion rates were determined using National Research Council (NRC) data (1984, 1994). The use of allometric equations for estimating ingestion rates is consistent with the methods described by USEPA (1997b).
  - Ingestion rates for mammals were calculated using the allometric equation for all laboratory mammals from USEPA (1988). Mink-specific ingestion rates were based on Bleavins and Aulerich (1981) if no mink ingestion rate was provided in the study. Drinking water ingestion rates (WIRs) were determined using Calder and Braun (1983). The use of allometric equations for estimating ingestion rates is consistent with the methods described by USEPA (1997b).
- **Percent moisture –** For fish, birds, and mammals, food concentrations were converted, as necessary, to the corresponding basis of the FIR (i.e., wet weight or dry weight) using percent moisture data provided in the study, if available.
  - For fish, if the weight basis of the dietary concentration was not reported, a commercial feed or pelleted diet was assumed to approximate a dry weight concentration, and 80% moisture content was assumed when the diet consisted of organism prey based on the moisture contents reported for various aquatic invertebrates and fish (USEPA 1997b).
  - For birds and mammals, if percent moisture content data were not reported in the study, published values were selected for the specific diet type using the NRC series on nutrient requirements (NRC 1994).

Literature-based Recommended TSVs

Screening-level dietary TSVs recommended in the general literature are presented in Tables 3-18 through 3-20. All of the studies reviewed from the primary literature are presented in the TSV database, included as Supplement A3-1, which provides the details and derivation of all TSVs reviewed. Supplement A3-2 provides literature citations for all TSVs reviewed from the primary literature.

Table 3-18. Screening-level TSVs for fish diet based on general literature review

Dietary COI	Units (ww)	Test Species	NOAEL	LOAEL	Endpoint	Source
Metals						
Arsenic	mg/kg bw/day	rainbow trout	0.40	0.60	growth	Erickson et al. (2010); Oladimeji et al. (1984)
Cadmium	mg/kg bw/day	rockfish	na	0.010	growth	Kim et al. (2004); Kang et al. (2005)
Chromium	mg/kg bw/day	grey mullet	0.19	na	growth	Walsh et al. (1994)
Cobalt	mg/kg bw/day	white carp	na	1.1	growth	Javed (2013)
Copper	mg/kg bw/day	rockfish	1.0	2.0	growth	Kang et al. (2005)
Lead	mg/kg bw/day	rainbow trout	134	na	growth	Goettl et al. (1976)
Mercury/ methylmercury	µg/kg bw/day	Atlantic croaker	na	1.5	reproduction	Alvarez et al. (2006)
Nickel	mg/kg bw/day	Indian carp	na	1.2	growth	Javed (2013)
Selenium	mg/kg bw/day	Chinook salmon	0.106	0.192	survival	Hamilton et al. (1990)
Silver	mg/kg bw/day	rainbow trout	70	na	growth	Galvez and Wood (1999)
Vanadium	mg/kg bw/day	rainbow trout	0.019	0.19	growth	Hilton and Bettger (1988)
Zinc	mg/kg bw/day	rainbow trout	19	38	growth	Takeda and Shimma (1977)
Butyltins						
TBT	µg/kg bw/day	zebrafish	na	12	growth, reproduction	Lima et al. (2015)
PAHs						
Benzo(a)pyrene	µg/kg bw/day	rockfish	30	40	growth	Kim et al. (2008)
Total PAHs	µg/kg bw/day	chinook salmon	6,200	18,000	growth	Meador et al. (2006)
PCBs						
Total PCB Congeners	µg/kg bw/day	barbel	na	50-250	reproduction	Hugla and Thome (1999)
PCDD/PCDFs						
TEQ[a]	ng/kg bw/day	rainbow trout	na	0.027	survival	Jones et al. (2001)

Table 3-18. Screening-level TSVs for fish diet based on general literature review

Dietary COI	Units (ww)	Test Species	NOAEL	LOAEL	Endpoint	Source
Organochlorine Pesticides						
Dieldrin	µg/kg bw/day	largemouth bass	8.1	na	growth, reproduction	Johnson et al. (2007)
Endosulfan	µg/kg bw/day	Atlantic salmon	11	na	growth	Petri et al. (2006)
Endrin	µg/kg bw/day	rainbow trout	43	145	growth	Grant and Mehrle (1973)
Total DDx	ug/kg bw/day	brook trout	na	143	reproduction	Macek (1968)

[a] TEQs were calculated using TEFs for fish from Van den Berg et al. (1998).

bw – body weight
COI – chemical of interest
LOAEL – lowest-observed-adverse-effect level
na – not available
NOAEL – no-observed-adverse-effect level
PAH – polycyclic aromatic hydrocarbon
PCB – polychlorinated biphenyl
PCDD – polychlorinated dibenzo-*p*-dioxin
PCDF – polychlorinated dibenzofuran
TBT – tributyltin
TEF – toxic equivalency factor
TEQ – toxic equivalent
TSV – toxicity screening value
ww – wet weight

Table 3-19. Screening-level TSVs for bird diet based on general literature review

Dietary COI	Test Species	NOAEL (mg/kg bw/day)	LOAEL (mg/kg bw/day)	Endpoint	Source
Metals					
Arsenic	mallard duck	10	40	reproduction	Stanley et al. (1994)
Cadmium	Japanese quail	na	4.0	growth	Richardson et al. (1974)
Chromium	black duck	1.0	5.0	reproduction	Haseltine et al. (unpublished), as cited in Sample et al. (1996)
Cobalt	chicken	na	23.1	growth and mortality	Diaz et al.(1994)
Copper	chicken	na	19	growth	Jensen and Maurice (1978)
Lead	Japanese quail	5.5	28	growth	Morgan et al. (1975)
Mercury/ methylmercury	mallard duck	0.050	na	reproduction	Heinz (1974); Heinz (1976)
		na	0.064		Heinz (1979)
Nickel	chicken	na	33	growth	Weber and Reid (1968)
Selenium	mallard duck	0.42	0.82	reproduction	Heinz et al. (1989)
Thallium	pheasant	na	24	survival	Hudson et al. (1984)
Vanadium	chicken	1.2	2.3	growth	Ousterhout and Berg (1980)
Zinc	chicken	82	124	growth	Roberson and Schaible (1960)
Butyltins					
TBT	Japanese quail	2.7	6.8	reproduction	Coenen et al. (1992); Schlatterer et al. (1993)
PAHs					
Benzo(a)-anthracene	northern bobwhite quail	0.58	na	survival	Brausch et al. (2010)
Benzo(a)pyrene	pigeon	na	1.4	reproduction	Hough el al. (1993)
Naphthalene	northern bobwhite quail	2,000	na	survival	Brausch et al. (2010)
Pyrene	northern bobwhite quail	2,000	na	survival	Brausch et al. (2010)
Total PAHs	mallard duck	40	na	growth	Patton and Dieter (1980)

Table 3-19. Screening-level TSVs for bird diet based on general literature review

Dietary COI	Test Species	NOAEL (mg/kg bw/day)	LOAEL (mg/kg bw/day)	Endpoint	Source
SVOCs					
BEHP	European starling	68	na	growth	O'Shea and Stafford (1980)
PCDDs/PCDFs					
TEQ[a]	ring-necked pheasant	0.000014	0.00014	mortality, growth reproduction	Nosek et al. (1992)
PCBs					
Total PCBs	ringed turtle dove	na	1.4	reproduction	Peakall et al. (1972); Peakall and Peakall (1973)
Organochlorine Pesticides					
Aldrin	quail	na	0.04	survival	Dewitt (1956)
Chlordane	bobwhite quail	na	20	survival	Hill et al. (1975); Heath et al. (1972)
Total DDx	barn owls	na	0.32	reproduction	Mendenhall et al. (1983)
Dieldrin	quail	0.080	0.12	survival	DeWitt (1956)
Endosulfan	gray partridge	10	na	reproduction	Abiola (1992)
Endrin	quail	0.070	0.20	survival	DeWitt (1956)
Heptachlor	bobwhite quail	na	5.0	survival	Hill et al. (1975); Heath et al. (1972)
Hexachloro-benzene	Japanese quail	1.1	5.0	survival	Vos et al. (1971)
gamma-BHC (Lindane)	mallard duck	1.6	3.6	reproduction	Chakravarty and Lahiri (1986)
Methoxychlor	zebra finch	34.6	346	reproduction	Gee et al. (2004)[b]

[a] TEQs were calculated using TEFs for birds from Van den Berg et al. (1998).
[b] Both studies had the same LOAEL and NOAEL.

BEHP – bis(2-ethylhexyl) phthalate
BHC – benzene hexachloride
bw – body weight
COI – chemical of interest
CPG – Cooperating parties Group
LOAEL – lowest-observed-adverse-effect level
na – not available
NOAEL – no-observed-adverse-effect level
PAH – polycyclic aromatic hydrocarbon
PAR – pathways analysis report
SVOC – semivolatile organic compound
TBT – tributyltin
TCDD – tetrachlorodibenzo-*p*-dioxin
TEF – toxic equivalency factor
TEQ – toxic equivalent

DDD – dichlorodiphenyldichloroethane
DDE – dichlorodiphenyldichloroethylene
DDT – dichlorodiphenyltrichloroethane
FFS – focused feasibility study
PCB – polychlorinated biphenyl
PCDD – polychlorinated dibenzo-*p*-dioxin
PCDF – polychlorinated dibenzofuran
total DDx – sum of all six DDT isomers (2,4′-DDD, 4,4′-DDD, 2,4′-DDE, 4,4′-DDE, 2,4′-DDT and 4,4′-DDT)
TSV – toxicity screening value
WHO – World Health Organization

Table 3-20. Screening-level TSVs for mammal diet based on general literature review

Dietary COI	Test Species	NOAEL (mg/kg bw/day)	LOAEL (mg/kg bw/day)	Endpoint	Source
Metals					
Antimony	rat	1,489	na	growth, survival	Hext et al. (1999)
Arsenic	rat	2.6	5.4	growth	Byron et al. (1967)
Cadmium	rat	3.5	13	growth	Machemer and Lorke (1981)
Chromium	rat	1,466	na	growth, survival	Ivankovic and Preussman (1975)
Cobalt	rat	na	1.0	growth	Chetty et al. (1979)
Copper	mink	18	26	reproduction	Aulerich et al. (1982)
Lead	rat	11	90	growth	Azar et al. (1973)
Mercury	mink	0.16	0.25	growth, survival	Wobeser et al. (1976b)
Nickel	rat	40	80	reproduction	Ambrose et al. (1976)
Selenium	rat	na	0.16	growth	Behne et al. (1992)
Thallium	rat	0.74	na	growth	Formigli et al. (1986)
Vanadium	rat	na	2.7	growth	Adachi et al. (2000)
Zinc	rat	160	320	reproduction	Schlicker and Cox (1968)
Organometals					
Dibutyltin	rat	3.8	7.6	reproduction, growth	Harazono and Ema (2003); Ema et al. (2003)
TBT	rat	0.4	2.0	reproduction	Omura et al. (2001)
PAHs					
1-methylnapthalene	rat	na	4,366	survival	Hodson (1985)
2-methylnapthalene	mouse	54	114	growth	Murata et al. (1997)
Benzo(a)pyrene	mouse	na	10	reproduction	MacKenzie and Angevine (1981)
Dibenzothiophene	mouse	na	470	survival	Leighton (1989)
Naphthalene	rat	50	150	growth	Navarro et al. (1991)
SVOCs					

Table 3-20. Screening-level TSVs for mammal diet based on general literature review

Dietary COI	Test Species	NOAEL (mg/kg bw/day)	LOAEL (mg/kg bw/day)	Endpoint	Source
4-methylphenol	mouse	na	1,248	survival	Schafer and Bowles al. (1985)
BEHP	mouse	44	91	reproduction	Tyl et al. (1988)
Benzaldehyde	mouse	na	1,250	survival	Schafer and Bowles al. (1985)
PCDDs/PCDFs					
TEQ[a]	mink	2.6×10^{-6}	8.8×10^{-6}	reproduction	Hochstein et al. (2001)
PCBs					
Total PCBs	mink	0.080	0.096	reproduction	Chapman et al. (2003)
Organochlorine Pesticides					
Aldrin	rat	0.83	4.1	survival	Reuber (1980)
Chlordane	mouse	0.18	0.92	growth	Khasawinah and Grutsch (1989)
Total DDx	rat	na	1.3	reproduction	Ware and Good (1967)
Dieldrin	rat	0.015	0.03	reproduction	Harr et al. (1970)
Endosulfan	mouse	0.84	2.5	growth, survival	Hack et al. (1995)
Endrin	mouse	na	0.92	survival, reproduction	Good and Ware (1969)
Heptachlor	mink	1.0	1.8	growth, survival, reproduction	Crum et al. (1993)
Hexachlorobenzene	mink and ferret	na	0.13	reproduction	Bleavins et al. (1984)
beta-BHC	rat	5.7	31	growth, survival	Van Velsen et al. (1986)
gamma-BHC (lindane)	rat	na	3.75	growth, reproduction	Sircar & Lahiri, (1989)
Methoxychlor	rat	na	56	growth, reproduction	You et al. (2002)
trans-Nonachlor	rat	2.5	25	growth, survival	Bondy et al. (2000)

[a] TEQs were calculated using TEFs for mammals from Van den Berg et al. (2006).

BEHP – bis(2-ethylhexyl) phthalate
BHC – benzene hexachloride
bw – body weight
LOAEL – lowest-observed-adverse-effect level
na – not available
NOAEL – no-observed-adverse-effect level
TBT – tributyltin
TCDD – tetrachlorodibenzo-p-dioxin
TEF – toxic equivalency factor

COI – chemical of interest
CPG – Cooperating Parties Group
DDD – dichlorodiphenyldichloroethane
DDE – dichlorodiphenyldichloroethylene
DDT – dichlorodiphenyltrichloroethane
FFS – focused feasibility study
PAH – polycyclic aromatic hydrocarbon
PAR – pathways analysis report
PCDD – polychlorinated dibenzo-p-dioxin
PCDF – polychlorinated dibenzofuran
PCB – polychlorinated biphenyl
SVOC – semivolatile organic compound
TEQ – toxic equivalent
total DDx – sum of all six DDT isomers (2,4′-DDD, 4,4′-DDD, 2,4′-DDE, 4,4′-DDE, 2,4′-DDT and 4,4′-DDT)
TSV – toxicity screening value
WHO – World Health Organization

3.3.4.2 Selected TSVs

Dietary TSVs used in this SLERA are based on previous documents developed by USEPA Region 2 for the LPRSA, when available; specific documents from which USEPA recommended include:

- USEPA's Lower Passaic River Restoration Project FFS (Louis Berger et al. 2014)
- USEPA's first draft of the LPRSA FFS (Malcolm Pirnie 2007)
- USEPA's LPR Restoration Project Pathways analysis report (PAR) (Battelle 2005)

If no TSVs were available from the above sources, TSVs were selected based on a general search and review of the scientific toxicological literature, as detailed in Section 3.3.4.1. If no NOAEL paired with the selected LOAEL was available from the toxicological literature, a NOAEL was derived by dividing the LOAEL by an extrapolation factor of 10 (USEPA 2015a, b, 2016). The use of extrapolation factors is uncertain and often results in highly conservative thresholds. Selected dietary TSVs are presented in Tables 3-21 through 3-23. Not all of the TSVs met the acceptability criteria described in Section 3.3.3.1; any components of the study that did not meet acceptability criteria or other key uncertainties are noted in Tables 3-21 through 3-23.

Table 3-21. Selected dietary TSVs for fish

Dietary COI	Units (ww)	Test Species	NOAEL	LOAEL	Endpoint	Source
Metals						
Arsenic	mg/kg bw/day	rainbow trout	0.4	0.60	growth	Erickson et al. (2010); (Oladimeji et al. 1984)
Cadmium	mg/kg bw/day	rockfish	0.0010	0.010	growth	Kim et al. (2004); Kang et al. (2005)
Chromium	mg/kg bw/day	grey mullet	0.19	na	growth	Walsh et al. (1994)
Cobalt	mg/kg bw/day	white carp	0.11	1.1	growth	Javed (2013)
Copper	mg/kg bw/day	rockfish	1.0	2.0	growth	Kang et al. (2005)
Lead	mg/kg bw/day	rainbow trout	134	na	growth	Goettl et al. (1976)
Mercury/ Methylmercury	µg/kg bw/day	Atlantic croaker	0.15	1.5	reproduction	Alvarez et al. (2006)
Nickel	mg/kg bw/day	Indian carp	0.12	1.2	growth	Javed (2013)
Selenium	mg/kg bw/day	chinook salmon	0.106	0.192	survival	Hamilton et al. (1990)
Silver	mg/kg bw/day	rainbow trout	70	na	growth	Galvez and Wood (1999)
Vanadium	mg/kg bw/day	rainbow trout	0.019	0.19	growth	Hilton and Bettger (1988)
Zinc	mg/kg bw/day	rainbow trout	19	38	growth	Takeda and Shimma (1977)
Butyltins						
TBT	µg/kg bw/day	zebrafish	1.2	12	growth, reproduction	Lima et al. (2015)
PAHs						
Benzo(a)pyrene	µg/kg bw/day	rockfish	30	40	growth	Kim et al. (2008)
Total PAHs	µg/kg bw/day	chinook salmon	6,200	18,000	growth	Meador et al. (2006)
PCBs						
Total PCB congeners	µg/kg bw/day	barbel	5	50	reproduction	Hugla and Thome (1999)
PCDDs/PCDFs						
TEQ[b]	ng/kg bw/day	rainbow trout	0.0027	0.027	survival	Jones et al. (2001)
Organochlorine Pesticides						
Dieldrin	µg/kg bw/day	largemouth bass	8.1	na	growth, reproduction	Johnson et al. (2007)
Endosulfan	µg/kg bw/day	Atlantic salmon	11	na	growth	Petri et al. (2006)

Table 3-21. Selected dietary TSVs for fish

Dietary COI	Units (ww)	Test Species	NOAEL	LOAEL	Endpoint	Source
Endrin	µg/kg bw/day	rainbow trout	43	145	growth	Grant and Mehrle (1973)
Total DDx	ug/kg bw/day	brook trout	14.3	143	reproduction	Macek (1968)

[a] No dietary TSVs were presented in any of the Region 2 documents; all TSVs were derived from the primary literature instead.

[b] TEQs were calculated using TEFs for fish from Van den Berg et al. (1998).

bw – body weight
COI – chemical of interest
DDD – dichlorodiphenyldichloroethane
DDE – dichlorodiphenyldichloroethylene
DDT – dichlorodiphenyltrichloroethane
LOAEL – lowest-observed-adverse-effect level
na – not applicable
NOAEL – no-observed-adverse-effect level
PAH – polycyclic aromatic hydrocarbon
PCB – polychlorinated biphenyl
PCDD – polychlorinated dibenzodioxins
PCDF – polychlorinated dibenzofurans
TBT – tributyltin
total DDx – sum of all six DDT isomers (2,4′-DDD, 4,4′-DDD, 2,4′-DDE, 4,4′-DDE, 2,4′-DDT and 4,4′-DDT)
TSV – toxicity screening value

Table 3-22. Selected dietary TSVs for birds

Dietary COI	Source	Test Species	TSV (mg/kg bw/day)		Endpoint	Primary Source
			NOAEL	LOAEL		
Metals						
Arsenic	PAR (Battelle 2005)	mallard duck	5.5	22.0	reproduction	Stanley et al. (1994) as cited in USEPA (2002)
Cadmium	PAR (Battelle 2005)	Japanese quail	0.08	10.4	growth	Richardson et al. (1974) as cited in USEPA (2002)
Chromium	general literature search	black duck	1.0	5.0	reproduction	Haseltine et al. (unpublished), as cited in Sample et al. (1996)
Cobalt	general literature search	chicken	2.31	23.1	growth and mortality	Diaz et al.(1994)
Copper	revised FFS (Louis Berger et al. 2014)	turkey	2.3	4.7	growth	Kashani et al. (1986) as cited in USEPA (2007b)
Lead	revised FFS (Louis Berger et al. 2014)	quail	0.19	1.9	reproduction	Edens and Garlich (1983) as cited in USEPA (2005)
Mercury/ methylmercury	revised FFS (Louis Berger et al. 2014)	mallard duck	0.013	0.026	reproduction	Heinz 1974, 1975, (1979), as cited in USEPA (1995)
Nickel	PAR (Battelle 2005)	mallard duck	1.38	56.3	growth	Cain & Pafford (1981) as cited in USEPA (2002)
Selenium	PAR (Battelle 2005)	mallard duck	0.23	0.93	reproduction	Heinz et al. (1989) as cited in USEPA (2002)
Thallium	general literature search	pheasant	2.4	24	survival	Hudson et al. (1984)
Vanadium	general literature search	chicken	1.2	2.3	growth	Ousterhout and Berg (1980)
Zinc	PAR (Battelle 2005)	mallard duck	17.2	172	growth, reproduction	Gasaway & Buss (1972) as cited in USEPA (2002)
Butyltins						
TBT	PAR (Battelle 2005)	quail	0.73	45.9	reproduction	Schlatterer et al. (1993) as cited in USEPA (2009)
PAHs[a]						
LPAHs	revised FFS (Louis Berger et al. 2014)	red-winged blackbird	0.67	6.7	survival	Schafer et al. (1983)
HPAHs	revised FFS (Louis Berger et al. 2014)	pigeon	0.048	0.48	reproduction	Hough et al. (1993)

Table 3-22. Selected dietary TSVs for birds

Dietary COI	Source	Test Species	TSV (mg/kg bw/day)		Endpoint	Primary Source
			NOAEL	LOAEL		
SVOCs						
BEHP	general literature search	European starling	68	na	growth	O'Shea and Stafford (1980)
PCDDs/PCDFs						
PCDD/PCDF TEQ[b]	revised FFS (Louis Berger et al. 2014)	pheasant	2.8×10^{-6}	2.8×10^{-5}	reproduction	Nosek et al. (1992) as cited in USEPA (1995)
Total TEQ[b]						
PCBs						
Total PCBs[c]	revised FFS (Louis Berger et al. 2014)	chicken	0.4	0.5	reproduction	Chapman (2003)
PCB TEQ[b]	revised FFS (Louis Berger et al. 2014)	pheasant	2.8×10^{-6}	2.8×10^{-5}	reproduction	Nosek et al. (1992) as cited in USEPA (1995)
Organochlorine Pesticides						
Aldrin	general literature search	quail	0.004	0.04	survival	Dewitt (1956)
Total chlordane	general literature search	bobwhite quail	2.0	20	survival	Hill et al. (1975); Heath et al. (1972)
Total DDx[d]	revised FFS (Louis Berger et al. 2014)	brown pelican	0.00090	0.027	reproduction	Anderson et al. (1975) as cited in USEPA (1995)
Dieldrin	revised FFS (Louis Berger et al. 2014)	crowned guinea fowl	0.054	0.18	survival	Wiese et al. (1969) as cited in USEPA (2007c)
Endosulfan I	general literature search	gray partridge	10	na	reproduction	Abiola (1992)
Endosulfan II						
Endrin	general literature search	quail	0.070	0.20	survival	DeWitt (1956)
Heptachlor	general literature search	bobwhite quail	0.50	5.0	survival	Hill et al. (1975); Heath et al. (1972)
Hexachloro-benzene	general literature search	Japanese quail	1.1	5.0	survival	Vos et al. (1971)

Table 3-22. Selected dietary TSVs for birds

Dietary COI	Source	Test Species	TSV (mg/kg bw/day)		Endpoint	Primary Source
			NOAEL	LOAEL		
gamma-BHC (Lindane)	general literature search	mallard duck	1.6	3.6	reproduction	Chakravarty and Lahiri (1986)
Methoxychlor	general literature search	zebra finch	34.6	346	reproduction	Gee et al. (2004)[e]
					survival	Millam et al. (2002)[e]

[a] PAHs were screened based on a comparison of a total HPAH and LPAH TSVs with calculated total HPAH and LPAH dietary doses, respectively.

[b] TSVs for TEQ are based on 2,3,7,8-TCDD; PCDDs/PCDFs and dioxin-like PCBs were screened based on a comparison of a TEQ screening-level TSV with a calculated TEQ. Bird TEQ dietary doses were determined using the most recent WHO-derived TEFs for birds (Van den Berg et al. 1998).

[c] Total PCBs were screened by comparing a TSV based on the sum of PCB congeners with bird dietary doses of total PCBs.

[d] DDT and metabolites were screened by comparing a TSV based on exposure to total DDx with bird dietary doses of total DDx.

BEHP – bis(2-ethylhexyl) phthalate
BHC – benzene hexachloride
bw – body weight
CF – conversion factor
COI – chemical of interest
CPG – Cooperating Parties Group
DDD – dichlorodiphenyldichloroethane
DDE – dichlorodiphenyldichloroethylene
DDT – dichlorodiphenyltrichloroethane
Eco-SSL – ecological soil screening level
FFS – focused feasibility study
HPAH – high-molecular-weight polycyclic aromatic hydrocarbon
LOAEL – lowest-observed-adverse-effect level
LPAH – low-molecular-weight polycyclic aromatic hydrocarbon
na – not available
NOAEL – no-observed-adverse-effect level
PAH – polycyclic aromatic hydrocarbon
PAR – pathways analysis report
PCB – polychlorinated biphenyl
PCDD – polychlorinated dibenzo-*p*-dioxin
PCDF – polychlorinated dibenzofuran
SVOC – semivolatile organic compound
TBT – tributyltin
TCDD – tetrachlorodibenzo-*p*-dioxin
TEF – toxic equivalency factor
TEQ – toxic equivalent
total DDx – sum of all six DDT isomers (2,4′-DDD, 4,4′-DDD, 2,4′-DDE, 4,4′-DDE, 2,4′-DDT and 4,4′-DDT)
TSV – toxicity screening value
USEPA – US Environmental Protection Agency
WHO – World Health Organization

Table 3-23. Selected dietary TSVs for mammals

Dietary COI	General literature search	Test Species	NOAEL (mg/kg bw/day)	LOAEL (mg/kg bw/day)	Endpoint	Source
Metals						
Antimony	general literature search	rat	1,489	na	growth, survival	Hext et al. (1999)
Arsenic	PAR (Battelle 2005)	rat	0.32	4.7	growth (NOAEL); cellular (LOAEL)	Schroeder et al. (1968) (NOAEL); Brown et al. (1976) (LOAEL), both as cited in USEPA (2002)
Cadmium	PAR (Battelle 2005)	mouse	0.06	2.64	reproduction	Webster (1988) (NOAEL); Schroeder & Mitchener (1971) (LOAEL), both as cited in USEPA (2002)
Chromium	general literature search	rat	1,466	na	growth, survival	Ivankovic and Preussman (1975)
Cobalt	PAR (Battelle 2005)	rat	1.2	20	reproduction	Domingo et al. (1985) (NOAEL); Mollenhauer et al. (1985) (LOAEL), both as cited in USEPA (2002)
Copper	revised FFS (Louis Berger et al. 2014)	mink	3.4	6.8	reproduction	Aulerich et al. (1982) as cited in USEPA (2007b)
Lead	revised FFS (Louis Berger et al. 2014)	rat	0.71	7.0	reproduction	Grant et al. (1980) as cited in USEPA (2005)
Mercury/ methylmercury	revised FFS (Louis Berger et al. 2014)	mink	0.016	0.027	growth	Wobeser et al. (1976a, b) as derived in USEPA (1995)
Nickel	PAR (Battelle 2005)	rat	0.133	31.6	reproduction	Smith et al. (1993) as cited in USEPA (2002)
Selenium	PAR (Battelle 2005)	mouse	0.05	1.21	liver (NOAEL); reproduction (LOAEL)	Harr et al. (1967) (NOAEL); Schroeder & Mitchener (1971) (LOAEL), both as cited in USEPA (2002)
Thallium	general literature search	rat	0.74	na	growth	Formigli et al. (1986)
Vanadium	general literature search	rat	0.27	2.7	growth	Adachi et al. (2000)
Zinc	PAR (Battelle 2005)	mouse (NOAEL); rat (LOAEL)	9.6	411	pancreas, adrenal cortex (NOAEL); reproduction (LOAEL)	Aughey et al. (1977) (NOAEL); Schlicker & Cox (1968) (LOAEL), both as cited in USEPA (2002)
Organometals						
Monobutyltin	PAR (Battelle 2005)	rat	0.25	15	reproduction	Smialowicz et al. (1989) (NOAEL); Ema et al. (1995) (LOAEL), both as cited in USEPA (2002)
Dibutyltin						

Table 3-23. Selected dietary TSVs for mammals

Dietary COI	General literature search	Test Species	NOAEL (mg/kg bw/day)	LOAEL (mg/kg bw/day)	Endpoint	Source
TBT						
TBT						
PAHs[a]						
Naphthalene	PAR (Battelle 2005)	rat	50	150	growth	Navarro et al. (1991)
LPAHs	revised FFS (Louis Berger et al. 2014)	rat	50	150	growth	Navarro et al. (1991) as cited in USEPA (2007d)
HPAHs	revised FFS (Louis Berger et al. 2014)	mouse	0.62	3.1	growth	Culp et al. (1998) as cited in USEPA (2007d)
SVOCs						
4-methylphenol	general literature search	mouse	124.8	1,248	survival	Schafer and Bowles al. (1985)
BEHP	general literature search	mouse	44	91	reproduction	Tyl et al. (1988)
Benzaldehyde	general literature search	mouse	125	1,250	survival	Schafer and Bowles al. (1985)
PCDDs/PCDFs						
PCDD/PCDF TEQ[b]	revised FFS (Louis Berger et al. 2014)	mink	8.0×10^{-8}	2.2×10^{-6}	reproduction	Tillett et al. (1996)
Total TEQ[b]						
PCBs						
Total PCBs[c]	revised FFS (Louis Berger et al. 2014)	mink	0.069	0.082	reproduction	Chapman (2003)
PCB TEQ[b]	revised FFS (Louis Berger et al. 2014)	mink	8.0×10^{-8}	2.2×10^{-6}	reproduction	Tillett et al. (1996)
Organochlorine Pesticides						
Aldrin	PAR (Battelle 2005)	rat	0.1	1.0	neuro-behavioral	Paul et al. (1992) as cited in USEPA (2002)

Table 3-23. Selected dietary TSVs for mammals

Dietary COI	General literature search	Test Species	NOAEL (mg/kg bw/day)	LOAEL (mg/kg bw/day)	Endpoint	Source
Total chlordane	general literature search	mouse	0.18	0.92	growth	Khasawinah and Grutsch (1989)
Total DDx[d]	revised FFS (Louis Berger et al. 2014)	rat	0.8	4.0	reproduction	Fitzhugh (1948)
Dieldrin	revised FFS (Louis Berger et al. 2014)	rat	0.015	0.03	reproduction	Harr et al. (1970)
Endosulfan I	general literature search	mouse	0.84	2.5	growth, survival	Hack et al. (1995)
Endosulfan II						
Endrin	general literature search	mouse	0.092	0.92	survival, reproduction	Good and Ware (1969)
Heptachlor	PAR (Battelle 2005)	rat	0.13	6.8	reproduction (NOAEL); development (LOAEL)	Shain et al. (1977) (NOAEL); Narotsky et al. (1995) (LOAEL), both as cited in USEPA (2002)
Hexachlorobenzene	general literature search	mink and ferret	0.013	0.13	reproduction	Bleavins et al. (1984)
beta-BHC	general literature search	rat	5.7	31	growth, survival	Van Velsen et al. (1986)
gamma-BHC (lindane)	PAR (Battelle 2005)	mouse (NOAEL); rat (LOAEL)	0.05	3.75	reproduction	Naishtein & Leibovich (1971) (NOAEL); Sircar & Lahiri, (1989) (LOAEL), as cited in USEPA (2002)
Methoxychlor	PAR (Battelle 2005)	rat	2.5	50	reproduction	Gray et al. (1989) as cited in USEPA (2002)
trans-Nonachlor	general literature search	rat	2.5	25	growth, survival	Bondy et al. (2000)

[a] PAHs were screened based on a comparison of a total HPAH and LPAH TSVs with calculated total HPAH and LPAH dietary doses, respectively.

[b] TSVs for TEQ are based on 2,3,7,8-TCDD; PCDDs/PCDFs and dioxin-like PCBs were screened based on a comparison of a TEQ TSV with a calculated TEQ. Mammal TEQ dietary doses were determined using the most recent WHO-derived TEFs for mammals (Van den Berg et al. 2006).

[c] Total PCBs were screened by comparing a TSV based on the sum of PCB congeners with mammal dietary doses of total PCBs.

[d] DDT and metabolites were screened by comparing a TSV based on exposure to total DDx with mammal dietary doses of total DDx.

BEHP – bis(2-ethylhexyl) phthalate
BHC – benzene hexachloride
bw – body weight
COI – chemical of interest
CPG – Cooperating Parties Group
DDD – dichlorodiphenyldichloroethane
DDE – dichlorodiphenyldichloroethylene
DDT – dichlorodiphenyltrichloroethane
FFS – focused feasibility study
HPAH – high-molecular-weight polycyclic aromatic hydrocarbon
LOAEL – lowest-observed-adverse-effect level
LPAH – low-molecular-weight polycyclic aromatic hydrocarbon
na – not available
NOAEL – no-observed-adverse-effect level
PAH – polycyclic aromatic hydrocarbon
PAR – pathways analysis report
PCDD – polychlorinated dibenzo-p-dioxin
PCDF – polychlorinated dibenzofuran
PCB – polychlorinated biphenyl
ppm – parts per million
SVOC – semivolatile organic compound
TBT – tributyltin
TCDD – tetrachlorodibenzo-p-dioxin
TEF – toxic equivalency factor
TEQ – toxic equivalent
total DDx – sum of all six DDT isomers (2,4′-DDD, 4,4′-DDD, 2,4′-DDE, 4,4′-DDE, 2,4′-DDT and 4,4′-DDT)
TSV – toxicity screening value
USEPA – US Environmental Protection Agency
WHO – World Health Organization

3.4 HAZARD QUOTIENT CALCULATIONS

For all LOEs evaluated, HQs were derived using the following equation:

$$HQ = \frac{MDC \text{ or } Dose}{TSV} \qquad \textbf{Equation 3-7}$$

Where:

HQ = hazard quotient (unitless)
MDC = maximum detected concentration
Dose = calculated exposure dose (based on maximum concentrations)
TSV = toxicity screening value

COIs with HQs ≥ 1.0 were identified as COPECs. All of the screening calculations are presented in the tables in Attachment A2; included are maximum concentrations, TSVs, and calculated HQs.

4 SLERA Results

The following subsections provide the results of the screening assessment for each of the ecological receptor groups.

4.1 BENTHIC INVERTEBRATES

The COPEC screening results of the three LOEs evaluated for the benthic invertebrate community (i.e., surface sediment, surface water, and tissue) are presented below.

4.1.1 Surface sediment

Table 4-1 presents the surface sediment COIs with maximum concentrations equal to or exceeding sediment TSVs; these COIs were identified as COPECs. Tables showing the comparison of maximum surface sediment concentrations to TSVs are presented in Attachment A2. Sediment COIs that could not be evaluated in the SLERA because no freshwater or estuarine TSVs were available are presented in Table 4-2. These COIs were retained for further evaluation in the BERA.

Table 4-1. Benthic invertebrate sediment COPECs

COI		
Metals		
Antimony	Copper	Silver
Arsenic	Lead	Vanadium[a]
Cadmium	Mercury/Methylmercury	Zinc
Chromium	Nickel	
Cobalt[a]	Selenium[a]	
Butyltins		
TBT[b]		
PAHs		
1-Methylnaphthalene[a]	Benzo(b/j)fluoranthene	Naphthalene
1-Methylphenanthrene[a]	Benzo(e)pyrene	Perylene[a]
2,6-Dimethylnaphthalene[a]	Benzo(g,h,i)perylene	Phenanthrene
2-Methylnaphthalene	Benzo(k)fluoranthene	Pyrene
Acenaphthene	Chrysene	Total benzofluoranthenes[a]
Acenaphthylene	Dibenzo(a,h)anthracene	Total HPAHs
Anthracene	Fluoranthene	Total LPAHs
Benzo(a)anthracene	Fluorene	Total PAHs
Benzo(a)pyrene	Indeno(1,2,3-cd)pyrene	

Table 4-1. Benthic invertebrate sediment COPECs

COI		
PCBs		
Aroclor-1254	Total PCBs	PCB TEQ[c]
Aroclor-1260		
PCDDs/PDCFs		
2,3,7,8-TCDD	PCDD/PCDF TEQ[c]	Total TEQ[c]
SVOCs		
2,4-Dinitrotoluene	Dibenzofuran	Isophorone
2,6-Dinitrotoluene[b]	Diethylphthalate[a]	n-Nitrosodiphenylamine[a]
4-Methylphenol	Dimethylphthalate[a]	Pentachlorphenol[a]
BEHP	Di-n-butylphthalate	Phenol
Butylbenzylphthalate	Di-n-octylphthalate	
Organochlorine Pesticides		
4,4'-DDD	Dieldrin	Heptachlor
4,4'-DDE	Endosulfan I	Heptachlor epoxide
4,4'-DDT	Endosulfan II	Hexachlorobenzene
Aldrin	Endrin	Methoxychlor
alpha-BHC	gamma-BHC (lindane)	Total chlordane
alpha-Chlordane	gamma-Chlordane	Total DDx
beta-BHC		
VOCs		
1,2,3-Trichlorobenzene	1,4-Dioxane[a]	m, p-Xylene[a]
1,2,4-Trichlorobenzene	Acetone	Toluene
1,4-Dichlorobenzene		
Herbicides		
2,4,5-TP (Silvex)		
Other		
Cyanide		

Note: COPECs are those COIs for which the maximum concentration equaled or exceeded its TSV. If a TSV was equaled or exceeded based on either freshwater or estuarine criteria in the freshwater or estuarine areas, respectively, it was retained as a COPEC for the entire LPRSA.

[a] COPEC based on estuarine TSV exceedance.

[b] COPEC based on freshwater TSV exceedance.

[c] TEQs are based on fish TEFs.

BEHP – bis(2-ethylhexyl) phthalate
BHC – benzene hexachloride
COI – chemical of interest
COPEC – chemical of potential ecological concern
PCB – polychlorinated biphenyl
PCDD – polychlorinated dibenzodioxins
PCDF – polychlorinated dibenzofurans
SVOC – semi-volatile organic compound

DDD – dichlorodiphenyldichloroethane
DDE – dichlorodiphenyldichloroethylene
DDT – dichlorodiphenyltrichloroethane
HPAH – high-molecular-weight polycyclic aromatic hydrocarbon
LPAH – low-molecular-weight polycyclic aromatic hydrocarbon
PAH – polycyclic aromatic hydrocarbon
TBT – tributyltin
TCDD – tetrachlorodibenzo-*p*-dioxin
TEF – toxic equivalency factor
TEQ – toxic equivalent
total DDx – sum of all six DDT isomers (2,4′-DDD, 4,4′-DDD, 2,4′-DDE, 4,4′-DDE, 2,4′-DDT and 4,4′-DDT)
TSV – toxicity screening value
VOC – volatile organic compound

Table 4-2. Sediment COIs with no sediment TSVs for benthic invertebrates

COI		
Metals		
Beryllium	Thallium	
Butyltins		
Dibutyltin	Tetrabutyltin	
Monobutyltin		
PAHs		
2,3,5-Trimethylnaphthalene	Dibenzothiophene	
SVOCs		
1,1′-Biphenyl	Acetophenone	Carbazole
Benzaldehyde	Caprolactam	n-Nitroso-di-n-propylamine
VOCs		
4-Methyl-2-pentanone	cis-1,2-Dichloroethylene	Methylcyclohexane
Chloromethane	Methyl acetate	
PCDDs/PCDFs		
Individual PCDDs/PCDFs other than 2,3,7,8-TCDD		
Organochlorine Pesticides		
Endrin ketone		
Herbicides		
2,4,5-T	2,4-DB	
TPH		
TPH – alkanes	TPH – purgeable	TPH – extractable

Note: While screening-level effects thresholds were unavailable for some individual COIs that were evaluated as a sum (e.g., alpha-chlordane, gamma-chlordane, oxychlordane, cis-nonachlor, and trans-nonachlor evaluated as total chlorane), these COIs are not included in this table since the individual components are included in a sum for which a screening-level threshold was available.

COI – chemical of interest
PAH – polycyclic aromatic hydrocarbon
PCDD– polychlorinated dibenzodioxins
PCDF –polychlorinated dibenzofurans
TCDD – tetrachlorodibenzo-*p*-dioxin
SVOC – semivolatile organic compound
TPH – total petroleum hydrocarbons
TSV – toxicity screening value
VOC – volatile organic compound

In addition to the COPEC screen, an additional comparison of sediment concentrations in the LPRSA to estuarine sediment thresholds used in the FFS was performed (USEPA 2015a, b, 2016). These are included as Attachment A5. This comparison does not result in any additional COPECs already listed in Table 4-1.

4.1.2 Surface water

Table 4-3 presents the surface water COIs with maximum concentrations equal to or exceeding surface water TSVs; these COIs were identified as COPECs. Tables showing the comparison of maximum surface water concentrations to aquatic life TSVs and amphibian/reptile TSVs are presented in Attachment A2. COIs that could not be evaluated in the SLERA because no freshwater or estuarine TSVs were available are presented in Table 4-4. These COIs were retained for further evaluation in the BERA.

Table 4-3. Surface water COPECs

COPEC		
Metals[a]		
Cadmium	Lead	Selenium
Chromium	Mercury	Silver
Copper	Nickel	Zinc
Butyltin		
TBT		
PAHs		
Anthracene	Benzo(a)pyrene	Pyrene
Benzo(a)anthracene	Fluoranthene	
SVOCs		
BEHP	Butylbenzylphthalate	
VOCs		
Trichloroethene		
PCBs		
Total PCBs	PCB TEQ[b]	
PCDDs/PCDFs		
2,3,7,8-TCDD	PCDD/PCDF TEQ[b]	Total TEQ[b]
Pesticides		
4,4'-DDE	Dieldrin	Total chlordane
4,4'-DDT	Hexachlorobenzene	Total DDx
Other		
Cyanide		

Note: COPECs are those COIs for which the maximum concentration equaled or exceeded its TSV. If a TSV was equaled or exceeded based on either freshwater or marine criteria in the freshwater or estuarine areas, respectively, it was retained as a COPEC for the entire LPRSA.

[a] Evaluated based on the total form of the metal, regardless of whether the TSV was based on dissolved or total.

[b] TEQs are based on fish TEFs.

BEHP – bis(2-ethylhexyl) phthalate
COI – chemical of interest
COPEC – chemical of potential ecological concern
DDD – dichlorodiphenyldichloroethane
DDE – dichlorodiphenyldichloroethylene
DDT – dichlorodiphenyltrichloroethane
LPRSA – Lower Passaic River Study Area
PAH – polycyclic aromatic hydrocarbon
PCB – polychlorinated biphenyl
PCDD– polychlorinated dibenzodioxins
PCDF –polychlorinated dibenzofurans
SVOC – semivolatile organic compound
TBT – tributyltin
TCDD – tetrachlorodibenzo-*p*-dioxin
TEF – toxic equivalency factor
TEQ – toxic equivalent
TSV – toxicity screening value
total DDx – sum of all six DDT isomers (2,4′-DDD, 4,4′-DDD, 2,4′-DDE, 4,4′-DDE, 2,4′-DDT and 4,4′-DDT)

Table 4-4. Surface water COIs with no surface water TSVs

COI		
Butyltins		
Monobutyltin	Dibutyltin	
PAHs		
1-Methylphenanthrene	Benzo(e)pyrene	Dibenzo(a,h)anthracene
2,3,5-Trimethylnaphthalene	Benzo(k)fluoranthene	Dibenzothiophene
2,6-Dimethylnaphthalene	Chrysene	Perylene
SVOCs		
2,6-Dinitrotoluene	Acetophenone	Caprolactam
4-Chloroaniline	Benzaldehyde	Carbazole
4-Methylphenol	Bis(2-chloroethoxy)methane	n-Nitroso-di-n-propylamine
PCDDs/PCDFs		
Individual PCDDs/PCDFs other than 2,3,7,8-TCDD		
Organochlorine Pesticides		
Endrin ketone		
VOCs		
1,4-Dioxane	Chloromethane	Isopropylbenzene
Bromodichloromethane	cis-1,2-Dichloroethylene	

Note: While TSVs were unavailable for some individual COIs that were evaluated as a sum (e.g., alpha-chlordane, gamma-chlordane, oxychlordane, cis-nonachlor, and trans-nonachlor evaluated as total chlorane), these COIs are not included in this table since the individual components are included in a sum for which a TSV was available.

COI – chemical of interest
PAH – polycyclic aromatic hydrocarbon
PCDD – polychlorinated dibenzo-*p*-dioxin
PCDF – polychlorinated dibenzofuran
SVOC – semivolatile organic compound
TCDD – tetrachlorodibenzo-*p*-dioxin
TSV – toxicity screening value
VOC – volatile organic compound

4.1.3 Tissue

Table 4-5 presents the tissue COIs with maximum benthic invertebrate tissue concentrations equal to or exceeding tissue TSVs; these COIs were identified as COPECs. Tables showing the comparison of maximum benthic invertebrate tissue concentrations to TSVs are presented in Attachment A2. COIs that could not be evaluated in the SLERA because no tissue TSVs for benthic invertebrates were available are presented in Table 4-6. These COIs were retained for further evaluation in the BERA.

Table 4-5. Benthic invertebrate tissue COPECs

COPEC	
Metals	
Arsenic	Mercury/methylmercury[a]
Cadmium	Nickel
Chromium	Selenium
Cobalt	Silver
Copper	Vanadium
Lead	Zinc
PAHs	
Total LPAHs	Total HPAHs
PCBs	
Total PCBs	PCB TEQ[b]
PCDDs/PCDFs	
2,3,7,8-TCDD	Total TEQ[b]
PCDD/PCDF TEQ[b]	
Organochlorine Pesticides	
Dieldrin	Total DDx
Heptachlor epoxide	

Note: COPECs are those COIs for which the maximum concentration equaled or exceeded its TSV. If a TSV was exceeded based on any invertebrate species evaluated, it was retained as a COPEC for all invertebrates.

[a] Total mercury is included as well as methylmercury because some of the TSVs were based on total mercury in tissue. For lower-trophic-level fish and invertebrate tissue, methylmercury is typically only slightly more than 50% of the total mercury. Methylmercury made up 84% in blue crab collected in 2009, but only 14% in bioaccumulation worms.

[b] TEQs are based on fish TEFs.

COI – chemical of interest
COPEC – chemical of potential ecological concern
DDD – dichlorodiphenyldichloroethane
DDE – dichlorodiphenyldichloroethylene
DDT – dichlorodiphenyltrichloroethane
HPAH – high-molecular-weight polycyclic aromatic hydrocarbon
LPAH – low-molecular-weight polycyclic aromatic hydrocarbon
PAH – polycyclic aromatic hydrocarbon
PCDD – polychlorinated dibenzo-*p*-dioxin
PCDF – polychlorinated dibenzofuran
TCDD – tetrachlorodibenzo-*p*-dioxin
TEF – toxic equivalency factor
TEQ – toxic equivalent
total DDx – sum of all six DDT isomers (2,4′-DDD, 4,4′-DDD, 2,4′-DDE, 4,4′-DDE, 2,4′-DDT and 4,4′-DDT)
TSV – toxicity screening value

Table 4-6. Tissue COIs with no tissue TSVs for benthic invertebrates

COIs		
Metals		
Antimony	Beryllium	
Butyltins		
Dibutyltin	Monobutyltin	Tetrabutyltin
Organochlorine Pesticides		
alpha-BHC	delta-BHC	Endrin aldehyde
beta-BHC	Endosulfan sulfate	Octachlorostyrene
PAHs		
1-Methylnaphthalene	2,6-Dimethylnaphthalene	Dibenzothiophene
1-Methylphenanthrene	2-Methylnaphthalene	Perylene
2,3,5-Trimethylnaphthalene	Benzo(e)pyrene	
SVOCs		
Acetophenone	Benzaldehyde	4-Methylphenol

BHC – benzene hexachloride
COI – chemical of interest
PAH – polycyclic aromatic hydrocarbon
SVOC – semivolatile organic compound
TSV – toxicity screening value

4.2 FISH

The COPEC screening results of the four LOEs evaluated for fish (i.e., surface water, tissue [whole body and egg], and dietary) are presented below.

4.2.1 Surface water

Table 4-3 presents the surface water COIs with maximum concentrations equal to or exceeding surface water TSVs; these COIs were identified as COPECs. Tables showing the comparison of maximum surface water concentrations to TSVs are presented in Attachment A2. COIs that could not be evaluated in the SLERA because no freshwater or estuarine TSVs were available are presented in Table 4-4. These COIs were retained for further evaluation in the BERA.

4.2.2 Tissue

Tissue data for fish were screened as empirical whole-body tissue concentrations and modeled fish egg mummichog tissue concentrations.

Table 4-7 presents the tissue COIs with maximum fish tissue concentrations equal to or exceeding tissue TSVs; these COIs were identified as COPECs. Tables showing the comparison of maximum fish tissue concentrations to TSVs are presented in Attachment A2. COIs that could not be evaluated in the SLERA because no tissue TSV for fish were available are presented in Table 4-8. These COIs were retained for further evaluation in the BERA.

Table 4-7. Fish tissue COPECs

COPEC	
Metals	
Arsenic	Mercury/Methylmercury[a]
Cadmium	Selenium
Chromium	Silver
Copper	Zinc
Lead	
PAHs	
Total HPAHs	Total LPAHs
PCBs	
Total PCBs	PCB-TEQ[b]
PCDDs/PCDFs	
2,3,7,8-TCDD	
PCDD/PCDF TEQ[b]	Total TEQ[b]
Organochlorine Pesticides	
Dieldrin	Total DDx
Endosulfan I	

Note: COPECs are those COIs for which the maximum concentration equaled or exceeded its TSV. If a TSV was equaled or exceeded based on any fish species evaluated, it was retained as a COPEC for all fish.

[a] Total mercury is included as well as methylmercury because some of the TSVs were based on total mercury in tissue. For lower-trophic-level fish and invertebrate tissue, methylmercury is typically only slightly more than 50% of the total mercury. Methylmercury made up 87% of the mercury in LPRSA fish collected in 2009 and 76% of the mercury in LPRSA mummichog collected in 2010.

[b] TEQs are based on fish TEFs.

COI – chemical of interest
COPEC – chemical of potential ecological concern
DDD – dichlorodiphenyldichloroethane
DDE – dichlorodiphenyldichloroethylene
DDT – dichlorodiphenyltrichloroethane
LPRSA – Lower Passaic River Study Area
PCB – polychlorinated biphenyl
PCDD– polychlorinated dibenzodioxin
PCDF – polychlorinated dibenzofuran
TCDD – tetrachlorodibenzo-*p*-dioxin
TEF – toxic equivalency factor.
TEQ – toxicity equivalent
total DDx – sum of all six DDT isomers (2,4′-DDD, 4,4′-DDD, 2,4′-DDE, 4,4′-DDE, 2,4′-DDT and 4,4′-DDT)
TSV – toxicity screening value

Table 4-8. Tissue COIs with no tissue TSVs for fish

COIs		
Metals		
Antimony	Cobalt	Thallium
Beryllium	Nickel	Vanadium
Butyltins		
Monobutyltin	Tetrabutyltin	

COIs		
PAHs		
1-Methylnaphthalene	2,6-Dimethylnaphthalene	Dibenzothiophene
1-Methylphenanthrene	2-Methylnaphthalene	Perylene
2,3,5-Trimethylnaphthalene	Benzo(e)pyrene	
Organochlorine Pesticides		
Aldrin	delta-BHC	Endrin aldehyde
alpha-BHC	Endosulfan sulfate	Endrin ketone
beta-BHC		
SVOCs		
Benzaldehyde		

COI– chemical of interest
BHC – benzene hexachloride
PAH – polycyclic aromatic hydrocarbon
SVOC – semivolatile organic compound
TSV – toxicity screening value

Table 4-9 presents the modeled egg tissue COIs with maximum concentrations equal to or exceeding egg tissue TSVs; these COIs were identified as COPECs. Tables showing the comparison of maximum modeled fish egg tissue concentrations to TSVs are presented in Attachment A2.

Table 4-9. Fish egg COPECs

COPEC	
Metals	
Mercury/methylmercury[a]	
PCBs	
Total PCBs	
PCDDs/PCDFs	
PCDD/PCDF TEQ[b]	Total TEQ[b]

Note: COPECs are those COIs for which the maximum concentration equaled or exceeded its TSV.

[a] Total mercury is included as well as methylmercury because some of the TSVs were based on total mercury in tissue. For lower-trophic-level fish and invertebrate tissue, methylmercury is typically only slightly more than 50% of the total mercury. Methylmercury made up 87% of the mercury in LPRSA fish collected in 2009 and 76% of the mercury in LPRSA mummichog collected in 2010.

[b] TEQs are based on fish TEFs.

COI – chemical of interest
COPEC – chemical of potential ecological concern
LPRSA – Lower Passaic River study Area
PCB – polychlorinated biphenyl
PCDD – polychlorinated dibenzodioxin
PCDF – polychlorinated dibenzofuran
TEF – toxic equivalency factor.
TEQ – toxic equivalent
TSV – toxicity screening value

4.2.3 Diet

Table 4-10 presents the diet COIs with maximum fish diet concentrations equal to or exceeding diet TSVs; these COIs were identified as COPECs. Tables showing the comparison of maximum fish diet doses to TSVs are presented in Attachment A2. COIs that could not be evaluated in the SLERA because no diet TSV for fish were available are presented in Table 4-11 These COIs were retained for further evaluation in the BERA.

Table 4-10. Fish dietary COPECs

COPEC	
Metals	
Cadmium	Nickel
Chromium	Selenium
Cobalt	Vanadium
Copper	Zinc
Mercury/methylmercury	
Butyltin	
TBT	
PAHs	
Benzo(a)pyrene	Total PAHs
PCBs	
Total PCBs	PCB TEQ[a]
PCDDS/PCDFs	
PCDD/PCDF TEQ[a]	Total TEQ[a]
Organochlorine Pesticides	
Total DDx	

Note: COPECs are those COIs for which the maximum modeled dietary dose equaled or exceeded its TSV. If a TSV was equaled or exceeded based on any fish species evaluated, it was retained as a COPEC for all fish.

[a] TEQs are based on fish TEFs.

COI – chemical of interest
COPEC – chemical of potential ecological concern
DDD – dichlorodiphenyldichloroethane
DDE – dichlorodiphenyldichloroethylene
DDT – dichlorodiphenyltrichloroethane
PAH – polycyclic aromatic hydrocarbon
PCB – polychlorinated biphenyl
PCDD – polychlorinated dibenzo-*p*-dioxin
PCDF – polychlorinated dibenzofuran
TEF – toxic equivalency factor
TEQ – toxic equivalent
TSV – toxicity screening value
total DDx – sum of all six DDT isomers (2,4′-DDD, 4,4′-DDD, 2,4′-DDE, 4,4′-DDE, 2,4′-DDT and 4,4′-DDT)

Table 4-11. Diet COIs with no diet TSVs for fish

COIs	
Metals	
Antimony	Thallium
Beryllium	
Butyltins	
Monobutyltin	Terabutyltin
Dibutyltin	
PAHs	
1-Methylnaphthalene	2-Methylnaphthalene
1-Methylphenanthrene	Benzo(e)pyrene
2,3,5-Trimethylnaphthalene	Dibenzothiophene
2,6-Dimethylnaphthalene	Perylene
Organochlorine Pesticides	
Aldrin	Heptachlor
alpha-BHC	Heptachlor epoxide
beta-BHC	Hexachlorobenze
delta-BHC	Methoxychlor
gamma-BHC (lindane)	cis-Nonachlor
alpha-Chordane	trans-nonachlor
gamma-chlordane	Oxychlordane
Endosulfan sulfate	Total chlordane
Endrin aldehyde	Total endosulfan
Endrin ketone	
SVOCs	
4-Methylphenol	Benzaldehyde
Acetophenone	Bis-(2-ethylhexyl)phthalate

BHC – benzene hexachloride
COI – chemical of interest
PAH – polycyclic aromatic hydrocarbon
SVOC – semivolatile organic compound
TSV – toxicity screening value

4.3 BIRDS

The COPEC screening results of the two LOEs evaluated for birds (i.e., dietary and egg tissue for piscivorous birds) are presented below.

4.3.1 Dietary

Table 4-12 presents the diet COIs with maximum bird diet concentrations equal to or exceeding diet TSVs; these COIs were identified as COPECs. Tables showing the comparison of maximum bird diet doses to TSVs are presented in Attachment A2. COIs that could not be evaluated in the SLERA because no diet TSV for birds were

available are presented in Table 4-13. These COIs were retained for further evaluation in the BERA.

Table 4-12. Bird dietary COPECs

COPEC		
Metals		
Cadmium	Lead	Selenium
Chromium	Mercury/ Methylmercury	Vanadium
Copper	Nickel	Zinc
PAHs		
Total LPAHs	Total HPAHs	
PCBs		
Total PCBs	PCB TEQ[a]	
PCDDs/PCDFs		
PCDD/PCDF TEQ[a]	Total TEQ[a]	
Organochlorine Pesticides		
Total DDx		

Note: COPECs are those COIs for which the maximum modeled dietary dose equaled or exceeded its TSV. If a TSV was equaled or exceeded based on any avian species evaluated, it was retained as a COPEC for all birds.

[a] TEQs are based on bird TEFs.

COI – chemical of interest
COPEC – chemical of potential ecological concern
DDD – dichlorodiphenyldichloroethane
DDE – dichlorodiphenyldichloroethylene
DDT – dichlorodiphenyltrichloroethane
HPAH – high-molecular-weight polycyclic aromatic hydrocarbon
LPAH – low-molecular-weight polycyclic aromatic hydrocarbon
PAH – polycyclic aromatic hydrocarbon
PCB – polychlorinated biphenyl
PCDD – polychlorinated dibenzodioxin
PCDF – polychlorinated dibenzofuran
TEF – toxic equivalency factor
TEQ – toxicity equivalent
total DDx – sum of all six DDT isomers (2,4′-DDD, 4,4′-DDD, 2,4′-DDE, 4,4′-DDE, 2,4′-DDT and 4,4′-DDT)
TSV – toxicity screening value

Table 4-13. Diet COIs with no diet TSVs for birds

COI			
Metals			
Antimony	Beryllium	Silver	
PAHs			
1-Methylnaphthalene	2,3,5-Trimethylnaphthalene	2-Methylnaphthalene	Dibenzothiophene
1-Methylphenanthrene	2,6-Dimethylnaphthalene	Benzo(e)pyrene	Perylene
SVOCs			
4-Methylphenol	Acetophenone	Benzaldehyde	
Organochlorine Pesticides			
alpha-BHC	delta-BHC	Endrin aldehyde	Heptachlor epoxide
beta-BHC	Endosulfan sulfate	Endrin ketone	

BHC – benzene hexachloride
COI – chemical of interest
PAH – polycyclic aromatic hydrocarbon
SVOC – semivolatile organic compound
TSV – toxicity screening value

4.3.2 Egg tissue

Table 4-14 presents the modeled piscivorous birds egg tissue COIs with maximum concentrations equal to or exceeding egg tissue TSVs; these COIs were identified as COPECs. Tables showing the comparison of maximum modeled bird egg tissue concentrations to TSVs are presented in Attachment A2.

Table 4-14. Bird egg COPECs

COPEC	
Metals	
Mercury/methylmercury	
PCBs	
Total PCBs	PCB TEQ[a]
PCDDs/PCDFs	
PCDD/PCDF TEQ[a]	Total TEQ[a]
Pesticides	
Total DDx	Dieldrin

Note: COPECs are those COIs for which the maximum concentration equaled or exceeded its TSV.
[a] TEQs are based on bird TEFs.

COI – chemical of interest
COPEC – chemical of potential ecological concern
DDD – dichlorodiphenyldichloroethane
DDE – dichlorodiphenyldichloroethylene
DDT – dichlorodiphenyltrichloroethane
PCB – polychlorinated biphenyl
PCDD – polychlorinated dibenzodioxin
PCDF – polychlorinated dibenzofuran
TEF – toxic equivalency factor
TEQ – toxic equivalent
total DDx – sum of all six DDT isomers (2,4′-DDD, 4,4′-DDD, 2,4′-DDE, 4,4′-DDE, 2,4′-DDT and 4,4′-DDT)
TSV – toxicity screening value

4.4 MAMMALS

The COPEC screening results of the one LOE evaluated for mammals (i.e., dietary) are presented below.

4.4.1 Dietary

Table 4-15 presents the diet COIs with maximum mammal diet concentrations equal to or exceeding diet TSVs; these COIs were identified as COPECs. Tables showing the comparison of maximum mammal diet doses to TSVs are presented in Attachment A2. COIs that could not be evaluated in the SLERA because no diet TSV for mammal were available are presented in Table 4-16. These COIs were retained for further evaluation in the BERA.

Table 4-15. Mammal dietary COPECs

COPEC	
Metals	
Arsenic	Nickel
Cadmium	Selenium
Copper	Vanadium
Lead	Zinc
Mercury/methylmercury	
PAHs	
Total HPAHs	
PCBs	
Total PCBs	PCB TEQ[a]
PCDDs/PCDFs	
PCDD/PCDF TEQ[a]	Total TEQ[a]
Organochlorine Pesticides	
Dieldrin	

Note: COPECs are those COIs for which the maximum modeled dietary dose equaled or exceeded its TSV. If a TSV was equaled or exceeded based on either mink or river otter, it was retained as a COPEC for all mammals.

[a] TEQs are based on mammal TEFs.

COI – chemical of interest
COPEC – chemical of potential ecological concern
HPAH – high-molecular-weight polycyclic aromatic hydrocarbon
PAH – polycyclic aromatic hydrocarbon
PCB – polychlorinated biphenyl
PCDD– polychlorinated dibenzodioxins
PCDF – polychlorinated dibenzofurans
TEF – toxic equivalency factor
TEQ – toxicity equivalent
TSV – toxicity screening value

Table 4-16. Diet COIs with no diet TSVs for mammals

COI		
Metals		
Beryllium	Silver	
PAHs		
1-Methylphenanthrene	2,6-Dimethylnaphthalene	Dibenzothiophene
1-Methylphenanthrene	2-Methylnaphthalene	Perylene
2,3,5-Trimethylnaphthalene	Benzo(e)pyrene	
Organochlorine Pesticides		
alpha-BHC	Endosulfan sulfate	Endrin ketone
delta-BHC	Endrin aldehyde	Heptachlor epoxide

BHC – benzene hexachloride
COI – chemical of interest
PAH – polycyclic aromatic hydrocarbon
TSV – toxicity screening value

4.5 ZOOPLANKTON

The COPEC screening results of the one LOE evaluated for zooplankton (i.e., surface water) are presented below.

4.5.1 Surface water

Table 4-3 presents the surface water COIs with maximum concentrations equal to or exceeding surface water TSVs; these COIs were identified as COPECs. Tables showing the comparison of maximum surface water concentrations to TSVs are presented in Attachment A2. COIs that could not be evaluated in the SLERA because no freshwater or estuarine TSVs were available are presented in Table 4-4. These COIs were retained for further evaluation in the BERA

4.6 AMPHIBIANS AND REPTILES

The COPEC screening results of the one LOE evaluated for amphibians/reptiles (i.e., surface water) are presented below.

4.6.1 Surface water

Table 4-17 presents the surface water COIs with maximum concentrations equal to or exceeding amphibian/reptile-specific surface water TSVs; these COIs were identified as COPECs. Tables showing the comparison of maximum surface water concentrations to TSVs are presented in Attachment A2. COIs that could not be evaluated in the SLERA because no amphibian/reptile-specific TSVs were available are presented in Table 4-18. These COIs were retained for further evaluation in the BERA.

Table 4-17. Surface water COPECs for amphibians and reptiles

COPEC	
Metals[a]	
Chromium	Nickel
Copper	Silver
Lead	Zinc
Mercury	
VOCs	
Trichloroethene	

Note: COPECs are those COIs for which the maximum surface water concentration equaled or exceeded its TSV.
[a] Evaluated based on the total form of the metal.
COI – chemical of interest
COPEC – chemical of potential ecological concern
TSV – toxicity screening value
VOC – volatile organic compound

Table 4-18. Surface water COIs with no surface water TSVs for amphibians/reptiles

COI		
Butyltins		
Dibutyltin	Monobutyltin	
PAHs		
1-Methylnaphthalene	Benzo(a)anthracene	Dibenzothiophene
1-Methylphenanthrene	Benzo(b)fluoranthene	Fluorene
2-Methylnaphthalene	Benzo(e)pyrene	Indeno(1,2,3-cd)pyrene
2,3,5-Trimethylnaphthalene	Benzo(g,h,i)perylene	Perylene
2,6-Dimethylnaphthalene	Benzo(k)fluoranthene	Phenanthrene
Acenaphthene	Chrysene	Pyrene
Acenaphthylene	Dibenzo(a,h)anthracene	
Anthracene		
SVOCs		
1,1'-Biphenyl	Benzaldehyde	Carbazole
2,4-Dimethylphenol	Bis(2-chloroethoxy)methane	Dibenzofuran
2,4-Dinitrotoluene	Bis(2-chloroethyl)ether	Diethylphthalate
2,6-Dinitrotoluene	BEHP	Di(n)octylphathalate
4-Bromophenyl-phenylether	Butylbenzylphthalate	n-Nitroso-di-n-propylamine
4-Methylphenol	Caprolactam	n-Nitrosodiphenylamine
Acetophenone		

Table 4-18. Surface water COIs with no surface water TSVs for amphibians/reptiles

COI		
PCDDs/PCDFs		
Individual dioxins and furans		
Organochlorine Pesticides		
2,4'-DDD	alpha-BHC	Endrin aldehyde
2,4'-DDE	beta-BHC	Endrin ketone
2,4'-DDT	delta-BHC	Heptachlor epoxide
4,4'-DDE	Endosulfan sulfate	Total chlordane
VOCs		
1,1,1-Trichlorobenzene	1,4-Dichlorobenzene	cis-1,2-Dichloroethylene
1,1-Dichlorethane	1,4-Dioxane	Ethylbenzene
1,2,4-Trichlorobenzene	Bromodichloromethane	Isopropylbenzene
1,2-Dichlorobenzene	Chloromethane	Vinyl chloride
Other		
Cyanide		

BEHP – bis(2-ethylhexyl) phthalate
BHC – benzene hexachloride
COI – chemical of interest
DDD – dichlorodiphenyldichloroethane
DDE – dichlorodiphenyldichloroethylene
DDT – dichlorodiphenyltrichloroethane
PAH – polycyclic aromatic hydrocarbon
PCDD – polychlorinated dibenzo-*p*-dioxin
PCDF – polychlorinated dibenzofuran
SVOC – semi-volatile organic compound
VOC – volatile organic compound

4.7 AQUATIC PLANTS

The COPEC screening results of the two LOEs evaluated for aquatic plants (i.e., surface water and sediment) are presented below.

4.7.1 Surface water

Table 4-3 presents the surface water COIs with maximum concentrations equal to or exceeding surface water TSVs; these COIs were identified as COPECs. Tables showing the comparison of maximum surface water concentrations to TSVs are presented in Attachment A2. COIs that could not be evaluated in the SLERA because no freshwater or estuarine TSVs were available are presented in Table 4-4. These COIs were retained for further evaluation in the BERA

4.7.2 Surface sediment

Table 4-19 presents the sediment COIs with maximum concentrations equal to or exceeding plant-specific soil TSVs; these COIs were identified as COPECs. Tables

showing the comparison of maximum sediment concentrations to plant soil TSVs are presented in Attachment A2.

There is high uncertainty in using terrestrial plant TSVs (developed mainly from studies of agricultural crops) to assess risk to aquatic plants. There are very limited toxicological data for terrestrial plants, and soil screening-level values were available only for metals, total PCBs, and two other organic sediment COIs (acenaphthene and toluene). The potential toxicity to plants of all other COIs detected in sediment (i.e., PAHs other than acenaphthene, SVOCs, PCDDs/PCDFs, pesticides, VOCs other than toluene, total petroleum hydrocarbons [TPH], and other COIs) cannot be characterized.

Table 4-19. Sediment COPECs for aquatic plants

COPEC		
Metals		
Antimony	Cobalt	Nickel
Arsenic	Copper	Selenium
Cadmium	Lead	Vanadium
Chromium	Mercury	Zinc
PAHs		
Acenaphthene		

Note: COPECs are those COIs for which the maximum sediment water concentration equaled or exceeded its plant-specific soil TSV.

COI – chemical of interest

COPEC – chemical of potential ecological concern

PAH – polycyclic aromatic hydrocarbon

TSV – toxicity screening value

5 Uncertainty Evaluation

The following presents the results of the uncertainty evaluation for the SLERA, including:

- General uncertainty (Section 5.1)
- COIs that could not be evaluated because they lacked TSVs (Section 5.2)
- Evaluation of DLs by comparing DLs to TSVs (Section 5.3).

5.1 General Uncertainty

This SLERA notes that some LOEs present less certain risk assessment results than other LOEs. General reduced certainties that have been identified in this SLERA are summarized in Table 5-1. Most of the general uncertainties identified in Table 5-1 result in a likely overestimation of risk. A SLERA is intended to be conservative in order to ensure that is identifies any potential risks based on any COPEC for more detailed and more realistic evaluation in a BERA.

Table 5-1. Summary of general SLERA uncertainties

Ecological Receptor Group	Media	Summary of Key General Uncertainties
Benthic invertebrates	sediment	**Exposure** – Evaluated TEQ - fish for benthic invertebrates when there is there is limited evidence for ligand activation of the AH (dioxin) cellular receptor in these organisms **Effects** – Used most conservative generic sediment thresholds available from the literature; site-specific toxicity data provide more insight into potential effects occurring in the LPRSA
Aquatic plants	sediment	**Exposure** – Used all surface sediment data for screening as potential exposure areas for aquatic plants, although LPRSA aquatic plant community is limited **Effects** – Used soil thresholds based on terrestrial plants to determine COPECs in sediment for aquatic plants
Aquatic organisms	surface water	**Exposure** – Evaluated TEQ - fish for benthic invertebrates when there is limited evidence for ligand activation of the AH (dioxin) cellular receptor in these organisms **Effects** – Evaluated total metals only, regardless of whether criteria is based on dissolved or total concentrations
Amphibians/reptiles	surface water	**Exposure** – Used all surface water data above RM 4 for screening as potential exposure areas for amphibians/reptiles, although the presence of amphibians and reptiles in the LPRSA is limited **Effects** – Limited toxicity thresholds available to develop TSVs

Table 5-1. Summary of general SLERA uncertainties

Ecological Receptor Group	Media	Summary of Key General Uncertainties
Benthic invertebrates	whole-body tissue	**Exposure** – Included evaluation of metals (other than organometals) in tissue, despite indications by others of uncertainty of a tissue approach for metals (Adams et al. 2011; USEPA 2007e); evaluated TEQ - fish for benthic invertebrates when there is limited evidence for ligand activation of the AH (dioxin) cellular receptor in these organisms **Effects** – Use of conservative TSVs; use of NOAELs based on extrapolation factors when none are available from the literature
Fish	whole-body tissue	**Exposure** – Included evaluation of PAHs and metals (other than organometals) in tissue, despite indications by others of uncertainty of a tissue approach for metals (Adams et al. 2011; USEPA 2007e), and despite the fact that PAHs are highly metabolized in fish tissue **Effects** – Use of conservative TSVs; use of NOAELs based on extrapolation factors when none are available from the literature
Fish	egg tissue	**Exposure** – Use of BCF to estimate mercury concentrations in eggs, when no regression could be derived from the literature; use of generic regression equation to predict organic COI concentrations in fish eggs from mummichog whole-body concentrations **Effects** – Use of conservative TSVs; use of NOAELs based on extrapolation factors when none were available from the literature
Fish	diet	**Exposure** – Limited empirical prey tissue available for modeling fish diet (e.g., invertivorous fish diet modeled using 100% worms because no empirical data available for other items such as grass shrimp, amphipods, and other invertebrates); considered single highest concentrations in any potential prey type as 100% of diet **Effects** – Use of conservative TSVs; use of extrapolation factors to derive NOAELs when none were available from the literature
Birds	egg tissue	**Exposure** – Use of highest BMFs based on highly variable literature-based adult egg assumptions **Effects** – Use of conservative TSVs; use of NOAELs based on extrapolation factors when none were available from the literature
Birds	diet	**Exposure** – Used highest ingestion rates and lowest body weights, when available; considered single highest concentrations in any potential prey type as 100% of diet; limited empirical invertebrate tissue available to model sandpiper diet **Effects** – Use of conservative TSVs; use of NOAELs based on extrapolation factors when none were available from the literature
Mammals	diet	**Exposure** – Used highest ingestion rates and lowest body weights, when available; considered single highest concentrations in any potential prey type as 100% of diet **Effects** – Use of conservative TSVs; use of NOAELs based on extrapolation factors when none were available from the literature

BCF – bioconcentration factor
BMF – biomagnification factor
COI – chemical of interest
COPEC – chemical of potential ecological concern
DDD – dichlorodiphenyldichloroethane
LPRSA – Lower Passaic River Study Area
NOAEL – no-observed-adverse-effect level
RM – river mile
SLERA – screening-level ecological risk assessment
TEQ – toxic equivalent

DDE – dichlorodiphenyldichloroethylene
DDT – dichlorodiphenyltrichloroethane
LOAEL – lowest-observed-adverse-effect level
TSV – toxicity screening value
USEPA – US Environmental Protection Agency

5.2 COIs Without TSVs

In this SLERA, only the COIs for which TSVs were available for a given media could be evaluated for potential unacceptable risk. For each media type (i.e., sediment, surface water, tissue, and diet), there were a number of COIs for which acceptable or appropriate TSVs were not available. These COIs are presented in Section 4. Without a TSV, the potential for unacceptable risk for many of these COIs remains unknown due to a lack of toxicological information. COIs with no TSVs were retained for further discussion in the BERA.

The following exposure media had COIs with no TSVs:

- **Sediment –** 40 COIs, including 16 individual PCDDs/PCDFs other than 2,3,7,8-TCDD (Table 4-2)
- **Surface water –** 42 COIs for aquatic organisms (i.e., benthic invertebrates, fish, zooplankton, and aquatic plants), including 16 individual PCDDs/PCDFs other than 2,3,7,8-TCDD, (Table 4-4); 84 COIs for amphibians/reptiles, including 17 individual PCDDs/PCDFs (Table 4-18)
- **Tissue –** 22 COIs for benthic invertebrates (Table 4-6), 23 COIs for fish (Table 4-8)
- **Diet –** 37 COIs for fish (Table 4-11), 21 COIs for birds (Table 4-13), 15 COIs for mammals (Table 4-16)

5.3 Detection Limit Analysis

Two DL analyses were conducted in the evaluation of sediment, surface water, and tissue:

- For COIs with maximum detected concentrations less than TSVs, DLs were also compared with TSVs to determine whether DLs were below TSVs.
- For chemicals that were never detected (i.e., not defined as COIs), DLs were compared with TSVs to determine whether DLs were below TSVs.

The results of these comparisons are presented in the following subsections.

5.3.1 COIs with maximum detected concentrations less than TSVs

For COIs that were not identified as COPECs (i.e., maximum concentrations were less than TSVs), a comparison between maximum DLs and TSVs was done to evaluate whether DLs were below TSVs. COIs with DLs greater than TSVs will be retained for

discussion in the BERA. This evaluation is presented in Attachment A4 (Tables A4-1 through A4-4) and the results are summarized below.

5.3.1.1 Sediment

For sediment, there were 12 COIs (1 herbicide and 11 volatile organic compounds [VOCs]) for which detected concentrations did not exceed TSVs; however, the DLs of these COIs did exceed TSVs. These include: 2,4-D, 1,2-dichlorobenzene, 1,3-dichlorobenzene, benzene, carbon disulfide, chloroform, cyclohexane, ethylbenzene, isopropylbenzene, methylene chloride, o-xylene and trichloroethene. The DL exceedances of TSVs are summarized in Table 5-2. These COIs will be retained for discussion in the BERA.

Table 5-2. Sediment COIs with DLs greater than TSVs

COI	Estuarine (RM 0 to RM 13)					Freshwater (RM 4 to RM 17.4)				
	No. Non-detects/ Total No. Samples	No. Samples with DL > TSV	Max. HQ	% Samples with Detected Values > TSV	% Samples with DLs Values > TSV	No. Non-Detects/ Total No. Samples	No. Samples with DL > TSV	Max. HQ	% Samples with Detected Values > TSV	% Samples with DLs Values > TSV
Herbicides										
2,4-D	215/217	9	**1.5**	0%	4%	192/194	2	**1.5**	0%	1%
VOCs										
1,2-Dichlorobenzene	117/161	4	**12**	0%	3%	121/136	4	**5.0**	0%	3%
1,3-Dichlorobenzene	132/160	4	**5.0**	0%	3%	127/135	4	**5.0**	0%	3%
Benzene	154/161	9	**15**	0%	6%	130/136	9	**15**	0%	7%
Carbon disulfide	68/161	3	**6.3**	0%	4%	83/136	3	**6.3**	0%	4%
Chloroform	160/161	4	**7.5**	0%	3%	135/136	4	**7.5**	0%	3%
Cyclohexane	160/161	3	**2.9**	0%	2%	135/136	3	**2.9**	0%	2%
Ethylbenzene	152/161	68	**38**	0%	45%	132/136	3	**5.0**	0%	2%
Isopropylbenzene	148/161	na[a]	na[a]	na[a]	na[a]	131/136	3	**2.7**	0%	2%
Methylene chloride	161/162	69	**37**	0%	43%	134/137	46	**37**	0%	34%
o-Xylene	152/161	66	**38**	0%	43%	127/136	2	**1.7**	0%	2%
Trichloroethene	124/161	25	**19**	0%	20%	108/136	20	**19**	0%	19%

[a] No estuarine TSV available for isoprophylbenzene.

COI – chemical of interest
DL – detection limit
HQ – hazard quotient
na – not applicable
RM – river mile
TSV – toxicity screening value
VOC – volatile organic compound

5.3.1.2 Surface water

For surface water, no COIs with detected values less than TSVs had DLs greater than TSVs. All surface water COI DLs were less than surface water TSVs.

5.3.1.3 Tissue

For benthic tissue COIs, no COIs with detected values less than TSVs had DLs greater than TSVs. All benthic invertebrate tissue COI DLs were less than tissue TSVs.

For fish tissue, there was one COI (i.e., endrin) with detected concentrations that did not exceed its TSV; however, DLs did exceed TSVs. The DL exceedances of the TSVs are summarized in Table 5-3. This COI will be retained for discussion in the BERA.

Table 5-3. Fish tissue COIs with DLs greater than NOAEL TSVs

COI	Species	No. Non-detects/ Total No. Samples	No. Samples with DL > NOAEL TSV	Max. HQ	% of Samples with Detected Values > NOAEL TSV	% of Samples with DLs Values > NOAEL TSV
Organochlorine Pesticides						
Endrin	carp	11/12	4	**3.5**	0%	33%
	white catfish	18/19	1	**1.7**	0%	5%
	American eel	20/21	5	**2.6**	0%	24%

[a] All values were not detected.

BEHP – bis(2-ethylhexyl) phthalate
COI – chemical of interest
DL – detection limit
HQ – hazard quotient
na – not applicable
NOAEL – no observed adverse effect level
SVOC – semivolatile organic compound
TSV – toxicity screening value

5.3.2 Analytes never detected

Chemicals that were analyzed but never detected were not identified as COIs, and therefore were not evaluated in the SLERA. For these chemicals, the maximum DL was compared to available TSVs to determine whether DLs were lower than screening values. This evaluation is presented in Attachment A4 (Tables A4-5 through A4-7) and the results are summarized below.

5.3.2.1 Sediment

For analytes that were never detected in sediment, maximum DLs were compared to the lowest freshwater and marine/estuarine values available from New Jersey's most current sediment screening values (NJDEP 2009; summarized in Table 5-4). DLs of non-detected analytes in surface water were compared to these TSVs (see Attachment A4). Fourteen SVOC analytes and one pesticide (toxaphene) had DLs greater than estuarine and/or freshwater TSVs (Table 5-4).

Table 5-4. Sediment analytes with DLs greater than TSVs

Parameter	Sediment Concentration (µg/kg)		
	DL Range	Estuarine TSV[a]	Freshwater TSV[a]
SVOCs			
2,4,5-Trichlorophenol	**126–11,900**	3	na
2,4,6-Trichlorophenol	**126–11,900**	6	208
2,4-Dichlorophenol	**126–11,900**	5	81.7
2,4-Dimethylphenol	200**–23,100**	na	304
2,4-Dinitrophenol	**613–58,000**	na	6.21
2-Chloronaphthalene	126**–11,900**	na	417
2-Chlorophenol	**126–11,900**	8	31.9
3,3'-Dichlorobenzidine	**200–23,100**	na	127
4-Nitrophenol	**244–23,100**	na	13.3
Bis(2-chloroethyl) ether	126**–11,900**	na	3,520
Hexachlorobutadiene	**126–11,900**	1.3	26.5
Hexachlorocyclopentadiene	126**–11,900**	na	901
Hexachloroethane	126**–11,900**	73	584
Nitrobenzene	126**–11,900**	na	145
Organochlorine Pesticides			
Toxaphene	**0.22–69**	na	0.077

Bold indicates DL exceeds TSV.

[a] TSVs based on lowest values reported in New Jersey's most current sediment screening values (NJDEP 2009).

na – not available
DL – detection limit
SVOC – semivolatile organic compound
TSV – toxicity screening value

5.3.2.2 Surface water

For analytes that were never detected in surface water, maximum DLs were compared to the lowest for freshwater and marine/estuarine values available from existing published national and regional WQGs and benchmarks, as described in Section 3.3.2. DLs of non-detected analytes in surface water were compared to these TSVs (see Attachment A4). Three SVOC analytes had DLs greater than estuarine and/or freshwater TSVs: hexachlorobutadiene, pentachlorophenol, and trans-1,3-dichloropropene (Table 5-5).

Table 5-5. Surface water analytes with DLs greater than TSVs

Analyte	Surface Water Concentration (µg/L)		
	DL Range	Estuarine TSV[a]	Freshwater TSV[a]
SVOCs			
Hexachlorobutadiene	**0.19 – 0.22**	na	0.053
Pentachlorophenol	**0.94 – 1.1**	7.9	0.5
trans-1,3-Dichloropropene	**0.5**	na	0.055

Bold indicates DL exceeds TSV.

[a] TSVs based on lowest values reported for the following sources: NJDEP (2009), USEPA AWQC, CCME WQGs (CCME 2016), or chronic Tier II values derived by ORNL (Suter and Tsao 1996).

AWQC – ambient water quality criteria
CCME – Canadian Council of Ministers of the Environment
DL – detection limit
na – not available
NJDEP – New Jersey Department of Environmental Protection
ORNL – Oak Ridge National Laboratory
SVOC – semivolatile organic compound
TSV – toxicity screening value
USEPA – US Environmental Protection Agency
WQG – water quality guideline

5.3.2.3 Tissue

For analytes that were never detected in tissue, maximum DLs were compared to the lowest NOAELs available based on toxicity data reported in USACE's ERED database (USACE 2016) or based on TSVs presented in Attachment A3. DLs of non-detected analytes in tissue were compared to these TSVs (see Attachment A4). Fourteen SVOC analytes had DLs greater than invertebrate and/or fish tissue TSVs (Table 5-6).

Table 5-6. Tissue analytes with DLs greater than TSVs

Analyte	Invertebrate Tissue Concentration (µg/kg ww)		Fish Tissue Concentration (µg/kg ww)	
	DL Range	Invertebrate TSV[a]	DL Range	Fish TSV[a]
SVOCs				
2,4-Dimethylphenol	190–2,000	na	860–**8,000**	5,990
2,4-Dinitrophenol	770–**8,000**	5,200	**3,400–32,000**	2,950
4-Methylphenol	not evaluated[b]	not evaluated[b]	860–**8,000**	7,900[c]
4-Nitrophenol	380–**4,000**	770	1,700–**16,000**	9,500
Atrazine	190–**2,000**	190	**860–8,000**	73.6
Bis-(2-chloroethyl)ether	190–2,000	na	**860–8,000**	110
BEHP	not evaluated[b]	not evaluated[b]	**860–8,000**	390[d]
Butylbenzylphthalate	190–2,000	na	860–**8,000**	6,450
Diethylphthalate	190–2,000	na	860–**8,000**	1,100
Dimethylphthalate	**190–2,000**	50	**860–8,000**	500

Analyte	Invertebrate Tissue Concentration (µg/kg ww)		Fish Tissue Concentration (µg/kg ww)	
	DL Range	Invertebrate TSV[a]	DL Range	Fish TSV[a]
Di-n-butylphthalate	**190–2,000**	50	860–8,000	na
Hexachlorobutadiene	190–2,000	9,160	860–**8,000**	3,480
Isophorone	190–2,000	na	**860–8,000**	650
n-Nitrosodiphenylamine	190 - 2,000	na	860 - 8,000	2,000

Bold indicates DL exceeds TSV.

[a] TSVs based on lowest value NOAELs (or extrapolated NOAELs) based on values reported in ERED (see Attachment A4), except where noted.

[b] Not evaluated; analyte was evaluated as a COI for benthic invertebrates (chemical was detected in invertebrate tissue but not in fish tissue).

[c] TSV based on LOAEL reported in Hodson et al. (1988)

[d] TSV based on NOAEL reported in Mehrle and Mayer (1976)

BEHP – bis(2-ethylhexyl phthalate)
DL – detection limit
ERED – Environmental Residue Effects Database
na – not available
NOAEL – no-observed-adverse-effect level
SVOC – semivolatile organic compound
TSV – toxicity screening value
ww – wet weight

6 Summary

This document presents the SLERA established to identify COPECs for each receptor group for further evaluation in the LPRSA BERA. This SLERA for the entire 17.4 mi of the LPRSA was conducted and prepared in accordance with Section IX.37.d of the May 2007 Settlement Agreement (USEPA 2007a). This SLERA is consistent with the comments, responses, and directives received from USEPA on June 30, 2017 (USEPA 2017b), September 18, 2017 (USEPA 2017d), July 10, 2018 (USEPA 2018), January 2, 2019 (CDM 2019), and March 5, 2019 (USEPA 2019); during face-to-face meetings or conference calls on July 24, September 27, October 3, and November 6, 2017, and July 24 and August 16, 2018; and via additional deliverables and communications between the Cooperating Parties Group (CPG) and USEPA from August through December 2017, from July through September 2018, and from January through June 2019. COPECs were conservatively identified by screening maximum concentrations (or doses) against selected conservative TSVs.

COPECs across all receptor groups include metals, PAHs, organochlorine pesticides, PCDDs/PCDFs, PCBs, SVOCs, VOCs, and cyanide. These COPECs are presented in Table 6-1. Conducting a BERA will provide a more site-specific and detailed assessment of which chemicals pose potential risk to ecological receptors. Additional work required to complete a BERA would include an evaluation of: dose-response relationships; toxicity thresholds; uncertainties associated with evaluating metals (other than mercury and selenium) in tissue and PAHs in fish tissue; risk based on upper confidence limit (UCL) and mean concentrations instead of the maximum detected concentration; and spatial evaluation of concentrations across the LPRSA.

In addition, the following COIs and analytes will be retained for discussion in the BERA:

- COIs with no TSVs (Table 6-2):
  - 40 sediment COIs for benthic invertebrates
  - 42 surface water COIs for aquatic organisms (i.e., benthic invertebrates, fish, zooplankton, and aquatic plants)
  - 84 surface water COIs for amphibians/reptiles
  - 22 tissue COIs for benthic invertebrates
  - 24 tissue COIs for fish
  - 37 diet COIs for fish diet
  - 21 diet COIs for bird diet
  - 15 diet COIs for mammal diet

- COIs with maximum detected concentrations less than TSVs, but DLs greater than TSVs:
  - 12 sediment COIs for benthic invertebrates (i.e., 2,4-D, 1,2-dichlorobenzene, 1,3-dichlorobenzene, benzene, carbon disulfide, chloroform, cyclohexane, ethylbenzene, isopropylbenzene, methylene chloride, o-xylene, and trichloroethene)
  - 1 tissue COI for fish (i.e., endrin)
- Analytes that were never detected, but have DLs greater than TSVs:
  - 15 sediment analytes for benthic invertebrates (i.e., 2,4,5-trichlorophenol, 2,4,6-trichlorophenol, 2,4-dichlorophenol, 2,4-dimethylphenol, 2,4-dinitrophenol, 2-chloronaphthalene, 2-chlorophenol, 3,3′-dichlorobenzidine, 4-nitrophenol, bis(2-chloroethyl) ether, hexachlorobutadiene, hexachlorocyclopentadiene, hexachloroethane, nitrobenzene, and toxaphene)
  - 3 surface water analytes (i.e., hexachlorobutadiene, pentachlorophenol, and trans-1,3-dichloropropene)
  - 14 tissue analytes for invertebrates and/or fish (i.e., 2,4-dimethylphenol, 2,4-dinitrophenol, 4-methylphenol, 4-nitrophenol, atrazine, bis-(2-chloroethyl) ether, BEHP, butylbenzylphthalate, diethylphthalate, dimethylphthalate, di-n-butylphthalate, hexachlorobutadiene, isophorone, and n-nitrosodiphenylamine)

Table 6-1. Summary of COPECs

COPEC	Sediment		Surface Water		Tissue				Diet		
	Benthic Invertebrates	Aquatic Plants	Invertebrates, Fish, Aquatic Plants, and Zooplankton	Amphibians/ Reptiles	Benthic Invertebrates	Fish	Fish Egg	Bird Egg	Fish	Birds	Mammals
Metals											
Antimony	X	X									
Arsenic	X	X			X	X					X
Cadmium	X	X	X		X	X			X	X	X
Chromium	X	X	X	X	X	X			X	X	
Cobalt	X	X			X				X		
Copper	X	X	X	X	X	X			X	X	X
Lead	X	X	X	X	X	X				X	X
Mercury	X	X	X	X	X	X	X	X	X	X	X
Methylmercury[a]	X				X	X	X	X	X	X	X
Nickel	X	X		X	X				X	X	X
Selenium	X	X	X		X	X			X	X	X
Silver	X		X	X	X	X					
Vanadium	X	X			X				X	X	X
Zinc	X	X		X	X	X			X	X	X
Butyltins											
TBT	X		X						X		
PAHs											
1-Methylnaphthalene	X										
1-Methylphenanthrene	X										
2,6-Dimethylnaphthalene	X										
2-Methylnaphthalene	X										

Table 6-1. Summary of COPECs

COPEC	Sediment		Surface Water		Tissue				Diet		
	Benthic Invertebrates	Aquatic Plants	Invertebrates, Fish, Aquatic Plants, and Zooplankton	Amphibians/ Reptiles	Benthic Invertebrates	Fish	Fish Egg	Bird Egg	Fish	Birds	Mammals
Acenaphthene	X	X									
Acenaphthylene	X										
Anthracene	X		X								
Benzo(a)anthracene	X		X								
Benzo(a)pyrene	X		X						X		
Benzo(b/j)fluoranthene	X										
Benzo(e)pyrene	X										
Benzo(g,h,i)perylene	X										
Benzo(k)fluoranthene	X										
Chrysene	X										
Dibenzo(a,h)anthracene	X										
Fluoranthene	X		X								
Fluorene	X										
Indeno(1,2,3-cd)pyrene	X										
Naphthalene	X										
Perylene	X										
Phenanthrene	X										
Pyrene	X		X								
Total benzofluoranthenes	X										
Total HPAHs	X				X	X				X	X
Total LPAHs	X				X	X				X	
Total PAHs	X								X		

Table 6-1. Summary of COPECs

COPEC	Sediment		Surface Water		Tissue				Diet		
	Benthic Invertebrates	Aquatic Plants	Invertebrates, Fish, Aquatic Plants, and Zooplankton	Amphibians/ Reptiles	Benthic Invertebrates	Fish	Fish Egg	Bird Egg	Fish	Birds	Mammals
SVOCs											
2,4-Dinitrotoluene	X										
2,6-Dinitrotoluene	X										
4-Methylphenol	X										
BEHP	X		X								
Butylbenzylphthalate	X		X								
Dibenzofuran	X										
Diethylphthalate	X										
Dimethylphthalate	X										
Di-n-butylphthalate	X										
Di-n-octylphthalate	X										
Isophorone	X										
n-Nitrosodiphenylamine	X										
Pentachlorophenol	X										
Phenol	X										
VOCs											
1,2,3-Trichlorobenzene	X										
1,2,4-Trichlorobenzene	X										
1,4-Dichlorobenzene	X										
1,4-Dioxane	X										
Acetone	X										

Table 6-1. Summary of COPECs

COPEC	Sediment		Surface Water		Tissue				Diet		
	Benthic Invertebrates	Aquatic Plants	Invertebrates, Fish, Aquatic Plants, and Zooplankton	Amphibians/ Reptiles	Benthic Invertebrates	Fish	Fish Egg	Bird Egg	Fish	Birds	Mammals
m, p-Xylene	X										
Toluene	X										
Trichloroethene				X							
PCBs											
Aroclor 1254	X										
Aroclor 1260	X										
Total PCBs	X		X		X	X	X	X	X	X	X
PCB TEQ[b]	X		X		X[b]	X[b]		X	X[b]	X[c]	X[d]
PCDDs/PCDFs											
2,3,7,8-TCDD	X		X		X	X					
PCDD/PCDF TEQ[b]	X		X		X	X	X	X	X	X	X
Total TEQ[b]	X		X		X	X	X	X	X	X	X
Organochlorine Pesticides											
4,4'-DDD	X										
4,4'-DDE	X		X								
4,4'-DDT	X		X								
Aldrin	X										
alpha-BHC	X										
alpha-chlordane	X										
beta-BHC	X										
gamma-BHC (Lindane)	X										
Dieldrin	X		X		X	X		X			X

Table 6-1. Summary of COPECs

COPEC	Sediment		Surface Water		Tissue				Diet		
	Benthic Invertebrates	Aquatic Plants	Invertebrates, Fish, Aquatic Plants, and Zooplankton	Amphibians/ Reptiles	Benthic Invertebrates	Fish	Fish Egg	Bird Egg	Fish	Birds	Mammals
Endrin	X										
Endosulfan I	X					X					
Endosulfan II	X										
gamma-chlordane	X										
Heptachlor	X										
Heptachlor epoxide	X				X						
Hexachlorobenzene	X		X								
Methoxychlor	X										
Total chlordane	X		X								
Total DDx	X		X		X	X		X	X	X	
Herbicides											
2,4,5-TP (Silvex)	X										
Other											
Cyanide	X		X								

[a] Total mercury is included as well as methylmercury for tissue and diet COPECs because some of the tissue and dietary TSVs were based on total mercury in tissue. For lower-trophic-level fish and invertebrate tissue, methylmercury is typically only slightly more than 50% of the total mercury. Methylmercury made up 87% of the mercury in LPRSA fish collected in 2009, 84% in blue crab collected in 2009, and 76% in mummichog collected in 2010, but only 14% in bioaccumulation worms.

[b] TEQs are based on fish TEFs for sediment exposure for benthic invertebrates, and for surface water exposure for invertebrates, fish, aquatic plants, and zooplankton. TEQs for fish, birds, and mammals are based on TEFs for their respective receptor groups. TEQs for benthic invertebrates are based on fish TEFs.

BEHP – bis(2-ethylhexyl) phthalate
BHC – benzene hexachloride
COPEC – chemical of potential ecological concern
LPAH – low-molecular-weight polycyclic aromatic hydrocarbon
LPRSA – Lower Passaic River Study Area
PAH – polycyclic aromatic hydrocarbon
TBT – tributyltin
TCDD – tetrachlorodibenzo-p-dioxin
TEF – toxic equivalency factor

DDD – dichlorodiphenyldichloroethane

DDE – dichlorodiphenyldichloroethylene

DDT – dichlorodiphenyltrichloroethane

HPAH – high-molecular-weight polycyclic aromatic hydrocarbon

PCB – polychlorinated biphenyl

PCDD – polychlorinated dibenzo-p-dioxin

PCDF – polychlorinated dibenzofuran

SVOC – semivolatile organic compound

TEQ – toxic equivalent

total DDX – sum of all six DDT isomers (2,4′-DDD, 4,4′-DDD, 2,4′-DDE, 4,4′-DDE, 2,4′-DDT and 4,4′-DDT)

TSV – toxicity screening value

VOC – volatile organic compound

Table 6-2. Summary of COIs with no TSVs

COI	Sediment	Surface Water	Tissue		Diet		
	Benthic Invertebrates	Invertebrates, Fish, Aquatic Plants, and Zooplankton	Benthic Invertebrates	Fish	Fish	Birds	Mammals
Metals							
Antimony			X	X	X	X	
Beryllium	X		X	X	X	X	X
Cobalt				X			
Nickel				X			
Silver						X	X
Thallium	X			X	X		
Vanadium				X			
Butyltins							
Monobutyltin	X	X	X	X	X		
Dibutyltin	X	X	X		X		
Tetrabutyltin	X		X	X	X		
PAHs							
1-Methylnaphthalene			X	X	X	X	X
1-Methylphenanthrene		X	X	X	X	X	X
2,3,5-Trimethylnaphthalene	X	X	X	X	X	X	X
2,6-Dimethylnaphthalene		X	X	X	X	X	X
2-Methylnaphthalene			X	X	X	X	X
Benzo(e)pyrene		X	X	X	X	X	X
Benzo(k)fluoranthene		X					
Chrysene		X					
Dibenzo(a,h)anthracene		X					
Dibenzothiophene	X	X	X	X	X	X	X
Perylene		X	X	X	X	X	X
SVOCs							
1,1′-Biphenyl	X						
2,6-Dinitrotoluene		X					
4-Chloroaniline		X					
4-Methylphenol		X	X		X	X	
Acetophenone	X	X	X		X	X	
Benzaldehyde	X	X	X	X	X	X	

Table 6-2. Summary of COIs with no TSVs

COI	Sediment	Surface Water	Tissue		Diet		
	Benthic Invertebrates	Invertebrates, Fish, Aquatic Plants, and Zooplankton	Benthic Invertebrates	Fish	Fish	Birds	Mammals
Bis(2-chloroethoxy)methane		X					
BEHP					X		
Caprolactam	X	X					
Carbazole	X	X					
n-Nitroso-di-n-propylamine	X	X					
VOCs							
1,4-Dioxane,		X					
4-Methyl-2-pentanone	X						
Bromodichloromethane		X					
Chloromethane	X	X					
cis-1,2-Dichloroethylene	X	X					
Isopropylbenzene		X					
Methylcyclohexane	X						
Methyl acetate	X						
PCDDs/PCDFs							
Individual PCDDs/PCDFs other than 2,3,7,8-TCDD	X	X					
Organochlorine Pesticides							
Aldrin				X	X		
alpha-BHC			X	X	X	X	X
beta-BHC			X	X	X	X	
delta-BHC			X	X	X	X	X
gamma-BHC (Lindane)					X		
alpha-Chlordane					X		
gamma-Chlordane					X		
Endosulfan sulfate			X	X	X	X	X
Endrin aldehyde			X	X	X	X	X
Endrin ketone	X	X		X	X	X	X
Heptachlor					X		
Heptachlor epoxide					X	X	X
Hexachlorobenzene					X		

Table 6-2. Summary of COIs with no TSVs

COI	Sediment	Surface Water	Tissue		Diet		
	Benthic Invertebrates	Invertebrates, Fish, Aquatic Plants, and Zooplankton	Benthic Invertebrates	Fish	Fish	Birds	Mammals
Methoxychlor					X		
cis-Nonachlor					X		
trans-nonachlor					X		
Octachlorostyrene			X				
Oxychlordane					X		
Total Chlordane					X		
Total endosulfan					X		
Herbicides							
2,4,5-T	X						
2,4-DB							
TPHs							
TPH – alkanes	X						
TPH – purgeable	X						
TPH – extractable	X						

BEHP – bis(2-ethylhexyl) phthalate
BHC – benzene hexachloride
COI – chemical of interest
PAH – polycyclic aromatic hydrocarbon
PCDD – polychlorinated dibenzo-*p*-dioxin
PCDF – polychlorinated dibenzofuran
SVOC – semivolatile organic compound
TCDD – tetrachlorodibenzo-p-dioxin
TEF – toxic equivalency factor
TPH – total petroleum hydrocarbon
TSV – toxicity screening value
VOC – volatile organic compound

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Attachment A1. Data Summary Statistics

Attachment A2. COPEC Screening Tables

Attachment A3. General Literature TRV Database

Supplement A3-1

Supplement A3-2

The following is the list of references to the TSVs provided in Attachment A3-1.

Table 1. References for Benthic Invertebrate Tissue TSVs

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Table 2 References for Fish Whole-Body Tissue TSVs

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Table 4 References for Fish Diet TSVs

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Table 5 References for Bird Egg Tissue TSVs

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Attachment A4. SLERA Uncertainty Calculation Tables

Attachment A5. Comparison of LPRSA Sediment Concentrations to FFS Sediment Screening Values

Attachment A1. Data Summary Statistics

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
Metals	Antimony	American eel (all)	21	1	4.8	0.014	0.014		0.0029	0.008	mg/kg
Metals	Antimony	Blue crab	24	23	95.8	0.0029	0.047	0.01	0.0022	0.0022	mg/kg
Metals	Antimony	Brown bullhead	6	1	16.7	0.006	0.006		0.005	0.008	mg/kg
Metals	Antimony	Carp	12	2	16.7	0.006	0.012	0.009	0.006	0.008	mg/kg
Metals	Antimony	Channel catfish	11	3	27.3	0.0036	0.018	0.0089	0.0026	0.0036	mg/kg
Metals	Antimony	Fish (all)	131	40	30.5	0.0034	0.072	0.017	0.0023	0.014	mg/kg
Metals	Antimony	Fish (≤ 11 cm)	23	10	43.5	0.012	0.043	0.022	0.012	0.013	mg/kg
Metals	Antimony	Fish (≤ 13 cm)	26	13	50	0.012	0.043	0.022	0.012	0.013	mg/kg
Metals	Antimony	Fish (≤ 18 cm)	41	18	43.9	0.007	0.043	0.02	0.006	0.014	mg/kg
Metals	Antimony	Fish (≤ 20 cm)	43	18	41.9	0.007	0.043	0.02	0.006	0.014	mg/kg
Metals	Antimony	Largemouth bass	3	3	100	0.0086	0.024	0.016			mg/kg
Metals	Antimony	Mummichog	18	7	38.9	0.012	0.027	0.019	0.012	0.013	mg/kg
Metals	Antimony	Mussel (estuarine)	3	1	33.3	0.003	0.003		0.002	0.003	mg/kg
Metals	Antimony	Mussel (freshwater)	5	1	20	0.016	0.016		0.004	0.005	mg/kg
Metals	Antimony	Northern pike	1	1	100	0.013	0.013				mg/kg
Metals	Antimony	Other forage fish (no mummichog)	10	9	90	0.012	0.043	0.023	0.013	0.013	mg/kg
Metals	Antimony	Smallmouth bass	3	3	100	0.02	0.022	0.021			mg/kg
Metals	Antimony	White catfish	19	5	26.3	0.0034	0.024	0.012	0.0023	0.0062	mg/kg
Metals	Antimony	White perch	22	4	18.2	0.007	0.072	0.026	0.005	0.014	mg/kg
Metals	Antimony	White sucker	5	1	20	0.0067	0.0067		0.0025	0.0048	mg/kg
Metals	Antimony	Worms (all)	14	11	78.6	0.003	0.18	0.041	0.003	0.003	mg/kg
Metals	Antimony	Worms (estuarine sp.)	5	2	40	0.003	0.004	0.0035	0.003	0.003	mg/kg
Metals	Antimony	Worms (freshwater sp.)	9	9	100	0.007	0.18	0.049			mg/kg
Metals	Arsenic	American eel (all)	21	19	90.5	0.054	0.61	0.16	0.16	0.17	mg/kg
Metals	Arsenic	Blue crab	24	24	100	0.29	1.9	1			mg/kg
Metals	Arsenic	Brown bullhead	6	6	100	0.031	0.19	0.08			mg/kg
Metals	Arsenic	Carp	12	11	91.7	0.064	0.21	0.12	0.18	0.18	mg/kg
Metals	Arsenic	Channel catfish	11	11	100	0.028	0.076	0.046			mg/kg
Metals	Arsenic	Fish (all)	131	124	94.7	0.017	0.61	0.17	0.064	0.18	mg/kg
Metals	Arsenic	Fish (≤ 11 cm)	23	23	100	0.044	0.51	0.31			mg/kg
Metals	Arsenic	Fish (≤ 13 cm)	26	26	100	0.044	0.51	0.32			mg/kg
Metals	Arsenic	Fish (≤ 18 cm)	41	41	100	0.044	0.52	0.28			mg/kg
Metals	Arsenic	Fish (≤ 20 cm)	43	43	100	0.044	0.52	0.28			mg/kg
Metals	Arsenic	Largemouth bass	3	0	0				0.064	0.068	mg/kg
Metals	Arsenic	Mummichog	18	18	100	0.19	0.51	0.35			mg/kg
Metals	Arsenic	Mussel (estuarine)	3	3	100	0.82	1.1	0.93			mg/kg
Metals	Arsenic	Mussel (freshwater)	5	5	100	0.28	0.37	0.34			mg/kg
Metals	Arsenic	Northern pike	1	1	100	0.12	0.12				mg/kg
Metals	Arsenic	Other forage fish (no mummichog)	10	10	100	0.044	0.52	0.26			mg/kg
Metals	Arsenic	Smallmouth bass	3	3	100	0.16	0.25	0.21			mg/kg
Metals	Arsenic	White catfish	19	19	100	0.017	0.19	0.063			mg/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
Metals	Arsenic	White perch	22	21	95.5	0.11	0.35	0.2	0.15	0.15	mg/kg
Metals	Arsenic	White sucker	5	5	100	0.064	0.11	0.079			mg/kg
Metals	Arsenic	Worms (all)	14	14	100	0.58	1.8	1.1			mg/kg
Metals	Arsenic	Worms (estuarine sp.)	5	5	100	1.6	1.8	1.7			mg/kg
Metals	Arsenic	Worms (freshwater sp.)	9	9	100	0.58	1.2	0.85			mg/kg
Metals	Arsenic (inorganic)	American eel (all)	21	5	23.8	0.005	0.011	0.0066	0.0043	0.01	mg/kg
Metals	Arsenic (inorganic)	Blue crab	24	24	100	0.016	0.065	0.039			mg/kg
Metals	Arsenic (inorganic)	Brown bullhead	6	3	50	0.007	0.012	0.01	0.01	0.01	mg/kg
Metals	Arsenic (inorganic)	Carp	12	2	16.7	0.011	0.011	0.011	0.01	0.01	mg/kg
Metals	Arsenic (inorganic)	Channel catfish	11	0	0				0.0041	0.0049	mg/kg
Metals	Arsenic (inorganic)	Fish (all)	131	53	40.5	0.005	0.17	0.044	0.0041	0.01	mg/kg
Metals	Arsenic (inorganic)	Fish (≤ 11 cm)	23	22	95.7	0.012	0.17	0.066	0.009	0.009	mg/kg
Metals	Arsenic (inorganic)	Fish (≤ 13 cm)	26	25	96.2	0.012	0.17	0.072	0.009	0.009	mg/kg
Metals	Arsenic (inorganic)	Fish (≤ 18 cm)	41	36	87.8	0.01	0.17	0.059	0.009	0.009	mg/kg
Metals	Arsenic (inorganic)	Fish (≤ 20 cm)	43	38	88.4	0.01	0.17	0.056	0.009	0.009	mg/kg
Metals	Arsenic (inorganic)	Largemouth bass	3	1	33.3	0.0093	0.0093		0.0047	0.005	mg/kg
Metals	Arsenic (inorganic)	Mummichog	18	18	100	0.012	0.17	0.065			mg/kg
Metals	Arsenic (inorganic)	Northern pike	1	0	0				0.0047	0.0047	mg/kg
Metals	Arsenic (inorganic)	Other forage fish (no mummichog)	10	9	90	0.022	0.17	0.087	0.009	0.009	mg/kg
Metals	Arsenic (inorganic)	Smallmouth bass	3	0	0				0.0045	0.0047	mg/kg
Metals	Arsenic (inorganic)	White catfish	19	2	10.5	0.014	0.03	0.022	0.0041	0.005	mg/kg
Metals	Arsenic (inorganic)	White perch	22	12	54.5	0.01	0.037	0.017	0.005	0.01	mg/kg
Metals	Arsenic (inorganic)	White sucker	5	1	20	0.015	0.015		0.0045	0.0047	mg/kg
Metals	Beryllium	American eel (all)	21	4	19	0.0013	0.0019	0.0016	0.00064	0.0015	mg/kg
Metals	Beryllium	Blue crab	24	24	100	0.001	0.003	0.0015			mg/kg
Metals	Beryllium	Brown bullhead	6	0	0				0.001	0.0016	mg/kg
Metals	Beryllium	Carp	12	2	16.7	0.0017	0.0018	0.0018	0.0012	0.0016	mg/kg
Metals	Beryllium	Channel catfish	11	1	9.1	0.001	0.001		0.00049	0.0026	mg/kg
Metals	Beryllium	Fish (all)	131	30	22.9	0.00074	0.021	0.0067	0.00042	0.006	mg/kg
Metals	Beryllium	Fish (≤ 11 cm)	23	11	47.8	0.005	0.021	0.011	0.001	0.005	mg/kg
Metals	Beryllium	Fish (≤ 13 cm)	26	14	53.8	0.005	0.021	0.011	0.001	0.005	mg/kg
Metals	Beryllium	Fish (≤ 18 cm)	41	16	39	0.005	0.021	0.011	0.001	0.006	mg/kg
Metals	Beryllium	Fish (≤ 20 cm)	43	17	39.5	0.0016	0.021	0.01	0.001	0.006	mg/kg
Metals	Beryllium	Largemouth bass	3	1	33.3	0.00074	0.00074		0.00049	0.00053	mg/kg
Metals	Beryllium	Mummichog	18	8	44.4	0.005	0.021	0.011	0.001	0.005	mg/kg
Metals	Beryllium	Mussel (estuarine)	3	3	100	0.0009	0.0012	0.001			mg/kg
Metals	Beryllium	Mussel (freshwater)	5	5	100	0.0054	0.0066	0.0061			mg/kg
Metals	Beryllium	Northern pike	1	0	0				0.00058	0.00058	mg/kg
Metals	Beryllium	Other forage fish (no mummichog)	10	8	80	0.005	0.021	0.011	0.001	0.006	mg/kg
Metals	Beryllium	Smallmouth bass	3	0	0				0.00051	0.00054	mg/kg
Metals	Beryllium	White catfish	19	3	15.8	0.00078	0.0047	0.0028	0.00042	0.0026	mg/kg
Metals	Beryllium	White perch	22	3	13.6	0.0016	0.0056	0.0034	0.0011	0.006	mg/kg
Metals	Beryllium	White sucker	5	0	0				0.00046	0.0019	mg/kg
Metals	Beryllium	Worms (all)	14	11	78.6	0.0006	0.019	0.0074	0.0006	0.0006	mg/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
Metals	Beryllium	Worms (estuarine sp.)	5	2	40	0.0006	0.0009	0.00075	0.0006	0.0006	mg/kg
Metals	Beryllium	Worms (freshwater sp.)	9	9	100	0.002	0.019	0.0089			mg/kg
Metals	Cadmium	American eel (all)	21	21	100	0.004	0.27	0.054			mg/kg
Metals	Cadmium	Blue crab	24	24	100	0.047	0.18	0.095			mg/kg
Metals	Cadmium	Brown bullhead	6	6	100	0.005	0.031	0.018			mg/kg
Metals	Cadmium	Carp	12	12	100	0.005	0.054	0.024			mg/kg
Metals	Cadmium	Channel catfish	11	11	100	0.0058	0.017	0.012			mg/kg
Metals	Cadmium	Fish (all)	131	131	100	0.003	0.27	0.024			mg/kg
Metals	Cadmium	Fish (≤ 11 cm)	23	23	100	0.0091	0.073	0.027			mg/kg
Metals	Cadmium	Fish (≤ 13 cm)	26	26	100	0.0091	0.099	0.031			mg/kg
Metals	Cadmium	Fish (≤ 18 cm)	41	41	100	0.006	0.099	0.026			mg/kg
Metals	Cadmium	Fish (≤ 20 cm)	43	43	100	0.004	0.099	0.025			mg/kg
Metals	Cadmium	Largemouth bass	3	3	100	0.0034	0.037	0.02			mg/kg
Metals	Cadmium	Mummichog	18	18	100	0.01	0.073	0.026			mg/kg
Metals	Cadmium	Mussel (estuarine)	3	3	100	0.021	0.025	0.022			mg/kg
Metals	Cadmium	Mussel (freshwater)	5	5	100	0.057	0.068	0.065			mg/kg
Metals	Cadmium	Northern pike	1	1	100	0.0035	0.0035				mg/kg
Metals	Cadmium	Other forage fish (no mummichog)	10	10	100	0.0091	0.099	0.044			mg/kg
Metals	Cadmium	Smallmouth bass	3	3	100	0.0043	0.0089	0.0069			mg/kg
Metals	Cadmium	White catfish	19	19	100	0.0039	0.027	0.011			mg/kg
Metals	Cadmium	White perch	22	22	100	0.003	0.031	0.012			mg/kg
Metals	Cadmium	White sucker	5	5	100	0.0035	0.013	0.0078			mg/kg
Metals	Cadmium	Worms (all)	14	14	100	0.023	0.2	0.08			mg/kg
Metals	Cadmium	Worms (estuarine sp.)	5	5	100	0.023	0.026	0.024			mg/kg
Metals	Cadmium	Worms (freshwater sp.)	9	9	100	0.042	0.2	0.11			mg/kg
Metals	Chromium	American eel (all)	21	19	90.5	0.04	4.5	1.2	0.013	0.02	mg/kg
Metals	Chromium	Blue crab	24	24	100	0.45	3.1	1.2			mg/kg
Metals	Chromium	Brown bullhead	6	6	100	0.12	0.94	0.5			mg/kg
Metals	Chromium	Carp	12	12	100	0.14	6.6	1.3			mg/kg
Metals	Chromium	Channel catfish	11	11	100	0.043	0.76	0.33			mg/kg
Metals	Chromium	Fish (all)	131	129	98.5	0.04	125	3.6	0.013	0.02	mg/kg
Metals	Chromium	Fish (≤ 11 cm)	23	23	100	0.89	23.2	6.2			mg/kg
Metals	Chromium	Fish (≤ 13 cm)	26	26	100	0.89	31.7	7.3			mg/kg
Metals	Chromium	Fish (≤ 18 cm)	41	41	100	0.87	125	9.5			mg/kg
Metals	Chromium	Fish (≤ 20 cm)	43	43	100	0.87	125	9.2			mg/kg
Metals	Chromium	Largemouth bass	3	3	100	0.15	0.23	0.2			mg/kg
Metals	Chromium	Mummichog	18	18	100	0.91	23.2	5.5			mg/kg
Metals	Chromium	Mussel (estuarine)	3	3	100	0.16	15.9	5.4			mg/kg
Metals	Chromium	Mussel (freshwater)	5	5	100	0.35	10.8	2.6			mg/kg
Metals	Chromium	Northern pike	1	1	100	1.1	1.1				mg/kg
Metals	Chromium	Other forage fish (no mummichog)	10	10	100	0.89	125	24			mg/kg
Metals	Chromium	Smallmouth bass	3	3	100	0.24	0.51	0.34			mg/kg
Metals	Chromium	White catfish	19	19	100	0.13	1.6	0.51			mg/kg
Metals	Chromium	White perch	22	22	100	0.61	9.8	3.2			mg/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
Metals	Chromium	White sucker	5	5	100	0.09	2	0.81			mg/kg
Metals	Chromium	Worms (all)	14	14	100	1.4	61	12			mg/kg
Metals	Chromium	Worms (estuarine sp.)	5	5	100	1.4	7.7	4.3			mg/kg
Metals	Chromium	Worms (freshwater sp.)	9	9	100	3.1	61	16			mg/kg
Metals	Cobalt	American eel (all)	14	14	100	0.016	0.096	0.048			mg/kg
Metals	Cobalt	Blue crab	24	24	100	0.059	0.095	0.072			mg/kg
Metals	Cobalt	Brown bullhead	6	6	100	0.016	0.054	0.034			mg/kg
Metals	Cobalt	Carp	12	12	100	0.019	0.1	0.047			mg/kg
Metals	Cobalt	Channel catfish	11	11	100	0.011	0.026	0.018			mg/kg
Metals	Cobalt	Fish (all)	124	124	100	0.011	1.1	0.076			mg/kg
Metals	Cobalt	Fish (≤ 11 cm)	23	23	100	0.031	0.35	0.14			mg/kg
Metals	Cobalt	Fish (≤ 13 cm)	26	26	100	0.031	0.42	0.16			mg/kg
Metals	Cobalt	Fish (≤ 18 cm)	41	41	100	0.031	1.1	0.16			mg/kg
Metals	Cobalt	Fish (≤ 20 cm)	43	43	100	0.031	1.1	0.15			mg/kg
Metals	Cobalt	Largemouth bass	3	3	100	0.021	0.025	0.024			mg/kg
Metals	Cobalt	Mummichog	18	18	100	0.046	0.34	0.12			mg/kg
Metals	Cobalt	Mussel (estuarine)	3	3	100	0.022	0.097	0.048			mg/kg
Metals	Cobalt	Mussel (freshwater)	5	5	100	0.076	0.16	0.096			mg/kg
Metals	Cobalt	Northern pike	1	1	100	0.025	0.025				mg/kg
Metals	Cobalt	Other forage fish (no mummichog)	10	10	100	0.031	1.1	0.32			mg/kg
Metals	Cobalt	Smallmouth bass	3	3	100	0.026	0.031	0.028			mg/kg
Metals	Cobalt	White catfish	19	19	100	0.016	0.062	0.026			mg/kg
Metals	Cobalt	White perch	22	22	100	0.032	0.14	0.067			mg/kg
Metals	Cobalt	White sucker	5	5	100	0.014	0.055	0.031			mg/kg
Metals	Cobalt	Worms (all)	14	14	100	0.096	1.8	0.42			mg/kg
Metals	Cobalt	Worms (estuarine sp.)	5	5	100	0.096	0.27	0.16			mg/kg
Metals	Cobalt	Worms (freshwater sp.)	9	9	100	0.21	1.8	0.57			mg/kg
Metals	Copper	American eel (all)	21	21	100	0.52	7.8	1.2			mg/kg
Metals	Copper	Blue crab	24	24	100	16.2	30.6	23			mg/kg
Metals	Copper	Brown bullhead	6	6	100	0.55	0.94	0.74			mg/kg
Metals	Copper	Carp	12	12	100	0.6	1.6	0.93			mg/kg
Metals	Copper	Channel catfish	11	11	100	0.31	2.3	0.59			mg/kg
Metals	Copper	Fish (all)	131	131	100	0.31	50.9	2.9			mg/kg
Metals	Copper	Fish (≤ 11 cm)	23	23	100	0.87	4.3	2.8			mg/kg
Metals	Copper	Fish (≤ 13 cm)	26	26	100	0.87	5.4	2.9			mg/kg
Metals	Copper	Fish (≤ 18 cm)	41	41	100	0.87	14.7	3.9			mg/kg
Metals	Copper	Fish (≤ 20 cm)	43	43	100	0.87	14.7	4.1			mg/kg
Metals	Copper	Largemouth bass	3	3	100	0.4	0.58	0.47			mg/kg
Metals	Copper	Mummichog	18	18	100	2	4.3	2.8			mg/kg
Metals	Copper	Mussel (estuarine)	3	3	100	0.63	0.98	0.76			mg/kg
Metals	Copper	Mussel (freshwater)	5	5	100	0.5	1.2	0.79			mg/kg
Metals	Copper	Northern pike	1	1	100	0.57	0.57				mg/kg
Metals	Copper	Other forage fish (no mummichog)	10	10	100	0.87	5.4	3.3			mg/kg
Metals	Copper	Smallmouth bass	3	3	100	0.4	0.8	0.53			mg/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
Metals	Copper	White catfish	19	19	100	0.33	0.83	0.63			mg/kg
Metals	Copper	White perch	22	22	100	1.6	50.9	10			mg/kg
Metals	Copper	White sucker	5	5	100	0.77	1.1	0.97			mg/kg
Metals	Copper	Worms (all)	14	14	100	1.2	11.9	4.1			mg/kg
Metals	Copper	Worms (estuarine sp.)	5	5	100	1.2	1.6	1.4			mg/kg
Metals	Copper	Worms (freshwater sp.)	9	9	100	2.1	11.9	5.6			mg/kg
Metals	Lead	American eel (all)	14	14	100	0.18	1.4	0.65			mg/kg
Metals	Lead	Blue crab	24	24	100	0.2	0.66	0.32			mg/kg
Metals	Lead	Brown bullhead	6	6	100	0.15	0.83	0.59			mg/kg
Metals	Lead	Carp	12	12	100	0.21	0.96	0.66			mg/kg
Metals	Lead	Channel catfish	11	11	100	0.056	0.37	0.24			mg/kg
Metals	Lead	Fish (all)	124	124	100	0.02	4.9	0.72			mg/kg
Metals	Lead	Fish (≤ 11 cm)	23	23	100	0.15	3.9	1.4			mg/kg
Metals	Lead	Fish (≤ 13 cm)	26	26	100	0.15	4.9	1.6			mg/kg
Metals	Lead	Fish (≤ 18 cm)	41	41	100	0.15	4.9	1.2			mg/kg
Metals	Lead	Fish (≤ 20 cm)	43	43	100	0.15	4.9	1.2			mg/kg
Metals	Lead	Largemouth bass	3	3	100	0.02	0.12	0.079			mg/kg
Metals	Lead	Mummichog	18	18	100	0.38	3.9	1.3			mg/kg
Metals	Lead	Mussel (estuarine)	3	3	100	0.12	0.17	0.15			mg/kg
Metals	Lead	Mussel (freshwater)	5	5	100	0.14	0.28	0.22			mg/kg
Metals	Lead	Northern pike	1	1	100	0.033	0.033				mg/kg
Metals	Lead	Other forage fish (no mummichog)	10	10	100	0.15	4.9	2.2			mg/kg
Metals	Lead	Smallmouth bass	3	3	100	0.052	0.098	0.081			mg/kg
Metals	Lead	White catfish	19	19	100	0.29	2.2	0.58			mg/kg
Metals	Lead	White perch	22	22	100	0.17	0.96	0.38			mg/kg
Metals	Lead	White sucker	5	5	100	0.15	0.3	0.23			mg/kg
Metals	Lead	Worms (all)	14	14	100	0.11	12.4	2.7			mg/kg
Metals	Lead	Worms (estuarine sp.)	5	5	100	0.11	0.22	0.16			mg/kg
Metals	Lead	Worms (freshwater sp.)	9	9	100	0.54	12.4	4.2			mg/kg
Metals	Mercury	American eel (all)	21	21	100	74	390	220			ug/kg
Metals	Mercury	Blue crab	24	24	100	79	190	130			ug/kg
Metals	Mercury	Brown bullhead	6	6	100	48	140	77			ug/kg
Metals	Mercury	Carp	12	12	100	42	110	67			ug/kg
Metals	Mercury	Channel catfish	11	11	100	32	230	120			ug/kg
Metals	Mercury	Fish (all)	131	131	100	30	680	140			ug/kg
Metals	Mercury	Fish (≤ 11 cm)	23	23	100	30	71	54			ug/kg
Metals	Mercury	Fish (≤ 13 cm)	26	26	100	30	83	55			ug/kg
Metals	Mercury	Fish (≤ 18 cm)	41	41	100	30	180	73			ug/kg
Metals	Mercury	Fish (≤ 20 cm)	43	43	100	30	180	77			ug/kg
Metals	Mercury	Largemouth bass	3	3	100	140	680	330			ug/kg
Metals	Mercury	Mummichog	18	18	100	36	71	58			ug/kg
Metals	Mercury	Mussel (estuarine)	3	3	100	8.7	19	13			ug/kg
Metals	Mercury	Mussel (freshwater)	5	5	100	24	35	29			ug/kg
Metals	Mercury	Northern pike	1	1	100	220	220				ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
Metals	Mercury	Other forage fish (no mummichog)	10	10	100	30	150	63			ug/kg
Metals	Mercury	Smallmouth bass	3	3	100	180	300	230			ug/kg
Metals	Mercury	White catfish	19	19	100	78	630	220			ug/kg
Metals	Mercury	White perch	22	22	100	33	530	160			ug/kg
Metals	Mercury	White sucker	5	5	100	77	140	110			ug/kg
Metals	Mercury	Worms (all)	19	19	100	7.6	150	28			ug/kg
Metals	Mercury	Worms (estuarine sp.)	5	5	100	21	25	23			ug/kg
Metals	Mercury	Worms (freshwater sp.)	14	14	100	7.6	150	31			ug/kg
Metals	Methyl mercury	American eel (all)	21	21	100	92	470	240			ug/kg
Metals	Methyl mercury	Blue crab	24	24	100	55	170	110			ug/kg
Metals	Methyl mercury	Brown bullhead	6	6	100	39	120	65			ug/kg
Metals	Methyl mercury	Carp	12	12	100	39	90	54			ug/kg
Metals	Methyl mercury	Channel catfish	11	11	100	30	230	110			ug/kg
Metals	Methyl mercury	Fish (all)	131	131	100	14	530	130			ug/kg
Metals	Methyl mercury	Fish (≤ 11 cm)	23	23	100	14	69	40			ug/kg
Metals	Methyl mercury	Fish (≤ 13 cm)	26	26	100	14	69	38			ug/kg
Metals	Methyl mercury	Fish (≤ 18 cm)	41	41	100	14	190	61			ug/kg
Metals	Methyl mercury	Fish (≤ 20 cm)	43	43	100	14	190	65			ug/kg
Metals	Methyl mercury	Largemouth bass	3	3	100	110	520	260			ug/kg
Metals	Methyl mercury	Mummichog	18	18	100	19	69	45			ug/kg
Metals	Methyl mercury	Mussel (estuarine)	3	3	100	3.3	4.7	4.2			ug/kg
Metals	Methyl mercury	Mussel (freshwater)	5	5	100	12	25	18			ug/kg
Metals	Methyl mercury	Northern pike	1	1	100	180	180				ug/kg
Metals	Methyl mercury	Other forage fish (no mummichog)	10	10	100	14	150	39			ug/kg
Metals	Methyl mercury	Smallmouth bass	3	3	100	140	220	170			ug/kg
Metals	Methyl mercury	White catfish	19	19	100	63	530	200			ug/kg
Metals	Methyl mercury	White perch	22	22	100	25	330	150			ug/kg
Metals	Methyl mercury	White sucker	5	5	100	71	130	100			ug/kg
Metals	Methyl mercury	Worms (all)	19	7	36.8	1	3.4	2.5	2.8	3.1	ug/kg
Metals	Methyl mercury	Worms (estuarine sp.)	5	5	100	2.9	3.4	3.1			ug/kg
Metals	Methyl mercury	Worms (freshwater sp.)	14	2	14.3	1	1.4	1.2	2.8	3.1	ug/kg
Metals	Nickel	American eel (all)	21	21	100	0.11	2.8	0.76			mg/kg
Metals	Nickel	Blue crab	24	24	100	0.52	1.9	0.89			mg/kg
Metals	Nickel	Brown bullhead	6	6	100	0.18	0.84	0.51			mg/kg
Metals	Nickel	Carp	12	12	100	0.23	4.2	1			mg/kg
Metals	Nickel	Channel catfish	11	11	100	0.15	0.5	0.3			mg/kg
Metals	Nickel	Fish (all)	131	131	100	0.11	89.1	2.5			mg/kg
Metals	Nickel	Fish (≤ 11 cm)	23	23	100	0.62	15.8	4.1			mg/kg
Metals	Nickel	Fish (≤ 13 cm)	26	26	100	0.62	22.1	4.9			mg/kg
Metals	Nickel	Fish (≤ 18 cm)	41	41	100	0.62	89.1	6.5			mg/kg
Metals	Nickel	Fish (≤ 20 cm)	43	43	100	0.62	89.1	6.3			mg/kg
Metals	Nickel	Largemouth bass	3	3	100	0.32	0.37	0.34			mg/kg
Metals	Nickel	Mummichog	18	18	100	0.81	15.8	3.6			mg/kg
Metals	Nickel	Mussel (estuarine)	3	3	100	0.11	6.1	2.1			mg/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
Metals	Nickel	Mussel (freshwater)	5	5	100	0.15	7.8	1.8			mg/kg
Metals	Nickel	Northern pike	1	1	100	0.51	0.51				mg/kg
Metals	Nickel	Other forage fish (no mummichog)	10	10	100	0.62	89.1	17			mg/kg
Metals	Nickel	Smallmouth bass	3	3	100	0.35	0.56	0.43			mg/kg
Metals	Nickel	White catfish	19	19	100	0.17	0.96	0.39			mg/kg
Metals	Nickel	White perch	22	22	100	0.62	6.3	2.1			mg/kg
Metals	Nickel	White sucker	5	5	100	0.14	0.94	0.47			mg/kg
Metals	Nickel	Worms (all)	14	14	100	1.2	36.2	7.4			mg/kg
Metals	Nickel	Worms (estuarine sp.)	5	5	100	1.2	4.9	3			mg/kg
Metals	Nickel	Worms (freshwater sp.)	9	9	100	2.4	36.2	9.8			mg/kg
Metals	Selenium	American eel (all)	21	21	100	0.33	1.2	0.67			mg/kg
Metals	Selenium	Blue crab	24	24	100	0.43	1.1	0.73			mg/kg
Metals	Selenium	Brown bullhead	6	6	100	0.4	0.9	0.61			mg/kg
Metals	Selenium	Carp	12	12	100	0.35	0.98	0.73			mg/kg
Metals	Selenium	Channel catfish	11	11	100	0.24	0.34	0.29			mg/kg
Metals	Selenium	Fish (all)	131	131	100	0.16	3	0.65			mg/kg
Metals	Selenium	Fish (≤ 11 cm)	23	23	100	0.3	0.89	0.63			mg/kg
Metals	Selenium	Fish (≤ 13 cm)	26	26	100	0.22	0.89	0.62			mg/kg
Metals	Selenium	Fish (≤ 18 cm)	41	41	100	0.22	1.3	0.7			mg/kg
Metals	Selenium	Fish (≤ 20 cm)	43	43	100	0.22	1.6	0.73			mg/kg
Metals	Selenium	Largemouth bass	3	3	100	0.36	0.59	0.49			mg/kg
Metals	Selenium	Mummichog	18	18	100	0.38	0.89	0.66			mg/kg
Metals	Selenium	Mussel (estuarine)	3	3	100	0.14	0.19	0.17			mg/kg
Metals	Selenium	Mussel (freshwater)	5	5	100	0.12	0.22	0.17			mg/kg
Metals	Selenium	Northern pike	1	1	100	0.55	0.55				mg/kg
Metals	Selenium	Other forage fish (no mummichog)	10	10	100	0.22	0.93	0.55			mg/kg
Metals	Selenium	Smallmouth bass	3	3	100	0.51	0.69	0.62			mg/kg
Metals	Selenium	White catfish	19	19	100	0.16	0.68	0.33			mg/kg
Metals	Selenium	White perch	22	22	100	0.37	3	1.2			mg/kg
Metals	Selenium	White sucker	5	5	100	0.3	0.46	0.38			mg/kg
Metals	Selenium	Worms (all)	14	14	100	0.28	0.77	0.46			mg/kg
Metals	Selenium	Worms (estuarine sp.)	5	5	100	0.28	0.35	0.3			mg/kg
Metals	Selenium	Worms (freshwater sp.)	9	9	100	0.29	0.77	0.54			mg/kg
Metals	Silver	American eel (all)	21	18	85.7	0.007	0.062	0.021	0.005	0.008	mg/kg
Metals	Silver	Blue crab	24	24	100	0.25	0.78	0.54			mg/kg
Metals	Silver	Brown bullhead	6	0	0				0.005	0.008	mg/kg
Metals	Silver	Carp	12	3	25	0.007	0.015	0.011	0.006	0.008	mg/kg
Metals	Silver	Channel catfish	11	1	9.1	0.014	0.014		0.0014	0.0019	mg/kg
Metals	Silver	Fish (all)	131	83	63.4	0.0026	0.64	0.055	0.0012	0.008	mg/kg
Metals	Silver	Fish (≤ 11 cm)	23	22	95.7	0.013	0.06	0.038	0.0051	0.0051	mg/kg
Metals	Silver	Fish (≤ 13 cm)	26	25	96.2	0.013	0.074	0.039	0.0051	0.0051	mg/kg
Metals	Silver	Fish (≤ 18 cm)	41	40	97.6	0.0067	0.19	0.049	0.0051	0.0051	mg/kg
Metals	Silver	Fish (≤ 20 cm)	43	42	97.7	0.0067	0.19	0.054	0.0051	0.0051	mg/kg
Metals	Silver	Largemouth bass	3	0	0				0.0026	0.0026	mg/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
Metals	Silver	Mummichog	18	18	100	0.023	0.06	0.039			mg/kg
Metals	Silver	Mussel (estuarine)	3	3	100	0.022	0.025	0.024			mg/kg
Metals	Silver	Mussel (freshwater)	5	5	100	0.005	0.006	0.0054			mg/kg
Metals	Silver	Northern pike	1	0	0				0.0028	0.0028	mg/kg
Metals	Silver	Other forage fish (no mummichog)	10	9	90	0.0067	0.074	0.035	0.0051	0.0051	mg/kg
Metals	Silver	Smallmouth bass	3	0	0				0.0026	0.0028	mg/kg
Metals	Silver	White catfish	19	7	36.8	0.0026	0.0066	0.0047	0.0012	0.0027	mg/kg
Metals	Silver	White perch	22	22	100	0.013	0.64	0.14			mg/kg
Metals	Silver	White sucker	5	5	100	0.003	0.005	0.0041			mg/kg
Metals	Silver	Worms (all)	14	14	100	0.006	0.042	0.023			mg/kg
Metals	Silver	Worms (estuarine sp.)	5	5	100	0.021	0.027	0.023			mg/kg
Metals	Silver	Worms (freshwater sp.)	9	9	100	0.006	0.042	0.023			mg/kg
Metals	Thallium	American eel (all)	21	2	9.5	0.0093	0.014	0.012	0.0005	0.0068	mg/kg
Metals	Thallium	Blue crab	24	4	16.7	0.0026	0.0045	0.0035	0.00021	0.0013	mg/kg
Metals	Thallium	Brown bullhead	6	0	0				0.0005	0.0053	mg/kg
Metals	Thallium	Carp	12	2	16.7	0.0008	0.0051	0.003	0.0007	0.0061	mg/kg
Metals	Thallium	Channel catfish	11	6	54.5	0.00036	0.0059	0.003	0.0021	0.0028	mg/kg
Metals	Thallium	Fish (all)	131	22	16.8	0.00036	0.024	0.0057	0.00027	0.0068	mg/kg
Metals	Thallium	Fish (≤ 11 cm)	23	1	4.3	0.0068	0.0068		0.0005	0.0052	mg/kg
Metals	Thallium	Fish (≤ 13 cm)	26	2	7.7	0.0068	0.007	0.0069	0.0005	0.0052	mg/kg
Metals	Thallium	Fish (≤ 18 cm)	41	3	7.3	0.0046	0.007	0.0061	0.0005	0.0065	mg/kg
Metals	Thallium	Fish (≤ 20 cm)	43	3	7	0.0046	0.007	0.0061	0.0005	0.0065	mg/kg
Metals	Thallium	Largemouth bass	3	0	0				0.00094	0.0025	mg/kg
Metals	Thallium	Mummichog	18	1	5.6	0.0068	0.0068		0.0005	0.0052	mg/kg
Metals	Thallium	Mussel (estuarine)	3	0	0				0.001	0.0011	mg/kg
Metals	Thallium	Mussel (freshwater)	5	1	20	0.006	0.006		0.0017	0.002	mg/kg
Metals	Thallium	Northern pike	1	0	0				0.0013	0.0013	mg/kg
Metals	Thallium	Other forage fish (no mummichog)	10	2	20	0.0046	0.007	0.0058	0.0042	0.0056	mg/kg
Metals	Thallium	Smallmouth bass	3	0	0				0.0026	0.0027	mg/kg
Metals	Thallium	White catfish	19	5	26.3	0.0021	0.0094	0.0041	0.00058	0.0028	mg/kg
Metals	Thallium	White perch	22	2	9.1	0.0095	0.024	0.017	0.0005	0.0065	mg/kg
Metals	Thallium	White sucker	5	2	40	0.002	0.0039	0.003	0.00027	0.0017	mg/kg
Metals	Thallium	Worms (all)	14	11	78.6	0.0003	0.006	0.0026	0.0003	0.0003	mg/kg
Metals	Thallium	Worms (estuarine sp.)	5	2	40	0.0003	0.001	0.00065	0.0003	0.0003	mg/kg
Metals	Thallium	Worms (freshwater sp.)	9	9	100	0.0006	0.006	0.003			mg/kg
Metals	Vanadium	American eel (all)	21	12	57.1	0.03	0.12	0.08	0.02	0.07	mg/kg
Metals	Vanadium	Blue crab	24	24	100	0.078	0.14	0.11			mg/kg
Metals	Vanadium	Brown bullhead	6	5	83.3	0.12	0.2	0.17	0.03	0.03	mg/kg
Metals	Vanadium	Carp	12	12	100	0.03	0.21	0.094			mg/kg
Metals	Vanadium	Channel catfish	11	11	100	0.032	0.063	0.05			mg/kg
Metals	Vanadium	Fish (all)	131	117	89.3	0.016	1.3	0.22	0.01	0.07	mg/kg
Metals	Vanadium	Fish (≤ 11 cm)	23	23	100	0.05	1.3	0.53			mg/kg
Metals	Vanadium	Fish (≤ 13 cm)	26	26	100	0.05	1.3	0.59			mg/kg
Metals	Vanadium	Fish (≤ 18 cm)	41	41	100	0.04	1.3	0.46			mg/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
Metals	Vanadium	Fish (≤ 20 cm)	43	43	100	0.04	1.3	0.44			mg/kg
Metals	Vanadium	Largemouth bass	3	0	0				0.01	0.01	mg/kg
Metals	Vanadium	Mummichog	18	18	100	0.15	1.3	0.51			mg/kg
Metals	Vanadium	Mussel (estuarine)	3	3	100	0.08	0.25	0.14			mg/kg
Metals	Vanadium	Mussel (freshwater)	5	5	100	4.9	5.8	5.3			mg/kg
Metals	Vanadium	Northern pike	1	0	0				0.01	0.01	mg/kg
Metals	Vanadium	Other forage fish (no mummichog)	10	10	100	0.05	1.3	0.8			mg/kg
Metals	Vanadium	Smallmouth bass	3	3	100	0.016	0.028	0.02			mg/kg
Metals	Vanadium	White catfish	19	19	100	0.043	0.21	0.13			mg/kg
Metals	Vanadium	White perch	22	22	100	0.04	0.39	0.12			mg/kg
Metals	Vanadium	White sucker	5	5	100	0.073	0.17	0.11			mg/kg
Metals	Vanadium	Worms (all)	14	14	100	0.07	1.3	0.4			mg/kg
Metals	Vanadium	Worms (estuarine sp.)	5	5	100	0.07	0.08	0.076			mg/kg
Metals	Vanadium	Worms (freshwater sp.)	9	9	100	0.11	1.3	0.57			mg/kg
Metals	Zinc	American eel (all)	21	21	100	23.1	42.2	29.4			mg/kg
Metals	Zinc	Blue crab	24	24	100	28.3	41.1	35.3			mg/kg
Metals	Zinc	Brown bullhead	6	6	100	15	41.4	20.2			mg/kg
Metals	Zinc	Carp	12	12	100	47.6	104	67			mg/kg
Metals	Zinc	Channel catfish	11	11	100	17	22	19			mg/kg
Metals	Zinc	Fish (all)	131	131	100	12	104	30			mg/kg
Metals	Zinc	Fish (≤ 11 cm)	23	23	100	25	51.6	41.4			mg/kg
Metals	Zinc	Fish (≤ 13 cm)	26	26	100	25	51.6	40			mg/kg
Metals	Zinc	Fish (≤ 18 cm)	41	41	100	21.4	51.6	35			mg/kg
Metals	Zinc	Fish (≤ 20 cm)	43	43	100	20.8	51.6	34.4			mg/kg
Metals	Zinc	Largemouth bass	3	3	100	15.4	16	16			mg/kg
Metals	Zinc	Mummichog	18	18	100	38.6	51.6	43.4			mg/kg
Metals	Zinc	Mussel (estuarine)	3	3	100	3.4	6.4	4.5			mg/kg
Metals	Zinc	Mussel (freshwater)	5	5	100	13.5	17.3	15.6			mg/kg
Metals	Zinc	Northern pike	1	1	100	34	34				mg/kg
Metals	Zinc	Other forage fish (no mummichog)	10	10	100	25	48	32.2			mg/kg
Metals	Zinc	Smallmouth bass	3	3	100	15	18.4	17			mg/kg
Metals	Zinc	White catfish	19	19	100	12	19	16			mg/kg
Metals	Zinc	White perch	22	22	100	19.9	30.8	25			mg/kg
Metals	Zinc	White sucker	5	5	100	14	21	17			mg/kg
Metals	Zinc	Worms (all)	14	14	100	18.1	45.2	29.5			mg/kg
Metals	Zinc	Worms (estuarine sp.)	5	5	100	18.1	19.5	18.7			mg/kg
Metals	Zinc	Worms (freshwater sp.)	9	9	100	26.4	45.2	35.5			mg/kg
Butyltin	Monobutyltin	American eel (all)	21	9	42.9	0.19	0.52	0.32	0.49	2	ug/kg
Butyltin	Monobutyltin	Blue crab	24	21	87.5	0.38	1.1	0.65	0.47	0.5	ug/kg
Butyltin	Monobutyltin	Brown bullhead	6	1	16.7	0.53	0.53		0.97	20	ug/kg
Butyltin	Monobutyltin	Carp	12	2	16.7	0.36	1.3	0.83	0.95	25	ug/kg
Butyltin	Monobutyltin	Channel catfish	11	0	0				0.47	0.88	ug/kg
Butyltin	Monobutyltin	Fish (all)	131	30	22.9	0.19	52	2.4	0.47	25	ug/kg
Butyltin	Monobutyltin	Fish (≤ 11 cm)	23	1	4.3	52	52		0.97	1.4	ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
Butyltin	Monobutyltin	Fish (≤ 13 cm)	26	2	7.7	1.6	52	27	0.97	1.4	ug/kg
Butyltin	Monobutyltin	Fish (≤ 18 cm)	41	2	4.9	1.6	52	27	0.96	2	ug/kg
Butyltin	Monobutyltin	Fish (≤ 20 cm)	43	2	4.7	1.6	52	27	0.96	2	ug/kg
Butyltin	Monobutyltin	Largemouth bass	3	0	0				0.5	0.79	ug/kg
Butyltin	Monobutyltin	Mummichog	18	1	5.6	52	52		0.97	1.4	ug/kg
Butyltin	Monobutyltin	Mussel (estuarine)	3	2	66.7	2.1	3.6	2.9	1	1	ug/kg
Butyltin	Monobutyltin	Mussel (freshwater)	5	3	60	1.6	2	1.7	1	1	ug/kg
Butyltin	Monobutyltin	Northern pike	1	0	0				0.5	0.5	ug/kg
Butyltin	Monobutyltin	Other forage fish (no mummichog)	10	1	10	1.6	1.6		0.97	1	ug/kg
Butyltin	Monobutyltin	Smallmouth bass	3	3	100	0.54	0.85	0.74			ug/kg
Butyltin	Monobutyltin	White catfish	19	12	63.2	0.33	3.1	0.92	0.47	0.5	ug/kg
Butyltin	Monobutyltin	White perch	22	1	4.5	0.38	0.38		0.94	2.4	ug/kg
Butyltin	Monobutyltin	White sucker	5	0	0				0.49	0.5	ug/kg
Butyltin	Monobutyltin	Worms (all)	14	10	71.4	2.3	30	8.6	1	3.4	ug/kg
Butyltin	Monobutyltin	Worms (estuarine sp.)	5	1	20	2.3	2.3		1	3.4	ug/kg
Butyltin	Monobutyltin	Worms (freshwater sp.)	9	9	100	3.7	30	9.3			ug/kg
Butyltin	Dibutyltin	American eel (all)	21	7	33.3	0.13	0.79	0.36	0.99	2	ug/kg
Butyltin	Dibutyltin	Blue crab	24	24	100	0.17	1.9	0.84			ug/kg
Butyltin	Dibutyltin	Brown bullhead	6	3	50	0.12	1.5	0.62	0.97	20	ug/kg
Butyltin	Dibutyltin	Carp	12	3	25	0.48	0.62	0.57	0.95	25	ug/kg
Butyltin	Dibutyltin	Channel catfish	11	2	18.2	0.19	0.23	0.21	0.47	0.88	ug/kg
Butyltin	Dibutyltin	Fish (all)	131	85	64.9	0.12	42	1.1	0.47	25	ug/kg
Butyltin	Dibutyltin	Fish (≤ 11 cm)	23	22	95.7	0.2	42	2.9	0.99	0.99	ug/kg
Butyltin	Dibutyltin	Fish (≤ 13 cm)	26	24	92.3	0.2	42	2.7	0.99	1	ug/kg
Butyltin	Dibutyltin	Fish (≤ 18 cm)	41	32	78	0.2	42	2.2	0.96	2	ug/kg
Butyltin	Dibutyltin	Fish (≤ 20 cm)	43	34	79.1	0.2	42	2.1	0.96	2	ug/kg
Butyltin	Dibutyltin	Largemouth bass	3	2	66.7	0.32	0.42	0.37	0.5	0.5	ug/kg
Butyltin	Dibutyltin	Mummichog	18	18	100	0.45	42	3.4			ug/kg
Butyltin	Dibutyltin	Mussel (estuarine)	3	3	100	0.13	0.37	0.22			ug/kg
Butyltin	Dibutyltin	Mussel (freshwater)	5	4	80	0.16	0.74	0.38	1	1	ug/kg
Butyltin	Dibutyltin	Northern pike	1	1	100	0.53	0.53				ug/kg
Butyltin	Dibutyltin	Other forage fish (no mummichog)	10	7	70	0.2	1.7	0.58	0.99	1	ug/kg
Butyltin	Dibutyltin	Smallmouth bass	3	3	100	0.33	0.42	0.37			ug/kg
Butyltin	Dibutyltin	White catfish	19	19	100	0.23	2.7	0.7			ug/kg
Butyltin	Dibutyltin	White perch	22	15	68.2	0.12	0.68	0.39	0.96	2.4	ug/kg
Butyltin	Dibutyltin	White sucker	5	5	100	0.22	0.54	0.38			ug/kg
Butyltin	Dibutyltin	Worms (all)	14	13	92.9	0.27	43	4.8	3.4	3.4	ug/kg
Butyltin	Dibutyltin	Worms (estuarine sp.)	5	4	80	0.27	1.9	0.82	3.4	3.4	ug/kg
Butyltin	Dibutyltin	Worms (freshwater sp.)	9	9	100	1	43	6.6			ug/kg
Butyltin	Tributyltin	American eel (all)	21	17	81	0.23	4.5	1.2	0.99	2	ug/kg
Butyltin	Tributyltin	Blue crab	24	24	100	0.37	3.8	1.7			ug/kg
Butyltin	Tributyltin	Brown bullhead	6	5	83.3	0.54	2.7	1.4	20	20	ug/kg
Butyltin	Tributyltin	Carp	12	9	75	0.81	3.1	2	20	25	ug/kg
Butyltin	Tributyltin	Channel catfish	11	11	100	0.45	1.1	0.7			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
Butyltin	Tributyltin	Fish (all)	131	120	91.6	0.18	63	3.3	0.5	25	ug/kg
Butyltin	Tributyltin	Fish (≤ 11 cm)	23	22	95.7	0.23	63	6.5	0.99	0.99	ug/kg
Butyltin	Tributyltin	Fish (≤ 13 cm)	26	25	96.2	0.18	63	5.9	0.99	0.99	ug/kg
Butyltin	Tributyltin	Fish (≤ 18 cm)	41	39	95.1	0.18	63	6.3	0.99	1	ug/kg
Butyltin	Tributyltin	Fish (≤ 20 cm)	43	41	95.3	0.18	63	6.7	0.99	1	ug/kg
Butyltin	Tributyltin	Largemouth bass	3	2	66.7	0.98	2.1	1.5	0.5	0.5	ug/kg
Butyltin	Tributyltin	Mummichog	18	18	100	1.3	63	7.7			ug/kg
Butyltin	Tributyltin	Mussel (estuarine)	3	3	100	0.5	0.9	0.66			ug/kg
Butyltin	Tributyltin	Mussel (freshwater)	5	4	80	0.16	0.45	0.29	1	1	ug/kg
Butyltin	Tributyltin	Northern pike	1	1	100	1.4	1.4				ug/kg
Butyltin	Tributyltin	Other forage fish (no mummichog)	10	8	80	0.18	3.6	1.5	0.99	1	ug/kg
Butyltin	Tributyltin	Smallmouth bass	3	3	100	0.37	1.3	0.96			ug/kg
Butyltin	Tributyltin	White catfish	19	19	100	0.42	4.2	1.5			ug/kg
Butyltin	Tributyltin	White perch	22	22	100	0.8	16	6.6			ug/kg
Butyltin	Tributyltin	White sucker	5	5	100	0.78	2.6	1.7			ug/kg
Butyltin	Tributyltin	Worms (all)	14	6	42.9	0.24	1.4	0.78	1	3.4	ug/kg
Butyltin	Tributyltin	Worms (estuarine sp.)	5	1	20	0.71	0.71		1	3.4	ug/kg
Butyltin	Tributyltin	Worms (freshwater sp.)	9	5	55.6	0.24	1.4	0.79	1	1	ug/kg
Butyltin	Tetrabutyltin	American eel (all)	21	0	0				0.49	2	ug/kg
Butyltin	Tetrabutyltin	Blue crab	24	0	0				0.46	0.5	ug/kg
Butyltin	Tetrabutyltin	Brown bullhead	6	0	0				0.97	20	ug/kg
Butyltin	Tetrabutyltin	Carp	12	2	16.7	0.39	0.48	0.44	0.95	25	ug/kg
Butyltin	Tetrabutyltin	Channel catfish	11	0	0				0.47	0.88	ug/kg
Butyltin	Tetrabutyltin	Fish (all)	131	4	3.1	0.39	0.67	0.53	0.47	25	ug/kg
Butyltin	Tetrabutyltin	Fish (≤ 11 cm)	23	0	0				0.97	5	ug/kg
Butyltin	Tetrabutyltin	Fish (≤ 13 cm)	26	0	0				0.97	5	ug/kg
Butyltin	Tetrabutyltin	Fish (≤ 18 cm)	41	0	0				0.96	5	ug/kg
Butyltin	Tetrabutyltin	Fish (≤ 20 cm)	43	0	0				0.96	5	ug/kg
Butyltin	Tetrabutyltin	Largemouth bass	3	0	0				0.5	0.79	ug/kg
Butyltin	Tetrabutyltin	Mummichog	18	0	0				0.97	5	ug/kg
Butyltin	Tetrabutyltin	Mussel (estuarine)	3	0	0				1	1	ug/kg
Butyltin	Tetrabutyltin	Mussel (freshwater)	5	0	0				1	1	ug/kg
Butyltin	Tetrabutyltin	Northern pike	1	0	0				0.5	0.5	ug/kg
Butyltin	Tetrabutyltin	Other forage fish (no mummichog)	10	0	0				0.97	1	ug/kg
Butyltin	Tetrabutyltin	Smallmouth bass	3	0	0				0.5	0.5	ug/kg
Butyltin	Tetrabutyltin	White catfish	19	2	10.5	0.56	0.67	0.62	0.47	0.5	ug/kg
Butyltin	Tetrabutyltin	White perch	22	0	0				0.5	2.4	ug/kg
Butyltin	Tetrabutyltin	White sucker	5	0	0				0.49	0.5	ug/kg
Butyltin	Tetrabutyltin	Worms (all)	14	0	0				0.97	4.8	ug/kg
Butyltin	Tetrabutyltin	Worms (estuarine sp.)	5	0	0				1	4.8	ug/kg
Butyltin	Tetrabutyltin	Worms (freshwater sp.)	9	0	0				0.97	1	ug/kg
PAHs	1-Methylnaphthale	American eel (all)	21	13	61.9	3.9	23	9.4	5	12	ug/kg
PAHs	1-Methylnaphthale	Blue crab	24	17	70.8	1.9	14	4.9	1.6	3.9	ug/kg
PAHs	1-Methylnaphthale	Brown bullhead	6	5	83.3	11	14	13	16	16	ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PAHs	1-Methylnaphthale	Carp	12	10	83.3	10	37	21	14	16	ug/kg
PAHs	1-Methylnaphthale	Channel catfish	11	10	90.9	9.1	16	12	2.9	2.9	ug/kg
PAHs	1-Methylnaphthale	Fish (all)	131	102	77.9	2.5	68	12	2.5	16	ug/kg
PAHs	1-Methylnaphthale	Fish (≤ 11 cm)	23	21	91.3	4.4	68	9.9	3.3	4.1	ug/kg
PAHs	1-Methylnaphthale	Fish (≤ 13 cm)	26	24	92.3	4.4	68	9.7	3.3	4.1	ug/kg
PAHs	1-Methylnaphthale	Fish (≤ 18 cm)	41	36	87.8	4.4	68	11	3.3	10	ug/kg
PAHs	1-Methylnaphthale	Fish (≤ 20 cm)	43	38	88.4	4.4	68	11	3.3	10	ug/kg
PAHs	1-Methylnaphthale	Largemouth bass	3	1	33.3	7.5	7.5		6.2	6.7	ug/kg
PAHs	1-Methylnaphthale	Mummichog	18	16	88.9	4.4	11	6.7	3.3	4.1	ug/kg
PAHs	1-Methylnaphthale	Mussel (estuarine)	3	3	100	9	21	14			ug/kg
PAHs	1-Methylnaphthale	Mussel (freshwater)	5	3	60	0.5	1	0.7	0.9	0.9	ug/kg
PAHs	1-Methylnaphthale	Northern pike	1	1	100	29	29				ug/kg
PAHs	1-Methylnaphthale	Other forage fish (no mummichog)	10	10	100	5.3	68	15			ug/kg
PAHs	1-Methylnaphthale	Smallmouth bass	3	0	0				6	14	ug/kg
PAHs	1-Methylnaphthale	White catfish	19	15	78.9	2.5	21	9	3	5.1	ug/kg
PAHs	1-Methylnaphthale	White perch	22	18	81.8	5.2	24	13	2.8	10	ug/kg
PAHs	1-Methylnaphthale	White sucker	5	3	60	7.3	12	10	2.5	2.7	ug/kg
PAHs	1-Methylnaphthale	Worms (all)	10	2	20	13	16	15	3.2	6.2	ug/kg
PAHs	1-Methylnaphthale	Worms (estuarine sp.)	5	0	0				3.2	5.8	ug/kg
PAHs	1-Methylnaphthale	Worms (freshwater sp.)	5	2	40	13	16	15	3.7	6.2	ug/kg
PAHs	1-Methylphenanthr	American eel (all)	21	12	57.1	1.4	5.6	3.2	0.93	3.1	ug/kg
PAHs	1-Methylphenanthr	Blue crab	24	17	70.8	0.62	14	2.4	0.38	1.3	ug/kg
PAHs	1-Methylphenanthr	Brown bullhead	6	5	83.3	3.6	12	8.3	4.1	4.1	ug/kg
PAHs	1-Methylphenanthr	Carp	12	11	91.7	1.9	27	14	2.7	2.7	ug/kg
PAHs	1-Methylphenanthr	Channel catfish	11	11	100	1.5	12	4.9			ug/kg
PAHs	1-Methylphenanthr	Fish (all)	131	106	80.9	1.3	27	7.3	0.71	4.1	ug/kg
PAHs	1-Methylphenanthr	Fish (≤ 11 cm)	23	21	91.3	1.3	14	5.1	0.98	1.4	ug/kg
PAHs	1-Methylphenanthr	Fish (≤ 13 cm)	26	24	92.3	1.3	15	5.5	0.98	1.4	ug/kg
PAHs	1-Methylphenanthr	Fish (≤ 18 cm)	41	36	87.8	1.3	25	7.2	0.98	4.1	ug/kg
PAHs	1-Methylphenanthr	Fish (≤ 20 cm)	43	37	86	1.3	25	7.3	0.98	4.1	ug/kg
PAHs	1-Methylphenanthr	Largemouth bass	3	1	33.3	2.2	2.2		0.97	2.1	ug/kg
PAHs	1-Methylphenanthr	Mummichog	18	16	88.9	1.3	9.6	3.5	0.98	1.4	ug/kg
PAHs	1-Methylphenanthr	Mussel (estuarine)	3	3	100	1	6	3.3			ug/kg
PAHs	1-Methylphenanthr	Mussel (freshwater)	5	5	100	4	7	5			ug/kg
PAHs	1-Methylphenanthr	Northern pike	1	1	100	7.7	7.7				ug/kg
PAHs	1-Methylphenanthr	Other forage fish (no mummichog)	10	10	100	3.3	15	9.4			ug/kg
PAHs	1-Methylphenanthr	Smallmouth bass	3	1	33.3	4.3	4.3		2.3	2.6	ug/kg
PAHs	1-Methylphenanthr	White catfish	19	19	100	2	20	7.7			ug/kg
PAHs	1-Methylphenanthr	White perch	22	18	81.8	2	25	9.3	2.1	4.1	ug/kg
PAHs	1-Methylphenanthr	White sucker	5	1	20	3.7	3.7		0.71	1.3	ug/kg
PAHs	1-Methylphenanthr	Worms (all)	10	7	70	2.6	69	22	2.9	3.8	ug/kg
PAHs	1-Methylphenanthr	Worms (estuarine sp.)	5	2	40	2.6	4	3.3	2.9	3.8	ug/kg
PAHs	1-Methylphenanthr	Worms (freshwater sp.)	5	5	100	7.3	69	30			ug/kg
PAHs	2,3,5-Trimethylnapl	American eel (all)	21	0	0				1.5	5.5	ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PAHs	2,3,5-Trimethylnapl	Blue crab	24	13	54.2	0.45	1.3	0.83	0.33	0.86	ug/kg
PAHs	2,3,5-Trimethylnapl	Brown bullhead	6	5	83.3	1.8	8.4	3.7	5.6	5.6	ug/kg
PAHs	2,3,5-Trimethylnapl	Carp	12	2	16.7	3.1	5	4.1	2.4	7.3	ug/kg
PAHs	2,3,5-Trimethylnapl	Channel catfish	11	10	90.9	1.7	12	5.2	0.83	0.83	ug/kg
PAHs	2,3,5-Trimethylnapl	Fish (all)	131	49	37.4	1.7	37	5.5	0.78	12	ug/kg
PAHs	2,3,5-Trimethylnapl	Fish (≤ 11 cm)	23	4	17.4	5.4	37	14	1.6	6.4	ug/kg
PAHs	2,3,5-Trimethylnapl	Fish (≤ 13 cm)	26	4	15.4	5.4	37	14	1.6	6.4	ug/kg
PAHs	2,3,5-Trimethylnapl	Fish (≤ 18 cm)	41	11	26.8	2.9	37	7.9	1.6	12	ug/kg
PAHs	2,3,5-Trimethylnapl	Fish (≤ 20 cm)	43	12	27.9	2.9	37	7.6	1.6	12	ug/kg
PAHs	2,3,5-Trimethylnapl	Largemouth bass	3	1	33.3	1.8	1.8		2.4	3.9	ug/kg
PAHs	2,3,5-Trimethylnapl	Mummichog	18	3	16.7	5.4	6.7	6	1.6	4.3	ug/kg
PAHs	2,3,5-Trimethylnapl	Mussel (estuarine)	3	2	66.7	1	1	1	1	1	ug/kg
PAHs	2,3,5-Trimethylnapl	Mussel (freshwater)	5	3	60	0.5	0.6	0.53	0.9	0.9	ug/kg
PAHs	2,3,5-Trimethylnapl	Northern pike	1	1	100	8.5	8.5				ug/kg
PAHs	2,3,5-Trimethylnapl	Other forage fish (no mummichog)	10	1	10	37	37		1.6	12	ug/kg
PAHs	2,3,5-Trimethylnapl	Smallmouth bass	3	1	33.3	10	10		4	4.2	ug/kg
PAHs	2,3,5-Trimethylnapl	White catfish	19	10	52.6	2.4	11	4.3	0.78	2.7	ug/kg
PAHs	2,3,5-Trimethylnapl	White perch	22	12	54.5	2.9	12	5	1.6	7.4	ug/kg
PAHs	2,3,5-Trimethylnapl	White sucker	5	3	60	3	4.4	3.6	1.2	1.9	ug/kg
PAHs	2,3,5-Trimethylnapl	Worms (all)	10	1	10	6.8	6.8		2.2	6.7	ug/kg
PAHs	2,3,5-Trimethylnapl	Worms (estuarine sp.)	5	0	0				2.2	3.6	ug/kg
PAHs	2,3,5-Trimethylnapl	Worms (freshwater sp.)	5	1	20	6.8	6.8		3.6	6.7	ug/kg
PAHs	2,6-Dimethylnaphth	American eel (all)	21	12	57.1	2.4	7.3	4.9	2	6.5	ug/kg
PAHs	2,6-Dimethylnaphth	Blue crab	24	20	83.3	0.98	4.3	2.2	0.87	2.1	ug/kg
PAHs	2,6-Dimethylnaphth	Brown bullhead	6	6	100	5	29	13			ug/kg
PAHs	2,6-Dimethylnaphth	Carp	12	12	100	5	28	11			ug/kg
PAHs	2,6-Dimethylnaphth	Channel catfish	11	11	100	4.1	19	8.1			ug/kg
PAHs	2,6-Dimethylnaphth	Fish (all)	131	112	85.5	2.4	40	9	1.2	6.8	ug/kg
PAHs	2,6-Dimethylnaphth	Fish (≤ 11 cm)	23	22	95.7	2.5	40	5.8	4.1	4.1	ug/kg
PAHs	2,6-Dimethylnaphth	Fish (≤ 13 cm)	26	25	96.2	2.5	40	5.7	4.1	4.1	ug/kg
PAHs	2,6-Dimethylnaphth	Fish (≤ 18 cm)	41	38	92.7	2.5	40	7.6	2.7	4.1	ug/kg
PAHs	2,6-Dimethylnaphth	Fish (≤ 20 cm)	43	40	93	2.5	40	8.1	2.7	4.1	ug/kg
PAHs	2,6-Dimethylnaphth	Largemouth bass	3	1	33.3	7.3	7.3		2.7	4.9	ug/kg
PAHs	2,6-Dimethylnaphth	Mummichog	18	18	100	2.5	6.3	4.1			ug/kg
PAHs	2,6-Dimethylnaphth	Mussel (estuarine)	3	3	100	1	2	1.7			ug/kg
PAHs	2,6-Dimethylnaphth	Mussel (freshwater)	5	5	100	0.5	0.9	0.64			ug/kg
PAHs	2,6-Dimethylnaphth	Northern pike	1	1	100	14	14				ug/kg
PAHs	2,6-Dimethylnaphth	Other forage fish (no mummichog)	10	10	100	3.9	40	9.2			ug/kg
PAHs	2,6-Dimethylnaphth	Smallmouth bass	3	1	33.3	5.3	5.3		6.8	6.8	ug/kg
PAHs	2,6-Dimethylnaphth	White catfish	19	18	94.7	3.5	33	12	1.4	1.4	ug/kg
PAHs	2,6-Dimethylnaphth	White perch	22	18	81.8	4.4	21	12	2.5	4.1	ug/kg
PAHs	2,6-Dimethylnaphth	White sucker	5	4	80	2.6	7.2	4.8	1.2	1.2	ug/kg
PAHs	2,6-Dimethylnaphth	Worms (all)	10	1	10	8	8		2.8	6.8	ug/kg
PAHs	2,6-Dimethylnaphth	Worms (estuarine sp.)	5	0	0				2.8	5.2	ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PAHs	2,6-Dimethylnaphth	Worms (freshwater sp.)	5	1	20	8	8		3.4	6.8	ug/kg
PAHs	2-Methylnaphthale	American eel (all)	21	14	66.7	3.1	21	9	3.5	15	ug/kg
PAHs	2-Methylnaphthale	Blue crab	24	7	29.2	2.4	9.8	5.3	1.4	4.1	ug/kg
PAHs	2-Methylnaphthale	Brown bullhead	6	5	83.3	14	24	21	20	20	ug/kg
PAHs	2-Methylnaphthale	Carp	12	8	66.7	11	28	18	19	26	ug/kg
PAHs	2-Methylnaphthale	Channel catfish	11	10	90.9	6.7	13	9.8	5	5	ug/kg
PAHs	2-Methylnaphthale	Fish (all)	131	102	77.9	3.1	36	12	1.2	26	ug/kg
PAHs	2-Methylnaphthale	Fish (≤ 11 cm)	23	22	95.7	3.7	23	8.9	3.2	3.2	ug/kg
PAHs	2-Methylnaphthale	Fish (≤ 13 cm)	26	25	96.2	3.7	23	9.2	3.2	3.2	ug/kg
PAHs	2-Methylnaphthale	Fish (≤ 18 cm)	41	38	92.7	3.7	23	10	3.2	19	ug/kg
PAHs	2-Methylnaphthale	Fish (≤ 20 cm)	43	40	93	3.7	23	10	3.2	19	ug/kg
PAHs	2-Methylnaphthale	Largemouth bass	3	1	33.3	10	10		7	7.4	ug/kg
PAHs	2-Methylnaphthale	Mummichog	18	17	94.4	3.7	16	7.8	3.2	3.2	ug/kg
PAHs	2-Methylnaphthale	Mussel (estuarine)	3	3	100	8	15	11			ug/kg
PAHs	2-Methylnaphthale	Mussel (freshwater)	5	4	80	0.5	0.9	0.63	0.9	0.9	ug/kg
PAHs	2-Methylnaphthale	Northern pike	1	1	100	26	26				ug/kg
PAHs	2-Methylnaphthale	Other forage fish (no mummichog)	10	10	100	5.7	23	12			ug/kg
PAHs	2-Methylnaphthale	Smallmouth bass	3	0	0				6.5	15	ug/kg
PAHs	2-Methylnaphthale	White catfish	19	12	63.2	5.1	36	14	1.2	6.1	ug/kg
PAHs	2-Methylnaphthale	White perch	22	19	86.4	6.5	30	13	2.8	19	ug/kg
PAHs	2-Methylnaphthale	White sucker	5	5	100	5.2	17	11			ug/kg
PAHs	2-Methylnaphthale	Worms (all)	10	2	20	5.5	28	17	3.1	6	ug/kg
PAHs	2-Methylnaphthale	Worms (estuarine sp.)	5	0	0				3.1	5.6	ug/kg
PAHs	2-Methylnaphthale	Worms (freshwater sp.)	5	2	40	5.5	28	17	3.6	6	ug/kg
PAHs	Acenaphthene	American eel (all)	21	20	95.2	9.8	100	31	3.1	3.1	ug/kg
PAHs	Acenaphthene	Blue crab	24	24	100	2.8	130	25			ug/kg
PAHs	Acenaphthene	Brown bullhead	6	6	100	11	83	37			ug/kg
PAHs	Acenaphthene	Carp	12	12	100	21	97	48			ug/kg
PAHs	Acenaphthene	Channel catfish	11	11	100	14	42	30			ug/kg
PAHs	Acenaphthene	Fish (all)	131	130	99.2	4.2	160	32	3.1	3.1	ug/kg
PAHs	Acenaphthene	Fish (≤ 11 cm)	23	23	100	6.3	160	20			ug/kg
PAHs	Acenaphthene	Fish (≤ 13 cm)	26	26	100	6.3	160	19			ug/kg
PAHs	Acenaphthene	Fish (≤ 18 cm)	41	41	100	6.3	160	26			ug/kg
PAHs	Acenaphthene	Fish (≤ 20 cm)	43	43	100	6.3	160	28			ug/kg
PAHs	Acenaphthene	Largemouth bass	3	3	100	8.9	15	12			ug/kg
PAHs	Acenaphthene	Mummichog	18	18	100	6.5	29	13			ug/kg
PAHs	Acenaphthene	Mussel (estuarine)	3	3	100	6	28	16			ug/kg
PAHs	Acenaphthene	Mussel (freshwater)	5	5	100	1	2	1.2			ug/kg
PAHs	Acenaphthene	Northern pike	1	1	100	71	71				ug/kg
PAHs	Acenaphthene	Other forage fish (no mummichog)	10	10	100	6.5	160	29			ug/kg
PAHs	Acenaphthene	Smallmouth bass	3	3	100	6.3	11	9.1			ug/kg
PAHs	Acenaphthene	White catfish	19	19	100	6.6	79	31			ug/kg
PAHs	Acenaphthene	White perch	22	22	100	4.2	110	48			ug/kg
PAHs	Acenaphthene	White sucker	5	5	100	9.6	23	15			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PAHs	Acenaphthene	Worms (all)	10	3	30	4.8	80	44	3.4	7.7	ug/kg
PAHs	Acenaphthene	Worms (estuarine sp.)	5	0	0				3.4	7.7	ug/kg
PAHs	Acenaphthene	Worms (freshwater sp.)	5	3	60	4.8	80	44	3.8	5.3	ug/kg
PAHs	Acenaphthylene	American eel (all)	21	4	19	2.9	5.4	3.7	1.3	9.4	ug/kg
PAHs	Acenaphthylene	Blue crab	24	21	87.5	1	9.8	3.5	0.76	1.4	ug/kg
PAHs	Acenaphthylene	Brown bullhead	6	5	83.3	6.1	27	14	1.9	1.9	ug/kg
PAHs	Acenaphthylene	Carp	12	12	100	5.9	27	18			ug/kg
PAHs	Acenaphthylene	Channel catfish	11	11	100	4.4	13	7.9			ug/kg
PAHs	Acenaphthylene	Fish (all)	131	101	77.1	1.8	30	12	1.3	9.4	ug/kg
PAHs	Acenaphthylene	Fish (≤ 11 cm)	23	16	69.6	2.5	23	8.4	2.5	3.2	ug/kg
PAHs	Acenaphthylene	Fish (≤ 13 cm)	26	19	73.1	2.5	27	9.8	2.5	3.2	ug/kg
PAHs	Acenaphthylene	Fish (≤ 18 cm)	41	34	82.9	2.5	30	14	2.5	3.2	ug/kg
PAHs	Acenaphthylene	Fish (≤ 20 cm)	43	36	83.7	2.5	30	14	2.5	3.2	ug/kg
PAHs	Acenaphthylene	Largemouth bass	3	2	66.7	3.6	4	3.8	2.5	2.5	ug/kg
PAHs	Acenaphthylene	Mummichog	18	11	61.1	2.5	11	5.4	2.5	3.2	ug/kg
PAHs	Acenaphthylene	Mussel (estuarine)	3	3	100	1	2	1.3			ug/kg
PAHs	Acenaphthylene	Mussel (freshwater)	5	1	20	0.5	0.5		0.9	0.9	ug/kg
PAHs	Acenaphthylene	Northern pike	1	1	100	28	28				ug/kg
PAHs	Acenaphthylene	Other forage fish (no mummichog)	10	10	100	4.7	30	17			ug/kg
PAHs	Acenaphthylene	Smallmouth bass	3	3	100	4.1	16	8.3			ug/kg
PAHs	Acenaphthylene	White catfish	19	17	89.5	1.8	16	9.1	3.4	5.7	ug/kg
PAHs	Acenaphthylene	White perch	22	21	95.5	2.3	27	16	3.9	3.9	ug/kg
PAHs	Acenaphthylene	White sucker	5	4	80	2.2	6	3.8	2.3	2.3	ug/kg
PAHs	Acenaphthylene	Worms (all)	10	5	50	11	72	29	3.3	5	ug/kg
PAHs	Acenaphthylene	Worms (estuarine sp.)	5	0	0				3.3	5	ug/kg
PAHs	Acenaphthylene	Worms (freshwater sp.)	5	5	100	11	72	29			ug/kg
PAHs	Anthracene	American eel (all)	21	11	52.4	2.5	5.1	3.8	1.8	4.7	ug/kg
PAHs	Anthracene	Blue crab	24	23	95.8	0.9	51	6.9	1.3	1.3	ug/kg
PAHs	Anthracene	Brown bullhead	6	6	100	4.4	41	19			ug/kg
PAHs	Anthracene	Carp	12	12	100	5.5	69	39			ug/kg
PAHs	Anthracene	Channel catfish	11	11	100	5.1	20	12			ug/kg
PAHs	Anthracene	Fish (all)	131	121	92.4	2.5	69	20	1.8	4.7	ug/kg
PAHs	Anthracene	Fish (≤ 11 cm)	23	23	100	5	41	14			ug/kg
PAHs	Anthracene	Fish (≤ 13 cm)	26	26	100	5	49	16			ug/kg
PAHs	Anthracene	Fish (≤ 18 cm)	41	41	100	5	56	23			ug/kg
PAHs	Anthracene	Fish (≤ 20 cm)	43	43	100	5	56	24			ug/kg
PAHs	Anthracene	Largemouth bass	3	3	100	4.4	7.5	6.2			ug/kg
PAHs	Anthracene	Mummichog	18	18	100	5	24	10			ug/kg
PAHs	Anthracene	Mussel (estuarine)	3	3	100	1	3	2			ug/kg
PAHs	Anthracene	Mussel (freshwater)	5	5	100	1	2	1.8			ug/kg
PAHs	Anthracene	Northern pike	1	1	100	40	40				ug/kg
PAHs	Anthracene	Other forage fish (no mummichog)	10	10	100	13	49	30			ug/kg
PAHs	Anthracene	Smallmouth bass	3	3	100	10	31	18			ug/kg
PAHs	Anthracene	White catfish	19	19	100	5.2	31	14			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PAHs	Anthracene	White perch	22	22	100	6	56	33			ug/kg
PAHs	Anthracene	White sucker	5	5	100	4.4	12	6.4			ug/kg
PAHs	Anthracene	Worms (all)	10	9	90	2.3	170	32	2.2	2.2	ug/kg
PAHs	Anthracene	Worms (estuarine sp.)	5	4	80	2.3	3.7	3.2	2.2	2.2	ug/kg
PAHs	Anthracene	Worms (freshwater sp.)	5	5	100	18	170	55			ug/kg
PAHs	Benzo(a)anthracene	American eel (all)	21	4	19	1.8	3.4	2.4	0.78	2.9	ug/kg
PAHs	Benzo(a)anthracene	Blue crab	24	24	100	1.7	41	8			ug/kg
PAHs	Benzo(a)anthracene	Brown bullhead	6	4	66.7	1.5	8.5	5.1	1.2	1.5	ug/kg
PAHs	Benzo(a)anthracene	Carp	12	12	100	1.3	9.8	5.1			ug/kg
PAHs	Benzo(a)anthracene	Channel catfish	11	9	81.8	0.59	3.7	1.7	0.59	0.84	ug/kg
PAHs	Benzo(a)anthracene	Fish (all)	131	92	70.2	0.59	81	10	0.41	3.3	ug/kg
PAHs	Benzo(a)anthracene	Fish (≤ 11 cm)	23	23	100	1.4	80	16			ug/kg
PAHs	Benzo(a)anthracene	Fish (≤ 13 cm)	26	26	100	1.4	81	20			ug/kg
PAHs	Benzo(a)anthracene	Fish (≤ 18 cm)	41	39	95.1	1.4	81	17	2.2	2.9	ug/kg
PAHs	Benzo(a)anthracene	Fish (≤ 20 cm)	43	40	93	1.4	81	17	2.2	3.3	ug/kg
PAHs	Benzo(a)anthracene	Largemouth bass	3	0	0				0.41	0.96	ug/kg
PAHs	Benzo(a)anthracene	Mummichog	18	18	100	1.4	36	11			ug/kg
PAHs	Benzo(a)anthracene	Mussel (estuarine)	3	3	100	2	19	9.7			ug/kg
PAHs	Benzo(a)anthracene	Mussel (freshwater)	5	5	100	9	11	9.6			ug/kg
PAHs	Benzo(a)anthracene	Northern pike	1	1	100	2.3	2.3				ug/kg
PAHs	Benzo(a)anthracene	Other forage fish (no mummichog)	10	10	100	1.5	81	41			ug/kg
PAHs	Benzo(a)anthracene	Smallmouth bass	3	1	33.3	60	60		0.9	1.1	ug/kg
PAHs	Benzo(a)anthracene	White catfish	19	16	84.2	1	28	4.2	0.6	0.92	ug/kg
PAHs	Benzo(a)anthracene	White perch	22	12	54.5	1.5	32	7.4	1.1	3.3	ug/kg
PAHs	Benzo(a)anthracene	White sucker	5	5	100	1.2	3.5	2			ug/kg
PAHs	Benzo(a)anthracene	Worms (all)	10	8	80	2.2	540	140	1.8	2	ug/kg
PAHs	Benzo(a)anthracene	Worms (estuarine sp.)	5	3	60	2.2	3.3	2.6	1.8	2	ug/kg
PAHs	Benzo(a)anthracene	Worms (freshwater sp.)	5	5	100	81	540	220			ug/kg
PAHs	Benzo(a)pyrene	American eel (all)	21	10	47.6	0.55	4.5	1.9	0.8	2.6	ug/kg
PAHs	Benzo(a)pyrene	Blue crab	24	24	100	1.9	40	7.4			ug/kg
PAHs	Benzo(a)pyrene	Brown bullhead	6	2	33.3	2.6	8.6	5.6	0.68	1.8	ug/kg
PAHs	Benzo(a)pyrene	Carp	12	6	50	0.8	4.9	2	0.68	2.5	ug/kg
PAHs	Benzo(a)pyrene	Channel catfish	11	1	9.1	1.2	1.2		0.32	1.2	ug/kg
PAHs	Benzo(a)pyrene	Fish (all)	131	70	53.4	0.55	98	12	0.22	2.8	ug/kg
PAHs	Benzo(a)pyrene	Fish (≤ 11 cm)	23	23	100	2.1	63	19			ug/kg
PAHs	Benzo(a)pyrene	Fish (≤ 13 cm)	26	26	100	2.1	98	22			ug/kg
PAHs	Benzo(a)pyrene	Fish (≤ 18 cm)	41	37	90.2	1.5	98	20	1.3	2.2	ug/kg
PAHs	Benzo(a)pyrene	Fish (≤ 20 cm)	43	39	90.7	1.5	98	19	1.3	2.2	ug/kg
PAHs	Benzo(a)pyrene	Largemouth bass	3	0	0				1.2	2.8	ug/kg
PAHs	Benzo(a)pyrene	Mummichog	18	18	100	3.3	56	15			ug/kg
PAHs	Benzo(a)pyrene	Mussel (estuarine)	3	3	100	1	9	4.3			ug/kg
PAHs	Benzo(a)pyrene	Mussel (freshwater)	5	5	100	5	8	7			ug/kg
PAHs	Benzo(a)pyrene	Northern pike	1	0	0				2.3	2.3	ug/kg
PAHs	Benzo(a)pyrene	Other forage fish (no mummichog)	10	10	100	2.1	98	42			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PAHs	Benzo(a)pyrene	Smallmouth bass	3	1	33.3	28	28		1.2	2.6	ug/kg
PAHs	Benzo(a)pyrene	White catfish	19	9	47.4	0.65	24	4.5	0.22	0.95	ug/kg
PAHs	Benzo(a)pyrene	White perch	22	11	50	1.5	24	5.6	0.5	2.2	ug/kg
PAHs	Benzo(a)pyrene	White sucker	5	2	40	1.7	2.9	2.3	0.58	1.1	ug/kg
PAHs	Benzo(a)pyrene	Worms (all)	10	5	50	87	440	190	1.8	3.2	ug/kg
PAHs	Benzo(a)pyrene	Worms (estuarine sp.)	5	0	0				1.8	3.2	ug/kg
PAHs	Benzo(a)pyrene	Worms (freshwater sp.)	5	5	100	87	440	190			ug/kg
PAHs	Benzo(b/j)fluoranth	American eel (all)	21	8	38.1	0.74	3.8	2.1	0.3	1.3	ug/kg
PAHs	Benzo(b/j)fluoranth	Blue crab	24	24	100	2.3	30	8.4			ug/kg
PAHs	Benzo(b/j)fluoranth	Brown bullhead	6	3	50	3.1	10	5.4	0.36	0.52	ug/kg
PAHs	Benzo(b/j)fluoranth	Carp	12	5	41.7	0.35	7.7	3.5	0.36	0.98	ug/kg
PAHs	Benzo(b/j)fluoranth	Channel catfish	11	5	45.5	0.78	0.94	0.86	0.2	1.4	ug/kg
PAHs	Benzo(b/j)fluoranth	Fish (all)	131	76	58	0.35	140	16	0.11	2.1	ug/kg
PAHs	Benzo(b/j)fluoranth	Fish (≤ 11 cm)	23	22	95.7	1.7	100	26	1.3	1.3	ug/kg
PAHs	Benzo(b/j)fluoranth	Fish (≤ 13 cm)	26	25	96.2	1.7	140	31	1.3	1.3	ug/kg
PAHs	Benzo(b/j)fluoranth	Fish (≤ 18 cm)	41	38	92.7	1.3	140	26	1.1	1.3	ug/kg
PAHs	Benzo(b/j)fluoranth	Fish (≤ 20 cm)	43	40	93	1.3	140	26	1.1	1.3	ug/kg
PAHs	Benzo(b/j)fluoranth	Largemouth bass	3	0	0				0.56	1.2	ug/kg
PAHs	Benzo(b/j)fluoranth	Mummichog	18	18	100	1.7	75	18			ug/kg
PAHs	Benzo(b/j)fluoranth	Northern pike	1	0	0				1.2	1.2	ug/kg
PAHs	Benzo(b/j)fluoranth	Other forage fish (no mummichog)	10	9	90	13	140	69	1.3	1.3	ug/kg
PAHs	Benzo(b/j)fluoranth	Smallmouth bass	3	1	33.3	47	47		0.73	1.2	ug/kg
PAHs	Benzo(b/j)fluoranth	White catfish	19	6	31.6	1.1	23	7	0.11	1.2	ug/kg
PAHs	Benzo(b/j)fluoranth	White perch	22	16	72.7	0.57	31	6	0.24	2.1	ug/kg
PAHs	Benzo(b/j)fluoranth	White sucker	5	5	100	1.1	5.2	2.6			ug/kg
PAHs	Benzo(b/j)fluoranth	Worms (all)	10	10	100	4.2	560	150			ug/kg
PAHs	Benzo(b/j)fluoranth	Worms (estuarine sp.)	5	5	100	4.2	6.5	4.8			ug/kg
PAHs	Benzo(b/j)fluoranth	Worms (freshwater sp.)	5	5	100	180	560	290			ug/kg
PAHs	Benzo(b)fluoranthe	Mussel (estuarine)	3	3	100	1	21	8.7			ug/kg
PAHs	Benzo(b)fluoranthe	Mussel (freshwater)	5	5	100	14	18	17			ug/kg
PAHs	Benzo(e)pyrene	American eel (all)	21	6	28.6	0.39	2.5	1.5	0.37	2.1	ug/kg
PAHs	Benzo(e)pyrene	Blue crab	24	23	95.8	1.4	22	5.8	1.1	1.1	ug/kg
PAHs	Benzo(e)pyrene	Brown bullhead	6	5	83.3	1	6.3	3.2	0.63	0.63	ug/kg
PAHs	Benzo(e)pyrene	Carp	12	6	50	0.54	4.7	2	0.58	2	ug/kg
PAHs	Benzo(e)pyrene	Channel catfish	11	2	18.2	0.62	0.64	0.63	0.32	1.6	ug/kg
PAHs	Benzo(e)pyrene	Fish (all)	131	77	58.8	0.39	87	9.8	0.15	9.3	ug/kg
PAHs	Benzo(e)pyrene	Fish (≤ 11 cm)	23	22	95.7	2.8	54	16	2.7	2.7	ug/kg
PAHs	Benzo(e)pyrene	Fish (≤ 13 cm)	26	24	92.3	2.8	87	21	2.7	9.3	ug/kg
PAHs	Benzo(e)pyrene	Fish (≤ 18 cm)	41	37	90.2	1.3	87	17	1.5	9.3	ug/kg
PAHs	Benzo(e)pyrene	Fish (≤ 20 cm)	43	39	90.7	1.3	87	17	1.5	9.3	ug/kg
PAHs	Benzo(e)pyrene	Largemouth bass	3	0	0				1.1	2.5	ug/kg
PAHs	Benzo(e)pyrene	Mummichog	18	18	100	2.8	37	12			ug/kg
PAHs	Benzo(e)pyrene	Mussel (estuarine)	3	3	100	1	15	7			ug/kg
PAHs	Benzo(e)pyrene	Mussel (freshwater)	5	5	100	22	24	23			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PAHs	Benzo(e)pyrene	Northern pike	1	0	0				2	2	ug/kg
PAHs	Benzo(e)pyrene	Other forage fish (no mummichog)	10	8	80	18	87	46	2.7	9.3	ug/kg
PAHs	Benzo(e)pyrene	Smallmouth bass	3	1	33.3	29	29		1.1	2.3	ug/kg
PAHs	Benzo(e)pyrene	White catfish	19	11	57.9	0.4	14	2.7	0.15	0.92	ug/kg
PAHs	Benzo(e)pyrene	White perch	22	16	72.7	0.87	17	3.9	0.81	7.7	ug/kg
PAHs	Benzo(e)pyrene	White sucker	5	4	80	0.59	4.6	2.4	0.75	0.75	ug/kg
PAHs	Benzo(e)pyrene	Worms (all)	10	10	100	3.3	350	110			ug/kg
PAHs	Benzo(e)pyrene	Worms (estuarine sp.)	5	5	100	3.3	7.5	4.8			ug/kg
PAHs	Benzo(e)pyrene	Worms (freshwater sp.)	5	5	100	140	350	210			ug/kg
PAHs	Benzo(g,h,i)perylen	American eel (all)	21	6	28.6	0.29	2.5	1.2	0.29	3.8	ug/kg
PAHs	Benzo(g,h,i)perylen	Blue crab	24	12	50	1.9	13	5.6	1	3	ug/kg
PAHs	Benzo(g,h,i)perylen	Brown bullhead	6	2	33.3	2.5	4.4	3.5	0.66	2.4	ug/kg
PAHs	Benzo(g,h,i)perylen	Carp	12	6	50	0.62	3.6	1.8	0.39	3.3	ug/kg
PAHs	Benzo(g,h,i)perylen	Channel catfish	11	1	9.1	0.65	0.65		0.23	1.8	ug/kg
PAHs	Benzo(g,h,i)perylen	Fish (all)	131	36	27.5	0.29	97	12	0.13	44	ug/kg
PAHs	Benzo(g,h,i)perylen	Fish (≤ 11 cm)	23	3	13	51	71	59	11	37	ug/kg
PAHs	Benzo(g,h,i)perylen	Fish (≤ 13 cm)	26	4	15.4	51	97	68	11	44	ug/kg
PAHs	Benzo(g,h,i)perylen	Fish (≤ 18 cm)	41	9	22	1.1	97	37	0.56	44	ug/kg
PAHs	Benzo(g,h,i)perylen	Fish (≤ 20 cm)	43	10	23.3	1.1	97	35	0.56	44	ug/kg
PAHs	Benzo(g,h,i)perylen	Largemouth bass	3	0	0				3.1	4.4	ug/kg
PAHs	Benzo(g,h,i)perylen	Mummichog	18	1	5.6	54	54		11	37	ug/kg
PAHs	Benzo(g,h,i)perylen	Mussel (estuarine)	3	3	100	0.5	5	2.2			ug/kg
PAHs	Benzo(g,h,i)perylen	Mussel (freshwater)	5	5	100	6	8	7			ug/kg
PAHs	Benzo(g,h,i)perylen	Northern pike	1	0	0				3.9	3.9	ug/kg
PAHs	Benzo(g,h,i)perylen	Other forage fish (no mummichog)	10	4	40	51	97	68	11	44	ug/kg
PAHs	Benzo(g,h,i)perylen	Smallmouth bass	3	1	33.3	15	15		2.5	6.3	ug/kg
PAHs	Benzo(g,h,i)perylen	White catfish	19	6	31.6	0.39	11	3.5	0.13	1.3	ug/kg
PAHs	Benzo(g,h,i)perylen	White perch	22	5	22.7	1.1	13	4.8	0.47	22	ug/kg
PAHs	Benzo(g,h,i)perylen	White sucker	5	4	80	0.99	3.3	2	1.1	1.1	ug/kg
PAHs	Benzo(g,h,i)perylen	Worms (all)	10	5	50	63	270	120	1.7	2.4	ug/kg
PAHs	Benzo(g,h,i)perylen	Worms (estuarine sp.)	5	0	0				1.7	2.4	ug/kg
PAHs	Benzo(g,h,i)perylen	Worms (freshwater sp.)	5	5	100	63	270	120			ug/kg
PAHs	Benzo(k)fluoranthe	American eel (all)	21	4	19	0.66	1	0.9	0.24	1.6	ug/kg
PAHs	Benzo(k)fluoranthe	Blue crab	24	24	100	1.3	21	4.2			ug/kg
PAHs	Benzo(k)fluoranthe	Brown bullhead	6	3	50	1.4	3.5	2.5	0.43	0.6	ug/kg
PAHs	Benzo(k)fluoranthe	Carp	12	6	50	0.51	4.6	2.2	0.41	1.3	ug/kg
PAHs	Benzo(k)fluoranthe	Channel catfish	11	3	27.3	0.34	0.45	0.41	0.21	0.48	ug/kg
PAHs	Benzo(k)fluoranthe	Fish (all)	131	63	48.1	0.34	48	7.6	0.12	1.6	ug/kg
PAHs	Benzo(k)fluoranthe	Fish (≤ 11 cm)	23	23	100	0.92	40	11			ug/kg
PAHs	Benzo(k)fluoranthe	Fish (≤ 13 cm)	26	26	100	0.92	48	12			ug/kg
PAHs	Benzo(k)fluoranthe	Fish (≤ 18 cm)	41	37	90.2	0.92	48	11	0.87	1.4	ug/kg
PAHs	Benzo(k)fluoranthe	Fish (≤ 20 cm)	43	39	90.7	0.92	48	11	0.87	1.4	ug/kg
PAHs	Benzo(k)fluoranthe	Largemouth bass	3	0	0				0.56	1.6	ug/kg
PAHs	Benzo(k)fluoranthe	Mummichog	18	18	100	1.7	40	9.3			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PAHs	Benzo(k)fluoranthe	Northern pike	1	0	0				1.4	1.4	ug/kg
PAHs	Benzo(k)fluoranthe	Other forage fish (no mummichog)	10	10	100	0.92	48	21			ug/kg
PAHs	Benzo(k)fluoranthe	Smallmouth bass	3	1	33.3	19	19		0.63	1.3	ug/kg
PAHs	Benzo(k)fluoranthe	White catfish	19	3	15.8	2.2	11	5.7	0.12	0.43	ug/kg
PAHs	Benzo(k)fluoranthe	White perch	22	11	50	1.2	15	3.6	0.29	1.4	ug/kg
PAHs	Benzo(k)fluoranthe	White sucker	5	4	80	0.81	1.8	1.3	0.38	0.38	ug/kg
PAHs	Benzo(k)fluoranthe	Worms (all)	10	9	90	2.1	250	74	2.2	2.2	ug/kg
PAHs	Benzo(k)fluoranthe	Worms (estuarine sp.)	5	4	80	2.1	3.1	2.4	2.2	2.2	ug/kg
PAHs	Benzo(k)fluoranthe	Worms (freshwater sp.)	5	5	100	77	250	130			ug/kg
PAHs	Benzo(j,k)fluoranth	Mussel (estuarine)	3	3	100	1	9	5			ug/kg
PAHs	Benzo(j,k)fluoranth	Mussel (freshwater)	5	5	100	7	8	7.6			ug/kg
PAHs	Chrysene	American eel (all)	21	8	38.1	1.5	5	2.9	0.78	3.4	ug/kg
PAHs	Chrysene	Blue crab	24	24	100	3.8	39	13			ug/kg
PAHs	Chrysene	Brown bullhead	6	6	100	2	14	7.2			ug/kg
PAHs	Chrysene	Carp	12	11	91.7	1.9	8.9	4.7	0.98	0.98	ug/kg
PAHs	Chrysene	Channel catfish	11	11	100	4.2	14	7.4			ug/kg
PAHs	Chrysene	Fish (all)	131	110	84	0.93	120	15	0.64	3.4	ug/kg
PAHs	Chrysene	Fish (≤ 11 cm)	23	23	100	2.6	120	28			ug/kg
PAHs	Chrysene	Fish (≤ 13 cm)	26	26	100	2.6	120	32			ug/kg
PAHs	Chrysene	Fish (≤ 18 cm)	41	40	97.6	2.6	120	30	1.3	1.3	ug/kg
PAHs	Chrysene	Fish (≤ 20 cm)	43	42	97.7	2.6	120	29	1.3	1.3	ug/kg
PAHs	Chrysene	Largemouth bass	3	1	33.3	0.93	0.93		0.64	0.75	ug/kg
PAHs	Chrysene	Mummichog	18	18	100	2.6	72	20			ug/kg
PAHs	Chrysene	Mussel (estuarine)	3	3	100	3	31	16			ug/kg
PAHs	Chrysene	Mussel (freshwater)	5	5	100	44	49	46			ug/kg
PAHs	Chrysene	Northern pike	1	1	100	2	2				ug/kg
PAHs	Chrysene	Other forage fish (no mummichog)	10	10	100	7	120	66			ug/kg
PAHs	Chrysene	Smallmouth bass	3	1	33.3	60	60		1.1	1.3	ug/kg
PAHs	Chrysene	White catfish	19	18	94.7	3	26	7	1	1	ug/kg
PAHs	Chrysene	White perch	22	20	90.9	2.5	38	13	1.3	2	ug/kg
PAHs	Chrysene	White sucker	5	5	100	2.1	6.6	3.5			ug/kg
PAHs	Chrysene	Worms (all)	10	10	100	8.8	630	190			ug/kg
PAHs	Chrysene	Worms (estuarine sp.)	5	5	100	8.8	25	15			ug/kg
PAHs	Chrysene	Worms (freshwater sp.)	5	5	100	230	630	360			ug/kg
PAHs	Dibenzo(a,h)anthra	American eel (all)	21	0	0				0.23	1.3	ug/kg
PAHs	Dibenzo(a,h)anthra	Blue crab	24	13	54.2	0.98	4.8	2.4	1	3.8	ug/kg
PAHs	Dibenzo(a,h)anthra	Brown bullhead	6	0	0				0.5	2	ug/kg
PAHs	Dibenzo(a,h)anthra	Carp	12	0	0				0.33	2.7	ug/kg
PAHs	Dibenzo(a,h)anthra	Channel catfish	11	0	0				0.25	0.79	ug/kg
PAHs	Dibenzo(a,h)anthra	Fish (all)	131	17	13	0.63	18	7.1	0.12	5.9	ug/kg
PAHs	Dibenzo(a,h)anthra	Fish (≤ 11 cm)	23	6	26.1	5.2	14	8.5	1.1	5.9	ug/kg
PAHs	Dibenzo(a,h)anthra	Fish (≤ 13 cm)	26	9	34.6	2.2	18	8.9	1.1	5.9	ug/kg
PAHs	Dibenzo(a,h)anthra	Fish (≤ 18 cm)	41	13	31.7	0.82	18	8.2	0.51	5.9	ug/kg
PAHs	Dibenzo(a,h)anthra	Fish (≤ 20 cm)	43	14	32.6	0.82	18	7.9	0.46	5.9	ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PAHs	Dibenzo(a,h)anthra	Largemouth bass	3	0	0				3.1	4.3	ug/kg
PAHs	Dibenzo(a,h)anthra	Mummichog	18	2	11.1	5.7	10	7.9	1.1	5.9	ug/kg
PAHs	Dibenzo(a,h)anthra	Northern pike	1	0	0				3.1	3.1	ug/kg
PAHs	Dibenzo(a,h)anthra	Other forage fish (no mummichog)	10	9	90	2.2	18	9.4	3.2	3.2	ug/kg
PAHs	Dibenzo(a,h)anthra	Smallmouth bass	3	1	33.3	6.5	6.5		2.2	4.1	ug/kg
PAHs	Dibenzo(a,h)anthra	White catfish	19	2	10.5	0.63	2.6	1.6	0.12	0.68	ug/kg
PAHs	Dibenzo(a,h)anthra	White perch	22	3	13.6	0.82	5.2	3.1	0.46	5.2	ug/kg
PAHs	Dibenzo(a,h)anthra	White sucker	5	0	0				0.33	1.6	ug/kg
PAHs	Dibenzo(a,h)anthra	Worms (all)	10	5	50	7.6	64	23	1.5	2.9	ug/kg
PAHs	Dibenzo(a,h)anthra	Worms (estuarine sp.)	5	0	0				1.5	2.9	ug/kg
PAHs	Dibenzo(a,h)anthra	Worms (freshwater sp.)	5	5	100	7.6	64	23			ug/kg
PAHs	Dibenzo(a,c+a,h)ant	Mussel (estuarine)	3	1	33.3	0.9	0.9		0.8	1	ug/kg
PAHs	Dibenzo(a,c+a,h)ant	Mussel (freshwater)	5	5	100	0.8	1	0.92			ug/kg
PAHs	Dibenzothiophene	American eel (all)	21	19	90.5	0.2	1.8	0.67	0.057	0.28	ug/kg
PAHs	Dibenzothiophene	Blue crab	24	17	70.8	0.41	6.8	1.4	0.22	0.45	ug/kg
PAHs	Dibenzothiophene	Brown bullhead	6	6	100	1.2	9.1	4.3			ug/kg
PAHs	Dibenzothiophene	Carp	12	12	100	1.7	5.2	3			ug/kg
PAHs	Dibenzothiophene	Channel catfish	11	11	100	1.2	7.6	2.9			ug/kg
PAHs	Dibenzothiophene	Fish (all)	131	129	98.5	0.2	12	2.8	0.057	0.28	ug/kg
PAHs	Dibenzothiophene	Fish (≤ 11 cm)	23	23	100	1.2	12	2.8			ug/kg
PAHs	Dibenzothiophene	Fish (≤ 13 cm)	26	26	100	1.2	12	2.9			ug/kg
PAHs	Dibenzothiophene	Fish (≤ 18 cm)	41	41	100	1.2	12	3.5			ug/kg
PAHs	Dibenzothiophene	Fish (≤ 20 cm)	43	43	100	1.2	12	3.6			ug/kg
PAHs	Dibenzothiophene	Largemouth bass	3	3	100	0.55	1.6	0.95			ug/kg
PAHs	Dibenzothiophene	Mummichog	18	18	100	1.2	3.3	2.2			ug/kg
PAHs	Dibenzothiophene	Mussel (estuarine)	3	3	100	1	3	2			ug/kg
PAHs	Dibenzothiophene	Mussel (freshwater)	5	5	100	0.5	0.9	0.68			ug/kg
PAHs	Dibenzothiophene	Northern pike	1	1	100	2.9	2.9				ug/kg
PAHs	Dibenzothiophene	Other forage fish (no mummichog)	10	10	100	2.4	12	4.1			ug/kg
PAHs	Dibenzothiophene	Smallmouth bass	3	3	100	0.64	1.2	0.93			ug/kg
PAHs	Dibenzothiophene	White catfish	19	19	100	0.86	9.4	3			ug/kg
PAHs	Dibenzothiophene	White perch	22	22	100	0.88	9.6	4.7			ug/kg
PAHs	Dibenzothiophene	White sucker	5	5	100	0.67	2	1.5			ug/kg
PAHs	Dibenzothiophene	Worms (all)	10	9	90	0.36	28	5.1	0.18	0.18	ug/kg
PAHs	Dibenzothiophene	Worms (estuarine sp.)	5	4	80	0.36	0.55	0.44	0.18	0.18	ug/kg
PAHs	Dibenzothiophene	Worms (freshwater sp.)	5	5	100	1.6	28	8.8			ug/kg
PAHs	Fluoranthene	American eel (all)	21	20	95.2	2.1	24	9.9	3.5	3.5	ug/kg
PAHs	Fluoranthene	Blue crab	24	22	91.7	4.8	84	23	6.4	12	ug/kg
PAHs	Fluoranthene	Brown bullhead	6	6	100	11	60	35			ug/kg
PAHs	Fluoranthene	Carp	12	12	100	11	49	26			ug/kg
PAHs	Fluoranthene	Channel catfish	11	11	100	9.3	54	20			ug/kg
PAHs	Fluoranthene	Fish (all)	131	130	99.2	2.1	170	35	3.5	3.5	ug/kg
PAHs	Fluoranthene	Fish (≤ 11 cm)	23	23	100	8.9	170	47			ug/kg
PAHs	Fluoranthene	Fish (≤ 13 cm)	26	26	100	8.9	170	53			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PAHs	Fluoranthene	Fish (≤ 18 cm)	41	41	100	8.9	170	57			ug/kg
PAHs	Fluoranthene	Fish (≤ 20 cm)	43	43	100	8.9	170	59			ug/kg
PAHs	Fluoranthene	Largemouth bass	3	3	100	3.1	4.9	3.9			ug/kg
PAHs	Fluoranthene	Mummichog	18	18	100	8.9	110	35			ug/kg
PAHs	Fluoranthene	Mussel (estuarine)	3	3	100	8	54	30			ug/kg
PAHs	Fluoranthene	Mussel (freshwater)	5	5	100	35	43	40			ug/kg
PAHs	Fluoranthene	Northern pike	1	1	100	22	22				ug/kg
PAHs	Fluoranthene	Other forage fish (no mummichog)	10	10	100	27	170	100			ug/kg
PAHs	Fluoranthene	Smallmouth bass	3	3	100	3.8	78	29			ug/kg
PAHs	Fluoranthene	White catfish	19	19	100	6.5	110	29			ug/kg
PAHs	Fluoranthene	White perch	22	22	100	13	120	59			ug/kg
PAHs	Fluoranthene	White sucker	5	5	100	7.7	13	11			ug/kg
PAHs	Fluoranthene	Worms (all)	10	10	100	20	1100	230			ug/kg
PAHs	Fluoranthene	Worms (estuarine sp.)	5	5	100	20	54	39			ug/kg
PAHs	Fluoranthene	Worms (freshwater sp.)	5	5	100	170	1100	430			ug/kg
PAHs	Fluorene	American eel (all)	21	2	9.5	4.9	41	23	1.4	68	ug/kg
PAHs	Fluorene	Blue crab	24	23	95.8	1.3	160	12	1.7	1.7	ug/kg
PAHs	Fluorene	Brown bullhead	6	1	16.7	28	28		39	99	ug/kg
PAHs	Fluorene	Carp	12	3	25	11	15	13	9.7	69	ug/kg
PAHs	Fluorene	Channel catfish	11	10	90.9	4.2	20	10	11	11	ug/kg
PAHs	Fluorene	Fish (all)	131	60	45.8	4	110	18	1.4	100	ug/kg
PAHs	Fluorene	Fish (≤ 11 cm)	23	15	65.2	5.7	62	13	3.1	9.3	ug/kg
PAHs	Fluorene	Fish (≤ 13 cm)	26	18	69.2	5.7	62	12	3.1	9.3	ug/kg
PAHs	Fluorene	Fish (≤ 18 cm)	41	28	68.3	5.7	62	15	3.1	100	ug/kg
PAHs	Fluorene	Fish (≤ 20 cm)	43	30	69.8	5.7	62	16	3.1	100	ug/kg
PAHs	Fluorene	Largemouth bass	3	0	0				5.2	6.1	ug/kg
PAHs	Fluorene	Mummichog	18	11	61.1	6.6	12	8.4	3.1	6.1	ug/kg
PAHs	Fluorene	Mussel (estuarine)	3	3	100	3	10	6.3			ug/kg
PAHs	Fluorene	Mussel (freshwater)	5	5	100	0.8	1	0.92			ug/kg
PAHs	Fluorene	Northern pike	1	0	0				12	12	ug/kg
PAHs	Fluorene	Other forage fish (no mummichog)	10	10	100	5.7	62	16			ug/kg
PAHs	Fluorene	Smallmouth bass	3	0	0				4.5	6.9	ug/kg
PAHs	Fluorene	White catfish	19	8	42.1	4	110	36	6.6	45	ug/kg
PAHs	Fluorene	White perch	22	12	54.5	6	63	28	9.3	100	ug/kg
PAHs	Fluorene	White sucker	5	3	60	4.6	11	8.2	1.9	3.6	ug/kg
PAHs	Fluorene	Worms (all)	10	7	70	3	64	16	2.2	2.8	ug/kg
PAHs	Fluorene	Worms (estuarine sp.)	5	2	40	3	4	3.5	2.2	2.8	ug/kg
PAHs	Fluorene	Worms (freshwater sp.)	5	5	100	5.8	64	20			ug/kg
PAHs	Indeno(1,2,3-cd)pyr	American eel (all)	21	4	19	0.78	1.7	1.1	0.31	1.8	ug/kg
PAHs	Indeno(1,2,3-cd)pyr	Blue crab	24	18	75	1.4	22	5.6	1.1	1.5	ug/kg
PAHs	Indeno(1,2,3-cd)pyr	Brown bullhead	6	1	16.7	4.1	4.1		0.84	3.5	ug/kg
PAHs	Indeno(1,2,3-cd)pyr	Carp	12	4	33.3	0.76	2.7	1.8	0.37	4.5	ug/kg
PAHs	Indeno(1,2,3-cd)pyr	Channel catfish	11	1	9.1	0.46	0.46		0.25	0.95	ug/kg
PAHs	Indeno(1,2,3-cd)pyr	Fish (all)	131	39	29.8	0.46	83	15	0.13	6.7	ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PAHs	Indeno(1,2,3-cd)pyr	Fish (≤ 11 cm)	23	11	47.8	9.3	48	25	2.2	6.7	ug/kg
PAHs	Indeno(1,2,3-cd)pyr	Fish (≤ 13 cm)	26	14	53.8	7.8	83	28	2.2	6.7	ug/kg
PAHs	Indeno(1,2,3-cd)pyr	Fish (≤ 18 cm)	41	21	51.2	0.62	83	24	0.61	6.7	ug/kg
PAHs	Indeno(1,2,3-cd)pyr	Fish (≤ 20 cm)	43	23	53.5	0.62	83	22	0.61	6.7	ug/kg
PAHs	Indeno(1,2,3-cd)pyr	Largemouth bass	3	0	0				2.9	4.3	ug/kg
PAHs	Indeno(1,2,3-cd)pyr	Mummichog	18	7	38.9	9.3	33	21	2.2	6.7	ug/kg
PAHs	Indeno(1,2,3-cd)pyr	Mussel (estuarine)	3	2	66.7	0.9	3	2	1	1	ug/kg
PAHs	Indeno(1,2,3-cd)pyr	Mussel (freshwater)	5	5	100	2	2	2			ug/kg
PAHs	Indeno(1,2,3-cd)pyr	Northern pike	1	0	0				3.9	3.9	ug/kg
PAHs	Indeno(1,2,3-cd)pyr	Other forage fish (no mummichog)	10	9	90	7.8	83	37	4.4	4.4	ug/kg
PAHs	Indeno(1,2,3-cd)pyr	Smallmouth bass	3	1	33.3	21	21		3	5.9	ug/kg
PAHs	Indeno(1,2,3-cd)pyr	White catfish	19	4	21.1	0.49	11	4.3	0.13	0.9	ug/kg
PAHs	Indeno(1,2,3-cd)pyr	White perch	22	7	31.8	0.62	14	4.6	0.61	5.3	ug/kg
PAHs	Indeno(1,2,3-cd)pyr	White sucker	5	1	20	2.9	2.9		0.56	1.9	ug/kg
PAHs	Indeno(1,2,3-cd)pyr	Worms (all)	10	5	50	39	250	92	2.2	3.1	ug/kg
PAHs	Indeno(1,2,3-cd)pyr	Worms (estuarine sp.)	5	0	0				2.2	3.1	ug/kg
PAHs	Indeno(1,2,3-cd)pyr	Worms (freshwater sp.)	5	5	100	39	250	92			ug/kg
PAHs	Naphthalene	American eel (all)	21	3	14.3	140	150	140	3.7	85	ug/kg
PAHs	Naphthalene	Blue crab	24	8	33.3	3	42	15	2.5	7.8	ug/kg
PAHs	Naphthalene	Brown bullhead	6	4	66.7	150	180	160	10	40	ug/kg
PAHs	Naphthalene	Carp	12	4	33.3	19	29	24	10	84	ug/kg
PAHs	Naphthalene	Channel catfish	11	0	0				3.2	27	ug/kg
PAHs	Naphthalene	Fish (all)	131	32	24.4	8.1	180	68	2.2	85	ug/kg
PAHs	Naphthalene	Fish (≤ 11 cm)	23	6	26.1	8.1	17	13	4.4	13	ug/kg
PAHs	Naphthalene	Fish (≤ 13 cm)	26	9	34.6	8.1	18	13	4.4	13	ug/kg
PAHs	Naphthalene	Fish (≤ 18 cm)	41	13	31.7	8.1	21	13	4.4	48	ug/kg
PAHs	Naphthalene	Fish (≤ 20 cm)	43	13	30.2	8.1	21	13	4.4	48	ug/kg
PAHs	Naphthalene	Largemouth bass	3	1	33.3	48	48		17	19	ug/kg
PAHs	Naphthalene	Mummichog	18	1	5.6	17	17		4.4	13	ug/kg
PAHs	Naphthalene	Mussel (estuarine)	3	3	100	20	60	38			ug/kg
PAHs	Naphthalene	Mussel (freshwater)	5	5	100	0.5	2	1.1			ug/kg
PAHs	Naphthalene	Northern pike	1	1	100	110	110				ug/kg
PAHs	Naphthalene	Other forage fish (no mummichog)	10	10	100	8.1	21	14			ug/kg
PAHs	Naphthalene	Smallmouth bass	3	1	33.3	24	24		21	22	ug/kg
PAHs	Naphthalene	White catfish	19	3	15.8	47	160	110	2.2	29	ug/kg
PAHs	Naphthalene	White perch	22	4	18.2	9.3	170	85	6.1	48	ug/kg
PAHs	Naphthalene	White sucker	5	0	0				2.8	9.2	ug/kg
PAHs	Naphthalene	Worms (all)	10	0	0				5	31	ug/kg
PAHs	Naphthalene	Worms (estuarine sp.)	5	0	0				5	7.7	ug/kg
PAHs	Naphthalene	Worms (freshwater sp.)	5	0	0				5.4	31	ug/kg
PAHs	Perylene	American eel (all)	21	0	0				0.4	2.5	ug/kg
PAHs	Perylene	Blue crab	24	23	95.8	0.74	9.4	2.3	0.59	0.59	ug/kg
PAHs	Perylene	Brown bullhead	6	2	33.3	0.62	1.9	1.3	0.63	1.8	ug/kg
PAHs	Perylene	Carp	12	0	0				0.53	2.7	ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PAHs	Perylene	Channel catfish	11	0	0				0.33	0.78	ug/kg
PAHs	Perylene	Fish (all)	131	28	21.4	0.62	24	6.6	0.19	2.9	ug/kg
PAHs	Perylene	Fish (≤ 11 cm)	23	14	60.9	1.5	16	6.6	0.59	1.8	ug/kg
PAHs	Perylene	Fish (≤ 13 cm)	26	17	65.4	1.5	24	7.6	0.59	1.8	ug/kg
PAHs	Perylene	Fish (≤ 18 cm)	41	20	48.8	1.5	24	8	0.57	2.5	ug/kg
PAHs	Perylene	Fish (≤ 20 cm)	43	21	48.8	1.5	24	7.9	0.57	2.5	ug/kg
PAHs	Perylene	Largemouth bass	3	0	0				1.1	2.4	ug/kg
PAHs	Perylene	Mummichog	18	10	55.6	1.5	13	5.8	0.59	1.8	ug/kg
PAHs	Perylene	Mussel (estuarine)	3	2	66.7	0.6	3	1.8	1	1	ug/kg
PAHs	Perylene	Mussel (freshwater)	5	5	100	2	2	2			ug/kg
PAHs	Perylene	Northern pike	1	0	0				2.4	2.4	ug/kg
PAHs	Perylene	Other forage fish (no mummichog)	10	9	90	2.5	24	11	1.2	1.2	ug/kg
PAHs	Perylene	Smallmouth bass	3	1	33.3	6	6		1.1	2.9	ug/kg
PAHs	Perylene	White catfish	19	3	15.8	1.3	5.7	3	0.19	0.73	ug/kg
PAHs	Perylene	White perch	22	2	9.1	4.1	7.2	5.7	0.4	2.5	ug/kg
PAHs	Perylene	White sucker	5	1	20	0.78	0.78		0.6	1.1	ug/kg
PAHs	Perylene	Worms (all)	10	5	50	21	110	42	1.6	2.8	ug/kg
PAHs	Perylene	Worms (estuarine sp.)	5	0	0				1.6	2.8	ug/kg
PAHs	Perylene	Worms (freshwater sp.)	5	5	100	21	110	42			ug/kg
PAHs	Phenanthrene	American eel (all)	21	20	95.2	2.6	17	8.1	2.4	2.4	ug/kg
PAHs	Phenanthrene	Blue crab	24	22	91.7	2.2	85	11	3.7	4.8	ug/kg
PAHs	Phenanthrene	Brown bullhead	6	6	100	14	61	37			ug/kg
PAHs	Phenanthrene	Carp	12	11	91.7	15	45	28	13	13	ug/kg
PAHs	Phenanthrene	Channel catfish	11	11	100	11	50	23			ug/kg
PAHs	Phenanthrene	Fish (all)	131	126	96.2	2.6	120	27	2.1	13	ug/kg
PAHs	Phenanthrene	Fish (≤ 11 cm)	23	21	91.3	8.4	96	29	5.7	5.9	ug/kg
PAHs	Phenanthrene	Fish (≤ 13 cm)	26	24	92.3	8.4	96	31	5.7	5.9	ug/kg
PAHs	Phenanthrene	Fish (≤ 18 cm)	41	39	95.1	8.4	96	37	5.7	5.9	ug/kg
PAHs	Phenanthrene	Fish (≤ 20 cm)	43	41	95.3	8.4	96	39	5.7	5.9	ug/kg
PAHs	Phenanthrene	Largemouth bass	3	3	100	4.5	9.5	6.7			ug/kg
PAHs	Phenanthrene	Mummichog	18	16	88.9	8.4	57	21	5.7	5.9	ug/kg
PAHs	Phenanthrene	Mussel (estuarine)	3	3	100	13	36	24			ug/kg
PAHs	Phenanthrene	Mussel (freshwater)	5	5	100	7	10	8.2			ug/kg
PAHs	Phenanthrene	Northern pike	1	1	100	24	24				ug/kg
PAHs	Phenanthrene	Other forage fish (no mummichog)	10	10	100	24	96	54			ug/kg
PAHs	Phenanthrene	Smallmouth bass	3	3	100	4.5	9.9	7.3			ug/kg
PAHs	Phenanthrene	White catfish	19	19	100	9.3	120	31			ug/kg
PAHs	Phenanthrene	White perch	22	22	100	13	83	43			ug/kg
PAHs	Phenanthrene	White sucker	5	4	80	6.1	14	10	2.1	2.1	ug/kg
PAHs	Phenanthrene	Worms (all)	10	10	100	4.6	550	85			ug/kg
PAHs	Phenanthrene	Worms (estuarine sp.)	5	5	100	4.6	5.5	5			ug/kg
PAHs	Phenanthrene	Worms (freshwater sp.)	5	5	100	36	550	160			ug/kg
PAHs	Pyrene	American eel (all)	21	20	95.2	1.4	16	5.8	2.3	2.3	ug/kg
PAHs	Pyrene	Blue crab	24	20	83.3	7	62	23	3.4	12	ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PAHs	Pyrene	Brown bullhead	6	6	100	8	40	24			ug/kg
PAHs	Pyrene	Carp	12	12	100	8.6	35	21			ug/kg
PAHs	Pyrene	Channel catfish	11	11	100	5.9	23	12			ug/kg
PAHs	Pyrene	Fish (all)	131	130	99.2	1.4	160	23	2.3	2.3	ug/kg
PAHs	Pyrene	Fish (≤ 11 cm)	23	23	100	6.2	160	39			ug/kg
PAHs	Pyrene	Fish (≤ 13 cm)	26	26	100	6.2	160	45			ug/kg
PAHs	Pyrene	Fish (≤ 18 cm)	41	41	100	6.2	160	40			ug/kg
PAHs	Pyrene	Fish (≤ 20 cm)	43	43	100	6.2	160	41			ug/kg
PAHs	Pyrene	Largemouth bass	3	3	100	2.2	3.6	3.1			ug/kg
PAHs	Pyrene	Mummichog	18	18	100	6.2	87	27			ug/kg
PAHs	Pyrene	Mussel (estuarine)	3	3	100	11	82	45			ug/kg
PAHs	Pyrene	Mussel (freshwater)	5	5	100	63	70	67			ug/kg
PAHs	Pyrene	Northern pike	1	1	100	16	16				ug/kg
PAHs	Pyrene	Other forage fish (no mummichog)	10	10	100	20	160	85			ug/kg
PAHs	Pyrene	Smallmouth bass	3	3	100	3.2	67	25			ug/kg
PAHs	Pyrene	White catfish	19	19	100	5.6	66	20			ug/kg
PAHs	Pyrene	White perch	22	22	100	5.6	61	25			ug/kg
PAHs	Pyrene	White sucker	5	5	100	4.7	11	8			ug/kg
PAHs	Pyrene	Worms (all)	10	10	100	21	830	210			ug/kg
PAHs	Pyrene	Worms (estuarine sp.)	5	5	100	21	45	32			ug/kg
PAHs	Pyrene	Worms (freshwater sp.)	5	5	100	190	830	390			ug/kg
PAHs	Total benzofluorant	American eel (all)	21	8	38.1	0.74	4.8	2.6	0.33	1.6	ug/kg
PAHs	Total benzofluorant	Blue crab	24	24	100	3.6	50	13			ug/kg
PAHs	Total benzofluorant	Brown bullhead	6	3	50	4.6	14	8.1	0.43	0.6	ug/kg
PAHs	Total benzofluorant	Carp	12	7	58.3	0.86	12	4.3	0.41	1.3	ug/kg
PAHs	Total benzofluorant	Channel catfish	11	5	45.5	0.82	1.3	1.1	0.25	1.4	ug/kg
PAHs	Total benzofluorant	Fish (all)	131	80	61.1	0.57	190	21	0.12	2.1	ug/kg
PAHs	Total benzofluorant	Fish (≤ 11 cm)	23	23	100	0.92	140	36			ug/kg
PAHs	Total benzofluorant	Fish (≤ 13 cm)	26	26	100	0.92	190	43			ug/kg
PAHs	Total benzofluorant	Fish (≤ 18 cm)	41	40	97.6	0.92	190	35	1.1	1.1	ug/kg
PAHs	Total benzofluorant	Fish (≤ 20 cm)	43	42	97.7	0.92	190	35	1.1	1.1	ug/kg
PAHs	Total benzofluorant	Largemouth bass	3	0	0				0.59	1.6	ug/kg
PAHs	Total benzofluorant	Mummichog	18	18	100	3.4	100	27			ug/kg
PAHs	Total benzofluorant	Mussel (estuarine)	3	3	100	2	30	14			ug/kg
PAHs	Total benzofluorant	Mussel (freshwater)	5	5	100	21	26	25			ug/kg
PAHs	Total benzofluorant	Northern pike	1	0	0				1.4	1.4	ug/kg
PAHs	Total benzofluorant	Other forage fish (no mummichog)	10	10	100	0.92	190	83			ug/kg
PAHs	Total benzofluorant	Smallmouth bass	3	1	33.3	66	66		0.73	1.3	ug/kg
PAHs	Total benzofluorant	White catfish	19	6	31.6	1.1	34	9.8	0.12	1.3	ug/kg
PAHs	Total benzofluorant	White perch	22	17	77.3	0.57	46	8	0.29	2.1	ug/kg
PAHs	Total benzofluorant	White sucker	5	5	100	1.1	7	3.5			ug/kg
PAHs	Total benzofluorant	Worms (all)	10	10	100	4.4	810	220			ug/kg
PAHs	Total benzofluorant	Worms (estuarine sp.)	5	5	100	4.4	9.6	6.7			ug/kg
PAHs	Total benzofluorant	Worms (freshwater sp.)	5	5	100	260	810	420			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PAHs	Total benzofluorant	American eel (all)	21	8	38.1	0.97	4.8	2.8	0.33	1.6	ug/kg
PAHs	Total benzofluorant	Blue crab	24	24	100	3.6	50	13			ug/kg
PAHs	Total benzofluorant	Brown bullhead	6	3	50	4.6	14	8.1	0.43	0.6	ug/kg
PAHs	Total benzofluorant	Carp	12	7	58.3	0.86	12	4.5	0.41	1.3	ug/kg
PAHs	Total benzofluorant	Channel catfish	11	5	45.5	1	1.3	1.1	0.25	1.4	ug/kg
PAHs	Total benzofluorant	Fish (all)	131	80	61.1	0.86	190	21	0.12	2.1	ug/kg
PAHs	Total benzofluorant	Fish (≤ 11 cm)	23	23	100	1.6	140	36			ug/kg
PAHs	Total benzofluorant	Fish (≤ 13 cm)	26	26	100	1.6	190	43			ug/kg
PAHs	Total benzofluorant	Fish (≤ 18 cm)	41	40	97.6	1.6	190	35	1.1	1.1	ug/kg
PAHs	Total benzofluorant	Fish (≤ 20 cm)	43	42	97.7	1.6	190	35	1.1	1.1	ug/kg
PAHs	Total benzofluorant	Largemouth bass	3	0	0				0.59	1.6	ug/kg
PAHs	Total benzofluorant	Mummichog	18	18	100	3.4	100	27			ug/kg
PAHs	Total benzofluorant	Mussel (estuarine)	3	3	100	2	30	14			ug/kg
PAHs	Total benzofluorant	Mussel (freshwater)	5	5	100	21	26	25			ug/kg
PAHs	Total benzofluorant	Northern pike	1	0	0				1.4	1.4	ug/kg
PAHs	Total benzofluorant	Other forage fish (no mummichog)	10	10	100	1.6	190	83			ug/kg
PAHs	Total benzofluorant	Smallmouth bass	3	1	33.3	66	66		0.73	1.3	ug/kg
PAHs	Total benzofluorant	White catfish	19	6	31.6	1.3	35	10	0.12	1.3	ug/kg
PAHs	Total benzofluorant	White perch	22	17	77.3	0.88	46	8.2	0.29	2.1	ug/kg
PAHs	Total benzofluorant	White sucker	5	5	100	1.5	7.2	3.7			ug/kg
PAHs	Total benzofluorant	Worms (all)	10	10	100	5.5	810	220			ug/kg
PAHs	Total benzofluorant	Worms (estuarine sp.)	5	5	100	5.5	9.6	6.9			ug/kg
PAHs	Total benzofluorant	Worms (freshwater sp.)	5	5	100	260	810	420			ug/kg
PAHs	Total benzofluorant	American eel (all)	21	8	38.1	1.2	4.8	3	0.33	1.6	ug/kg
PAHs	Total benzofluorant	Blue crab	24	24	100	3.6	50	13			ug/kg
PAHs	Total benzofluorant	Brown bullhead	6	3	50	4.6	14	8.1	0.43	0.6	ug/kg
PAHs	Total benzofluorant	Carp	12	7	58.3	0.86	12	4.7	0.41	1.3	ug/kg
PAHs	Total benzofluorant	Channel catfish	11	5	45.5	1.1	1.3	1.2	0.25	1.4	ug/kg
PAHs	Total benzofluorant	Fish (all)	131	80	61.1	0.86	190	21	0.12	2.1	ug/kg
PAHs	Total benzofluorant	Fish (≤ 11 cm)	23	23	100	2.2	140	36			ug/kg
PAHs	Total benzofluorant	Fish (≤ 13 cm)	26	26	100	2.2	190	43			ug/kg
PAHs	Total benzofluorant	Fish (≤ 18 cm)	41	40	97.6	2.2	190	35	1.1	1.1	ug/kg
PAHs	Total benzofluorant	Fish (≤ 20 cm)	43	42	97.7	2.2	190	35	1.1	1.1	ug/kg
PAHs	Total benzofluorant	Largemouth bass	3	0	0				0.59	1.6	ug/kg
PAHs	Total benzofluorant	Mummichog	18	18	100	3.4	100	27			ug/kg
PAHs	Total benzofluorant	Mussel (estuarine)	3	3	100	2	30	14			ug/kg
PAHs	Total benzofluorant	Mussel (freshwater)	5	5	100	21	26	25			ug/kg
PAHs	Total benzofluorant	Northern pike	1	0	0				1.4	1.4	ug/kg
PAHs	Total benzofluorant	Other forage fish (no mummichog)	10	10	100	2.2	190	83			ug/kg
PAHs	Total benzofluorant	Smallmouth bass	3	1	33.3	66	66		0.73	1.3	ug/kg
PAHs	Total benzofluorant	White catfish	19	6	31.6	1.6	35	10	0.12	1.3	ug/kg
PAHs	Total benzofluorant	White perch	22	17	77.3	1.2	46	8.4	0.29	2.1	ug/kg
PAHs	Total benzofluorant	White sucker	5	5	100	1.9	7.3	3.8			ug/kg
PAHs	Total benzofluorant	Worms (all)	10	10	100	6.3	810	220			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PAHs	Total benzofluorant	Worms (estuarine sp.)	5	5	100	6.3	9.6	7.1			ug/kg
PAHs	Total benzofluorant	Worms (freshwater sp.)	5	5	100	260	810	420			ug/kg
PAHs	Total carcinogenic P	American eel (all)	21	14	66.7	0.0016	5.4	1.6	0.87	2.6	ug/kg
PAHs	Total carcinogenic P	Blue crab	24	24	100	2.1	52	10			ug/kg
PAHs	Total carcinogenic P	Brown bullhead	6	6	100	0.002	11	2.6			ug/kg
PAHs	Total carcinogenic P	Carp	12	12	100	0.13	7	1.7			ug/kg
PAHs	Total carcinogenic P	Channel catfish	11	11	100	0.0055	1	0.28			ug/kg
PAHs	Total carcinogenic P	Fish (all)	131	120	91.6	0.0016	150	11	0.87	4.3	ug/kg
PAHs	Total carcinogenic P	Fish (≤ 11 cm)	23	23	100	2.3	100	26			ug/kg
PAHs	Total carcinogenic P	Fish (≤ 13 cm)	26	26	100	2.3	150	32			ug/kg
PAHs	Total carcinogenic P	Fish (≤ 18 cm)	41	41	100	0.017	150	26			ug/kg
PAHs	Total carcinogenic P	Fish (≤ 20 cm)	43	43	100	0.017	150	25			ug/kg
PAHs	Total carcinogenic P	Largemouth bass	3	1	33.3	0.34	0.34		3.5	4.3	ug/kg
PAHs	Total carcinogenic P	Mummichog	18	18	100	3.6	76	20			ug/kg
PAHs	Total carcinogenic P	Mussel (estuarine)	3	3	100	1.3	14	6.6			ug/kg
PAHs	Total carcinogenic P	Mussel (freshwater)	5	5	100	8.6	12	11			ug/kg
PAHs	Total carcinogenic P	Northern pike	1	1	100	1.6	1.6				ug/kg
PAHs	Total carcinogenic P	Other forage fish (no mummichog)	10	10	100	2.3	150	64			ug/kg
PAHs	Total carcinogenic P	Smallmouth bass	3	1	33.3	47	47		2.2	4.1	ug/kg
PAHs	Total carcinogenic P	White catfish	19	19	100	0.0042	33	2.9			ug/kg
PAHs	Total carcinogenic P	White perch	22	22	100	0.0025	35	4.3			ug/kg
PAHs	Total carcinogenic P	White sucker	5	5	100	0.26	3.5	1.4			ug/kg
PAHs	Total carcinogenic P	Worms (all)	10	10	100	0.45	640	140			ug/kg
PAHs	Total carcinogenic P	Worms (estuarine sp.)	5	5	100	0.45	1	0.66			ug/kg
PAHs	Total carcinogenic P	Worms (freshwater sp.)	5	5	100	130	640	270			ug/kg
PAHs	Total carcinogenic P	American eel (all)	21	14	66.7	0.75	5.9	2.2	0.87	2.6	ug/kg
PAHs	Total carcinogenic P	Blue crab	24	24	100	3.7	54	12			ug/kg
PAHs	Total carcinogenic P	Brown bullhead	6	6	100	1.1	12	3.7			ug/kg
PAHs	Total carcinogenic P	Carp	12	12	100	1.3	7.5	2.7			ug/kg
PAHs	Total carcinogenic P	Channel catfish	11	11	100	0.8	2.5	1.5			ug/kg
PAHs	Total carcinogenic P	Fish (all)	131	120	91.6	0.56	150	12	0.87	4.3	ug/kg
PAHs	Total carcinogenic P	Fish (≤ 11 cm)	23	23	100	4.2	100	27			ug/kg
PAHs	Total carcinogenic P	Fish (≤ 13 cm)	26	26	100	4.2	150	33			ug/kg
PAHs	Total carcinogenic P	Fish (≤ 18 cm)	41	41	100	1.7	150	27			ug/kg
PAHs	Total carcinogenic P	Fish (≤ 20 cm)	43	43	100	1.7	150	26			ug/kg
PAHs	Total carcinogenic P	Largemouth bass	3	1	33.3	4.5	4.5		3.5	4.3	ug/kg
PAHs	Total carcinogenic P	Mummichog	18	18	100	4.7	76	21			ug/kg
PAHs	Total carcinogenic P	Mussel (estuarine)	3	3	100	1.9	14	6.9			ug/kg
PAHs	Total carcinogenic P	Mussel (freshwater)	5	5	100	8.6	12	11			ug/kg
PAHs	Total carcinogenic P	Northern pike	1	1	100	5.4	5.4				ug/kg
PAHs	Total carcinogenic P	Other forage fish (no mummichog)	10	10	100	4.2	150	65			ug/kg
PAHs	Total carcinogenic P	Smallmouth bass	3	1	33.3	47	47		2.2	4.1	ug/kg
PAHs	Total carcinogenic P	White catfish	19	19	100	0.56	33	3.7			ug/kg
PAHs	Total carcinogenic P	White perch	22	22	100	0.94	35	5.4			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PAHs	Total carcinogenic P	White sucker	5	5	100	1.3	5.2	2.8			ug/kg
PAHs	Total carcinogenic P	Worms (all)	10	10	100	2.5	640	140			ug/kg
PAHs	Total carcinogenic P	Worms (estuarine sp.)	5	5	100	2.5	3.6	3			ug/kg
PAHs	Total carcinogenic P	Worms (freshwater sp.)	5	5	100	130	640	270			ug/kg
PAHs	Total carcinogenic P	American eel (all)	21	14	66.7	0.94	6.4	2.9	0.87	2.6	ug/kg
PAHs	Total carcinogenic P	Blue crab	24	24	100	5	56	13			ug/kg
PAHs	Total carcinogenic P	Brown bullhead	6	6	100	2.2	12	4.6			ug/kg
PAHs	Total carcinogenic P	Carp	12	12	100	1.9	8	3.6			ug/kg
PAHs	Total carcinogenic P	Channel catfish	11	11	100	1.3	4.8	2.6			ug/kg
PAHs	Total carcinogenic P	Fish (all)	131	120	91.6	0.94	150	13	0.87	4.3	ug/kg
PAHs	Total carcinogenic P	Fish (≤ 11 cm)	23	23	100	5.6	100	29			ug/kg
PAHs	Total carcinogenic P	Fish (≤ 13 cm)	26	26	100	5.6	150	34			ug/kg
PAHs	Total carcinogenic P	Fish (≤ 18 cm)	41	41	100	2.6	150	28			ug/kg
PAHs	Total carcinogenic P	Fish (≤ 20 cm)	43	43	100	2.6	150	27			ug/kg
PAHs	Total carcinogenic P	Largemouth bass	3	1	33.3	8.3	8.3		3.5	4.3	ug/kg
PAHs	Total carcinogenic P	Mummichog	18	18	100	5.6	76	23			ug/kg
PAHs	Total carcinogenic P	Mussel (estuarine)	3	3	100	2.4	14	7.2			ug/kg
PAHs	Total carcinogenic P	Mussel (freshwater)	5	5	100	8.6	12	11			ug/kg
PAHs	Total carcinogenic P	Northern pike	1	1	100	8.9	8.9				ug/kg
PAHs	Total carcinogenic P	Other forage fish (no mummichog)	10	10	100	6	150	65			ug/kg
PAHs	Total carcinogenic P	Smallmouth bass	3	1	33.3	47	47		2.2	4.1	ug/kg
PAHs	Total carcinogenic P	White catfish	19	19	100	0.98	33	4.4			ug/kg
PAHs	Total carcinogenic P	White perch	22	22	100	1.9	35	6.6			ug/kg
PAHs	Total carcinogenic P	White sucker	5	5	100	2.3	6.9	4.1			ug/kg
PAHs	Total carcinogenic P	Worms (all)	10	10	100	4.3	640	140			ug/kg
PAHs	Total carcinogenic P	Worms (estuarine sp.)	5	5	100	4.3	6.1	5.3			ug/kg
PAHs	Total carcinogenic P	Worms (freshwater sp.)	5	5	100	130	640	270			ug/kg
PAHs	Total HPAHs	American eel (all)	21	21	100	3.1	49	19			ug/kg
PAHs	Total HPAHs	Blue crab	24	24	100	14	350	82			ug/kg
PAHs	Total HPAHs	Brown bullhead	6	6	100	21	110	77			ug/kg
PAHs	Total HPAHs	Carp	12	12	100	24	120	62			ug/kg
PAHs	Total HPAHs	Channel catfish	11	11	100	20	96	41			ug/kg
PAHs	Total HPAHs	Fish (all)	131	131	100	3.1	1000	110			ug/kg
PAHs	Total HPAHs	Fish (≤ 11 cm)	23	23	100	29	860	210			ug/kg
PAHs	Total HPAHs	Fish (≤ 13 cm)	26	26	100	29	1000	240			ug/kg
PAHs	Total HPAHs	Fish (≤ 18 cm)	41	41	100	29	1000	220			ug/kg
PAHs	Total HPAHs	Fish (≤ 20 cm)	43	43	100	29	1000	220			ug/kg
PAHs	Total HPAHs	Largemouth bass	3	3	100	5.6	9.4	7.2			ug/kg
PAHs	Total HPAHs	Mummichog	18	18	100	29	540	150			ug/kg
PAHs	Total HPAHs	Mussel (estuarine)	3	3	100	28	230	120			ug/kg
PAHs	Total HPAHs	Mussel (freshwater)	5	5	100	190	220	210			ug/kg
PAHs	Total HPAHs	Northern pike	1	1	100	42	42				ug/kg
PAHs	Total HPAHs	Other forage fish (no mummichog)	10	10	100	78	1000	480			ug/kg
PAHs	Total HPAHs	Smallmouth bass	3	3	100	7.3	390	140			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PAHs	Total HPAHs	White catfish	19	19	100	17	310	66			ug/kg
PAHs	Total HPAHs	White perch	22	22	100	21	340	110			ug/kg
PAHs	Total HPAHs	White sucker	5	5	100	21	48	30			ug/kg
PAHs	Total HPAHs	Worms (all)	10	10	100	58	4900	1200			ug/kg
PAHs	Total HPAHs	Worms (estuarine sp.)	5	5	100	58	140	95			ug/kg
PAHs	Total HPAHs	Worms (freshwater sp.)	5	5	100	1100	4900	2200			ug/kg
PAHs	Total HPAHs (ND=0.	American eel (all)	21	21	100	6.4	50	22			ug/kg
PAHs	Total HPAHs (ND=0.	Blue crab	24	24	100	25	360	94			ug/kg
PAHs	Total HPAHs (ND=0.	Brown bullhead	6	6	100	24	120	80			ug/kg
PAHs	Total HPAHs (ND=0.	Carp	12	12	100	29	120	64			ug/kg
PAHs	Total HPAHs (ND=0.	Channel catfish	11	11	100	23	96	44			ug/kg
PAHs	Total HPAHs (ND=0.	Fish (all)	131	131	100	6.4	1000	110			ug/kg
PAHs	Total HPAHs (ND=0.	Fish (≤ 11 cm)	23	23	100	38	860	220			ug/kg
PAHs	Total HPAHs (ND=0.	Fish (≤ 13 cm)	26	26	100	38	1000	250			ug/kg
PAHs	Total HPAHs (ND=0.	Fish (≤ 18 cm)	41	41	100	38	1000	230			ug/kg
PAHs	Total HPAHs (ND=0.	Fish (≤ 20 cm)	43	43	100	38	1000	230			ug/kg
PAHs	Total HPAHs (ND=0.	Largemouth bass	3	3	100	21	26	23			ug/kg
PAHs	Total HPAHs (ND=0.	Mummichog	18	18	100	38	540	160			ug/kg
PAHs	Total HPAHs (ND=0.	Mussel (estuarine)	3	3	100	29	230	120			ug/kg
PAHs	Total HPAHs (ND=0.	Mussel (freshwater)	5	5	100	190	220	210			ug/kg
PAHs	Total HPAHs (ND=0.	Northern pike	1	1	100	58	58				ug/kg
PAHs	Total HPAHs (ND=0.	Other forage fish (no mummichog)	10	10	100	87	1000	490			ug/kg
PAHs	Total HPAHs (ND=0.	Smallmouth bass	3	3	100	16	400	150			ug/kg
PAHs	Total HPAHs (ND=0.	White catfish	19	19	100	21	310	68			ug/kg
PAHs	Total HPAHs (ND=0.	White perch	22	22	100	25	340	120			ug/kg
PAHs	Total HPAHs (ND=0.	White sucker	5	5	100	23	52	34			ug/kg
PAHs	Total HPAHs (ND=0.	Worms (all)	10	10	100	63	4900	1200			ug/kg
PAHs	Total HPAHs (ND=0.	Worms (estuarine sp.)	5	5	100	63	140	100			ug/kg
PAHs	Total HPAHs (ND=0.	Worms (freshwater sp.)	5	5	100	1100	4900	2200			ug/kg
PAHs	Total HPAHs (ND=D	American eel (all)	21	21	100	9.8	50	26			ug/kg
PAHs	Total HPAHs (ND=D	Blue crab	24	24	100	35	360	110			ug/kg
PAHs	Total HPAHs (ND=D	Brown bullhead	6	6	100	27	120	81			ug/kg
PAHs	Total HPAHs (ND=D	Carp	12	12	100	30	120	66			ug/kg
PAHs	Total HPAHs (ND=D	Channel catfish	11	11	100	27	96	48			ug/kg
PAHs	Total HPAHs (ND=D	Fish (all)	131	131	100	9.8	1000	120			ug/kg
PAHs	Total HPAHs (ND=D	Fish (≤ 11 cm)	23	23	100	46	860	230			ug/kg
PAHs	Total HPAHs (ND=D	Fish (≤ 13 cm)	26	26	100	46	1000	260			ug/kg
PAHs	Total HPAHs (ND=D	Fish (≤ 18 cm)	41	41	100	46	1000	230			ug/kg
PAHs	Total HPAHs (ND=D	Fish (≤ 20 cm)	43	43	100	46	1000	240			ug/kg
PAHs	Total HPAHs (ND=D	Largemouth bass	3	3	100	33	47	40			ug/kg
PAHs	Total HPAHs (ND=D	Mummichog	18	18	100	46	540	170			ug/kg
PAHs	Total HPAHs (ND=D	Mussel (estuarine)	3	3	100	30	230	120			ug/kg
PAHs	Total HPAHs (ND=D	Mussel (freshwater)	5	5	100	190	220	210			ug/kg
PAHs	Total HPAHs (ND=D	Northern pike	1	1	100	75	75				ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PAHs	Total HPAHs (ND=D	Other forage fish (no mummichog)	10	10	100	97	1000	500			ug/kg
PAHs	Total HPAHs (ND=D	Smallmouth bass	3	3	100	25	400	160			ug/kg
PAHs	Total HPAHs (ND=D	White catfish	19	19	100	23	310	71			ug/kg
PAHs	Total HPAHs (ND=D	White perch	22	22	100	28	340	120			ug/kg
PAHs	Total HPAHs (ND=D	White sucker	5	5	100	25	55	38			ug/kg
PAHs	Total HPAHs (ND=D	Worms (all)	10	10	100	67	4900	1200			ug/kg
PAHs	Total HPAHs (ND=D	Worms (estuarine sp.)	5	5	100	67	150	100			ug/kg
PAHs	Total HPAHs (ND=D	Worms (freshwater sp.)	5	5	100	1100	4900	2200			ug/kg
PAHs	Total LPAHs	American eel (all)	21	21	100	15	170	62			ug/kg
PAHs	Total LPAHs	Blue crab	24	24	100	5.8	270	59			ug/kg
PAHs	Total LPAHs	Brown bullhead	6	6	100	180	260	220			ug/kg
PAHs	Total LPAHs	Carp	12	12	100	93	250	140			ug/kg
PAHs	Total LPAHs	Channel catfish	11	11	100	39	130	78			ug/kg
PAHs	Total LPAHs	Fish (all)	131	131	100	15	470	110			ug/kg
PAHs	Total LPAHs	Fish (≤ 11 cm)	23	23	100	18	370	78			ug/kg
PAHs	Total LPAHs	Fish (≤ 13 cm)	26	26	100	18	370	84			ug/kg
PAHs	Total LPAHs	Fish (≤ 18 cm)	41	41	100	18	370	110			ug/kg
PAHs	Total LPAHs	Fish (≤ 20 cm)	43	43	100	18	370	120			ug/kg
PAHs	Total LPAHs	Largemouth bass	3	3	100	33	61	42			ug/kg
PAHs	Total LPAHs	Mummichog	18	18	100	18	130	51			ug/kg
PAHs	Total LPAHs	Mussel (estuarine)	3	3	100	44	140	87			ug/kg
PAHs	Total LPAHs	Mussel (freshwater)	5	5	100	12	17	13			ug/kg
PAHs	Total LPAHs	Northern pike	1	1	100	260	260				ug/kg
PAHs	Total LPAHs	Other forage fish (no mummichog)	10	10	100	69	370	160			ug/kg
PAHs	Total LPAHs	Smallmouth bass	3	3	100	38	67	50			ug/kg
PAHs	Total LPAHs	White catfish	19	19	100	34	470	120			ug/kg
PAHs	Total LPAHs	White perch	22	22	100	36	300	170			ug/kg
PAHs	Total LPAHs	White sucker	5	5	100	17	49	36			ug/kg
PAHs	Total LPAHs	Worms (all)	10	10	100	5.3	940	150			ug/kg
PAHs	Total LPAHs	Worms (estuarine sp.)	5	5	100	5.3	12	9			ug/kg
PAHs	Total LPAHs	Worms (freshwater sp.)	5	5	100	71	940	300			ug/kg
PAHs	Total LPAHs (ND=0.!	American eel (all)	21	21	100	24	200	90			ug/kg
PAHs	Total LPAHs (ND=0.!	Blue crab	24	24	100	11	270	65			ug/kg
PAHs	Total LPAHs (ND=0.!	Brown bullhead	6	6	100	180	300	250			ug/kg
PAHs	Total LPAHs (ND=0.!	Carp	12	12	100	93	260	170			ug/kg
PAHs	Total LPAHs (ND=0.!	Channel catfish	11	11	100	55	150	89			ug/kg
PAHs	Total LPAHs (ND=0.!	Fish (all)	131	131	100	24	470	130			ug/kg
PAHs	Total LPAHs (ND=0.!	Fish (≤ 11 cm)	23	23	100	27	370	82			ug/kg
PAHs	Total LPAHs (ND=0.!	Fish (≤ 13 cm)	26	26	100	27	370	88			ug/kg
PAHs	Total LPAHs (ND=0.!	Fish (≤ 18 cm)	41	41	100	27	370	120			ug/kg
PAHs	Total LPAHs (ND=0.!	Fish (≤ 20 cm)	43	43	100	27	370	120			ug/kg
PAHs	Total LPAHs (ND=0.!	Largemouth bass	3	3	100	44	77	57			ug/kg
PAHs	Total LPAHs (ND=0.!	Mummichog	18	18	100	27	130	57			ug/kg
PAHs	Total LPAHs (ND=0.!	Mussel (estuarine)	3	3	100	44	140	87			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PAHs	Total LPAHs (ND=0.!	Mussel (freshwater)	5	5	100	12	17	13			ug/kg
PAHs	Total LPAHs (ND=0.!	Northern pike	1	1	100	280	280				ug/kg
PAHs	Total LPAHs (ND=0.!	Other forage fish (no mummichog)	10	10	100	69	370	160			ug/kg
PAHs	Total LPAHs (ND=0.!	Smallmouth bass	3	3	100	49	94	67			ug/kg
PAHs	Total LPAHs (ND=0.!	White catfish	19	19	100	38	470	140			ug/kg
PAHs	Total LPAHs (ND=0.!	White perch	22	22	100	40	330	190			ug/kg
PAHs	Total LPAHs (ND=0.!	White sucker	5	5	100	26	59	45			ug/kg
PAHs	Total LPAHs (ND=0.!	Worms (all)	10	10	100	14	950	160			ug/kg
PAHs	Total LPAHs (ND=0.!	Worms (estuarine sp.)	5	5	100	14	21	18			ug/kg
PAHs	Total LPAHs (ND=0.!	Worms (freshwater sp.)	5	5	100	75	950	300			ug/kg
PAHs	Total LPAHs (ND=DL	American eel (all)	21	21	100	28	230	120			ug/kg
PAHs	Total LPAHs (ND=DL	Blue crab	24	24	100	18	280	71			ug/kg
PAHs	Total LPAHs (ND=DL	Brown bullhead	6	6	100	190	340	290			ug/kg
PAHs	Total LPAHs (ND=DL	Carp	12	12	100	93	300	200			ug/kg
PAHs	Total LPAHs (ND=DL	Channel catfish	11	11	100	62	170	100			ug/kg
PAHs	Total LPAHs (ND=DL	Fish (all)	131	131	100	28	470	140			ug/kg
PAHs	Total LPAHs (ND=DL	Fish (≤ 11 cm)	23	23	100	35	370	87			ug/kg
PAHs	Total LPAHs (ND=DL	Fish (≤ 13 cm)	26	26	100	35	370	92			ug/kg
PAHs	Total LPAHs (ND=DL	Fish (≤ 18 cm)	41	41	100	35	370	120			ug/kg
PAHs	Total LPAHs (ND=DL	Fish (≤ 20 cm)	43	43	100	35	370	130			ug/kg
PAHs	Total LPAHs (ND=DL	Largemouth bass	3	3	100	55	95	73			ug/kg
PAHs	Total LPAHs (ND=DL	Mummichog	18	18	100	35	130	62			ug/kg
PAHs	Total LPAHs (ND=DL	Mussel (estuarine)	3	3	100	44	140	87			ug/kg
PAHs	Total LPAHs (ND=DL	Mussel (freshwater)	5	5	100	13	18	14			ug/kg
PAHs	Total LPAHs (ND=DL	Northern pike	1	1	100	300	300				ug/kg
PAHs	Total LPAHs (ND=DL	Other forage fish (no mummichog)	10	10	100	69	370	160			ug/kg
PAHs	Total LPAHs (ND=DL	Smallmouth bass	3	3	100	52	120	83			ug/kg
PAHs	Total LPAHs (ND=DL	White catfish	19	19	100	43	470	160			ug/kg
PAHs	Total LPAHs (ND=DL	White perch	22	22	100	44	380	200			ug/kg
PAHs	Total LPAHs (ND=DL	White sucker	5	5	100	36	68	54			ug/kg
PAHs	Total LPAHs (ND=DL	Worms (all)	10	10	100	23	970	170			ug/kg
PAHs	Total LPAHs (ND=DL	Worms (estuarine sp.)	5	5	100	23	30	27			ug/kg
PAHs	Total LPAHs (ND=DL	Worms (freshwater sp.)	5	5	100	80	970	310			ug/kg
PAHs	Total PAHs	American eel (all)	21	21	100	27	170	81			ug/kg
PAHs	Total PAHs	Blue crab	24	24	100	17	420	140			ug/kg
PAHs	Total PAHs	Brown bullhead	6	6	100	210	330	300			ug/kg
PAHs	Total PAHs	Carp	12	12	100	120	350	210			ug/kg
PAHs	Total PAHs	Channel catfish	11	11	100	59	210	120			ug/kg
PAHs	Total PAHs	Fish (all)	131	131	100	27	1200	220			ug/kg
PAHs	Total PAHs	Fish (≤ 11 cm)	23	23	100	48	1100	290			ug/kg
PAHs	Total PAHs	Fish (≤ 13 cm)	26	26	100	48	1200	330			ug/kg
PAHs	Total PAHs	Fish (≤ 18 cm)	41	41	100	48	1200	330			ug/kg
PAHs	Total PAHs	Fish (≤ 20 cm)	43	43	100	48	1200	340			ug/kg
PAHs	Total PAHs	Largemouth bass	3	3	100	31	70	45			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PAHs	Total PAHs	Mummichog	18	18	100	48	670	200			ug/kg
PAHs	Total PAHs	Mussel (estuarine)	3	3	100	72	370	210			ug/kg
PAHs	Total PAHs	Mussel (freshwater)	5	5	100	200	230	220			ug/kg
PAHs	Total PAHs	Northern pike	1	1	100	300	300				ug/kg
PAHs	Total PAHs	Other forage fish (no mummichog)	10	10	100	170	1200	650			ug/kg
PAHs	Total PAHs	Smallmouth bass	3	3	100	43	460	190			ug/kg
PAHs	Total PAHs	White catfish	19	19	100	58	590	180			ug/kg
PAHs	Total PAHs	White perch	22	22	100	63	570	280			ug/kg
PAHs	Total PAHs	White sucker	5	5	100	38	97	67			ug/kg
PAHs	Total PAHs	Worms (all)	10	10	100	67	5900	1300			ug/kg
PAHs	Total PAHs	Worms (estuarine sp.)	5	5	100	67	150	110			ug/kg
PAHs	Total PAHs	Worms (freshwater sp.)	5	5	100	1200	5900	2500			ug/kg
PAHs	Total PAHs (ND=0.5	American eel (all)	21	21	100	38	210	110			ug/kg
PAHs	Total PAHs (ND=0.5	Blue crab	24	24	100	44	430	160			ug/kg
PAHs	Total PAHs (ND=0.5	Brown bullhead	6	6	100	250	380	330			ug/kg
PAHs	Total PAHs (ND=0.5	Carp	12	12	100	130	360	230			ug/kg
PAHs	Total PAHs (ND=0.5	Channel catfish	11	11	100	84	240	130			ug/kg
PAHs	Total PAHs (ND=0.5	Fish (all)	131	131	100	38	1200	240			ug/kg
PAHs	Total PAHs (ND=0.5	Fish (≤ 11 cm)	23	23	100	65	1100	300			ug/kg
PAHs	Total PAHs (ND=0.5	Fish (≤ 13 cm)	26	26	100	65	1200	340			ug/kg
PAHs	Total PAHs (ND=0.5	Fish (≤ 18 cm)	41	41	100	65	1200	340			ug/kg
PAHs	Total PAHs (ND=0.5	Fish (≤ 20 cm)	43	43	100	65	1200	350			ug/kg
PAHs	Total PAHs (ND=0.5	Largemouth bass	3	3	100	76	100	85			ug/kg
PAHs	Total PAHs (ND=0.5	Mummichog	18	18	100	65	670	220			ug/kg
PAHs	Total PAHs (ND=0.5	Mussel (estuarine)	3	3	100	73	370	210			ug/kg
PAHs	Total PAHs (ND=0.5	Mussel (freshwater)	5	5	100	200	230	220			ug/kg
PAHs	Total PAHs (ND=0.5	Northern pike	1	1	100	340	340				ug/kg
PAHs	Total PAHs (ND=0.5	Other forage fish (no mummichog)	10	10	100	180	1200	660			ug/kg
PAHs	Total PAHs (ND=0.5	Smallmouth bass	3	3	100	64	500	220			ug/kg
PAHs	Total PAHs (ND=0.5	White catfish	19	19	100	72	590	210			ug/kg
PAHs	Total PAHs (ND=0.5	White perch	22	22	100	72	570	300			ug/kg
PAHs	Total PAHs (ND=0.5	White sucker	5	5	100	49	110	80			ug/kg
PAHs	Total PAHs (ND=0.5	Worms (all)	10	10	100	81	5900	1300			ug/kg
PAHs	Total PAHs (ND=0.5	Worms (estuarine sp.)	5	5	100	81	160	120			ug/kg
PAHs	Total PAHs (ND=0.5	Worms (freshwater sp.)	5	5	100	1200	5900	2500			ug/kg
PAHs	Total PAHs (ND=DL)	American eel (all)	21	21	100	49	250	140			ug/kg
PAHs	Total PAHs (ND=DL)	Blue crab	24	24	100	59	440	180			ug/kg
PAHs	Total PAHs (ND=DL)	Brown bullhead	6	6	100	290	430	370			ug/kg
PAHs	Total PAHs (ND=DL)	Carp	12	12	100	140	380	260			ug/kg
PAHs	Total PAHs (ND=DL)	Channel catfish	11	11	100	92	260	150			ug/kg
PAHs	Total PAHs (ND=DL)	Fish (all)	131	131	100	49	1200	260			ug/kg
PAHs	Total PAHs (ND=DL)	Fish (≤ 11 cm)	23	23	100	82	1100	320			ug/kg
PAHs	Total PAHs (ND=DL)	Fish (≤ 13 cm)	26	26	100	82	1200	360			ug/kg
PAHs	Total PAHs (ND=DL)	Fish (≤ 18 cm)	41	41	100	82	1200	360			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PAHs	Total PAHs (ND=DL)	Fish (≤ 20 cm)	43	43	100	82	1200	370			ug/kg
PAHs	Total PAHs (ND=DL)	Largemouth bass	3	3	100	120	130	120			ug/kg
PAHs	Total PAHs (ND=DL)	Mummichog	18	18	100	82	670	230			ug/kg
PAHs	Total PAHs (ND=DL)	Mussel (estuarine)	3	3	100	74	370	210			ug/kg
PAHs	Total PAHs (ND=DL)	Mussel (freshwater)	5	5	100	200	230	220			ug/kg
PAHs	Total PAHs (ND=DL)	Northern pike	1	1	100	380	380				ug/kg
PAHs	Total PAHs (ND=DL)	Other forage fish (no mummichog)	10	10	100	190	1200	670			ug/kg
PAHs	Total PAHs (ND=DL)	Smallmouth bass	3	3	100	74	530	250			ug/kg
PAHs	Total PAHs (ND=DL)	White catfish	19	19	100	84	590	230			ug/kg
PAHs	Total PAHs (ND=DL)	White perch	22	22	100	81	580	320			ug/kg
PAHs	Total PAHs (ND=DL)	White sucker	5	5	100	61	130	93			ug/kg
PAHs	Total PAHs (ND=DL)	Worms (all)	10	10	100	95	5900	1300			ug/kg
PAHs	Total PAHs (ND=DL)	Worms (estuarine sp.)	5	5	100	95	180	130			ug/kg
PAHs	Total PAHs (ND=DL)	Worms (freshwater sp.)	5	5	100	1200	5900	2600			ug/kg
Alk PAHs	C1-Benzanthracene	American eel (all)	21	6	28.6	0.5	1.6	0.98	0.45	0.99	ug/kg
Alk PAHs	C1-Benzanthracene	Blue crab	24	24	100	0.69	15	3.4			ug/kg
Alk PAHs	C1-Benzanthracene	Brown bullhead	6	6	100	0.46	1.7	1.1			ug/kg
Alk PAHs	C1-Benzanthracene	Carp	12	11	91.7	0.53	1.9	0.84	0.81	0.81	ug/kg
Alk PAHs	C1-Benzanthracene	Channel catfish	11	10	90.9	0.49	1.8	0.92	0.46	0.46	ug/kg
Alk PAHs	C1-Benzanthracene	Fish (all)	129	94	72.9	0.46	52	4.7	0.41	0.99	ug/kg
Alk PAHs	C1-Benzanthracene	Fish (≤ 11 cm)	22	22	100	0.9	46	10			ug/kg
Alk PAHs	C1-Benzanthracene	Fish (≤ 13 cm)	24	24	100	0.9	52	13			ug/kg
Alk PAHs	C1-Benzanthracene	Fish (≤ 18 cm)	39	39	100	0.62	52	9.3			ug/kg
Alk PAHs	C1-Benzanthracene	Fish (≤ 20 cm)	41	41	100	0.62	52	9.1			ug/kg
Alk PAHs	C1-Benzanthracene	Largemouth bass	3	0	0				0.46	0.48	ug/kg
Alk PAHs	C1-Benzanthracene	Mummichog	17	17	100	1	23	7.2			ug/kg
Alk PAHs	C1-Benzanthracene	Mussel (estuarine)	3	3	100	0.9	16	7.3			ug/kg
Alk PAHs	C1-Benzanthracene	Mussel (freshwater)	5	5	100	14	18	16			ug/kg
Alk PAHs	C1-Benzanthracene	Northern pike	1	0	0				0.41	0.41	ug/kg
Alk PAHs	C1-Benzanthracene	Other forage fish (no mummichog)	9	9	100	0.9	52	24			ug/kg
Alk PAHs	C1-Benzanthracene	Smallmouth bass	3	2	66.7	0.5	9.1	4.8	0.49	0.49	ug/kg
Alk PAHs	C1-Benzanthracene	White catfish	19	10	52.6	0.47	4.4	1.5	0.43	0.47	ug/kg
Alk PAHs	C1-Benzanthracene	White perch	22	18	81.8	0.62	10	2.3	0.85	0.9	ug/kg
Alk PAHs	C1-Benzanthracene	White sucker	5	5	100	0.54	4.2	1.6			ug/kg
Alk PAHs	C1-Dibenzothiophe	American eel (all)	21	20	95.2	0.5	1.8	1	0.97	0.97	ug/kg
Alk PAHs	C1-Dibenzothiophe	Blue crab	24	17	70.8	0.48	1.4	0.7	0.45	0.5	ug/kg
Alk PAHs	C1-Dibenzothiophe	Brown bullhead	6	6	100	1.6	11	6.8			ug/kg
Alk PAHs	C1-Dibenzothiophe	Carp	12	12	100	4.1	12	7.3			ug/kg
Alk PAHs	C1-Dibenzothiophe	Channel catfish	11	11	100	1.5	5.2	2.9			ug/kg
Alk PAHs	C1-Dibenzothiophe	Fish (all)	129	128	99.2	0.5	13	3.4	0.97	0.97	ug/kg
Alk PAHs	C1-Dibenzothiophe	Fish (≤ 11 cm)	22	22	100	0.7	7	2.1			ug/kg
Alk PAHs	C1-Dibenzothiophe	Fish (≤ 13 cm)	24	24	100	0.7	7	2.2			ug/kg
Alk PAHs	C1-Dibenzothiophe	Fish (≤ 18 cm)	39	39	100	0.7	12	3.2			ug/kg
Alk PAHs	C1-Dibenzothiophe	Fish (≤ 20 cm)	41	41	100	0.7	13	3.4			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
Alk PAHs	C1-Dibenzothiophe	Largemouth bass	3	3	100	0.69	5.9	2.4			ug/kg
Alk PAHs	C1-Dibenzothiophe	Mummichog	17	17	100	0.7	3	1.5			ug/kg
Alk PAHs	C1-Dibenzothiophe	Mussel (estuarine)	3	3	100	0.7	3	1.9			ug/kg
Alk PAHs	C1-Dibenzothiophe	Mussel (freshwater)	5	5	100	2	3	2.6			ug/kg
Alk PAHs	C1-Dibenzothiophe	Northern pike	1	1	100	7.3	7.3				ug/kg
Alk PAHs	C1-Dibenzothiophe	Other forage fish (no mummichog)	9	9	100	2	7	3.9			ug/kg
Alk PAHs	C1-Dibenzothiophe	Smallmouth bass	3	3	100	0.76	0.91	0.84			ug/kg
Alk PAHs	C1-Dibenzothiophe	White catfish	19	19	100	0.98	12	2.9			ug/kg
Alk PAHs	C1-Dibenzothiophe	White perch	22	22	100	1	13	5.3			ug/kg
Alk PAHs	C1-Dibenzothiophe	White sucker	5	5	100	0.85	1.7	1.4			ug/kg
Alk PAHs	C1-Fluorenes	American eel (all)	21	21	100	0.64	3.8	1.8			ug/kg
Alk PAHs	C1-Fluorenes	Blue crab	24	22	91.7	0.47	2.2	1	0.47	0.5	ug/kg
Alk PAHs	C1-Fluorenes	Brown bullhead	6	6	100	2.6	9.9	6.5			ug/kg
Alk PAHs	C1-Fluorenes	Carp	12	12	100	2.9	10	5.5			ug/kg
Alk PAHs	C1-Fluorenes	Channel catfish	11	11	100	1.9	8.6	4.5			ug/kg
Alk PAHs	C1-Fluorenes	Fish (all)	129	129	100	0.64	22	5			ug/kg
Alk PAHs	C1-Fluorenes	Fish (≤ 11 cm)	22	22	100	1	22	3.8			ug/kg
Alk PAHs	C1-Fluorenes	Fish (≤ 13 cm)	24	24	100	1	22	3.9			ug/kg
Alk PAHs	C1-Fluorenes	Fish (≤ 18 cm)	39	39	100	1	22	6.2			ug/kg
Alk PAHs	C1-Fluorenes	Fish (≤ 20 cm)	41	41	100	1	22	6.6			ug/kg
Alk PAHs	C1-Fluorenes	Largemouth bass	3	3	100	1.2	1.7	1.4			ug/kg
Alk PAHs	C1-Fluorenes	Mummichog	17	17	100	1	4	2.5			ug/kg
Alk PAHs	C1-Fluorenes	Mussel (estuarine)	3	3	100	1	4	2.7			ug/kg
Alk PAHs	C1-Fluorenes	Mussel (freshwater)	5	5	100	2	3	2.8			ug/kg
Alk PAHs	C1-Fluorenes	Northern pike	1	1	100	5.8	5.8				ug/kg
Alk PAHs	C1-Fluorenes	Other forage fish (no mummichog)	9	9	100	3	22	6.7			ug/kg
Alk PAHs	C1-Fluorenes	Smallmouth bass	3	3	100	1.2	1.7	1.5			ug/kg
Alk PAHs	C1-Fluorenes	White catfish	19	19	100	1.4	17	4.8			ug/kg
Alk PAHs	C1-Fluorenes	White perch	22	22	100	3	18	10			ug/kg
Alk PAHs	C1-Fluorenes	White sucker	5	5	100	0.91	3.2	2.1			ug/kg
Alk PAHs	C1-Phenanthrene/a	American eel (all)	21	21	100	0.83	5.7	2.4			ug/kg
Alk PAHs	C1-Phenanthrene/a	Blue crab	24	24	100	0.72	14	3.4			ug/kg
Alk PAHs	C1-Phenanthrene/a	Brown bullhead	6	6	100	5	18	11			ug/kg
Alk PAHs	C1-Phenanthrene/a	Carp	12	12	100	4.7	18	8.6			ug/kg
Alk PAHs	C1-Phenanthrene/a	Channel catfish	11	11	100	3.4	12	7			ug/kg
Alk PAHs	C1-Phenanthrene/a	Fish (all)	129	129	100	0.83	28	7.5			ug/kg
Alk PAHs	C1-Phenanthrene/a	Fish (≤ 11 cm)	22	22	100	1	28	7.7			ug/kg
Alk PAHs	C1-Phenanthrene/a	Fish (≤ 13 cm)	24	24	100	1	28	8.6			ug/kg
Alk PAHs	C1-Phenanthrene/a	Fish (≤ 18 cm)	39	39	100	1	28	10			ug/kg
Alk PAHs	C1-Phenanthrene/a	Fish (≤ 20 cm)	41	41	100	1	28	11			ug/kg
Alk PAHs	C1-Phenanthrene/a	Largemouth bass	3	3	100	1.1	1.8	1.4			ug/kg
Alk PAHs	C1-Phenanthrene/a	Mummichog	17	17	100	1	12	4.9			ug/kg
Alk PAHs	C1-Phenanthrene/a	Mussel (estuarine)	3	3	100	4	22	13			ug/kg
Alk PAHs	C1-Phenanthrene/a	Mussel (freshwater)	5	5	100	16	22	18			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
Alk PAHs	C1-Phenanthrene/a	Northern pike	1	1	100	6.7	6.7				ug/kg
Alk PAHs	C1-Phenanthrene/a	Other forage fish (no mummichog)	9	9	100	6	28	16			ug/kg
Alk PAHs	C1-Phenanthrene/a	Smallmouth bass	3	3	100	1.3	5.4	2.8			ug/kg
Alk PAHs	C1-Phenanthrene/a	White catfish	19	19	100	3	24	7.4			ug/kg
Alk PAHs	C1-Phenanthrene/a	White perch	22	22	100	3.6	24	13			ug/kg
Alk PAHs	C1-Phenanthrene/a	White sucker	5	5	100	1.7	4.6	2.9			ug/kg
Alk PAHs	C1-Pyrene/fluorantl	American eel (all)	21	21	100	0.89	4.5	2.2			ug/kg
Alk PAHs	C1-Pyrene/fluorantl	Blue crab	24	24	100	2.9	51	12			ug/kg
Alk PAHs	C1-Pyrene/fluorantl	Brown bullhead	6	6	100	4.3	11	7.7			ug/kg
Alk PAHs	C1-Pyrene/fluorantl	Carp	12	12	100	3.6	11	6.5			ug/kg
Alk PAHs	C1-Pyrene/fluorantl	Channel catfish	11	11	100	2.3	4.8	3.4			ug/kg
Alk PAHs	C1-Pyrene/fluorantl	Fish (all)	129	129	100	0.89	60	8			ug/kg
Alk PAHs	C1-Pyrene/fluorantl	Fish (≤ 11 cm)	22	22	100	2	54	14			ug/kg
Alk PAHs	C1-Pyrene/fluorantl	Fish (≤ 13 cm)	24	24	100	2	60	16			ug/kg
Alk PAHs	C1-Pyrene/fluorantl	Fish (≤ 18 cm)	39	39	100	2	60	15			ug/kg
Alk PAHs	C1-Pyrene/fluorantl	Fish (≤ 20 cm)	41	41	100	2	60	15			ug/kg
Alk PAHs	C1-Pyrene/fluorantl	Largemouth bass	3	3	100	1.1	2.4	1.6			ug/kg
Alk PAHs	C1-Pyrene/fluorantl	Mummichog	17	17	100	2	29	9.9			ug/kg
Alk PAHs	C1-Pyrene/fluorantl	Mussel (estuarine)	3	3	100	4	47	23			ug/kg
Alk PAHs	C1-Pyrene/fluorantl	Mussel (freshwater)	5	5	100	49	60	55			ug/kg
Alk PAHs	C1-Pyrene/fluorantl	Northern pike	1	1	100	2.7	2.7				ug/kg
Alk PAHs	C1-Pyrene/fluorantl	Other forage fish (no mummichog)	9	9	100	7	60	29			ug/kg
Alk PAHs	C1-Pyrene/fluorantl	Smallmouth bass	3	3	100	1.4	22	8.4			ug/kg
Alk PAHs	C1-Pyrene/fluorantl	White catfish	19	19	100	1.7	19	5.1			ug/kg
Alk PAHs	C1-Pyrene/fluorantl	White perch	22	22	100	1.8	38	11			ug/kg
Alk PAHs	C1-Pyrene/fluorantl	White sucker	5	5	100	1.7	6.2	3.2			ug/kg
Alk PAHs	C2-Benzanthracene	American eel (all)	21	0	0				0.45	0.99	ug/kg
Alk PAHs	C2-Benzanthracene	Blue crab	24	24	100	0.6	5.8	1.9			ug/kg
Alk PAHs	C2-Benzanthracene	Brown bullhead	6	5	83.3	1	1.4	1.2	0.91	0.91	ug/kg
Alk PAHs	C2-Benzanthracene	Carp	12	12	100	0.54	2.5	1.2			ug/kg
Alk PAHs	C2-Benzanthracene	Channel catfish	11	10	90.9	0.74	2.9	1.4	0.46	0.46	ug/kg
Alk PAHs	C2-Benzanthracene	Fish (all)	129	84	65.1	0.44	36	3.4	0.41	0.99	ug/kg
Alk PAHs	C2-Benzanthracene	Fish (≤ 11 cm)	22	22	100	0.6	26	6.3			ug/kg
Alk PAHs	C2-Benzanthracene	Fish (≤ 13 cm)	24	24	100	0.6	36	7.9			ug/kg
Alk PAHs	C2-Benzanthracene	Fish (≤ 18 cm)	39	38	97.4	0.6	36	5.8	0.96	0.96	ug/kg
Alk PAHs	C2-Benzanthracene	Fish (≤ 20 cm)	41	40	97.6	0.6	36	5.7	0.96	0.96	ug/kg
Alk PAHs	C2-Benzanthracene	Largemouth bass	3	0	0				0.46	0.48	ug/kg
Alk PAHs	C2-Benzanthracene	Mummichog	17	17	100	1	15	4.5			ug/kg
Alk PAHs	C2-Benzanthracene	Mussel (estuarine)	3	2	66.7	2	8	5	1	1	ug/kg
Alk PAHs	C2-Benzanthracene	Mussel (freshwater)	5	5	100	6	7	6.4			ug/kg
Alk PAHs	C2-Benzanthracene	Northern pike	1	0	0				0.41	0.41	ug/kg
Alk PAHs	C2-Benzanthracene	Other forage fish (no mummichog)	9	9	100	0.6	36	14			ug/kg
Alk PAHs	C2-Benzanthracene	Smallmouth bass	3	2	66.7	0.68	3.2	1.9	0.49	0.49	ug/kg
Alk PAHs	C2-Benzanthracene	White catfish	19	7	36.8	0.84	3	1.6	0.43	0.47	ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
Alk PAHs	C2-Benzanthracene	White perch	22	17	77.3	0.44	5	1.5	0.85	0.96	ug/kg
Alk PAHs	C2-Benzanthracene	White sucker	5	5	100	0.57	2.5	1.4			ug/kg
Alk PAHs	C2-Dibenzothiophe	American eel (all)	21	21	100	0.47	2.2	1			ug/kg
Alk PAHs	C2-Dibenzothiophe	Blue crab	24	24	100	0.5	2.9	1.3			ug/kg
Alk PAHs	C2-Dibenzothiophe	Brown bullhead	6	6	100	2.4	12	6			ug/kg
Alk PAHs	C2-Dibenzothiophe	Carp	12	12	100	1.9	13	5.8			ug/kg
Alk PAHs	C2-Dibenzothiophe	Channel catfish	11	11	100	2.5	6.1	3.6			ug/kg
Alk PAHs	C2-Dibenzothiophe	Fish (all)	129	129	100	0.47	13	3.5			ug/kg
Alk PAHs	C2-Dibenzothiophe	Fish (≤ 11 cm)	22	22	100	0.8	8	2.8			ug/kg
Alk PAHs	C2-Dibenzothiophe	Fish (≤ 13 cm)	24	24	100	0.8	9	3.1			ug/kg
Alk PAHs	C2-Dibenzothiophe	Fish (≤ 18 cm)	39	39	100	0.8	9	4			ug/kg
Alk PAHs	C2-Dibenzothiophe	Fish (≤ 20 cm)	41	41	100	0.8	9	4.2			ug/kg
Alk PAHs	C2-Dibenzothiophe	Largemouth bass	3	3	100	0.64	1.2	0.95			ug/kg
Alk PAHs	C2-Dibenzothiophe	Mummichog	17	17	100	0.8	5	2.1			ug/kg
Alk PAHs	C2-Dibenzothiophe	Mussel (estuarine)	3	3	100	1	11	5.7			ug/kg
Alk PAHs	C2-Dibenzothiophe	Mussel (freshwater)	5	5	100	9	11	10			ug/kg
Alk PAHs	C2-Dibenzothiophe	Northern pike	1	1	100	3.1	3.1				ug/kg
Alk PAHs	C2-Dibenzothiophe	Other forage fish (no mummichog)	9	9	100	2	9	5.1			ug/kg
Alk PAHs	C2-Dibenzothiophe	Smallmouth bass	3	3	100	1.4	1.8	1.6			ug/kg
Alk PAHs	C2-Dibenzothiophe	White catfish	19	19	100	1.4	9.1	3.5			ug/kg
Alk PAHs	C2-Dibenzothiophe	White perch	22	22	100	1.1	8.9	5.5			ug/kg
Alk PAHs	C2-Dibenzothiophe	White sucker	5	5	100	1.3	2.8	2			ug/kg
Alk PAHs	C2-Fluorenes	American eel (all)	21	19	90.5	0.78	3.9	2.1	0.89	0.97	ug/kg
Alk PAHs	C2-Fluorenes	Blue crab	24	21	87.5	0.52	2.9	1.5	0.47	0.5	ug/kg
Alk PAHs	C2-Fluorenes	Brown bullhead	6	6	100	2.9	13	7.6			ug/kg
Alk PAHs	C2-Fluorenes	Carp	12	12	100	2.8	17	7.5			ug/kg
Alk PAHs	C2-Fluorenes	Channel catfish	11	11	100	2.1	7.8	3.8			ug/kg
Alk PAHs	C2-Fluorenes	Fish (all)	129	127	98.4	0.78	17	5	0.89	0.97	ug/kg
Alk PAHs	C2-Fluorenes	Fish (≤ 11 cm)	22	22	100	1	10	3.8			ug/kg
Alk PAHs	C2-Fluorenes	Fish (≤ 13 cm)	24	24	100	1	10	4.1			ug/kg
Alk PAHs	C2-Fluorenes	Fish (≤ 18 cm)	39	39	100	1	15	5.9			ug/kg
Alk PAHs	C2-Fluorenes	Fish (≤ 20 cm)	41	41	100	1	15	6.1			ug/kg
Alk PAHs	C2-Fluorenes	Largemouth bass	3	3	100	1.2	1.5	1.3			ug/kg
Alk PAHs	C2-Fluorenes	Mummichog	17	17	100	1	5	2.9			ug/kg
Alk PAHs	C2-Fluorenes	Mussel (estuarine)	3	3	100	2	9	5.3			ug/kg
Alk PAHs	C2-Fluorenes	Mussel (freshwater)	5	5	100	6	8	7			ug/kg
Alk PAHs	C2-Fluorenes	Northern pike	1	1	100	6	6				ug/kg
Alk PAHs	C2-Fluorenes	Other forage fish (no mummichog)	9	9	100	3	10	6.4			ug/kg
Alk PAHs	C2-Fluorenes	Smallmouth bass	3	3	100	1.7	2.1	1.8			ug/kg
Alk PAHs	C2-Fluorenes	White catfish	19	19	100	1.5	13	4.2			ug/kg
Alk PAHs	C2-Fluorenes	White perch	22	22	100	2.2	16	9.1			ug/kg
Alk PAHs	C2-Fluorenes	White sucker	5	5	100	1.4	2.4	2			ug/kg
Alk PAHs	C2-Naphthalenes	American eel (all)	21	21	100	2	16	5.7			ug/kg
Alk PAHs	C2-Naphthalenes	Blue crab	24	24	100	1.3	16	4.3			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
Alk PAHs	C2-Naphthalenes	Brown bullhead	6	6	100	15	47	29			ug/kg
Alk PAHs	C2-Naphthalenes	Carp	12	12	100	12	46	23			ug/kg
Alk PAHs	C2-Naphthalenes	Channel catfish	11	11	100	9.2	37	23			ug/kg
Alk PAHs	C2-Naphthalenes	Fish (all)	129	129	100	2	89	17			ug/kg
Alk PAHs	C2-Naphthalenes	Fish (≤ 11 cm)	22	22	100	5	89	11			ug/kg
Alk PAHs	C2-Naphthalenes	Fish (≤ 13 cm)	24	24	100	5	89	11			ug/kg
Alk PAHs	C2-Naphthalenes	Fish (≤ 18 cm)	39	39	100	5	89	15			ug/kg
Alk PAHs	C2-Naphthalenes	Fish (≤ 20 cm)	41	41	100	5	89	16			ug/kg
Alk PAHs	C2-Naphthalenes	Largemouth bass	3	3	100	5	12	7.5			ug/kg
Alk PAHs	C2-Naphthalenes	Mummichog	17	17	100	5	11	6.9			ug/kg
Alk PAHs	C2-Naphthalenes	Mussel (estuarine)	3	3	100	6	17	11			ug/kg
Alk PAHs	C2-Naphthalenes	Mussel (freshwater)	5	5	100	2	3	2.4			ug/kg
Alk PAHs	C2-Naphthalenes	Northern pike	1	1	100	33	33				ug/kg
Alk PAHs	C2-Naphthalenes	Other forage fish (no mummichog)	9	9	100	6	89	19			ug/kg
Alk PAHs	C2-Naphthalenes	Smallmouth bass	3	3	100	3.9	9.8	6.7			ug/kg
Alk PAHs	C2-Naphthalenes	White catfish	19	19	100	4.7	70	23			ug/kg
Alk PAHs	C2-Naphthalenes	White perch	22	22	100	4.7	45	22			ug/kg
Alk PAHs	C2-Naphthalenes	White sucker	5	5	100	3.6	18	9.5			ug/kg
Alk PAHs	C2-Phenanthrene/a	American eel (all)	21	21	100	1.2	4.3	2.5			ug/kg
Alk PAHs	C2-Phenanthrene/a	Blue crab	24	24	100	1	11	4			ug/kg
Alk PAHs	C2-Phenanthrene/a	Brown bullhead	6	6	100	5.7	15	9.4			ug/kg
Alk PAHs	C2-Phenanthrene/a	Carp	12	12	100	5.9	16	9.8			ug/kg
Alk PAHs	C2-Phenanthrene/a	Channel catfish	11	11	100	3.3	6.7	4.8			ug/kg
Alk PAHs	C2-Phenanthrene/a	Fish (all)	129	129	100	1	20	5.8			ug/kg
Alk PAHs	C2-Phenanthrene/a	Fish (≤ 11 cm)	22	22	100	1	20	5.7			ug/kg
Alk PAHs	C2-Phenanthrene/a	Fish (≤ 13 cm)	24	24	100	1	20	6.5			ug/kg
Alk PAHs	C2-Phenanthrene/a	Fish (≤ 18 cm)	39	39	100	1	20	7.2			ug/kg
Alk PAHs	C2-Phenanthrene/a	Fish (≤ 20 cm)	41	41	100	1	20	7.5			ug/kg
Alk PAHs	C2-Phenanthrene/a	Largemouth bass	3	3	100	1.4	2.6	2.1			ug/kg
Alk PAHs	C2-Phenanthrene/a	Mummichog	17	17	100	1	10	4.2			ug/kg
Alk PAHs	C2-Phenanthrene/a	Mussel (estuarine)	3	3	100	3	27	14			ug/kg
Alk PAHs	C2-Phenanthrene/a	Mussel (freshwater)	5	5	100	25	30	28			ug/kg
Alk PAHs	C2-Phenanthrene/a	Northern pike	1	1	100	4.6	4.6				ug/kg
Alk PAHs	C2-Phenanthrene/a	Other forage fish (no mummichog)	9	9	100	3	20	11			ug/kg
Alk PAHs	C2-Phenanthrene/a	Smallmouth bass	3	3	100	2	5.4	3.2			ug/kg
Alk PAHs	C2-Phenanthrene/a	White catfish	19	19	100	2.2	10	4.6			ug/kg
Alk PAHs	C2-Phenanthrene/a	White perch	22	22	100	1.9	14	8.1			ug/kg
Alk PAHs	C2-Phenanthrene/a	White sucker	5	5	100	1.9	4	3.2			ug/kg
Alk PAHs	C3-Benzanthracene	American eel (all)	21	0	0				0.45	0.99	ug/kg
Alk PAHs	C3-Benzanthracene	Blue crab	24	18	75	0.71	3	1.6	0.45	0.5	ug/kg
Alk PAHs	C3-Benzanthracene	Brown bullhead	6	0	0				0.91	0.99	ug/kg
Alk PAHs	C3-Benzanthracene	Carp	12	1	8.3	1.1	1.1		0.74	0.99	ug/kg
Alk PAHs	C3-Benzanthracene	Channel catfish	11	7	63.6	1.1	3.7	2.1	0.46	0.48	ug/kg
Alk PAHs	C3-Benzanthracene	Fish (all)	129	39	30.2	1.1	27	5.4	0.41	1	ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
Alk PAHs	C3-Benzanthracene	Fish (≤ 11 cm)	22	15	68.2	3	19	7.3	0.9	1	ug/kg
Alk PAHs	C3-Benzanthracene	Fish (≤ 13 cm)	24	17	70.8	3	27	8.8	0.9	1	ug/kg
Alk PAHs	C3-Benzanthracene	Fish (≤ 18 cm)	39	21	53.8	2	27	8.1	0.85	1	ug/kg
Alk PAHs	C3-Benzanthracene	Fish (≤ 20 cm)	41	22	53.7	2	27	7.9	0.85	1	ug/kg
Alk PAHs	C3-Benzanthracene	Largemouth bass	3	0	0				0.46	0.48	ug/kg
Alk PAHs	C3-Benzanthracene	Mummichog	17	11	64.7	3	13	5.6	0.9	1	ug/kg
Alk PAHs	C3-Benzanthracene	Mussel (estuarine)	3	1	33.3	6	6		0.8	1	ug/kg
Alk PAHs	C3-Benzanthracene	Mussel (freshwater)	5	4	80	6	8	6.5	0.9	0.9	ug/kg
Alk PAHs	C3-Benzanthracene	Northern pike	1	0	0				0.41	0.41	ug/kg
Alk PAHs	C3-Benzanthracene	Other forage fish (no mummichog)	9	8	88.9	4	27	13	0.9	0.9	ug/kg
Alk PAHs	C3-Benzanthracene	Smallmouth bass	3	1	33.3	3.4	3.4		0.47	0.49	ug/kg
Alk PAHs	C3-Benzanthracene	White catfish	19	4	21.1	2	2.9	2.5	0.43	0.48	ug/kg
Alk PAHs	C3-Benzanthracene	White perch	22	3	13.6	2	5	3.3	0.43	0.98	ug/kg
Alk PAHs	C3-Benzanthracene	White sucker	5	4	80	1.3	2.8	2	0.45	0.45	ug/kg
Alk PAHs	C3-Dibenzothiophe	American eel (all)	21	21	100	0.75	2.7	1.5			ug/kg
Alk PAHs	C3-Dibenzothiophe	Blue crab	24	24	100	0.64	4.9	2.3			ug/kg
Alk PAHs	C3-Dibenzothiophe	Brown bullhead	6	6	100	3.1	13	6.6			ug/kg
Alk PAHs	C3-Dibenzothiophe	Carp	12	12	100	2.5	15	7.3			ug/kg
Alk PAHs	C3-Dibenzothiophe	Channel catfish	11	11	100	2.8	8.7	4.7			ug/kg
Alk PAHs	C3-Dibenzothiophe	Fish (all)	129	129	100	0.75	15	4.1			ug/kg
Alk PAHs	C3-Dibenzothiophe	Fish (≤ 11 cm)	22	22	100	1	8	2.8			ug/kg
Alk PAHs	C3-Dibenzothiophe	Fish (≤ 13 cm)	24	24	100	1	10	3.2			ug/kg
Alk PAHs	C3-Dibenzothiophe	Fish (≤ 18 cm)	39	39	100	1	10	4.3			ug/kg
Alk PAHs	C3-Dibenzothiophe	Fish (≤ 20 cm)	41	41	100	1	10	4.5			ug/kg
Alk PAHs	C3-Dibenzothiophe	Largemouth bass	3	3	100	0.99	2	1.3			ug/kg
Alk PAHs	C3-Dibenzothiophe	Mummichog	17	17	100	1	6	2.2			ug/kg
Alk PAHs	C3-Dibenzothiophe	Mussel (estuarine)	3	3	100	1	13	6			ug/kg
Alk PAHs	C3-Dibenzothiophe	Mussel (freshwater)	5	5	100	10	12	11			ug/kg
Alk PAHs	C3-Dibenzothiophe	Northern pike	1	1	100	4	4				ug/kg
Alk PAHs	C3-Dibenzothiophe	Other forage fish (no mummichog)	9	9	100	2	10	5			ug/kg
Alk PAHs	C3-Dibenzothiophe	Smallmouth bass	3	3	100	1.3	3	2.4			ug/kg
Alk PAHs	C3-Dibenzothiophe	White catfish	19	19	100	1.5	6.8	3.7			ug/kg
Alk PAHs	C3-Dibenzothiophe	White perch	22	22	100	1.1	10	6.2			ug/kg
Alk PAHs	C3-Dibenzothiophe	White sucker	5	5	100	2.3	4	3			ug/kg
Alk PAHs	C3-Fluorenes	American eel (all)	21	0	0				0.45	0.99	ug/kg
Alk PAHs	C3-Fluorenes	Blue crab	24	19	79.2	1.5	6.4	3.6	0.47	0.5	ug/kg
Alk PAHs	C3-Fluorenes	Brown bullhead	6	6	100	6.8	20	12			ug/kg
Alk PAHs	C3-Fluorenes	Carp	12	12	100	6.1	22	12			ug/kg
Alk PAHs	C3-Fluorenes	Channel catfish	11	11	100	3.8	9.8	6.8			ug/kg
Alk PAHs	C3-Fluorenes	Fish (all)	129	107	82.9	2	22	8.4	0.45	0.99	ug/kg
Alk PAHs	C3-Fluorenes	Fish (≤ 11 cm)	22	22	100	2	15	5.7			ug/kg
Alk PAHs	C3-Fluorenes	Fish (≤ 13 cm)	24	24	100	2	15	6.2			ug/kg
Alk PAHs	C3-Fluorenes	Fish (≤ 18 cm)	39	39	100	2	17	8.2			ug/kg
Alk PAHs	C3-Fluorenes	Fish (≤ 20 cm)	41	41	100	2	17	8.6			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
Alk PAHs	C3-Fluorenes	Largemouth bass	3	2	66.7	2.8	2.8	2.8	0.46	0.46	ug/kg
Alk PAHs	C3-Fluorenes	Mummichog	17	17	100	2	9	4.7			ug/kg
Alk PAHs	C3-Fluorenes	Mussel (estuarine)	3	2	66.7	6	13	9.5	1	1	ug/kg
Alk PAHs	C3-Fluorenes	Mussel (freshwater)	5	5	100	10	12	11			ug/kg
Alk PAHs	C3-Fluorenes	Northern pike	1	1	100	9.9	9.9				ug/kg
Alk PAHs	C3-Fluorenes	Other forage fish (no mummichog)	9	9	100	5	15	9.3			ug/kg
Alk PAHs	C3-Fluorenes	Smallmouth bass	3	3	100	2.9	3.7	3.3			ug/kg
Alk PAHs	C3-Fluorenes	White catfish	19	19	100	3.2	16	7.1			ug/kg
Alk PAHs	C3-Fluorenes	White perch	22	22	100	3.5	19	12			ug/kg
Alk PAHs	C3-Fluorenes	White sucker	5	5	100	3.1	5.9	4.6			ug/kg
Alk PAHs	C3-Naphthalenes	American eel (all)	21	21	100	2.1	12	5			ug/kg
Alk PAHs	C3-Naphthalenes	Blue crab	24	24	100	1.4	10	4			ug/kg
Alk PAHs	C3-Naphthalenes	Brown bullhead	6	6	100	9.3	58	29			ug/kg
Alk PAHs	C3-Naphthalenes	Carp	12	12	100	9	29	17			ug/kg
Alk PAHs	C3-Naphthalenes	Channel catfish	11	11	100	7.9	34	19			ug/kg
Alk PAHs	C3-Naphthalenes	Fish (all)	129	129	100	2.1	99	16			ug/kg
Alk PAHs	C3-Naphthalenes	Fish (≤ 11 cm)	22	22	100	4	56	8.8			ug/kg
Alk PAHs	C3-Naphthalenes	Fish (≤ 13 cm)	24	24	100	4	56	8.8			ug/kg
Alk PAHs	C3-Naphthalenes	Fish (≤ 18 cm)	39	39	100	4	56	16			ug/kg
Alk PAHs	C3-Naphthalenes	Fish (≤ 20 cm)	41	41	100	4	56	17			ug/kg
Alk PAHs	C3-Naphthalenes	Largemouth bass	3	3	100	5	8.3	6.2			ug/kg
Alk PAHs	C3-Naphthalenes	Mummichog	17	17	100	4	8	5.7			ug/kg
Alk PAHs	C3-Naphthalenes	Mussel (estuarine)	3	3	100	4	15	9.3			ug/kg
Alk PAHs	C3-Naphthalenes	Mussel (freshwater)	5	5	100	4	6	4.8			ug/kg
Alk PAHs	C3-Naphthalenes	Northern pike	1	1	100	27	27				ug/kg
Alk PAHs	C3-Naphthalenes	Other forage fish (no mummichog)	9	9	100	7	56	15			ug/kg
Alk PAHs	C3-Naphthalenes	Smallmouth bass	3	3	100	4.4	7.2	6.2			ug/kg
Alk PAHs	C3-Naphthalenes	White catfish	19	19	100	5.4	99	26			ug/kg
Alk PAHs	C3-Naphthalenes	White perch	22	22	100	6.4	50	28			ug/kg
Alk PAHs	C3-Naphthalenes	White sucker	5	5	100	3	12	7.1			ug/kg
Alk PAHs	C3-Phenanthrene/a	American eel (all)	21	21	100	2.3	17	6.4			ug/kg
Alk PAHs	C3-Phenanthrene/a	Blue crab	24	24	100	2	8.9	5.2			ug/kg
Alk PAHs	C3-Phenanthrene/a	Brown bullhead	6	6	100	4.8	36	13			ug/kg
Alk PAHs	C3-Phenanthrene/a	Carp	12	11	91.7	8.2	44	22	0.96	0.96	ug/kg
Alk PAHs	C3-Phenanthrene/a	Channel catfish	11	11	100	3.3	18	9.6			ug/kg
Alk PAHs	C3-Phenanthrene/a	Fish (all)	129	128	99.2	2	58	12	0.96	0.96	ug/kg
Alk PAHs	C3-Phenanthrene/a	Fish (≤ 11 cm)	22	22	100	2	15	5.6			ug/kg
Alk PAHs	C3-Phenanthrene/a	Fish (≤ 13 cm)	24	24	100	2	19	6.4			ug/kg
Alk PAHs	C3-Phenanthrene/a	Fish (≤ 18 cm)	39	39	100	2	33	9.2			ug/kg
Alk PAHs	C3-Phenanthrene/a	Fish (≤ 20 cm)	41	41	100	2	33	9.6			ug/kg
Alk PAHs	C3-Phenanthrene/a	Largemouth bass	3	3	100	4.5	58	23			ug/kg
Alk PAHs	C3-Phenanthrene/a	Mummichog	17	17	100	2	11	4.8			ug/kg
Alk PAHs	C3-Phenanthrene/a	Mussel (estuarine)	3	3	100	1	23	10			ug/kg
Alk PAHs	C3-Phenanthrene/a	Mussel (freshwater)	5	5	100	16	20	18			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
Alk PAHs	C3-Phenanthrene/a	Northern pike	1	1	100	12	12				ug/kg
Alk PAHs	C3-Phenanthrene/a	Other forage fish (no mummichog)	9	9	100	3	19	9.4			ug/kg
Alk PAHs	C3-Phenanthrene/a	Smallmouth bass	3	3	100	6.9	11	8.8			ug/kg
Alk PAHs	C3-Phenanthrene/a	White catfish	19	19	100	3.3	34	15			ug/kg
Alk PAHs	C3-Phenanthrene/a	White perch	22	22	100	2.6	33	14			ug/kg
Alk PAHs	C3-Phenanthrene/a	White sucker	5	5	100	5.8	16	9.3			ug/kg
Alk PAHs	C4-Benzanthracene	American eel (all)	21	0	0				0.45	0.99	ug/kg
Alk PAHs	C4-Benzanthracene	Blue crab	24	0	0				0.42	0.5	ug/kg
Alk PAHs	C4-Benzanthracene	Brown bullhead	6	0	0				0.91	0.99	ug/kg
Alk PAHs	C4-Benzanthracene	Carp	12	0	0				0.74	0.99	ug/kg
Alk PAHs	C4-Benzanthracene	Channel catfish	11	0	0				0.42	0.49	ug/kg
Alk PAHs	C4-Benzanthracene	Fish (all)	129	11	8.5	3	15	7.2	0.39	1	ug/kg
Alk PAHs	C4-Benzanthracene	Fish (≤ 11 cm)	22	8	36.4	3	10	6.5	0.9	1	ug/kg
Alk PAHs	C4-Benzanthracene	Fish (≤ 13 cm)	24	10	41.7	3	15	7.4	0.9	1	ug/kg
Alk PAHs	C4-Benzanthracene	Fish (≤ 18 cm)	39	11	28.2	3	15	7.2	0.85	1	ug/kg
Alk PAHs	C4-Benzanthracene	Fish (≤ 20 cm)	41	11	26.8	3	15	7.2	0.85	1	ug/kg
Alk PAHs	C4-Benzanthracene	Largemouth bass	3	0	0				0.46	0.48	ug/kg
Alk PAHs	C4-Benzanthracene	Mummichog	17	5	29.4	3	8	5.2	0.9	1	ug/kg
Alk PAHs	C4-Benzanthracene	Mussel (estuarine)	3	0	0				0.8	1	ug/kg
Alk PAHs	C4-Benzanthracene	Mussel (freshwater)	5	0	0				0.9	0.9	ug/kg
Alk PAHs	C4-Benzanthracene	Northern pike	1	0	0				0.41	0.41	ug/kg
Alk PAHs	C4-Benzanthracene	Other forage fish (no mummichog)	9	6	66.7	5	15	8.8	0.9	0.9	ug/kg
Alk PAHs	C4-Benzanthracene	Smallmouth bass	3	0	0				0.39	0.49	ug/kg
Alk PAHs	C4-Benzanthracene	White catfish	19	0	0				0.43	0.48	ug/kg
Alk PAHs	C4-Benzanthracene	White perch	22	0	0				0.43	1	ug/kg
Alk PAHs	C4-Benzanthracene	White sucker	5	0	0				0.43	0.45	ug/kg
Alk PAHs	C4-Dibenzothiophe	American eel (all)	21	21	100	1.7	11	4.4			ug/kg
Alk PAHs	C4-Dibenzothiophe	Blue crab	24	24	100	1	5.3	3.1			ug/kg
Alk PAHs	C4-Dibenzothiophe	Brown bullhead	6	6	100	4.8	21	11			ug/kg
Alk PAHs	C4-Dibenzothiophe	Carp	12	12	100	5.3	23	14			ug/kg
Alk PAHs	C4-Dibenzothiophe	Channel catfish	11	11	100	3.1	13	7.1			ug/kg
Alk PAHs	C4-Dibenzothiophe	Fish (all)	129	103	79.8	0.9	23	6.4	0.39	0.98	ug/kg
Alk PAHs	C4-Dibenzothiophe	Fish (≤ 11 cm)	22	22	100	0.9	5	2.6			ug/kg
Alk PAHs	C4-Dibenzothiophe	Fish (≤ 13 cm)	24	24	100	0.9	8	2.9			ug/kg
Alk PAHs	C4-Dibenzothiophe	Fish (≤ 18 cm)	39	28	71.8	0.9	10	3.2	0.85	0.96	ug/kg
Alk PAHs	C4-Dibenzothiophe	Fish (≤ 20 cm)	41	28	68.3	0.9	10	3.2	0.85	0.96	ug/kg
Alk PAHs	C4-Dibenzothiophe	Largemouth bass	3	1	33.3	1	1		0.46	0.48	ug/kg
Alk PAHs	C4-Dibenzothiophe	Mummichog	17	17	100	0.9	5	2.2			ug/kg
Alk PAHs	C4-Dibenzothiophe	Mussel (estuarine)	3	2	66.7	2	9	5.5	1	1	ug/kg
Alk PAHs	C4-Dibenzothiophe	Mussel (freshwater)	5	5	100	5	6	5.6			ug/kg
Alk PAHs	C4-Dibenzothiophe	Northern pike	1	0	0				0.41	0.41	ug/kg
Alk PAHs	C4-Dibenzothiophe	Other forage fish (no mummichog)	9	9	100	2	8	4.2			ug/kg
Alk PAHs	C4-Dibenzothiophe	Smallmouth bass	3	1	33.3	4.9	4.9		0.39	0.49	ug/kg
Alk PAHs	C4-Dibenzothiophe	White catfish	19	18	94.7	2.2	15	7.6	0.46	0.46	ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
Alk PAHs	C4-Dibenzothiopher	White perch	22	2	9.1	4	10	7	0.43	0.98	ug/kg
Alk PAHs	C4-Dibenzothiopher	White sucker	5	5	100	3.1	5.7	4.5			ug/kg
Alk PAHs	C4-Naphthalenes	American eel (all)	21	21	100	1.6	8.5	3.9			ug/kg
Alk PAHs	C4-Naphthalenes	Blue crab	24	24	100	1.5	14	4.4			ug/kg
Alk PAHs	C4-Naphthalenes	Brown bullhead	6	6	100	5.8	39	22			ug/kg
Alk PAHs	C4-Naphthalenes	Carp	12	12	100	4.8	32	16			ug/kg
Alk PAHs	C4-Naphthalenes	Channel catfish	11	11	100	6	23	12			ug/kg
Alk PAHs	C4-Naphthalenes	Fish (all)	129	129	100	1.6	52	15			ug/kg
Alk PAHs	C4-Naphthalenes	Fish (≤ 11 cm)	22	22	100	7	23	9.8			ug/kg
Alk PAHs	C4-Naphthalenes	Fish (≤ 13 cm)	24	24	100	7	23	10			ug/kg
Alk PAHs	C4-Naphthalenes	Fish (≤ 18 cm)	39	39	100	7	50	17			ug/kg
Alk PAHs	C4-Naphthalenes	Fish (≤ 20 cm)	41	41	100	7	50	18			ug/kg
Alk PAHs	C4-Naphthalenes	Largemouth bass	3	3	100	4.1	6	5.3			ug/kg
Alk PAHs	C4-Naphthalenes	Mummichog	17	17	100	7	10	8.8			ug/kg
Alk PAHs	C4-Naphthalenes	Mussel (estuarine)	3	3	100	2	12	6.7			ug/kg
Alk PAHs	C4-Naphthalenes	Mussel (freshwater)	5	5	100	7	7	7			ug/kg
Alk PAHs	C4-Naphthalenes	Northern pike	1	1	100	21	21				ug/kg
Alk PAHs	C4-Naphthalenes	Other forage fish (no mummichog)	9	9	100	8	23	12			ug/kg
Alk PAHs	C4-Naphthalenes	Smallmouth bass	3	3	100	6.6	11	8.8			ug/kg
Alk PAHs	C4-Naphthalenes	White catfish	19	19	100	4.1	52	16			ug/kg
Alk PAHs	C4-Naphthalenes	White perch	22	22	100	6.3	52	31			ug/kg
Alk PAHs	C4-Naphthalenes	White sucker	5	5	100	3.8	9.5	6.3			ug/kg
Alk PAHs	C4-Phenanthrene/a	American eel (all)	21	1	4.8	0.75	0.75		0.45	0.99	ug/kg
Alk PAHs	C4-Phenanthrene/a	Blue crab	24	24	100	1	8.2	4.1			ug/kg
Alk PAHs	C4-Phenanthrene/a	Brown bullhead	6	6	100	1.3	8.9	3.9			ug/kg
Alk PAHs	C4-Phenanthrene/a	Carp	12	12	100	1.7	6.9	4.3			ug/kg
Alk PAHs	C4-Phenanthrene/a	Channel catfish	11	11	100	1	4.2	2.2			ug/kg
Alk PAHs	C4-Phenanthrene/a	Fish (all)	129	108	83.7	0.58	9	2.4	0.45	0.99	ug/kg
Alk PAHs	C4-Phenanthrene/a	Fish (≤ 11 cm)	22	22	100	0.6	6	2.1			ug/kg
Alk PAHs	C4-Phenanthrene/a	Fish (≤ 13 cm)	24	24	100	0.6	9	2.5			ug/kg
Alk PAHs	C4-Phenanthrene/a	Fish (≤ 18 cm)	39	39	100	0.6	9	2.4			ug/kg
Alk PAHs	C4-Phenanthrene/a	Fish (≤ 20 cm)	41	41	100	0.6	9	2.4			ug/kg
Alk PAHs	C4-Phenanthrene/a	Largemouth bass	3	3	100	0.81	1.3	0.98			ug/kg
Alk PAHs	C4-Phenanthrene/a	Mummichog	17	17	100	0.6	5	1.8			ug/kg
Alk PAHs	C4-Phenanthrene/a	Mussel (estuarine)	3	2	66.7	3	11	7	1	1	ug/kg
Alk PAHs	C4-Phenanthrene/a	Mussel (freshwater)	5	5	100	7	9	8			ug/kg
Alk PAHs	C4-Phenanthrene/a	Northern pike	1	1	100	1.6	1.6				ug/kg
Alk PAHs	C4-Phenanthrene/a	Other forage fish (no mummichog)	9	9	100	0.6	9	3.7			ug/kg
Alk PAHs	C4-Phenanthrene/a	Smallmouth bass	3	3	100	1.1	1.5	1.3			ug/kg
Alk PAHs	C4-Phenanthrene/a	White catfish	19	19	100	0.67	2.5	1.5			ug/kg
Alk PAHs	C4-Phenanthrene/a	White perch	22	22	100	0.58	3.7	2.2			ug/kg
Alk PAHs	C4-Phenanthrene/a	White sucker	5	4	80	1	2.4	1.7	0.45	0.45	ug/kg
SVOCs	4-Methylphenol	American eel (all)	21	0	0				900	7100	ug/kg
SVOCs	4-Methylphenol	Blue crab	24	0	0				1300	2000	ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
SVOCs	4-Methylphenol	Brown bullhead	6	0	0				7400	8000	ug/kg
SVOCs	4-Methylphenol	Carp	12	0	0				6700	7600	ug/kg
SVOCs	4-Methylphenol	Channel catfish	11	0	0				3300	3800	ug/kg
SVOCs	4-Methylphenol	Fish (all)	130	0	0				860	8000	ug/kg
SVOCs	4-Methylphenol	Fish (≤ 11 cm)	23	0	0				7000	7700	ug/kg
SVOCs	4-Methylphenol	Fish (≤ 13 cm)	25	0	0				7000	7700	ug/kg
SVOCs	4-Methylphenol	Fish (≤ 18 cm)	40	0	0				1900	8000	ug/kg
SVOCs	4-Methylphenol	Fish (≤ 20 cm)	42	0	0				1900	8000	ug/kg
SVOCs	4-Methylphenol	Largemouth bass	3	0	0				920	950	ug/kg
SVOCs	4-Methylphenol	Mummichog	18	0	0				7000	7700	ug/kg
SVOCs	4-Methylphenol	Mussel (estuarine)	3	0	0				900	940	ug/kg
SVOCs	4-Methylphenol	Mussel (freshwater)	5	0	0				920	950	ug/kg
SVOCs	4-Methylphenol	Northern pike	1	0	0				880	880	ug/kg
SVOCs	4-Methylphenol	Other forage fish (no mummichog)	9	0	0				7000	7600	ug/kg
SVOCs	4-Methylphenol	Smallmouth bass	3	0	0				900	950	ug/kg
SVOCs	4-Methylphenol	White catfish	19	0	0				3000	3500	ug/kg
SVOCs	4-Methylphenol	White perch	22	0	0				860	8000	ug/kg
SVOCs	4-Methylphenol	White sucker	5	0	0				3500	3800	ug/kg
SVOCs	4-Methylphenol	Worms (all)	7	2	28.6	320	360	340	190	2000	ug/kg
SVOCs	4-Methylphenol	Worms (estuarine sp.)	5	0	0				190	2000	ug/kg
SVOCs	4-Methylphenol	Worms (freshwater sp.)	2	2	100	320	360	340			ug/kg
SVOCs	Acetophenone	American eel (all)	21	0	0				900	7100	ug/kg
SVOCs	Acetophenone	Blue crab	24	0	0				1200	2000	ug/kg
SVOCs	Acetophenone	Brown bullhead	6	0	0				7400	8000	ug/kg
SVOCs	Acetophenone	Carp	12	0	0				6700	7600	ug/kg
SVOCs	Acetophenone	Channel catfish	11	0	0				3300	3800	ug/kg
SVOCs	Acetophenone	Fish (all)	130	0	0				860	8000	ug/kg
SVOCs	Acetophenone	Fish (≤ 11 cm)	23	0	0				7000	7700	ug/kg
SVOCs	Acetophenone	Fish (≤ 13 cm)	25	0	0				7000	7700	ug/kg
SVOCs	Acetophenone	Fish (≤ 18 cm)	40	0	0				1900	8000	ug/kg
SVOCs	Acetophenone	Fish (≤ 20 cm)	42	0	0				1900	8000	ug/kg
SVOCs	Acetophenone	Largemouth bass	3	0	0				920	950	ug/kg
SVOCs	Acetophenone	Mummichog	18	0	0				7000	7700	ug/kg
SVOCs	Acetophenone	Mussel (estuarine)	3	0	0				900	940	ug/kg
SVOCs	Acetophenone	Mussel (freshwater)	5	0	0				920	950	ug/kg
SVOCs	Acetophenone	Northern pike	1	0	0				880	880	ug/kg
SVOCs	Acetophenone	Other forage fish (no mummichog)	9	0	0				7000	7600	ug/kg
SVOCs	Acetophenone	Smallmouth bass	3	0	0				900	950	ug/kg
SVOCs	Acetophenone	White catfish	19	0	0				3000	3500	ug/kg
SVOCs	Acetophenone	White perch	22	0	0				860	8000	ug/kg
SVOCs	Acetophenone	White sucker	5	0	0				3500	3800	ug/kg
SVOCs	Acetophenone	Worms (all)	7	3	42.9	100	160	130	190	2000	ug/kg
SVOCs	Acetophenone	Worms (estuarine sp.)	5	2	40	100	160	130	190	2000	ug/kg
SVOCs	Acetophenone	Worms (freshwater sp.)	2	1	50	130	130		200	200	ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
SVOCs	Benzaldehyde	American eel (all)	21	0	0				1800	14000	ug/kg
SVOCs	Benzaldehyde	Brown bullhead	1	0	0				16000	16000	ug/kg
SVOCs	Benzaldehyde	Channel catfish	11	0	0				6500	7700	ug/kg
SVOCs	Benzaldehyde	Fish (all)	102	1	1	9000	9000		1000	16000	ug/kg
SVOCs	Benzaldehyde	Fish (≤ 11 cm)	20	0	0				14000	15000	ug/kg
SVOCs	Benzaldehyde	Fish (≤ 13 cm)	22	1	4.5	9000	9000		14000	15000	ug/kg
SVOCs	Benzaldehyde	Fish (≤ 18 cm)	36	1	2.8	9000	9000		3800	16000	ug/kg
SVOCs	Benzaldehyde	Fish (≤ 20 cm)	38	1	2.6	9000	9000		3800	16000	ug/kg
SVOCs	Benzaldehyde	Mummichog	18	0	0				14000	15000	ug/kg
SVOCs	Benzaldehyde	Mussel (estuarine)	3	0	0				1800	1900	ug/kg
SVOCs	Benzaldehyde	Mussel (freshwater)	5	5	100	9000	16000	13000			ug/kg
SVOCs	Benzaldehyde	Other forage fish (no mummichog)	5	1	20	9000	9000		14000	15000	ug/kg
SVOCs	Benzaldehyde	White catfish	19	0	0				6100	7200	ug/kg
SVOCs	Benzaldehyde	White perch	22	0	0				1000	16000	ug/kg
SVOCs	Benzaldehyde	White sucker	5	0	0				7000	7800	ug/kg
SVOCs	Benzaldehyde	Worms (all)	5	4	80	230	1100	640	390	390	ug/kg
SVOCs	Benzaldehyde	Worms (estuarine sp.)	3	2	66.7	230	410	320	390	390	ug/kg
SVOCs	Benzaldehyde	Worms (freshwater sp.)	2	2	100	830	1100	970			ug/kg
SVOCs	Bis-(2-ethylhexyl)ph	American eel (all)	21	0	0				900	7100	ug/kg
SVOCs	Bis-(2-ethylhexyl)ph	Blue crab	24	0	0				1300	2000	ug/kg
SVOCs	Bis-(2-ethylhexyl)ph	Brown bullhead	6	0	0				7400	8000	ug/kg
SVOCs	Bis-(2-ethylhexyl)ph	Carp	12	0	0				6700	7600	ug/kg
SVOCs	Bis-(2-ethylhexyl)ph	Channel catfish	11	0	0				3300	3800	ug/kg
SVOCs	Bis-(2-ethylhexyl)ph	Fish (all)	130	0	0				860	8000	ug/kg
SVOCs	Bis-(2-ethylhexyl)ph	Fish (≤ 11 cm)	23	0	0				7000	7700	ug/kg
SVOCs	Bis-(2-ethylhexyl)ph	Fish (≤ 13 cm)	25	0	0				7000	7700	ug/kg
SVOCs	Bis-(2-ethylhexyl)ph	Fish (≤ 18 cm)	40	0	0				1900	8000	ug/kg
SVOCs	Bis-(2-ethylhexyl)ph	Fish (≤ 20 cm)	42	0	0				1900	8000	ug/kg
SVOCs	Bis-(2-ethylhexyl)ph	Largemouth bass	3	0	0				920	950	ug/kg
SVOCs	Bis-(2-ethylhexyl)ph	Mummichog	18	0	0				7000	7700	ug/kg
SVOCs	Bis-(2-ethylhexyl)ph	Mussel (estuarine)	3	0	0				900	940	ug/kg
SVOCs	Bis-(2-ethylhexyl)ph	Mussel (freshwater)	5	1	20	1600	1600		920	950	ug/kg
SVOCs	Bis-(2-ethylhexyl)ph	Northern pike	1	0	0				880	880	ug/kg
SVOCs	Bis-(2-ethylhexyl)ph	Other forage fish (no mummichog)	9	0	0				7000	7600	ug/kg
SVOCs	Bis-(2-ethylhexyl)ph	Smallmouth bass	3	0	0				900	950	ug/kg
SVOCs	Bis-(2-ethylhexyl)ph	White catfish	19	0	0				3000	3500	ug/kg
SVOCs	Bis-(2-ethylhexyl)ph	White perch	22	0	0				860	8000	ug/kg
SVOCs	Bis-(2-ethylhexyl)ph	White sucker	5	0	0				3500	3800	ug/kg
SVOCs	Bis-(2-ethylhexyl)ph	Worms (all)	7	2	28.6	210	790	500	190	2000	ug/kg
SVOCs	Bis-(2-ethylhexyl)ph	Worms (estuarine sp.)	5	0	0				190	2000	ug/kg
SVOCs	Bis-(2-ethylhexyl)ph	Worms (freshwater sp.)	2	2	100	210	790	500			ug/kg
PCB Aroclors	Aroclor-1242	American eel (all)	21	0	0				3.6	7.8	ug/kg
PCB Aroclors	Aroclor-1242	Blue crab	24	0	0				3.5	7.2	ug/kg
PCB Aroclors	Aroclor-1242	Brown bullhead	6	6	100	42	300	150			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Aroclors	Aroclor-1242	Carp	12	12	100	100	1100	580			ug/kg
PCB Aroclors	Aroclor-1242	Channel catfish	11	11	100	37	150	92			ug/kg
PCB Aroclors	Aroclor-1242	Fish (all)	129	101	78.3	19	1100	210	1.8	7.8	ug/kg
PCB Aroclors	Aroclor-1242	Fish (≤ 11 cm)	22	22	100	64	290	180			ug/kg
PCB Aroclors	Aroclor-1242	Fish (≤ 13 cm)	24	24	100	64	290	180			ug/kg
PCB Aroclors	Aroclor-1242	Fish (≤ 18 cm)	39	39	100	64	530	210			ug/kg
PCB Aroclors	Aroclor-1242	Fish (≤ 20 cm)	41	41	100	64	530	210			ug/kg
PCB Aroclors	Aroclor-1242	Largemouth bass	3	0	0				1.8	1.8	ug/kg
PCB Aroclors	Aroclor-1242	Mummichog	17	17	100	64	290	180			ug/kg
PCB Aroclors	Aroclor-1242	Mussel (estuarine)	3	2	66.7	20	22	21	7.4	7.4	ug/kg
PCB Aroclors	Aroclor-1242	Mussel (freshwater)	5	5	100	24	39	31			ug/kg
PCB Aroclors	Aroclor-1242	Northern pike	1	0	0				1.8	1.8	ug/kg
PCB Aroclors	Aroclor-1242	Other forage fish (no mummichog)	9	9	100	78	320	170			ug/kg
PCB Aroclors	Aroclor-1242	Smallmouth bass	3	0	0				1.8	1.9	ug/kg
PCB Aroclors	Aroclor-1242	White catfish	19	19	100	19	240	94			ug/kg
PCB Aroclors	Aroclor-1242	White perch	22	22	100	34	530	260			ug/kg
PCB Aroclors	Aroclor-1242	White sucker	5	5	100	57	200	130			ug/kg
PCB Aroclors	Aroclor-1254	American eel (all)	21	21	100	230	2200	880			ug/kg
PCB Aroclors	Aroclor-1254	Blue crab	24	24	100	150	620	290			ug/kg
PCB Aroclors	Aroclor-1254	Brown bullhead	6	6	100	290	1200	730			ug/kg
PCB Aroclors	Aroclor-1254	Carp	12	12	100	1100	6800	2900			ug/kg
PCB Aroclors	Aroclor-1254	Channel catfish	11	11	100	400	1900	1000			ug/kg
PCB Aroclors	Aroclor-1254	Fish (all)	129	129	100	110	9300	1200			ug/kg
PCB Aroclors	Aroclor-1254	Fish (≤ 11 cm)	22	22	100	110	540	320			ug/kg
PCB Aroclors	Aroclor-1254	Fish (≤ 13 cm)	24	24	100	110	540	320			ug/kg
PCB Aroclors	Aroclor-1254	Fish (≤ 18 cm)	39	39	100	110	2000	620			ug/kg
PCB Aroclors	Aroclor-1254	Fish (≤ 20 cm)	41	41	100	110	2000	660			ug/kg
PCB Aroclors	Aroclor-1254	Largemouth bass	3	3	100	830	9300	3700			ug/kg
PCB Aroclors	Aroclor-1254	Mummichog	17	17	100	110	540	330			ug/kg
PCB Aroclors	Aroclor-1254	Mussel (estuarine)	3	1	33.3	14	14		7.4	7.5	ug/kg
PCB Aroclors	Aroclor-1254	Mussel (freshwater)	5	5	100	13	24	17			ug/kg
PCB Aroclors	Aroclor-1254	Northern pike	1	1	100	1400	1400				ug/kg
PCB Aroclors	Aroclor-1254	Other forage fish (no mummichog)	9	9	100	140	390	260			ug/kg
PCB Aroclors	Aroclor-1254	Smallmouth bass	3	3	100	680	1400	1000			ug/kg
PCB Aroclors	Aroclor-1254	White catfish	19	19	100	470	4800	1900			ug/kg
PCB Aroclors	Aroclor-1254	White perch	22	22	100	220	2400	1200			ug/kg
PCB Aroclors	Aroclor-1254	White sucker	5	5	100	350	1500	820			ug/kg
PCB Aroclors	Aroclor-1260	American eel (all)	21	21	100	190	5300	980			ug/kg
PCB Aroclors	Aroclor-1260	Blue crab	24	24	100	36	380	130			ug/kg
PCB Aroclors	Aroclor-1260	Brown bullhead	6	6	100	110	780	400			ug/kg
PCB Aroclors	Aroclor-1260	Carp	12	12	100	460	3000	1300			ug/kg
PCB Aroclors	Aroclor-1260	Channel catfish	11	11	100	84	980	490			ug/kg
PCB Aroclors	Aroclor-1260	Fish (all)	129	129	100	79	5300	770			ug/kg
PCB Aroclors	Aroclor-1260	Fish (≤ 11 cm)	22	22	100	79	360	190			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Aroclors	Aroclor-1260	Fish (≤ 13 cm)	24	24	100	79	360	190			ug/kg
PCB Aroclors	Aroclor-1260	Fish (≤ 18 cm)	39	39	100	79	2000	380			ug/kg
PCB Aroclors	Aroclor-1260	Fish (≤ 20 cm)	41	41	100	79	2000	390			ug/kg
PCB Aroclors	Aroclor-1260	Largemouth bass	3	3	100	270	1600	790			ug/kg
PCB Aroclors	Aroclor-1260	Mummichog	17	17	100	79	360	210			ug/kg
PCB Aroclors	Aroclor-1260	Mussel (estuarine)	3	0	0				7.4	7.5	ug/kg
PCB Aroclors	Aroclor-1260	Mussel (freshwater)	5	0	0				7	7.6	ug/kg
PCB Aroclors	Aroclor-1260	Northern pike	1	1	100	750	750				ug/kg
PCB Aroclors	Aroclor-1260	Other forage fish (no mummichog)	9	9	100	89	220	140			ug/kg
PCB Aroclors	Aroclor-1260	Smallmouth bass	3	3	100	560	800	680			ug/kg
PCB Aroclors	Aroclor-1260	White catfish	19	19	100	180	3800	1400			ug/kg
PCB Aroclors	Aroclor-1260	White perch	22	22	100	140	2000	720			ug/kg
PCB Aroclors	Aroclor-1260	White sucker	5	5	100	140	1000	480			ug/kg
PCB Aroclors	Total PCB Aroclors	American eel (all)	21	21	100	670	7500	1800			ug/kg
PCB Aroclors	Total PCB Aroclors	Blue crab	24	24	100	190	970	410			ug/kg
PCB Aroclors	Total PCB Aroclors	Brown bullhead	6	6	100	450	2300	1300			ug/kg
PCB Aroclors	Total PCB Aroclors	Carp	12	12	100	1700	11000	4800			ug/kg
PCB Aroclors	Total PCB Aroclors	Channel catfish	11	11	100	630	3000	1600			ug/kg
PCB Aroclors	Total PCB Aroclors	Fish (all)	129	129	100	250	11000	2200			ug/kg
PCB Aroclors	Total PCB Aroclors	Fish (≤ 11 cm)	22	22	100	250	1200	680			ug/kg
PCB Aroclors	Total PCB Aroclors	Fish (≤ 13 cm)	24	24	100	250	1200	680			ug/kg
PCB Aroclors	Total PCB Aroclors	Fish (≤ 18 cm)	39	39	100	250	4200	1200			ug/kg
PCB Aroclors	Total PCB Aroclors	Fish (≤ 20 cm)	41	41	100	250	4200	1300			ug/kg
PCB Aroclors	Total PCB Aroclors	Largemouth bass	3	3	100	1100	11000	4500			ug/kg
PCB Aroclors	Total PCB Aroclors	Mummichog	17	17	100	250	1200	710			ug/kg
PCB Aroclors	Total PCB Aroclors	Mussel (estuarine)	3	2	66.7	20	36	28	7.4	7.4	ug/kg
PCB Aroclors	Total PCB Aroclors	Mussel (freshwater)	5	5	100	37	63	48			ug/kg
PCB Aroclors	Total PCB Aroclors	Northern pike	1	1	100	2100	2100				ug/kg
PCB Aroclors	Total PCB Aroclors	Other forage fish (no mummichog)	9	9	100	350	930	580			ug/kg
PCB Aroclors	Total PCB Aroclors	Smallmouth bass	3	3	100	1200	2200	1700			ug/kg
PCB Aroclors	Total PCB Aroclors	White catfish	19	19	100	830	8600	3300			ug/kg
PCB Aroclors	Total PCB Aroclors	White perch	22	22	100	470	4200	2200			ug/kg
PCB Aroclors	Total PCB Aroclors	White sucker	5	5	100	540	2700	1400			ug/kg
PCB Aroclors	Total PCB Aroclors (	American eel (all)	21	21	100	700	7500	1900			ug/kg
PCB Aroclors	Total PCB Aroclors (	Blue crab	24	24	100	220	980	440			ug/kg
PCB Aroclors	Total PCB Aroclors (	Brown bullhead	6	6	100	510	2300	1300			ug/kg
PCB Aroclors	Total PCB Aroclors (	Carp	12	12	100	1700	11000	4900			ug/kg
PCB Aroclors	Total PCB Aroclors (	Channel catfish	11	11	100	650	3000	1600			ug/kg
PCB Aroclors	Total PCB Aroclors (	Fish (all)	129	129	100	280	11000	2200			ug/kg
PCB Aroclors	Total PCB Aroclors (	Fish (≤ 11 cm)	22	22	100	280	1200	700			ug/kg
PCB Aroclors	Total PCB Aroclors (	Fish (≤ 13 cm)	24	24	100	280	1200	700			ug/kg
PCB Aroclors	Total PCB Aroclors (	Fish (≤ 18 cm)	39	39	100	280	4200	1200			ug/kg
PCB Aroclors	Total PCB Aroclors (	Fish (≤ 20 cm)	41	41	100	280	4200	1300			ug/kg
PCB Aroclors	Total PCB Aroclors (	Largemouth bass	3	3	100	1100	11000	4500			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Aroclors	Total PCB Aroclors (	Mummichog	17	17	100	280	1200	730			ug/kg
PCB Aroclors	Total PCB Aroclors (	Mussel (estuarine)	3	2	66.7	50	62	56	7.4	7.4	ug/kg
PCB Aroclors	Total PCB Aroclors (	Mussel (freshwater)	5	5	100	64	89	74			ug/kg
PCB Aroclors	Total PCB Aroclors (	Northern pike	1	1	100	2200	2200				ug/kg
PCB Aroclors	Total PCB Aroclors (	Other forage fish (no mummichog)	9	9	100	370	950	600			ug/kg
PCB Aroclors	Total PCB Aroclors (	Smallmouth bass	3	3	100	1200	2200	1700			ug/kg
PCB Aroclors	Total PCB Aroclors (	White catfish	19	19	100	840	8600	3400			ug/kg
PCB Aroclors	Total PCB Aroclors (	White perch	22	22	100	490	4200	2200			ug/kg
PCB Aroclors	Total PCB Aroclors (	White sucker	5	5	100	570	2700	1500			ug/kg
PCB Aroclors	Total PCB Aroclors (	American eel (all)	21	21	100	720	7500	1900			ug/kg
PCB Aroclors	Total PCB Aroclors (	Blue crab	24	24	100	240	1000	470			ug/kg
PCB Aroclors	Total PCB Aroclors (	Brown bullhead	6	6	100	560	2400	1400			ug/kg
PCB Aroclors	Total PCB Aroclors (	Carp	12	12	100	1800	11000	4900			ug/kg
PCB Aroclors	Total PCB Aroclors (	Channel catfish	11	11	100	670	3000	1600			ug/kg
PCB Aroclors	Total PCB Aroclors (	Fish (all)	129	129	100	300	11000	2200			ug/kg
PCB Aroclors	Total PCB Aroclors (	Fish (≤ 11 cm)	22	22	100	300	1200	730			ug/kg
PCB Aroclors	Total PCB Aroclors (	Fish (≤ 13 cm)	24	24	100	300	1200	730			ug/kg
PCB Aroclors	Total PCB Aroclors (	Fish (≤ 18 cm)	39	39	100	300	4200	1300			ug/kg
PCB Aroclors	Total PCB Aroclors (	Fish (≤ 20 cm)	41	41	100	300	4200	1300			ug/kg
PCB Aroclors	Total PCB Aroclors (	Largemouth bass	3	3	100	1100	11000	4500			ug/kg
PCB Aroclors	Total PCB Aroclors (	Mummichog	17	17	100	300	1200	760			ug/kg
PCB Aroclors	Total PCB Aroclors (	Mussel (estuarine)	3	2	66.7	80	89	85	7.4	7.4	ug/kg
PCB Aroclors	Total PCB Aroclors (	Mussel (freshwater)	5	5	100	89	120	100			ug/kg
PCB Aroclors	Total PCB Aroclors (	Northern pike	1	1	100	2200	2200				ug/kg
PCB Aroclors	Total PCB Aroclors (	Other forage fish (no mummichog)	9	9	100	390	970	620			ug/kg
PCB Aroclors	Total PCB Aroclors (	Smallmouth bass	3	3	100	1200	2200	1700			ug/kg
PCB Aroclors	Total PCB Aroclors (	White catfish	19	19	100	910	8600	3400			ug/kg
PCB Aroclors	Total PCB Aroclors (	White perch	22	22	100	520	4200	2200			ug/kg
PCB Aroclors	Total PCB Aroclors (	White sucker	5	5	100	590	2700	1500			ug/kg
PCB Aroclors	Total PCB Aroclors-(	American eel (all)	21	21	100	670	7500	1800			ug/kg
PCB Aroclors	Total PCB Aroclors-(	Blue crab	24	24	100	190	970	410			ug/kg
PCB Aroclors	Total PCB Aroclors-(	Brown bullhead	6	6	100	450	2300	1300			ug/kg
PCB Aroclors	Total PCB Aroclors-(	Carp	12	12	100	1700	11000	4800			ug/kg
PCB Aroclors	Total PCB Aroclors-(	Channel catfish	11	11	100	630	3000	1600			ug/kg
PCB Aroclors	Total PCB Aroclors-(	Fish (all)	129	129	100	250	11000	2200			ug/kg
PCB Aroclors	Total PCB Aroclors-(	Fish (≤ 11 cm)	22	22	100	250	1200	680			ug/kg
PCB Aroclors	Total PCB Aroclors-(	Fish (≤ 13 cm)	24	24	100	250	1200	680			ug/kg
PCB Aroclors	Total PCB Aroclors-(	Fish (≤ 18 cm)	39	39	100	250	4200	1200			ug/kg
PCB Aroclors	Total PCB Aroclors-(	Fish (≤ 20 cm)	41	41	100	250	4200	1300			ug/kg
PCB Aroclors	Total PCB Aroclors-(	Largemouth bass	3	3	100	1100	11000	4500			ug/kg
PCB Aroclors	Total PCB Aroclors-(	Mummichog	17	17	100	250	1200	710			ug/kg
PCB Aroclors	Total PCB Aroclors-(	Mussel (estuarine)	3	2	66.7	20	36	28	7.4	7.4	ug/kg
PCB Aroclors	Total PCB Aroclors-(	Mussel (freshwater)	5	5	100	37	63	48			ug/kg
PCB Aroclors	Total PCB Aroclors-(	Northern pike	1	1	100	2100	2100				ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Aroclors	Total PCB Aroclors-(	Other forage fish (no mummichog)	9	9	100	350	930	580			ug/kg
PCB Aroclors	Total PCB Aroclors-(	Smallmouth bass	3	3	100	1200	2200	1700			ug/kg
PCB Aroclors	Total PCB Aroclors-(	White catfish	19	19	100	830	8600	3300			ug/kg
PCB Aroclors	Total PCB Aroclors-(	White perch	22	22	100	470	4200	2200			ug/kg
PCB Aroclors	Total PCB Aroclors-(	White sucker	5	5	100	540	2700	1400			ug/kg
PCB Congeners	PCB-1	American eel (all)	21	14	66.7	0.0039	0.031	0.015	0.0013	0.0039	ug/kg
PCB Congeners	PCB-1	Blue crab	24	9	37.5	0.0028	0.009	0.0051	0.0012	0.0042	ug/kg
PCB Congeners	PCB-1	Brown bullhead	6	6	100	0.0078	0.2	0.08			ug/kg
PCB Congeners	PCB-1	Carp	12	12	100	0.037	0.75	0.19			ug/kg
PCB Congeners	PCB-1	Channel catfish	11	11	100	0.048	0.26	0.1			ug/kg
PCB Congeners	PCB-1	Fish (all)	131	123	93.9	0.0039	0.75	0.078	0.0013	0.005	ug/kg
PCB Congeners	PCB-1	Fish (≤ 11 cm)	23	23	100	0.014	0.094	0.04			ug/kg
PCB Congeners	PCB-1	Fish (≤ 13 cm)	26	26	100	0.014	0.094	0.042			ug/kg
PCB Congeners	PCB-1	Fish (≤ 18 cm)	41	41	100	0.014	0.22	0.067			ug/kg
PCB Congeners	PCB-1	Fish (≤ 20 cm)	43	43	100	0.014	0.22	0.072			ug/kg
PCB Congeners	PCB-1	Largemouth bass	3	3	100	0.024	0.078	0.047			ug/kg
PCB Congeners	PCB-1	Mummichog	18	18	100	0.014	0.094	0.041			ug/kg
PCB Congeners	PCB-1	Mussel (estuarine)	3	3	100	0.004	0.0085	0.0064			ug/kg
PCB Congeners	PCB-1	Mussel (freshwater)	5	5	100	0.0024	0.0033	0.0028			ug/kg
PCB Congeners	PCB-1	Northern pike	1	1	100	0.096	0.096				ug/kg
PCB Congeners	PCB-1	Other forage fish (no mummichog)	10	10	100	0.02	0.092	0.045			ug/kg
PCB Congeners	PCB-1	Smallmouth bass	3	3	100	0.014	0.047	0.034			ug/kg
PCB Congeners	PCB-1	White catfish	19	18	94.7	0.013	0.093	0.047	0.005	0.005	ug/kg
PCB Congeners	PCB-1	White perch	22	22	100	0.012	0.26	0.12			ug/kg
PCB Congeners	PCB-1	White sucker	5	5	100	0.02	0.15	0.076			ug/kg
PCB Congeners	PCB-1	Worms (all)	19	16	84.2	0.0031	0.2	0.036	0.0014	0.0018	ug/kg
PCB Congeners	PCB-1	Worms (estuarine sp.)	5	4	80	0.006	0.051	0.017	0.0014	0.0014	ug/kg
PCB Congeners	PCB-1	Worms (freshwater sp.)	14	12	85.7	0.0031	0.2	0.043	0.0016	0.0018	ug/kg
PCB Congeners	PCB-2	American eel (all)	21	0	0				0.0009	0.0072	ug/kg
PCB Congeners	PCB-2	Blue crab	24	1	4.2	0.028	0.028		0.0014	0.0042	ug/kg
PCB Congeners	PCB-2	Brown bullhead	6	4	66.7	0.0029	0.015	0.0088	0.0016	0.0028	ug/kg
PCB Congeners	PCB-2	Carp	12	11	91.7	0.0043	0.021	0.0097	0.0017	0.0017	ug/kg
PCB Congeners	PCB-2	Channel catfish	11	5	45.5	0.0013	0.019	0.0064	0.00096	0.0015	ug/kg
PCB Congeners	PCB-2	Fish (all)	131	80	61.1	0.0011	0.022	0.0071	0.00058	0.0072	ug/kg
PCB Congeners	PCB-2	Fish (≤ 11 cm)	23	22	95.7	0.0015	0.0056	0.0035	0.001	0.001	ug/kg
PCB Congeners	PCB-2	Fish (≤ 13 cm)	26	25	96.2	0.0015	0.0056	0.0035	0.001	0.001	ug/kg
PCB Congeners	PCB-2	Fish (≤ 18 cm)	41	37	90.2	0.0015	0.019	0.0057	0.001	0.0024	ug/kg
PCB Congeners	PCB-2	Fish (≤ 20 cm)	43	39	90.7	0.0015	0.019	0.0062	0.001	0.0024	ug/kg
PCB Congeners	PCB-2	Largemouth bass	3	2	66.7	0.0026	0.0037	0.0032	0.0021	0.0021	ug/kg
PCB Congeners	PCB-2	Mummichog	18	17	94.4	0.0024	0.0056	0.0036	0.001	0.001	ug/kg
PCB Congeners	PCB-2	Mussel (estuarine)	3	3	100	0.0015	0.0024	0.002			ug/kg
PCB Congeners	PCB-2	Mussel (freshwater)	5	5	100	0.00041	0.00091	0.00067			ug/kg
PCB Congeners	PCB-2	Northern pike	1	1	100	0.0037	0.0037				ug/kg
PCB Congeners	PCB-2	Other forage fish (no mummichog)	10	10	100	0.0015	0.0059	0.0033			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-2	Smallmouth bass	3	3	100	0.0011	0.0026	0.002			ug/kg
PCB Congeners	PCB-2	White catfish	19	9	47.4	0.0027	0.012	0.007	0.00074	0.0023	ug/kg
PCB Congeners	PCB-2	White perch	22	17	77.3	0.0029	0.022	0.013	0.00068	0.0024	ug/kg
PCB Congeners	PCB-2	White sucker	5	1	20	0.0059	0.0059		0.00058	0.0011	ug/kg
PCB Congeners	PCB-2	Worms (all)	19	11	57.9	0.0031	0.041	0.013	0.0013	0.0024	ug/kg
PCB Congeners	PCB-2	Worms (estuarine sp.)	5	1	20	0.0078	0.0078		0.0016	0.0024	ug/kg
PCB Congeners	PCB-2	Worms (freshwater sp.)	14	10	71.4	0.0031	0.041	0.014	0.0013	0.0019	ug/kg
PCB Congeners	PCB-3	American eel (all)	21	1	4.8	0.0033	0.0033		0.0011	0.0087	ug/kg
PCB Congeners	PCB-3	Blue crab	24	1	4.2	0.026	0.026		0.0015	0.0051	ug/kg
PCB Congeners	PCB-3	Brown bullhead	6	5	83.3	0.0069	0.026	0.015	0.002	0.002	ug/kg
PCB Congeners	PCB-3	Carp	12	12	100	0.0043	0.055	0.016			ug/kg
PCB Congeners	PCB-3	Channel catfish	11	11	100	0.0028	0.043	0.012			ug/kg
PCB Congeners	PCB-3	Fish (all)	131	99	75.6	0.0024	0.055	0.013	0.0007	0.0087	ug/kg
PCB Congeners	PCB-3	Fish (≤ 11 cm)	23	23	100	0.0029	0.012	0.006			ug/kg
PCB Congeners	PCB-3	Fish (≤ 13 cm)	26	26	100	0.0029	0.016	0.0063			ug/kg
PCB Congeners	PCB-3	Fish (≤ 18 cm)	41	39	95.1	0.0029	0.039	0.012	0.0019	0.0028	ug/kg
PCB Congeners	PCB-3	Fish (≤ 20 cm)	43	41	95.3	0.0029	0.039	0.013	0.0019	0.0028	ug/kg
PCB Congeners	PCB-3	Largemouth bass	3	2	66.7	0.0055	0.0098	0.0077	0.0026	0.0026	ug/kg
PCB Congeners	PCB-3	Mummichog	18	18	100	0.0029	0.012	0.0057			ug/kg
PCB Congeners	PCB-3	Mussel (estuarine)	3	3	100	0.0013	0.002	0.0015			ug/kg
PCB Congeners	PCB-3	Mussel (freshwater)	5	5	100	0.001	0.0012	0.0011			ug/kg
PCB Congeners	PCB-3	Northern pike	1	1	100	0.012	0.012				ug/kg
PCB Congeners	PCB-3	Other forage fish (no mummichog)	10	10	100	0.0033	0.016	0.0077			ug/kg
PCB Congeners	PCB-3	Smallmouth bass	3	3	100	0.0028	0.0068	0.0053			ug/kg
PCB Congeners	PCB-3	White catfish	19	15	78.9	0.0024	0.031	0.011	0.0016	0.0027	ug/kg
PCB Congeners	PCB-3	White perch	22	20	90.9	0.0034	0.053	0.026	0.0019	0.0028	ug/kg
PCB Congeners	PCB-3	White sucker	5	1	20	0.016	0.016		0.0007	0.0013	ug/kg
PCB Congeners	PCB-3	Worms (all)	19	10	52.6	0.0045	0.1	0.024	0.0015	0.0027	ug/kg
PCB Congeners	PCB-3	Worms (estuarine sp.)	5	0	0				0.0018	0.0027	ug/kg
PCB Congeners	PCB-3	Worms (freshwater sp.)	14	10	71.4	0.0045	0.1	0.024	0.0015	0.0022	ug/kg
PCB Congeners	PCB-4	American eel (all)	21	21	100	0.035	0.47	0.19			ug/kg
PCB Congeners	PCB-4	Blue crab	24	24	100	0.018	0.15	0.053			ug/kg
PCB Congeners	PCB-4	Brown bullhead	6	6	100	0.23	3.3	1.4			ug/kg
PCB Congeners	PCB-4	Carp	12	12	100	0.84	7.1	2.9			ug/kg
PCB Congeners	PCB-4	Channel catfish	11	11	100	0.68	3.7	1.8			ug/kg
PCB Congeners	PCB-4	Fish (all)	131	131	100	0.035	7.1	1.3			ug/kg
PCB Congeners	PCB-4	Fish (≤ 11 cm)	23	23	100	0.23	1.3	0.62			ug/kg
PCB Congeners	PCB-4	Fish (≤ 13 cm)	26	26	100	0.23	1.3	0.63			ug/kg
PCB Congeners	PCB-4	Fish (≤ 18 cm)	41	41	100	0.23	3.9	1.2			ug/kg
PCB Congeners	PCB-4	Fish (≤ 20 cm)	43	43	100	0.23	3.9	1.3			ug/kg
PCB Congeners	PCB-4	Largemouth bass	3	3	100	0.42	1.4	0.9			ug/kg
PCB Congeners	PCB-4	Mummichog	18	18	100	0.23	1.3	0.64			ug/kg
PCB Congeners	PCB-4	Mussel (estuarine)	3	3	100	0.028	0.073	0.055			ug/kg
PCB Congeners	PCB-4	Mussel (freshwater)	5	5	100	0.068	0.091	0.077			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-4	Northern pike	1	1	100	1.4	1.4				ug/kg
PCB Congeners	PCB-4	Other forage fish (no mummichog)	10	10	100	0.24	1.3	0.65			ug/kg
PCB Congeners	PCB-4	Smallmouth bass	3	3	100	0.46	1	0.79			ug/kg
PCB Congeners	PCB-4	White catfish	19	19	100	0.27	3.1	1.2			ug/kg
PCB Congeners	PCB-4	White perch	22	22	100	0.31	5.2	2.4			ug/kg
PCB Congeners	PCB-4	White sucker	5	5	100	0.74	2.5	1.6			ug/kg
PCB Congeners	PCB-4	Worms (all)	19	19	100	0.045	2.3	0.41			ug/kg
PCB Congeners	PCB-4	Worms (estuarine sp.)	5	5	100	0.055	0.98	0.28			ug/kg
PCB Congeners	PCB-4	Worms (freshwater sp.)	14	14	100	0.045	2.3	0.45			ug/kg
PCB Congeners	PCB-5	American eel (all)	21	0	0				0.0052	0.051	ug/kg
PCB Congeners	PCB-5	Blue crab	24	1	4.2	0.014	0.014		0.0066	0.024	ug/kg
PCB Congeners	PCB-5	Brown bullhead	6	1	16.7	0.042	0.042		0.0074	0.019	ug/kg
PCB Congeners	PCB-5	Carp	12	12	100	0.014	0.098	0.041			ug/kg
PCB Congeners	PCB-5	Channel catfish	11	10	90.9	0.0096	0.038	0.018	0.006	0.006	ug/kg
PCB Congeners	PCB-5	Fish (all)	131	90	68.7	0.0031	0.098	0.02	0.002	0.051	ug/kg
PCB Congeners	PCB-5	Fish (≤ 11 cm)	23	23	100	0.0031	0.011	0.0062			ug/kg
PCB Congeners	PCB-5	Fish (≤ 13 cm)	26	26	100	0.0031	0.011	0.0064			ug/kg
PCB Congeners	PCB-5	Fish (≤ 18 cm)	41	40	97.6	0.0031	0.065	0.014	0.014	0.014	ug/kg
PCB Congeners	PCB-5	Fish (≤ 20 cm)	43	42	97.7	0.0031	0.065	0.016	0.014	0.014	ug/kg
PCB Congeners	PCB-5	Largemouth bass	3	2	66.7	0.0082	0.016	0.012	0.018	0.018	ug/kg
PCB Congeners	PCB-5	Mummichog	18	18	100	0.0031	0.011	0.0058			ug/kg
PCB Congeners	PCB-5	Mussel (estuarine)	3	2	66.7	0.0011	0.0017	0.0014	0.00063	0.00063	ug/kg
PCB Congeners	PCB-5	Mussel (freshwater)	5	5	100	0.00072	0.0016	0.001			ug/kg
PCB Congeners	PCB-5	Northern pike	1	1	100	0.017	0.017				ug/kg
PCB Congeners	PCB-5	Other forage fish (no mummichog)	10	10	100	0.0041	0.014	0.0078			ug/kg
PCB Congeners	PCB-5	Smallmouth bass	3	3	100	0.0049	0.01	0.0079			ug/kg
PCB Congeners	PCB-5	White catfish	19	9	47.4	0.0077	0.017	0.011	0.002	0.01	ug/kg
PCB Congeners	PCB-5	White perch	22	19	86.4	0.0059	0.065	0.034	0.0044	0.014	ug/kg
PCB Congeners	PCB-5	White sucker	5	5	100	0.011	0.023	0.017			ug/kg
PCB Congeners	PCB-5	Worms (all)	19	5	26.3	0.0031	0.073	0.02	0.0072	0.02	ug/kg
PCB Congeners	PCB-5	Worms (estuarine sp.)	5	0	0				0.0099	0.02	ug/kg
PCB Congeners	PCB-5	Worms (freshwater sp.)	14	5	35.7	0.0031	0.073	0.02	0.0072	0.017	ug/kg
PCB Congeners	PCB-6	American eel (all)	21	17	81	0.0032	0.036	0.017	0.014	0.022	ug/kg
PCB Congeners	PCB-6	Blue crab	24	23	95.8	0.0086	0.068	0.029	0.011	0.011	ug/kg
PCB Congeners	PCB-6	Brown bullhead	6	6	100	0.075	2.2	0.68			ug/kg
PCB Congeners	PCB-6	Carp	12	12	100	0.4	3.1	1.4			ug/kg
PCB Congeners	PCB-6	Channel catfish	11	11	100	0.074	0.8	0.36			ug/kg
PCB Congeners	PCB-6	Fish (all)	131	127	96.9	0.0032	3.1	0.46	0.014	0.022	ug/kg
PCB Congeners	PCB-6	Fish (≤ 11 cm)	23	23	100	0.063	0.38	0.17			ug/kg
PCB Congeners	PCB-6	Fish (≤ 13 cm)	26	26	100	0.063	0.38	0.18			ug/kg
PCB Congeners	PCB-6	Fish (≤ 18 cm)	41	41	100	0.063	1.6	0.38			ug/kg
PCB Congeners	PCB-6	Fish (≤ 20 cm)	43	43	100	0.063	1.6	0.42			ug/kg
PCB Congeners	PCB-6	Largemouth bass	3	3	100	0.075	0.45	0.26			ug/kg
PCB Congeners	PCB-6	Mummichog	18	18	100	0.063	0.38	0.17			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-6	Mussel (estuarine)	3	3	100	0.011	0.043	0.026			ug/kg
PCB Congeners	PCB-6	Mussel (freshwater)	5	5	100	0.027	0.039	0.032			ug/kg
PCB Congeners	PCB-6	Northern pike	1	1	100	0.47	0.47				ug/kg
PCB Congeners	PCB-6	Other forage fish (no mummichog)	10	10	100	0.097	0.35	0.21			ug/kg
PCB Congeners	PCB-6	Smallmouth bass	3	3	100	0.11	0.29	0.22			ug/kg
PCB Congeners	PCB-6	White catfish	19	19	100	0.028	0.89	0.32			ug/kg
PCB Congeners	PCB-6	White perch	22	22	100	0.11	1.6	0.79			ug/kg
PCB Congeners	PCB-6	White sucker	5	5	100	0.2	0.7	0.43			ug/kg
PCB Congeners	PCB-6	Worms (all)	19	17	89.5	0.007	0.93	0.16	0.0097	0.019	ug/kg
PCB Congeners	PCB-6	Worms (estuarine sp.)	5	3	60	0.007	0.068	0.028	0.0097	0.019	ug/kg
PCB Congeners	PCB-6	Worms (freshwater sp.)	14	14	100	0.023	0.93	0.19			ug/kg
PCB Congeners	PCB-7	American eel (all)	21	1	4.8	0.004	0.004		0.0048	0.049	ug/kg
PCB Congeners	PCB-7	Blue crab	24	1	4.2	0.01	0.01		0.0063	0.023	ug/kg
PCB Congeners	PCB-7	Brown bullhead	6	4	66.7	0.02	0.088	0.054	0.0079	0.013	ug/kg
PCB Congeners	PCB-7	Carp	12	12	100	0.025	0.2	0.097			ug/kg
PCB Congeners	PCB-7	Channel catfish	11	11	100	0.018	0.1	0.041			ug/kg
PCB Congeners	PCB-7	Fish (all)	131	106	80.9	0.0023	0.2	0.048	0.0048	0.049	ug/kg
PCB Congeners	PCB-7	Fish (≤ 11 cm)	23	23	100	0.0062	0.035	0.017			ug/kg
PCB Congeners	PCB-7	Fish (≤ 13 cm)	26	26	100	0.0062	0.035	0.018			ug/kg
PCB Congeners	PCB-7	Fish (≤ 18 cm)	41	41	100	0.0062	0.18	0.043			ug/kg
PCB Congeners	PCB-7	Fish (≤ 20 cm)	43	43	100	0.0062	0.18	0.048			ug/kg
PCB Congeners	PCB-7	Largemouth bass	3	2	66.7	0.035	0.056	0.046	0.016	0.016	ug/kg
PCB Congeners	PCB-7	Mummichog	18	18	100	0.0062	0.029	0.014			ug/kg
PCB Congeners	PCB-7	Mussel (estuarine)	3	3	100	0.0013	0.003	0.0022			ug/kg
PCB Congeners	PCB-7	Mussel (freshwater)	5	5	100	0.0028	0.005	0.0036			ug/kg
PCB Congeners	PCB-7	Northern pike	1	1	100	0.057	0.057				ug/kg
PCB Congeners	PCB-7	Other forage fish (no mummichog)	10	10	100	0.015	0.038	0.025			ug/kg
PCB Congeners	PCB-7	Smallmouth bass	3	3	100	0.014	0.037	0.029			ug/kg
PCB Congeners	PCB-7	White catfish	19	17	89.5	0.0023	0.03	0.017	0.0074	0.0098	ug/kg
PCB Congeners	PCB-7	White perch	22	22	100	0.014	0.18	0.094			ug/kg
PCB Congeners	PCB-7	White sucker	5	5	100	0.019	0.072	0.041			ug/kg
PCB Congeners	PCB-7	Worms (all)	19	15	78.9	0.0027	0.15	0.024	0.0095	0.018	ug/kg
PCB Congeners	PCB-7	Worms (estuarine sp.)	5	2	40	0.0027	0.023	0.013	0.0095	0.018	ug/kg
PCB Congeners	PCB-7	Worms (freshwater sp.)	14	13	92.9	0.0053	0.15	0.025	0.013	0.013	ug/kg
PCB Congeners	PCB-8	American eel (all)	21	21	100	0.0084	0.13	0.05			ug/kg
PCB Congeners	PCB-8	Blue crab	24	24	100	0.015	0.22	0.087			ug/kg
PCB Congeners	PCB-8	Brown bullhead	6	6	100	0.24	4.1	1.6			ug/kg
PCB Congeners	PCB-8	Carp	12	12	100	1.1	8.4	4			ug/kg
PCB Congeners	PCB-8	Channel catfish	11	11	100	0.34	2.4	0.97			ug/kg
PCB Congeners	PCB-8	Fish (all)	131	131	100	0.0084	8.4	1.3			ug/kg
PCB Congeners	PCB-8	Fish (≤ 11 cm)	23	23	100	0.29	1.1	0.59			ug/kg
PCB Congeners	PCB-8	Fish (≤ 13 cm)	26	26	100	0.29	1.1	0.59			ug/kg
PCB Congeners	PCB-8	Fish (≤ 18 cm)	41	41	100	0.29	4.9	1.2			ug/kg
PCB Congeners	PCB-8	Fish (≤ 20 cm)	43	43	100	0.29	4.9	1.4			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-8	Largemouth bass	3	3	100	0.22	1.5	0.88			ug/kg
PCB Congeners	PCB-8	Mummichog	18	18	100	0.31	1.1	0.6			ug/kg
PCB Congeners	PCB-8	Mussel (estuarine)	3	3	100	0.028	0.065	0.048			ug/kg
PCB Congeners	PCB-8	Mussel (freshwater)	5	5	100	0.073	0.14	0.096			ug/kg
PCB Congeners	PCB-8	Northern pike	1	1	100	1.4	1.4				ug/kg
PCB Congeners	PCB-8	Other forage fish (no mummichog)	10	10	100	0.29	0.95	0.59			ug/kg
PCB Congeners	PCB-8	Smallmouth bass	3	3	100	0.34	1	0.75			ug/kg
PCB Congeners	PCB-8	White catfish	19	19	100	0.097	2.5	0.94			ug/kg
PCB Congeners	PCB-8	White perch	22	22	100	0.39	4.9	2.5			ug/kg
PCB Congeners	PCB-8	White sucker	5	5	100	0.65	2.2	1.3			ug/kg
PCB Congeners	PCB-8	Worms (all)	19	19	100	0.0057	5.1	0.53			ug/kg
PCB Congeners	PCB-8	Worms (estuarine sp.)	5	5	100	0.0057	0.17	0.044			ug/kg
PCB Congeners	PCB-8	Worms (freshwater sp.)	14	14	100	0.07	5.1	0.7			ug/kg
PCB Congeners	PCB-9	American eel (all)	21	8	38.1	0.0061	0.01	0.0083	0.0061	0.05	ug/kg
PCB Congeners	PCB-9	Blue crab	24	4	16.7	0.011	0.016	0.013	0.0063	0.023	ug/kg
PCB Congeners	PCB-9	Brown bullhead	6	6	100	0.021	0.35	0.14			ug/kg
PCB Congeners	PCB-9	Carp	12	12	100	0.11	0.78	0.36			ug/kg
PCB Congeners	PCB-9	Channel catfish	11	11	100	0.038	0.2	0.092			ug/kg
PCB Congeners	PCB-9	Fish (all)	131	118	90.1	0.005	0.78	0.11	0.0061	0.05	ug/kg
PCB Congeners	PCB-9	Fish (≤ 11 cm)	23	23	100	0.013	0.061	0.028			ug/kg
PCB Congeners	PCB-9	Fish (≤ 13 cm)	26	26	100	0.013	0.061	0.03			ug/kg
PCB Congeners	PCB-9	Fish (≤ 18 cm)	41	41	100	0.013	0.34	0.078			ug/kg
PCB Congeners	PCB-9	Fish (≤ 20 cm)	43	43	100	0.013	0.34	0.088			ug/kg
PCB Congeners	PCB-9	Largemouth bass	3	3	100	0.017	0.095	0.056			ug/kg
PCB Congeners	PCB-9	Mummichog	18	18	100	0.013	0.047	0.025			ug/kg
PCB Congeners	PCB-9	Mussel (estuarine)	3	3	100	0.0022	0.007	0.0045			ug/kg
PCB Congeners	PCB-9	Mussel (freshwater)	5	5	100	0.0052	0.0086	0.0062			ug/kg
PCB Congeners	PCB-9	Northern pike	1	1	100	0.11	0.11				ug/kg
PCB Congeners	PCB-9	Other forage fish (no mummichog)	10	10	100	0.024	0.08	0.044			ug/kg
PCB Congeners	PCB-9	Smallmouth bass	3	3	100	0.027	0.064	0.049			ug/kg
PCB Congeners	PCB-9	White catfish	19	19	100	0.005	0.15	0.058			ug/kg
PCB Congeners	PCB-9	White perch	22	22	100	0.028	0.34	0.17			ug/kg
PCB Congeners	PCB-9	White sucker	5	5	100	0.052	0.14	0.092			ug/kg
PCB Congeners	PCB-9	Worms (all)	19	17	89.5	0.0046	0.25	0.033	0.0098	0.019	ug/kg
PCB Congeners	PCB-9	Worms (estuarine sp.)	5	3	60	0.0046	0.04	0.017	0.0098	0.019	ug/kg
PCB Congeners	PCB-9	Worms (freshwater sp.)	14	14	100	0.0053	0.25	0.037			ug/kg
PCB Congeners	PCB-10	American eel (all)	21	10	47.6	0.0033	0.021	0.013	0.0059	0.019	ug/kg
PCB Congeners	PCB-10	Blue crab	24	0	0				0.0051	0.021	ug/kg
PCB Congeners	PCB-10	Brown bullhead	6	5	83.3	0.033	0.15	0.071	0.0049	0.0049	ug/kg
PCB Congeners	PCB-10	Carp	12	12	100	0.071	0.52	0.21			ug/kg
PCB Congeners	PCB-10	Channel catfish	11	11	100	0.045	0.17	0.093			ug/kg
PCB Congeners	PCB-10	Fish (all)	131	118	90.1	0.0033	0.52	0.076	0.0049	0.019	ug/kg
PCB Congeners	PCB-10	Fish (≤ 11 cm)	23	23	100	0.0094	0.056	0.026			ug/kg
PCB Congeners	PCB-10	Fish (≤ 13 cm)	26	26	100	0.0094	0.056	0.026			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-10	Fish (≤ 18 cm)	41	41	100	0.0094	0.19	0.055			ug/kg
PCB Congeners	PCB-10	Fish (≤ 20 cm)	43	43	100	0.0094	0.21	0.061			ug/kg
PCB Congeners	PCB-10	Largemouth bass	3	3	100	0.013	0.072	0.042			ug/kg
PCB Congeners	PCB-10	Mummichog	18	18	100	0.0094	0.056	0.026			ug/kg
PCB Congeners	PCB-10	Mussel (estuarine)	3	3	100	0.0025	0.01	0.0063			ug/kg
PCB Congeners	PCB-10	Mussel (freshwater)	5	5	100	0.0044	0.0059	0.0049			ug/kg
PCB Congeners	PCB-10	Northern pike	1	1	100	0.083	0.083				ug/kg
PCB Congeners	PCB-10	Other forage fish (no mummichog)	10	10	100	0.016	0.057	0.029			ug/kg
PCB Congeners	PCB-10	Smallmouth bass	3	3	100	0.024	0.049	0.04			ug/kg
PCB Congeners	PCB-10	White catfish	19	18	94.7	0.0053	0.094	0.035	0.0059	0.0059	ug/kg
PCB Congeners	PCB-10	White perch	22	22	100	0.015	0.3	0.13			ug/kg
PCB Congeners	PCB-10	White sucker	5	5	100	0.044	0.12	0.08			ug/kg
PCB Congeners	PCB-10	Worms (all)	19	17	89.5	0.0035	0.073	0.02	0.0096	0.012	ug/kg
PCB Congeners	PCB-10	Worms (estuarine sp.)	5	5	100	0.0085	0.071	0.022			ug/kg
PCB Congeners	PCB-10	Worms (freshwater sp.)	14	12	85.7	0.0035	0.073	0.019	0.0096	0.012	ug/kg
PCB Congeners	PCB-11	American eel (all)	21	6	28.6	0.057	0.11	0.076	0.015	0.067	ug/kg
PCB Congeners	PCB-11	Blue crab	24	23	95.8	0.018	0.27	0.12	0.015	0.015	ug/kg
PCB Congeners	PCB-11	Brown bullhead	6	4	66.7	0.077	0.15	0.11	0.033	0.045	ug/kg
PCB Congeners	PCB-11	Carp	12	9	75	0.15	0.41	0.23	0.089	0.11	ug/kg
PCB Congeners	PCB-11	Channel catfish	11	1	9.1	0.24	0.24		0.0088	0.025	ug/kg
PCB Congeners	PCB-11	Fish (all)	131	83	63.4	0.038	1.3	0.23	0.008	0.11	ug/kg
PCB Congeners	PCB-11	Fish (≤ 11 cm)	23	23	100	0.063	0.26	0.12			ug/kg
PCB Congeners	PCB-11	Fish (≤ 13 cm)	26	26	100	0.063	0.26	0.12			ug/kg
PCB Congeners	PCB-11	Fish (≤ 18 cm)	41	41	100	0.063	0.8	0.24			ug/kg
PCB Congeners	PCB-11	Fish (≤ 20 cm)	43	43	100	0.063	0.8	0.25			ug/kg
PCB Congeners	PCB-11	Largemouth bass	3	2	66.7	0.038	0.051	0.045	0.02	0.02	ug/kg
PCB Congeners	PCB-11	Mummichog	18	18	100	0.063	0.21	0.11			ug/kg
PCB Congeners	PCB-11	Mussel (estuarine)	3	3	100	0.024	0.083	0.053			ug/kg
PCB Congeners	PCB-11	Mussel (freshwater)	5	5	100	0.04	0.079	0.061			ug/kg
PCB Congeners	PCB-11	Northern pike	1	1	100	0.11	0.11				ug/kg
PCB Congeners	PCB-11	Other forage fish (no mummichog)	10	10	100	0.067	0.32	0.15			ug/kg
PCB Congeners	PCB-11	Smallmouth bass	3	1	33.3	0.042	0.042		0.01	0.02	ug/kg
PCB Congeners	PCB-11	White catfish	19	6	31.6	0.081	0.16	0.11	0.008	0.035	ug/kg
PCB Congeners	PCB-11	White perch	22	22	100	0.07	1.3	0.5			ug/kg
PCB Congeners	PCB-11	White sucker	5	3	60	0.047	0.15	0.084	0.02	0.025	ug/kg
PCB Congeners	PCB-11	Worms (all)	19	19	100	0.06	1.6	0.31			ug/kg
PCB Congeners	PCB-11	Worms (estuarine sp.)	5	5	100	0.06	0.62	0.19			ug/kg
PCB Congeners	PCB-11	Worms (freshwater sp.)	14	14	100	0.076	1.6	0.35			ug/kg
PCB Congeners	PCB-12	American eel (all)	21	3	14.3	0.014	0.02	0.016	0.0085	0.06	ug/kg
PCB Congeners	PCB-12	Blue crab	24	19	79.2	0.019	0.08	0.046	0.01	0.028	ug/kg
PCB Congeners	PCB-12	Brown bullhead	6	2	33.3	0.056	0.069	0.063	0.0086	0.016	ug/kg
PCB Congeners	PCB-12	Carp	12	10	83.3	0.018	0.17	0.098	0.011	0.018	ug/kg
PCB Congeners	PCB-12	Channel catfish	11	11	100	0.0079	0.072	0.021			ug/kg
PCB Congeners	PCB-12	Fish (all)	131	98	74.8	0.0045	0.27	0.054	0.0049	0.06	ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-12	Fish (≤ 11 cm)	23	23	100	0.0089	0.042	0.021			ug/kg
PCB Congeners	PCB-12	Fish (≤ 13 cm)	26	26	100	0.0089	0.042	0.022			ug/kg
PCB Congeners	PCB-12	Fish (≤ 18 cm)	41	41	100	0.0089	0.22	0.054			ug/kg
PCB Congeners	PCB-12	Fish (≤ 20 cm)	43	43	100	0.0089	0.22	0.058			ug/kg
PCB Congeners	PCB-12	Largemouth bass	3	2	66.7	0.018	0.026	0.022	0.02	0.02	ug/kg
PCB Congeners	PCB-12	Mummichog	18	18	100	0.0089	0.042	0.019			ug/kg
PCB Congeners	PCB-12	Mussel (estuarine)	3	3	100	0.0048	0.017	0.011			ug/kg
PCB Congeners	PCB-12	Mussel (freshwater)	5	5	100	0.015	0.022	0.018			ug/kg
PCB Congeners	PCB-12	Northern pike	1	1	100	0.034	0.034				ug/kg
PCB Congeners	PCB-12	Other forage fish (no mummichog)	10	10	100	0.014	0.057	0.029			ug/kg
PCB Congeners	PCB-12	Smallmouth bass	3	3	100	0.0078	0.018	0.014			ug/kg
PCB Congeners	PCB-12	White catfish	19	12	63.2	0.0045	0.055	0.026	0.0049	0.012	ug/kg
PCB Congeners	PCB-12	White perch	22	21	95.5	0.016	0.27	0.13	0.0059	0.0059	ug/kg
PCB Congeners	PCB-12	White sucker	5	5	100	0.014	0.043	0.026			ug/kg
PCB Congeners	PCB-12	Worms (all)	19	19	100	0.0096	0.29	0.073			ug/kg
PCB Congeners	PCB-12	Worms (estuarine sp.)	5	5	100	0.0096	0.059	0.024			ug/kg
PCB Congeners	PCB-12	Worms (freshwater sp.)	14	14	100	0.013	0.29	0.091			ug/kg
PCB Congeners	PCB-14	American eel (all)	21	0	0				0.0047	0.048	ug/kg
PCB Congeners	PCB-14	Blue crab	24	1	4.2	0.012	0.012		0.0063	0.022	ug/kg
PCB Congeners	PCB-14	Brown bullhead	6	0	0				0.0069	0.018	ug/kg
PCB Congeners	PCB-14	Carp	12	0	0				0.0068	0.019	ug/kg
PCB Congeners	PCB-14	Channel catfish	11	0	0				0.0037	0.0071	ug/kg
PCB Congeners	PCB-14	Fish (all)	131	0	0				0.00098	0.048	ug/kg
PCB Congeners	PCB-14	Fish (≤ 11 cm)	23	0	0				0.00098	0.0039	ug/kg
PCB Congeners	PCB-14	Fish (≤ 13 cm)	26	0	0				0.00098	0.0039	ug/kg
PCB Congeners	PCB-14	Fish (≤ 18 cm)	41	0	0				0.00098	0.016	ug/kg
PCB Congeners	PCB-14	Fish (≤ 20 cm)	43	0	0				0.00098	0.016	ug/kg
PCB Congeners	PCB-14	Largemouth bass	3	0	0				0.0017	0.017	ug/kg
PCB Congeners	PCB-14	Mummichog	18	0	0				0.00098	0.0039	ug/kg
PCB Congeners	PCB-14	Mussel (estuarine)	3	0	0				0.00032	0.00061	ug/kg
PCB Congeners	PCB-14	Mussel (freshwater)	5	0	0				0.00035	0.00052	ug/kg
PCB Congeners	PCB-14	Northern pike	1	0	0				0.0023	0.0023	ug/kg
PCB Congeners	PCB-14	Other forage fish (no mummichog)	10	0	0				0.001	0.0024	ug/kg
PCB Congeners	PCB-14	Smallmouth bass	3	0	0				0.002	0.0022	ug/kg
PCB Congeners	PCB-14	White catfish	19	0	0				0.0019	0.0097	ug/kg
PCB Congeners	PCB-14	White perch	22	0	0				0.0011	0.016	ug/kg
PCB Congeners	PCB-14	White sucker	5	0	0				0.0095	0.023	ug/kg
PCB Congeners	PCB-14	Worms (all)	19	0	0				0.0064	0.018	ug/kg
PCB Congeners	PCB-14	Worms (estuarine sp.)	5	0	0				0.0093	0.018	ug/kg
PCB Congeners	PCB-14	Worms (freshwater sp.)	14	0	0				0.0064	0.016	ug/kg
PCB Congeners	PCB-15	American eel (all)	21	21	100	0.022	0.21	0.093			ug/kg
PCB Congeners	PCB-15	Blue crab	24	24	100	0.59	1.5	1			ug/kg
PCB Congeners	PCB-15	Brown bullhead	6	6	100	0.055	0.36	0.19			ug/kg
PCB Congeners	PCB-15	Carp	12	12	100	0.14	1.2	0.6			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-15	Channel catfish	11	10	90.9	0.014	0.42	0.089	0.0067	0.0067	ug/kg
PCB Congeners	PCB-15	Fish (all)	131	130	99.2	0.014	2.6	0.37	0.0067	0.0067	ug/kg
PCB Congeners	PCB-15	Fish (≤ 11 cm)	23	23	100	0.075	0.99	0.23			ug/kg
PCB Congeners	PCB-15	Fish (≤ 13 cm)	26	26	100	0.075	0.99	0.23			ug/kg
PCB Congeners	PCB-15	Fish (≤ 18 cm)	41	41	100	0.075	1.6	0.49			ug/kg
PCB Congeners	PCB-15	Fish (≤ 20 cm)	43	43	100	0.075	1.6	0.52			ug/kg
PCB Congeners	PCB-15	Largemouth bass	3	3	100	0.12	0.31	0.21			ug/kg
PCB Congeners	PCB-15	Mummichog	18	18	100	0.075	0.33	0.17			ug/kg
PCB Congeners	PCB-15	Mussel (estuarine)	3	3	100	0.021	0.065	0.043			ug/kg
PCB Congeners	PCB-15	Mussel (freshwater)	5	5	100	0.1	0.14	0.11			ug/kg
PCB Congeners	PCB-15	Northern pike	1	1	100	0.36	0.36				ug/kg
PCB Congeners	PCB-15	Other forage fish (no mummichog)	10	10	100	0.12	0.99	0.35			ug/kg
PCB Congeners	PCB-15	Smallmouth bass	3	3	100	0.11	0.22	0.18			ug/kg
PCB Congeners	PCB-15	White catfish	19	19	100	0.041	0.36	0.15			ug/kg
PCB Congeners	PCB-15	White perch	22	22	100	0.18	2.6	1.1			ug/kg
PCB Congeners	PCB-15	White sucker	5	5	100	0.33	0.73	0.44			ug/kg
PCB Congeners	PCB-15	Worms (all)	19	19	100	0.088	1.8	0.45			ug/kg
PCB Congeners	PCB-15	Worms (estuarine sp.)	5	5	100	0.15	0.58	0.26			ug/kg
PCB Congeners	PCB-15	Worms (freshwater sp.)	14	14	100	0.088	1.8	0.51			ug/kg
PCB Congeners	PCB-16	American eel (all)	21	21	100	0.024	0.33	0.11			ug/kg
PCB Congeners	PCB-16	Blue crab	24	24	100	0.0071	0.13	0.047			ug/kg
PCB Congeners	PCB-16	Brown bullhead	6	6	100	0.55	6.3	2.8			ug/kg
PCB Congeners	PCB-16	Carp	12	12	100	1.1	24	12			ug/kg
PCB Congeners	PCB-16	Channel catfish	11	11	100	0.31	4.6	2.1			ug/kg
PCB Congeners	PCB-16	Fish (all)	131	131	100	0.024	24	3.2			ug/kg
PCB Congeners	PCB-16	Fish (≤ 11 cm)	23	23	100	0.19	2.6	1.2			ug/kg
PCB Congeners	PCB-16	Fish (≤ 13 cm)	26	26	100	0.19	2.6	1.3			ug/kg
PCB Congeners	PCB-16	Fish (≤ 18 cm)	41	41	100	0.19	9	2.6			ug/kg
PCB Congeners	PCB-16	Fish (≤ 20 cm)	43	43	100	0.19	9	2.8			ug/kg
PCB Congeners	PCB-16	Largemouth bass	3	3	100	0.29	4.1	2.3			ug/kg
PCB Congeners	PCB-16	Mummichog	18	18	100	0.42	2.4	1.3			ug/kg
PCB Congeners	PCB-16	Mussel (estuarine)	3	3	100	0.041	0.18	0.11			ug/kg
PCB Congeners	PCB-16	Mussel (freshwater)	5	5	100	0.18	0.38	0.27			ug/kg
PCB Congeners	PCB-16	Northern pike	1	1	100	2.9	2.9				ug/kg
PCB Congeners	PCB-16	Other forage fish (no mummichog)	10	10	100	0.19	3	1.4			ug/kg
PCB Congeners	PCB-16	Smallmouth bass	3	3	100	0.76	2.5	1.9			ug/kg
PCB Congeners	PCB-16	White catfish	19	19	100	0.9	6.4	2.4			ug/kg
PCB Congeners	PCB-16	White perch	22	22	100	0.53	12	5.3			ug/kg
PCB Congeners	PCB-16	White sucker	5	5	100	1.5	5.5	3.5			ug/kg
PCB Congeners	PCB-16	Worms (all)	19	18	94.7	0.015	7.3	1.1	0.0033	0.0033	ug/kg
PCB Congeners	PCB-16	Worms (estuarine sp.)	5	4	80	0.015	0.33	0.095	0.0033	0.0033	ug/kg
PCB Congeners	PCB-16	Worms (freshwater sp.)	14	14	100	0.18	7.3	1.4			ug/kg
PCB Congeners	PCB-17	American eel (all)	21	21	100	0.044	0.73	0.23			ug/kg
PCB Congeners	PCB-17	Blue crab	24	24	100	0.033	0.42	0.16			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-17	Brown bullhead	6	6	100	0.62	8.7	3.6			ug/kg
PCB Congeners	PCB-17	Carp	12	12	100	2.2	38	19			ug/kg
PCB Congeners	PCB-17	Channel catfish	11	11	100	1.3	6	3.7			ug/kg
PCB Congeners	PCB-17	Fish (all)	131	131	100	0.044	38	5.1			ug/kg
PCB Congeners	PCB-17	Fish (≤ 11 cm)	23	23	100	0.36	4.9	2.3			ug/kg
PCB Congeners	PCB-17	Fish (≤ 13 cm)	26	26	100	0.36	4.9	2.4			ug/kg
PCB Congeners	PCB-17	Fish (≤ 18 cm)	41	41	100	0.36	14	4.4			ug/kg
PCB Congeners	PCB-17	Fish (≤ 20 cm)	43	43	100	0.36	14	4.7			ug/kg
PCB Congeners	PCB-17	Largemouth bass	3	3	100	0.6	7	3.8			ug/kg
PCB Congeners	PCB-17	Mummichog	18	18	100	0.82	4.9	2.4			ug/kg
PCB Congeners	PCB-17	Mussel (estuarine)	3	3	100	0.06	0.29	0.17			ug/kg
PCB Congeners	PCB-17	Mussel (freshwater)	5	5	100	0.26	0.49	0.37			ug/kg
PCB Congeners	PCB-17	Northern pike	1	1	100	5.7	5.7				ug/kg
PCB Congeners	PCB-17	Other forage fish (no mummichog)	10	10	100	0.36	4.3	2.2			ug/kg
PCB Congeners	PCB-17	Smallmouth bass	3	3	100	1.4	4.1	3.1			ug/kg
PCB Congeners	PCB-17	White catfish	19	19	100	1.1	9	3.2			ug/kg
PCB Congeners	PCB-17	White perch	22	22	100	0.96	18	8.6			ug/kg
PCB Congeners	PCB-17	White sucker	5	5	100	2.7	8.9	6			ug/kg
PCB Congeners	PCB-17	Worms (all)	19	19	100	0.03	7.4	1.4			ug/kg
PCB Congeners	PCB-17	Worms (estuarine sp.)	5	5	100	0.03	0.96	0.23			ug/kg
PCB Congeners	PCB-17	Worms (freshwater sp.)	14	14	100	0.2	7.4	1.8			ug/kg
PCB Congeners	PCB-18	American eel (all)	21	21	100	0.17	2.4	0.79			ug/kg
PCB Congeners	PCB-18	Blue crab	24	24	100	0.069	0.83	0.31			ug/kg
PCB Congeners	PCB-18	Brown bullhead	6	6	100	2	30	10			ug/kg
PCB Congeners	PCB-18	Carp	12	12	100	6	92	47			ug/kg
PCB Congeners	PCB-18	Channel catfish	11	11	100	3.2	13	8			ug/kg
PCB Congeners	PCB-18	Fish (all)	131	131	100	0.17	92	11			ug/kg
PCB Congeners	PCB-18	Fish (≤ 11 cm)	23	23	100	0.76	8.1	3.7			ug/kg
PCB Congeners	PCB-18	Fish (≤ 13 cm)	26	26	100	0.76	8.1	3.9			ug/kg
PCB Congeners	PCB-18	Fish (≤ 18 cm)	41	41	100	0.76	26	8			ug/kg
PCB Congeners	PCB-18	Fish (≤ 20 cm)	43	43	100	0.76	26	8.6			ug/kg
PCB Congeners	PCB-18	Largemouth bass	3	3	100	1.5	14	7.6			ug/kg
PCB Congeners	PCB-18	Mummichog	18	18	100	1.1	8.1	3.8			ug/kg
PCB Congeners	PCB-18	Mussel (estuarine)	3	3	100	0.09	0.46	0.27			ug/kg
PCB Congeners	PCB-18	Mussel (freshwater)	5	5	100	0.46	0.93	0.67			ug/kg
PCB Congeners	PCB-18	Northern pike	1	1	100	10	10				ug/kg
PCB Congeners	PCB-18	Other forage fish (no mummichog)	10	10	100	0.76	10	4.2			ug/kg
PCB Congeners	PCB-18	Smallmouth bass	3	3	100	2.4	7.7	5.7			ug/kg
PCB Congeners	PCB-18	White catfish	19	19	100	2.8	22	8.2			ug/kg
PCB Congeners	PCB-18	White perch	22	22	100	1.7	36	17			ug/kg
PCB Congeners	PCB-18	White sucker	5	5	100	2.8	11	6.9			ug/kg
PCB Congeners	PCB-18	Worms (all)	19	19	100	0.42	16	2.9			ug/kg
PCB Congeners	PCB-18	Worms (estuarine sp.)	5	5	100	0.44	7.1	1.9			ug/kg
PCB Congeners	PCB-18	Worms (freshwater sp.)	14	14	100	0.42	16	3.3			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-19	American eel (all)	21	21	100	0.051	0.51	0.22			ug/kg
PCB Congeners	PCB-19	Blue crab	24	23	95.8	0.0072	0.073	0.026	0.0045	0.0045	ug/kg
PCB Congeners	PCB-19	Brown bullhead	6	6	100	0.21	1.7	0.76			ug/kg
PCB Congeners	PCB-19	Carp	12	12	100	0.22	10	4.2			ug/kg
PCB Congeners	PCB-19	Channel catfish	11	11	100	0.69	2.3	1.4			ug/kg
PCB Congeners	PCB-19	Fish (all)	131	131	100	0.051	10	1.4			ug/kg
PCB Congeners	PCB-19	Fish (≤ 11 cm)	23	23	100	0.19	1.4	0.6			ug/kg
PCB Congeners	PCB-19	Fish (≤ 13 cm)	26	26	100	0.19	1.4	0.63			ug/kg
PCB Congeners	PCB-19	Fish (≤ 18 cm)	41	41	100	0.19	3.9	1.2			ug/kg
PCB Congeners	PCB-19	Fish (≤ 20 cm)	43	43	100	0.19	3.9	1.3			ug/kg
PCB Congeners	PCB-19	Largemouth bass	3	3	100	0.21	1.7	0.96			ug/kg
PCB Congeners	PCB-19	Mummichog	18	18	100	0.19	1.4	0.59			ug/kg
PCB Congeners	PCB-19	Mussel (estuarine)	3	3	100	0.016	0.058	0.037			ug/kg
PCB Congeners	PCB-19	Mussel (freshwater)	5	5	100	0.062	0.088	0.074			ug/kg
PCB Congeners	PCB-19	Northern pike	1	1	100	1.5	1.5				ug/kg
PCB Congeners	PCB-19	Other forage fish (no mummichog)	10	10	100	0.24	1.9	0.77			ug/kg
PCB Congeners	PCB-19	Smallmouth bass	3	3	100	0.49	1.2	0.89			ug/kg
PCB Congeners	PCB-19	White catfish	19	19	100	0.16	2.1	0.85			ug/kg
PCB Congeners	PCB-19	White perch	22	22	100	0.3	4.9	2.5			ug/kg
PCB Congeners	PCB-19	White sucker	5	5	100	0.93	2.5	1.7			ug/kg
PCB Congeners	PCB-19	Worms (all)	19	19	100	0.075	1.6	0.41			ug/kg
PCB Congeners	PCB-19	Worms (estuarine sp.)	5	5	100	0.11	1.1	0.35			ug/kg
PCB Congeners	PCB-19	Worms (freshwater sp.)	14	14	100	0.075	1.6	0.44			ug/kg
PCB Congeners	PCB-20	American eel (all)	21	21	100	4.1	30	15			ug/kg
PCB Congeners	PCB-20	Blue crab	24	24	100	8	19	14			ug/kg
PCB Congeners	PCB-20	Brown bullhead	6	6	100	6.1	59	22			ug/kg
PCB Congeners	PCB-20	Carp	12	12	100	20	130	74			ug/kg
PCB Congeners	PCB-20	Channel catfish	11	11	100	15	33	22			ug/kg
PCB Congeners	PCB-20	Fish (all)	131	131	100	4.1	130	31			ug/kg
PCB Congeners	PCB-20	Fish (≤ 11 cm)	23	23	100	8.1	31	17			ug/kg
PCB Congeners	PCB-20	Fish (≤ 13 cm)	26	26	100	8.1	31	16			ug/kg
PCB Congeners	PCB-20	Fish (≤ 18 cm)	41	41	100	5.7	63	25			ug/kg
PCB Congeners	PCB-20	Fish (≤ 20 cm)	43	43	100	5.7	70	27			ug/kg
PCB Congeners	PCB-20	Largemouth bass	3	3	100	4.3	40	22			ug/kg
PCB Congeners	PCB-20	Mummichog	18	18	100	8.1	31	17			ug/kg
PCB Congeners	PCB-20	Mussel (estuarine)	3	3	100	0.15	0.86	0.47			ug/kg
PCB Congeners	PCB-20	Mussel (freshwater)	5	5	100	0.81	1.5	1.2			ug/kg
PCB Congeners	PCB-20	Northern pike	1	1	100	34	34				ug/kg
PCB Congeners	PCB-20	Other forage fish (no mummichog)	10	10	100	5.7	32	15			ug/kg
PCB Congeners	PCB-20	Smallmouth bass	3	3	100	7.5	19	14			ug/kg
PCB Congeners	PCB-20	White catfish	19	19	100	6.6	94	39			ug/kg
PCB Congeners	PCB-20	White perch	22	22	100	7.2	78	44			ug/kg
PCB Congeners	PCB-20	White sucker	5	5	100	14	42	28			ug/kg
PCB Congeners	PCB-20	Worms (all)	19	19	100	0.68	20	4.2			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-20	Worms (estuarine sp.)	5	5	100	0.68	5.8	1.8			ug/kg
PCB Congeners	PCB-20	Worms (freshwater sp.)	14	14	100	0.82	20	5.1			ug/kg
PCB Congeners	PCB-21	American eel (all)	21	11	52.4	0.039	0.39	0.17	0.0054	0.017	ug/kg
PCB Congeners	PCB-21	Blue crab	24	24	100	0.039	0.52	0.23			ug/kg
PCB Congeners	PCB-21	Brown bullhead	6	6	100	0.24	7.5	2.9			ug/kg
PCB Congeners	PCB-21	Carp	12	12	100	2.6	36	16			ug/kg
PCB Congeners	PCB-21	Channel catfish	11	11	100	0.4	2.6	1.2			ug/kg
PCB Congeners	PCB-21	Fish (all)	131	121	92.4	0.039	36	4.9	0.0054	0.017	ug/kg
PCB Congeners	PCB-21	Fish (≤ 11 cm)	23	23	100	0.25	3.6	1.2			ug/kg
PCB Congeners	PCB-21	Fish (≤ 13 cm)	26	26	100	0.25	3.6	1.3			ug/kg
PCB Congeners	PCB-21	Fish (≤ 18 cm)	41	41	100	0.25	17	4.9			ug/kg
PCB Congeners	PCB-21	Fish (≤ 20 cm)	43	43	100	0.25	17	5.4			ug/kg
PCB Congeners	PCB-21	Largemouth bass	3	3	100	1.1	7	4			ug/kg
PCB Congeners	PCB-21	Mummichog	18	18	100	0.25	1.9	0.86			ug/kg
PCB Congeners	PCB-21	Mussel (estuarine)	3	3	100	0.042	0.21	0.12			ug/kg
PCB Congeners	PCB-21	Mussel (freshwater)	5	5	100	0.21	0.54	0.35			ug/kg
PCB Congeners	PCB-21	Northern pike	1	1	100	5.9	5.9				ug/kg
PCB Congeners	PCB-21	Other forage fish (no mummichog)	10	10	100	0.81	4.1	2.3			ug/kg
PCB Congeners	PCB-21	Smallmouth bass	3	3	100	1.4	4.5	3.2			ug/kg
PCB Congeners	PCB-21	White catfish	19	19	100	0.21	3.3	1.5			ug/kg
PCB Congeners	PCB-21	White perch	22	22	100	1.4	19	11			ug/kg
PCB Congeners	PCB-21	White sucker	5	5	100	2.4	9.8	5.8			ug/kg
PCB Congeners	PCB-21	Worms (all)	19	18	94.7	0.034	13	1.7	0.0051	0.0051	ug/kg
PCB Congeners	PCB-21	Worms (estuarine sp.)	5	4	80	0.034	0.33	0.11	0.0051	0.0051	ug/kg
PCB Congeners	PCB-21	Worms (freshwater sp.)	14	14	100	0.26	13	2.2			ug/kg
PCB Congeners	PCB-22	American eel (all)	21	21	100	0.28	2.8	1.2			ug/kg
PCB Congeners	PCB-22	Blue crab	24	24	100	0.051	0.56	0.27			ug/kg
PCB Congeners	PCB-22	Brown bullhead	6	6	100	1	12	4.7			ug/kg
PCB Congeners	PCB-22	Carp	12	12	100	4.5	30	16			ug/kg
PCB Congeners	PCB-22	Channel catfish	11	11	100	0.87	4.4	3			ug/kg
PCB Congeners	PCB-22	Fish (all)	131	131	100	0.28	30	5.4			ug/kg
PCB Congeners	PCB-22	Fish (≤ 11 cm)	23	23	100	1.2	4.5	2.6			ug/kg
PCB Congeners	PCB-22	Fish (≤ 13 cm)	26	26	100	1.2	4.5	2.6			ug/kg
PCB Congeners	PCB-22	Fish (≤ 18 cm)	41	41	100	1.1	14	4.9			ug/kg
PCB Congeners	PCB-22	Fish (≤ 20 cm)	43	43	100	1.1	14	5.3			ug/kg
PCB Congeners	PCB-22	Largemouth bass	3	3	100	0.53	7	3.8			ug/kg
PCB Congeners	PCB-22	Mummichog	18	18	100	1.2	4.5	2.4			ug/kg
PCB Congeners	PCB-22	Mussel (estuarine)	3	3	100	0.035	0.19	0.11			ug/kg
PCB Congeners	PCB-22	Mussel (freshwater)	5	5	100	0.2	0.38	0.28			ug/kg
PCB Congeners	PCB-22	Northern pike	1	1	100	5.9	5.9				ug/kg
PCB Congeners	PCB-22	Other forage fish (no mummichog)	10	10	100	1.1	5.9	2.9			ug/kg
PCB Congeners	PCB-22	Smallmouth bass	3	3	100	1.6	3.9	2.9			ug/kg
PCB Congeners	PCB-22	White catfish	19	19	100	1.1	15	5.9			ug/kg
PCB Congeners	PCB-22	White perch	22	22	100	1.3	17	9.1			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-22	White sucker	5	5	100	2.4	7.4	4.6			ug/kg
PCB Congeners	PCB-22	Worms (all)	19	19	100	0.11	6.7	1.1			ug/kg
PCB Congeners	PCB-22	Worms (estuarine sp.)	5	5	100	0.11	1.3	0.39			ug/kg
PCB Congeners	PCB-22	Worms (freshwater sp.)	14	14	100	0.21	6.7	1.4			ug/kg
PCB Congeners	PCB-23	American eel (all)	21	0	0				0.0033	0.019	ug/kg
PCB Congeners	PCB-23	Blue crab	24	0	0				0.0049	0.011	ug/kg
PCB Congeners	PCB-23	Brown bullhead	6	2	33.3	0.0066	0.022	0.014	0.004	0.01	ug/kg
PCB Congeners	PCB-23	Carp	12	11	91.7	0.022	0.18	0.08	0.0069	0.0069	ug/kg
PCB Congeners	PCB-23	Channel catfish	11	2	18.2	0.016	0.017	0.017	0.0034	0.0068	ug/kg
PCB Congeners	PCB-23	Fish (all)	131	89	67.9	0.0035	0.18	0.028	0.0028	0.019	ug/kg
PCB Congeners	PCB-23	Fish (≤ 11 cm)	23	21	91.3	0.0056	0.021	0.0097	0.0028	0.0044	ug/kg
PCB Congeners	PCB-23	Fish (≤ 13 cm)	26	24	92.3	0.0056	0.021	0.0096	0.0028	0.0044	ug/kg
PCB Congeners	PCB-23	Fish (≤ 18 cm)	41	39	95.1	0.0035	0.055	0.019	0.0028	0.0044	ug/kg
PCB Congeners	PCB-23	Fish (≤ 20 cm)	43	41	95.3	0.0035	0.056	0.021	0.0028	0.0044	ug/kg
PCB Congeners	PCB-23	Largemouth bass	3	2	66.7	0.015	0.029	0.022	0.0061	0.0061	ug/kg
PCB Congeners	PCB-23	Mummichog	18	17	94.4	0.0056	0.021	0.01	0.0028	0.0028	ug/kg
PCB Congeners	PCB-23	Mussel (estuarine)	3	2	66.7	0.00036	0.00084	0.0006	0.00027	0.00027	ug/kg
PCB Congeners	PCB-23	Mussel (freshwater)	5	1	20	0.0015	0.0015		0.00056	0.00096	ug/kg
PCB Congeners	PCB-23	Northern pike	1	1	100	0.0041	0.0041				ug/kg
PCB Congeners	PCB-23	Other forage fish (no mummichog)	10	9	90	0.0035	0.02	0.0091	0.0044	0.0044	ug/kg
PCB Congeners	PCB-23	Smallmouth bass	3	3	100	0.006	0.014	0.011			ug/kg
PCB Congeners	PCB-23	White catfish	19	16	84.2	0.0043	0.052	0.025	0.0035	0.0069	ug/kg
PCB Congeners	PCB-23	White perch	22	21	95.5	0.0072	0.056	0.036	0.0077	0.0077	ug/kg
PCB Congeners	PCB-23	White sucker	5	5	100	0.011	0.025	0.018			ug/kg
PCB Congeners	PCB-23	Worms (all)	19	2	10.5	0.0052	0.026	0.016	0.0046	0.012	ug/kg
PCB Congeners	PCB-23	Worms (estuarine sp.)	5	1	20	0.0052	0.0052		0.0052	0.0078	ug/kg
PCB Congeners	PCB-23	Worms (freshwater sp.)	14	1	7.1	0.026	0.026		0.0046	0.012	ug/kg
PCB Congeners	PCB-24	American eel (all)	21	16	76.2	0.0054	0.057	0.022	0.0013	0.0034	ug/kg
PCB Congeners	PCB-24	Blue crab	24	0	0				0.0016	0.0059	ug/kg
PCB Congeners	PCB-24	Brown bullhead	6	6	100	0.041	0.35	0.17			ug/kg
PCB Congeners	PCB-24	Carp	12	12	100	0.2	1.2	0.7			ug/kg
PCB Congeners	PCB-24	Channel catfish	11	11	100	0.098	0.31	0.17			ug/kg
PCB Congeners	PCB-24	Fish (all)	131	125	95.4	0.0054	1.2	0.18	0.0013	0.0034	ug/kg
PCB Congeners	PCB-24	Fish (≤ 11 cm)	23	23	100	0.0062	0.13	0.044			ug/kg
PCB Congeners	PCB-24	Fish (≤ 13 cm)	26	26	100	0.0062	0.13	0.047			ug/kg
PCB Congeners	PCB-24	Fish (≤ 18 cm)	41	41	100	0.0062	0.36	0.11			ug/kg
PCB Congeners	PCB-24	Fish (≤ 20 cm)	43	43	100	0.0062	0.36	0.11			ug/kg
PCB Congeners	PCB-24	Largemouth bass	3	3	100	0.019	0.18	0.11			ug/kg
PCB Congeners	PCB-24	Mummichog	18	18	100	0.0062	0.062	0.03			ug/kg
PCB Congeners	PCB-24	Mussel (estuarine)	3	3	100	0.0017	0.0074	0.0043			ug/kg
PCB Congeners	PCB-24	Mussel (freshwater)	5	5	100	0.0085	0.012	0.011			ug/kg
PCB Congeners	PCB-24	Northern pike	1	1	100	0.21	0.21				ug/kg
PCB Congeners	PCB-24	Other forage fish (no mummichog)	10	10	100	0.028	0.15	0.085			ug/kg
PCB Congeners	PCB-24	Smallmouth bass	3	3	100	0.058	0.13	0.099			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-24	White catfish	19	19	100	0.064	0.35	0.18			ug/kg
PCB Congeners	PCB-24	White perch	22	21	95.5	0.032	0.36	0.21	0.0016	0.0016	ug/kg
PCB Congeners	PCB-24	White sucker	5	5	100	0.1	0.24	0.17			ug/kg
PCB Congeners	PCB-24	Worms (all)	19	15	78.9	0.0058	0.11	0.026	0.0019	0.0028	ug/kg
PCB Congeners	PCB-24	Worms (estuarine sp.)	5	4	80	0.0069	0.086	0.027	0.0019	0.0019	ug/kg
PCB Congeners	PCB-24	Worms (freshwater sp.)	14	11	78.6	0.0058	0.11	0.026	0.0026	0.0028	ug/kg
PCB Congeners	PCB-25	American eel (all)	21	21	100	0.041	0.44	0.2			ug/kg
PCB Congeners	PCB-25	Blue crab	24	24	100	0.037	0.24	0.12			ug/kg
PCB Congeners	PCB-25	Brown bullhead	6	6	100	0.11	1.3	0.53			ug/kg
PCB Congeners	PCB-25	Carp	12	12	100	1.6	9.3	4.7			ug/kg
PCB Congeners	PCB-25	Channel catfish	11	11	100	0.19	1.4	0.58			ug/kg
PCB Congeners	PCB-25	Fish (all)	131	131	100	0.041	9.3	1.6			ug/kg
PCB Congeners	PCB-25	Fish (≤ 11 cm)	23	23	100	0.37	1.9	0.95			ug/kg
PCB Congeners	PCB-25	Fish (≤ 13 cm)	26	26	100	0.37	1.9	1			ug/kg
PCB Congeners	PCB-25	Fish (≤ 18 cm)	41	41	100	0.37	6.2	2			ug/kg
PCB Congeners	PCB-25	Fish (≤ 20 cm)	43	43	100	0.37	6.8	2.2			ug/kg
PCB Congeners	PCB-25	Largemouth bass	3	3	100	0.34	2.5	1.4			ug/kg
PCB Congeners	PCB-25	Mummichog	18	18	100	0.37	1.9	0.87			ug/kg
PCB Congeners	PCB-25	Mussel (estuarine)	3	3	100	0.02	0.12	0.066			ug/kg
PCB Congeners	PCB-25	Mussel (freshwater)	5	5	100	0.11	0.17	0.14			ug/kg
PCB Congeners	PCB-25	Northern pike	1	1	100	2.9	2.9				ug/kg
PCB Congeners	PCB-25	Other forage fish (no mummichog)	10	10	100	0.59	2.8	1.3			ug/kg
PCB Congeners	PCB-25	Smallmouth bass	3	3	100	0.6	1.5	1.1			ug/kg
PCB Congeners	PCB-25	White catfish	19	19	100	0.053	1.8	0.5			ug/kg
PCB Congeners	PCB-25	White perch	22	22	100	0.55	7.1	4			ug/kg
PCB Congeners	PCB-25	White sucker	5	5	100	0.8	2.7	1.4			ug/kg
PCB Congeners	PCB-25	Worms (all)	19	19	100	0.045	1.5	0.41			ug/kg
PCB Congeners	PCB-25	Worms (estuarine sp.)	5	5	100	0.045	0.31	0.12			ug/kg
PCB Congeners	PCB-25	Worms (freshwater sp.)	14	14	100	0.083	1.5	0.51			ug/kg
PCB Congeners	PCB-26	American eel (all)	21	21	100	0.43	3.3	1.6			ug/kg
PCB Congeners	PCB-26	Blue crab	24	24	100	0.06	0.43	0.19			ug/kg
PCB Congeners	PCB-26	Brown bullhead	6	6	100	0.5	10	2.9			ug/kg
PCB Congeners	PCB-26	Carp	12	12	100	4.6	23	14			ug/kg
PCB Congeners	PCB-26	Channel catfish	11	11	100	0.47	2.9	1.5			ug/kg
PCB Congeners	PCB-26	Fish (all)	131	131	100	0.31	23	4			ug/kg
PCB Congeners	PCB-26	Fish (≤ 11 cm)	23	23	100	0.73	3.6	1.9			ug/kg
PCB Congeners	PCB-26	Fish (≤ 13 cm)	26	26	100	0.73	3.6	1.9			ug/kg
PCB Congeners	PCB-26	Fish (≤ 18 cm)	41	41	100	0.73	11	3.8			ug/kg
PCB Congeners	PCB-26	Fish (≤ 20 cm)	43	43	100	0.73	13	4.1			ug/kg
PCB Congeners	PCB-26	Largemouth bass	3	3	100	1.1	4.9	3			ug/kg
PCB Congeners	PCB-26	Mummichog	18	18	100	0.73	3.6	1.7			ug/kg
PCB Congeners	PCB-26	Mussel (estuarine)	3	3	100	0.03	0.21	0.11			ug/kg
PCB Congeners	PCB-26	Mussel (freshwater)	5	5	100	0.18	0.29	0.23			ug/kg
PCB Congeners	PCB-26	Northern pike	1	1	100	5.8	5.8				ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-26	Other forage fish (no mummichog)	10	10	100	0.97	5.1	2.5			ug/kg
PCB Congeners	PCB-26	Smallmouth bass	3	3	100	1.2	3.1	2.2			ug/kg
PCB Congeners	PCB-26	White catfish	19	19	100	0.31	7.5	2.4			ug/kg
PCB Congeners	PCB-26	White perch	22	22	100	1.1	13	7.2			ug/kg
PCB Congeners	PCB-26	White sucker	5	5	100	1.7	5.3	3.1			ug/kg
PCB Congeners	PCB-26	Worms (all)	19	19	100	0.066	3.3	0.68			ug/kg
PCB Congeners	PCB-26	Worms (estuarine sp.)	5	5	100	0.066	0.58	0.19			ug/kg
PCB Congeners	PCB-26	Worms (freshwater sp.)	14	14	100	0.13	3.3	0.86			ug/kg
PCB Congeners	PCB-27	American eel (all)	21	21	100	0.015	0.25	0.079			ug/kg
PCB Congeners	PCB-27	Blue crab	24	24	100	0.0095	0.12	0.051			ug/kg
PCB Congeners	PCB-27	Brown bullhead	6	6	100	0.098	2	0.9			ug/kg
PCB Congeners	PCB-27	Carp	12	12	100	0.6	10	5.6			ug/kg
PCB Congeners	PCB-27	Channel catfish	11	11	100	0.17	1.5	0.97			ug/kg
PCB Congeners	PCB-27	Fish (all)	131	131	100	0.015	10	1.3			ug/kg
PCB Congeners	PCB-27	Fish (≤ 11 cm)	23	23	100	0.082	1.1	0.48			ug/kg
PCB Congeners	PCB-27	Fish (≤ 13 cm)	26	26	100	0.082	1.1	0.5			ug/kg
PCB Congeners	PCB-27	Fish (≤ 18 cm)	41	41	100	0.082	3.2	1			ug/kg
PCB Congeners	PCB-27	Fish (≤ 20 cm)	43	43	100	0.082	3.2	1.1			ug/kg
PCB Congeners	PCB-27	Largemouth bass	3	3	100	0.12	1.4	0.79			ug/kg
PCB Congeners	PCB-27	Mummichog	18	18	100	0.17	1.1	0.51			ug/kg
PCB Congeners	PCB-27	Mussel (estuarine)	3	3	100	0.014	0.082	0.046			ug/kg
PCB Congeners	PCB-27	Mussel (freshwater)	5	5	100	0.06	0.088	0.075			ug/kg
PCB Congeners	PCB-27	Northern pike	1	1	100	1.4	1.4				ug/kg
PCB Congeners	PCB-27	Other forage fish (no mummichog)	10	10	100	0.082	1.1	0.49			ug/kg
PCB Congeners	PCB-27	Smallmouth bass	3	3	100	0.34	0.84	0.67			ug/kg
PCB Congeners	PCB-27	White catfish	19	19	100	0.11	1.6	0.53			ug/kg
PCB Congeners	PCB-27	White perch	22	22	100	0.21	4.7	2.1			ug/kg
PCB Congeners	PCB-27	White sucker	5	5	100	0.64	2.2	1.4			ug/kg
PCB Congeners	PCB-27	Worms (all)	19	19	100	0.056	1.3	0.28			ug/kg
PCB Congeners	PCB-27	Worms (estuarine sp.)	5	5	100	0.056	0.46	0.15			ug/kg
PCB Congeners	PCB-27	Worms (freshwater sp.)	14	14	100	0.069	1.3	0.32			ug/kg
PCB Congeners	PCB-31	American eel (all)	21	21	100	1.3	9.6	4.7			ug/kg
PCB Congeners	PCB-31	Blue crab	24	24	100	0.21	1.7	0.78			ug/kg
PCB Congeners	PCB-31	Brown bullhead	6	6	100	1.2	8.7	4.4			ug/kg
PCB Congeners	PCB-31	Carp	12	12	100	12	72	38			ug/kg
PCB Congeners	PCB-31	Channel catfish	11	11	100	1.1	11	4.2			ug/kg
PCB Congeners	PCB-31	Fish (all)	131	131	100	0.5	72	13			ug/kg
PCB Congeners	PCB-31	Fish (≤ 11 cm)	23	23	100	4.3	16	8.7			ug/kg
PCB Congeners	PCB-31	Fish (≤ 13 cm)	26	26	100	4.3	16	8.8			ug/kg
PCB Congeners	PCB-31	Fish (≤ 18 cm)	41	41	100	3.7	42	15			ug/kg
PCB Congeners	PCB-31	Fish (≤ 20 cm)	43	43	100	3.7	45	17			ug/kg
PCB Congeners	PCB-31	Largemouth bass	3	3	100	3	17	10			ug/kg
PCB Congeners	PCB-31	Mummichog	18	18	100	4.3	16	8.5			ug/kg
PCB Congeners	PCB-31	Mussel (estuarine)	3	3	100	0.12	0.69	0.38			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-31	Mussel (freshwater)	5	5	100	0.61	1.3	0.92			ug/kg
PCB Congeners	PCB-31	Northern pike	1	1	100	19	19				ug/kg
PCB Congeners	PCB-31	Other forage fish (no mummichog)	10	10	100	3.7	21	9.5			ug/kg
PCB Congeners	PCB-31	Smallmouth bass	3	3	100	3.7	9.7	7			ug/kg
PCB Congeners	PCB-31	White catfish	19	19	100	0.5	16	4.6			ug/kg
PCB Congeners	PCB-31	White perch	22	22	100	3.9	51	28			ug/kg
PCB Congeners	PCB-31	White sucker	5	5	100	6.7	22	13			ug/kg
PCB Congeners	PCB-31	Worms (all)	19	19	100	0.13	17	2.9			ug/kg
PCB Congeners	PCB-31	Worms (estuarine sp.)	5	5	100	0.13	1.7	0.51			ug/kg
PCB Congeners	PCB-31	Worms (freshwater sp.)	14	14	100	0.5	17	3.8			ug/kg
PCB Congeners	PCB-32	American eel (all)	21	21	100	0.11	1.7	0.58			ug/kg
PCB Congeners	PCB-32	Blue crab	24	24	100	0.041	0.54	0.24			ug/kg
PCB Congeners	PCB-32	Brown bullhead	6	6	100	1	9.5	3.9			ug/kg
PCB Congeners	PCB-32	Carp	12	12	100	2.8	41	22			ug/kg
PCB Congeners	PCB-32	Channel catfish	11	11	100	0.92	5.4	3.5			ug/kg
PCB Congeners	PCB-32	Fish (all)	131	131	100	0.11	41	5.1			ug/kg
PCB Congeners	PCB-32	Fish (≤ 11 cm)	23	23	100	0.32	5.3	2.5			ug/kg
PCB Congeners	PCB-32	Fish (≤ 13 cm)	26	26	100	0.32	5.3	2.5			ug/kg
PCB Congeners	PCB-32	Fish (≤ 18 cm)	41	41	100	0.32	12	4			ug/kg
PCB Congeners	PCB-32	Fish (≤ 20 cm)	43	43	100	0.32	12	4.3			ug/kg
PCB Congeners	PCB-32	Largemouth bass	3	3	100	0.53	6.5	3.5			ug/kg
PCB Congeners	PCB-32	Mummichog	18	18	100	1.1	5.3	2.8			ug/kg
PCB Congeners	PCB-32	Mussel (estuarine)	3	3	100	0.047	0.25	0.15			ug/kg
PCB Congeners	PCB-32	Mussel (freshwater)	5	5	100	0.23	0.38	0.3			ug/kg
PCB Congeners	PCB-32	Northern pike	1	1	100	5.5	5.5				ug/kg
PCB Congeners	PCB-32	Other forage fish (no mummichog)	10	10	100	0.32	3.6	1.8			ug/kg
PCB Congeners	PCB-32	Smallmouth bass	3	3	100	1.4	3.6	2.8			ug/kg
PCB Congeners	PCB-32	White catfish	19	19	100	0.9	7.3	2.8			ug/kg
PCB Congeners	PCB-32	White perch	22	22	100	0.84	17	7.3			ug/kg
PCB Congeners	PCB-32	White sucker	5	5	100	2.7	8.8	5.7			ug/kg
PCB Congeners	PCB-32	Worms (all)	19	19	100	0.11	5.4	1.1			ug/kg
PCB Congeners	PCB-32	Worms (estuarine sp.)	5	5	100	0.11	1.5	0.43			ug/kg
PCB Congeners	PCB-32	Worms (freshwater sp.)	14	14	100	0.27	5.4	1.4			ug/kg
PCB Congeners	PCB-34	American eel (all)	21	14	66.7	0.0069	0.13	0.047	0.0036	0.01	ug/kg
PCB Congeners	PCB-34	Blue crab	24	20	83.3	0.0069	0.033	0.02	0.0044	0.0099	ug/kg
PCB Congeners	PCB-34	Brown bullhead	6	6	100	0.03	0.57	0.16			ug/kg
PCB Congeners	PCB-34	Carp	12	12	100	0.15	1.4	0.68			ug/kg
PCB Congeners	PCB-34	Channel catfish	11	11	100	0.076	0.29	0.15			ug/kg
PCB Congeners	PCB-34	Fish (all)	131	124	94.7	0.0069	1.4	0.21	0.0036	0.01	ug/kg
PCB Congeners	PCB-34	Fish (≤ 11 cm)	23	23	100	0.028	0.15	0.073			ug/kg
PCB Congeners	PCB-34	Fish (≤ 13 cm)	26	26	100	0.028	0.15	0.074			ug/kg
PCB Congeners	PCB-34	Fish (≤ 18 cm)	41	41	100	0.016	0.44	0.14			ug/kg
PCB Congeners	PCB-34	Fish (≤ 20 cm)	43	43	100	0.016	0.51	0.16			ug/kg
PCB Congeners	PCB-34	Largemouth bass	3	3	100	0.034	0.17	0.11			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-34	Mummichog	18	18	100	0.028	0.15	0.07			ug/kg
PCB Congeners	PCB-34	Mussel (estuarine)	3	3	100	0.0012	0.0095	0.0048			ug/kg
PCB Congeners	PCB-34	Mussel (freshwater)	5	5	100	0.0061	0.01	0.0082			ug/kg
PCB Congeners	PCB-34	Northern pike	1	1	100	0.23	0.23				ug/kg
PCB Congeners	PCB-34	Other forage fish (no mummichog)	10	10	100	0.016	0.14	0.079			ug/kg
PCB Congeners	PCB-34	Smallmouth bass	3	3	100	0.034	0.1	0.073			ug/kg
PCB Congeners	PCB-34	White catfish	19	19	100	0.041	0.6	0.26			ug/kg
PCB Congeners	PCB-34	White perch	22	22	100	0.036	0.51	0.28			ug/kg
PCB Congeners	PCB-34	White sucker	5	5	100	0.06	0.23	0.15			ug/kg
PCB Congeners	PCB-34	Worms (all)	19	16	84.2	0.0046	0.21	0.04	0.0048	0.007	ug/kg
PCB Congeners	PCB-34	Worms (estuarine sp.)	5	2	40	0.0046	0.043	0.024	0.0048	0.007	ug/kg
PCB Congeners	PCB-34	Worms (freshwater sp.)	14	14	100	0.0056	0.21	0.042			ug/kg
PCB Congeners	PCB-35	American eel (all)	21	0	0				0.0032	0.019	ug/kg
PCB Congeners	PCB-35	Blue crab	24	9	37.5	0.0095	0.018	0.013	0.0048	0.011	ug/kg
PCB Congeners	PCB-35	Brown bullhead	6	0	0				0.0039	0.0098	ug/kg
PCB Congeners	PCB-35	Carp	12	0	0				0.0042	0.022	ug/kg
PCB Congeners	PCB-35	Channel catfish	11	0	0				0.003	0.0059	ug/kg
PCB Congeners	PCB-35	Fish (all)	131	38	29	0.0021	0.072	0.019	0.0012	0.022	ug/kg
PCB Congeners	PCB-35	Fish (≤ 11 cm)	23	19	82.6	0.0021	0.014	0.0066	0.0015	0.004	ug/kg
PCB Congeners	PCB-35	Fish (≤ 13 cm)	26	21	80.8	0.0021	0.038	0.0084	0.0015	0.004	ug/kg
PCB Congeners	PCB-35	Fish (≤ 18 cm)	41	31	75.6	0.0021	0.049	0.014	0.0015	0.013	ug/kg
PCB Congeners	PCB-35	Fish (≤ 20 cm)	43	33	76.7	0.0021	0.072	0.017	0.0015	0.013	ug/kg
PCB Congeners	PCB-35	Largemouth bass	3	0	0				0.0013	0.0055	ug/kg
PCB Congeners	PCB-35	Mummichog	18	15	83.3	0.0021	0.014	0.0059	0.0015	0.0025	ug/kg
PCB Congeners	PCB-35	Mussel (estuarine)	3	3	100	0.0021	0.011	0.0061			ug/kg
PCB Congeners	PCB-35	Mussel (freshwater)	5	5	100	0.0098	0.021	0.016			ug/kg
PCB Congeners	PCB-35	Northern pike	1	0	0				0.0021	0.0021	ug/kg
PCB Congeners	PCB-35	Other forage fish (no mummichog)	10	8	80	0.0039	0.038	0.013	0.0025	0.004	ug/kg
PCB Congeners	PCB-35	Smallmouth bass	3	0	0				0.0014	0.0018	ug/kg
PCB Congeners	PCB-35	White catfish	19	0	0				0.0012	0.0073	ug/kg
PCB Congeners	PCB-35	White perch	22	15	68.2	0.011	0.072	0.035	0.0039	0.013	ug/kg
PCB Congeners	PCB-35	White sucker	5	0	0				0.0021	0.0035	ug/kg
PCB Congeners	PCB-35	Worms (all)	19	19	100	0.0069	0.28	0.058			ug/kg
PCB Congeners	PCB-35	Worms (estuarine sp.)	5	5	100	0.0069	0.047	0.017			ug/kg
PCB Congeners	PCB-35	Worms (freshwater sp.)	14	14	100	0.014	0.28	0.073			ug/kg
PCB Congeners	PCB-36	American eel (all)	21	0	0				0.0028	0.016	ug/kg
PCB Congeners	PCB-36	Blue crab	24	0	0				0.0041	0.0092	ug/kg
PCB Congeners	PCB-36	Brown bullhead	6	0	0				0.0033	0.0084	ug/kg
PCB Congeners	PCB-36	Carp	12	0	0				0.0035	0.018	ug/kg
PCB Congeners	PCB-36	Channel catfish	11	0	0				0.0027	0.0054	ug/kg
PCB Congeners	PCB-36	Fish (all)	131	0	0				0.00097	0.018	ug/kg
PCB Congeners	PCB-36	Fish (≤ 11 cm)	23	0	0				0.0012	0.0035	ug/kg
PCB Congeners	PCB-36	Fish (≤ 13 cm)	26	0	0				0.0012	0.0035	ug/kg
PCB Congeners	PCB-36	Fish (≤ 18 cm)	41	0	0				0.0012	0.015	ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-36	Fish (≤ 20 cm)	43	0	0				0.0012	0.015	ug/kg
PCB Congeners	PCB-36	Largemouth bass	3	0	0				0.0011	0.0048	ug/kg
PCB Congeners	PCB-36	Mummichog	18	0	0				0.0012	0.0031	ug/kg
PCB Congeners	PCB-36	Mussel (estuarine)	3	2	66.7	0.00064	0.0017	0.0012	0.00027	0.00027	ug/kg
PCB Congeners	PCB-36	Mussel (freshwater)	5	3	60	0.001	0.0012	0.0011	0.00054	0.00083	ug/kg
PCB Congeners	PCB-36	Northern pike	1	0	0				0.0017	0.0017	ug/kg
PCB Congeners	PCB-36	Other forage fish (no mummichog)	10	0	0				0.0016	0.0045	ug/kg
PCB Congeners	PCB-36	Smallmouth bass	3	0	0				0.0012	0.0016	ug/kg
PCB Congeners	PCB-36	White catfish	19	0	0				0.00097	0.0065	ug/kg
PCB Congeners	PCB-36	White perch	22	0	0				0.0026	0.015	ug/kg
PCB Congeners	PCB-36	White sucker	5	0	0				0.0017	0.003	ug/kg
PCB Congeners	PCB-36	Worms (all)	19	0	0				0.0036	0.016	ug/kg
PCB Congeners	PCB-36	Worms (estuarine sp.)	5	0	0				0.0041	0.0089	ug/kg
PCB Congeners	PCB-36	Worms (freshwater sp.)	14	0	0				0.0036	0.016	ug/kg
PCB Congeners	PCB-37	American eel (all)	21	0	0				0.0042	0.024	ug/kg
PCB Congeners	PCB-37	Blue crab	24	24	100	1.5	3.7	2.5			ug/kg
PCB Congeners	PCB-37	Brown bullhead	6	6	100	0.13	0.66	0.36			ug/kg
PCB Congeners	PCB-37	Carp	12	12	100	0.55	2.4	1.4			ug/kg
PCB Congeners	PCB-37	Channel catfish	11	2	18.2	0.039	0.38	0.21	0.0042	0.008	ug/kg
PCB Congeners	PCB-37	Fish (all)	131	90	68.7	0.013	7.6	1.4	0.0016	0.024	ug/kg
PCB Congeners	PCB-37	Fish (≤ 11 cm)	23	23	100	0.13	3	0.55			ug/kg
PCB Congeners	PCB-37	Fish (≤ 13 cm)	26	26	100	0.13	3	0.57			ug/kg
PCB Congeners	PCB-37	Fish (≤ 18 cm)	41	41	100	0.13	5.8	1.5			ug/kg
PCB Congeners	PCB-37	Fish (≤ 20 cm)	43	43	100	0.13	5.8	1.6			ug/kg
PCB Congeners	PCB-37	Largemouth bass	3	3	100	0.56	1.1	0.8			ug/kg
PCB Congeners	PCB-37	Mummichog	18	18	100	0.13	0.7	0.34			ug/kg
PCB Congeners	PCB-37	Mussel (estuarine)	3	3	100	0.025	0.13	0.072			ug/kg
PCB Congeners	PCB-37	Mussel (freshwater)	5	5	100	0.16	0.3	0.22			ug/kg
PCB Congeners	PCB-37	Northern pike	1	1	100	1.2	1.2				ug/kg
PCB Congeners	PCB-37	Other forage fish (no mummichog)	10	10	100	0.25	3	1			ug/kg
PCB Congeners	PCB-37	Smallmouth bass	3	3	100	0.44	0.63	0.56			ug/kg
PCB Congeners	PCB-37	White catfish	19	8	42.1	0.013	1	0.3	0.0016	0.0097	ug/kg
PCB Congeners	PCB-37	White perch	22	22	100	0.46	7.6	3.5			ug/kg
PCB Congeners	PCB-37	White sucker	5	5	100	1.2	2.4	1.5			ug/kg
PCB Congeners	PCB-37	Worms (all)	19	19	100	0.22	4.9	0.97			ug/kg
PCB Congeners	PCB-37	Worms (estuarine sp.)	5	5	100	0.22	1.4	0.49			ug/kg
PCB Congeners	PCB-37	Worms (freshwater sp.)	14	14	100	0.23	4.9	1.1			ug/kg
PCB Congeners	PCB-38	American eel (all)	21	1	4.8	0.073	0.073		0.0034	0.019	ug/kg
PCB Congeners	PCB-38	Blue crab	24	0	0				0.0048	0.011	ug/kg
PCB Congeners	PCB-38	Brown bullhead	6	2	33.3	0.015	0.073	0.044	0.004	0.0098	ug/kg
PCB Congeners	PCB-38	Carp	12	11	91.7	0.071	0.42	0.2	0.0052	0.0052	ug/kg
PCB Congeners	PCB-38	Channel catfish	11	10	90.9	0.0057	0.018	0.0099	0.0048	0.0048	ug/kg
PCB Congeners	PCB-38	Fish (all)	131	83	63.4	0.0037	0.42	0.049	0.0013	0.019	ug/kg
PCB Congeners	PCB-38	Fish (≤ 11 cm)	23	21	91.3	0.004	0.024	0.012	0.0031	0.0036	ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-38	Fish (≤ 13 cm)	26	24	92.3	0.004	0.024	0.012	0.0031	0.0036	ug/kg
PCB Congeners	PCB-38	Fish (≤ 18 cm)	41	34	82.9	0.0037	0.05	0.019	0.0024	0.012	ug/kg
PCB Congeners	PCB-38	Fish (≤ 20 cm)	43	36	83.7	0.0037	0.064	0.021	0.0024	0.012	ug/kg
PCB Congeners	PCB-38	Largemouth bass	3	2	66.7	0.036	0.074	0.055	0.0055	0.0055	ug/kg
PCB Congeners	PCB-38	Mummichog	18	17	94.4	0.004	0.024	0.012	0.0036	0.0036	ug/kg
PCB Congeners	PCB-38	Mussel (estuarine)	3	0	0				0.00024	0.00065	ug/kg
PCB Congeners	PCB-38	Mussel (freshwater)	5	1	20	0.00093	0.00093		0.00057	0.00086	ug/kg
PCB Congeners	PCB-38	Northern pike	1	1	100	0.071	0.071				ug/kg
PCB Congeners	PCB-38	Other forage fish (no mummichog)	10	9	90	0.0037	0.026	0.014	0.0024	0.0024	ug/kg
PCB Congeners	PCB-38	Smallmouth bass	3	3	100	0.017	0.035	0.024			ug/kg
PCB Congeners	PCB-38	White catfish	19	12	63.2	0.0068	0.11	0.036	0.0013	0.0057	ug/kg
PCB Congeners	PCB-38	White perch	22	15	68.2	0.022	0.075	0.042	0.0031	0.012	ug/kg
PCB Congeners	PCB-38	White sucker	5	0	0				0.0021	0.0036	ug/kg
PCB Congeners	PCB-38	Worms (all)	19	0	0				0.0044	0.019	ug/kg
PCB Congeners	PCB-38	Worms (estuarine sp.)	5	0	0				0.0052	0.011	ug/kg
PCB Congeners	PCB-38	Worms (freshwater sp.)	14	0	0				0.0044	0.019	ug/kg
PCB Congeners	PCB-39	American eel (all)	21	0	0				0.0032	0.018	ug/kg
PCB Congeners	PCB-39	Blue crab	24	17	70.8	0.013	0.038	0.024	0.0047	0.011	ug/kg
PCB Congeners	PCB-39	Brown bullhead	6	4	66.7	0.022	0.19	0.072	0.0059	0.0095	ug/kg
PCB Congeners	PCB-39	Carp	12	1	8.3	0.09	0.09		0.0041	0.022	ug/kg
PCB Congeners	PCB-39	Channel catfish	11	11	100	0.0071	0.027	0.013			ug/kg
PCB Congeners	PCB-39	Fish (all)	131	42	32.1	0.0025	0.25	0.094	0.0012	0.022	ug/kg
PCB Congeners	PCB-39	Fish (≤ 11 cm)	23	1	4.3	0.0025	0.0025		0.0013	0.004	ug/kg
PCB Congeners	PCB-39	Fish (≤ 13 cm)	26	1	3.8	0.0025	0.0025		0.0013	0.004	ug/kg
PCB Congeners	PCB-39	Fish (≤ 18 cm)	41	10	24.4	0.0025	0.25	0.15	0.0013	0.011	ug/kg
PCB Congeners	PCB-39	Fish (≤ 20 cm)	43	12	27.9	0.0025	0.25	0.17	0.0013	0.011	ug/kg
PCB Congeners	PCB-39	Largemouth bass	3	3	100	0.055	0.19	0.11			ug/kg
PCB Congeners	PCB-39	Mummichog	18	1	5.6	0.0025	0.0025		0.0013	0.0035	ug/kg
PCB Congeners	PCB-39	Mussel (estuarine)	3	3	100	0.00094	0.0049	0.0027			ug/kg
PCB Congeners	PCB-39	Mussel (freshwater)	5	5	100	0.0036	0.0077	0.006			ug/kg
PCB Congeners	PCB-39	Northern pike	1	1	100	0.19	0.19				ug/kg
PCB Congeners	PCB-39	Other forage fish (no mummichog)	10	1	10	0.015	0.015		0.0022	0.0051	ug/kg
PCB Congeners	PCB-39	Smallmouth bass	3	3	100	0.039	0.13	0.076			ug/kg
PCB Congeners	PCB-39	White catfish	19	4	21.1	0.062	0.22	0.13	0.0012	0.0073	ug/kg
PCB Congeners	PCB-39	White perch	22	13	59.1	0.016	0.25	0.17	0.0029	0.011	ug/kg
PCB Congeners	PCB-39	White sucker	5	0	0				0.002	0.0035	ug/kg
PCB Congeners	PCB-39	Worms (all)	19	6	31.6	0.016	0.16	0.052	0.0042	0.012	ug/kg
PCB Congeners	PCB-39	Worms (estuarine sp.)	5	1	20	0.048	0.048		0.0048	0.0073	ug/kg
PCB Congeners	PCB-39	Worms (freshwater sp.)	14	5	35.7	0.016	0.16	0.053	0.0042	0.012	ug/kg
PCB Congeners	PCB-40	American eel (all)	21	20	95.2	0.24	5	1.7	0.0043	0.0043	ug/kg
PCB Congeners	PCB-40	Blue crab	24	24	100	0.19	1.5	0.84			ug/kg
PCB Congeners	PCB-40	Brown bullhead	6	6	100	1.4	31	11			ug/kg
PCB Congeners	PCB-40	Carp	12	12	100	5.5	110	52			ug/kg
PCB Congeners	PCB-40	Channel catfish	11	11	100	0.84	9.5	4.9			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-40	Fish (all)	131	130	99.2	0.24	110	13	0.0043	0.0043	ug/kg
PCB Congeners	PCB-40	Fish (≤ 11 cm)	23	23	100	1.5	11	5.4			ug/kg
PCB Congeners	PCB-40	Fish (≤ 13 cm)	26	26	100	1.5	11	5.5			ug/kg
PCB Congeners	PCB-40	Fish (≤ 18 cm)	41	41	100	1.2	35	11			ug/kg
PCB Congeners	PCB-40	Fish (≤ 20 cm)	43	43	100	1.2	42	12			ug/kg
PCB Congeners	PCB-40	Largemouth bass	3	3	100	4.3	18	10			ug/kg
PCB Congeners	PCB-40	Mummichog	18	18	100	2.2	11	5.7			ug/kg
PCB Congeners	PCB-40	Mussel (estuarine)	3	3	100	0.053	0.43	0.22			ug/kg
PCB Congeners	PCB-40	Mussel (freshwater)	5	5	100	0.32	0.55	0.44			ug/kg
PCB Congeners	PCB-40	Northern pike	1	1	100	15	15				ug/kg
PCB Congeners	PCB-40	Other forage fish (no mummichog)	10	10	100	1.2	9	4.8			ug/kg
PCB Congeners	PCB-40	Smallmouth bass	3	3	100	3.6	9.8	6.6			ug/kg
PCB Congeners	PCB-40	White catfish	19	19	100	1.9	19	9.1			ug/kg
PCB Congeners	PCB-40	White perch	22	22	100	2.9	42	22			ug/kg
PCB Congeners	PCB-40	White sucker	5	5	100	4.4	23	13			ug/kg
PCB Congeners	PCB-40	Worms (all)	19	19	100	0.16	10	2.3			ug/kg
PCB Congeners	PCB-40	Worms (estuarine sp.)	5	5	100	0.16	1.7	0.52			ug/kg
PCB Congeners	PCB-40	Worms (freshwater sp.)	14	14	100	0.91	10	3			ug/kg
PCB Congeners	PCB-41	American eel (all)	21	1	4.8	0.61	0.61		0.0016	0.014	ug/kg
PCB Congeners	PCB-41	Blue crab	24	3	12.5	0.013	0.049	0.03	0.0029	0.013	ug/kg
PCB Congeners	PCB-41	Brown bullhead	6	5	83.3	0.093	2.4	0.85	0.0039	0.0039	ug/kg
PCB Congeners	PCB-41	Carp	12	12	100	0.52	11	4.8			ug/kg
PCB Congeners	PCB-41	Channel catfish	11	11	100	0.083	0.72	0.38			ug/kg
PCB Congeners	PCB-41	Fish (all)	131	109	83.2	0.049	11	1.5	0.0016	0.014	ug/kg
PCB Congeners	PCB-41	Fish (≤ 11 cm)	23	22	95.7	0.049	0.97	0.5	0.0016	0.0016	ug/kg
PCB Congeners	PCB-41	Fish (≤ 13 cm)	26	25	96.2	0.049	0.97	0.53	0.0016	0.0016	ug/kg
PCB Congeners	PCB-41	Fish (≤ 18 cm)	41	40	97.6	0.049	5.6	1.4	0.0016	0.0016	ug/kg
PCB Congeners	PCB-41	Fish (≤ 20 cm)	43	42	97.7	0.049	5.6	1.5	0.0016	0.0016	ug/kg
PCB Congeners	PCB-41	Largemouth bass	3	3	100	0.21	1.9	1			ug/kg
PCB Congeners	PCB-41	Mummichog	18	18	100	0.16	0.97	0.49			ug/kg
PCB Congeners	PCB-41	Mussel (estuarine)	3	3	100	0.0065	0.042	0.022			ug/kg
PCB Congeners	PCB-41	Mussel (freshwater)	5	5	100	0.047	0.1	0.069			ug/kg
PCB Congeners	PCB-41	Northern pike	1	1	100	1.1	1.1				ug/kg
PCB Congeners	PCB-41	Other forage fish (no mummichog)	10	9	90	0.049	0.88	0.56	0.0016	0.0016	ug/kg
PCB Congeners	PCB-41	Smallmouth bass	3	3	100	0.4	1.2	0.79			ug/kg
PCB Congeners	PCB-41	White catfish	19	19	100	0.13	1.3	0.6			ug/kg
PCB Congeners	PCB-41	White perch	22	22	100	0.43	5.6	2.8			ug/kg
PCB Congeners	PCB-41	White sucker	5	5	100	0.6	2.6	1.6			ug/kg
PCB Congeners	PCB-41	Worms (all)	19	14	73.7	0.06	1.6	0.31	0.0034	0.0056	ug/kg
PCB Congeners	PCB-41	Worms (estuarine sp.)	5	0	0				0.0034	0.0056	ug/kg
PCB Congeners	PCB-41	Worms (freshwater sp.)	14	14	100	0.06	1.6	0.31			ug/kg
PCB Congeners	PCB-42	American eel (all)	21	21	100	0.75	14	4.8			ug/kg
PCB Congeners	PCB-42	Blue crab	24	24	100	0.11	0.72	0.34			ug/kg
PCB Congeners	PCB-42	Brown bullhead	6	6	100	1.4	16	6.3			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-42	Carp	12	12	100	4.4	83	40			ug/kg
PCB Congeners	PCB-42	Channel catfish	11	11	100	4.3	19	9.1			ug/kg
PCB Congeners	PCB-42	Fish (all)	131	131	100	0.75	83	12			ug/kg
PCB Congeners	PCB-42	Fish (≤ 11 cm)	23	23	100	1.6	7.6	3.9			ug/kg
PCB Congeners	PCB-42	Fish (≤ 13 cm)	26	26	100	1.6	7.6	4			ug/kg
PCB Congeners	PCB-42	Fish (≤ 18 cm)	41	41	100	1.4	22	7.5			ug/kg
PCB Congeners	PCB-42	Fish (≤ 20 cm)	43	43	100	1.4	27	8.3			ug/kg
PCB Congeners	PCB-42	Largemouth bass	3	3	100	3.8	14	8.3			ug/kg
PCB Congeners	PCB-42	Mummichog	18	18	100	1.6	7.6	3.8			ug/kg
PCB Congeners	PCB-42	Mussel (estuarine)	3	3	100	0.03	0.27	0.14			ug/kg
PCB Congeners	PCB-42	Mussel (freshwater)	5	5	100	0.19	0.32	0.26			ug/kg
PCB Congeners	PCB-42	Northern pike	1	1	100	15	15				ug/kg
PCB Congeners	PCB-42	Other forage fish (no mummichog)	10	10	100	1.4	6.2	4.1			ug/kg
PCB Congeners	PCB-42	Smallmouth bass	3	3	100	3.7	8.3	5.5			ug/kg
PCB Congeners	PCB-42	White catfish	19	19	100	2.2	31	13			ug/kg
PCB Congeners	PCB-42	White perch	22	22	100	2	27	14			ug/kg
PCB Congeners	PCB-42	White sucker	5	5	100	3.9	17	9.8			ug/kg
PCB Congeners	PCB-42	Worms (all)	19	19	100	0.19	5.8	1.5			ug/kg
PCB Congeners	PCB-42	Worms (estuarine sp.)	5	5	100	0.19	1.5	0.48			ug/kg
PCB Congeners	PCB-42	Worms (freshwater sp.)	14	14	100	0.48	5.8	1.8			ug/kg
PCB Congeners	PCB-43	American eel (all)	21	14	66.7	0.013	0.39	0.13	0.0021	0.012	ug/kg
PCB Congeners	PCB-43	Blue crab	24	24	100	0.018	0.17	0.074			ug/kg
PCB Congeners	PCB-43	Brown bullhead	6	6	100	0.2	2.4	1			ug/kg
PCB Congeners	PCB-43	Carp	12	12	100	0.88	12	5.4			ug/kg
PCB Congeners	PCB-43	Channel catfish	11	11	100	0.56	2.5	1.2			ug/kg
PCB Congeners	PCB-43	Fish (all)	131	124	94.7	0.013	12	1.5	0.0021	0.012	ug/kg
PCB Congeners	PCB-43	Fish (≤ 11 cm)	23	23	100	0.092	1.2	0.5			ug/kg
PCB Congeners	PCB-43	Fish (≤ 13 cm)	26	26	100	0.092	1.2	0.5			ug/kg
PCB Congeners	PCB-43	Fish (≤ 18 cm)	41	41	100	0.092	3.2	0.98			ug/kg
PCB Congeners	PCB-43	Fish (≤ 20 cm)	43	43	100	0.092	3.9	1.1			ug/kg
PCB Congeners	PCB-43	Largemouth bass	3	3	100	0.67	1.9	1.2			ug/kg
PCB Congeners	PCB-43	Mummichog	18	18	100	0.19	1.2	0.53			ug/kg
PCB Congeners	PCB-43	Mussel (estuarine)	3	3	100	0.004	0.038	0.018			ug/kg
PCB Congeners	PCB-43	Mussel (freshwater)	5	5	100	0.028	0.052	0.041			ug/kg
PCB Congeners	PCB-43	Northern pike	1	1	100	1.7	1.7				ug/kg
PCB Congeners	PCB-43	Other forage fish (no mummichog)	10	10	100	0.092	0.96	0.43			ug/kg
PCB Congeners	PCB-43	Smallmouth bass	3	3	100	0.36	1	0.67			ug/kg
PCB Congeners	PCB-43	White catfish	19	19	100	0.3	3.4	1.7			ug/kg
PCB Congeners	PCB-43	White perch	22	22	100	0.27	3.9	2			ug/kg
PCB Congeners	PCB-43	White sucker	5	5	100	0.29	1.6	0.87			ug/kg
PCB Congeners	PCB-43	Worms (all)	19	19	100	0.058	1	0.26			ug/kg
PCB Congeners	PCB-43	Worms (estuarine sp.)	5	5	100	0.058	0.48	0.15			ug/kg
PCB Congeners	PCB-43	Worms (freshwater sp.)	14	14	100	0.084	1	0.3			ug/kg
PCB Congeners	PCB-44	American eel (all)	21	21	100	7.4	130	54			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-44	Blue crab	24	24	100	7.4	40	18			ug/kg
PCB Congeners	PCB-44	Brown bullhead	6	6	100	10	110	42			ug/kg
PCB Congeners	PCB-44	Carp	12	12	100	28	360	190			ug/kg
PCB Congeners	PCB-44	Channel catfish	11	11	100	19	110	49			ug/kg
PCB Congeners	PCB-44	Fish (all)	131	131	100	5.1	360	69			ug/kg
PCB Congeners	PCB-44	Fish (≤ 11 cm)	23	23	100	9.6	47	22			ug/kg
PCB Congeners	PCB-44	Fish (≤ 13 cm)	26	26	100	9.6	47	22			ug/kg
PCB Congeners	PCB-44	Fish (≤ 18 cm)	41	41	100	5.1	120	41			ug/kg
PCB Congeners	PCB-44	Fish (≤ 20 cm)	43	43	100	5.1	150	45			ug/kg
PCB Congeners	PCB-44	Largemouth bass	3	3	100	37	80	55			ug/kg
PCB Congeners	PCB-44	Mummichog	18	18	100	9.6	47	23			ug/kg
PCB Congeners	PCB-44	Mussel (estuarine)	3	3	100	0.13	1	0.51			ug/kg
PCB Congeners	PCB-44	Mussel (freshwater)	5	5	100	0.73	1.3	1			ug/kg
PCB Congeners	PCB-44	Northern pike	1	1	100	76	76				ug/kg
PCB Congeners	PCB-44	Other forage fish (no mummichog)	10	10	100	5.1	45	21			ug/kg
PCB Congeners	PCB-44	Smallmouth bass	3	3	100	17	41	27			ug/kg
PCB Congeners	PCB-44	White catfish	19	19	100	13	240	100			ug/kg
PCB Congeners	PCB-44	White perch	22	22	100	9.5	150	79			ug/kg
PCB Congeners	PCB-44	White sucker	5	5	100	18	96	52			ug/kg
PCB Congeners	PCB-44	Worms (all)	19	19	100	0.89	29	6.5			ug/kg
PCB Congeners	PCB-44	Worms (estuarine sp.)	5	5	100	0.89	5.7	2.3			ug/kg
PCB Congeners	PCB-44	Worms (freshwater sp.)	14	14	100	1.8	29	8			ug/kg
PCB Congeners	PCB-45	American eel (all)	21	20	95.2	0.14	1.4	0.55	0.0013	0.0013	ug/kg
PCB Congeners	PCB-45	Blue crab	24	14	58.3	0.0077	0.12	0.033	0.003	0.01	ug/kg
PCB Congeners	PCB-45	Brown bullhead	6	6	100	0.69	5.5	2.3			ug/kg
PCB Congeners	PCB-45	Carp	12	12	100	1.5	21	12			ug/kg
PCB Congeners	PCB-45	Channel catfish	11	11	100	0.64	4.9	2.3			ug/kg
PCB Congeners	PCB-45	Fish (all)	131	128	97.7	0.14	21	3.4	0.0013	0.012	ug/kg
PCB Congeners	PCB-45	Fish (≤ 11 cm)	23	23	100	0.35	1.9	0.97			ug/kg
PCB Congeners	PCB-45	Fish (≤ 13 cm)	26	26	100	0.35	2.2	1.1			ug/kg
PCB Congeners	PCB-45	Fish (≤ 18 cm)	41	41	100	0.35	12	2.7			ug/kg
PCB Congeners	PCB-45	Fish (≤ 20 cm)	43	42	97.7	0.35	12	2.8	0.012	0.012	ug/kg
PCB Congeners	PCB-45	Largemouth bass	3	3	100	0.73	3.6	2.3			ug/kg
PCB Congeners	PCB-45	Mummichog	18	18	100	0.35	1.6	0.87			ug/kg
PCB Congeners	PCB-45	Mussel (estuarine)	3	3	100	0.014	0.1	0.053			ug/kg
PCB Congeners	PCB-45	Mussel (freshwater)	5	5	100	0.13	0.25	0.19			ug/kg
PCB Congeners	PCB-45	Northern pike	1	1	100	4.6	4.6				ug/kg
PCB Congeners	PCB-45	Other forage fish (no mummichog)	10	10	100	0.43	3.4	1.5			ug/kg
PCB Congeners	PCB-45	Smallmouth bass	3	3	100	1	2.7	1.9			ug/kg
PCB Congeners	PCB-45	White catfish	19	19	100	0.58	7.5	3.7			ug/kg
PCB Congeners	PCB-45	White perch	22	20	90.9	0.81	12	5.4	0.0063	0.012	ug/kg
PCB Congeners	PCB-45	White sucker	5	5	100	1.3	5	2.9			ug/kg
PCB Congeners	PCB-45	Worms (all)	19	19	100	0.084	3.2	0.62			ug/kg
PCB Congeners	PCB-45	Worms (estuarine sp.)	5	5	100	0.084	1.3	0.34			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-45	Worms (freshwater sp.)	14	14	100	0.21	3.2	0.72			ug/kg
PCB Congeners	PCB-46	American eel (all)	21	21	100	0.019	0.4	0.12			ug/kg
PCB Congeners	PCB-46	Blue crab	24	17	70.8	0.0086	0.06	0.026	0.0036	0.013	ug/kg
PCB Congeners	PCB-46	Brown bullhead	6	6	100	0.11	2.1	0.89			ug/kg
PCB Congeners	PCB-46	Carp	12	12	100	0.052	8.1	4.2			ug/kg
PCB Congeners	PCB-46	Channel catfish	11	11	100	0.27	1.4	0.7			ug/kg
PCB Congeners	PCB-46	Fish (all)	131	131	100	0.019	8.1	1.3			ug/kg
PCB Congeners	PCB-46	Fish (≤ 11 cm)	23	23	100	0.028	0.91	0.34			ug/kg
PCB Congeners	PCB-46	Fish (≤ 13 cm)	26	26	100	0.028	0.91	0.38			ug/kg
PCB Congeners	PCB-46	Fish (≤ 18 cm)	41	41	100	0.028	4.7	1.1			ug/kg
PCB Congeners	PCB-46	Fish (≤ 20 cm)	43	43	100	0.028	5.2	1.3			ug/kg
PCB Congeners	PCB-46	Largemouth bass	3	3	100	0.18	1.8	0.94			ug/kg
PCB Congeners	PCB-46	Mummichog	18	18	100	0.12	0.71	0.31			ug/kg
PCB Congeners	PCB-46	Mussel (estuarine)	3	3	100	0.0093	0.071	0.037			ug/kg
PCB Congeners	PCB-46	Mussel (freshwater)	5	5	100	0.05	0.085	0.07			ug/kg
PCB Congeners	PCB-46	Northern pike	1	1	100	1.4	1.4				ug/kg
PCB Congeners	PCB-46	Other forage fish (no mummichog)	10	10	100	0.028	1.3	0.54			ug/kg
PCB Congeners	PCB-46	Smallmouth bass	3	3	100	0.39	1.2	0.79			ug/kg
PCB Congeners	PCB-46	White catfish	19	19	100	0.13	1.7	0.85			ug/kg
PCB Congeners	PCB-46	White perch	22	22	100	0.33	5.2	2.6			ug/kg
PCB Congeners	PCB-46	White sucker	5	5	100	0.57	2.3	1.4			ug/kg
PCB Congeners	PCB-46	Worms (all)	19	19	100	0.024	1.3	0.3			ug/kg
PCB Congeners	PCB-46	Worms (estuarine sp.)	5	5	100	0.024	0.27	0.083			ug/kg
PCB Congeners	PCB-46	Worms (freshwater sp.)	14	14	100	0.12	1.3	0.38			ug/kg
PCB Congeners	PCB-48	American eel (all)	21	21	100	0.025	0.63	0.15			ug/kg
PCB Congeners	PCB-48	Blue crab	24	24	100	0.023	0.32	0.13			ug/kg
PCB Congeners	PCB-48	Brown bullhead	6	6	100	0.74	7.9	3.2			ug/kg
PCB Congeners	PCB-48	Carp	12	12	100	2.8	51	22			ug/kg
PCB Congeners	PCB-48	Channel catfish	11	11	100	1.4	6.2	2.9			ug/kg
PCB Congeners	PCB-48	Fish (all)	131	131	100	0.025	51	5			ug/kg
PCB Congeners	PCB-48	Fish (≤ 11 cm)	23	23	100	0.24	2.8	0.95			ug/kg
PCB Congeners	PCB-48	Fish (≤ 13 cm)	26	26	100	0.24	2.8	1.1			ug/kg
PCB Congeners	PCB-48	Fish (≤ 18 cm)	41	41	100	0.24	13	3.4			ug/kg
PCB Congeners	PCB-48	Fish (≤ 20 cm)	43	43	100	0.24	14	3.8			ug/kg
PCB Congeners	PCB-48	Largemouth bass	3	3	100	1.5	5.7	3.4			ug/kg
PCB Congeners	PCB-48	Mummichog	18	18	100	0.24	1.6	0.78			ug/kg
PCB Congeners	PCB-48	Mussel (estuarine)	3	3	100	0.02	0.16	0.081			ug/kg
PCB Congeners	PCB-48	Mussel (freshwater)	5	5	100	0.13	0.26	0.19			ug/kg
PCB Congeners	PCB-48	Northern pike	1	1	100	5.9	5.9				ug/kg
PCB Congeners	PCB-48	Other forage fish (no mummichog)	10	10	100	0.42	3.2	1.7			ug/kg
PCB Congeners	PCB-48	Smallmouth bass	3	3	100	1.2	3.8	2.4			ug/kg
PCB Congeners	PCB-48	White catfish	19	19	100	0.11	11	5.1			ug/kg
PCB Congeners	PCB-48	White perch	22	22	100	0.99	14	7.6			ug/kg
PCB Congeners	PCB-48	White sucker	5	5	100	1.4	7	3.6			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-48	Worms (all)	19	19	100	0.079	4.6	0.9			ug/kg
PCB Congeners	PCB-48	Worms (estuarine sp.)	5	5	100	0.079	1.2	0.33			ug/kg
PCB Congeners	PCB-48	Worms (freshwater sp.)	14	14	100	0.24	4.6	1.1			ug/kg
PCB Congeners	PCB-49	American eel (all)	21	21	100	1.4	36	10			ug/kg
PCB Congeners	PCB-49	Blue crab	24	24	100	0.16	2.1	0.79			ug/kg
PCB Congeners	PCB-49	Brown bullhead	6	6	100	5.8	56	21			ug/kg
PCB Congeners	PCB-49	Carp	12	12	100	32	250	130			ug/kg
PCB Congeners	PCB-49	Channel catfish	11	11	100	13	76	34			ug/kg
PCB Congeners	PCB-49	Fish (all)	131	131	100	1.4	250	41			ug/kg
PCB Congeners	PCB-49	Fish (≤ 11 cm)	23	23	100	6.3	28	14			ug/kg
PCB Congeners	PCB-49	Fish (≤ 13 cm)	26	26	100	6.3	28	14			ug/kg
PCB Congeners	PCB-49	Fish (≤ 18 cm)	41	41	100	4.4	82	26			ug/kg
PCB Congeners	PCB-49	Fish (≤ 20 cm)	43	43	100	4.4	110	30			ug/kg
PCB Congeners	PCB-49	Largemouth bass	3	3	100	25	53	43			ug/kg
PCB Congeners	PCB-49	Mummichog	18	18	100	6.3	28	14			ug/kg
PCB Congeners	PCB-49	Mussel (estuarine)	3	3	100	0.088	0.74	0.37			ug/kg
PCB Congeners	PCB-49	Mussel (freshwater)	5	5	100	0.51	0.85	0.7			ug/kg
PCB Congeners	PCB-49	Northern pike	1	1	100	54	54				ug/kg
PCB Congeners	PCB-49	Other forage fish (no mummichog)	10	10	100	4.4	27	13			ug/kg
PCB Congeners	PCB-49	Smallmouth bass	3	3	100	12	28	19			ug/kg
PCB Congeners	PCB-49	White catfish	19	19	100	8.9	140	63			ug/kg
PCB Congeners	PCB-49	White perch	22	22	100	6.4	110	51			ug/kg
PCB Congeners	PCB-49	White sucker	5	5	100	13	61	34			ug/kg
PCB Congeners	PCB-49	Worms (all)	19	19	100	0.67	16	4			ug/kg
PCB Congeners	PCB-49	Worms (estuarine sp.)	5	5	100	0.67	3.9	1.4			ug/kg
PCB Congeners	PCB-49	Worms (freshwater sp.)	14	14	100	1.2	16	4.9			ug/kg
PCB Congeners	PCB-50	American eel (all)	21	21	100	0.13	3.3	1.1			ug/kg
PCB Congeners	PCB-50	Blue crab	24	24	100	0.02	0.44	0.14			ug/kg
PCB Congeners	PCB-50	Brown bullhead	6	6	100	0.28	3.5	1.3			ug/kg
PCB Congeners	PCB-50	Carp	12	12	100	0.7	49	27			ug/kg
PCB Congeners	PCB-50	Channel catfish	11	11	100	1	4.4	2.3			ug/kg
PCB Congeners	PCB-50	Fish (all)	131	131	100	0.13	49	6.8			ug/kg
PCB Congeners	PCB-50	Fish (≤ 11 cm)	23	23	100	0.27	7	2.5			ug/kg
PCB Congeners	PCB-50	Fish (≤ 13 cm)	26	26	100	0.27	7	2.6			ug/kg
PCB Congeners	PCB-50	Fish (≤ 18 cm)	41	41	100	0.27	25	6.4			ug/kg
PCB Congeners	PCB-50	Fish (≤ 20 cm)	43	43	100	0.27	29	7.2			ug/kg
PCB Congeners	PCB-50	Largemouth bass	3	3	100	2.5	9.8	5.4			ug/kg
PCB Congeners	PCB-50	Mummichog	18	18	100	0.97	7	2.7			ug/kg
PCB Congeners	PCB-50	Mussel (estuarine)	3	3	100	0.037	0.23	0.12			ug/kg
PCB Congeners	PCB-50	Mussel (freshwater)	5	5	100	0.15	0.26	0.21			ug/kg
PCB Congeners	PCB-50	Northern pike	1	1	100	7.7	7.7				ug/kg
PCB Congeners	PCB-50	Other forage fish (no mummichog)	10	10	100	0.27	6.7	2.5			ug/kg
PCB Congeners	PCB-50	Smallmouth bass	3	3	100	1.4	5.3	3.4			ug/kg
PCB Congeners	PCB-50	White catfish	19	19	100	0.26	6.4	2.9			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-50	White perch	22	22	100	1.2	29	14			ug/kg
PCB Congeners	PCB-50	White sucker	5	5	100	2.3	14	7.4			ug/kg
PCB Congeners	PCB-50	Worms (all)	19	19	100	0.35	6.5	1.4			ug/kg
PCB Congeners	PCB-50	Worms (estuarine sp.)	5	5	100	0.35	2.5	0.97			ug/kg
PCB Congeners	PCB-50	Worms (freshwater sp.)	14	14	100	0.44	6.5	1.6			ug/kg
PCB Congeners	PCB-51	American eel (all)	21	21	100	0.043	3.9	0.9			ug/kg
PCB Congeners	PCB-51	Blue crab	24	24	100	0.069	0.68	0.23			ug/kg
PCB Congeners	PCB-51	Brown bullhead	6	5	83.3	0.16	3.2	1.5	0.0036	0.0036	ug/kg
PCB Congeners	PCB-51	Carp	12	12	100	0.25	63	30			ug/kg
PCB Congeners	PCB-51	Channel catfish	11	11	100	0.9	5.6	3			ug/kg
PCB Congeners	PCB-51	Fish (all)	131	130	99.2	0.043	63	7.6	0.0036	0.0036	ug/kg
PCB Congeners	PCB-51	Fish (≤ 11 cm)	23	23	100	0.16	12	3.9			ug/kg
PCB Congeners	PCB-51	Fish (≤ 13 cm)	26	26	100	0.16	12	3.8			ug/kg
PCB Congeners	PCB-51	Fish (≤ 18 cm)	41	41	100	0.16	26	7.6			ug/kg
PCB Congeners	PCB-51	Fish (≤ 20 cm)	43	43	100	0.16	38	8.6			ug/kg
PCB Congeners	PCB-51	Largemouth bass	3	3	100	0.19	14	6.2			ug/kg
PCB Congeners	PCB-51	Mummichog	18	18	100	1.6	12	4.4			ug/kg
PCB Congeners	PCB-51	Mussel (estuarine)	3	3	100	0.037	0.21	0.11			ug/kg
PCB Congeners	PCB-51	Mussel (freshwater)	5	5	100	0.076	0.15	0.11			ug/kg
PCB Congeners	PCB-51	Northern pike	1	1	100	8.4	8.4				ug/kg
PCB Congeners	PCB-51	Other forage fish (no mummichog)	10	10	100	0.16	6.5	2.5			ug/kg
PCB Congeners	PCB-51	Smallmouth bass	3	3	100	1.2	5.7	3.5			ug/kg
PCB Congeners	PCB-51	White catfish	19	19	100	0.095	7.3	2			ug/kg
PCB Congeners	PCB-51	White perch	22	22	100	0.93	38	16			ug/kg
PCB Congeners	PCB-51	White sucker	5	5	100	2	17	9.2			ug/kg
PCB Congeners	PCB-51	Worms (all)	19	19	100	0.16	8.7	1.6			ug/kg
PCB Congeners	PCB-51	Worms (estuarine sp.)	5	5	100	0.16	1	0.6			ug/kg
PCB Congeners	PCB-51	Worms (freshwater sp.)	14	14	100	0.33	8.7	1.9			ug/kg
PCB Congeners	PCB-52	American eel (all)	21	21	100	7.7	86	42			ug/kg
PCB Congeners	PCB-52	Blue crab	24	24	100	0.21	2.1	0.89			ug/kg
PCB Congeners	PCB-52	Brown bullhead	6	6	100	5.8	57	21			ug/kg
PCB Congeners	PCB-52	Carp	12	12	100	41	290	150			ug/kg
PCB Congeners	PCB-52	Channel catfish	11	11	100	14	65	32			ug/kg
PCB Congeners	PCB-52	Fish (all)	131	131	100	4.9	290	53			ug/kg
PCB Congeners	PCB-52	Fish (≤ 11 cm)	23	23	100	6.7	33	17			ug/kg
PCB Congeners	PCB-52	Fish (≤ 13 cm)	26	26	100	6.7	33	17			ug/kg
PCB Congeners	PCB-52	Fish (≤ 18 cm)	41	41	100	5.3	100	33			ug/kg
PCB Congeners	PCB-52	Fish (≤ 20 cm)	43	43	100	5.3	140	37			ug/kg
PCB Congeners	PCB-52	Largemouth bass	3	3	100	29	240	110			ug/kg
PCB Congeners	PCB-52	Mummichog	18	18	100	6.7	33	16			ug/kg
PCB Congeners	PCB-52	Mussel (estuarine)	3	3	100	0.14	1.1	0.55			ug/kg
PCB Congeners	PCB-52	Mussel (freshwater)	5	5	100	0.83	1.5	1.2			ug/kg
PCB Congeners	PCB-52	Northern pike	1	1	100	58	58				ug/kg
PCB Congeners	PCB-52	Other forage fish (no mummichog)	10	10	100	5.3	40	18			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-52	Smallmouth bass	3	3	100	15	35	23			ug/kg
PCB Congeners	PCB-52	White catfish	19	19	100	11	170	72			ug/kg
PCB Congeners	PCB-52	White perch	22	22	100	9.3	140	65			ug/kg
PCB Congeners	PCB-52	White sucker	5	5	100	4.9	27	13			ug/kg
PCB Congeners	PCB-52	Worms (all)	19	19	100	1.5	20	6			ug/kg
PCB Congeners	PCB-52	Worms (estuarine sp.)	5	5	100	1.5	9.5	3.2			ug/kg
PCB Congeners	PCB-52	Worms (freshwater sp.)	14	14	100	1.8	20	7			ug/kg
PCB Congeners	PCB-54	American eel (all)	21	21	100	0.005	0.23	0.072			ug/kg
PCB Congeners	PCB-54	Blue crab	24	9	37.5	0.0041	0.036	0.014	0.002	0.005	ug/kg
PCB Congeners	PCB-54	Brown bullhead	6	6	100	0.041	1.8	0.66			ug/kg
PCB Congeners	PCB-54	Carp	12	12	100	0.032	6.1	3.1			ug/kg
PCB Congeners	PCB-54	Channel catfish	11	11	100	0.051	0.42	0.21			ug/kg
PCB Congeners	PCB-54	Fish (all)	131	131	100	0.005	6.1	0.72			ug/kg
PCB Congeners	PCB-54	Fish (≤ 11 cm)	23	23	100	0.052	0.66	0.22			ug/kg
PCB Congeners	PCB-54	Fish (≤ 13 cm)	26	26	100	0.052	0.66	0.24			ug/kg
PCB Congeners	PCB-54	Fish (≤ 18 cm)	41	41	100	0.044	2.4	0.6			ug/kg
PCB Congeners	PCB-54	Fish (≤ 20 cm)	43	43	100	0.044	2.4	0.66			ug/kg
PCB Congeners	PCB-54	Largemouth bass	3	3	100	0.021	0.81	0.38			ug/kg
PCB Congeners	PCB-54	Mummichog	18	18	100	0.065	0.66	0.23			ug/kg
PCB Congeners	PCB-54	Mussel (estuarine)	3	3	100	0.005	0.019	0.012			ug/kg
PCB Congeners	PCB-54	Mussel (freshwater)	5	5	100	0.0094	0.018	0.012			ug/kg
PCB Congeners	PCB-54	Northern pike	1	1	100	0.37	0.37				ug/kg
PCB Congeners	PCB-54	Other forage fish (no mummichog)	10	10	100	0.044	0.84	0.28			ug/kg
PCB Congeners	PCB-54	Smallmouth bass	3	3	100	0.081	0.4	0.25			ug/kg
PCB Congeners	PCB-54	White catfish	19	19	100	0.067	1.1	0.4			ug/kg
PCB Congeners	PCB-54	White perch	22	22	100	0.045	2.9	1.3			ug/kg
PCB Congeners	PCB-54	White sucker	5	5	100	0.1	1.3	0.65			ug/kg
PCB Congeners	PCB-54	Worms (all)	19	19	100	0.022	1.4	0.19			ug/kg
PCB Congeners	PCB-54	Worms (estuarine sp.)	5	5	100	0.022	0.13	0.076			ug/kg
PCB Congeners	PCB-54	Worms (freshwater sp.)	14	14	100	0.025	1.4	0.23			ug/kg
PCB Congeners	PCB-55	American eel (all)	21	1	4.8	0.028	0.028		0.0039	0.04	ug/kg
PCB Congeners	PCB-55	Blue crab	24	0	0				0.0052	0.011	ug/kg
PCB Congeners	PCB-55	Brown bullhead	6	2	33.3	0.074	0.32	0.2	0.0092	0.028	ug/kg
PCB Congeners	PCB-55	Carp	12	11	91.7	0.16	1.2	0.43	0.02	0.02	ug/kg
PCB Congeners	PCB-55	Channel catfish	11	1	9.1	0.013	0.013		0.0031	0.0074	ug/kg
PCB Congeners	PCB-55	Fish (all)	131	76	58	0.013	1.2	0.25	0.0031	0.04	ug/kg
PCB Congeners	PCB-55	Fish (≤ 11 cm)	23	23	100	0.027	0.15	0.072			ug/kg
PCB Congeners	PCB-55	Fish (≤ 13 cm)	26	26	100	0.027	0.16	0.077			ug/kg
PCB Congeners	PCB-55	Fish (≤ 18 cm)	41	40	97.6	0.027	0.93	0.21	0.014	0.014	ug/kg
PCB Congeners	PCB-55	Fish (≤ 20 cm)	43	40	93	0.027	0.93	0.21	0.012	0.014	ug/kg
PCB Congeners	PCB-55	Largemouth bass	3	3	100	0.15	0.49	0.29			ug/kg
PCB Congeners	PCB-55	Mummichog	18	18	100	0.027	0.12	0.063			ug/kg
PCB Congeners	PCB-55	Mussel (estuarine)	3	3	100	0.0011	0.0078	0.004			ug/kg
PCB Congeners	PCB-55	Mussel (freshwater)	5	5	100	0.0066	0.014	0.011			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-55	Northern pike	1	1	100	0.42	0.42				ug/kg
PCB Congeners	PCB-55	Other forage fish (no mummichog)	10	10	100	0.044	0.23	0.11			ug/kg
PCB Congeners	PCB-55	Smallmouth bass	3	3	100	0.078	0.16	0.11			ug/kg
PCB Congeners	PCB-55	White catfish	19	5	26.3	0.03	0.68	0.31	0.0044	0.016	ug/kg
PCB Congeners	PCB-55	White perch	22	16	72.7	0.15	0.93	0.5	0.0037	0.014	ug/kg
PCB Congeners	PCB-55	White sucker	5	5	100	0.027	0.3	0.13			ug/kg
PCB Congeners	PCB-55	Worms (all)	19	11	57.9	0.03	0.18	0.072	0.0026	0.012	ug/kg
PCB Congeners	PCB-55	Worms (estuarine sp.)	5	0	0				0.0026	0.0056	ug/kg
PCB Congeners	PCB-55	Worms (freshwater sp.)	14	11	78.6	0.03	0.18	0.072	0.0068	0.012	ug/kg
PCB Congeners	PCB-56	American eel (all)	21	21	100	0.034	0.83	0.22			ug/kg
PCB Congeners	PCB-56	Blue crab	24	24	100	0.072	0.67	0.35			ug/kg
PCB Congeners	PCB-56	Brown bullhead	6	6	100	0.51	17	7.1			ug/kg
PCB Congeners	PCB-56	Carp	12	12	100	6.9	41	23			ug/kg
PCB Congeners	PCB-56	Channel catfish	11	11	100	0.37	3.4	2			ug/kg
PCB Congeners	PCB-56	Fish (all)	131	131	100	0.034	41	6.9			ug/kg
PCB Congeners	PCB-56	Fish (≤ 11 cm)	23	23	100	0.57	4.9	2			ug/kg
PCB Congeners	PCB-56	Fish (≤ 13 cm)	26	26	100	0.57	5.4	2.2			ug/kg
PCB Congeners	PCB-56	Fish (≤ 18 cm)	41	41	100	0.57	21	6.1			ug/kg
PCB Congeners	PCB-56	Fish (≤ 20 cm)	43	43	100	0.57	22	6.8			ug/kg
PCB Congeners	PCB-56	Largemouth bass	3	3	100	4.3	8	6			ug/kg
PCB Congeners	PCB-56	Mummichog	18	18	100	0.57	3.2	1.5			ug/kg
PCB Congeners	PCB-56	Mussel (estuarine)	3	3	100	0.029	0.26	0.13			ug/kg
PCB Congeners	PCB-56	Mussel (freshwater)	5	5	100	0.2	0.46	0.32			ug/kg
PCB Congeners	PCB-56	Northern pike	1	1	100	11	11				ug/kg
PCB Congeners	PCB-56	Other forage fish (no mummichog)	10	10	100	1.2	7.1	3.6			ug/kg
PCB Congeners	PCB-56	Smallmouth bass	3	3	100	2.3	4.4	3			ug/kg
PCB Congeners	PCB-56	White catfish	19	19	100	1.3	15	6			ug/kg
PCB Congeners	PCB-56	White perch	22	22	100	1.9	29	14			ug/kg
PCB Congeners	PCB-56	White sucker	5	5	100	3.2	12	7.4			ug/kg
PCB Congeners	PCB-56	Worms (all)	19	19	100	0.27	8.4	1.8			ug/kg
PCB Congeners	PCB-56	Worms (estuarine sp.)	5	5	100	0.27	2.3	0.72			ug/kg
PCB Congeners	PCB-56	Worms (freshwater sp.)	14	14	100	0.58	8.4	2.2			ug/kg
PCB Congeners	PCB-57	American eel (all)	21	19	90.5	0.0077	0.13	0.046	0.021	0.043	ug/kg
PCB Congeners	PCB-57	Blue crab	24	6	25	0.0094	0.021	0.014	0.0053	0.012	ug/kg
PCB Congeners	PCB-57	Brown bullhead	6	5	83.3	0.051	0.39	0.18	0.0098	0.0098	ug/kg
PCB Congeners	PCB-57	Carp	12	12	100	0.19	0.88	0.54			ug/kg
PCB Congeners	PCB-57	Channel catfish	11	11	100	0.0093	0.092	0.043			ug/kg
PCB Congeners	PCB-57	Fish (all)	131	126	96.2	0.0077	0.88	0.18	0.0098	0.13	ug/kg
PCB Congeners	PCB-57	Fish (≤ 11 cm)	23	23	100	0.022	0.11	0.057			ug/kg
PCB Congeners	PCB-57	Fish (≤ 13 cm)	26	26	100	0.022	0.12	0.06			ug/kg
PCB Congeners	PCB-57	Fish (≤ 18 cm)	41	40	97.6	0.022	0.54	0.15	0.016	0.016	ug/kg
PCB Congeners	PCB-57	Fish (≤ 20 cm)	43	42	97.7	0.022	0.63	0.17	0.016	0.016	ug/kg
PCB Congeners	PCB-57	Largemouth bass	3	2	66.7	0.13	0.21	0.17	0.13	0.13	ug/kg
PCB Congeners	PCB-57	Mummichog	18	18	100	0.022	0.11	0.052			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-57	Mussel (estuarine)	3	2	66.7	0.0019	0.0053	0.0036	0.0004	0.0004	ug/kg
PCB Congeners	PCB-57	Mussel (freshwater)	5	5	100	0.0045	0.0076	0.0057			ug/kg
PCB Congeners	PCB-57	Northern pike	1	1	100	0.38	0.38				ug/kg
PCB Congeners	PCB-57	Other forage fish (no mummichog)	10	10	100	0.028	0.17	0.081			ug/kg
PCB Congeners	PCB-57	Smallmouth bass	3	3	100	0.065	0.13	0.095			ug/kg
PCB Congeners	PCB-57	White catfish	19	19	100	0.025	0.67	0.18			ug/kg
PCB Congeners	PCB-57	White perch	22	21	95.5	0.039	0.69	0.33	0.016	0.016	ug/kg
PCB Congeners	PCB-57	White sucker	5	5	100	0.069	0.22	0.13			ug/kg
PCB Congeners	PCB-57	Worms (all)	19	18	94.7	0.0069	0.11	0.029	0.0042	0.0042	ug/kg
PCB Congeners	PCB-57	Worms (estuarine sp.)	5	4	80	0.0069	0.029	0.013	0.0042	0.0042	ug/kg
PCB Congeners	PCB-57	Worms (freshwater sp.)	14	14	100	0.0086	0.11	0.034			ug/kg
PCB Congeners	PCB-58	American eel (all)	21	21	100	0.018	0.26	0.097			ug/kg
PCB Congeners	PCB-58	Blue crab	24	1	4.2	0.0081	0.0081		0.0045	0.01	ug/kg
PCB Congeners	PCB-58	Brown bullhead	6	5	83.3	0.03	0.26	0.12	0.0088	0.0088	ug/kg
PCB Congeners	PCB-58	Carp	12	12	100	0.11	0.82	0.4			ug/kg
PCB Congeners	PCB-58	Channel catfish	11	11	100	0.021	0.21	0.094			ug/kg
PCB Congeners	PCB-58	Fish (all)	131	129	98.5	0.012	0.82	0.15	0.0088	0.11	ug/kg
PCB Congeners	PCB-58	Fish (≤ 11 cm)	23	23	100	0.014	0.056	0.034			ug/kg
PCB Congeners	PCB-58	Fish (≤ 13 cm)	26	26	100	0.014	0.068	0.035			ug/kg
PCB Congeners	PCB-58	Fish (≤ 18 cm)	41	41	100	0.012	0.31	0.087			ug/kg
PCB Congeners	PCB-58	Fish (≤ 20 cm)	43	43	100	0.012	0.37	0.098			ug/kg
PCB Congeners	PCB-58	Largemouth bass	3	2	66.7	0.054	0.11	0.082	0.11	0.11	ug/kg
PCB Congeners	PCB-58	Mummichog	18	18	100	0.014	0.056	0.031			ug/kg
PCB Congeners	PCB-58	Mussel (estuarine)	3	1	33.3	0.0012	0.0012		0.00037	0.0005	ug/kg
PCB Congeners	PCB-58	Mussel (freshwater)	5	5	100	0.0026	0.0048	0.0038			ug/kg
PCB Congeners	PCB-58	Northern pike	1	1	100	0.18	0.18				ug/kg
PCB Congeners	PCB-58	Other forage fish (no mummichog)	10	10	100	0.012	0.11	0.047			ug/kg
PCB Congeners	PCB-58	Smallmouth bass	3	3	100	0.029	0.074	0.048			ug/kg
PCB Congeners	PCB-58	White catfish	19	19	100	0.014	0.59	0.25			ug/kg
PCB Congeners	PCB-58	White perch	22	22	100	0.019	0.39	0.19			ug/kg
PCB Congeners	PCB-58	White sucker	5	5	100	0.048	0.14	0.089			ug/kg
PCB Congeners	PCB-58	Worms (all)	19	9	47.4	0.0053	0.059	0.017	0.0023	0.011	ug/kg
PCB Congeners	PCB-58	Worms (estuarine sp.)	5	0	0				0.0023	0.0051	ug/kg
PCB Congeners	PCB-58	Worms (freshwater sp.)	14	9	64.3	0.0053	0.059	0.017	0.0056	0.011	ug/kg
PCB Congeners	PCB-59	American eel (all)	21	21	100	0.8	11	4.6			ug/kg
PCB Congeners	PCB-59	Blue crab	24	24	100	0.48	1.3	1.1			ug/kg
PCB Congeners	PCB-59	Brown bullhead	6	6	100	0.82	7.4	3.1			ug/kg
PCB Congeners	PCB-59	Carp	12	12	100	3.1	29	15			ug/kg
PCB Congeners	PCB-59	Channel catfish	11	11	100	1.6	8.3	3.8			ug/kg
PCB Congeners	PCB-59	Fish (all)	131	130	99.2	0.47	29	5.3	0.0033	0.0033	ug/kg
PCB Congeners	PCB-59	Fish (≤ 11 cm)	23	23	100	0.64	3	1.5			ug/kg
PCB Congeners	PCB-59	Fish (≤ 13 cm)	26	26	100	0.64	3	1.5			ug/kg
PCB Congeners	PCB-59	Fish (≤ 18 cm)	41	40	97.6	0.47	9.5	3	0.0033	0.0033	ug/kg
PCB Congeners	PCB-59	Fish (≤ 20 cm)	43	42	97.7	0.47	12	3.4	0.0033	0.0033	ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-59	Largemouth bass	3	3	100	1.6	5.4	3.2			ug/kg
PCB Congeners	PCB-59	Mummichog	18	18	100	0.64	3	1.5			ug/kg
PCB Congeners	PCB-59	Mussel (estuarine)	3	3	100	0.011	0.092	0.046			ug/kg
PCB Congeners	PCB-59	Mussel (freshwater)	5	5	100	0.071	0.12	0.099			ug/kg
PCB Congeners	PCB-59	Northern pike	1	1	100	5.9	5.9				ug/kg
PCB Congeners	PCB-59	Other forage fish (no mummichog)	10	10	100	0.47	3.5	1.6			ug/kg
PCB Congeners	PCB-59	Smallmouth bass	3	3	100	1.5	3.1	2.1			ug/kg
PCB Congeners	PCB-59	White catfish	19	19	100	1.1	18	7.5			ug/kg
PCB Congeners	PCB-59	White perch	22	21	95.5	0.89	12	6.1	0.0033	0.0033	ug/kg
PCB Congeners	PCB-59	White sucker	5	5	100	1.6	6.4	3.6			ug/kg
PCB Congeners	PCB-59	Worms (all)	19	19	100	0.14	2.1	0.54			ug/kg
PCB Congeners	PCB-59	Worms (estuarine sp.)	5	5	100	0.14	0.97	0.33			ug/kg
PCB Congeners	PCB-59	Worms (freshwater sp.)	14	14	100	0.21	2.1	0.61			ug/kg
PCB Congeners	PCB-60	American eel (all)	21	21	100	0.77	8.7	4.1			ug/kg
PCB Congeners	PCB-60	Blue crab	24	24	100	1.7	4.4	3.2			ug/kg
PCB Congeners	PCB-60	Brown bullhead	6	6	100	1.5	8.3	4.4			ug/kg
PCB Congeners	PCB-60	Carp	12	12	100	7.5	49	21			ug/kg
PCB Congeners	PCB-60	Channel catfish	11	11	100	1.7	12	6			ug/kg
PCB Congeners	PCB-60	Fish (all)	131	131	100	0.63	49	7.1			ug/kg
PCB Congeners	PCB-60	Fish (≤ 11 cm)	23	23	100	0.98	4.3	2.3			ug/kg
PCB Congeners	PCB-60	Fish (≤ 13 cm)	26	26	100	0.98	4.3	2.2			ug/kg
PCB Congeners	PCB-60	Fish (≤ 18 cm)	41	41	100	0.63	10	3.8			ug/kg
PCB Congeners	PCB-60	Fish (≤ 20 cm)	43	43	100	0.63	11	4.1			ug/kg
PCB Congeners	PCB-60	Largemouth bass	3	3	100	4.9	9.2	6.5			ug/kg
PCB Congeners	PCB-60	Mummichog	18	18	100	1.2	4.3	2.4			ug/kg
PCB Congeners	PCB-60	Mussel (estuarine)	3	3	100	0.011	0.093	0.048			ug/kg
PCB Congeners	PCB-60	Mussel (freshwater)	5	5	100	0.072	0.19	0.12			ug/kg
PCB Congeners	PCB-60	Northern pike	1	1	100	8.8	8.8				ug/kg
PCB Congeners	PCB-60	Other forage fish (no mummichog)	10	10	100	0.63	4	2			ug/kg
PCB Congeners	PCB-60	Smallmouth bass	3	3	100	2.6	4.6	3.3			ug/kg
PCB Congeners	PCB-60	White catfish	19	19	100	1.8	28	11			ug/kg
PCB Congeners	PCB-60	White perch	22	22	100	1.3	14	7.1			ug/kg
PCB Congeners	PCB-60	White sucker	5	5	100	2.2	11	5.9			ug/kg
PCB Congeners	PCB-60	Worms (all)	19	19	100	0.13	3.9	0.65			ug/kg
PCB Congeners	PCB-60	Worms (estuarine sp.)	5	5	100	0.13	0.96	0.32			ug/kg
PCB Congeners	PCB-60	Worms (freshwater sp.)	14	14	100	0.19	3.9	0.77			ug/kg
PCB Congeners	PCB-61	American eel (all)	21	21	100	2.2	35	13			ug/kg
PCB Congeners	PCB-61	Blue crab	24	24	100	5.3	15	12			ug/kg
PCB Congeners	PCB-61	Brown bullhead	6	6	100	5.8	35	18			ug/kg
PCB Congeners	PCB-61	Carp	12	12	100	42	280	140			ug/kg
PCB Congeners	PCB-61	Channel catfish	11	11	100	3.1	45	20			ug/kg
PCB Congeners	PCB-61	Fish (all)	131	131	100	2.2	280	42			ug/kg
PCB Congeners	PCB-61	Fish (≤ 11 cm)	23	23	100	7.4	32	17			ug/kg
PCB Congeners	PCB-61	Fish (≤ 13 cm)	26	26	100	7.4	32	17			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-61	Fish (≤ 18 cm)	41	41	100	5.6	100	34			ug/kg
PCB Congeners	PCB-61	Fish (≤ 20 cm)	43	43	100	5.6	110	37			ug/kg
PCB Congeners	PCB-61	Largemouth bass	3	3	100	30	130	71			ug/kg
PCB Congeners	PCB-61	Mummichog	18	18	100	7.4	32	17			ug/kg
PCB Congeners	PCB-61	Mussel (estuarine)	3	3	100	0.12	1.1	0.54			ug/kg
PCB Congeners	PCB-61	Mussel (freshwater)	5	5	100	0.77	1.7	1.2			ug/kg
PCB Congeners	PCB-61	Northern pike	1	1	100	76	76				ug/kg
PCB Congeners	PCB-61	Other forage fish (no mummichog)	10	10	100	5.6	38	18			ug/kg
PCB Congeners	PCB-61	Smallmouth bass	3	3	100	14	28	19			ug/kg
PCB Congeners	PCB-61	White catfish	19	19	100	7.1	110	41			ug/kg
PCB Congeners	PCB-61	White perch	22	22	100	9.6	130	66			ug/kg
PCB Congeners	PCB-61	White sucker	5	5	100	18	69	43			ug/kg
PCB Congeners	PCB-61	Worms (all)	19	19	100	0.46	30	6.5			ug/kg
PCB Congeners	PCB-61	Worms (estuarine sp.)	5	5	100	0.46	3.4	1.1			ug/kg
PCB Congeners	PCB-61	Worms (freshwater sp.)	14	14	100	1.8	30	8.5			ug/kg
PCB Congeners	PCB-63	American eel (all)	21	21	100	0.18	3.2	1.1			ug/kg
PCB Congeners	PCB-63	Blue crab	24	24	100	0.093	0.43	0.29			ug/kg
PCB Congeners	PCB-63	Brown bullhead	6	6	100	0.47	3	1.5			ug/kg
PCB Congeners	PCB-63	Carp	12	12	100	2.3	16	7.3			ug/kg
PCB Congeners	PCB-63	Channel catfish	11	11	100	0.55	4.1	2			ug/kg
PCB Congeners	PCB-63	Fish (all)	131	131	100	0.18	16	2.4			ug/kg
PCB Congeners	PCB-63	Fish (≤ 11 cm)	23	23	100	0.35	1.4	0.78			ug/kg
PCB Congeners	PCB-63	Fish (≤ 13 cm)	26	26	100	0.35	1.4	0.77			ug/kg
PCB Congeners	PCB-63	Fish (≤ 18 cm)	41	41	100	0.21	3.9	1.4			ug/kg
PCB Congeners	PCB-63	Fish (≤ 20 cm)	43	43	100	0.21	4.5	1.5			ug/kg
PCB Congeners	PCB-63	Largemouth bass	3	3	100	1.6	3.2	2.4			ug/kg
PCB Congeners	PCB-63	Mummichog	18	18	100	0.41	1.4	0.82			ug/kg
PCB Congeners	PCB-63	Mussel (estuarine)	3	3	100	0.0033	0.029	0.014			ug/kg
PCB Congeners	PCB-63	Mussel (freshwater)	5	5	100	0.023	0.044	0.033			ug/kg
PCB Congeners	PCB-63	Northern pike	1	1	100	3.2	3.2				ug/kg
PCB Congeners	PCB-63	Other forage fish (no mummichog)	10	10	100	0.21	1.4	0.68			ug/kg
PCB Congeners	PCB-63	Smallmouth bass	3	3	100	0.87	1.7	1.2			ug/kg
PCB Congeners	PCB-63	White catfish	19	19	100	0.64	10	3.9			ug/kg
PCB Congeners	PCB-63	White perch	22	22	100	0.37	5.2	2.6			ug/kg
PCB Congeners	PCB-63	White sucker	5	5	100	0.75	3.7	2			ug/kg
PCB Congeners	PCB-63	Worms (all)	19	19	100	0.053	0.85	0.22			ug/kg
PCB Congeners	PCB-63	Worms (estuarine sp.)	5	5	100	0.053	0.34	0.12			ug/kg
PCB Congeners	PCB-63	Worms (freshwater sp.)	14	14	100	0.062	0.85	0.25			ug/kg
PCB Congeners	PCB-64	American eel (all)	21	21	100	5.5	57	24			ug/kg
PCB Congeners	PCB-64	Blue crab	24	24	100	0.21	1.4	0.71			ug/kg
PCB Congeners	PCB-64	Brown bullhead	6	6	100	4.3	30	14			ug/kg
PCB Congeners	PCB-64	Carp	12	12	100	18	130	64			ug/kg
PCB Congeners	PCB-64	Channel catfish	11	11	100	7.2	42	19			ug/kg
PCB Congeners	PCB-64	Fish (all)	131	131	100	2.4	130	25			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-64	Fish (≤ 11 cm)	23	23	100	3.7	14	7.8			ug/kg
PCB Congeners	PCB-64	Fish (≤ 13 cm)	26	26	100	3.7	14	7.7			ug/kg
PCB Congeners	PCB-64	Fish (≤ 18 cm)	41	41	100	2.4	39	13			ug/kg
PCB Congeners	PCB-64	Fish (≤ 20 cm)	43	43	100	2.4	46	15			ug/kg
PCB Congeners	PCB-64	Largemouth bass	3	3	100	13	28	19			ug/kg
PCB Congeners	PCB-64	Mummichog	18	18	100	3.7	14	8			ug/kg
PCB Congeners	PCB-64	Mussel (estuarine)	3	3	100	0.045	0.38	0.19			ug/kg
PCB Congeners	PCB-64	Mussel (freshwater)	5	5	100	0.31	0.54	0.42			ug/kg
PCB Congeners	PCB-64	Northern pike	1	1	100	27	27				ug/kg
PCB Congeners	PCB-64	Other forage fish (no mummichog)	10	10	100	2.4	14	7.2			ug/kg
PCB Congeners	PCB-64	Smallmouth bass	3	3	100	6.8	15	10			ug/kg
PCB Congeners	PCB-64	White catfish	19	19	100	5.7	93	38			ug/kg
PCB Congeners	PCB-64	White perch	22	22	100	3.9	46	25			ug/kg
PCB Congeners	PCB-64	White sucker	5	5	100	8.2	32	18			ug/kg
PCB Congeners	PCB-64	Worms (all)	19	19	100	0.45	9	2.3			ug/kg
PCB Congeners	PCB-64	Worms (estuarine sp.)	5	5	100	0.45	3.3	1.1			ug/kg
PCB Congeners	PCB-64	Worms (freshwater sp.)	14	14	100	0.88	9	2.7			ug/kg
PCB Congeners	PCB-66	American eel (all)	21	21	100	3.8	57	20			ug/kg
PCB Congeners	PCB-66	Blue crab	24	24	100	8	23	17			ug/kg
PCB Congeners	PCB-66	Brown bullhead	6	6	100	7.7	48	24			ug/kg
PCB Congeners	PCB-66	Carp	12	12	100	33	260	120			ug/kg
PCB Congeners	PCB-66	Channel catfish	11	11	100	8.8	72	36			ug/kg
PCB Congeners	PCB-66	Fish (all)	131	131	100	3.6	260	40			ug/kg
PCB Congeners	PCB-66	Fish (≤ 11 cm)	23	23	100	5.6	25	13			ug/kg
PCB Congeners	PCB-66	Fish (≤ 13 cm)	26	26	100	5.6	25	13			ug/kg
PCB Congeners	PCB-66	Fish (≤ 18 cm)	41	41	100	3.6	62	22			ug/kg
PCB Congeners	PCB-66	Fish (≤ 20 cm)	43	43	100	3.6	70	24			ug/kg
PCB Congeners	PCB-66	Largemouth bass	3	3	100	27	55	46			ug/kg
PCB Congeners	PCB-66	Mummichog	18	18	100	6.5	25	14			ug/kg
PCB Congeners	PCB-66	Mussel (estuarine)	3	3	100	0.067	0.56	0.28			ug/kg
PCB Congeners	PCB-66	Mussel (freshwater)	5	5	100	0.43	0.92	0.67			ug/kg
PCB Congeners	PCB-66	Northern pike	1	1	100	50	50				ug/kg
PCB Congeners	PCB-66	Other forage fish (no mummichog)	10	10	100	3.6	24	11			ug/kg
PCB Congeners	PCB-66	Smallmouth bass	3	3	100	14	26	18			ug/kg
PCB Congeners	PCB-66	White catfish	19	19	100	9.7	160	65			ug/kg
PCB Congeners	PCB-66	White perch	22	22	100	6.9	81	42			ug/kg
PCB Congeners	PCB-66	White sucker	5	5	100	12	60	32			ug/kg
PCB Congeners	PCB-66	Worms (all)	19	19	100	0.49	15	3.5			ug/kg
PCB Congeners	PCB-66	Worms (estuarine sp.)	5	5	100	0.49	3.1	1.1			ug/kg
PCB Congeners	PCB-66	Worms (freshwater sp.)	14	14	100	1.1	15	4.4			ug/kg
PCB Congeners	PCB-67	American eel (all)	21	11	52.4	0.014	0.32	0.14	0.0051	0.017	ug/kg
PCB Congeners	PCB-67	Blue crab	24	19	79.2	0.02	0.13	0.064	0.0047	0.0063	ug/kg
PCB Congeners	PCB-67	Brown bullhead	6	5	83.3	0.083	0.46	0.23	0.0082	0.0082	ug/kg
PCB Congeners	PCB-67	Carp	12	12	100	0.29	2.2	1.3			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-67	Channel catfish	11	8	72.7	0.014	0.34	0.16	0.0034	0.0064	ug/kg
PCB Congeners	PCB-67	Fish (all)	131	117	89.3	0.014	2.7	0.58	0.0034	0.017	ug/kg
PCB Congeners	PCB-67	Fish (≤ 11 cm)	23	23	100	0.046	0.47	0.17			ug/kg
PCB Congeners	PCB-67	Fish (≤ 13 cm)	26	26	100	0.046	0.55	0.2			ug/kg
PCB Congeners	PCB-67	Fish (≤ 18 cm)	41	41	100	0.046	2.2	0.63			ug/kg
PCB Congeners	PCB-67	Fish (≤ 20 cm)	43	43	100	0.046	2.4	0.7			ug/kg
PCB Congeners	PCB-67	Largemouth bass	3	3	100	0.032	1.3	0.59			ug/kg
PCB Congeners	PCB-67	Mummichog	18	18	100	0.046	0.3	0.13			ug/kg
PCB Congeners	PCB-67	Mussel (estuarine)	3	3	100	0.0031	0.031	0.015			ug/kg
PCB Congeners	PCB-67	Mussel (freshwater)	5	5	100	0.022	0.04	0.032			ug/kg
PCB Congeners	PCB-67	Northern pike	1	1	100	1.4	1.4				ug/kg
PCB Congeners	PCB-67	Other forage fish (no mummichog)	10	10	100	0.14	0.78	0.35			ug/kg
PCB Congeners	PCB-67	Smallmouth bass	3	3	100	0.24	0.52	0.35			ug/kg
PCB Congeners	PCB-67	White catfish	19	19	100	0.023	1	0.26			ug/kg
PCB Congeners	PCB-67	White perch	22	22	100	0.17	2.7	1.4			ug/kg
PCB Congeners	PCB-67	White sucker	5	5	100	0.23	0.82	0.45			ug/kg
PCB Congeners	PCB-67	Worms (all)	19	19	100	0.023	0.61	0.14			ug/kg
PCB Congeners	PCB-67	Worms (estuarine sp.)	5	5	100	0.023	0.14	0.05			ug/kg
PCB Congeners	PCB-67	Worms (freshwater sp.)	14	14	100	0.044	0.61	0.17			ug/kg
PCB Congeners	PCB-68	American eel (all)	21	21	100	0.02	0.7	0.22			ug/kg
PCB Congeners	PCB-68	Blue crab	24	24	100	0.057	0.21	0.14			ug/kg
PCB Congeners	PCB-68	Brown bullhead	6	6	100	0.1	0.97	0.4			ug/kg
PCB Congeners	PCB-68	Carp	12	12	100	0.45	3	1.8			ug/kg
PCB Congeners	PCB-68	Channel catfish	11	11	100	0.16	1	0.52			ug/kg
PCB Congeners	PCB-68	Fish (all)	131	131	100	0.02	3	0.64			ug/kg
PCB Congeners	PCB-68	Fish (≤ 11 cm)	23	23	100	0.11	0.54	0.25			ug/kg
PCB Congeners	PCB-68	Fish (≤ 13 cm)	26	26	100	0.11	0.54	0.25			ug/kg
PCB Congeners	PCB-68	Fish (≤ 18 cm)	41	41	100	0.056	1.3	0.43			ug/kg
PCB Congeners	PCB-68	Fish (≤ 20 cm)	43	43	100	0.056	1.4	0.47			ug/kg
PCB Congeners	PCB-68	Largemouth bass	3	3	100	0.42	0.86	0.57			ug/kg
PCB Congeners	PCB-68	Mummichog	18	18	100	0.13	0.54	0.27			ug/kg
PCB Congeners	PCB-68	Mussel (estuarine)	3	3	100	0.0011	0.0078	0.0039			ug/kg
PCB Congeners	PCB-68	Mussel (freshwater)	5	5	100	0.0057	0.0083	0.0065			ug/kg
PCB Congeners	PCB-68	Northern pike	1	1	100	0.98	0.98				ug/kg
PCB Congeners	PCB-68	Other forage fish (no mummichog)	10	10	100	0.056	0.43	0.21			ug/kg
PCB Congeners	PCB-68	Smallmouth bass	3	3	100	0.23	0.43	0.3			ug/kg
PCB Congeners	PCB-68	White catfish	19	19	100	0.14	2.5	0.98			ug/kg
PCB Congeners	PCB-68	White perch	22	22	100	0.077	1.7	0.81			ug/kg
PCB Congeners	PCB-68	White sucker	5	5	100	0.22	1.1	0.59			ug/kg
PCB Congeners	PCB-68	Worms (all)	19	19	100	0.018	0.2	0.06			ug/kg
PCB Congeners	PCB-68	Worms (estuarine sp.)	5	5	100	0.018	0.055	0.032			ug/kg
PCB Congeners	PCB-68	Worms (freshwater sp.)	14	14	100	0.021	0.2	0.07			ug/kg
PCB Congeners	PCB-72	American eel (all)	21	21	100	0.033	0.8	0.26			ug/kg
PCB Congeners	PCB-72	Blue crab	24	24	100	0.016	0.086	0.055			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-72	Brown bullhead	6	6	100	0.088	0.69	0.31			ug/kg
PCB Congeners	PCB-72	Carp	12	12	100	0.5	3.3	1.7			ug/kg
PCB Congeners	PCB-72	Channel catfish	11	11	100	0.081	0.37	0.22			ug/kg
PCB Congeners	PCB-72	Fish (all)	131	131	100	0.033	3.3	0.57			ug/kg
PCB Congeners	PCB-72	Fish (≤ 11 cm)	23	23	100	0.11	0.45	0.24			ug/kg
PCB Congeners	PCB-72	Fish (≤ 13 cm)	26	26	100	0.11	0.45	0.24			ug/kg
PCB Congeners	PCB-72	Fish (≤ 18 cm)	41	41	100	0.06	1.2	0.43			ug/kg
PCB Congeners	PCB-72	Fish (≤ 20 cm)	43	43	100	0.06	1.7	0.49			ug/kg
PCB Congeners	PCB-72	Largemouth bass	3	3	100	0.41	1.2	0.79			ug/kg
PCB Congeners	PCB-72	Mummichog	18	18	100	0.14	0.45	0.26			ug/kg
PCB Congeners	PCB-72	Mussel (estuarine)	3	3	100	0.0012	0.015	0.007			ug/kg
PCB Congeners	PCB-72	Mussel (freshwater)	5	5	100	0.0088	0.014	0.011			ug/kg
PCB Congeners	PCB-72	Northern pike	1	1	100	0.94	0.94				ug/kg
PCB Congeners	PCB-72	Other forage fish (no mummichog)	10	10	100	0.06	0.44	0.21			ug/kg
PCB Congeners	PCB-72	Smallmouth bass	3	3	100	0.23	0.41	0.29			ug/kg
PCB Congeners	PCB-72	White catfish	19	19	100	0.088	2.4	0.68			ug/kg
PCB Congeners	PCB-72	White perch	22	22	100	0.094	1.7	0.86			ug/kg
PCB Congeners	PCB-72	White sucker	5	5	100	0.23	1	0.55			ug/kg
PCB Congeners	PCB-72	Worms (all)	19	19	100	0.012	0.19	0.054			ug/kg
PCB Congeners	PCB-72	Worms (estuarine sp.)	5	5	100	0.012	0.046	0.019			ug/kg
PCB Congeners	PCB-72	Worms (freshwater sp.)	14	14	100	0.021	0.19	0.067			ug/kg
PCB Congeners	PCB-73	American eel (all)	21	15	71.4	0.016	0.46	0.1	0.0016	0.0089	ug/kg
PCB Congeners	PCB-73	Blue crab	24	18	75	0.014	0.08	0.033	0.0026	0.0045	ug/kg
PCB Congeners	PCB-73	Brown bullhead	6	5	83.3	0.042	0.68	0.29	0.003	0.003	ug/kg
PCB Congeners	PCB-73	Carp	12	12	100	0.084	1.2	0.74			ug/kg
PCB Congeners	PCB-73	Channel catfish	11	11	100	0.093	0.59	0.25			ug/kg
PCB Congeners	PCB-73	Fish (all)	131	123	93.9	0.01	1.2	0.33	0.0016	0.0089	ug/kg
PCB Congeners	PCB-73	Fish (≤ 11 cm)	23	23	100	0.021	0.33	0.12			ug/kg
PCB Congeners	PCB-73	Fish (≤ 13 cm)	26	26	100	0.021	0.33	0.12			ug/kg
PCB Congeners	PCB-73	Fish (≤ 18 cm)	41	41	100	0.01	1	0.27			ug/kg
PCB Congeners	PCB-73	Fish (≤ 20 cm)	43	43	100	0.01	1.2	0.3			ug/kg
PCB Congeners	PCB-73	Largemouth bass	3	2	66.7	0.13	0.27	0.2	0.0041	0.0041	ug/kg
PCB Congeners	PCB-73	Mummichog	18	18	100	0.045	0.33	0.13			ug/kg
PCB Congeners	PCB-73	Mussel (estuarine)	3	3	100	0.0012	0.0069	0.0037			ug/kg
PCB Congeners	PCB-73	Mussel (freshwater)	5	5	100	0.0055	0.0091	0.0068			ug/kg
PCB Congeners	PCB-73	Northern pike	1	1	100	0.27	0.27				ug/kg
PCB Congeners	PCB-73	Other forage fish (no mummichog)	10	10	100	0.01	0.21	0.095			ug/kg
PCB Congeners	PCB-73	Smallmouth bass	3	3	100	0.049	0.11	0.075			ug/kg
PCB Congeners	PCB-73	White catfish	19	19	100	0.045	0.98	0.42			ug/kg
PCB Congeners	PCB-73	White perch	22	22	100	0.096	1.2	0.57			ug/kg
PCB Congeners	PCB-73	White sucker	5	5	100	0.084	0.59	0.33			ug/kg
PCB Congeners	PCB-73	Worms (all)	19	16	84.2	0.0099	0.22	0.049	0.0024	0.0041	ug/kg
PCB Congeners	PCB-73	Worms (estuarine sp.)	5	4	80	0.019	0.04	0.028	0.0024	0.0024	ug/kg
PCB Congeners	PCB-73	Worms (freshwater sp.)	14	12	85.7	0.0099	0.22	0.056	0.0032	0.0041	ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-77	American eel (all)	21	15	71.4	0.011	0.062	0.033	0.0068	0.052	ug/kg
PCB Congeners	PCB-77	Blue crab	24	24	100	0.82	1.8	1.4			ug/kg
PCB Congeners	PCB-77	Brown bullhead	6	6	100	0.15	0.87	0.41			ug/kg
PCB Congeners	PCB-77	Carp	12	12	100	0.8	3.4	1.9			ug/kg
PCB Congeners	PCB-77	Channel catfish	11	11	100	0.054	0.35	0.14			ug/kg
PCB Congeners	PCB-77	Fish (all)	131	125	95.4	0.011	6.6	1.1	0.0068	0.052	ug/kg
PCB Congeners	PCB-77	Fish (≤ 11 cm)	23	23	100	0.23	1.5	0.66			ug/kg
PCB Congeners	PCB-77	Fish (≤ 13 cm)	26	26	100	0.23	1.5	0.67			ug/kg
PCB Congeners	PCB-77	Fish (≤ 18 cm)	41	41	100	0.23	5	1.5			ug/kg
PCB Congeners	PCB-77	Fish (≤ 20 cm)	43	43	100	0.23	5	1.6			ug/kg
PCB Congeners	PCB-77	Largemouth bass	3	3	100	0.061	5.6	2.4			ug/kg
PCB Congeners	PCB-77	Mummichog	18	18	100	0.23	1.1	0.58			ug/kg
PCB Congeners	PCB-77	Mussel (estuarine)	3	3	100	0.0057	0.046	0.023			ug/kg
PCB Congeners	PCB-77	Mussel (freshwater)	5	5	100	0.046	0.091	0.066			ug/kg
PCB Congeners	PCB-77	Northern pike	1	1	100	2.2	2.2				ug/kg
PCB Congeners	PCB-77	Other forage fish (no mummichog)	10	10	100	0.28	1.5	0.84			ug/kg
PCB Congeners	PCB-77	Smallmouth bass	3	3	100	0.46	0.83	0.62			ug/kg
PCB Congeners	PCB-77	White catfish	19	19	100	0.037	1.2	0.24			ug/kg
PCB Congeners	PCB-77	White perch	22	22	100	0.45	6.6	3.1			ug/kg
PCB Congeners	PCB-77	White sucker	5	5	100	0.95	2.6	1.7			ug/kg
PCB Congeners	PCB-77	Worms (all)	19	19	100	0.085	1.6	0.38			ug/kg
PCB Congeners	PCB-77	Worms (estuarine sp.)	5	5	100	0.085	0.44	0.16			ug/kg
PCB Congeners	PCB-77	Worms (freshwater sp.)	14	14	100	0.16	1.6	0.46			ug/kg
PCB Congeners	PCB-79	American eel (all)	21	21	100	0.046	0.56	0.17			ug/kg
PCB Congeners	PCB-79	Blue crab	24	24	100	0.017	0.082	0.055			ug/kg
PCB Congeners	PCB-79	Brown bullhead	6	6	100	0.058	0.41	0.21			ug/kg
PCB Congeners	PCB-79	Carp	12	12	100	0.5	3.3	1.4			ug/kg
PCB Congeners	PCB-79	Channel catfish	11	11	100	0.083	0.62	0.28			ug/kg
PCB Congeners	PCB-79	Fish (all)	131	131	100	0.033	5	0.42			ug/kg
PCB Congeners	PCB-79	Fish (≤ 11 cm)	23	23	100	0.033	0.19	0.11			ug/kg
PCB Congeners	PCB-79	Fish (≤ 13 cm)	26	26	100	0.033	0.19	0.11			ug/kg
PCB Congeners	PCB-79	Fish (≤ 18 cm)	41	41	100	0.033	0.59	0.19			ug/kg
PCB Congeners	PCB-79	Fish (≤ 20 cm)	43	43	100	0.033	0.59	0.21			ug/kg
PCB Congeners	PCB-79	Largemouth bass	3	3	100	0.34	5	2			ug/kg
PCB Congeners	PCB-79	Mummichog	18	18	100	0.033	0.19	0.098			ug/kg
PCB Congeners	PCB-79	Mussel (estuarine)	3	3	100	0.00062	0.0061	0.0031			ug/kg
PCB Congeners	PCB-79	Mussel (freshwater)	5	5	100	0.0056	0.0094	0.0075			ug/kg
PCB Congeners	PCB-79	Northern pike	1	1	100	0.59	0.59				ug/kg
PCB Congeners	PCB-79	Other forage fish (no mummichog)	10	10	100	0.033	0.18	0.12			ug/kg
PCB Congeners	PCB-79	Smallmouth bass	3	3	100	0.16	0.47	0.32			ug/kg
PCB Congeners	PCB-79	White catfish	19	19	100	0.08	0.93	0.49			ug/kg
PCB Congeners	PCB-79	White perch	22	22	100	0.049	0.68	0.36			ug/kg
PCB Congeners	PCB-79	White sucker	5	5	100	0.17	0.82	0.44			ug/kg
PCB Congeners	PCB-79	Worms (all)	19	18	94.7	0.0091	0.24	0.054	0.0022	0.0022	ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-79	Worms (estuarine sp.)	5	4	80	0.0091	0.046	0.019	0.0022	0.0022	ug/kg
PCB Congeners	PCB-79	Worms (freshwater sp.)	14	14	100	0.02	0.24	0.064			ug/kg
PCB Congeners	PCB-81	American eel (all)	21	9	42.9	0.008	0.042	0.025	0.0052	0.048	ug/kg
PCB Congeners	PCB-81	Blue crab	24	24	100	0.022	0.11	0.079			ug/kg
PCB Congeners	PCB-81	Brown bullhead	6	6	100	0.033	0.18	0.098			ug/kg
PCB Congeners	PCB-81	Carp	12	12	100	0.095	0.38	0.26			ug/kg
PCB Congeners	PCB-81	Channel catfish	11	10	90.9	0.008	0.13	0.077	0.0042	0.0042	ug/kg
PCB Congeners	PCB-81	Fish (all)	131	117	89.3	0.008	0.49	0.12	0.0042	0.14	ug/kg
PCB Congeners	PCB-81	Fish (≤ 11 cm)	23	23	100	0.021	0.073	0.045			ug/kg
PCB Congeners	PCB-81	Fish (≤ 13 cm)	26	26	100	0.021	0.073	0.045			ug/kg
PCB Congeners	PCB-81	Fish (≤ 18 cm)	41	41	100	0.018	0.23	0.082			ug/kg
PCB Congeners	PCB-81	Fish (≤ 20 cm)	43	43	100	0.018	0.24	0.089			ug/kg
PCB Congeners	PCB-81	Largemouth bass	3	2	66.7	0.075	0.11	0.093	0.14	0.14	ug/kg
PCB Congeners	PCB-81	Mummichog	18	18	100	0.021	0.073	0.044			ug/kg
PCB Congeners	PCB-81	Mussel (estuarine)	3	2	66.7	0.00073	0.0017	0.0012	0.0004	0.0004	ug/kg
PCB Congeners	PCB-81	Mussel (freshwater)	5	4	80	0.0021	0.0036	0.003	0.00053	0.00053	ug/kg
PCB Congeners	PCB-81	Northern pike	1	1	100	0.2	0.2				ug/kg
PCB Congeners	PCB-81	Other forage fish (no mummichog)	10	10	100	0.018	0.09	0.047			ug/kg
PCB Congeners	PCB-81	Smallmouth bass	3	3	100	0.036	0.057	0.046			ug/kg
PCB Congeners	PCB-81	White catfish	19	19	100	0.014	0.49	0.19			ug/kg
PCB Congeners	PCB-81	White perch	22	22	100	0.029	0.31	0.16			ug/kg
PCB Congeners	PCB-81	White sucker	5	5	100	0.056	0.28	0.14			ug/kg
PCB Congeners	PCB-81	Worms (all)	19	9	47.4	0.0064	0.059	0.018	0.0032	0.0095	ug/kg
PCB Congeners	PCB-81	Worms (estuarine sp.)	5	1	20	0.02	0.02		0.0032	0.0053	ug/kg
PCB Congeners	PCB-81	Worms (freshwater sp.)	14	8	57.1	0.0064	0.059	0.018	0.0046	0.0095	ug/kg
PCB Congeners	PCB-82	American eel (all)	21	21	100	0.34	5.1	1.6			ug/kg
PCB Congeners	PCB-82	Blue crab	24	19	79.2	0.022	0.2	0.061	0.0075	0.017	ug/kg
PCB Congeners	PCB-82	Brown bullhead	6	6	100	0.72	6.7	3.4			ug/kg
PCB Congeners	PCB-82	Carp	12	12	100	4.8	39	17			ug/kg
PCB Congeners	PCB-82	Channel catfish	11	11	100	0.3	6.2	2.6			ug/kg
PCB Congeners	PCB-82	Fish (all)	131	131	100	0.17	39	4.2			ug/kg
PCB Congeners	PCB-82	Fish (≤ 11 cm)	23	23	100	0.41	2.3	1.2			ug/kg
PCB Congeners	PCB-82	Fish (≤ 13 cm)	26	26	100	0.41	2.3	1.3			ug/kg
PCB Congeners	PCB-82	Fish (≤ 18 cm)	41	41	100	0.41	8.8	2.5			ug/kg
PCB Congeners	PCB-82	Fish (≤ 20 cm)	43	43	100	0.41	8.8	2.7			ug/kg
PCB Congeners	PCB-82	Largemouth bass	3	3	100	2.7	31	13			ug/kg
PCB Congeners	PCB-82	Mummichog	18	18	100	0.41	2.1	1			ug/kg
PCB Congeners	PCB-82	Mussel (estuarine)	3	3	100	0.0075	0.073	0.036			ug/kg
PCB Congeners	PCB-82	Mussel (freshwater)	5	5	100	0.066	0.13	0.098			ug/kg
PCB Congeners	PCB-82	Northern pike	1	1	100	6.4	6.4				ug/kg
PCB Congeners	PCB-82	Other forage fish (no mummichog)	10	10	100	0.45	2.1	1.5			ug/kg
PCB Congeners	PCB-82	Smallmouth bass	3	3	100	1.2	4	2.7			ug/kg
PCB Congeners	PCB-82	White catfish	19	19	100	0.52	7.6	3			ug/kg
PCB Congeners	PCB-82	White perch	22	22	100	0.17	9.2	4.9			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-82	White sucker	5	5	100	1.8	9.3	4.7			ug/kg
PCB Congeners	PCB-82	Worms (all)	19	18	94.7	0.027	3.5	0.72	0.016	0.016	ug/kg
PCB Congeners	PCB-82	Worms (estuarine sp.)	5	4	80	0.027	0.24	0.085	0.016	0.016	ug/kg
PCB Congeners	PCB-82	Worms (freshwater sp.)	14	14	100	0.32	3.5	0.91			ug/kg
PCB Congeners	PCB-83	American eel (all)	21	21	100	0.27	3.6	1.4			ug/kg
PCB Congeners	PCB-83	Blue crab	24	0	0				0.0057	0.017	ug/kg
PCB Congeners	PCB-83	Brown bullhead	6	4	66.7	0.57	2.9	1.5	0.0055	0.011	ug/kg
PCB Congeners	PCB-83	Carp	12	11	91.7	3.2	19	7.9	0.0086	0.0086	ug/kg
PCB Congeners	PCB-83	Channel catfish	11	11	100	0.43	4	1.7			ug/kg
PCB Congeners	PCB-83	Fish (all)	131	125	95.4	0.018	29	2.5	0.005	0.011	ug/kg
PCB Congeners	PCB-83	Fish (≤ 11 cm)	23	23	100	0.27	1.5	0.81			ug/kg
PCB Congeners	PCB-83	Fish (≤ 13 cm)	26	26	100	0.27	1.5	0.82			ug/kg
PCB Congeners	PCB-83	Fish (≤ 18 cm)	41	40	97.6	0.1	4.5	1.4	0.0055	0.0055	ug/kg
PCB Congeners	PCB-83	Fish (≤ 20 cm)	43	41	95.3	0.1	4.5	1.4	0.0055	0.0089	ug/kg
PCB Congeners	PCB-83	Largemouth bass	3	3	100	1	29	11			ug/kg
PCB Congeners	PCB-83	Mummichog	18	18	100	0.27	1.5	0.8			ug/kg
PCB Congeners	PCB-83	Mussel (estuarine)	3	3	100	0.0037	0.05	0.023			ug/kg
PCB Congeners	PCB-83	Mussel (freshwater)	5	5	100	0.035	0.072	0.049			ug/kg
PCB Congeners	PCB-83	Northern pike	1	1	100	3.2	3.2				ug/kg
PCB Congeners	PCB-83	Other forage fish (no mummichog)	10	10	100	0.1	1.5	0.81			ug/kg
PCB Congeners	PCB-83	Smallmouth bass	3	3	100	0.54	2.4	1.4			ug/kg
PCB Congeners	PCB-83	White catfish	19	19	100	0.018	6.1	2.4			ug/kg
PCB Congeners	PCB-83	White perch	22	19	86.4	0.097	5.3	2.6	0.005	0.0089	ug/kg
PCB Congeners	PCB-83	White sucker	5	5	100	0.48	3.3	1.7			ug/kg
PCB Congeners	PCB-83	Worms (all)	19	18	94.7	0.041	1.8	0.34	0.011	0.011	ug/kg
PCB Congeners	PCB-83	Worms (estuarine sp.)	5	4	80	0.041	0.2	0.085	0.011	0.011	ug/kg
PCB Congeners	PCB-83	Worms (freshwater sp.)	14	14	100	0.15	1.8	0.42			ug/kg
PCB Congeners	PCB-84	American eel (all)	21	21	100	0.43	9.3	2.9			ug/kg
PCB Congeners	PCB-84	Blue crab	24	24	100	0.043	0.39	0.15			ug/kg
PCB Congeners	PCB-84	Brown bullhead	6	6	100	1.2	13	6			ug/kg
PCB Congeners	PCB-84	Carp	12	12	100	6.8	66	29			ug/kg
PCB Congeners	PCB-84	Channel catfish	11	11	100	1.5	9.5	4			ug/kg
PCB Congeners	PCB-84	Fish (all)	131	131	100	0.42	66	7.5			ug/kg
PCB Congeners	PCB-84	Fish (≤ 11 cm)	23	23	100	0.79	4	2.2			ug/kg
PCB Congeners	PCB-84	Fish (≤ 13 cm)	26	26	100	0.79	4.5	2.4			ug/kg
PCB Congeners	PCB-84	Fish (≤ 18 cm)	41	41	100	0.42	20	5.1			ug/kg
PCB Congeners	PCB-84	Fish (≤ 20 cm)	43	43	100	0.42	20	5.5			ug/kg
PCB Congeners	PCB-84	Largemouth bass	3	3	100	4	37	17			ug/kg
PCB Congeners	PCB-84	Mummichog	18	18	100	0.79	4	2			ug/kg
PCB Congeners	PCB-84	Mussel (estuarine)	3	3	100	0.017	0.19	0.091			ug/kg
PCB Congeners	PCB-84	Mussel (freshwater)	5	5	100	0.17	0.28	0.23			ug/kg
PCB Congeners	PCB-84	Northern pike	1	1	100	13	13				ug/kg
PCB Congeners	PCB-84	Other forage fish (no mummichog)	10	10	100	0.42	6.1	3			ug/kg
PCB Congeners	PCB-84	Smallmouth bass	3	3	100	2	6.1	3.8			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-84	White catfish	19	19	100	0.88	10	4.8			ug/kg
PCB Congeners	PCB-84	White perch	22	22	100	1.3	22	10			ug/kg
PCB Congeners	PCB-84	White sucker	5	5	100	2.8	13	7.1			ug/kg
PCB Congeners	PCB-84	Worms (all)	19	19	100	0.27	7.8	1.5			ug/kg
PCB Congeners	PCB-84	Worms (estuarine sp.)	5	5	100	0.27	1.7	0.58			ug/kg
PCB Congeners	PCB-84	Worms (freshwater sp.)	14	14	100	0.55	7.8	1.8			ug/kg
PCB Congeners	PCB-85	American eel (all)	21	21	100	3.4	27	12			ug/kg
PCB Congeners	PCB-85	Blue crab	24	24	100	2.1	7.2	5			ug/kg
PCB Congeners	PCB-85	Brown bullhead	6	6	100	3.1	16	8.9			ug/kg
PCB Congeners	PCB-85	Carp	12	12	100	6.3	75	34			ug/kg
PCB Congeners	PCB-85	Channel catfish	11	11	100	2	25	12			ug/kg
PCB Congeners	PCB-85	Fish (all)	131	131	100	1.4	130	15			ug/kg
PCB Congeners	PCB-85	Fish (≤ 11 cm)	23	23	100	1.6	6.8	4.2			ug/kg
PCB Congeners	PCB-85	Fish (≤ 13 cm)	26	26	100	1.6	6.8	4.1			ug/kg
PCB Congeners	PCB-85	Fish (≤ 18 cm)	41	41	100	1.4	21	6.7			ug/kg
PCB Congeners	PCB-85	Fish (≤ 20 cm)	43	43	100	1.4	21	7.2			ug/kg
PCB Congeners	PCB-85	Largemouth bass	3	3	100	9.5	130	53			ug/kg
PCB Congeners	PCB-85	Mummichog	18	18	100	2.3	6.8	4.4			ug/kg
PCB Congeners	PCB-85	Mussel (estuarine)	3	3	100	0.01	0.1	0.048			ug/kg
PCB Congeners	PCB-85	Mussel (freshwater)	5	5	100	0.096	0.16	0.12			ug/kg
PCB Congeners	PCB-85	Northern pike	1	1	100	16	16				ug/kg
PCB Congeners	PCB-85	Other forage fish (no mummichog)	10	10	100	1.4	6.1	3.3			ug/kg
PCB Congeners	PCB-85	Smallmouth bass	3	3	100	5	12	8.3			ug/kg
PCB Congeners	PCB-85	White catfish	19	19	100	5.4	67	25			ug/kg
PCB Congeners	PCB-85	White perch	22	22	100	2.4	21	12			ug/kg
PCB Congeners	PCB-85	White sucker	5	5	100	5.2	21	11			ug/kg
PCB Congeners	PCB-85	Worms (all)	19	19	100	0.18	5	1.1			ug/kg
PCB Congeners	PCB-85	Worms (estuarine sp.)	5	5	100	0.18	1.3	0.44			ug/kg
PCB Congeners	PCB-85	Worms (freshwater sp.)	14	14	100	0.4	5	1.3			ug/kg
PCB Congeners	PCB-86	American eel (all)	21	21	100	3.1	49	15			ug/kg
PCB Congeners	PCB-86	Blue crab	24	24	100	1.2	3.8	2.3			ug/kg
PCB Congeners	PCB-86	Brown bullhead	6	6	100	7.2	42	21			ug/kg
PCB Congeners	PCB-86	Carp	12	12	100	42	260	120			ug/kg
PCB Congeners	PCB-86	Channel catfish	11	11	100	7	63	29			ug/kg
PCB Congeners	PCB-86	Fish (all)	131	131	100	3.1	480	40			ug/kg
PCB Congeners	PCB-86	Fish (≤ 11 cm)	23	23	100	5.3	22	12			ug/kg
PCB Congeners	PCB-86	Fish (≤ 13 cm)	26	26	100	5.3	22	12			ug/kg
PCB Congeners	PCB-86	Fish (≤ 18 cm)	41	41	100	3.6	80	21			ug/kg
PCB Congeners	PCB-86	Fish (≤ 20 cm)	43	43	100	3.6	80	23			ug/kg
PCB Congeners	PCB-86	Largemouth bass	3	3	100	25	480	180			ug/kg
PCB Congeners	PCB-86	Mummichog	18	18	100	5.3	22	12			ug/kg
PCB Congeners	PCB-86	Mussel (estuarine)	3	3	100	0.041	0.41	0.2			ug/kg
PCB Congeners	PCB-86	Mussel (freshwater)	5	5	100	0.4	0.7	0.54			ug/kg
PCB Congeners	PCB-86	Northern pike	1	1	100	54	54				ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-86	Other forage fish (no mummichog)	10	10	100	3.6	18	11			ug/kg
PCB Congeners	PCB-86	Smallmouth bass	3	3	100	13	32	23			ug/kg
PCB Congeners	PCB-86	White catfish	19	19	100	10	130	56			ug/kg
PCB Congeners	PCB-86	White perch	22	22	100	6.5	80	40			ug/kg
PCB Congeners	PCB-86	White sucker	5	5	100	15	68	35			ug/kg
PCB Congeners	PCB-86	Worms (all)	19	19	100	0.41	23	4.1			ug/kg
PCB Congeners	PCB-86	Worms (estuarine sp.)	5	5	100	0.41	2.5	0.9			ug/kg
PCB Congeners	PCB-86	Worms (freshwater sp.)	14	14	100	1.6	23	5.2			ug/kg
PCB Congeners	PCB-88	American eel (all)	21	0	0				0.0024	0.024	ug/kg
PCB Congeners	PCB-88	Blue crab	24	0	0				0.006	0.018	ug/kg
PCB Congeners	PCB-88	Brown bullhead	6	0	0				0.0032	0.017	ug/kg
PCB Congeners	PCB-88	Carp	12	0	0				0.0056	0.027	ug/kg
PCB Congeners	PCB-88	Channel catfish	11	0	0				0.0039	0.0074	ug/kg
PCB Congeners	PCB-88	Fish (all)	131	0	0				0.00085	0.043	ug/kg
PCB Congeners	PCB-88	Fish (≤ 11 cm)	23	0	0				0.00085	0.0044	ug/kg
PCB Congeners	PCB-88	Fish (≤ 13 cm)	26	0	0				0.00085	0.0044	ug/kg
PCB Congeners	PCB-88	Fish (≤ 18 cm)	41	0	0				0.00085	0.013	ug/kg
PCB Congeners	PCB-88	Fish (≤ 20 cm)	43	0	0				0.00085	0.013	ug/kg
PCB Congeners	PCB-88	Largemouth bass	3	0	0				0.002	0.043	ug/kg
PCB Congeners	PCB-88	Mummichog	18	0	0				0.00085	0.0044	ug/kg
PCB Congeners	PCB-88	Mussel (estuarine)	3	0	0				0.00062	0.0017	ug/kg
PCB Congeners	PCB-88	Mussel (freshwater)	5	2	40	0.0057	0.016	0.011	0.0026	0.0033	ug/kg
PCB Congeners	PCB-88	Northern pike	1	0	0				0.0033	0.0033	ug/kg
PCB Congeners	PCB-88	Other forage fish (no mummichog)	10	0	0				0.0012	0.0022	ug/kg
PCB Congeners	PCB-88	Smallmouth bass	3	0	0				0.0019	0.0026	ug/kg
PCB Congeners	PCB-88	White catfish	19	0	0				0.0012	0.01	ug/kg
PCB Congeners	PCB-88	White perch	22	0	0				0.001	0.013	ug/kg
PCB Congeners	PCB-88	White sucker	5	0	0				0.0022	0.0091	ug/kg
PCB Congeners	PCB-88	Worms (all)	19	0	0				0.0035	0.082	ug/kg
PCB Congeners	PCB-88	Worms (estuarine sp.)	5	0	0				0.0095	0.017	ug/kg
PCB Congeners	PCB-88	Worms (freshwater sp.)	14	0	0				0.0035	0.082	ug/kg
PCB Congeners	PCB-89	American eel (all)	21	10	47.6	0.0045	0.076	0.023	0.0017	0.018	ug/kg
PCB Congeners	PCB-89	Blue crab	24	3	12.5	0.01	0.029	0.018	0.0068	0.015	ug/kg
PCB Congeners	PCB-89	Brown bullhead	6	5	83.3	0.1	0.66	0.37	0.0046	0.0046	ug/kg
PCB Congeners	PCB-89	Carp	12	11	91.7	0.038	4.2	1.8	0.0092	0.0092	ug/kg
PCB Congeners	PCB-89	Channel catfish	11	11	100	0.054	0.35	0.16			ug/kg
PCB Congeners	PCB-89	Fish (all)	131	117	89.3	0.0045	4.2	0.45	0.0013	0.018	ug/kg
PCB Congeners	PCB-89	Fish (≤ 11 cm)	23	22	95.7	0.018	0.34	0.17	0.0013	0.0013	ug/kg
PCB Congeners	PCB-89	Fish (≤ 13 cm)	26	25	96.2	0.018	0.34	0.17	0.0013	0.0013	ug/kg
PCB Congeners	PCB-89	Fish (≤ 18 cm)	41	40	97.6	0.018	1	0.3	0.0013	0.0013	ug/kg
PCB Congeners	PCB-89	Fish (≤ 20 cm)	43	42	97.7	0.018	1	0.33	0.0013	0.0013	ug/kg
PCB Congeners	PCB-89	Largemouth bass	3	3	100	0.22	0.63	0.46			ug/kg
PCB Congeners	PCB-89	Mummichog	18	18	100	0.074	0.34	0.17			ug/kg
PCB Congeners	PCB-89	Mussel (estuarine)	3	2	66.7	0.0038	0.011	0.0074	0.00055	0.00055	ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-89	Mussel (freshwater)	5	5	100	0.0089	0.018	0.014			ug/kg
PCB Congeners	PCB-89	Northern pike	1	1	100	0.37	0.37				ug/kg
PCB Congeners	PCB-89	Other forage fish (no mummichog)	10	9	90	0.018	0.22	0.13	0.0013	0.0013	ug/kg
PCB Congeners	PCB-89	Smallmouth bass	3	3	100	0.093	0.29	0.17			ug/kg
PCB Congeners	PCB-89	White catfish	19	19	100	0.061	0.94	0.41			ug/kg
PCB Congeners	PCB-89	White perch	22	22	100	0.073	1.2	0.59			ug/kg
PCB Congeners	PCB-89	White sucker	5	5	100	0.14	0.81	0.41			ug/kg
PCB Congeners	PCB-89	Worms (all)	19	14	73.7	0.041	0.31	0.11	0.009	0.015	ug/kg
PCB Congeners	PCB-89	Worms (estuarine sp.)	5	0	0				0.009	0.015	ug/kg
PCB Congeners	PCB-89	Worms (freshwater sp.)	14	14	100	0.041	0.31	0.11			ug/kg
PCB Congeners	PCB-90	American eel (all)	21	21	100	13	93	35			ug/kg
PCB Congeners	PCB-90	Blue crab	24	24	100	0.81	5.1	2.2			ug/kg
PCB Congeners	PCB-90	Brown bullhead	6	6	100	7.7	57	27			ug/kg
PCB Congeners	PCB-90	Carp	12	12	100	76	440	210			ug/kg
PCB Congeners	PCB-90	Channel catfish	11	11	100	12	110	55			ug/kg
PCB Congeners	PCB-90	Fish (all)	131	131	100	6.9	920	80			ug/kg
PCB Congeners	PCB-90	Fish (≤ 11 cm)	23	23	100	9.5	42	22			ug/kg
PCB Congeners	PCB-90	Fish (≤ 13 cm)	26	26	100	9.5	42	22			ug/kg
PCB Congeners	PCB-90	Fish (≤ 18 cm)	41	41	100	6.9	210	42			ug/kg
PCB Congeners	PCB-90	Fish (≤ 20 cm)	43	43	100	6.9	210	45			ug/kg
PCB Congeners	PCB-90	Largemouth bass	3	3	100	55	920	360			ug/kg
PCB Congeners	PCB-90	Mummichog	18	18	100	9.5	42	23			ug/kg
PCB Congeners	PCB-90	Mussel (estuarine)	3	3	100	0.071	0.68	0.33			ug/kg
PCB Congeners	PCB-90	Mussel (freshwater)	5	5	100	0.58	1	0.8			ug/kg
PCB Congeners	PCB-90	Northern pike	1	1	100	110	110				ug/kg
PCB Congeners	PCB-90	Other forage fish (no mummichog)	10	10	100	6.9	41	20			ug/kg
PCB Congeners	PCB-90	Smallmouth bass	3	3	100	26	64	45			ug/kg
PCB Congeners	PCB-90	White catfish	19	19	100	29	320	130			ug/kg
PCB Congeners	PCB-90	White perch	22	22	100	11	210	81			ug/kg
PCB Congeners	PCB-90	White sucker	5	5	100	23	120	57			ug/kg
PCB Congeners	PCB-90	Worms (all)	19	19	100	1.1	35	6.8			ug/kg
PCB Congeners	PCB-90	Worms (estuarine sp.)	5	5	100	1.1	5.6	2.2			ug/kg
PCB Congeners	PCB-90	Worms (freshwater sp.)	14	14	100	2.6	35	8.4			ug/kg
PCB Congeners	PCB-91	American eel (all)	21	21	100	0.56	9.1	2.9			ug/kg
PCB Congeners	PCB-91	Blue crab	24	24	100	0.12	0.64	0.29			ug/kg
PCB Congeners	PCB-91	Brown bullhead	6	6	100	1.1	7.5	3.6			ug/kg
PCB Congeners	PCB-91	Carp	12	12	100	6.7	62	28			ug/kg
PCB Congeners	PCB-91	Channel catfish	11	11	100	1.9	16	7.6			ug/kg
PCB Congeners	PCB-91	Fish (all)	131	131	100	0.56	62	9.4			ug/kg
PCB Congeners	PCB-91	Fish (≤ 11 cm)	23	23	100	1.6	6.4	3.3			ug/kg
PCB Congeners	PCB-91	Fish (≤ 13 cm)	26	26	100	1.6	6.4	3.3			ug/kg
PCB Congeners	PCB-91	Fish (≤ 18 cm)	41	41	100	0.73	21	5.8			ug/kg
PCB Congeners	PCB-91	Fish (≤ 20 cm)	43	43	100	0.73	21	6.2			ug/kg
PCB Congeners	PCB-91	Largemouth bass	3	3	100	6.5	50	23			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-91	Mummichog	18	18	100	1.6	6.4	3.4			ug/kg
PCB Congeners	PCB-91	Mussel (estuarine)	3	3	100	0.01	0.11	0.052			ug/kg
PCB Congeners	PCB-91	Mussel (freshwater)	5	5	100	0.086	0.15	0.12			ug/kg
PCB Congeners	PCB-91	Northern pike	1	1	100	16	16				ug/kg
PCB Congeners	PCB-91	Other forage fish (no mummichog)	10	10	100	0.73	5.2	2.8			ug/kg
PCB Congeners	PCB-91	Smallmouth bass	3	3	100	3	7.6	5.1			ug/kg
PCB Congeners	PCB-91	White catfish	19	19	100	1.9	31	14			ug/kg
PCB Congeners	PCB-91	White perch	22	22	100	1.3	23	11			ug/kg
PCB Congeners	PCB-91	White sucker	5	5	100	3.5	18	8.9			ug/kg
PCB Congeners	PCB-91	Worms (all)	19	19	100	0.26	4.5	1.2			ug/kg
PCB Congeners	PCB-91	Worms (estuarine sp.)	5	5	100	0.26	1.2	0.47			ug/kg
PCB Congeners	PCB-91	Worms (freshwater sp.)	14	14	100	0.48	4.5	1.4			ug/kg
PCB Congeners	PCB-92	American eel (all)	21	21	100	1.2	24	8.8			ug/kg
PCB Congeners	PCB-92	Blue crab	24	24	100	0.14	0.84	0.36			ug/kg
PCB Congeners	PCB-92	Brown bullhead	6	6	100	2.3	15	7.6			ug/kg
PCB Congeners	PCB-92	Carp	12	12	100	11	72	35			ug/kg
PCB Congeners	PCB-92	Channel catfish	11	11	100	2.3	23	11			ug/kg
PCB Congeners	PCB-92	Fish (all)	131	131	100	1.2	150	15			ug/kg
PCB Congeners	PCB-92	Fish (≤ 11 cm)	23	23	100	2.1	8.9	4.7			ug/kg
PCB Congeners	PCB-92	Fish (≤ 13 cm)	26	26	100	2.1	8.9	4.6			ug/kg
PCB Congeners	PCB-92	Fish (≤ 18 cm)	41	41	100	1.2	39	8.6			ug/kg
PCB Congeners	PCB-92	Fish (≤ 20 cm)	43	43	100	1.2	39	9.4			ug/kg
PCB Congeners	PCB-92	Largemouth bass	3	3	100	9.5	150	60			ug/kg
PCB Congeners	PCB-92	Mummichog	18	18	100	2.3	8.9	5			ug/kg
PCB Congeners	PCB-92	Mussel (estuarine)	3	3	100	0.014	0.15	0.071			ug/kg
PCB Congeners	PCB-92	Mussel (freshwater)	5	5	100	0.13	0.21	0.17			ug/kg
PCB Congeners	PCB-92	Northern pike	1	1	100	20	20				ug/kg
PCB Congeners	PCB-92	Other forage fish (no mummichog)	10	10	100	1.2	8	3.8			ug/kg
PCB Congeners	PCB-92	Smallmouth bass	3	3	100	5.1	12	8.2			ug/kg
PCB Congeners	PCB-92	White catfish	19	19	100	3.4	57	21			ug/kg
PCB Congeners	PCB-92	White perch	22	22	100	2.1	39	17			ug/kg
PCB Congeners	PCB-92	White sucker	5	5	100	3	20	9.1			ug/kg
PCB Congeners	PCB-92	Worms (all)	19	19	100	0.19	6.5	1.3			ug/kg
PCB Congeners	PCB-92	Worms (estuarine sp.)	5	5	100	0.19	0.91	0.36			ug/kg
PCB Congeners	PCB-92	Worms (freshwater sp.)	14	14	100	0.51	6.5	1.7			ug/kg
PCB Congeners	PCB-93	American eel (all)	21	21	100	0.32	15	4.6			ug/kg
PCB Congeners	PCB-93	Blue crab	24	24	100	0.73	4.6	1.9			ug/kg
PCB Congeners	PCB-93	Brown bullhead	6	6	100	0.36	5.9	2.5			ug/kg
PCB Congeners	PCB-93	Carp	12	12	100	0.26	23	11			ug/kg
PCB Congeners	PCB-93	Channel catfish	11	11	100	0.71	6.1	3.1			ug/kg
PCB Congeners	PCB-93	Fish (all)	131	131	100	0.26	23	5.4			ug/kg
PCB Congeners	PCB-93	Fish (≤ 11 cm)	23	23	100	0.62	4.6	1.9			ug/kg
PCB Congeners	PCB-93	Fish (≤ 13 cm)	26	26	100	0.62	4.6	1.9			ug/kg
PCB Congeners	PCB-93	Fish (≤ 18 cm)	41	41	100	0.28	16	3.6			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-93	Fish (≤ 20 cm)	43	43	100	0.28	16	3.9			ug/kg
PCB Congeners	PCB-93	Largemouth bass	3	3	100	2.1	6.9	4.1			ug/kg
PCB Congeners	PCB-93	Mummichog	18	18	100	0.95	4.6	2.1			ug/kg
PCB Congeners	PCB-93	Mussel (estuarine)	3	3	100	0.0047	0.05	0.024			ug/kg
PCB Congeners	PCB-93	Mussel (freshwater)	5	5	100	0.019	0.041	0.027			ug/kg
PCB Congeners	PCB-93	Northern pike	1	1	100	5.8	5.8				ug/kg
PCB Congeners	PCB-93	Other forage fish (no mummichog)	10	10	100	0.28	2.9	1.3			ug/kg
PCB Congeners	PCB-93	Smallmouth bass	3	3	100	1.4	3.4	2.2			ug/kg
PCB Congeners	PCB-93	White catfish	19	19	100	0.96	23	8.9			ug/kg
PCB Congeners	PCB-93	White perch	22	22	100	0.5	16	7			ug/kg
PCB Congeners	PCB-93	White sucker	5	5	100	1.1	11	5.1			ug/kg
PCB Congeners	PCB-93	Worms (all)	19	19	100	0.052	2.4	0.41			ug/kg
PCB Congeners	PCB-93	Worms (estuarine sp.)	5	5	100	0.052	0.24	0.15			ug/kg
PCB Congeners	PCB-93	Worms (freshwater sp.)	14	14	100	0.11	2.4	0.5			ug/kg
PCB Congeners	PCB-94	American eel (all)	21	21	100	0.005	0.45	0.085			ug/kg
PCB Congeners	PCB-94	Blue crab	24	24	100	0.015	0.16	0.09			ug/kg
PCB Congeners	PCB-94	Brown bullhead	6	5	83.3	0.11	1.4	0.68	0.0052	0.0052	ug/kg
PCB Congeners	PCB-94	Carp	12	12	100	0.055	5.6	2.9			ug/kg
PCB Congeners	PCB-94	Channel catfish	11	11	100	0.2	1.4	0.64			ug/kg
PCB Congeners	PCB-94	Fish (all)	131	130	99.2	0.005	5.6	0.98	0.0052	0.0052	ug/kg
PCB Congeners	PCB-94	Fish (≤ 11 cm)	23	23	100	0.014	0.68	0.23			ug/kg
PCB Congeners	PCB-94	Fish (≤ 13 cm)	26	26	100	0.014	0.68	0.25			ug/kg
PCB Congeners	PCB-94	Fish (≤ 18 cm)	41	41	100	0.014	4.8	0.83			ug/kg
PCB Congeners	PCB-94	Fish (≤ 20 cm)	43	43	100	0.014	4.8	0.93			ug/kg
PCB Congeners	PCB-94	Largemouth bass	3	3	100	0.36	0.8	0.53			ug/kg
PCB Congeners	PCB-94	Mummichog	18	18	100	0.07	0.68	0.24			ug/kg
PCB Congeners	PCB-94	Mussel (estuarine)	3	3	100	0.0017	0.016	0.0078			ug/kg
PCB Congeners	PCB-94	Mussel (freshwater)	5	5	100	0.009	0.017	0.012			ug/kg
PCB Congeners	PCB-94	Northern pike	1	1	100	1.2	1.2				ug/kg
PCB Congeners	PCB-94	Other forage fish (no mummichog)	10	10	100	0.014	0.59	0.24			ug/kg
PCB Congeners	PCB-94	Smallmouth bass	3	3	100	0.11	0.48	0.26			ug/kg
PCB Congeners	PCB-94	White catfish	19	19	100	0.088	2.5	1			ug/kg
PCB Congeners	PCB-94	White perch	22	22	100	0.075	5	2			ug/kg
PCB Congeners	PCB-94	White sucker	5	5	100	0.16	2.6	1.3			ug/kg
PCB Congeners	PCB-94	Worms (all)	19	19	100	0.022	0.95	0.17			ug/kg
PCB Congeners	PCB-94	Worms (estuarine sp.)	5	5	100	0.022	0.12	0.069			ug/kg
PCB Congeners	PCB-94	Worms (freshwater sp.)	14	14	100	0.042	0.95	0.2			ug/kg
PCB Congeners	PCB-95	American eel (all)	21	21	100	1.7	27	9			ug/kg
PCB Congeners	PCB-95	Blue crab	24	24	100	0.23	1.4	0.57			ug/kg
PCB Congeners	PCB-95	Brown bullhead	6	6	100	4.4	30	14			ug/kg
PCB Congeners	PCB-95	Carp	12	12	100	26	190	90			ug/kg
PCB Congeners	PCB-95	Channel catfish	11	11	100	6.4	35	16			ug/kg
PCB Congeners	PCB-95	Fish (all)	131	131	100	1.7	280	31			ug/kg
PCB Congeners	PCB-95	Fish (≤ 11 cm)	23	23	100	5	21	11			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-95	Fish (≤ 13 cm)	26	26	100	5	21	11			ug/kg
PCB Congeners	PCB-95	Fish (≤ 18 cm)	41	41	100	2.1	120	22			ug/kg
PCB Congeners	PCB-95	Fish (≤ 20 cm)	43	43	100	2.1	120	24			ug/kg
PCB Congeners	PCB-95	Largemouth bass	3	3	100	20	280	110			ug/kg
PCB Congeners	PCB-95	Mummichog	18	18	100	5	21	11			ug/kg
PCB Congeners	PCB-95	Mussel (estuarine)	3	3	100	0.06	0.58	0.28			ug/kg
PCB Congeners	PCB-95	Mussel (freshwater)	5	5	100	0.55	0.83	0.7			ug/kg
PCB Congeners	PCB-95	Northern pike	1	1	100	47	47				ug/kg
PCB Congeners	PCB-95	Other forage fish (no mummichog)	10	10	100	2.1	21	9.9			ug/kg
PCB Congeners	PCB-95	Smallmouth bass	3	3	100	11	24	16			ug/kg
PCB Congeners	PCB-95	White catfish	19	19	100	6.3	86	38			ug/kg
PCB Congeners	PCB-95	White perch	22	22	100	5.2	120	43			ug/kg
PCB Congeners	PCB-95	White sucker	5	5	100	8.8	41	21			ug/kg
PCB Congeners	PCB-95	Worms (all)	19	19	100	0.92	24	4.7			ug/kg
PCB Congeners	PCB-95	Worms (estuarine sp.)	5	5	100	0.92	5.3	1.9			ug/kg
PCB Congeners	PCB-95	Worms (freshwater sp.)	14	14	100	1.8	24	5.7			ug/kg
PCB Congeners	PCB-96	American eel (all)	21	21	100	0.0064	0.19	0.044			ug/kg
PCB Congeners	PCB-96	Blue crab	24	2	8.3	0.011	0.022	0.017	0.0024	0.0062	ug/kg
PCB Congeners	PCB-96	Brown bullhead	6	6	100	0.063	0.93	0.34			ug/kg
PCB Congeners	PCB-96	Carp	12	12	100	0.022	3.3	1.8			ug/kg
PCB Congeners	PCB-96	Channel catfish	11	11	100	0.02	0.26	0.098			ug/kg
PCB Congeners	PCB-96	Fish (all)	131	131	100	0.0064	3.3	0.46			ug/kg
PCB Congeners	PCB-96	Fish (≤ 11 cm)	23	23	100	0.016	0.26	0.11			ug/kg
PCB Congeners	PCB-96	Fish (≤ 13 cm)	26	26	100	0.016	0.3	0.12			ug/kg
PCB Congeners	PCB-96	Fish (≤ 18 cm)	41	41	100	0.016	1.7	0.37			ug/kg
PCB Congeners	PCB-96	Fish (≤ 20 cm)	43	43	100	0.016	1.7	0.41			ug/kg
PCB Congeners	PCB-96	Largemouth bass	3	3	100	0.2	0.57	0.41			ug/kg
PCB Congeners	PCB-96	Mummichog	18	18	100	0.035	0.26	0.1			ug/kg
PCB Congeners	PCB-96	Mussel (estuarine)	3	3	100	0.0016	0.012	0.0061			ug/kg
PCB Congeners	PCB-96	Mussel (freshwater)	5	5	100	0.0092	0.017	0.013			ug/kg
PCB Congeners	PCB-96	Northern pike	1	1	100	0.55	0.55				ug/kg
PCB Congeners	PCB-96	Other forage fish (no mummichog)	10	10	100	0.016	0.43	0.16			ug/kg
PCB Congeners	PCB-96	Smallmouth bass	3	3	100	0.093	0.3	0.17			ug/kg
PCB Congeners	PCB-96	White catfish	19	19	100	0.054	0.93	0.4			ug/kg
PCB Congeners	PCB-96	White perch	22	22	100	0.058	1.9	0.86			ug/kg
PCB Congeners	PCB-96	White sucker	5	5	100	0.15	1.2	0.62			ug/kg
PCB Congeners	PCB-96	Worms (all)	19	19	100	0.017	0.38	0.086			ug/kg
PCB Congeners	PCB-96	Worms (estuarine sp.)	5	5	100	0.017	0.097	0.043			ug/kg
PCB Congeners	PCB-96	Worms (freshwater sp.)	14	14	100	0.023	0.38	0.1			ug/kg
PCB Congeners	PCB-98	American eel (all)	21	8	38.1	0.0044	0.075	0.031	0.0014	0.016	ug/kg
PCB Congeners	PCB-98	Blue crab	24	0	0				0.0057	0.017	ug/kg
PCB Congeners	PCB-98	Brown bullhead	6	0	0				0.0023	0.012	ug/kg
PCB Congeners	PCB-98	Carp	12	1	8.3	0.15	0.15		0.0075	0.03	ug/kg
PCB Congeners	PCB-98	Channel catfish	11	1	9.1	0.14	0.14		0.0033	0.0059	ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-98	Fish (all)	131	42	32.1	0.0044	0.26	0.077	0.00097	0.039	ug/kg
PCB Congeners	PCB-98	Fish (≤ 11 cm)	23	9	39.1	0.019	0.071	0.037	0.00097	0.0028	ug/kg
PCB Congeners	PCB-98	Fish (≤ 13 cm)	26	12	46.2	0.019	0.071	0.04	0.00097	0.0028	ug/kg
PCB Congeners	PCB-98	Fish (≤ 18 cm)	41	16	39	0.0054	0.23	0.051	0.00097	0.01	ug/kg
PCB Congeners	PCB-98	Fish (≤ 20 cm)	43	16	37.2	0.0054	0.23	0.051	0.00097	0.01	ug/kg
PCB Congeners	PCB-98	Largemouth bass	3	0	0				0.0017	0.039	ug/kg
PCB Congeners	PCB-98	Mummichog	18	4	22.2	0.019	0.045	0.027	0.00097	0.0028	ug/kg
PCB Congeners	PCB-98	Mussel (estuarine)	3	0	0				0.00062	0.0017	ug/kg
PCB Congeners	PCB-98	Mussel (freshwater)	5	1	20	0.0025	0.0025		0.0023	0.003	ug/kg
PCB Congeners	PCB-98	Northern pike	1	0	0				0.0032	0.0032	ug/kg
PCB Congeners	PCB-98	Other forage fish (no mummichog)	10	10	100	0.0054	0.071	0.043			ug/kg
PCB Congeners	PCB-98	Smallmouth bass	3	0	0				0.0017	0.0023	ug/kg
PCB Congeners	PCB-98	White catfish	19	14	73.7	0.02	0.26	0.13	0.0028	0.011	ug/kg
PCB Congeners	PCB-98	White perch	22	2	9.1	0.05	0.23	0.14	0.0021	0.01	ug/kg
PCB Congeners	PCB-98	White sucker	5	2	40	0.038	0.072	0.055	0.0031	0.0071	ug/kg
PCB Congeners	PCB-98	Worms (all)	19	0	0				0.0029	0.082	ug/kg
PCB Congeners	PCB-98	Worms (estuarine sp.)	5	0	0				0.0096	0.014	ug/kg
PCB Congeners	PCB-98	Worms (freshwater sp.)	14	0	0				0.0029	0.082	ug/kg
PCB Congeners	PCB-99	American eel (all)	21	21	100	10	86	36			ug/kg
PCB Congeners	PCB-99	Blue crab	24	24	100	6.8	24	17			ug/kg
PCB Congeners	PCB-99	Brown bullhead	6	6	100	4.7	36	18			ug/kg
PCB Congeners	PCB-99	Carp	12	12	100	32	220	100			ug/kg
PCB Congeners	PCB-99	Channel catfish	11	11	100	6.3	80	39			ug/kg
PCB Congeners	PCB-99	Fish (all)	131	131	100	3.7	350	46			ug/kg
PCB Congeners	PCB-99	Fish (≤ 11 cm)	23	23	100	4.7	22	12			ug/kg
PCB Congeners	PCB-99	Fish (≤ 13 cm)	26	26	100	4.7	22	12			ug/kg
PCB Congeners	PCB-99	Fish (≤ 18 cm)	41	41	100	3.7	76	21			ug/kg
PCB Congeners	PCB-99	Fish (≤ 20 cm)	43	43	100	3.7	76	24			ug/kg
PCB Congeners	PCB-99	Largemouth bass	3	3	100	31	350	140			ug/kg
PCB Congeners	PCB-99	Mummichog	18	18	100	6.9	22	13			ug/kg
PCB Congeners	PCB-99	Mussel (estuarine)	3	3	100	0.039	0.34	0.16			ug/kg
PCB Congeners	PCB-99	Mussel (freshwater)	5	5	100	0.26	0.46	0.38			ug/kg
PCB Congeners	PCB-99	Northern pike	1	1	100	58	58				ug/kg
PCB Congeners	PCB-99	Other forage fish (no mummichog)	10	10	100	3.7	20	9.6			ug/kg
PCB Congeners	PCB-99	Smallmouth bass	3	3	100	14	32	22			ug/kg
PCB Congeners	PCB-99	White catfish	19	19	100	18	200	80			ug/kg
PCB Congeners	PCB-99	White perch	22	22	100	6.6	77	43			ug/kg
PCB Congeners	PCB-99	White sucker	5	5	100	14	74	37			ug/kg
PCB Congeners	PCB-99	Worms (all)	19	19	100	0.5	11	2.7			ug/kg
PCB Congeners	PCB-99	Worms (estuarine sp.)	5	5	100	0.5	2.4	0.99			ug/kg
PCB Congeners	PCB-99	Worms (freshwater sp.)	14	14	100	0.99	11	3.3			ug/kg
PCB Congeners	PCB-102	American eel (all)	21	20	95.2	0.013	0.81	0.14	0.014	0.014	ug/kg
PCB Congeners	PCB-102	Blue crab	24	24	100	0.025	0.27	0.098			ug/kg
PCB Congeners	PCB-102	Brown bullhead	6	6	100	0.18	2.3	0.88			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-102	Carp	12	12	100	0.27	16	8.4			ug/kg
PCB Congeners	PCB-102	Channel catfish	11	11	100	0.37	3.3	1.4			ug/kg
PCB Congeners	PCB-102	Fish (all)	131	130	99.2	0.013	16	2.4	0.014	0.014	ug/kg
PCB Congeners	PCB-102	Fish (≤ 11 cm)	23	23	100	0.077	3.1	1.1			ug/kg
PCB Congeners	PCB-102	Fish (≤ 13 cm)	26	26	100	0.077	3.1	1.1			ug/kg
PCB Congeners	PCB-102	Fish (≤ 18 cm)	41	41	100	0.077	12	2.4			ug/kg
PCB Congeners	PCB-102	Fish (≤ 20 cm)	43	43	100	0.077	12	2.7			ug/kg
PCB Congeners	PCB-102	Largemouth bass	3	3	100	1.5	4.8	3.2			ug/kg
PCB Congeners	PCB-102	Mummichog	18	18	100	0.51	3.1	1.3			ug/kg
PCB Congeners	PCB-102	Mussel (estuarine)	3	3	100	0.0049	0.045	0.022			ug/kg
PCB Congeners	PCB-102	Mussel (freshwater)	5	5	100	0.025	0.047	0.036			ug/kg
PCB Congeners	PCB-102	Northern pike	1	1	100	3.6	3.6				ug/kg
PCB Congeners	PCB-102	Other forage fish (no mummichog)	10	10	100	0.077	1.4	0.63			ug/kg
PCB Congeners	PCB-102	Smallmouth bass	3	3	100	0.48	1.4	0.88			ug/kg
PCB Congeners	PCB-102	White catfish	19	19	100	0.072	3.5	0.85			ug/kg
PCB Congeners	PCB-102	White perch	22	22	100	0.34	12	5.2			ug/kg
PCB Congeners	PCB-102	White sucker	5	5	100	0.51	7.4	3.6			ug/kg
PCB Congeners	PCB-102	Worms (all)	19	19	100	0.062	1.8	0.43			ug/kg
PCB Congeners	PCB-102	Worms (estuarine sp.)	5	5	100	0.062	0.39	0.18			ug/kg
PCB Congeners	PCB-102	Worms (freshwater sp.)	14	14	100	0.14	1.8	0.52			ug/kg
PCB Congeners	PCB-103	American eel (all)	21	19	90.5	0.0066	0.3	0.055	0.0013	0.013	ug/kg
PCB Congeners	PCB-103	Blue crab	24	20	83.3	0.012	0.11	0.036	0.0055	0.012	ug/kg
PCB Congeners	PCB-103	Brown bullhead	6	6	100	0.12	1.7	0.72			ug/kg
PCB Congeners	PCB-103	Carp	12	12	100	0.49	8.4	4.3			ug/kg
PCB Congeners	PCB-103	Channel catfish	11	11	100	0.28	1.9	0.97			ug/kg
PCB Congeners	PCB-103	Fish (all)	131	129	98.5	0.0066	8.4	1.5	0.0013	0.013	ug/kg
PCB Congeners	PCB-103	Fish (≤ 11 cm)	23	23	100	0.21	1.6	0.61			ug/kg
PCB Congeners	PCB-103	Fish (≤ 13 cm)	26	26	100	0.21	1.6	0.61			ug/kg
PCB Congeners	PCB-103	Fish (≤ 18 cm)	41	41	100	0.093	5.8	1.2			ug/kg
PCB Congeners	PCB-103	Fish (≤ 20 cm)	43	43	100	0.093	5.8	1.4			ug/kg
PCB Congeners	PCB-103	Largemouth bass	3	3	100	1.1	2.9	2.1			ug/kg
PCB Congeners	PCB-103	Mummichog	18	18	100	0.28	1.6	0.68			ug/kg
PCB Congeners	PCB-103	Mussel (estuarine)	3	3	100	0.0028	0.023	0.011			ug/kg
PCB Congeners	PCB-103	Mussel (freshwater)	5	5	100	0.0099	0.02	0.014			ug/kg
PCB Congeners	PCB-103	Northern pike	1	1	100	2.2	2.2				ug/kg
PCB Congeners	PCB-103	Other forage fish (no mummichog)	10	10	100	0.093	1.2	0.47			ug/kg
PCB Congeners	PCB-103	Smallmouth bass	3	3	100	0.49	1.2	0.76			ug/kg
PCB Congeners	PCB-103	White catfish	19	19	100	0.22	4.6	2.1			ug/kg
PCB Congeners	PCB-103	White perch	22	22	100	0.15	5.8	2.5			ug/kg
PCB Congeners	PCB-103	White sucker	5	5	100	0.36	3.4	1.7			ug/kg
PCB Congeners	PCB-103	Worms (all)	19	19	100	0.035	0.83	0.16			ug/kg
PCB Congeners	PCB-103	Worms (estuarine sp.)	5	5	100	0.035	0.11	0.074			ug/kg
PCB Congeners	PCB-103	Worms (freshwater sp.)	14	14	100	0.043	0.83	0.2			ug/kg
PCB Congeners	PCB-104	American eel (all)	21	7	33.3	0.0045	0.03	0.012	0.0015	0.0071	ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-104	Blue crab	24	11	45.8	0.0059	0.032	0.015	0.0025	0.0068	ug/kg
PCB Congeners	PCB-104	Brown bullhead	6	6	100	0.017	0.57	0.22			ug/kg
PCB Congeners	PCB-104	Carp	12	12	100	0.018	2.7	1.3			ug/kg
PCB Congeners	PCB-104	Channel catfish	11	11	100	0.04	0.22	0.1			ug/kg
PCB Congeners	PCB-104	Fish (all)	131	116	88.5	0.0045	2.7	0.37	0.0015	0.0071	ug/kg
PCB Congeners	PCB-104	Fish (≤ 11 cm)	23	23	100	0.02	0.5	0.17			ug/kg
PCB Congeners	PCB-104	Fish (≤ 13 cm)	26	26	100	0.02	0.5	0.17			ug/kg
PCB Congeners	PCB-104	Fish (≤ 18 cm)	41	41	100	0.017	1.2	0.33			ug/kg
PCB Congeners	PCB-104	Fish (≤ 20 cm)	43	43	100	0.017	1.2	0.35			ug/kg
PCB Congeners	PCB-104	Largemouth bass	3	2	66.7	0.15	0.42	0.29	0.0071	0.0071	ug/kg
PCB Congeners	PCB-104	Mummichog	18	18	100	0.06	0.5	0.19			ug/kg
PCB Congeners	PCB-104	Mussel (estuarine)	3	3	100	0.00088	0.0063	0.0032			ug/kg
PCB Congeners	PCB-104	Mussel (freshwater)	5	5	100	0.0021	0.0052	0.0031			ug/kg
PCB Congeners	PCB-104	Northern pike	1	1	100	0.4	0.4				ug/kg
PCB Congeners	PCB-104	Other forage fish (no mummichog)	10	10	100	0.017	0.38	0.13			ug/kg
PCB Congeners	PCB-104	Smallmouth bass	3	3	100	0.033	0.19	0.11			ug/kg
PCB Congeners	PCB-104	White catfish	19	19	100	0.014	0.34	0.16			ug/kg
PCB Congeners	PCB-104	White perch	22	22	100	0.027	1.3	0.6			ug/kg
PCB Congeners	PCB-104	White sucker	5	5	100	0.049	0.52	0.29			ug/kg
PCB Congeners	PCB-104	Worms (all)	19	18	94.7	0.0055	0.47	0.071	0.0044	0.0044	ug/kg
PCB Congeners	PCB-104	Worms (estuarine sp.)	5	5	100	0.0055	0.049	0.023			ug/kg
PCB Congeners	PCB-104	Worms (freshwater sp.)	14	13	92.9	0.012	0.47	0.089	0.0044	0.0044	ug/kg
PCB Congeners	PCB-105	American eel (all)	21	21	100	12	99	35			ug/kg
PCB Congeners	PCB-105	Blue crab	24	24	100	3.9	14	8.9			ug/kg
PCB Congeners	PCB-105	Brown bullhead	6	6	100	5.1	22	13			ug/kg
PCB Congeners	PCB-105	Carp	12	12	100	26	130	60			ug/kg
PCB Congeners	PCB-105	Channel catfish	11	11	100	3.6	51	24			ug/kg
PCB Congeners	PCB-105	Fish (all)	131	131	100	2.9	290	30			ug/kg
PCB Congeners	PCB-105	Fish (≤ 11 cm)	23	23	100	3.1	12	7.2			ug/kg
PCB Congeners	PCB-105	Fish (≤ 13 cm)	26	26	100	3.1	12	7.1			ug/kg
PCB Congeners	PCB-105	Fish (≤ 18 cm)	41	41	100	2.9	38	12			ug/kg
PCB Congeners	PCB-105	Fish (≤ 20 cm)	43	43	100	2.9	38	13			ug/kg
PCB Congeners	PCB-105	Largemouth bass	3	3	100	18	290	110			ug/kg
PCB Congeners	PCB-105	Mummichog	18	18	100	3.3	12	7.4			ug/kg
PCB Congeners	PCB-105	Mussel (estuarine)	3	3	100	0.019	0.18	0.086			ug/kg
PCB Congeners	PCB-105	Mussel (freshwater)	5	5	100	0.16	0.32	0.23			ug/kg
PCB Congeners	PCB-105	Northern pike	1	1	100	32	32				ug/kg
PCB Congeners	PCB-105	Other forage fish (no mummichog)	10	10	100	2.9	12	6.4			ug/kg
PCB Congeners	PCB-105	Smallmouth bass	3	3	100	10	21	16			ug/kg
PCB Congeners	PCB-105	White catfish	19	19	100	9.7	130	45			ug/kg
PCB Congeners	PCB-105	White perch	22	22	100	4.5	41	22			ug/kg
PCB Congeners	PCB-105	White sucker	5	5	100	10	39	20			ug/kg
PCB Congeners	PCB-105	Worms (all)	19	19	100	0.38	11	2.1			ug/kg
PCB Congeners	PCB-105	Worms (estuarine sp.)	5	5	100	0.38	1.8	0.7			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-105	Worms (freshwater sp.)	14	14	100	0.77	11	2.6			ug/kg
PCB Congeners	PCB-106	American eel (all)	21	0	0				0.0012	0.012	ug/kg
PCB Congeners	PCB-106	Blue crab	24	0	0				0.0043	0.013	ug/kg
PCB Congeners	PCB-106	Brown bullhead	6	1	16.7	0.022	0.022		0.0021	0.011	ug/kg
PCB Congeners	PCB-106	Carp	12	0	0				0.0033	0.018	ug/kg
PCB Congeners	PCB-106	Channel catfish	11	0	0				0.0027	0.0047	ug/kg
PCB Congeners	PCB-106	Fish (all)	131	3	2.3	0.022	0.047	0.03	0.0005	0.026	ug/kg
PCB Congeners	PCB-106	Fish (≤ 11 cm)	23	0	0				0.0005	0.0021	ug/kg
PCB Congeners	PCB-106	Fish (≤ 13 cm)	26	0	0				0.0005	0.0021	ug/kg
PCB Congeners	PCB-106	Fish (≤ 18 cm)	41	0	0				0.0005	0.0081	ug/kg
PCB Congeners	PCB-106	Fish (≤ 20 cm)	43	0	0				0.0005	0.0081	ug/kg
PCB Congeners	PCB-106	Largemouth bass	3	0	0				0.0012	0.026	ug/kg
PCB Congeners	PCB-106	Mummichog	18	0	0				0.0005	0.0021	ug/kg
PCB Congeners	PCB-106	Mussel (estuarine)	3	0	0				0.00041	0.0011	ug/kg
PCB Congeners	PCB-106	Mussel (freshwater)	5	0	0				0.0016	0.0024	ug/kg
PCB Congeners	PCB-106	Northern pike	1	0	0				0.0022	0.0022	ug/kg
PCB Congeners	PCB-106	Other forage fish (no mummichog)	10	0	0				0.00067	0.0013	ug/kg
PCB Congeners	PCB-106	Smallmouth bass	3	0	0				0.0011	0.0015	ug/kg
PCB Congeners	PCB-106	White catfish	19	0	0				0.00077	0.0068	ug/kg
PCB Congeners	PCB-106	White perch	22	2	9.1	0.022	0.047	0.035	0.00061	0.0081	ug/kg
PCB Congeners	PCB-106	White sucker	5	0	0				0.0013	0.0052	ug/kg
PCB Congeners	PCB-106	Worms (all)	19	1	5.3	0.0072	0.0072		0.0024	0.061	ug/kg
PCB Congeners	PCB-106	Worms (estuarine sp.)	5	0	0				0.0071	0.011	ug/kg
PCB Congeners	PCB-106	Worms (freshwater sp.)	14	1	7.1	0.0072	0.0072		0.0024	0.061	ug/kg
PCB Congeners	PCB-107	American eel (all)	21	21	100	0.2	3.4	0.98			ug/kg
PCB Congeners	PCB-107	Blue crab	24	24	100	0.44	1.7	1.1			ug/kg
PCB Congeners	PCB-107	Brown bullhead	6	6	100	0.85	4.1	2.4			ug/kg
PCB Congeners	PCB-107	Carp	12	12	100	5	22	11			ug/kg
PCB Congeners	PCB-107	Channel catfish	11	11	100	0.65	7.6	3.6			ug/kg
PCB Congeners	PCB-107	Fish (all)	131	131	100	0.2	48	4.4			ug/kg
PCB Congeners	PCB-107	Fish (≤ 11 cm)	23	23	100	0.51	2.3	1.3			ug/kg
PCB Congeners	PCB-107	Fish (≤ 13 cm)	26	26	100	0.51	2.3	1.3			ug/kg
PCB Congeners	PCB-107	Fish (≤ 18 cm)	41	41	100	0.45	7.7	2.3			ug/kg
PCB Congeners	PCB-107	Fish (≤ 20 cm)	43	43	100	0.45	7.7	2.6			ug/kg
PCB Congeners	PCB-107	Largemouth bass	3	3	100	3.2	48	19			ug/kg
PCB Congeners	PCB-107	Mummichog	18	18	100	0.68	2.3	1.4			ug/kg
PCB Congeners	PCB-107	Mussel (estuarine)	3	3	100	0.005	0.033	0.017			ug/kg
PCB Congeners	PCB-107	Mussel (freshwater)	5	5	100	0.029	0.052	0.039			ug/kg
PCB Congeners	PCB-107	Northern pike	1	1	100	6.4	6.4				ug/kg
PCB Congeners	PCB-107	Other forage fish (no mummichog)	10	10	100	0.45	2.2	1.1			ug/kg
PCB Congeners	PCB-107	Smallmouth bass	3	3	100	1.6	3.9	2.9			ug/kg
PCB Congeners	PCB-107	White catfish	19	19	100	1.7	18	7			ug/kg
PCB Congeners	PCB-107	White perch	22	22	100	0.66	8.3	4.6			ug/kg
PCB Congeners	PCB-107	White sucker	5	5	100	1.7	7.5	3.8			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-107	Worms (all)	19	19	100	0.065	1.7	0.36			ug/kg
PCB Congeners	PCB-107	Worms (estuarine sp.)	5	5	100	0.065	0.27	0.12			ug/kg
PCB Congeners	PCB-107	Worms (freshwater sp.)	14	14	100	0.15	1.7	0.45			ug/kg
PCB Congeners	PCB-108	American eel (all)	21	21	100	0.036	0.48	0.15			ug/kg
PCB Congeners	PCB-108	Blue crab	24	23	95.8	0.018	0.12	0.063	0.0052	0.0052	ug/kg
PCB Congeners	PCB-108	Brown bullhead	6	6	100	0.089	0.81	0.41			ug/kg
PCB Congeners	PCB-108	Carp	12	12	100	1.5	7.5	3.8			ug/kg
PCB Congeners	PCB-108	Channel catfish	11	11	100	0.087	0.55	0.28			ug/kg
PCB Congeners	PCB-108	Fish (all)	131	130	99.2	0.036	26	1.2	0.0012	0.0012	ug/kg
PCB Congeners	PCB-108	Fish (≤ 11 cm)	23	22	95.7	0.14	0.75	0.4	0.0012	0.0012	ug/kg
PCB Congeners	PCB-108	Fish (≤ 13 cm)	26	25	96.2	0.14	0.76	0.42	0.0012	0.0012	ug/kg
PCB Congeners	PCB-108	Fish (≤ 18 cm)	41	40	97.6	0.14	3.7	0.97	0.0012	0.0012	ug/kg
PCB Congeners	PCB-108	Fish (≤ 20 cm)	43	42	97.7	0.14	3.7	1.1	0.0012	0.0012	ug/kg
PCB Congeners	PCB-108	Largemouth bass	3	3	100	0.89	26	9.4			ug/kg
PCB Congeners	PCB-108	Mummichog	18	17	94.4	0.14	0.65	0.36	0.0012	0.0012	ug/kg
PCB Congeners	PCB-108	Mussel (estuarine)	3	3	100	0.0023	0.019	0.0092			ug/kg
PCB Congeners	PCB-108	Mussel (freshwater)	5	5	100	0.019	0.036	0.027			ug/kg
PCB Congeners	PCB-108	Northern pike	1	1	100	3	3				ug/kg
PCB Congeners	PCB-108	Other forage fish (no mummichog)	10	10	100	0.23	1	0.53			ug/kg
PCB Congeners	PCB-108	Smallmouth bass	3	3	100	0.4	0.98	0.78			ug/kg
PCB Congeners	PCB-108	White catfish	19	19	100	0.043	2.4	0.48			ug/kg
PCB Congeners	PCB-108	White perch	22	22	100	0.26	4	2			ug/kg
PCB Congeners	PCB-108	White sucker	5	5	100	0.8	1.6	1.2			ug/kg
PCB Congeners	PCB-108	Worms (all)	19	19	100	0.013	1.3	0.21			ug/kg
PCB Congeners	PCB-108	Worms (estuarine sp.)	5	5	100	0.013	0.079	0.03			ug/kg
PCB Congeners	PCB-108	Worms (freshwater sp.)	14	14	100	0.082	1.3	0.28			ug/kg
PCB Congeners	PCB-110	American eel (all)	21	21	100	15	120	48			ug/kg
PCB Congeners	PCB-110	Blue crab	24	24	100	0.34	2.8	1.3			ug/kg
PCB Congeners	PCB-110	Brown bullhead	6	6	100	12	60	33			ug/kg
PCB Congeners	PCB-110	Carp	12	12	100	57	290	140			ug/kg
PCB Congeners	PCB-110	Channel catfish	11	11	100	11	100	47			ug/kg
PCB Congeners	PCB-110	Fish (all)	131	131	100	5.2	610	61			ug/kg
PCB Congeners	PCB-110	Fish (≤ 11 cm)	23	23	100	8.6	32	18			ug/kg
PCB Congeners	PCB-110	Fish (≤ 13 cm)	26	26	100	8.6	32	18			ug/kg
PCB Congeners	PCB-110	Fish (≤ 18 cm)	41	41	100	5.2	120	32			ug/kg
PCB Congeners	PCB-110	Fish (≤ 20 cm)	43	43	100	5.2	120	34			ug/kg
PCB Congeners	PCB-110	Largemouth bass	3	3	100	35	610	240			ug/kg
PCB Congeners	PCB-110	Mummichog	18	18	100	8.7	32	19			ug/kg
PCB Congeners	PCB-110	Mussel (estuarine)	3	3	100	0.059	0.6	0.29			ug/kg
PCB Congeners	PCB-110	Mussel (freshwater)	5	5	100	0.6	1.1	0.89			ug/kg
PCB Congeners	PCB-110	Northern pike	1	1	100	75	75				ug/kg
PCB Congeners	PCB-110	Other forage fish (no mummichog)	10	10	100	5.2	28	15			ug/kg
PCB Congeners	PCB-110	Smallmouth bass	3	3	100	22	49	35			ug/kg
PCB Congeners	PCB-110	White catfish	19	19	100	14	210	85			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-110	White perch	22	22	100	10	120	59			ug/kg
PCB Congeners	PCB-110	White sucker	5	5	100	26	100	53			ug/kg
PCB Congeners	PCB-110	Worms (all)	19	19	100	0.75	35	6.4			ug/kg
PCB Congeners	PCB-110	Worms (estuarine sp.)	5	5	100	0.75	4.6	1.7			ug/kg
PCB Congeners	PCB-110	Worms (freshwater sp.)	14	14	100	2.7	35	8.1			ug/kg
PCB Congeners	PCB-111	American eel (all)	21	21	100	0.017	0.56	0.15			ug/kg
PCB Congeners	PCB-111	Blue crab	24	22	91.7	0.011	0.055	0.039	0.0071	0.008	ug/kg
PCB Congeners	PCB-111	Brown bullhead	6	2	33.3	0.031	0.096	0.064	0.0024	0.012	ug/kg
PCB Congeners	PCB-111	Carp	12	9	75	0.064	0.36	0.18	0.0038	0.02	ug/kg
PCB Congeners	PCB-111	Channel catfish	11	11	100	0.0077	0.16	0.082			ug/kg
PCB Congeners	PCB-111	Fish (all)	131	113	86.3	0.0074	0.63	0.11	0.0021	0.029	ug/kg
PCB Congeners	PCB-111	Fish (≤ 11 cm)	23	23	100	0.0091	0.068	0.032			ug/kg
PCB Congeners	PCB-111	Fish (≤ 13 cm)	26	26	100	0.0091	0.068	0.031			ug/kg
PCB Congeners	PCB-111	Fish (≤ 18 cm)	41	36	87.8	0.0074	0.21	0.043	0.0037	0.0064	ug/kg
PCB Congeners	PCB-111	Fish (≤ 20 cm)	43	36	83.7	0.0074	0.21	0.043	0.0037	0.0064	ug/kg
PCB Congeners	PCB-111	Largemouth bass	3	2	66.7	0.071	0.15	0.11	0.029	0.029	ug/kg
PCB Congeners	PCB-111	Mummichog	18	18	100	0.02	0.068	0.036			ug/kg
PCB Congeners	PCB-111	Mussel (estuarine)	3	0	0				0.00036	0.001	ug/kg
PCB Congeners	PCB-111	Mussel (freshwater)	5	0	0				0.0014	0.0021	ug/kg
PCB Congeners	PCB-111	Northern pike	1	1	100	0.12	0.12				ug/kg
PCB Congeners	PCB-111	Other forage fish (no mummichog)	10	10	100	0.0074	0.042	0.02			ug/kg
PCB Congeners	PCB-111	Smallmouth bass	3	3	100	0.037	0.1	0.066			ug/kg
PCB Congeners	PCB-111	White catfish	19	19	100	0.011	0.63	0.2			ug/kg
PCB Congeners	PCB-111	White perch	22	12	54.5	0.023	0.21	0.11	0.0021	0.0064	ug/kg
PCB Congeners	PCB-111	White sucker	5	5	100	0.029	0.19	0.087			ug/kg
PCB Congeners	PCB-111	Worms (all)	19	0	0				0.0027	0.065	ug/kg
PCB Congeners	PCB-111	Worms (estuarine sp.)	5	0	0				0.0076	0.012	ug/kg
PCB Congeners	PCB-111	Worms (freshwater sp.)	14	0	0				0.0027	0.065	ug/kg
PCB Congeners	PCB-112	American eel (all)	21	0	0				0.0011	0.012	ug/kg
PCB Congeners	PCB-112	Blue crab	24	0	0				0.004	0.012	ug/kg
PCB Congeners	PCB-112	Brown bullhead	6	0	0				0.002	0.011	ug/kg
PCB Congeners	PCB-112	Carp	12	0	0				0.0034	0.018	ug/kg
PCB Congeners	PCB-112	Channel catfish	11	0	0				0.0026	0.0046	ug/kg
PCB Congeners	PCB-112	Fish (all)	131	20	15.3	0.014	0.34	0.073	0.00073	0.026	ug/kg
PCB Congeners	PCB-112	Fish (≤ 11 cm)	23	10	43.5	0.015	0.053	0.037	0.00078	0.0022	ug/kg
PCB Congeners	PCB-112	Fish (≤ 13 cm)	26	13	50	0.015	0.077	0.037	0.00078	0.0022	ug/kg
PCB Congeners	PCB-112	Fish (≤ 18 cm)	41	17	41.5	0.014	0.14	0.045	0.00078	0.0086	ug/kg
PCB Congeners	PCB-112	Fish (≤ 20 cm)	43	17	39.5	0.014	0.14	0.045	0.00078	0.0086	ug/kg
PCB Congeners	PCB-112	Largemouth bass	3	0	0				0.0012	0.026	ug/kg
PCB Congeners	PCB-112	Mummichog	18	5	27.8	0.029	0.053	0.041	0.00078	0.0022	ug/kg
PCB Congeners	PCB-112	Mussel (estuarine)	3	2	66.7	0.0016	0.0017	0.0017	0.00036	0.00036	ug/kg
PCB Congeners	PCB-112	Mussel (freshwater)	5	2	40	0.0023	0.0088	0.0056	0.0014	0.0021	ug/kg
PCB Congeners	PCB-112	Northern pike	1	0	0				0.0022	0.0022	ug/kg
PCB Congeners	PCB-112	Other forage fish (no mummichog)	10	10	100	0.014	0.077	0.038			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-112	Smallmouth bass	3	0	0				0.0011	0.0016	ug/kg
PCB Congeners	PCB-112	White catfish	19	3	15.8	0.12	0.34	0.23	0.00073	0.0068	ug/kg
PCB Congeners	PCB-112	White perch	22	2	9.1	0.04	0.14	0.09	0.0018	0.0086	ug/kg
PCB Congeners	PCB-112	White sucker	5	0	0				0.0012	0.0048	ug/kg
PCB Congeners	PCB-112	Worms (all)	19	0	0				0.0024	0.061	ug/kg
PCB Congeners	PCB-112	Worms (estuarine sp.)	5	0	0				0.0071	0.011	ug/kg
PCB Congeners	PCB-112	Worms (freshwater sp.)	14	0	0				0.0024	0.061	ug/kg
PCB Congeners	PCB-114	American eel (all)	21	21	100	0.49	4.6	1.9			ug/kg
PCB Congeners	PCB-114	Blue crab	24	24	100	0.32	1	0.71			ug/kg
PCB Congeners	PCB-114	Brown bullhead	6	6	100	0.37	1.7	0.99			ug/kg
PCB Congeners	PCB-114	Carp	12	12	100	2.1	9.9	4.8			ug/kg
PCB Congeners	PCB-114	Channel catfish	11	11	100	0.26	3.8	1.8			ug/kg
PCB Congeners	PCB-114	Fish (all)	131	131	100	0.18	22	2.1			ug/kg
PCB Congeners	PCB-114	Fish (≤ 11 cm)	23	23	100	0.21	0.88	0.52			ug/kg
PCB Congeners	PCB-114	Fish (≤ 13 cm)	26	26	100	0.21	0.88	0.51			ug/kg
PCB Congeners	PCB-114	Fish (≤ 18 cm)	41	41	100	0.18	2.8	0.87			ug/kg
PCB Congeners	PCB-114	Fish (≤ 20 cm)	43	43	100	0.18	2.8	0.94			ug/kg
PCB Congeners	PCB-114	Largemouth bass	3	3	100	1.4	22	8.7			ug/kg
PCB Congeners	PCB-114	Mummichog	18	18	100	0.26	0.88	0.55			ug/kg
PCB Congeners	PCB-114	Mussel (estuarine)	3	3	100	0.00099	0.0083	0.0041			ug/kg
PCB Congeners	PCB-114	Mussel (freshwater)	5	5	100	0.01	0.02	0.014			ug/kg
PCB Congeners	PCB-114	Northern pike	1	1	100	2.3	2.3				ug/kg
PCB Congeners	PCB-114	Other forage fish (no mummichog)	10	10	100	0.18	0.83	0.43			ug/kg
PCB Congeners	PCB-114	Smallmouth bass	3	3	100	0.71	1.6	1.2			ug/kg
PCB Congeners	PCB-114	White catfish	19	19	100	0.79	10	3.4			ug/kg
PCB Congeners	PCB-114	White perch	22	22	100	0.32	2.9	1.7			ug/kg
PCB Congeners	PCB-114	White sucker	5	5	100	0.67	2.9	1.5			ug/kg
PCB Congeners	PCB-114	Worms (all)	19	19	100	0.023	0.74	0.14			ug/kg
PCB Congeners	PCB-114	Worms (estuarine sp.)	5	5	100	0.023	0.12	0.045			ug/kg
PCB Congeners	PCB-114	Worms (freshwater sp.)	14	14	100	0.051	0.74	0.17			ug/kg
PCB Congeners	PCB-115	American eel (all)	21	6	28.6	0.24	6.3	3.3	0.00094	0.0062	ug/kg
PCB Congeners	PCB-115	Blue crab	24	24	100	0.2	1	0.62			ug/kg
PCB Congeners	PCB-115	Brown bullhead	6	0	0				0.0019	0.0098	ug/kg
PCB Congeners	PCB-115	Carp	12	0	0				0.0033	0.02	ug/kg
PCB Congeners	PCB-115	Channel catfish	11	0	0				0.0023	0.004	ug/kg
PCB Congeners	PCB-115	Fish (all)	131	39	29.8	0.052	6.3	0.78	0.00075	0.022	ug/kg
PCB Congeners	PCB-115	Fish (≤ 11 cm)	23	23	100	0.11	0.51	0.31			ug/kg
PCB Congeners	PCB-115	Fish (≤ 13 cm)	26	26	100	0.11	0.51	0.31			ug/kg
PCB Congeners	PCB-115	Fish (≤ 18 cm)	41	30	73.2	0.11	0.95	0.33	0.0016	0.0076	ug/kg
PCB Congeners	PCB-115	Fish (≤ 20 cm)	43	30	69.8	0.11	0.95	0.33	0.0016	0.0076	ug/kg
PCB Congeners	PCB-115	Largemouth bass	3	0	0				0.0011	0.022	ug/kg
PCB Congeners	PCB-115	Mummichog	18	18	100	0.16	0.51	0.33			ug/kg
PCB Congeners	PCB-115	Mussel (estuarine)	3	3	100	0.0012	0.026	0.0096			ug/kg
PCB Congeners	PCB-115	Mussel (freshwater)	5	5	100	0.012	0.033	0.024			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-115	Northern pike	1	0	0				0.0022	0.0022	ug/kg
PCB Congeners	PCB-115	Other forage fish (no mummichog)	10	10	100	0.11	0.46	0.27			ug/kg
PCB Congeners	PCB-115	Smallmouth bass	3	0	0				0.00096	0.0014	ug/kg
PCB Congeners	PCB-115	White catfish	19	1	5.3	0.052	0.052		0.00075	0.0075	ug/kg
PCB Congeners	PCB-115	White perch	22	2	9.1	0.33	0.95	0.64	0.0015	0.0076	ug/kg
PCB Congeners	PCB-115	White sucker	5	2	40	0.38	0.39	0.39	0.002	0.0044	ug/kg
PCB Congeners	PCB-115	Worms (all)	19	0	0				0.0021	0.057	ug/kg
PCB Congeners	PCB-115	Worms (estuarine sp.)	5	0	0				0.0067	0.01	ug/kg
PCB Congeners	PCB-115	Worms (freshwater sp.)	14	0	0				0.0021	0.057	ug/kg
PCB Congeners	PCB-117	American eel (all)	21	21	100	1.3	14	3.8			ug/kg
PCB Congeners	PCB-117	Blue crab	24	24	100	0.056	0.6	0.34			ug/kg
PCB Congeners	PCB-117	Brown bullhead	6	1	16.7	0.49	0.49		0.0022	0.011	ug/kg
PCB Congeners	PCB-117	Carp	12	12	100	2.7	12	5.7			ug/kg
PCB Congeners	PCB-117	Channel catfish	11	11	100	0.34	3.7	1.8			ug/kg
PCB Congeners	PCB-117	Fish (all)	131	124	94.7	0.11	25	2.8	0.0022	0.011	ug/kg
PCB Congeners	PCB-117	Fish (≤ 11 cm)	23	23	100	0.27	1.1	0.64			ug/kg
PCB Congeners	PCB-117	Fish (≤ 13 cm)	26	26	100	0.27	1.1	0.62			ug/kg
PCB Congeners	PCB-117	Fish (≤ 18 cm)	41	39	95.1	0.26	3.9	1.1	0.0034	0.0036	ug/kg
PCB Congeners	PCB-117	Fish (≤ 20 cm)	43	41	95.3	0.26	3.9	1.2	0.0034	0.0036	ug/kg
PCB Congeners	PCB-117	Largemouth bass	3	3	100	1.6	25	9.7			ug/kg
PCB Congeners	PCB-117	Mummichog	18	18	100	0.38	1.1	0.67			ug/kg
PCB Congeners	PCB-117	Mussel (estuarine)	3	3	100	0.0019	0.017	0.0086			ug/kg
PCB Congeners	PCB-117	Mussel (freshwater)	5	5	100	0.015	0.028	0.021			ug/kg
PCB Congeners	PCB-117	Northern pike	1	1	100	3.9	3.9				ug/kg
PCB Congeners	PCB-117	Other forage fish (no mummichog)	10	10	100	0.26	0.93	0.53			ug/kg
PCB Congeners	PCB-117	Smallmouth bass	3	3	100	0.95	1.8	1.5			ug/kg
PCB Congeners	PCB-117	White catfish	19	19	100	0.11	12	3.6			ug/kg
PCB Congeners	PCB-117	White perch	22	20	90.9	0.17	4.6	2.2	0.0034	0.0036	ug/kg
PCB Congeners	PCB-117	White sucker	5	5	100	0.8	3.5	1.9			ug/kg
PCB Congeners	PCB-117	Worms (all)	19	18	94.7	0.038	1	0.22	0.011	0.011	ug/kg
PCB Congeners	PCB-117	Worms (estuarine sp.)	5	4	80	0.038	0.054	0.049	0.011	0.011	ug/kg
PCB Congeners	PCB-117	Worms (freshwater sp.)	14	14	100	0.083	1	0.27			ug/kg
PCB Congeners	PCB-118	American eel (all)	21	21	100	30	260	91			ug/kg
PCB Congeners	PCB-118	Blue crab	24	24	100	13	41	27			ug/kg
PCB Congeners	PCB-118	Brown bullhead	6	6	100	13	62	36			ug/kg
PCB Congeners	PCB-118	Carp	12	12	100	81	320	170			ug/kg
PCB Congeners	PCB-118	Channel catfish	11	11	100	11	140	71			ug/kg
PCB Congeners	PCB-118	Fish (all)	131	131	100	8.1	650	81			ug/kg
PCB Congeners	PCB-118	Fish (≤ 11 cm)	23	23	100	8.7	32	20			ug/kg
PCB Congeners	PCB-118	Fish (≤ 13 cm)	26	26	100	8.7	32	20			ug/kg
PCB Congeners	PCB-118	Fish (≤ 18 cm)	41	41	100	8.1	120	34			ug/kg
PCB Congeners	PCB-118	Fish (≤ 20 cm)	43	43	100	8.1	120	37			ug/kg
PCB Congeners	PCB-118	Largemouth bass	3	3	100	51	650	260			ug/kg
PCB Congeners	PCB-118	Mummichog	18	18	100	9.8	32	21			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-118	Mussel (estuarine)	3	3	100	0.056	0.43	0.21			ug/kg
PCB Congeners	PCB-118	Mussel (freshwater)	5	5	100	0.41	0.81	0.6			ug/kg
PCB Congeners	PCB-118	Northern pike	1	1	100	94	94				ug/kg
PCB Congeners	PCB-118	Other forage fish (no mummichog)	10	10	100	8.1	32	18			ug/kg
PCB Congeners	PCB-118	Smallmouth bass	3	3	100	28	62	46			ug/kg
PCB Congeners	PCB-118	White catfish	19	19	100	31	370	130			ug/kg
PCB Congeners	PCB-118	White perch	22	22	100	13	120	65			ug/kg
PCB Congeners	PCB-118	White sucker	5	5	100	28	110	57			ug/kg
PCB Congeners	PCB-118	Worms (all)	19	19	100	0.63	29	5.1			ug/kg
PCB Congeners	PCB-118	Worms (estuarine sp.)	5	5	100	0.63	2.7	1.1			ug/kg
PCB Congeners	PCB-118	Worms (freshwater sp.)	14	14	100	1.9	29	6.5			ug/kg
PCB Congeners	PCB-120	American eel (all)	21	21	100	0.036	0.97	0.31			ug/kg
PCB Congeners	PCB-120	Blue crab	24	24	100	0.065	0.23	0.16			ug/kg
PCB Congeners	PCB-120	Brown bullhead	6	5	83.3	0.047	0.31	0.15	0.0035	0.0035	ug/kg
PCB Congeners	PCB-120	Carp	12	12	100	0.24	1.4	0.74			ug/kg
PCB Congeners	PCB-120	Channel catfish	11	11	100	0.057	0.61	0.3			ug/kg
PCB Congeners	PCB-120	Fish (all)	131	129	98.5	0.028	1.8	0.38	0.0018	0.0035	ug/kg
PCB Congeners	PCB-120	Fish (≤ 11 cm)	23	23	100	0.035	0.23	0.11			ug/kg
PCB Congeners	PCB-120	Fish (≤ 13 cm)	26	26	100	0.035	0.23	0.11			ug/kg
PCB Congeners	PCB-120	Fish (≤ 18 cm)	41	41	100	0.028	0.8	0.2			ug/kg
PCB Congeners	PCB-120	Fish (≤ 20 cm)	43	43	100	0.028	0.8	0.22			ug/kg
PCB Congeners	PCB-120	Largemouth bass	3	3	100	0.29	1.1	0.65			ug/kg
PCB Congeners	PCB-120	Mummichog	18	18	100	0.072	0.23	0.13			ug/kg
PCB Congeners	PCB-120	Mussel (estuarine)	3	2	66.7	0.0012	0.0029	0.0021	0.00037	0.00037	ug/kg
PCB Congeners	PCB-120	Mussel (freshwater)	5	0	0				0.0015	0.0021	ug/kg
PCB Congeners	PCB-120	Northern pike	1	1	100	0.51	0.51				ug/kg
PCB Congeners	PCB-120	Other forage fish (no mummichog)	10	10	100	0.028	0.17	0.078			ug/kg
PCB Congeners	PCB-120	Smallmouth bass	3	3	100	0.14	0.38	0.25			ug/kg
PCB Congeners	PCB-120	White catfish	19	19	100	0.098	1.8	0.63			ug/kg
PCB Congeners	PCB-120	White perch	22	21	95.5	0.056	0.8	0.42	0.0018	0.0018	ug/kg
PCB Congeners	PCB-120	White sucker	5	5	100	0.11	0.74	0.34			ug/kg
PCB Congeners	PCB-120	Worms (all)	19	5	26.3	0.011	0.051	0.022	0.0023	0.057	ug/kg
PCB Congeners	PCB-120	Worms (estuarine sp.)	5	3	60	0.011	0.016	0.013	0.01	0.011	ug/kg
PCB Congeners	PCB-120	Worms (freshwater sp.)	14	2	14.3	0.017	0.051	0.034	0.0023	0.057	ug/kg
PCB Congeners	PCB-121	American eel (all)	21	21	100	0.0079	0.31	0.11			ug/kg
PCB Congeners	PCB-121	Blue crab	24	24	100	0.011	0.071	0.038			ug/kg
PCB Congeners	PCB-121	Brown bullhead	6	1	16.7	0.12	0.12		0.0022	0.011	ug/kg
PCB Congeners	PCB-121	Carp	12	12	100	0.054	0.41	0.22			ug/kg
PCB Congeners	PCB-121	Channel catfish	11	11	100	0.016	0.16	0.077			ug/kg
PCB Congeners	PCB-121	Fish (all)	131	118	90.1	0.0059	0.46	0.11	0.0021	0.029	ug/kg
PCB Congeners	PCB-121	Fish (≤ 11 cm)	23	23	100	0.012	0.072	0.033			ug/kg
PCB Congeners	PCB-121	Fish (≤ 13 cm)	26	26	100	0.012	0.072	0.032			ug/kg
PCB Congeners	PCB-121	Fish (≤ 18 cm)	41	38	92.7	0.0059	0.21	0.048	0.0036	0.0066	ug/kg
PCB Congeners	PCB-121	Fish (≤ 20 cm)	43	39	90.7	0.0059	0.21	0.05	0.0036	0.0066	ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-121	Largemouth bass	3	2	66.7	0.059	0.12	0.09	0.029	0.029	ug/kg
PCB Congeners	PCB-121	Mummichog	18	18	100	0.018	0.072	0.036			ug/kg
PCB Congeners	PCB-121	Mussel (estuarine)	3	0	0				0.00035	0.00097	ug/kg
PCB Congeners	PCB-121	Mussel (freshwater)	5	0	0				0.0014	0.002	ug/kg
PCB Congeners	PCB-121	Northern pike	1	1	100	0.12	0.12				ug/kg
PCB Congeners	PCB-121	Other forage fish (no mummichog)	10	10	100	0.0059	0.049	0.023			ug/kg
PCB Congeners	PCB-121	Smallmouth bass	3	3	100	0.03	0.068	0.049			ug/kg
PCB Congeners	PCB-121	White catfish	19	19	100	0.027	0.46	0.18			ug/kg
PCB Congeners	PCB-121	White perch	22	15	68.2	0.027	0.21	0.11	0.0021	0.0066	ug/kg
PCB Congeners	PCB-121	White sucker	5	5	100	0.028	0.18	0.083			ug/kg
PCB Congeners	PCB-121	Worms (all)	19	0	0				0.0026	0.063	ug/kg
PCB Congeners	PCB-121	Worms (estuarine sp.)	5	0	0				0.0074	0.012	ug/kg
PCB Congeners	PCB-121	Worms (freshwater sp.)	14	0	0				0.0026	0.063	ug/kg
PCB Congeners	PCB-122	American eel (all)	21	17	81	0.072	0.62	0.22	0.0017	0.014	ug/kg
PCB Congeners	PCB-122	Blue crab	24	0	0				0.0052	0.014	ug/kg
PCB Congeners	PCB-122	Brown bullhead	6	6	100	0.078	0.72	0.39			ug/kg
PCB Congeners	PCB-122	Carp	12	11	91.7	0.42	1.6	1	0.02	0.02	ug/kg
PCB Congeners	PCB-122	Channel catfish	11	11	100	0.095	0.63	0.34			ug/kg
PCB Congeners	PCB-122	Fish (all)	131	125	95.4	0.014	6.6	0.51	0.0013	0.02	ug/kg
PCB Congeners	PCB-122	Fish (≤ 11 cm)	23	22	95.7	0.014	0.24	0.066	0.0013	0.0013	ug/kg
PCB Congeners	PCB-122	Fish (≤ 13 cm)	26	25	96.2	0.014	0.24	0.073	0.0013	0.0013	ug/kg
PCB Congeners	PCB-122	Fish (≤ 18 cm)	41	40	97.6	0.014	1.1	0.28	0.0013	0.0013	ug/kg
PCB Congeners	PCB-122	Fish (≤ 20 cm)	43	42	97.7	0.014	1.1	0.31	0.0013	0.0013	ug/kg
PCB Congeners	PCB-122	Largemouth bass	3	3	100	0.24	6.6	2.4			ug/kg
PCB Congeners	PCB-122	Mummichog	18	17	94.4	0.014	0.073	0.041	0.0013	0.0013	ug/kg
PCB Congeners	PCB-122	Mussel (estuarine)	3	3	100	0.00066	0.0071	0.0034			ug/kg
PCB Congeners	PCB-122	Mussel (freshwater)	5	4	80	0.0069	0.011	0.0092	0.0021	0.0021	ug/kg
PCB Congeners	PCB-122	Northern pike	1	1	100	0.76	0.76				ug/kg
PCB Congeners	PCB-122	Other forage fish (no mummichog)	10	10	100	0.045	0.24	0.13			ug/kg
PCB Congeners	PCB-122	Smallmouth bass	3	3	100	0.1	0.28	0.21			ug/kg
PCB Congeners	PCB-122	White catfish	19	19	100	0.043	2.1	0.82			ug/kg
PCB Congeners	PCB-122	White perch	22	22	100	0.068	1.2	0.65			ug/kg
PCB Congeners	PCB-122	White sucker	5	5	100	0.23	0.53	0.38			ug/kg
PCB Congeners	PCB-122	Worms (all)	19	15	78.9	0.038	0.36	0.099	0.0084	0.013	ug/kg
PCB Congeners	PCB-122	Worms (estuarine sp.)	5	1	20	0.041	0.041		0.0084	0.013	ug/kg
PCB Congeners	PCB-122	Worms (freshwater sp.)	14	14	100	0.038	0.36	0.1			ug/kg
PCB Congeners	PCB-123	American eel (all)	21	21	100	0.39	3.1	1.4			ug/kg
PCB Congeners	PCB-123	Blue crab	24	24	100	0.27	0.88	0.59			ug/kg
PCB Congeners	PCB-123	Brown bullhead	6	6	100	0.31	1.4	0.79			ug/kg
PCB Congeners	PCB-123	Carp	12	12	100	1.6	6.6	3.4			ug/kg
PCB Congeners	PCB-123	Channel catfish	11	11	100	0.21	2.7	1.3			ug/kg
PCB Congeners	PCB-123	Fish (all)	131	131	100	0.16	15	1.6			ug/kg
PCB Congeners	PCB-123	Fish (≤ 11 cm)	23	23	100	0.19	0.68	0.42			ug/kg
PCB Congeners	PCB-123	Fish (≤ 13 cm)	26	26	100	0.19	0.68	0.41			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-123	Fish (≤ 18 cm)	41	41	100	0.16	2.3	0.7			ug/kg
PCB Congeners	PCB-123	Fish (≤ 20 cm)	43	43	100	0.16	2.3	0.77			ug/kg
PCB Congeners	PCB-123	Largemouth bass	3	3	100	1.1	15	5.9			ug/kg
PCB Congeners	PCB-123	Mummichog	18	18	100	0.24	0.68	0.44			ug/kg
PCB Congeners	PCB-123	Mussel (estuarine)	3	3	100	0.001	0.01	0.0046			ug/kg
PCB Congeners	PCB-123	Mussel (freshwater)	5	5	100	0.0095	0.016	0.012			ug/kg
PCB Congeners	PCB-123	Northern pike	1	1	100	2	2				ug/kg
PCB Congeners	PCB-123	Other forage fish (no mummichog)	10	10	100	0.16	0.64	0.36			ug/kg
PCB Congeners	PCB-123	Smallmouth bass	3	3	100	0.52	1.3	0.93			ug/kg
PCB Congeners	PCB-123	White catfish	19	19	100	0.56	7.6	2.7			ug/kg
PCB Congeners	PCB-123	White perch	22	22	100	0.24	2.3	1.4			ug/kg
PCB Congeners	PCB-123	White sucker	5	5	100	0.64	2.1	1.2			ug/kg
PCB Congeners	PCB-123	Worms (all)	19	19	100	0.022	0.5	0.11			ug/kg
PCB Congeners	PCB-123	Worms (estuarine sp.)	5	5	100	0.022	0.097	0.039			ug/kg
PCB Congeners	PCB-123	Worms (freshwater sp.)	14	14	100	0.045	0.5	0.13			ug/kg
PCB Congeners	PCB-126	American eel (all)	21	12	57.1	0.032	0.099	0.064	0.012	0.048	ug/kg
PCB Congeners	PCB-126	Blue crab	24	23	95.8	0.019	0.097	0.066	0.0099	0.0099	ug/kg
PCB Congeners	PCB-126	Brown bullhead	6	6	100	0.054	0.19	0.11			ug/kg
PCB Congeners	PCB-126	Carp	12	12	100	0.12	0.69	0.39			ug/kg
PCB Congeners	PCB-126	Channel catfish	11	11	100	0.022	0.3	0.15			ug/kg
PCB Congeners	PCB-126	Fish (all)	131	122	93.1	0.016	2.1	0.19	0.012	0.048	ug/kg
PCB Congeners	PCB-126	Fish (≤ 11 cm)	23	23	100	0.028	0.099	0.057			ug/kg
PCB Congeners	PCB-126	Fish (≤ 13 cm)	26	26	100	0.028	0.099	0.056			ug/kg
PCB Congeners	PCB-126	Fish (≤ 18 cm)	41	41	100	0.016	0.29	0.095			ug/kg
PCB Congeners	PCB-126	Fish (≤ 20 cm)	43	43	100	0.016	0.29	0.1			ug/kg
PCB Congeners	PCB-126	Largemouth bass	3	3	100	0.12	2.1	0.81			ug/kg
PCB Congeners	PCB-126	Mummichog	18	18	100	0.031	0.099	0.06			ug/kg
PCB Congeners	PCB-126	Mussel (estuarine)	3	2	66.7	0.00038	0.00083	0.00061	0.00062	0.00062	ug/kg
PCB Congeners	PCB-126	Mussel (freshwater)	5	5	100	0.0014	0.0021	0.0018			ug/kg
PCB Congeners	PCB-126	Northern pike	1	1	100	0.25	0.25				ug/kg
PCB Congeners	PCB-126	Other forage fish (no mummichog)	10	10	100	0.016	0.09	0.049			ug/kg
PCB Congeners	PCB-126	Smallmouth bass	3	3	100	0.081	0.16	0.12			ug/kg
PCB Congeners	PCB-126	White catfish	19	19	100	0.065	0.78	0.3			ug/kg
PCB Congeners	PCB-126	White perch	22	22	100	0.022	0.34	0.18			ug/kg
PCB Congeners	PCB-126	White sucker	5	5	100	0.094	0.39	0.19			ug/kg
PCB Congeners	PCB-126	Worms (all)	19	10	52.6	0.0074	0.028	0.016	0.0044	0.0084	ug/kg
PCB Congeners	PCB-126	Worms (estuarine sp.)	5	1	20	0.011	0.011		0.0044	0.0071	ug/kg
PCB Congeners	PCB-126	Worms (freshwater sp.)	14	9	64.3	0.0074	0.028	0.016	0.0052	0.0084	ug/kg
PCB Congeners	PCB-127	American eel (all)	21	0	0				0.0014	0.014	ug/kg
PCB Congeners	PCB-127	Blue crab	24	1	4.2	0.03	0.03		0.005	0.014	ug/kg
PCB Congeners	PCB-127	Brown bullhead	6	0	0				0.0023	0.01	ug/kg
PCB Congeners	PCB-127	Carp	12	3	25	0.16	0.41	0.32	0.0036	0.019	ug/kg
PCB Congeners	PCB-127	Channel catfish	11	2	18.2	0.019	0.087	0.053	0.0031	0.0059	ug/kg
PCB Congeners	PCB-127	Fish (all)	131	11	8.4	0.019	1.4	0.3	0.00056	0.019	ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-127	Fish (≤ 11 cm)	23	0	0				0.00056	0.0021	ug/kg
PCB Congeners	PCB-127	Fish (≤ 13 cm)	26	0	0				0.00056	0.0021	ug/kg
PCB Congeners	PCB-127	Fish (≤ 18 cm)	41	0	0				0.00056	0.0089	ug/kg
PCB Congeners	PCB-127	Fish (≤ 20 cm)	43	0	0				0.00056	0.0089	ug/kg
PCB Congeners	PCB-127	Largemouth bass	3	2	66.7	0.17	1.4	0.79	0.0018	0.0018	ug/kg
PCB Congeners	PCB-127	Mummichog	18	0	0				0.00056	0.0021	ug/kg
PCB Congeners	PCB-127	Mussel (estuarine)	3	0	0				0.00043	0.0012	ug/kg
PCB Congeners	PCB-127	Mussel (freshwater)	5	0	0				0.0017	0.0027	ug/kg
PCB Congeners	PCB-127	Northern pike	1	0	0				0.0024	0.0024	ug/kg
PCB Congeners	PCB-127	Other forage fish (no mummichog)	10	0	0				0.00076	0.0016	ug/kg
PCB Congeners	PCB-127	Smallmouth bass	3	3	100	0.065	0.13	0.1			ug/kg
PCB Congeners	PCB-127	White catfish	19	1	5.3	0.32	0.32		0.00086	0.0082	ug/kg
PCB Congeners	PCB-127	White perch	22	0	0				0.00068	0.0089	ug/kg
PCB Congeners	PCB-127	White sucker	5	0	0				0.0016	0.0059	ug/kg
PCB Congeners	PCB-127	Worms (all)	19	0	0				0.0028	0.071	ug/kg
PCB Congeners	PCB-127	Worms (estuarine sp.)	5	0	0				0.0086	0.013	ug/kg
PCB Congeners	PCB-127	Worms (freshwater sp.)	14	0	0				0.0028	0.071	ug/kg
PCB Congeners	PCB-128	American eel (all)	21	21	100	4.9	46	15			ug/kg
PCB Congeners	PCB-128	Blue crab	24	24	100	1.2	5.2	3.1			ug/kg
PCB Congeners	PCB-128	Brown bullhead	6	6	100	2	11	6.2			ug/kg
PCB Congeners	PCB-128	Carp	12	12	100	14	55	29			ug/kg
PCB Congeners	PCB-128	Channel catfish	11	11	100	1.3	21	10			ug/kg
PCB Congeners	PCB-128	Fish (all)	131	131	100	1.3	160	14			ug/kg
PCB Congeners	PCB-128	Fish (≤ 11 cm)	23	23	100	1.4	4.4	2.8			ug/kg
PCB Congeners	PCB-128	Fish (≤ 13 cm)	26	26	100	1.4	4.4	2.8			ug/kg
PCB Congeners	PCB-128	Fish (≤ 18 cm)	41	41	100	1.4	23	5.4			ug/kg
PCB Congeners	PCB-128	Fish (≤ 20 cm)	43	43	100	1.4	23	5.8			ug/kg
PCB Congeners	PCB-128	Largemouth bass	3	3	100	9.4	160	62			ug/kg
PCB Congeners	PCB-128	Mummichog	18	18	100	1.5	4.4	2.9			ug/kg
PCB Congeners	PCB-128	Mussel (estuarine)	3	3	100	0.0089	0.063	0.031			ug/kg
PCB Congeners	PCB-128	Mussel (freshwater)	5	5	100	0.076	0.13	0.098			ug/kg
PCB Congeners	PCB-128	Northern pike	1	1	100	15	15				ug/kg
PCB Congeners	PCB-128	Other forage fish (no mummichog)	10	10	100	1.4	4.8	2.8			ug/kg
PCB Congeners	PCB-128	Smallmouth bass	3	3	100	5.3	12	9			ug/kg
PCB Congeners	PCB-128	White catfish	19	19	100	6.1	63	21			ug/kg
PCB Congeners	PCB-128	White perch	22	22	100	1.9	23	11			ug/kg
PCB Congeners	PCB-128	White sucker	5	5	100	3.8	18	8.9			ug/kg
PCB Congeners	PCB-128	Worms (all)	19	19	100	0.17	4.9	0.85			ug/kg
PCB Congeners	PCB-128	Worms (estuarine sp.)	5	5	100	0.17	0.58	0.29			ug/kg
PCB Congeners	PCB-128	Worms (freshwater sp.)	14	14	100	0.4	4.9	1.1			ug/kg
PCB Congeners	PCB-129	American eel (all)	21	21	100	43	490	140			ug/kg
PCB Congeners	PCB-129	Blue crab	24	24	100	12	55	27			ug/kg
PCB Congeners	PCB-129	Brown bullhead	6	6	100	15	91	51			ug/kg
PCB Congeners	PCB-129	Carp	12	12	100	110	370	210			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-129	Channel catfish	11	11	100	13	200	94			ug/kg
PCB Congeners	PCB-129	Fish (all)	131	131	100	10	640	110			ug/kg
PCB Congeners	PCB-129	Fish (≤ 11 cm)	23	23	100	10	45	25			ug/kg
PCB Congeners	PCB-129	Fish (≤ 13 cm)	26	26	100	10	45	25			ug/kg
PCB Congeners	PCB-129	Fish (≤ 18 cm)	41	41	100	10	320	54			ug/kg
PCB Congeners	PCB-129	Fish (≤ 20 cm)	43	43	100	10	320	58			ug/kg
PCB Congeners	PCB-129	Largemouth bass	3	3	100	76	640	280			ug/kg
PCB Congeners	PCB-129	Mummichog	18	18	100	13	45	27			ug/kg
PCB Congeners	PCB-129	Mussel (estuarine)	3	3	100	0.081	0.53	0.26			ug/kg
PCB Congeners	PCB-129	Mussel (freshwater)	5	5	100	0.59	0.99	0.79			ug/kg
PCB Congeners	PCB-129	Northern pike	1	1	100	120	120				ug/kg
PCB Congeners	PCB-129	Other forage fish (no mummichog)	10	10	100	10	38	21			ug/kg
PCB Congeners	PCB-129	Smallmouth bass	3	3	100	41	95	72			ug/kg
PCB Congeners	PCB-129	White catfish	19	19	100	41	520	180			ug/kg
PCB Congeners	PCB-129	White perch	22	22	100	16	320	110			ug/kg
PCB Congeners	PCB-129	White sucker	5	5	100	39	180	90			ug/kg
PCB Congeners	PCB-129	Worms (all)	19	19	100	1.5	28	6.3			ug/kg
PCB Congeners	PCB-129	Worms (estuarine sp.)	5	5	100	1.5	4.6	2.4			ug/kg
PCB Congeners	PCB-129	Worms (freshwater sp.)	14	14	100	2.8	28	7.7			ug/kg
PCB Congeners	PCB-130	American eel (all)	21	21	100	2.4	22	6.4			ug/kg
PCB Congeners	PCB-130	Blue crab	24	24	100	0.23	0.77	0.47			ug/kg
PCB Congeners	PCB-130	Brown bullhead	6	6	100	0.96	5	2.7			ug/kg
PCB Congeners	PCB-130	Carp	12	12	100	5.5	19	11			ug/kg
PCB Congeners	PCB-130	Channel catfish	11	11	100	0.69	8.4	3.9			ug/kg
PCB Congeners	PCB-130	Fish (all)	131	131	100	0.45	32	5.2			ug/kg
PCB Congeners	PCB-130	Fish (≤ 11 cm)	23	23	100	0.59	2.5	1.4			ug/kg
PCB Congeners	PCB-130	Fish (≤ 13 cm)	26	26	100	0.59	2.5	1.3			ug/kg
PCB Congeners	PCB-130	Fish (≤ 18 cm)	41	41	100	0.45	11	2.4			ug/kg
PCB Congeners	PCB-130	Fish (≤ 20 cm)	43	43	100	0.45	11	2.6			ug/kg
PCB Congeners	PCB-130	Largemouth bass	3	3	100	2.9	32	14			ug/kg
PCB Congeners	PCB-130	Mummichog	18	18	100	0.7	2.5	1.4			ug/kg
PCB Congeners	PCB-130	Mussel (estuarine)	3	3	100	0.0037	0.031	0.015			ug/kg
PCB Congeners	PCB-130	Mussel (freshwater)	5	5	100	0.036	0.06	0.047			ug/kg
PCB Congeners	PCB-130	Northern pike	1	1	100	5.5	5.5				ug/kg
PCB Congeners	PCB-130	Other forage fish (no mummichog)	10	10	100	0.45	2.2	1.1			ug/kg
PCB Congeners	PCB-130	Smallmouth bass	3	3	100	1.9	4.4	3.4			ug/kg
PCB Congeners	PCB-130	White catfish	19	19	100	1.9	21	7.6			ug/kg
PCB Congeners	PCB-130	White perch	22	22	100	0.6	11	4.5			ug/kg
PCB Congeners	PCB-130	White sucker	5	5	100	1.4	9.3	4.3			ug/kg
PCB Congeners	PCB-130	Worms (all)	19	19	100	0.081	1.9	0.34			ug/kg
PCB Congeners	PCB-130	Worms (estuarine sp.)	5	5	100	0.081	0.25	0.13			ug/kg
PCB Congeners	PCB-130	Worms (freshwater sp.)	14	14	100	0.14	1.9	0.42			ug/kg
PCB Congeners	PCB-131	American eel (all)	21	21	100	0.042	0.5	0.14			ug/kg
PCB Congeners	PCB-131	Blue crab	24	16	66.7	0.0084	0.043	0.021	0.0036	0.013	ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-131	Brown bullhead	6	5	83.3	0.12	0.63	0.38	0.0022	0.0022	ug/kg
PCB Congeners	PCB-131	Carp	12	12	100	0.66	3.3	1.7			ug/kg
PCB Congeners	PCB-131	Channel catfish	11	11	100	0.069	0.95	0.43			ug/kg
PCB Congeners	PCB-131	Fish (all)	131	130	99.2	0.028	3.3	0.48	0.0022	0.0022	ug/kg
PCB Congeners	PCB-131	Fish (≤ 11 cm)	23	23	100	0.028	0.23	0.095			ug/kg
PCB Congeners	PCB-131	Fish (≤ 13 cm)	26	26	100	0.028	0.23	0.1			ug/kg
PCB Congeners	PCB-131	Fish (≤ 18 cm)	41	41	100	0.028	1.9	0.3			ug/kg
PCB Congeners	PCB-131	Fish (≤ 20 cm)	43	43	100	0.028	1.9	0.32			ug/kg
PCB Congeners	PCB-131	Largemouth bass	3	3	100	0.28	3	1.2			ug/kg
PCB Congeners	PCB-131	Mummichog	18	18	100	0.028	0.14	0.074			ug/kg
PCB Congeners	PCB-131	Mussel (estuarine)	3	2	66.7	0.0008	0.0033	0.0021	0.00035	0.00035	ug/kg
PCB Congeners	PCB-131	Mussel (freshwater)	5	5	100	0.0075	0.015	0.011			ug/kg
PCB Congeners	PCB-131	Northern pike	1	1	100	0.71	0.71				ug/kg
PCB Congeners	PCB-131	Other forage fish (no mummichog)	10	10	100	0.032	0.25	0.16			ug/kg
PCB Congeners	PCB-131	Smallmouth bass	3	3	100	0.13	0.47	0.34			ug/kg
PCB Congeners	PCB-131	White catfish	19	19	100	0.054	1.2	0.38			ug/kg
PCB Congeners	PCB-131	White perch	22	22	100	0.084	1.9	0.64			ug/kg
PCB Congeners	PCB-131	White sucker	5	5	100	0.26	1	0.54			ug/kg
PCB Congeners	PCB-131	Worms (all)	19	17	89.5	0.011	0.42	0.068	0.0027	0.0063	ug/kg
PCB Congeners	PCB-131	Worms (estuarine sp.)	5	3	60	0.011	0.046	0.023	0.0027	0.0063	ug/kg
PCB Congeners	PCB-131	Worms (freshwater sp.)	14	14	100	0.024	0.42	0.078			ug/kg
PCB Congeners	PCB-132	American eel (all)	21	21	100	0.72	17	5			ug/kg
PCB Congeners	PCB-132	Blue crab	24	23	95.8	0.023	0.67	0.13	0.0055	0.0055	ug/kg
PCB Congeners	PCB-132	Brown bullhead	6	6	100	3.1	18	9.5			ug/kg
PCB Congeners	PCB-132	Carp	12	12	100	13	72	38			ug/kg
PCB Congeners	PCB-132	Channel catfish	11	11	100	2.3	26	11			ug/kg
PCB Congeners	PCB-132	Fish (all)	131	131	100	0.72	72	14			ug/kg
PCB Congeners	PCB-132	Fish (≤ 11 cm)	23	23	100	1.9	7.6	4.4			ug/kg
PCB Congeners	PCB-132	Fish (≤ 13 cm)	26	26	100	1.9	7.6	4.4			ug/kg
PCB Congeners	PCB-132	Fish (≤ 18 cm)	41	41	100	0.98	71	10			ug/kg
PCB Congeners	PCB-132	Fish (≤ 20 cm)	43	43	100	0.98	71	11			ug/kg
PCB Congeners	PCB-132	Largemouth bass	3	3	100	7.7	54	26			ug/kg
PCB Congeners	PCB-132	Mummichog	18	18	100	1.9	7.6	4.4			ug/kg
PCB Congeners	PCB-132	Mussel (estuarine)	3	3	100	0.019	0.17	0.081			ug/kg
PCB Congeners	PCB-132	Mussel (freshwater)	5	5	100	0.19	0.34	0.26			ug/kg
PCB Congeners	PCB-132	Northern pike	1	1	100	19	19				ug/kg
PCB Congeners	PCB-132	Other forage fish (no mummichog)	10	10	100	0.98	6.8	4.1			ug/kg
PCB Congeners	PCB-132	Smallmouth bass	3	3	100	4	12	8.6			ug/kg
PCB Congeners	PCB-132	White catfish	19	19	100	2.3	30	15			ug/kg
PCB Congeners	PCB-132	White perch	22	22	100	1.8	71	19			ug/kg
PCB Congeners	PCB-132	White sucker	5	5	100	5.8	32	16			ug/kg
PCB Congeners	PCB-132	Worms (all)	19	19	100	0.15	8.3	1.5			ug/kg
PCB Congeners	PCB-132	Worms (estuarine sp.)	5	5	100	0.15	0.75	0.32			ug/kg
PCB Congeners	PCB-132	Worms (freshwater sp.)	14	14	100	0.6	8.3	1.9			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-133	American eel (all)	21	21	100	0.85	13	3.3			ug/kg
PCB Congeners	PCB-133	Blue crab	24	24	100	0.36	1.3	0.71			ug/kg
PCB Congeners	PCB-133	Brown bullhead	6	6	100	0.29	2.2	1.1			ug/kg
PCB Congeners	PCB-133	Carp	12	12	100	1.5	6.6	3.8			ug/kg
PCB Congeners	PCB-133	Channel catfish	11	11	100	0.3	3.4	1.7			ug/kg
PCB Congeners	PCB-133	Fish (all)	131	131	100	0.18	13	2.3			ug/kg
PCB Congeners	PCB-133	Fish (≤ 11 cm)	23	23	100	0.22	1.1	0.59			ug/kg
PCB Congeners	PCB-133	Fish (≤ 13 cm)	26	26	100	0.22	1.1	0.57			ug/kg
PCB Congeners	PCB-133	Fish (≤ 18 cm)	41	41	100	0.18	6.3	1.2			ug/kg
PCB Congeners	PCB-133	Fish (≤ 20 cm)	43	43	100	0.18	6.3	1.3			ug/kg
PCB Congeners	PCB-133	Largemouth bass	3	3	100	1.4	6.6	3.5			ug/kg
PCB Congeners	PCB-133	Mummichog	18	18	100	0.34	1.1	0.65			ug/kg
PCB Congeners	PCB-133	Mussel (estuarine)	3	3	100	0.0033	0.013	0.0073			ug/kg
PCB Congeners	PCB-133	Mussel (freshwater)	5	5	100	0.0097	0.017	0.014			ug/kg
PCB Congeners	PCB-133	Northern pike	1	1	100	2.6	2.6				ug/kg
PCB Congeners	PCB-133	Other forage fish (no mummichog)	10	10	100	0.18	0.88	0.42			ug/kg
PCB Congeners	PCB-133	Smallmouth bass	3	3	100	0.77	2	1.4			ug/kg
PCB Congeners	PCB-133	White catfish	19	19	100	0.64	10	3.5			ug/kg
PCB Congeners	PCB-133	White perch	22	22	100	0.3	6.3	2.5			ug/kg
PCB Congeners	PCB-133	White sucker	5	5	100	0.64	4.3	2			ug/kg
PCB Congeners	PCB-133	Worms (all)	19	19	100	0.041	0.37	0.11			ug/kg
PCB Congeners	PCB-133	Worms (estuarine sp.)	5	5	100	0.041	0.11	0.064			ug/kg
PCB Congeners	PCB-133	Worms (freshwater sp.)	14	14	100	0.044	0.37	0.13			ug/kg
PCB Congeners	PCB-134	American eel (all)	21	21	100	0.85	6.2	2.3			ug/kg
PCB Congeners	PCB-134	Blue crab	24	15	62.5	0.012	0.17	0.047	0.0038	0.015	ug/kg
PCB Congeners	PCB-134	Brown bullhead	6	6	100	0.55	3.6	1.9			ug/kg
PCB Congeners	PCB-134	Carp	12	12	100	2.6	16	7.7			ug/kg
PCB Congeners	PCB-134	Channel catfish	11	11	100	0.44	5	2.2			ug/kg
PCB Congeners	PCB-134	Fish (all)	131	131	100	0.21	16	2.8			ug/kg
PCB Congeners	PCB-134	Fish (≤ 11 cm)	23	23	100	0.29	1.6	0.81			ug/kg
PCB Congeners	PCB-134	Fish (≤ 13 cm)	26	26	100	0.29	1.6	0.82			ug/kg
PCB Congeners	PCB-134	Fish (≤ 18 cm)	41	41	100	0.21	15	2.1			ug/kg
PCB Congeners	PCB-134	Fish (≤ 20 cm)	43	43	100	0.21	15	2.2			ug/kg
PCB Congeners	PCB-134	Largemouth bass	3	3	100	1.5	12	5.3			ug/kg
PCB Congeners	PCB-134	Mummichog	18	18	100	0.29	1.6	0.81			ug/kg
PCB Congeners	PCB-134	Mussel (estuarine)	3	3	100	0.0038	0.035	0.017			ug/kg
PCB Congeners	PCB-134	Mussel (freshwater)	5	5	100	0.035	0.059	0.048			ug/kg
PCB Congeners	PCB-134	Northern pike	1	1	100	3.9	3.9				ug/kg
PCB Congeners	PCB-134	Other forage fish (no mummichog)	10	10	100	0.21	1.5	0.8			ug/kg
PCB Congeners	PCB-134	Smallmouth bass	3	3	100	0.68	2.3	1.6			ug/kg
PCB Congeners	PCB-134	White catfish	19	19	100	0.27	6.1	2.1			ug/kg
PCB Congeners	PCB-134	White perch	22	22	100	0.47	15	4.3			ug/kg
PCB Congeners	PCB-134	White sucker	5	5	100	0.74	5.5	2.7			ug/kg
PCB Congeners	PCB-134	Worms (all)	19	19	100	0.051	1.8	0.33			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-134	Worms (estuarine sp.)	5	5	100	0.051	0.26	0.11			ug/kg
PCB Congeners	PCB-134	Worms (freshwater sp.)	14	14	100	0.11	1.8	0.41			ug/kg
PCB Congeners	PCB-135	American eel (all)	21	21	100	2	22	7.9			ug/kg
PCB Congeners	PCB-135	Blue crab	24	24	100	0.2	1.7	0.51			ug/kg
PCB Congeners	PCB-135	Brown bullhead	6	6	100	3.7	30	15			ug/kg
PCB Congeners	PCB-135	Carp	12	12	100	17	98	55			ug/kg
PCB Congeners	PCB-135	Channel catfish	11	11	100	3.6	38	18			ug/kg
PCB Congeners	PCB-135	Fish (all)	131	131	100	2	160	24			ug/kg
PCB Congeners	PCB-135	Fish (≤ 11 cm)	23	23	100	3.6	16	8			ug/kg
PCB Congeners	PCB-135	Fish (≤ 13 cm)	26	26	100	3.6	16	7.9			ug/kg
PCB Congeners	PCB-135	Fish (≤ 18 cm)	41	41	100	2	160	20			ug/kg
PCB Congeners	PCB-135	Fish (≤ 20 cm)	43	43	100	2	160	22			ug/kg
PCB Congeners	PCB-135	Largemouth bass	3	3	100	16	73	40			ug/kg
PCB Congeners	PCB-135	Mummichog	18	18	100	3.8	16	8.6			ug/kg
PCB Congeners	PCB-135	Mussel (estuarine)	3	3	100	0.033	0.27	0.13			ug/kg
PCB Congeners	PCB-135	Mussel (freshwater)	5	5	100	0.23	0.39	0.31			ug/kg
PCB Congeners	PCB-135	Northern pike	1	1	100	32	32				ug/kg
PCB Congeners	PCB-135	Other forage fish (no mummichog)	10	10	100	2	13	6.2			ug/kg
PCB Congeners	PCB-135	Smallmouth bass	3	3	100	8.5	23	16			ug/kg
PCB Congeners	PCB-135	White catfish	19	19	100	5.2	71	31			ug/kg
PCB Congeners	PCB-135	White perch	22	22	100	3.3	160	42			ug/kg
PCB Congeners	PCB-135	White sucker	5	5	100	8	55	27			ug/kg
PCB Congeners	PCB-135	Worms (all)	19	19	100	0.36	8.5	2.6			ug/kg
PCB Congeners	PCB-135	Worms (estuarine sp.)	5	5	100	0.36	1.5	0.72			ug/kg
PCB Congeners	PCB-135	Worms (freshwater sp.)	14	14	100	1.3	8.5	3.2			ug/kg
PCB Congeners	PCB-136	American eel (all)	21	21	100	0.43	5.7	1.9			ug/kg
PCB Congeners	PCB-136	Blue crab	24	23	95.8	0.012	0.4	0.094	0.0033	0.0033	ug/kg
PCB Congeners	PCB-136	Brown bullhead	6	6	100	0.89	8.3	3.8			ug/kg
PCB Congeners	PCB-136	Carp	12	12	100	3.4	37	19			ug/kg
PCB Congeners	PCB-136	Channel catfish	11	11	100	0.78	5.8	2.4			ug/kg
PCB Congeners	PCB-136	Fish (all)	131	131	100	0.38	51	6.4			ug/kg
PCB Congeners	PCB-136	Fish (≤ 11 cm)	23	23	100	0.61	3.3	1.7			ug/kg
PCB Congeners	PCB-136	Fish (≤ 13 cm)	26	26	100	0.61	3.4	1.8			ug/kg
PCB Congeners	PCB-136	Fish (≤ 18 cm)	41	41	100	0.38	51	5.8			ug/kg
PCB Congeners	PCB-136	Fish (≤ 20 cm)	43	43	100	0.38	51	6.1			ug/kg
PCB Congeners	PCB-136	Largemouth bass	3	3	100	2.7	24	11			ug/kg
PCB Congeners	PCB-136	Mummichog	18	18	100	0.61	3.3	1.6			ug/kg
PCB Congeners	PCB-136	Mussel (estuarine)	3	3	100	0.0096	0.096	0.046			ug/kg
PCB Congeners	PCB-136	Mussel (freshwater)	5	5	100	0.08	0.14	0.11			ug/kg
PCB Congeners	PCB-136	Northern pike	1	1	100	9.9	9.9				ug/kg
PCB Congeners	PCB-136	Other forage fish (no mummichog)	10	10	100	0.38	4.4	2.1			ug/kg
PCB Congeners	PCB-136	Smallmouth bass	3	3	100	1.1	5.3	3.3			ug/kg
PCB Congeners	PCB-136	White catfish	19	19	100	0.64	16	5.6			ug/kg
PCB Congeners	PCB-136	White perch	22	22	100	0.96	51	12			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-136	White sucker	5	5	100	2	15	7.3			ug/kg
PCB Congeners	PCB-136	Worms (all)	19	19	100	0.18	4	0.92			ug/kg
PCB Congeners	PCB-136	Worms (estuarine sp.)	5	5	100	0.18	0.76	0.34			ug/kg
PCB Congeners	PCB-136	Worms (freshwater sp.)	14	14	100	0.37	4	1.1			ug/kg
PCB Congeners	PCB-137	American eel (all)	21	21	100	1.1	7.9	3.6			ug/kg
PCB Congeners	PCB-137	Blue crab	24	24	100	0.63	2.4	1.4			ug/kg
PCB Congeners	PCB-137	Brown bullhead	6	6	100	0.96	3.5	2.1			ug/kg
PCB Congeners	PCB-137	Carp	12	12	100	4.4	16	8.6			ug/kg
PCB Congeners	PCB-137	Channel catfish	11	11	100	0.35	7.6	3.4			ug/kg
PCB Congeners	PCB-137	Fish (all)	131	131	100	0.35	33	4			ug/kg
PCB Congeners	PCB-137	Fish (≤ 11 cm)	23	23	100	0.46	1.8	1.1			ug/kg
PCB Congeners	PCB-137	Fish (≤ 13 cm)	26	26	100	0.46	1.8	1.1			ug/kg
PCB Congeners	PCB-137	Fish (≤ 18 cm)	41	41	100	0.45	5.2	1.8			ug/kg
PCB Congeners	PCB-137	Fish (≤ 20 cm)	43	43	100	0.45	5.3	2			ug/kg
PCB Congeners	PCB-137	Largemouth bass	3	3	100	2.8	33	13			ug/kg
PCB Congeners	PCB-137	Mummichog	18	18	100	0.62	1.8	1.2			ug/kg
PCB Congeners	PCB-137	Mussel (estuarine)	3	3	100	0.0018	0.0085	0.0048			ug/kg
PCB Congeners	PCB-137	Mussel (freshwater)	5	5	100	0.024	0.036	0.03			ug/kg
PCB Congeners	PCB-137	Northern pike	1	1	100	4.5	4.5				ug/kg
PCB Congeners	PCB-137	Other forage fish (no mummichog)	10	10	100	0.45	1.6	0.9			ug/kg
PCB Congeners	PCB-137	Smallmouth bass	3	3	100	1.9	3.9	3.1			ug/kg
PCB Congeners	PCB-137	White catfish	19	19	100	2	16	6.3			ug/kg
PCB Congeners	PCB-137	White perch	22	22	100	0.58	6.5	3.6			ug/kg
PCB Congeners	PCB-137	White sucker	5	5	100	1.5	5.5	3.1			ug/kg
PCB Congeners	PCB-137	Worms (all)	19	19	100	0.021	1.5	0.18			ug/kg
PCB Congeners	PCB-137	Worms (estuarine sp.)	5	5	100	0.052	0.23	0.1			ug/kg
PCB Congeners	PCB-137	Worms (freshwater sp.)	14	14	100	0.021	1.5	0.21			ug/kg
PCB Congeners	PCB-139	American eel (all)	21	21	100	0.61	5.5	2			ug/kg
PCB Congeners	PCB-139	Blue crab	24	24	100	0.3	1.1	0.64			ug/kg
PCB Congeners	PCB-139	Brown bullhead	6	6	100	0.22	1.4	0.74			ug/kg
PCB Congeners	PCB-139	Carp	12	12	100	0.94	6.3	3.5			ug/kg
PCB Congeners	PCB-139	Channel catfish	11	11	100	0.19	2.7	1.4			ug/kg
PCB Congeners	PCB-139	Fish (all)	131	131	100	0.18	12	1.8			ug/kg
PCB Congeners	PCB-139	Fish (≤ 11 cm)	23	23	100	0.21	0.91	0.51			ug/kg
PCB Congeners	PCB-139	Fish (≤ 13 cm)	26	26	100	0.21	0.91	0.5			ug/kg
PCB Congeners	PCB-139	Fish (≤ 18 cm)	41	41	100	0.18	3.8	0.97			ug/kg
PCB Congeners	PCB-139	Fish (≤ 20 cm)	43	43	100	0.18	3.8	1			ug/kg
PCB Congeners	PCB-139	Largemouth bass	3	3	100	1.2	12	5.1			ug/kg
PCB Congeners	PCB-139	Mummichog	18	18	100	0.29	0.91	0.55			ug/kg
PCB Congeners	PCB-139	Mussel (estuarine)	3	2	66.7	0.002	0.0066	0.0043	0.0003	0.0003	ug/kg
PCB Congeners	PCB-139	Mussel (freshwater)	5	5	100	0.0088	0.016	0.013			ug/kg
PCB Congeners	PCB-139	Northern pike	1	1	100	2.1	2.1				ug/kg
PCB Congeners	PCB-139	Other forage fish (no mummichog)	10	10	100	0.18	0.74	0.4			ug/kg
PCB Congeners	PCB-139	Smallmouth bass	3	3	100	0.7	1.6	1.2			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-139	White catfish	19	19	100	0.69	6.8	2.8			ug/kg
PCB Congeners	PCB-139	White perch	22	22	100	0.27	3.8	2			ug/kg
PCB Congeners	PCB-139	White sucker	5	5	100	0.67	3.4	1.7			ug/kg
PCB Congeners	PCB-139	Worms (all)	19	19	100	0.018	0.63	0.12			ug/kg
PCB Congeners	PCB-139	Worms (estuarine sp.)	5	5	100	0.018	0.078	0.039			ug/kg
PCB Congeners	PCB-139	Worms (freshwater sp.)	14	14	100	0.047	0.63	0.14			ug/kg
PCB Congeners	PCB-141	American eel (all)	21	21	100	4.1	55	13			ug/kg
PCB Congeners	PCB-141	Blue crab	24	24	100	0.089	1	0.33			ug/kg
PCB Congeners	PCB-141	Brown bullhead	6	6	100	2.5	17	8.9			ug/kg
PCB Congeners	PCB-141	Carp	12	12	100	12	59	31			ug/kg
PCB Congeners	PCB-141	Channel catfish	11	11	100	1.8	26	13			ug/kg
PCB Congeners	PCB-141	Fish (all)	131	131	100	1.3	79	16			ug/kg
PCB Congeners	PCB-141	Fish (≤ 11 cm)	23	23	100	1.8	7.7	4			ug/kg
PCB Congeners	PCB-141	Fish (≤ 13 cm)	26	26	100	1.8	7.7	4			ug/kg
PCB Congeners	PCB-141	Fish (≤ 18 cm)	41	41	100	1.3	75	9.6			ug/kg
PCB Congeners	PCB-141	Fish (≤ 20 cm)	43	43	100	1.3	75	10			ug/kg
PCB Congeners	PCB-141	Largemouth bass	3	3	100	10	58	28			ug/kg
PCB Congeners	PCB-141	Mummichog	18	18	100	1.8	7.7	4.3			ug/kg
PCB Congeners	PCB-141	Mussel (estuarine)	3	3	100	0.0051	0.013	0.0083			ug/kg
PCB Congeners	PCB-141	Mussel (freshwater)	5	5	100	0.092	0.18	0.14			ug/kg
PCB Congeners	PCB-141	Northern pike	1	1	100	16	16				ug/kg
PCB Congeners	PCB-141	Other forage fish (no mummichog)	10	10	100	1.3	6.2	3.2			ug/kg
PCB Congeners	PCB-141	Smallmouth bass	3	3	100	5.2	12	9.4			ug/kg
PCB Congeners	PCB-141	White catfish	19	19	100	4.8	79	28			ug/kg
PCB Congeners	PCB-141	White perch	22	22	100	2	75	20			ug/kg
PCB Congeners	PCB-141	White sucker	5	5	100	4.2	31	13			ug/kg
PCB Congeners	PCB-141	Worms (all)	19	19	100	0.081	3.1	0.47			ug/kg
PCB Congeners	PCB-141	Worms (estuarine sp.)	5	5	100	0.081	0.42	0.19			ug/kg
PCB Congeners	PCB-141	Worms (freshwater sp.)	14	14	100	0.11	3.1	0.57			ug/kg
PCB Congeners	PCB-142	American eel (all)	21	0	0				0.0012	0.0077	ug/kg
PCB Congeners	PCB-142	Blue crab	24	0	0				0.0039	0.016	ug/kg
PCB Congeners	PCB-142	Brown bullhead	6	0	0				0.0022	0.005	ug/kg
PCB Congeners	PCB-142	Carp	12	8	66.7	0.013	0.071	0.036	0.0039	0.015	ug/kg
PCB Congeners	PCB-142	Channel catfish	11	0	0				0.0025	0.0046	ug/kg
PCB Congeners	PCB-142	Fish (all)	131	16	12.2	0.0037	0.071	0.026	0.00061	0.015	ug/kg
PCB Congeners	PCB-142	Fish (≤ 11 cm)	23	1	4.3	0.0064	0.0064		0.00061	0.0021	ug/kg
PCB Congeners	PCB-142	Fish (≤ 13 cm)	26	1	3.8	0.0064	0.0064		0.00061	0.0021	ug/kg
PCB Congeners	PCB-142	Fish (≤ 18 cm)	41	3	7.3	0.0064	0.018	0.013	0.00061	0.0063	ug/kg
PCB Congeners	PCB-142	Fish (≤ 20 cm)	43	3	7	0.0064	0.018	0.013	0.00061	0.0063	ug/kg
PCB Congeners	PCB-142	Largemouth bass	3	0	0				0.0013	0.0053	ug/kg
PCB Congeners	PCB-142	Mummichog	18	0	0				0.00061	0.0021	ug/kg
PCB Congeners	PCB-142	Mussel (estuarine)	3	0	0				0.00015	0.00037	ug/kg
PCB Congeners	PCB-142	Mussel (freshwater)	5	0	0				0.00023	0.00034	ug/kg
PCB Congeners	PCB-142	Northern pike	1	1	100	0.019	0.019				ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-142	Other forage fish (no mummichog)	10	0	0				0.00061	0.0011	ug/kg
PCB Congeners	PCB-142	Smallmouth bass	3	0	0				0.0012	0.0016	ug/kg
PCB Congeners	PCB-142	White catfish	19	4	21.1	0.0037	0.035	0.016	0.0017	0.0096	ug/kg
PCB Congeners	PCB-142	White perch	22	3	13.6	0.0064	0.018	0.013	0.0017	0.0063	ug/kg
PCB Congeners	PCB-142	White sucker	5	0	0				0.0011	0.0033	ug/kg
PCB Congeners	PCB-142	Worms (all)	19	0	0				0.0033	0.008	ug/kg
PCB Congeners	PCB-142	Worms (estuarine sp.)	5	0	0				0.0035	0.008	ug/kg
PCB Congeners	PCB-142	Worms (freshwater sp.)	14	0	0				0.0033	0.0079	ug/kg
PCB Congeners	PCB-143	American eel (all)	21	0	0				0.0011	0.0067	ug/kg
PCB Congeners	PCB-143	Blue crab	24	0	0				0.0038	0.015	ug/kg
PCB Congeners	PCB-143	Brown bullhead	6	0	0				0.0022	0.0048	ug/kg
PCB Congeners	PCB-143	Carp	12	6	50	0.23	0.79	0.53	0.0044	0.014	ug/kg
PCB Congeners	PCB-143	Channel catfish	11	1	9.1	0.047	0.047		0.0024	0.0041	ug/kg
PCB Congeners	PCB-143	Fish (all)	131	57	43.5	0.0041	0.79	0.13	0.00093	0.014	ug/kg
PCB Congeners	PCB-143	Fish (≤ 11 cm)	23	21	91.3	0.014	0.08	0.045	0.00093	0.00094	ug/kg
PCB Congeners	PCB-143	Fish (≤ 13 cm)	26	24	92.3	0.014	0.08	0.043	0.00093	0.00094	ug/kg
PCB Congeners	PCB-143	Fish (≤ 18 cm)	41	28	68.3	0.0089	0.18	0.047	0.00093	0.0058	ug/kg
PCB Congeners	PCB-143	Fish (≤ 20 cm)	43	28	65.1	0.0089	0.18	0.047	0.00093	0.0058	ug/kg
PCB Congeners	PCB-143	Largemouth bass	3	1	33.3	0.13	0.13		0.0012	0.0049	ug/kg
PCB Congeners	PCB-143	Mummichog	18	18	100	0.021	0.08	0.046			ug/kg
PCB Congeners	PCB-143	Mussel (estuarine)	3	0	0				0.00014	0.00034	ug/kg
PCB Congeners	PCB-143	Mussel (freshwater)	5	2	40	0.0026	0.0036	0.0031	0.0002	0.00029	ug/kg
PCB Congeners	PCB-143	Northern pike	1	0	0				0.0012	0.0012	ug/kg
PCB Congeners	PCB-143	Other forage fish (no mummichog)	10	8	80	0.0089	0.059	0.03	0.00093	0.00094	ug/kg
PCB Congeners	PCB-143	Smallmouth bass	3	1	33.3	0.043	0.043		0.0011	0.0012	ug/kg
PCB Congeners	PCB-143	White catfish	19	14	73.7	0.0076	0.27	0.13	0.0018	0.0024	ug/kg
PCB Congeners	PCB-143	White perch	22	4	18.2	0.0041	0.57	0.2	0.0015	0.0058	ug/kg
PCB Congeners	PCB-143	White sucker	5	4	80	0.024	0.27	0.11	0.0011	0.0011	ug/kg
PCB Congeners	PCB-143	Worms (all)	19	3	15.8	0.0097	0.068	0.031	0.0032	0.0072	ug/kg
PCB Congeners	PCB-143	Worms (estuarine sp.)	5	0	0				0.0032	0.0069	ug/kg
PCB Congeners	PCB-143	Worms (freshwater sp.)	14	3	21.4	0.0097	0.068	0.031	0.0034	0.0072	ug/kg
PCB Congeners	PCB-144	American eel (all)	21	21	100	0.12	1.8	0.48			ug/kg
PCB Congeners	PCB-144	Blue crab	24	24	100	0.028	0.27	0.1			ug/kg
PCB Congeners	PCB-144	Brown bullhead	6	6	100	0.42	3	1.5			ug/kg
PCB Congeners	PCB-144	Carp	12	12	100	3.1	16	8.5			ug/kg
PCB Congeners	PCB-144	Channel catfish	11	11	100	0.35	4.6	2.4			ug/kg
PCB Congeners	PCB-144	Fish (all)	131	131	100	0.12	21	3.3			ug/kg
PCB Congeners	PCB-144	Fish (≤ 11 cm)	23	23	100	0.5	2.1	1.1			ug/kg
PCB Congeners	PCB-144	Fish (≤ 13 cm)	26	26	100	0.5	2.1	1.1			ug/kg
PCB Congeners	PCB-144	Fish (≤ 18 cm)	41	41	100	0.28	21	2.5			ug/kg
PCB Congeners	PCB-144	Fish (≤ 20 cm)	43	43	100	0.28	21	2.7			ug/kg
PCB Congeners	PCB-144	Largemouth bass	3	3	100	2.5	16	7.5			ug/kg
PCB Congeners	PCB-144	Mummichog	18	18	100	0.53	2.1	1.2			ug/kg
PCB Congeners	PCB-144	Mussel (estuarine)	3	3	100	0.0015	0.0055	0.0031			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-144	Mussel (freshwater)	5	5	100	0.026	0.049	0.036			ug/kg
PCB Congeners	PCB-144	Northern pike	1	1	100	4.4	4.4				ug/kg
PCB Congeners	PCB-144	Other forage fish (no mummichog)	10	10	100	0.28	1.7	0.85			ug/kg
PCB Congeners	PCB-144	Smallmouth bass	3	3	100	1.3	3.1	2.3			ug/kg
PCB Congeners	PCB-144	White catfish	19	19	100	1.1	10	4.8			ug/kg
PCB Congeners	PCB-144	White perch	22	22	100	0.44	21	5.1			ug/kg
PCB Congeners	PCB-144	White sucker	5	5	100	1.3	7.5	3.5			ug/kg
PCB Congeners	PCB-144	Worms (all)	19	19	100	0.05	1.1	0.25			ug/kg
PCB Congeners	PCB-144	Worms (estuarine sp.)	5	5	100	0.05	0.2	0.092			ug/kg
PCB Congeners	PCB-144	Worms (freshwater sp.)	14	14	100	0.1	1.1	0.31			ug/kg
PCB Congeners	PCB-145	American eel (all)	21	0	0				0.00082	0.0058	ug/kg
PCB Congeners	PCB-145	Blue crab	24	0	0				0.0027	0.009	ug/kg
PCB Congeners	PCB-145	Brown bullhead	6	0	0				0.0015	0.0034	ug/kg
PCB Congeners	PCB-145	Carp	12	10	83.3	0.026	0.14	0.069	0.0039	0.004	ug/kg
PCB Congeners	PCB-145	Channel catfish	11	1	9.1	0.0033	0.0033		0.002	0.0031	ug/kg
PCB Congeners	PCB-145	Fish (all)	131	62	47.3	0.0019	0.14	0.02	0.00042	0.0058	ug/kg
PCB Congeners	PCB-145	Fish (≤ 11 cm)	23	20	87	0.0019	0.01	0.005	0.00063	0.00073	ug/kg
PCB Congeners	PCB-145	Fish (≤ 13 cm)	26	23	88.5	0.0019	0.01	0.005	0.00063	0.00073	ug/kg
PCB Congeners	PCB-145	Fish (≤ 18 cm)	41	26	63.4	0.0019	0.014	0.0055	0.00042	0.0048	ug/kg
PCB Congeners	PCB-145	Fish (≤ 20 cm)	43	26	60.5	0.0019	0.014	0.0055	0.00042	0.0048	ug/kg
PCB Congeners	PCB-145	Largemouth bass	3	3	100	0.009	0.11	0.046			ug/kg
PCB Congeners	PCB-145	Mummichog	18	17	94.4	0.0025	0.01	0.0052	0.00073	0.00073	ug/kg
PCB Congeners	PCB-145	Mussel (estuarine)	3	0	0				0.000089	0.00021	ug/kg
PCB Congeners	PCB-145	Mussel (freshwater)	5	0	0				0.00015	0.0002	ug/kg
PCB Congeners	PCB-145	Northern pike	1	1	100	0.021	0.021				ug/kg
PCB Congeners	PCB-145	Other forage fish (no mummichog)	10	7	70	0.0019	0.0092	0.0048	0.00042	0.00068	ug/kg
PCB Congeners	PCB-145	Smallmouth bass	3	3	100	0.0054	0.011	0.0075			ug/kg
PCB Congeners	PCB-145	White catfish	19	12	63.2	0.002	0.031	0.014	0.0014	0.0057	ug/kg
PCB Congeners	PCB-145	White perch	22	3	13.6	0.0058	0.031	0.017	0.0011	0.0048	ug/kg
PCB Congeners	PCB-145	White sucker	5	5	100	0.0056	0.02	0.011			ug/kg
PCB Congeners	PCB-145	Worms (all)	19	1	5.3	0.018	0.018		0.0023	0.0057	ug/kg
PCB Congeners	PCB-145	Worms (estuarine sp.)	5	0	0				0.0025	0.0053	ug/kg
PCB Congeners	PCB-145	Worms (freshwater sp.)	14	1	7.1	0.018	0.018		0.0023	0.0057	ug/kg
PCB Congeners	PCB-146	American eel (all)	21	21	100	6.6	110	28			ug/kg
PCB Congeners	PCB-146	Blue crab	24	24	100	2.5	11	5.3			ug/kg
PCB Congeners	PCB-146	Brown bullhead	6	6	100	2.6	19	10			ug/kg
PCB Congeners	PCB-146	Carp	12	12	100	14	57	33			ug/kg
PCB Congeners	PCB-146	Channel catfish	11	11	100	2.5	31	15			ug/kg
PCB Congeners	PCB-146	Fish (all)	131	131	100	1.7	110	21			ug/kg
PCB Congeners	PCB-146	Fish (≤ 11 cm)	23	23	100	1.7	9	4.6			ug/kg
PCB Congeners	PCB-146	Fish (≤ 13 cm)	26	26	100	1.7	9	4.5			ug/kg
PCB Congeners	PCB-146	Fish (≤ 18 cm)	41	41	100	1.7	58	10			ug/kg
PCB Congeners	PCB-146	Fish (≤ 20 cm)	43	43	100	1.7	58	11			ug/kg
PCB Congeners	PCB-146	Largemouth bass	3	3	100	13	58	31			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-146	Mummichog	18	18	100	2.5	9	5			ug/kg
PCB Congeners	PCB-146	Mussel (estuarine)	3	3	100	0.024	0.1	0.054			ug/kg
PCB Congeners	PCB-146	Mussel (freshwater)	5	5	100	0.079	0.13	0.1			ug/kg
PCB Congeners	PCB-146	Northern pike	1	1	100	21	21				ug/kg
PCB Congeners	PCB-146	Other forage fish (no mummichog)	10	10	100	1.7	7.3	3.5			ug/kg
PCB Congeners	PCB-146	Smallmouth bass	3	3	100	7	18	12			ug/kg
PCB Congeners	PCB-146	White catfish	19	19	100	5.9	94	33			ug/kg
PCB Congeners	PCB-146	White perch	22	22	100	2.8	58	22			ug/kg
PCB Congeners	PCB-146	White sucker	5	5	100	6	37	18			ug/kg
PCB Congeners	PCB-146	Worms (all)	19	19	100	0.33	2.9	0.89			ug/kg
PCB Congeners	PCB-146	Worms (estuarine sp.)	5	5	100	0.33	0.85	0.49			ug/kg
PCB Congeners	PCB-146	Worms (freshwater sp.)	14	14	100	0.39	2.9	1			ug/kg
PCB Congeners	PCB-147	American eel (all)	21	21	100	14	110	37			ug/kg
PCB Congeners	PCB-147	Blue crab	24	24	100	0.86	5.5	2.1			ug/kg
PCB Congeners	PCB-147	Brown bullhead	6	6	100	7.1	54	28			ug/kg
PCB Congeners	PCB-147	Carp	12	12	100	51	240	130			ug/kg
PCB Congeners	PCB-147	Channel catfish	11	11	100	6.5	86	41			ug/kg
PCB Congeners	PCB-147	Fish (all)	131	131	100	4.7	280	58			ug/kg
PCB Congeners	PCB-147	Fish (≤ 11 cm)	23	23	100	7.6	32	16			ug/kg
PCB Congeners	PCB-147	Fish (≤ 13 cm)	26	26	100	7.6	32	16			ug/kg
PCB Congeners	PCB-147	Fish (≤ 18 cm)	41	41	100	4.7	280	38			ug/kg
PCB Congeners	PCB-147	Fish (≤ 20 cm)	43	43	100	4.7	280	41			ug/kg
PCB Congeners	PCB-147	Largemouth bass	3	3	100	42	250	120			ug/kg
PCB Congeners	PCB-147	Mummichog	18	18	100	7.6	32	18			ug/kg
PCB Congeners	PCB-147	Mussel (estuarine)	3	3	100	0.069	0.55	0.27			ug/kg
PCB Congeners	PCB-147	Mussel (freshwater)	5	5	100	0.46	0.8	0.63			ug/kg
PCB Congeners	PCB-147	Northern pike	1	1	100	70	70				ug/kg
PCB Congeners	PCB-147	Other forage fish (no mummichog)	10	10	100	4.7	24	13			ug/kg
PCB Congeners	PCB-147	Smallmouth bass	3	3	100	21	49	36			ug/kg
PCB Congeners	PCB-147	White catfish	19	19	100	18	210	87			ug/kg
PCB Congeners	PCB-147	White perch	22	22	100	7.3	280	78			ug/kg
PCB Congeners	PCB-147	White sucker	5	5	100	18	120	59			ug/kg
PCB Congeners	PCB-147	Worms (all)	19	19	100	0.98	17	5.2			ug/kg
PCB Congeners	PCB-147	Worms (estuarine sp.)	5	5	100	0.98	3.8	1.9			ug/kg
PCB Congeners	PCB-147	Worms (freshwater sp.)	14	14	100	2.3	17	6.4			ug/kg
PCB Congeners	PCB-148	American eel (all)	21	21	100	0.039	1	0.4			ug/kg
PCB Congeners	PCB-148	Blue crab	24	24	100	0.092	0.32	0.19			ug/kg
PCB Congeners	PCB-148	Brown bullhead	6	6	100	0.046	0.59	0.26			ug/kg
PCB Congeners	PCB-148	Carp	12	12	100	0.11	1.6	0.81			ug/kg
PCB Congeners	PCB-148	Channel catfish	11	11	100	0.074	0.64	0.33			ug/kg
PCB Congeners	PCB-148	Fish (all)	131	131	100	0.026	1.8	0.47			ug/kg
PCB Congeners	PCB-148	Fish (≤ 11 cm)	23	23	100	0.047	0.33	0.15			ug/kg
PCB Congeners	PCB-148	Fish (≤ 13 cm)	26	26	100	0.047	0.33	0.14			ug/kg
PCB Congeners	PCB-148	Fish (≤ 18 cm)	41	41	100	0.026	1.5	0.32			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-148	Fish (≤ 20 cm)	43	43	100	0.026	1.5	0.34			ug/kg
PCB Congeners	PCB-148	Largemouth bass	3	3	100	0.32	0.54	0.4			ug/kg
PCB Congeners	PCB-148	Mummichog	18	18	100	0.079	0.33	0.16			ug/kg
PCB Congeners	PCB-148	Mussel (estuarine)	3	2	66.7	0.0014	0.003	0.0022	0.00031	0.00031	ug/kg
PCB Congeners	PCB-148	Mussel (freshwater)	5	4	80	0.0016	0.0029	0.0021	0.00024	0.00024	ug/kg
PCB Congeners	PCB-148	Northern pike	1	1	100	0.55	0.55				ug/kg
PCB Congeners	PCB-148	Other forage fish (no mummichog)	10	10	100	0.026	0.24	0.1			ug/kg
PCB Congeners	PCB-148	Smallmouth bass	3	3	100	0.12	0.41	0.26			ug/kg
PCB Congeners	PCB-148	White catfish	19	19	100	0.11	1.8	0.76			ug/kg
PCB Congeners	PCB-148	White perch	22	22	100	0.055	1.5	0.66			ug/kg
PCB Congeners	PCB-148	White sucker	5	5	100	0.11	1.2	0.54			ug/kg
PCB Congeners	PCB-148	Worms (all)	19	18	94.7	0.0085	0.12	0.029	0.0044	0.0044	ug/kg
PCB Congeners	PCB-148	Worms (estuarine sp.)	5	5	100	0.0085	0.024	0.016			ug/kg
PCB Congeners	PCB-148	Worms (freshwater sp.)	14	13	92.9	0.0094	0.12	0.034	0.0044	0.0044	ug/kg
PCB Congeners	PCB-150	American eel (all)	21	12	57.1	0.0031	0.083	0.021	0.0013	0.0039	ug/kg
PCB Congeners	PCB-150	Blue crab	24	4	16.7	0.0089	0.02	0.013	0.0028	0.0093	ug/kg
PCB Congeners	PCB-150	Brown bullhead	6	6	100	0.026	0.4	0.17			ug/kg
PCB Congeners	PCB-150	Carp	12	12	100	0.039	1.8	0.9			ug/kg
PCB Congeners	PCB-150	Channel catfish	11	11	100	0.058	0.48	0.22			ug/kg
PCB Congeners	PCB-150	Fish (all)	131	122	93.1	0.0031	1.8	0.35	0.0013	0.0039	ug/kg
PCB Congeners	PCB-150	Fish (≤ 11 cm)	23	23	100	0.043	0.26	0.11			ug/kg
PCB Congeners	PCB-150	Fish (≤ 13 cm)	26	26	100	0.043	0.26	0.11			ug/kg
PCB Congeners	PCB-150	Fish (≤ 18 cm)	41	41	100	0.013	1.3	0.27			ug/kg
PCB Congeners	PCB-150	Fish (≤ 20 cm)	43	43	100	0.013	1.3	0.29			ug/kg
PCB Congeners	PCB-150	Largemouth bass	3	3	100	0.23	0.47	0.38			ug/kg
PCB Congeners	PCB-150	Mummichog	18	18	100	0.05	0.26	0.12			ug/kg
PCB Congeners	PCB-150	Mussel (estuarine)	3	2	66.7	0.0013	0.0036	0.0025	0.00019	0.00019	ug/kg
PCB Congeners	PCB-150	Mussel (freshwater)	5	5	100	0.0012	0.003	0.0018			ug/kg
PCB Congeners	PCB-150	Northern pike	1	1	100	0.55	0.55				ug/kg
PCB Congeners	PCB-150	Other forage fish (no mummichog)	10	10	100	0.013	0.23	0.096			ug/kg
PCB Congeners	PCB-150	Smallmouth bass	3	3	100	0.075	0.33	0.2			ug/kg
PCB Congeners	PCB-150	White catfish	19	19	100	0.035	1	0.42			ug/kg
PCB Congeners	PCB-150	White perch	22	22	100	0.03	1.3	0.56			ug/kg
PCB Congeners	PCB-150	White sucker	5	5	100	0.088	1.1	0.49			ug/kg
PCB Congeners	PCB-150	Worms (all)	19	18	94.7	0.011	0.14	0.035	0.0025	0.0025	ug/kg
PCB Congeners	PCB-150	Worms (estuarine sp.)	5	4	80	0.011	0.026	0.019	0.0025	0.0025	ug/kg
PCB Congeners	PCB-150	Worms (freshwater sp.)	14	14	100	0.011	0.14	0.039			ug/kg
PCB Congeners	PCB-152	American eel (all)	21	10	47.6	0.003	0.07	0.017	0.0012	0.0047	ug/kg
PCB Congeners	PCB-152	Blue crab	24	5	20.8	0.0048	0.014	0.0091	0.0023	0.0074	ug/kg
PCB Congeners	PCB-152	Brown bullhead	6	6	100	0.018	0.27	0.12			ug/kg
PCB Congeners	PCB-152	Carp	12	12	100	0.0073	1.1	0.56			ug/kg
PCB Congeners	PCB-152	Channel catfish	11	11	100	0.026	0.27	0.11			ug/kg
PCB Congeners	PCB-152	Fish (all)	131	120	91.6	0.003	1.1	0.22	0.0012	0.0047	ug/kg
PCB Congeners	PCB-152	Fish (≤ 11 cm)	23	23	100	0.006	0.08	0.027			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-152	Fish (≤ 13 cm)	26	26	100	0.006	0.1	0.031			ug/kg
PCB Congeners	PCB-152	Fish (≤ 18 cm)	41	41	100	0.0058	1	0.16			ug/kg
PCB Congeners	PCB-152	Fish (≤ 20 cm)	43	43	100	0.0058	1	0.18			ug/kg
PCB Congeners	PCB-152	Largemouth bass	3	3	100	0.082	0.3	0.17			ug/kg
PCB Congeners	PCB-152	Mummichog	18	18	100	0.006	0.063	0.024			ug/kg
PCB Congeners	PCB-152	Mussel (estuarine)	3	2	66.7	0.00085	0.0026	0.0017	0.00021	0.00021	ug/kg
PCB Congeners	PCB-152	Mussel (freshwater)	5	5	100	0.0013	0.0031	0.002			ug/kg
PCB Congeners	PCB-152	Northern pike	1	1	100	0.28	0.28				ug/kg
PCB Congeners	PCB-152	Other forage fish (no mummichog)	10	10	100	0.0058	0.13	0.047			ug/kg
PCB Congeners	PCB-152	Smallmouth bass	3	3	100	0.024	0.11	0.061			ug/kg
PCB Congeners	PCB-152	White catfish	19	19	100	0.023	0.66	0.29			ug/kg
PCB Congeners	PCB-152	White perch	22	22	100	0.017	1	0.39			ug/kg
PCB Congeners	PCB-152	White sucker	5	5	100	0.04	0.59	0.31			ug/kg
PCB Congeners	PCB-152	Worms (all)	19	14	73.7	0.0065	0.13	0.031	0.0021	0.0036	ug/kg
PCB Congeners	PCB-152	Worms (estuarine sp.)	5	1	20	0.024	0.024		0.0021	0.0036	ug/kg
PCB Congeners	PCB-152	Worms (freshwater sp.)	14	13	92.9	0.0065	0.13	0.032	0.003	0.003	ug/kg
PCB Congeners	PCB-153	American eel (all)	21	21	100	48	780	210			ug/kg
PCB Congeners	PCB-153	Blue crab	24	24	100	17	79	38			ug/kg
PCB Congeners	PCB-153	Brown bullhead	6	6	100	12	100	55			ug/kg
PCB Congeners	PCB-153	Carp	12	12	100	130	490	280			ug/kg
PCB Congeners	PCB-153	Channel catfish	11	11	100	18	250	130			ug/kg
PCB Congeners	PCB-153	Fish (all)	131	131	100	12	790	160			ug/kg
PCB Congeners	PCB-153	Fish (≤ 11 cm)	23	23	100	14	66	36			ug/kg
PCB Congeners	PCB-153	Fish (≤ 13 cm)	26	26	100	14	66	35			ug/kg
PCB Congeners	PCB-153	Fish (≤ 18 cm)	41	41	100	14	480	76			ug/kg
PCB Congeners	PCB-153	Fish (≤ 20 cm)	43	43	100	14	480	81			ug/kg
PCB Congeners	PCB-153	Largemouth bass	3	3	100	110	520	270			ug/kg
PCB Congeners	PCB-153	Mummichog	18	18	100	20	66	39			ug/kg
PCB Congeners	PCB-153	Mussel (estuarine)	3	3	100	0.083	0.44	0.22			ug/kg
PCB Congeners	PCB-153	Mussel (freshwater)	5	5	100	0.37	0.68	0.53			ug/kg
PCB Congeners	PCB-153	Northern pike	1	1	100	160	160				ug/kg
PCB Congeners	PCB-153	Other forage fish (no mummichog)	10	10	100	14	55	28			ug/kg
PCB Congeners	PCB-153	Smallmouth bass	3	3	100	56	140	100			ug/kg
PCB Congeners	PCB-153	White catfish	19	19	100	53	790	280			ug/kg
PCB Congeners	PCB-153	White perch	22	22	100	20	480	160			ug/kg
PCB Congeners	PCB-153	White sucker	5	5	100	48	280	130			ug/kg
PCB Congeners	PCB-153	Worms (all)	19	19	100	2.4	23	6.5			ug/kg
PCB Congeners	PCB-153	Worms (estuarine sp.)	5	5	100	2.4	6.1	3.5			ug/kg
PCB Congeners	PCB-153	Worms (freshwater sp.)	14	14	100	2.7	23	7.6			ug/kg
PCB Congeners	PCB-154	American eel (all)	21	21	100	0.44	7.2	2.4			ug/kg
PCB Congeners	PCB-154	Blue crab	24	24	100	0.51	1.9	1.2			ug/kg
PCB Congeners	PCB-154	Brown bullhead	6	6	100	0.2	2.8	1.3			ug/kg
PCB Congeners	PCB-154	Carp	12	12	100	0.42	8.5	4.3			ug/kg
PCB Congeners	PCB-154	Channel catfish	11	11	100	0.4	3.5	1.8			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-154	Fish (all)	131	131	100	0.16	12	2.8			ug/kg
PCB Congeners	PCB-154	Fish (≤ 11 cm)	23	23	100	0.26	1.9	0.89			ug/kg
PCB Congeners	PCB-154	Fish (≤ 13 cm)	26	26	100	0.26	1.9	0.87			ug/kg
PCB Congeners	PCB-154	Fish (≤ 18 cm)	41	41	100	0.16	8.8	1.9			ug/kg
PCB Congeners	PCB-154	Fish (≤ 20 cm)	43	43	100	0.16	8.8	2			ug/kg
PCB Congeners	PCB-154	Largemouth bass	3	3	100	1.8	4.1	3.1			ug/kg
PCB Congeners	PCB-154	Mummichog	18	18	100	0.51	1.9	1			ug/kg
PCB Congeners	PCB-154	Mussel (estuarine)	3	3	100	0.0047	0.019	0.01			ug/kg
PCB Congeners	PCB-154	Mussel (freshwater)	5	5	100	0.0078	0.015	0.011			ug/kg
PCB Congeners	PCB-154	Northern pike	1	1	100	3.2	3.2				ug/kg
PCB Congeners	PCB-154	Other forage fish (no mummichog)	10	10	100	0.16	1.4	0.58			ug/kg
PCB Congeners	PCB-154	Smallmouth bass	3	3	100	0.79	2.4	1.5			ug/kg
PCB Congeners	PCB-154	White catfish	19	19	100	0.52	12	5.1			ug/kg
PCB Congeners	PCB-154	White perch	22	22	100	0.36	8.8	4			ug/kg
PCB Congeners	PCB-154	White sucker	5	5	100	0.56	6.8	3.1			ug/kg
PCB Congeners	PCB-154	Worms (all)	19	19	100	0.054	0.52	0.15			ug/kg
PCB Congeners	PCB-154	Worms (estuarine sp.)	5	5	100	0.056	0.15	0.091			ug/kg
PCB Congeners	PCB-154	Worms (freshwater sp.)	14	14	100	0.054	0.52	0.17			ug/kg
PCB Congeners	PCB-155	American eel (all)	21	21	100	0.074	3.8	1.1			ug/kg
PCB Congeners	PCB-155	Blue crab	24	24	100	0.15	0.46	0.35			ug/kg
PCB Congeners	PCB-155	Brown bullhead	6	6	100	0.051	0.92	0.43			ug/kg
PCB Congeners	PCB-155	Carp	12	12	100	0.035	5.1	2.2			ug/kg
PCB Congeners	PCB-155	Channel catfish	11	11	100	0.11	1.3	0.61			ug/kg
PCB Congeners	PCB-155	Fish (all)	131	130	99.2	0.035	5.1	0.97	0.0048	0.0048	ug/kg
PCB Congeners	PCB-155	Fish (≤ 11 cm)	23	23	100	0.038	0.76	0.36			ug/kg
PCB Congeners	PCB-155	Fish (≤ 13 cm)	26	26	100	0.038	0.76	0.35			ug/kg
PCB Congeners	PCB-155	Fish (≤ 18 cm)	41	41	100	0.038	1.9	0.54			ug/kg
PCB Congeners	PCB-155	Fish (≤ 20 cm)	43	43	100	0.038	1.9	0.58			ug/kg
PCB Congeners	PCB-155	Largemouth bass	3	2	66.7	0.65	1.4	1	0.0048	0.0048	ug/kg
PCB Congeners	PCB-155	Mummichog	18	18	100	0.18	0.76	0.41			ug/kg
PCB Congeners	PCB-155	Mussel (estuarine)	3	3	100	0.00071	0.0059	0.0029			ug/kg
PCB Congeners	PCB-155	Mussel (freshwater)	5	5	100	0.0011	0.0083	0.0042			ug/kg
PCB Congeners	PCB-155	Northern pike	1	1	100	0.98	0.98				ug/kg
PCB Congeners	PCB-155	Other forage fish (no mummichog)	10	10	100	0.038	0.63	0.23			ug/kg
PCB Congeners	PCB-155	Smallmouth bass	3	3	100	0.26	0.89	0.5			ug/kg
PCB Congeners	PCB-155	White catfish	19	19	100	0.1	5	1.6			ug/kg
PCB Congeners	PCB-155	White perch	22	22	100	0.11	1.9	0.97			ug/kg
PCB Congeners	PCB-155	White sucker	5	5	100	0.08	1.5	0.6			ug/kg
PCB Congeners	PCB-155	Worms (all)	19	18	94.7	0.0075	0.098	0.042	0.0045	0.0045	ug/kg
PCB Congeners	PCB-155	Worms (estuarine sp.)	5	5	100	0.0075	0.021	0.017			ug/kg
PCB Congeners	PCB-155	Worms (freshwater sp.)	14	13	92.9	0.015	0.098	0.052	0.0045	0.0045	ug/kg
PCB Congeners	PCB-156	American eel (all)	21	21	100	4.2	57	15			ug/kg
PCB Congeners	PCB-156	Blue crab	24	24	100	1.5	7.2	3.4			ug/kg
PCB Congeners	PCB-156	Brown bullhead	6	6	100	2	9.5	5.6			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-156	Carp	12	12	100	11	47	25			ug/kg
PCB Congeners	PCB-156	Channel catfish	11	11	100	1.4	22	11			ug/kg
PCB Congeners	PCB-156	Fish (all)	131	131	100	1.3	120	13			ug/kg
PCB Congeners	PCB-156	Fish (≤ 11 cm)	23	23	100	1.3	4.5	2.7			ug/kg
PCB Congeners	PCB-156	Fish (≤ 13 cm)	26	26	100	1.3	4.5	2.7			ug/kg
PCB Congeners	PCB-156	Fish (≤ 18 cm)	41	41	100	1.3	30	5.4			ug/kg
PCB Congeners	PCB-156	Fish (≤ 20 cm)	43	43	100	1.3	30	5.8			ug/kg
PCB Congeners	PCB-156	Largemouth bass	3	3	100	8.2	120	47			ug/kg
PCB Congeners	PCB-156	Mummichog	18	18	100	1.4	4.5	2.8			ug/kg
PCB Congeners	PCB-156	Mussel (estuarine)	3	3	100	0.0035	0.021	0.01			ug/kg
PCB Congeners	PCB-156	Mussel (freshwater)	5	5	100	0.041	0.078	0.057			ug/kg
PCB Congeners	PCB-156	Northern pike	1	1	100	14	14				ug/kg
PCB Congeners	PCB-156	Other forage fish (no mummichog)	10	10	100	1.3	4.1	2.4			ug/kg
PCB Congeners	PCB-156	Smallmouth bass	3	3	100	4.5	10	7.9			ug/kg
PCB Congeners	PCB-156	White catfish	19	19	100	5.3	68	21			ug/kg
PCB Congeners	PCB-156	White perch	22	22	100	1.6	30	11			ug/kg
PCB Congeners	PCB-156	White sucker	5	5	100	4.2	19	9.3			ug/kg
PCB Congeners	PCB-156	Worms (all)	19	19	100	0.12	4.3	0.68			ug/kg
PCB Congeners	PCB-156	Worms (estuarine sp.)	5	5	100	0.12	0.48	0.22			ug/kg
PCB Congeners	PCB-156	Worms (freshwater sp.)	14	14	100	0.28	4.3	0.85			ug/kg
PCB Congeners	PCB-158	American eel (all)	21	21	100	4	44	12			ug/kg
PCB Congeners	PCB-158	Blue crab	24	24	100	1.4	6.1	3.1			ug/kg
PCB Congeners	PCB-158	Brown bullhead	6	6	100	1.5	7.9	4.4			ug/kg
PCB Congeners	PCB-158	Carp	12	12	100	9.4	33	18			ug/kg
PCB Congeners	PCB-158	Channel catfish	11	11	100	1.1	16	8.3			ug/kg
PCB Congeners	PCB-158	Fish (all)	131	131	100	0.91	56	10			ug/kg
PCB Congeners	PCB-158	Fish (≤ 11 cm)	23	23	100	0.94	3.9	2.3			ug/kg
PCB Congeners	PCB-158	Fish (≤ 13 cm)	26	26	100	0.94	3.9	2.3			ug/kg
PCB Congeners	PCB-158	Fish (≤ 18 cm)	41	41	100	0.91	29	4.8			ug/kg
PCB Congeners	PCB-158	Fish (≤ 20 cm)	43	43	100	0.91	29	5.1			ug/kg
PCB Congeners	PCB-158	Largemouth bass	3	3	100	6.5	56	24			ug/kg
PCB Congeners	PCB-158	Mummichog	18	18	100	1.4	3.9	2.5			ug/kg
PCB Congeners	PCB-158	Mussel (estuarine)	3	3	100	0.0029	0.014	0.0073			ug/kg
PCB Congeners	PCB-158	Mussel (freshwater)	5	5	100	0.046	0.081	0.061			ug/kg
PCB Congeners	PCB-158	Northern pike	1	1	100	10	10				ug/kg
PCB Congeners	PCB-158	Other forage fish (no mummichog)	10	10	100	0.91	3.4	1.9			ug/kg
PCB Congeners	PCB-158	Smallmouth bass	3	3	100	3.5	7.5	5.9			ug/kg
PCB Congeners	PCB-158	White catfish	19	19	100	3.9	46	16			ug/kg
PCB Congeners	PCB-158	White perch	22	22	100	1.5	29	9.9			ug/kg
PCB Congeners	PCB-158	White sucker	5	5	100	3.7	16	8.1			ug/kg
PCB Congeners	PCB-158	Worms (all)	19	19	100	0.11	2.9	0.52			ug/kg
PCB Congeners	PCB-158	Worms (estuarine sp.)	5	5	100	0.11	0.44	0.2			ug/kg
PCB Congeners	PCB-158	Worms (freshwater sp.)	14	14	100	0.2	2.9	0.63			ug/kg
PCB Congeners	PCB-159	American eel (all)	21	14	66.7	0.026	2	0.51	0.006	0.011	ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-159	Blue crab	24	3	12.5	0.01	0.022	0.018	0.0051	0.014	ug/kg
PCB Congeners	PCB-159	Brown bullhead	6	5	83.3	0.12	1	0.49	0.017	0.017	ug/kg
PCB Congeners	PCB-159	Carp	12	0	0				0.012	0.059	ug/kg
PCB Congeners	PCB-159	Channel catfish	11	11	100	0.019	0.94	0.15			ug/kg
PCB Congeners	PCB-159	Fish (all)	131	76	58	0.017	3.1	0.43	0.0021	0.059	ug/kg
PCB Congeners	PCB-159	Fish (≤ 11 cm)	23	14	60.9	0.081	0.45	0.21	0.0035	0.0061	ug/kg
PCB Congeners	PCB-159	Fish (≤ 13 cm)	26	14	53.8	0.081	0.45	0.21	0.0035	0.0061	ug/kg
PCB Congeners	PCB-159	Fish (≤ 18 cm)	41	19	46.3	0.081	1.4	0.44	0.0021	0.02	ug/kg
PCB Congeners	PCB-159	Fish (≤ 20 cm)	43	21	48.8	0.081	1.4	0.49	0.0021	0.02	ug/kg
PCB Congeners	PCB-159	Largemouth bass	3	0	0				0.013	0.023	ug/kg
PCB Congeners	PCB-159	Mummichog	18	14	77.8	0.081	0.45	0.21	0.0035	0.0061	ug/kg
PCB Congeners	PCB-159	Mussel (estuarine)	3	0	0				0.00018	0.0004	ug/kg
PCB Congeners	PCB-159	Mussel (freshwater)	5	4	80	0.0041	0.0075	0.0055	0.00052	0.00052	ug/kg
PCB Congeners	PCB-159	Northern pike	1	0	0				0.015	0.015	ug/kg
PCB Congeners	PCB-159	Other forage fish (no mummichog)	10	0	0				0.0021	0.008	ug/kg
PCB Congeners	PCB-159	Smallmouth bass	3	0	0				0.0045	0.018	ug/kg
PCB Congeners	PCB-159	White catfish	19	19	100	0.017	3.1	0.56			ug/kg
PCB Congeners	PCB-159	White perch	22	10	45.5	0.044	1.4	0.76	0.0046	0.02	ug/kg
PCB Congeners	PCB-159	White sucker	5	3	60	0.052	0.15	0.11	0.0027	0.0033	ug/kg
PCB Congeners	PCB-159	Worms (all)	19	4	21.1	0.029	0.1	0.052	0.0042	0.007	ug/kg
PCB Congeners	PCB-159	Worms (estuarine sp.)	5	0	0				0.0042	0.007	ug/kg
PCB Congeners	PCB-159	Worms (freshwater sp.)	14	4	28.6	0.029	0.1	0.052	0.0045	0.0063	ug/kg
PCB Congeners	PCB-160	American eel (all)	21	0	0				0.00082	0.0052	ug/kg
PCB Congeners	PCB-160	Blue crab	24	0	0				0.0028	0.012	ug/kg
PCB Congeners	PCB-160	Brown bullhead	6	0	0				0.0017	0.0037	ug/kg
PCB Congeners	PCB-160	Carp	12	0	0				0.0029	0.011	ug/kg
PCB Congeners	PCB-160	Channel catfish	11	0	0				0.0019	0.0032	ug/kg
PCB Congeners	PCB-160	Fish (all)	131	1	0.8	0.0093	0.0093		0.00037	0.011	ug/kg
PCB Congeners	PCB-160	Fish (≤ 11 cm)	23	1	4.3	0.0093	0.0093		0.00037	0.0016	ug/kg
PCB Congeners	PCB-160	Fish (≤ 13 cm)	26	1	3.8	0.0093	0.0093		0.00037	0.0016	ug/kg
PCB Congeners	PCB-160	Fish (≤ 18 cm)	41	1	2.4	0.0093	0.0093		0.00037	0.0044	ug/kg
PCB Congeners	PCB-160	Fish (≤ 20 cm)	43	1	2.3	0.0093	0.0093		0.00037	0.0044	ug/kg
PCB Congeners	PCB-160	Largemouth bass	3	0	0				0.00096	0.0039	ug/kg
PCB Congeners	PCB-160	Mummichog	18	1	5.6	0.0093	0.0093		0.00045	0.0016	ug/kg
PCB Congeners	PCB-160	Mussel (estuarine)	3	0	0				0.0001	0.00025	ug/kg
PCB Congeners	PCB-160	Mussel (freshwater)	5	0	0				0.00016	0.00023	ug/kg
PCB Congeners	PCB-160	Northern pike	1	0	0				0.001	0.001	ug/kg
PCB Congeners	PCB-160	Other forage fish (no mummichog)	10	0	0				0.00042	0.00078	ug/kg
PCB Congeners	PCB-160	Smallmouth bass	3	0	0				0.00085	0.0012	ug/kg
PCB Congeners	PCB-160	White catfish	19	0	0				0.00063	0.0073	ug/kg
PCB Congeners	PCB-160	White perch	22	0	0				0.00037	0.0044	ug/kg
PCB Congeners	PCB-160	White sucker	5	0	0				0.00084	0.0025	ug/kg
PCB Congeners	PCB-160	Worms (all)	19	0	0				0.0025	0.0062	ug/kg
PCB Congeners	PCB-160	Worms (estuarine sp.)	5	0	0				0.0025	0.0062	ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-160	Worms (freshwater sp.)	14	0	0				0.0026	0.0057	ug/kg
PCB Congeners	PCB-161	American eel (all)	21	0	0				0.00076	0.0047	ug/kg
PCB Congeners	PCB-161	Blue crab	24	0	0				0.0026	0.011	ug/kg
PCB Congeners	PCB-161	Brown bullhead	6	0	0				0.0015	0.0033	ug/kg
PCB Congeners	PCB-161	Carp	12	0	0				0.0025	0.0097	ug/kg
PCB Congeners	PCB-161	Channel catfish	11	0	0				0.0017	0.0029	ug/kg
PCB Congeners	PCB-161	Fish (all)	131	3	2.3	0.0027	0.005	0.0041	0.00034	0.0097	ug/kg
PCB Congeners	PCB-161	Fish (≤ 11 cm)	23	3	13	0.0027	0.005	0.0041	0.00034	0.0014	ug/kg
PCB Congeners	PCB-161	Fish (≤ 13 cm)	26	3	11.5	0.0027	0.005	0.0041	0.00034	0.0014	ug/kg
PCB Congeners	PCB-161	Fish (≤ 18 cm)	41	3	7.3	0.0027	0.005	0.0041	0.00034	0.0041	ug/kg
PCB Congeners	PCB-161	Fish (≤ 20 cm)	43	3	7	0.0027	0.005	0.0041	0.00034	0.0041	ug/kg
PCB Congeners	PCB-161	Largemouth bass	3	0	0				0.00084	0.0033	ug/kg
PCB Congeners	PCB-161	Mummichog	18	3	16.7	0.0027	0.005	0.0041	0.0004	0.0014	ug/kg
PCB Congeners	PCB-161	Mussel (estuarine)	3	0	0				0.0001	0.00025	ug/kg
PCB Congeners	PCB-161	Mussel (freshwater)	5	0	0				0.00016	0.00024	ug/kg
PCB Congeners	PCB-161	Northern pike	1	0	0				0.00091	0.00091	ug/kg
PCB Congeners	PCB-161	Other forage fish (no mummichog)	10	0	0				0.00039	0.00072	ug/kg
PCB Congeners	PCB-161	Smallmouth bass	3	0	0				0.00073	0.001	ug/kg
PCB Congeners	PCB-161	White catfish	19	0	0				0.00056	0.0063	ug/kg
PCB Congeners	PCB-161	White perch	22	0	0				0.00034	0.0041	ug/kg
PCB Congeners	PCB-161	White sucker	5	0	0				0.00073	0.0021	ug/kg
PCB Congeners	PCB-161	Worms (all)	19	0	0				0.0023	0.0053	ug/kg
PCB Congeners	PCB-161	Worms (estuarine sp.)	5	0	0				0.0023	0.0053	ug/kg
PCB Congeners	PCB-161	Worms (freshwater sp.)	14	0	0				0.0023	0.0051	ug/kg
PCB Congeners	PCB-162	American eel (all)	21	21	100	0.043	0.76	0.27			ug/kg
PCB Congeners	PCB-162	Blue crab	24	24	100	0.042	0.21	0.13			ug/kg
PCB Congeners	PCB-162	Brown bullhead	6	6	100	0.075	0.39	0.2			ug/kg
PCB Congeners	PCB-162	Carp	12	12	100	0.35	1.6	0.88			ug/kg
PCB Congeners	PCB-162	Channel catfish	11	11	100	0.06	0.69	0.35			ug/kg
PCB Congeners	PCB-162	Fish (all)	131	130	99.2	0.043	3.4	0.42	0.0031	0.0031	ug/kg
PCB Congeners	PCB-162	Fish (≤ 11 cm)	23	22	95.7	0.049	0.2	0.11	0.0031	0.0031	ug/kg
PCB Congeners	PCB-162	Fish (≤ 13 cm)	26	25	96.2	0.049	0.2	0.11	0.0031	0.0031	ug/kg
PCB Congeners	PCB-162	Fish (≤ 18 cm)	41	40	97.6	0.049	0.83	0.21	0.0031	0.0031	ug/kg
PCB Congeners	PCB-162	Fish (≤ 20 cm)	43	42	97.7	0.049	0.83	0.22	0.0031	0.0031	ug/kg
PCB Congeners	PCB-162	Largemouth bass	3	3	100	0.32	3.4	1.4			ug/kg
PCB Congeners	PCB-162	Mummichog	18	17	94.4	0.054	0.2	0.12	0.0031	0.0031	ug/kg
PCB Congeners	PCB-162	Mussel (estuarine)	3	2	66.7	0.00075	0.002	0.0014	0.00034	0.00034	ug/kg
PCB Congeners	PCB-162	Mussel (freshwater)	5	5	100	0.0018	0.003	0.0023			ug/kg
PCB Congeners	PCB-162	Northern pike	1	1	100	0.58	0.58				ug/kg
PCB Congeners	PCB-162	Other forage fish (no mummichog)	10	10	100	0.049	0.19	0.095			ug/kg
PCB Congeners	PCB-162	Smallmouth bass	3	3	100	0.16	0.39	0.29			ug/kg
PCB Congeners	PCB-162	White catfish	19	19	100	0.16	2	0.69			ug/kg
PCB Congeners	PCB-162	White perch	22	22	100	0.063	0.83	0.43			ug/kg
PCB Congeners	PCB-162	White sucker	5	5	100	0.14	0.74	0.35			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-162	Worms (all)	19	18	94.7	0.0084	0.12	0.028	0.0064	0.0064	ug/kg
PCB Congeners	PCB-162	Worms (estuarine sp.)	5	4	80	0.0084	0.0098	0.0093	0.0064	0.0064	ug/kg
PCB Congeners	PCB-162	Worms (freshwater sp.)	14	14	100	0.0089	0.12	0.034			ug/kg
PCB Congeners	PCB-164	American eel (all)	21	21	100	1.3	13	4.4			ug/kg
PCB Congeners	PCB-164	Blue crab	24	23	95.8	0.044	0.35	0.13	0.0031	0.0031	ug/kg
PCB Congeners	PCB-164	Brown bullhead	6	6	100	0.81	5.2	2.8			ug/kg
PCB Congeners	PCB-164	Carp	12	12	100	3.8	17	9.2			ug/kg
PCB Congeners	PCB-164	Channel catfish	11	11	100	0.6	8	4.1			ug/kg
PCB Congeners	PCB-164	Fish (all)	131	131	100	0.47	23	5			ug/kg
PCB Congeners	PCB-164	Fish (≤ 11 cm)	23	23	100	0.49	2.2	1.2			ug/kg
PCB Congeners	PCB-164	Fish (≤ 13 cm)	26	26	100	0.49	2.2	1.2			ug/kg
PCB Congeners	PCB-164	Fish (≤ 18 cm)	41	41	100	0.47	22	2.9			ug/kg
PCB Congeners	PCB-164	Fish (≤ 20 cm)	43	43	100	0.47	22	3.1			ug/kg
PCB Congeners	PCB-164	Largemouth bass	3	3	100	2.9	23	10			ug/kg
PCB Congeners	PCB-164	Mummichog	18	18	100	0.49	2.2	1.2			ug/kg
PCB Congeners	PCB-164	Mussel (estuarine)	3	3	100	0.0032	0.029	0.014			ug/kg
PCB Congeners	PCB-164	Mussel (freshwater)	5	5	100	0.039	0.074	0.055			ug/kg
PCB Congeners	PCB-164	Northern pike	1	1	100	5.8	5.8				ug/kg
PCB Congeners	PCB-164	Other forage fish (no mummichog)	10	10	100	0.47	2	1			ug/kg
PCB Congeners	PCB-164	Smallmouth bass	3	3	100	1.5	3.7	2.7			ug/kg
PCB Congeners	PCB-164	White catfish	19	19	100	1.8	23	8.5			ug/kg
PCB Congeners	PCB-164	White perch	22	22	100	0.63	22	6.1			ug/kg
PCB Congeners	PCB-164	White sucker	5	5	100	1.8	9.9	4.8			ug/kg
PCB Congeners	PCB-164	Worms (all)	19	19	100	0.023	1.6	0.38			ug/kg
PCB Congeners	PCB-164	Worms (estuarine sp.)	5	5	100	0.023	0.11	0.051			ug/kg
PCB Congeners	PCB-164	Worms (freshwater sp.)	14	14	100	0.18	1.6	0.49			ug/kg
PCB Congeners	PCB-165	American eel (all)	21	21	100	0.022	0.33	0.11			ug/kg
PCB Congeners	PCB-165	Blue crab	24	18	75	0.009	0.034	0.024	0.0031	0.0052	ug/kg
PCB Congeners	PCB-165	Brown bullhead	6	1	16.7	0.026	0.026		0.0016	0.0035	ug/kg
PCB Congeners	PCB-165	Carp	12	11	91.7	0.058	0.2	0.13	0.003	0.003	ug/kg
PCB Congeners	PCB-165	Channel catfish	11	11	100	0.0051	0.11	0.057			ug/kg
PCB Congeners	PCB-165	Fish (all)	131	114	87	0.0044	0.33	0.068	0.00041	0.0066	ug/kg
PCB Congeners	PCB-165	Fish (≤ 11 cm)	23	23	100	0.0086	0.04	0.021			ug/kg
PCB Congeners	PCB-165	Fish (≤ 13 cm)	26	26	100	0.0086	0.04	0.021			ug/kg
PCB Congeners	PCB-165	Fish (≤ 18 cm)	41	36	87.8	0.0086	0.12	0.032	0.00041	0.0044	ug/kg
PCB Congeners	PCB-165	Fish (≤ 20 cm)	43	37	86	0.0086	0.12	0.034	0.00041	0.0044	ug/kg
PCB Congeners	PCB-165	Largemouth bass	3	3	100	0.043	0.086	0.071			ug/kg
PCB Congeners	PCB-165	Mummichog	18	18	100	0.014	0.04	0.023			ug/kg
PCB Congeners	PCB-165	Mussel (estuarine)	3	0	0				0.0001	0.00025	ug/kg
PCB Congeners	PCB-165	Mussel (freshwater)	5	1	20	0.00049	0.00049		0.0002	0.00024	ug/kg
PCB Congeners	PCB-165	Northern pike	1	1	100	0.082	0.082				ug/kg
PCB Congeners	PCB-165	Other forage fish (no mummichog)	10	9	90	0.0086	0.032	0.017	0.00041	0.00041	ug/kg
PCB Congeners	PCB-165	Smallmouth bass	3	3	100	0.027	0.067	0.048			ug/kg
PCB Congeners	PCB-165	White catfish	19	17	89.5	0.0044	0.24	0.067	0.0018	0.0066	ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-165	White perch	22	14	63.6	0.015	0.13	0.073	0.0012	0.0044	ug/kg
PCB Congeners	PCB-165	White sucker	5	5	100	0.026	0.12	0.061			ug/kg
PCB Congeners	PCB-165	Worms (all)	19	1	5.3	0.0059	0.0059		0.0023	0.0055	ug/kg
PCB Congeners	PCB-165	Worms (estuarine sp.)	5	1	20	0.0059	0.0059		0.0024	0.0055	ug/kg
PCB Congeners	PCB-165	Worms (freshwater sp.)	14	0	0				0.0023	0.0054	ug/kg
PCB Congeners	PCB-167	American eel (all)	21	21	100	1.9	25	6.6			ug/kg
PCB Congeners	PCB-167	Blue crab	24	24	100	0.7	2.9	1.4			ug/kg
PCB Congeners	PCB-167	Brown bullhead	6	6	100	0.82	4.1	2.3			ug/kg
PCB Congeners	PCB-167	Carp	12	12	100	4.7	19	10			ug/kg
PCB Congeners	PCB-167	Channel catfish	11	11	100	0.56	8.5	4.3			ug/kg
PCB Congeners	PCB-167	Fish (all)	131	131	100	0.51	38	5.3			ug/kg
PCB Congeners	PCB-167	Fish (≤ 11 cm)	23	23	100	0.51	2	1.2			ug/kg
PCB Congeners	PCB-167	Fish (≤ 13 cm)	26	26	100	0.51	2	1.1			ug/kg
PCB Congeners	PCB-167	Fish (≤ 18 cm)	41	41	100	0.51	11	2.1			ug/kg
PCB Congeners	PCB-167	Fish (≤ 20 cm)	43	43	100	0.51	11	2.3			ug/kg
PCB Congeners	PCB-167	Largemouth bass	3	3	100	3.3	38	16			ug/kg
PCB Congeners	PCB-167	Mummichog	18	18	100	0.64	2	1.2			ug/kg
PCB Congeners	PCB-167	Mussel (estuarine)	3	3	100	0.0026	0.016	0.0079			ug/kg
PCB Congeners	PCB-167	Mussel (freshwater)	5	5	100	0.016	0.029	0.022			ug/kg
PCB Congeners	PCB-167	Northern pike	1	1	100	5.8	5.8				ug/kg
PCB Congeners	PCB-167	Other forage fish (no mummichog)	10	10	100	0.51	1.7	0.96			ug/kg
PCB Congeners	PCB-167	Smallmouth bass	3	3	100	1.9	4.4	3.3			ug/kg
PCB Congeners	PCB-167	White catfish	19	19	100	2.1	29	8.7			ug/kg
PCB Congeners	PCB-167	White perch	22	22	100	0.6	11	4.3			ug/kg
PCB Congeners	PCB-167	White sucker	5	5	100	1.6	8	3.7			ug/kg
PCB Congeners	PCB-167	Worms (all)	19	19	100	0.059	1.2	0.22			ug/kg
PCB Congeners	PCB-167	Worms (estuarine sp.)	5	5	100	0.059	0.17	0.092			ug/kg
PCB Congeners	PCB-167	Worms (freshwater sp.)	14	14	100	0.096	1.2	0.27			ug/kg
PCB Congeners	PCB-169	American eel (all)	21	0	0				0.0068	0.17	ug/kg
PCB Congeners	PCB-169	Blue crab	24	0	0				0.0068	0.022	ug/kg
PCB Congeners	PCB-169	Brown bullhead	6	0	0				0.01	0.064	ug/kg
PCB Congeners	PCB-169	Carp	12	0	0				0.02	0.084	ug/kg
PCB Congeners	PCB-169	Channel catfish	11	0	0				0.007	0.017	ug/kg
PCB Congeners	PCB-169	Fish (all)	131	0	0				0.0032	0.17	ug/kg
PCB Congeners	PCB-169	Fish (≤ 11 cm)	23	0	0				0.0041	0.0097	ug/kg
PCB Congeners	PCB-169	Fish (≤ 13 cm)	26	0	0				0.0041	0.011	ug/kg
PCB Congeners	PCB-169	Fish (≤ 18 cm)	41	0	0				0.0032	0.035	ug/kg
PCB Congeners	PCB-169	Fish (≤ 20 cm)	43	0	0				0.0032	0.035	ug/kg
PCB Congeners	PCB-169	Largemouth bass	3	0	0				0.018	0.033	ug/kg
PCB Congeners	PCB-169	Mummichog	18	0	0				0.0041	0.0097	ug/kg
PCB Congeners	PCB-169	Mussel (estuarine)	3	0	0				0.0002	0.00043	ug/kg
PCB Congeners	PCB-169	Mussel (freshwater)	5	2	40	0.00077	0.00091	0.00084	0.0005	0.00059	ug/kg
PCB Congeners	PCB-169	Northern pike	1	0	0				0.022	0.022	ug/kg
PCB Congeners	PCB-169	Other forage fish (no mummichog)	10	0	0				0.0032	0.013	ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-169	Smallmouth bass	3	0	0				0.0066	0.025	ug/kg
PCB Congeners	PCB-169	White catfish	19	0	0				0.0032	0.028	ug/kg
PCB Congeners	PCB-169	White perch	22	0	0				0.0061	0.036	ug/kg
PCB Congeners	PCB-169	White sucker	5	0	0				0.004	0.016	ug/kg
PCB Congeners	PCB-169	Worms (all)	19	0	0				0.0064	0.011	ug/kg
PCB Congeners	PCB-169	Worms (estuarine sp.)	5	0	0				0.0064	0.011	ug/kg
PCB Congeners	PCB-169	Worms (freshwater sp.)	14	0	0				0.0064	0.011	ug/kg
PCB Congeners	PCB-170	American eel (all)	21	21	100	8.2	240	44			ug/kg
PCB Congeners	PCB-170	Blue crab	24	24	100	1.3	9.5	3.7			ug/kg
PCB Congeners	PCB-170	Brown bullhead	6	6	100	4.2	37	18			ug/kg
PCB Congeners	PCB-170	Carp	12	12	100	24	140	70			ug/kg
PCB Congeners	PCB-170	Channel catfish	11	11	100	3.5	57	29			ug/kg
PCB Congeners	PCB-170	Fish (all)	131	131	100	2.9	240	38			ug/kg
PCB Congeners	PCB-170	Fish (≤ 11 cm)	23	23	100	3	15	7.5			ug/kg
PCB Congeners	PCB-170	Fish (≤ 13 cm)	26	26	100	3	15	7.3			ug/kg
PCB Congeners	PCB-170	Fish (≤ 18 cm)	41	41	100	2.9	170	19			ug/kg
PCB Congeners	PCB-170	Fish (≤ 20 cm)	43	43	100	2.9	170	20			ug/kg
PCB Congeners	PCB-170	Largemouth bass	3	3	100	26	66	44			ug/kg
PCB Congeners	PCB-170	Mummichog	18	18	100	3.9	15	8.2			ug/kg
PCB Congeners	PCB-170	Mussel (estuarine)	3	3	100	0.0059	0.032	0.016			ug/kg
PCB Congeners	PCB-170	Mussel (freshwater)	5	5	100	0.066	0.12	0.092			ug/kg
PCB Congeners	PCB-170	Northern pike	1	1	100	34	34				ug/kg
PCB Congeners	PCB-170	Other forage fish (no mummichog)	10	10	100	2.9	11	5.5			ug/kg
PCB Congeners	PCB-170	Smallmouth bass	3	3	100	11	32	23			ug/kg
PCB Congeners	PCB-170	White catfish	19	19	100	8.5	220	70			ug/kg
PCB Congeners	PCB-170	White perch	22	22	100	4	170	41			ug/kg
PCB Congeners	PCB-170	White sucker	5	5	100	8.7	75	32			ug/kg
PCB Congeners	PCB-170	Worms (all)	19	19	100	0.34	3.4	1.1			ug/kg
PCB Congeners	PCB-170	Worms (estuarine sp.)	5	5	100	0.34	0.96	0.6			ug/kg
PCB Congeners	PCB-170	Worms (freshwater sp.)	14	14	100	0.51	3.4	1.3			ug/kg
PCB Congeners	PCB-171	American eel (all)	21	21	100	1.9	52	9.8			ug/kg
PCB Congeners	PCB-171	Blue crab	24	24	100	0.9	5	1.9			ug/kg
PCB Congeners	PCB-171	Brown bullhead	6	6	100	1.1	9	4.3			ug/kg
PCB Congeners	PCB-171	Carp	12	12	100	6.2	27	15			ug/kg
PCB Congeners	PCB-171	Channel catfish	11	11	100	0.82	11	6.1			ug/kg
PCB Congeners	PCB-171	Fish (all)	131	131	100	0.58	52	8.5			ug/kg
PCB Congeners	PCB-171	Fish (≤ 11 cm)	23	23	100	0.72	3.7	1.8			ug/kg
PCB Congeners	PCB-171	Fish (≤ 13 cm)	26	26	100	0.72	3.7	1.8			ug/kg
PCB Congeners	PCB-171	Fish (≤ 18 cm)	41	41	100	0.58	41	4.7			ug/kg
PCB Congeners	PCB-171	Fish (≤ 20 cm)	43	43	100	0.58	41	5			ug/kg
PCB Congeners	PCB-171	Largemouth bass	3	3	100	5	20	11			ug/kg
PCB Congeners	PCB-171	Mummichog	18	18	100	0.89	3.7	2			ug/kg
PCB Congeners	PCB-171	Mussel (estuarine)	3	3	100	0.0019	0.01	0.0052			ug/kg
PCB Congeners	PCB-171	Mussel (freshwater)	5	5	100	0.022	0.05	0.036			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-171	Northern pike	1	1	100	7.6	7.6				ug/kg
PCB Congeners	PCB-171	Other forage fish (no mummichog)	10	10	100	0.58	2.5	1.3			ug/kg
PCB Congeners	PCB-171	Smallmouth bass	3	3	100	2.5	6.8	4.9			ug/kg
PCB Congeners	PCB-171	White catfish	19	19	100	2.3	44	15			ug/kg
PCB Congeners	PCB-171	White perch	22	22	100	0.96	41	10			ug/kg
PCB Congeners	PCB-171	White sucker	5	5	100	2.1	17	7.7			ug/kg
PCB Congeners	PCB-171	Worms (all)	19	19	100	0.096	0.94	0.31			ug/kg
PCB Congeners	PCB-171	Worms (estuarine sp.)	5	5	100	0.096	0.26	0.17			ug/kg
PCB Congeners	PCB-171	Worms (freshwater sp.)	14	14	100	0.14	0.94	0.36			ug/kg
PCB Congeners	PCB-172	American eel (all)	21	21	100	1.4	42	7.6			ug/kg
PCB Congeners	PCB-172	Blue crab	24	24	100	0.43	3.6	1.1			ug/kg
PCB Congeners	PCB-172	Brown bullhead	6	6	100	0.8	6.3	3			ug/kg
PCB Congeners	PCB-172	Carp	12	12	100	3.6	19	9.8			ug/kg
PCB Congeners	PCB-172	Channel catfish	11	11	100	0.57	8	4.2			ug/kg
PCB Congeners	PCB-172	Fish (all)	131	131	100	0.43	42	5.8			ug/kg
PCB Congeners	PCB-172	Fish (≤ 11 cm)	23	23	100	0.47	2.3	1.1			ug/kg
PCB Congeners	PCB-172	Fish (≤ 13 cm)	26	26	100	0.47	2.3	1.1			ug/kg
PCB Congeners	PCB-172	Fish (≤ 18 cm)	41	41	100	0.43	23	2.8			ug/kg
PCB Congeners	PCB-172	Fish (≤ 20 cm)	43	43	100	0.43	23	3			ug/kg
PCB Congeners	PCB-172	Largemouth bass	3	3	100	3.6	11	6.7			ug/kg
PCB Congeners	PCB-172	Mummichog	18	18	100	0.56	2.3	1.2			ug/kg
PCB Congeners	PCB-172	Mussel (estuarine)	3	3	100	0.0017	0.0085	0.0045			ug/kg
PCB Congeners	PCB-172	Mussel (freshwater)	5	5	100	0.017	0.035	0.027			ug/kg
PCB Congeners	PCB-172	Northern pike	1	1	100	5	5				ug/kg
PCB Congeners	PCB-172	Other forage fish (no mummichog)	10	10	100	0.43	1.7	0.84			ug/kg
PCB Congeners	PCB-172	Smallmouth bass	3	3	100	1.7	5.1	3.5			ug/kg
PCB Congeners	PCB-172	White catfish	19	19	100	1.3	32	10			ug/kg
PCB Congeners	PCB-172	White perch	22	22	100	0.61	23	6.1			ug/kg
PCB Congeners	PCB-172	White sucker	5	5	100	1.3	11	4.8			ug/kg
PCB Congeners	PCB-172	Worms (all)	19	19	100	0.05	0.43	0.15			ug/kg
PCB Congeners	PCB-172	Worms (estuarine sp.)	5	5	100	0.05	0.13	0.089			ug/kg
PCB Congeners	PCB-172	Worms (freshwater sp.)	14	14	100	0.068	0.43	0.18			ug/kg
PCB Congeners	PCB-174	American eel (all)	21	21	100	2.4	42	9.5			ug/kg
PCB Congeners	PCB-174	Blue crab	24	24	100	0.048	1.6	0.33			ug/kg
PCB Congeners	PCB-174	Brown bullhead	6	6	100	3.3	28	13			ug/kg
PCB Congeners	PCB-174	Carp	12	12	100	12	75	41			ug/kg
PCB Congeners	PCB-174	Channel catfish	11	11	100	2.2	31	15			ug/kg
PCB Congeners	PCB-174	Fish (all)	131	131	100	1.2	120	19			ug/kg
PCB Congeners	PCB-174	Fish (≤ 11 cm)	23	23	100	1.8	11	4.9			ug/kg
PCB Congeners	PCB-174	Fish (≤ 13 cm)	26	26	100	1.8	11	4.9			ug/kg
PCB Congeners	PCB-174	Fish (≤ 18 cm)	41	41	100	1.2	120	13			ug/kg
PCB Congeners	PCB-174	Fish (≤ 20 cm)	43	43	100	1.2	120	13			ug/kg
PCB Congeners	PCB-174	Largemouth bass	3	3	100	11	37	22			ug/kg
PCB Congeners	PCB-174	Mummichog	18	18	100	1.8	11	5.3			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-174	Mussel (estuarine)	3	3	100	0.0068	0.018	0.012			ug/kg
PCB Congeners	PCB-174	Mussel (freshwater)	5	5	100	0.12	0.22	0.18			ug/kg
PCB Congeners	PCB-174	Northern pike	1	1	100	19	19				ug/kg
PCB Congeners	PCB-174	Other forage fish (no mummichog)	10	10	100	1.2	6.6	3.9			ug/kg
PCB Congeners	PCB-174	Smallmouth bass	3	3	100	4.5	17	12			ug/kg
PCB Congeners	PCB-174	White catfish	19	19	100	5.3	83	35			ug/kg
PCB Congeners	PCB-174	White perch	22	22	100	1.4	120	26			ug/kg
PCB Congeners	PCB-174	White sucker	5	5	100	3.6	41	20			ug/kg
PCB Congeners	PCB-174	Worms (all)	19	19	100	0.061	2.8	0.84			ug/kg
PCB Congeners	PCB-174	Worms (estuarine sp.)	5	5	100	0.061	0.29	0.16			ug/kg
PCB Congeners	PCB-174	Worms (freshwater sp.)	14	14	100	0.42	2.8	1.1			ug/kg
PCB Congeners	PCB-175	American eel (all)	21	21	100	0.27	8.5	1.7			ug/kg
PCB Congeners	PCB-175	Blue crab	24	24	100	0.2	0.95	0.37			ug/kg
PCB Congeners	PCB-175	Brown bullhead	6	6	100	0.21	1.7	0.81			ug/kg
PCB Congeners	PCB-175	Carp	12	12	100	1	5	2.7			ug/kg
PCB Congeners	PCB-175	Channel catfish	11	11	100	0.15	1.9	1			ug/kg
PCB Congeners	PCB-175	Fish (all)	131	131	100	0.099	8.5	1.5			ug/kg
PCB Congeners	PCB-175	Fish (≤ 11 cm)	23	23	100	0.15	0.73	0.35			ug/kg
PCB Congeners	PCB-175	Fish (≤ 13 cm)	26	26	100	0.15	0.73	0.34			ug/kg
PCB Congeners	PCB-175	Fish (≤ 18 cm)	41	41	100	0.099	7.3	0.9			ug/kg
PCB Congeners	PCB-175	Fish (≤ 20 cm)	43	43	100	0.099	7.3	0.94			ug/kg
PCB Congeners	PCB-175	Largemouth bass	3	3	100	0.88	2.4	1.6			ug/kg
PCB Congeners	PCB-175	Mummichog	18	18	100	0.18	0.73	0.39			ug/kg
PCB Congeners	PCB-175	Mussel (estuarine)	3	0	0				0.00032	0.0005	ug/kg
PCB Congeners	PCB-175	Mussel (freshwater)	5	5	100	0.0037	0.0079	0.0058			ug/kg
PCB Congeners	PCB-175	Northern pike	1	1	100	1.5	1.5				ug/kg
PCB Congeners	PCB-175	Other forage fish (no mummichog)	10	10	100	0.099	0.51	0.25			ug/kg
PCB Congeners	PCB-175	Smallmouth bass	3	3	100	0.41	1.4	0.93			ug/kg
PCB Congeners	PCB-175	White catfish	19	19	100	0.4	7.8	2.7			ug/kg
PCB Congeners	PCB-175	White perch	22	22	100	0.16	7.3	1.9			ug/kg
PCB Congeners	PCB-175	White sucker	5	5	100	0.3	2.9	1.3			ug/kg
PCB Congeners	PCB-175	Worms (all)	19	19	100	0.022	0.14	0.051			ug/kg
PCB Congeners	PCB-175	Worms (estuarine sp.)	5	5	100	0.022	0.053	0.034			ug/kg
PCB Congeners	PCB-175	Worms (freshwater sp.)	14	14	100	0.023	0.14	0.057			ug/kg
PCB Congeners	PCB-176	American eel (all)	21	21	100	0.079	2.1	0.47			ug/kg
PCB Congeners	PCB-176	Blue crab	24	24	100	0.011	0.24	0.062			ug/kg
PCB Congeners	PCB-176	Brown bullhead	6	6	100	0.3	3	1.4			ug/kg
PCB Congeners	PCB-176	Carp	12	12	100	2.1	15	8.2			ug/kg
PCB Congeners	PCB-176	Channel catfish	11	11	100	0.33	4.4	2			ug/kg
PCB Congeners	PCB-176	Fish (all)	131	131	100	0.079	21	2.7			ug/kg
PCB Congeners	PCB-176	Fish (≤ 11 cm)	23	23	100	0.27	1.6	0.73			ug/kg
PCB Congeners	PCB-176	Fish (≤ 13 cm)	26	26	100	0.27	1.6	0.73			ug/kg
PCB Congeners	PCB-176	Fish (≤ 18 cm)	41	41	100	0.12	21	2.1			ug/kg
PCB Congeners	PCB-176	Fish (≤ 20 cm)	43	43	100	0.12	21	2.2			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-176	Largemouth bass	3	3	100	1.6	4.5	3.1			ug/kg
PCB Congeners	PCB-176	Mummichog	18	18	100	0.27	1.6	0.78			ug/kg
PCB Congeners	PCB-176	Mussel (estuarine)	3	3	100	0.00072	0.0043	0.0021			ug/kg
PCB Congeners	PCB-176	Mussel (freshwater)	5	5	100	0.011	0.025	0.019			ug/kg
PCB Congeners	PCB-176	Northern pike	1	1	100	3.5	3.5				ug/kg
PCB Congeners	PCB-176	Other forage fish (no mummichog)	10	10	100	0.12	1.3	0.64			ug/kg
PCB Congeners	PCB-176	Smallmouth bass	3	3	100	0.63	3.1	2			ug/kg
PCB Congeners	PCB-176	White catfish	19	19	100	0.43	8.6	3.5			ug/kg
PCB Congeners	PCB-176	White perch	22	22	100	0.2	21	4.3			ug/kg
PCB Congeners	PCB-176	White sucker	5	5	100	0.98	10	4.1			ug/kg
PCB Congeners	PCB-176	Worms (all)	19	19	100	0.047	0.66	0.23			ug/kg
PCB Congeners	PCB-176	Worms (estuarine sp.)	5	5	100	0.047	0.17	0.096			ug/kg
PCB Congeners	PCB-176	Worms (freshwater sp.)	14	14	100	0.13	0.66	0.27			ug/kg
PCB Congeners	PCB-177	American eel (all)	21	21	100	4.9	120	21			ug/kg
PCB Congeners	PCB-177	Blue crab	24	24	100	0.66	2.6	1.3			ug/kg
PCB Congeners	PCB-177	Brown bullhead	6	6	100	2.3	20	9.1			ug/kg
PCB Congeners	PCB-177	Carp	12	12	100	10	53	29			ug/kg
PCB Congeners	PCB-177	Channel catfish	11	11	100	1.5	21	9.3			ug/kg
PCB Congeners	PCB-177	Fish (all)	131	131	100	0.94	120	15			ug/kg
PCB Congeners	PCB-177	Fish (≤ 11 cm)	23	23	100	1.5	7.9	3.8			ug/kg
PCB Congeners	PCB-177	Fish (≤ 13 cm)	26	26	100	1.5	7.9	3.7			ug/kg
PCB Congeners	PCB-177	Fish (≤ 18 cm)	41	41	100	0.97	59	7.4			ug/kg
PCB Congeners	PCB-177	Fish (≤ 20 cm)	43	43	100	0.97	59	7.7			ug/kg
PCB Congeners	PCB-177	Largemouth bass	3	3	100	7.1	24	16			ug/kg
PCB Congeners	PCB-177	Mummichog	18	18	100	1.9	7.9	4.2			ug/kg
PCB Congeners	PCB-177	Mussel (estuarine)	3	3	100	0.01	0.078	0.038			ug/kg
PCB Congeners	PCB-177	Mussel (freshwater)	5	5	100	0.063	0.12	0.092			ug/kg
PCB Congeners	PCB-177	Northern pike	1	1	100	12	12				ug/kg
PCB Congeners	PCB-177	Other forage fish (no mummichog)	10	10	100	0.97	5.1	2.6			ug/kg
PCB Congeners	PCB-177	Smallmouth bass	3	3	100	3.6	12	8.4			ug/kg
PCB Congeners	PCB-177	White catfish	19	19	100	4.5	78	26			ug/kg
PCB Congeners	PCB-177	White perch	22	22	100	0.94	59	13			ug/kg
PCB Congeners	PCB-177	White sucker	5	5	100	3	36	16			ug/kg
PCB Congeners	PCB-177	Worms (all)	19	19	100	0.18	2	0.71			ug/kg
PCB Congeners	PCB-177	Worms (estuarine sp.)	5	5	100	0.18	0.48	0.32			ug/kg
PCB Congeners	PCB-177	Worms (freshwater sp.)	14	14	100	0.37	2	0.85			ug/kg
PCB Congeners	PCB-178	American eel (all)	21	21	100	2.8	73	13			ug/kg
PCB Congeners	PCB-178	Blue crab	24	24	100	1	5.6	2.1			ug/kg
PCB Congeners	PCB-178	Brown bullhead	6	6	100	0.84	7.6	3.4			ug/kg
PCB Congeners	PCB-178	Carp	12	12	100	5.1	29	14			ug/kg
PCB Congeners	PCB-178	Channel catfish	11	11	100	0.95	12	6			ug/kg
PCB Congeners	PCB-178	Fish (all)	131	131	100	0.61	73	8.9			ug/kg
PCB Congeners	PCB-178	Fish (≤ 11 cm)	23	23	100	0.66	3.8	1.8			ug/kg
PCB Congeners	PCB-178	Fish (≤ 13 cm)	26	26	100	0.66	3.8	1.7			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-178	Fish (≤ 18 cm)	41	41	100	0.61	33	4.5			ug/kg
PCB Congeners	PCB-178	Fish (≤ 20 cm)	43	43	100	0.61	33	4.8			ug/kg
PCB Congeners	PCB-178	Largemouth bass	3	3	100	4.8	13	9.2			ug/kg
PCB Congeners	PCB-178	Mummichog	18	18	100	0.98	3.8	2			ug/kg
PCB Congeners	PCB-178	Mussel (estuarine)	3	3	100	0.0082	0.033	0.018			ug/kg
PCB Congeners	PCB-178	Mussel (freshwater)	5	5	100	0.026	0.043	0.035			ug/kg
PCB Congeners	PCB-178	Northern pike	1	1	100	8.7	8.7				ug/kg
PCB Congeners	PCB-178	Other forage fish (no mummichog)	10	10	100	0.61	2.6	1.2			ug/kg
PCB Congeners	PCB-178	Smallmouth bass	3	3	100	2.3	8.1	5.2			ug/kg
PCB Congeners	PCB-178	White catfish	19	19	100	1.9	56	15			ug/kg
PCB Congeners	PCB-178	White perch	22	22	100	0.9	33	9.6			ug/kg
PCB Congeners	PCB-178	White sucker	5	5	100	1.8	17	7.4			ug/kg
PCB Congeners	PCB-178	Worms (all)	19	19	100	0.1	0.99	0.33			ug/kg
PCB Congeners	PCB-178	Worms (estuarine sp.)	5	5	100	0.1	0.23	0.16			ug/kg
PCB Congeners	PCB-178	Worms (freshwater sp.)	14	14	100	0.18	0.99	0.39			ug/kg
PCB Congeners	PCB-179	American eel (all)	21	21	100	0.71	10	3			ug/kg
PCB Congeners	PCB-179	Blue crab	24	24	100	0.012	0.53	0.095			ug/kg
PCB Congeners	PCB-179	Brown bullhead	6	6	100	1	9.6	4.5			ug/kg
PCB Congeners	PCB-179	Carp	12	12	100	4.3	39	22			ug/kg
PCB Congeners	PCB-179	Channel catfish	11	11	100	1	14	5.8			ug/kg
PCB Congeners	PCB-179	Fish (all)	131	131	100	0.44	63	8.6			ug/kg
PCB Congeners	PCB-179	Fish (≤ 11 cm)	23	23	100	0.44	3.8	1.7			ug/kg
PCB Congeners	PCB-179	Fish (≤ 13 cm)	26	26	100	0.44	3.8	1.7			ug/kg
PCB Congeners	PCB-179	Fish (≤ 18 cm)	41	41	100	0.44	63	6.5			ug/kg
PCB Congeners	PCB-179	Fish (≤ 20 cm)	43	43	100	0.44	63	7			ug/kg
PCB Congeners	PCB-179	Largemouth bass	3	3	100	3	8.5	6.3			ug/kg
PCB Congeners	PCB-179	Mummichog	18	18	100	0.44	3.8	1.6			ug/kg
PCB Congeners	PCB-179	Mussel (estuarine)	3	3	100	0.0078	0.06	0.028			ug/kg
PCB Congeners	PCB-179	Mussel (freshwater)	5	5	100	0.049	0.099	0.077			ug/kg
PCB Congeners	PCB-179	Northern pike	1	1	100	10	10				ug/kg
PCB Congeners	PCB-179	Other forage fish (no mummichog)	10	10	100	0.5	4.3	2			ug/kg
PCB Congeners	PCB-179	Smallmouth bass	3	3	100	1.1	8.2	4.9			ug/kg
PCB Congeners	PCB-179	White catfish	19	19	100	1.8	39	13			ug/kg
PCB Congeners	PCB-179	White perch	22	22	100	0.75	63	14			ug/kg
PCB Congeners	PCB-179	White sucker	5	5	100	2.3	24	10			ug/kg
PCB Congeners	PCB-179	Worms (all)	19	19	100	0.099	2.3	0.69			ug/kg
PCB Congeners	PCB-179	Worms (estuarine sp.)	5	5	100	0.099	0.34	0.19			ug/kg
PCB Congeners	PCB-179	Worms (freshwater sp.)	14	14	100	0.41	2.3	0.87			ug/kg
PCB Congeners	PCB-180	American eel (all)	21	21	100	23	850	150			ug/kg
PCB Congeners	PCB-180	Blue crab	24	24	100	12	81	27			ug/kg
PCB Congeners	PCB-180	Brown bullhead	6	6	100	14	120	58			ug/kg
PCB Congeners	PCB-180	Carp	12	12	100	70	360	190			ug/kg
PCB Congeners	PCB-180	Channel catfish	11	11	100	11	170	87			ug/kg
PCB Congeners	PCB-180	Fish (all)	131	131	100	9	850	120			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-180	Fish (≤ 11 cm)	23	23	100	9.4	47	23			ug/kg
PCB Congeners	PCB-180	Fish (≤ 13 cm)	26	26	100	9.4	47	23			ug/kg
PCB Congeners	PCB-180	Fish (≤ 18 cm)	41	41	100	9	460	58			ug/kg
PCB Congeners	PCB-180	Fish (≤ 20 cm)	43	43	100	9	460	62			ug/kg
PCB Congeners	PCB-180	Largemouth bass	3	3	100	76	160	120			ug/kg
PCB Congeners	PCB-180	Mummichog	18	18	100	12	47	26			ug/kg
PCB Congeners	PCB-180	Mussel (estuarine)	3	3	100	0.016	0.094	0.048			ug/kg
PCB Congeners	PCB-180	Mussel (freshwater)	5	5	100	0.17	0.33	0.25			ug/kg
PCB Congeners	PCB-180	Northern pike	1	1	100	110	110				ug/kg
PCB Congeners	PCB-180	Other forage fish (no mummichog)	10	10	100	9	33	17			ug/kg
PCB Congeners	PCB-180	Smallmouth bass	3	3	100	35	100	71			ug/kg
PCB Congeners	PCB-180	White catfish	19	19	100	25	660	210			ug/kg
PCB Congeners	PCB-180	White perch	22	22	100	13	460	130			ug/kg
PCB Congeners	PCB-180	White sucker	5	5	100	24	220	95			ug/kg
PCB Congeners	PCB-180	Worms (all)	19	19	100	0.33	5	1.5			ug/kg
PCB Congeners	PCB-180	Worms (estuarine sp.)	5	5	100	0.98	2.6	1.7			ug/kg
PCB Congeners	PCB-180	Worms (freshwater sp.)	14	14	100	0.33	5	1.4			ug/kg
PCB Congeners	PCB-181	American eel (all)	21	21	100	0.084	1.7	0.36			ug/kg
PCB Congeners	PCB-181	Blue crab	24	24	100	0.026	0.15	0.067			ug/kg
PCB Congeners	PCB-181	Brown bullhead	6	6	100	0.05	0.29	0.16			ug/kg
PCB Congeners	PCB-181	Carp	12	12	100	0.23	0.92	0.5			ug/kg
PCB Congeners	PCB-181	Channel catfish	11	11	100	0.032	0.39	0.2			ug/kg
PCB Congeners	PCB-181	Fish (all)	131	131	100	0.022	1.8	0.29			ug/kg
PCB Congeners	PCB-181	Fish (≤ 11 cm)	23	23	100	0.025	0.13	0.067			ug/kg
PCB Congeners	PCB-181	Fish (≤ 13 cm)	26	26	100	0.025	0.13	0.065			ug/kg
PCB Congeners	PCB-181	Fish (≤ 18 cm)	41	41	100	0.022	0.76	0.14			ug/kg
PCB Congeners	PCB-181	Fish (≤ 20 cm)	43	43	100	0.022	0.76	0.15			ug/kg
PCB Congeners	PCB-181	Largemouth bass	3	3	100	0.16	1.8	0.75			ug/kg
PCB Congeners	PCB-181	Mummichog	18	18	100	0.039	0.13	0.074			ug/kg
PCB Congeners	PCB-181	Mussel (estuarine)	3	0	0				0.0003	0.00046	ug/kg
PCB Congeners	PCB-181	Mussel (freshwater)	5	3	60	0.00092	0.0018	0.0013	0.00038	0.00055	ug/kg
PCB Congeners	PCB-181	Northern pike	1	1	100	0.28	0.28				ug/kg
PCB Congeners	PCB-181	Other forage fish (no mummichog)	10	10	100	0.022	0.09	0.046			ug/kg
PCB Congeners	PCB-181	Smallmouth bass	3	3	100	0.1	0.27	0.19			ug/kg
PCB Congeners	PCB-181	White catfish	19	19	100	0.08	1.4	0.48			ug/kg
PCB Congeners	PCB-181	White perch	22	22	100	0.037	0.76	0.28			ug/kg
PCB Congeners	PCB-181	White sucker	5	5	100	0.075	0.54	0.24			ug/kg
PCB Congeners	PCB-181	Worms (all)	19	7	36.8	0.0087	0.066	0.022	0.005	0.0082	ug/kg
PCB Congeners	PCB-181	Worms (estuarine sp.)	5	0	0				0.0051	0.0082	ug/kg
PCB Congeners	PCB-181	Worms (freshwater sp.)	14	7	50	0.0087	0.066	0.022	0.005	0.0077	ug/kg
PCB Congeners	PCB-182	American eel (all)	21	20	95.2	0.037	1.6	0.33	0.008	0.008	ug/kg
PCB Congeners	PCB-182	Blue crab	24	24	100	0.023	0.15	0.075			ug/kg
PCB Congeners	PCB-182	Brown bullhead	6	5	83.3	0.039	0.29	0.13	0.015	0.015	ug/kg
PCB Congeners	PCB-182	Carp	12	12	100	0.12	0.71	0.37			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-182	Channel catfish	11	11	100	0.027	0.31	0.16			ug/kg
PCB Congeners	PCB-182	Fish (all)	131	129	98.5	0.016	1.6	0.26	0.008	0.015	ug/kg
PCB Congeners	PCB-182	Fish (≤ 11 cm)	23	23	100	0.02	0.14	0.062			ug/kg
PCB Congeners	PCB-182	Fish (≤ 13 cm)	26	26	100	0.02	0.14	0.06			ug/kg
PCB Congeners	PCB-182	Fish (≤ 18 cm)	41	41	100	0.016	0.65	0.15			ug/kg
PCB Congeners	PCB-182	Fish (≤ 20 cm)	43	43	100	0.016	0.65	0.16			ug/kg
PCB Congeners	PCB-182	Largemouth bass	3	3	100	0.16	0.56	0.33			ug/kg
PCB Congeners	PCB-182	Mummichog	18	18	100	0.032	0.14	0.07			ug/kg
PCB Congeners	PCB-182	Mussel (estuarine)	3	0	0				0.00031	0.00047	ug/kg
PCB Congeners	PCB-182	Mussel (freshwater)	5	2	40	0.0013	0.0016	0.0015	0.00036	0.00058	ug/kg
PCB Congeners	PCB-182	Northern pike	1	1	100	0.24	0.24				ug/kg
PCB Congeners	PCB-182	Other forage fish (no mummichog)	10	10	100	0.016	0.093	0.042			ug/kg
PCB Congeners	PCB-182	Smallmouth bass	3	3	100	0.077	0.22	0.15			ug/kg
PCB Congeners	PCB-182	White catfish	19	19	100	0.068	1.3	0.48			ug/kg
PCB Congeners	PCB-182	White perch	22	22	100	0.047	0.65	0.32			ug/kg
PCB Congeners	PCB-182	White sucker	5	5	100	0.037	0.5	0.22			ug/kg
PCB Congeners	PCB-182	Worms (all)	19	4	21.1	0.0049	0.027	0.015	0.0037	0.0068	ug/kg
PCB Congeners	PCB-182	Worms (estuarine sp.)	5	2	40	0.0049	0.0081	0.0065	0.0056	0.0068	ug/kg
PCB Congeners	PCB-182	Worms (freshwater sp.)	14	2	14.3	0.019	0.027	0.023	0.0037	0.0063	ug/kg
PCB Congeners	PCB-183	American eel (all)	21	21	100	5	140	27			ug/kg
PCB Congeners	PCB-183	Blue crab	24	24	100	2.6	14	5.5			ug/kg
PCB Congeners	PCB-183	Brown bullhead	6	6	100	2.1	18	9			ug/kg
PCB Congeners	PCB-183	Carp	12	12	100	14	71	36			ug/kg
PCB Congeners	PCB-183	Channel catfish	11	11	100	2	30	16			ug/kg
PCB Congeners	PCB-183	Fish (all)	131	131	100	1.3	140	22			ug/kg
PCB Congeners	PCB-183	Fish (≤ 11 cm)	23	23	100	1.7	9.8	4.7			ug/kg
PCB Congeners	PCB-183	Fish (≤ 13 cm)	26	26	100	1.7	9.8	4.6			ug/kg
PCB Congeners	PCB-183	Fish (≤ 18 cm)	41	41	100	1.3	93	11			ug/kg
PCB Congeners	PCB-183	Fish (≤ 20 cm)	43	43	100	1.3	93	12			ug/kg
PCB Congeners	PCB-183	Largemouth bass	3	3	100	12	35	22			ug/kg
PCB Congeners	PCB-183	Mummichog	18	18	100	2.4	9.8	5.3			ug/kg
PCB Congeners	PCB-183	Mussel (estuarine)	3	3	100	0.0049	0.015	0.009			ug/kg
PCB Congeners	PCB-183	Mussel (freshwater)	5	5	100	0.052	0.11	0.083			ug/kg
PCB Congeners	PCB-183	Northern pike	1	1	100	19	19				ug/kg
PCB Congeners	PCB-183	Other forage fish (no mummichog)	10	10	100	1.3	6.1	3.1			ug/kg
PCB Congeners	PCB-183	Smallmouth bass	3	3	100	5.8	18	12			ug/kg
PCB Congeners	PCB-183	White catfish	19	19	100	5.2	130	39			ug/kg
PCB Congeners	PCB-183	White perch	22	22	100	2.3	93	25			ug/kg
PCB Congeners	PCB-183	White sucker	5	5	100	4.8	41	18			ug/kg
PCB Congeners	PCB-183	Worms (all)	19	19	100	0.26	1.7	0.62			ug/kg
PCB Congeners	PCB-183	Worms (estuarine sp.)	5	5	100	0.26	0.68	0.45			ug/kg
PCB Congeners	PCB-183	Worms (freshwater sp.)	14	14	100	0.27	1.7	0.68			ug/kg
PCB Congeners	PCB-184	American eel (all)	21	21	100	0.037	0.83	0.22			ug/kg
PCB Congeners	PCB-184	Blue crab	24	24	100	0.01	0.092	0.048			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-184	Brown bullhead	6	6	100	0.012	0.12	0.058			ug/kg
PCB Congeners	PCB-184	Carp	12	12	100	0.016	0.88	0.42			ug/kg
PCB Congeners	PCB-184	Channel catfish	11	11	100	0.024	0.32	0.15			ug/kg
PCB Congeners	PCB-184	Fish (all)	131	131	100	0.012	1.1	0.19			ug/kg
PCB Congeners	PCB-184	Fish (≤ 11 cm)	23	23	100	0.014	0.066	0.034			ug/kg
PCB Congeners	PCB-184	Fish (≤ 13 cm)	26	26	100	0.014	0.066	0.034			ug/kg
PCB Congeners	PCB-184	Fish (≤ 18 cm)	41	41	100	0.012	0.35	0.076			ug/kg
PCB Congeners	PCB-184	Fish (≤ 20 cm)	43	43	100	0.012	0.35	0.083			ug/kg
PCB Congeners	PCB-184	Largemouth bass	3	3	100	0.091	0.25	0.15			ug/kg
PCB Congeners	PCB-184	Mummichog	18	18	100	0.019	0.066	0.037			ug/kg
PCB Congeners	PCB-184	Mussel (estuarine)	3	0	0				0.00011	0.00021	ug/kg
PCB Congeners	PCB-184	Mussel (freshwater)	5	4	80	0.00088	0.0012	0.001	0.00014	0.00014	ug/kg
PCB Congeners	PCB-184	Northern pike	1	1	100	0.22	0.22				ug/kg
PCB Congeners	PCB-184	Other forage fish (no mummichog)	10	10	100	0.012	0.054	0.026			ug/kg
PCB Congeners	PCB-184	Smallmouth bass	3	3	100	0.056	0.2	0.12			ug/kg
PCB Congeners	PCB-184	White catfish	19	19	100	0.049	1.1	0.35			ug/kg
PCB Congeners	PCB-184	White perch	22	22	100	0.024	0.35	0.17			ug/kg
PCB Congeners	PCB-184	White sucker	5	5	100	0.035	0.27	0.11			ug/kg
PCB Congeners	PCB-184	Worms (all)	19	6	31.6	0.0054	0.0091	0.0068	0.0024	0.0053	ug/kg
PCB Congeners	PCB-184	Worms (estuarine sp.)	5	0	0				0.0026	0.0053	ug/kg
PCB Congeners	PCB-184	Worms (freshwater sp.)	14	6	42.9	0.0054	0.0091	0.0068	0.0024	0.0046	ug/kg
PCB Congeners	PCB-185	American eel (all)	21	0	0				0.0039	0.073	ug/kg
PCB Congeners	PCB-185	Blue crab	24	0	0				0.006	0.019	ug/kg
PCB Congeners	PCB-185	Brown bullhead	6	6	100	0.5	3.1	1.7			ug/kg
PCB Congeners	PCB-185	Carp	12	11	91.7	2.2	11	6.2	0.016	0.016	ug/kg
PCB Congeners	PCB-185	Channel catfish	11	4	36.4	0.16	1.1	0.5	0.0044	0.01	ug/kg
PCB Congeners	PCB-185	Fish (all)	131	95	72.5	0.063	17	3	0.0039	0.073	ug/kg
PCB Congeners	PCB-185	Fish (≤ 11 cm)	23	23	100	0.21	1.7	0.7			ug/kg
PCB Congeners	PCB-185	Fish (≤ 13 cm)	26	26	100	0.21	1.7	0.69			ug/kg
PCB Congeners	PCB-185	Fish (≤ 18 cm)	41	38	92.7	0.21	17	1.9	0.0074	0.012	ug/kg
PCB Congeners	PCB-185	Fish (≤ 20 cm)	43	40	93	0.21	17	2	0.0074	0.012	ug/kg
PCB Congeners	PCB-185	Largemouth bass	3	3	100	1.8	9.1	4.5			ug/kg
PCB Congeners	PCB-185	Mummichog	18	18	100	0.21	1.7	0.75			ug/kg
PCB Congeners	PCB-185	Mussel (estuarine)	3	1	33.3	0.00099	0.00099		0.00033	0.00051	ug/kg
PCB Congeners	PCB-185	Mussel (freshwater)	5	5	100	0.012	0.02	0.017			ug/kg
PCB Congeners	PCB-185	Northern pike	1	1	100	2.8	2.8				ug/kg
PCB Congeners	PCB-185	Other forage fish (no mummichog)	10	10	100	0.25	1.3	0.58			ug/kg
PCB Congeners	PCB-185	Smallmouth bass	3	3	100	0.7	2.3	1.7			ug/kg
PCB Congeners	PCB-185	White catfish	19	18	94.7	0.87	8.6	4.3	0.017	0.017	ug/kg
PCB Congeners	PCB-185	White perch	22	16	72.7	0.063	17	4.1	0.0074	0.017	ug/kg
PCB Congeners	PCB-185	White sucker	5	5	100	0.88	8.1	3.4			ug/kg
PCB Congeners	PCB-185	Worms (all)	19	19	100	0.012	0.6	0.2			ug/kg
PCB Congeners	PCB-185	Worms (estuarine sp.)	5	5	100	0.012	0.059	0.034			ug/kg
PCB Congeners	PCB-185	Worms (freshwater sp.)	14	14	100	0.12	0.6	0.26			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-186	American eel (all)	21	0	0				0.00063	0.0059	ug/kg
PCB Congeners	PCB-186	Blue crab	24	0	0				0.0023	0.0071	ug/kg
PCB Congeners	PCB-186	Brown bullhead	6	0	0				0.0016	0.0029	ug/kg
PCB Congeners	PCB-186	Carp	12	0	0				0.003	0.0089	ug/kg
PCB Congeners	PCB-186	Channel catfish	11	0	0				0.0013	0.0031	ug/kg
PCB Congeners	PCB-186	Fish (all)	131	3	2.3	0.0016	0.0031	0.0024	0.00024	0.0089	ug/kg
PCB Congeners	PCB-186	Fish (≤ 11 cm)	23	2	8.7	0.0016	0.0026	0.0021	0.00024	0.0014	ug/kg
PCB Congeners	PCB-186	Fish (≤ 13 cm)	26	2	7.7	0.0016	0.0026	0.0021	0.00024	0.0014	ug/kg
PCB Congeners	PCB-186	Fish (≤ 18 cm)	41	2	4.9	0.0016	0.0026	0.0021	0.00024	0.0043	ug/kg
PCB Congeners	PCB-186	Fish (≤ 20 cm)	43	2	4.7	0.0016	0.0026	0.0021	0.00024	0.0043	ug/kg
PCB Congeners	PCB-186	Largemouth bass	3	0	0				0.00076	0.0051	ug/kg
PCB Congeners	PCB-186	Mummichog	18	2	11.1	0.0016	0.0026	0.0021	0.00044	0.0014	ug/kg
PCB Congeners	PCB-186	Mussel (estuarine)	3	0	0				0.00012	0.00023	ug/kg
PCB Congeners	PCB-186	Mussel (freshwater)	5	0	0				0.00016	0.00023	ug/kg
PCB Congeners	PCB-186	Northern pike	1	0	0				0.0011	0.0011	ug/kg
PCB Congeners	PCB-186	Other forage fish (no mummichog)	10	0	0				0.0003	0.00059	ug/kg
PCB Congeners	PCB-186	Smallmouth bass	3	0	0				0.00075	0.00093	ug/kg
PCB Congeners	PCB-186	White catfish	19	1	5.3	0.0031	0.0031		0.0013	0.0057	ug/kg
PCB Congeners	PCB-186	White perch	22	0	0				0.00024	0.0048	ug/kg
PCB Congeners	PCB-186	White sucker	5	0	0				0.0011	0.0028	ug/kg
PCB Congeners	PCB-186	Worms (all)	19	0	0				0.0017	0.0052	ug/kg
PCB Congeners	PCB-186	Worms (estuarine sp.)	5	0	0				0.0025	0.0052	ug/kg
PCB Congeners	PCB-186	Worms (freshwater sp.)	14	0	0				0.0017	0.0044	ug/kg
PCB Congeners	PCB-187	American eel (all)	21	21	100	19	390	80			ug/kg
PCB Congeners	PCB-187	Blue crab	24	24	100	5.6	32	12			ug/kg
PCB Congeners	PCB-187	Brown bullhead	6	6	100	7.5	59	30			ug/kg
PCB Congeners	PCB-187	Carp	12	12	100	41	180	100			ug/kg
PCB Congeners	PCB-187	Channel catfish	11	11	100	5.3	74	38			ug/kg
PCB Congeners	PCB-187	Fish (all)	131	131	100	4.2	390	58			ug/kg
PCB Congeners	PCB-187	Fish (≤ 11 cm)	23	23	100	4.2	24	12			ug/kg
PCB Congeners	PCB-187	Fish (≤ 13 cm)	26	26	100	4.2	24	11			ug/kg
PCB Congeners	PCB-187	Fish (≤ 18 cm)	41	41	100	4.2	200	28			ug/kg
PCB Congeners	PCB-187	Fish (≤ 20 cm)	43	43	100	4.2	200	30			ug/kg
PCB Congeners	PCB-187	Largemouth bass	3	3	100	37	120	75			ug/kg
PCB Congeners	PCB-187	Mummichog	18	18	100	6	24	13			ug/kg
PCB Congeners	PCB-187	Mussel (estuarine)	3	3	100	0.047	0.22	0.12			ug/kg
PCB Congeners	PCB-187	Mussel (freshwater)	5	5	100	0.16	0.28	0.23			ug/kg
PCB Congeners	PCB-187	Northern pike	1	1	100	53	53				ug/kg
PCB Congeners	PCB-187	Other forage fish (no mummichog)	10	10	100	4.2	16	8.2			ug/kg
PCB Congeners	PCB-187	Smallmouth bass	3	3	100	21	52	36			ug/kg
PCB Congeners	PCB-187	White catfish	19	19	100	14	280	93			ug/kg
PCB Congeners	PCB-187	White perch	22	22	100	6.7	200	61			ug/kg
PCB Congeners	PCB-187	White sucker	5	5	100	12	100	44			ug/kg
PCB Congeners	PCB-187	Worms (all)	19	19	100	0.68	12	3.6			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-187	Worms (estuarine sp.)	5	5	100	0.68	1.5	1.1			ug/kg
PCB Congeners	PCB-187	Worms (freshwater sp.)	14	14	100	2.2	12	4.5			ug/kg
PCB Congeners	PCB-188	American eel (all)	21	21	100	0.019	0.67	0.16			ug/kg
PCB Congeners	PCB-188	Blue crab	24	24	100	0.02	0.092	0.062			ug/kg
PCB Congeners	PCB-188	Brown bullhead	6	6	100	0.016	0.17	0.073			ug/kg
PCB Congeners	PCB-188	Carp	12	12	100	0.025	0.66	0.29			ug/kg
PCB Congeners	PCB-188	Channel catfish	11	11	100	0.042	0.27	0.15			ug/kg
PCB Congeners	PCB-188	Fish (all)	131	131	100	0.01	0.93	0.17			ug/kg
PCB Congeners	PCB-188	Fish (≤ 11 cm)	23	23	100	0.016	0.086	0.043			ug/kg
PCB Congeners	PCB-188	Fish (≤ 13 cm)	26	26	100	0.016	0.086	0.043			ug/kg
PCB Congeners	PCB-188	Fish (≤ 18 cm)	41	41	100	0.01	0.41	0.092			ug/kg
PCB Congeners	PCB-188	Fish (≤ 20 cm)	43	43	100	0.01	0.41	0.1			ug/kg
PCB Congeners	PCB-188	Largemouth bass	3	3	100	0.11	0.21	0.15			ug/kg
PCB Congeners	PCB-188	Mummichog	18	18	100	0.026	0.086	0.048			ug/kg
PCB Congeners	PCB-188	Mussel (estuarine)	3	3	100	0.0007	0.0011	0.00085			ug/kg
PCB Congeners	PCB-188	Mussel (freshwater)	5	2	40	0.00046	0.0006	0.00053	0.00014	0.0002	ug/kg
PCB Congeners	PCB-188	Northern pike	1	1	100	0.21	0.21				ug/kg
PCB Congeners	PCB-188	Other forage fish (no mummichog)	10	10	100	0.01	0.071	0.032			ug/kg
PCB Congeners	PCB-188	Smallmouth bass	3	3	100	0.042	0.18	0.11			ug/kg
PCB Congeners	PCB-188	White catfish	19	19	100	0.032	0.93	0.3			ug/kg
PCB Congeners	PCB-188	White perch	22	22	100	0.017	0.41	0.2			ug/kg
PCB Congeners	PCB-188	White sucker	5	5	100	0.035	0.41	0.17			ug/kg
PCB Congeners	PCB-188	Worms (all)	19	13	68.4	0.0043	0.034	0.011	0.0028	0.0057	ug/kg
PCB Congeners	PCB-188	Worms (estuarine sp.)	5	4	80	0.0043	0.01	0.007	0.0057	0.0057	ug/kg
PCB Congeners	PCB-188	Worms (freshwater sp.)	14	9	64.3	0.0057	0.034	0.013	0.0028	0.005	ug/kg
PCB Congeners	PCB-189	American eel (all)	21	21	100	0.33	11	1.9			ug/kg
PCB Congeners	PCB-189	Blue crab	24	24	100	0.11	0.93	0.3			ug/kg
PCB Congeners	PCB-189	Brown bullhead	6	6	100	0.17	1.3	0.64			ug/kg
PCB Congeners	PCB-189	Carp	12	12	100	0.86	5.1	2.5			ug/kg
PCB Congeners	PCB-189	Channel catfish	11	11	100	0.13	2.3	1.1			ug/kg
PCB Congeners	PCB-189	Fish (all)	131	131	100	0.12	11	1.4			ug/kg
PCB Congeners	PCB-189	Fish (≤ 11 cm)	23	23	100	0.12	0.5	0.25			ug/kg
PCB Congeners	PCB-189	Fish (≤ 13 cm)	26	26	100	0.12	0.5	0.25			ug/kg
PCB Congeners	PCB-189	Fish (≤ 18 cm)	41	41	100	0.12	5.4	0.65			ug/kg
PCB Congeners	PCB-189	Fish (≤ 20 cm)	43	43	100	0.12	5.4	0.68			ug/kg
PCB Congeners	PCB-189	Largemouth bass	3	3	100	0.88	2.7	1.7			ug/kg
PCB Congeners	PCB-189	Mummichog	18	18	100	0.12	0.5	0.27			ug/kg
PCB Congeners	PCB-189	Mussel (estuarine)	3	2	66.7	0.00043	0.0012	0.00082	0.00041	0.00041	ug/kg
PCB Congeners	PCB-189	Mussel (freshwater)	5	5	100	0.002	0.0042	0.003			ug/kg
PCB Congeners	PCB-189	Northern pike	1	1	100	1.3	1.3				ug/kg
PCB Congeners	PCB-189	Other forage fish (no mummichog)	10	10	100	0.12	0.38	0.21			ug/kg
PCB Congeners	PCB-189	Smallmouth bass	3	3	100	0.37	1.2	0.83			ug/kg
PCB Congeners	PCB-189	White catfish	19	19	100	0.31	8.5	2.6			ug/kg
PCB Congeners	PCB-189	White perch	22	22	100	0.16	5.4	1.4			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-189	White sucker	5	5	100	0.31	2.7	1.1			ug/kg
PCB Congeners	PCB-189	Worms (all)	19	19	100	0.013	0.15	0.046			ug/kg
PCB Congeners	PCB-189	Worms (estuarine sp.)	5	5	100	0.013	0.03	0.02			ug/kg
PCB Congeners	PCB-189	Worms (freshwater sp.)	14	14	100	0.025	0.15	0.055			ug/kg
PCB Congeners	PCB-190	American eel (all)	21	21	100	2.2	62	11			ug/kg
PCB Congeners	PCB-190	Blue crab	24	24	100	0.56	4.4	1.5			ug/kg
PCB Congeners	PCB-190	Brown bullhead	6	6	100	0.87	7.1	3.4			ug/kg
PCB Congeners	PCB-190	Carp	12	12	100	4.8	24	12			ug/kg
PCB Congeners	PCB-190	Channel catfish	11	11	100	0.72	11	5.6			ug/kg
PCB Congeners	PCB-190	Fish (all)	131	131	100	0.53	62	7.9			ug/kg
PCB Congeners	PCB-190	Fish (≤ 11 cm)	23	23	100	0.53	2.9	1.4			ug/kg
PCB Congeners	PCB-190	Fish (≤ 13 cm)	26	26	100	0.53	2.9	1.4			ug/kg
PCB Congeners	PCB-190	Fish (≤ 18 cm)	41	41	100	0.53	33	3.8			ug/kg
PCB Congeners	PCB-190	Fish (≤ 20 cm)	43	43	100	0.53	33	4			ug/kg
PCB Congeners	PCB-190	Largemouth bass	3	3	100	4.8	16	9.6			ug/kg
PCB Congeners	PCB-190	Mummichog	18	18	100	0.81	2.9	1.5			ug/kg
PCB Congeners	PCB-190	Mussel (estuarine)	3	2	66.7	0.0016	0.0035	0.0026	0.00034	0.00034	ug/kg
PCB Congeners	PCB-190	Mussel (freshwater)	5	5	100	0.015	0.029	0.022			ug/kg
PCB Congeners	PCB-190	Northern pike	1	1	100	7	7				ug/kg
PCB Congeners	PCB-190	Other forage fish (no mummichog)	10	10	100	0.53	2	1			ug/kg
PCB Congeners	PCB-190	Smallmouth bass	3	3	100	2.1	6.4	4.6			ug/kg
PCB Congeners	PCB-190	White catfish	19	19	100	2	45	14			ug/kg
PCB Congeners	PCB-190	White perch	22	22	100	0.85	33	8.3			ug/kg
PCB Congeners	PCB-190	White sucker	5	5	100	2	16	6.7			ug/kg
PCB Congeners	PCB-190	Worms (all)	19	19	100	0.067	0.73	0.27			ug/kg
PCB Congeners	PCB-190	Worms (estuarine sp.)	5	5	100	0.067	0.2	0.12			ug/kg
PCB Congeners	PCB-190	Worms (freshwater sp.)	14	14	100	0.15	0.73	0.33			ug/kg
PCB Congeners	PCB-191	American eel (all)	21	21	100	0.3	11	2			ug/kg
PCB Congeners	PCB-191	Blue crab	24	24	100	0.16	0.98	0.36			ug/kg
PCB Congeners	PCB-191	Brown bullhead	6	5	83.3	0.17	1.4	0.75	0.0068	0.0068	ug/kg
PCB Congeners	PCB-191	Carp	12	12	100	0.87	4.1	2.3			ug/kg
PCB Congeners	PCB-191	Channel catfish	11	11	100	0.14	2	1			ug/kg
PCB Congeners	PCB-191	Fish (all)	131	130	99.2	0.093	11	1.5	0.0068	0.0068	ug/kg
PCB Congeners	PCB-191	Fish (≤ 11 cm)	23	23	100	0.11	0.61	0.3			ug/kg
PCB Congeners	PCB-191	Fish (≤ 13 cm)	26	26	100	0.11	0.61	0.29			ug/kg
PCB Congeners	PCB-191	Fish (≤ 18 cm)	41	41	100	0.093	5.9	0.75			ug/kg
PCB Congeners	PCB-191	Fish (≤ 20 cm)	43	43	100	0.093	5.9	0.79			ug/kg
PCB Congeners	PCB-191	Largemouth bass	3	3	100	0.94	2.2	1.5			ug/kg
PCB Congeners	PCB-191	Mummichog	18	18	100	0.18	0.61	0.34			ug/kg
PCB Congeners	PCB-191	Mussel (estuarine)	3	0	0				0.00025	0.00038	ug/kg
PCB Congeners	PCB-191	Mussel (freshwater)	5	5	100	0.0025	0.0062	0.0043			ug/kg
PCB Congeners	PCB-191	Northern pike	1	1	100	1.3	1.3				ug/kg
PCB Congeners	PCB-191	Other forage fish (no mummichog)	10	10	100	0.093	0.41	0.2			ug/kg
PCB Congeners	PCB-191	Smallmouth bass	3	3	100	0.44	1.3	0.9			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-191	White catfish	19	19	100	0.38	8	2.7			ug/kg
PCB Congeners	PCB-191	White perch	22	22	100	0.18	5.9	1.6			ug/kg
PCB Congeners	PCB-191	White sucker	5	5	100	0.29	2.6	1.1			ug/kg
PCB Congeners	PCB-191	Worms (all)	19	18	94.7	0.011	0.11	0.035	0.005	0.005	ug/kg
PCB Congeners	PCB-191	Worms (estuarine sp.)	5	5	100	0.016	0.041	0.027			ug/kg
PCB Congeners	PCB-191	Worms (freshwater sp.)	14	13	92.9	0.011	0.11	0.038	0.005	0.005	ug/kg
PCB Congeners	PCB-192	American eel (all)	21	3	14.3	0.0096	0.011	0.011	0.0026	0.05	ug/kg
PCB Congeners	PCB-192	Blue crab	24	0	0				0.0044	0.014	ug/kg
PCB Congeners	PCB-192	Brown bullhead	6	0	0				0.0039	0.013	ug/kg
PCB Congeners	PCB-192	Carp	12	0	0				0.0069	0.027	ug/kg
PCB Congeners	PCB-192	Channel catfish	11	0	0				0.0032	0.0074	ug/kg
PCB Congeners	PCB-192	Fish (all)	131	4	3.1	0.0096	0.018	0.012	0.0014	0.05	ug/kg
PCB Congeners	PCB-192	Fish (≤ 11 cm)	23	0	0				0.0015	0.0047	ug/kg
PCB Congeners	PCB-192	Fish (≤ 13 cm)	26	0	0				0.0015	0.0047	ug/kg
PCB Congeners	PCB-192	Fish (≤ 18 cm)	41	0	0				0.0015	0.018	ug/kg
PCB Congeners	PCB-192	Fish (≤ 20 cm)	43	1	2.3	0.018	0.018		0.0015	0.018	ug/kg
PCB Congeners	PCB-192	Largemouth bass	3	0	0				0.0022	0.014	ug/kg
PCB Congeners	PCB-192	Mummichog	18	0	0				0.0018	0.0047	ug/kg
PCB Congeners	PCB-192	Mussel (estuarine)	3	0	0				0.00024	0.00036	ug/kg
PCB Congeners	PCB-192	Mussel (freshwater)	5	0	0				0.00032	0.00045	ug/kg
PCB Congeners	PCB-192	Northern pike	1	0	0				0.0032	0.0032	ug/kg
PCB Congeners	PCB-192	Other forage fish (no mummichog)	10	0	0				0.0015	0.0036	ug/kg
PCB Congeners	PCB-192	Smallmouth bass	3	0	0				0.0014	0.0023	ug/kg
PCB Congeners	PCB-192	White catfish	19	0	0				0.0019	0.012	ug/kg
PCB Congeners	PCB-192	White perch	22	1	4.5	0.018	0.018		0.0017	0.018	ug/kg
PCB Congeners	PCB-192	White sucker	5	0	0				0.0014	0.0049	ug/kg
PCB Congeners	PCB-192	Worms (all)	19	0	0				0.0033	0.0063	ug/kg
PCB Congeners	PCB-192	Worms (estuarine sp.)	5	0	0				0.0041	0.0063	ug/kg
PCB Congeners	PCB-192	Worms (freshwater sp.)	14	0	0				0.0033	0.0062	ug/kg
PCB Congeners	PCB-194	American eel (all)	21	21	100	3.3	120	20			ug/kg
PCB Congeners	PCB-194	Blue crab	24	24	100	0.88	8.5	2.7			ug/kg
PCB Congeners	PCB-194	Brown bullhead	6	6	100	2.2	17	8			ug/kg
PCB Congeners	PCB-194	Carp	12	12	100	10	69	34			ug/kg
PCB Congeners	PCB-194	Channel catfish	11	11	100	1.5	26	12			ug/kg
PCB Congeners	PCB-194	Fish (all)	131	131	100	1.4	120	17			ug/kg
PCB Congeners	PCB-194	Fish (≤ 11 cm)	23	23	100	1.5	6.2	3.2			ug/kg
PCB Congeners	PCB-194	Fish (≤ 13 cm)	26	26	100	1.5	6.2	3.1			ug/kg
PCB Congeners	PCB-194	Fish (≤ 18 cm)	41	41	100	1.4	63	8			ug/kg
PCB Congeners	PCB-194	Fish (≤ 20 cm)	43	43	100	1.4	63	8.4			ug/kg
PCB Congeners	PCB-194	Largemouth bass	3	3	100	12	18	16			ug/kg
PCB Congeners	PCB-194	Mummichog	18	18	100	1.6	6.2	3.4			ug/kg
PCB Congeners	PCB-194	Mussel (estuarine)	3	3	100	0.0031	0.012	0.0066			ug/kg
PCB Congeners	PCB-194	Mussel (freshwater)	5	5	100	0.038	0.076	0.06			ug/kg
PCB Congeners	PCB-194	Northern pike	1	1	100	15	15				ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-194	Other forage fish (no mummichog)	10	10	100	1.4	4.7	2.6			ug/kg
PCB Congeners	PCB-194	Smallmouth bass	3	3	100	4.7	18	12			ug/kg
PCB Congeners	PCB-194	White catfish	19	19	100	3.4	100	31			ug/kg
PCB Congeners	PCB-194	White perch	22	22	100	2.3	63	17			ug/kg
PCB Congeners	PCB-194	White sucker	5	5	100	3.4	35	14			ug/kg
PCB Congeners	PCB-194	Worms (all)	19	19	100	0.13	0.77	0.31			ug/kg
PCB Congeners	PCB-194	Worms (estuarine sp.)	5	5	100	0.13	0.26	0.2			ug/kg
PCB Congeners	PCB-194	Worms (freshwater sp.)	14	14	100	0.13	0.77	0.35			ug/kg
PCB Congeners	PCB-195	American eel (all)	21	21	100	1.2	38	6.4			ug/kg
PCB Congeners	PCB-195	Blue crab	24	24	100	0.25	2.1	0.76			ug/kg
PCB Congeners	PCB-195	Brown bullhead	6	6	100	1.1	7.3	3.5			ug/kg
PCB Congeners	PCB-195	Carp	12	12	100	4.2	24	12			ug/kg
PCB Congeners	PCB-195	Channel catfish	11	11	100	0.5	9.3	4.3			ug/kg
PCB Congeners	PCB-195	Fish (all)	131	131	100	0.48	38	5.9			ug/kg
PCB Congeners	PCB-195	Fish (≤ 11 cm)	23	23	100	0.48	2.5	1.3			ug/kg
PCB Congeners	PCB-195	Fish (≤ 13 cm)	26	26	100	0.48	2.5	1.2			ug/kg
PCB Congeners	PCB-195	Fish (≤ 18 cm)	41	41	100	0.48	25	3.1			ug/kg
PCB Congeners	PCB-195	Fish (≤ 20 cm)	43	43	100	0.48	25	3.3			ug/kg
PCB Congeners	PCB-195	Largemouth bass	3	3	100	4	7.2	5.8			ug/kg
PCB Congeners	PCB-195	Mummichog	18	18	100	0.63	2.5	1.4			ug/kg
PCB Congeners	PCB-195	Mussel (estuarine)	3	3	100	0.0012	0.0019	0.0016			ug/kg
PCB Congeners	PCB-195	Mussel (freshwater)	5	5	100	0.016	0.034	0.026			ug/kg
PCB Congeners	PCB-195	Northern pike	1	1	100	5.1	5.1				ug/kg
PCB Congeners	PCB-195	Other forage fish (no mummichog)	10	10	100	0.48	1.7	0.93			ug/kg
PCB Congeners	PCB-195	Smallmouth bass	3	3	100	1.7	5.6	3.8			ug/kg
PCB Congeners	PCB-195	White catfish	19	19	100	0.8	33	10			ug/kg
PCB Congeners	PCB-195	White perch	22	22	100	0.75	25	6.6			ug/kg
PCB Congeners	PCB-195	White sucker	5	5	100	1.3	12	5			ug/kg
PCB Congeners	PCB-195	Worms (all)	19	19	100	0.089	0.64	0.22			ug/kg
PCB Congeners	PCB-195	Worms (estuarine sp.)	5	5	100	0.089	0.19	0.14			ug/kg
PCB Congeners	PCB-195	Worms (freshwater sp.)	14	14	100	0.11	0.64	0.24			ug/kg
PCB Congeners	PCB-196	American eel (all)	21	21	100	2.1	72	13			ug/kg
PCB Congeners	PCB-196	Blue crab	24	24	100	0.91	6	2.2			ug/kg
PCB Congeners	PCB-196	Brown bullhead	6	6	100	0.95	7.4	3.6			ug/kg
PCB Congeners	PCB-196	Carp	12	12	100	5.6	33	17			ug/kg
PCB Congeners	PCB-196	Channel catfish	11	11	100	0.84	14	6.8			ug/kg
PCB Congeners	PCB-196	Fish (all)	131	131	100	0.57	72	10			ug/kg
PCB Congeners	PCB-196	Fish (≤ 11 cm)	23	23	100	0.76	4	1.9			ug/kg
PCB Congeners	PCB-196	Fish (≤ 13 cm)	26	26	100	0.76	4	1.9			ug/kg
PCB Congeners	PCB-196	Fish (≤ 18 cm)	41	41	100	0.57	41	4.9			ug/kg
PCB Congeners	PCB-196	Fish (≤ 20 cm)	43	43	100	0.57	41	5.2			ug/kg
PCB Congeners	PCB-196	Largemouth bass	3	3	100	8.1	14	11			ug/kg
PCB Congeners	PCB-196	Mummichog	18	18	100	1.1	4	2.1			ug/kg
PCB Congeners	PCB-196	Mussel (estuarine)	3	3	100	0.001	0.0016	0.0013			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-196	Mussel (freshwater)	5	5	100	0.012	0.027	0.019			ug/kg
PCB Congeners	PCB-196	Northern pike	1	1	100	9.4	9.4				ug/kg
PCB Congeners	PCB-196	Other forage fish (no mummichog)	10	10	100	0.57	2.3	1.2			ug/kg
PCB Congeners	PCB-196	Smallmouth bass	3	3	100	3.6	13	8.3			ug/kg
PCB Congeners	PCB-196	White catfish	19	19	100	1.9	66	19			ug/kg
PCB Congeners	PCB-196	White perch	22	22	100	1.1	41	11			ug/kg
PCB Congeners	PCB-196	White sucker	5	5	100	1.7	22	8.5			ug/kg
PCB Congeners	PCB-196	Worms (all)	19	19	100	0.079	0.48	0.2			ug/kg
PCB Congeners	PCB-196	Worms (estuarine sp.)	5	5	100	0.12	0.24	0.18			ug/kg
PCB Congeners	PCB-196	Worms (freshwater sp.)	14	14	100	0.079	0.48	0.21			ug/kg
PCB Congeners	PCB-197	American eel (all)	21	21	100	0.17	5.6	1			ug/kg
PCB Congeners	PCB-197	Blue crab	24	24	100	0.072	0.45	0.16			ug/kg
PCB Congeners	PCB-197	Brown bullhead	6	6	100	0.061	0.48	0.25			ug/kg
PCB Congeners	PCB-197	Carp	12	12	100	0.42	2.6	1.2			ug/kg
PCB Congeners	PCB-197	Channel catfish	11	11	100	0.071	0.95	0.48			ug/kg
PCB Congeners	PCB-197	Fish (all)	131	131	100	0.043	5.6	0.73			ug/kg
PCB Congeners	PCB-197	Fish (≤ 11 cm)	23	23	100	0.046	0.25	0.13			ug/kg
PCB Congeners	PCB-197	Fish (≤ 13 cm)	26	26	100	0.046	0.25	0.13			ug/kg
PCB Congeners	PCB-197	Fish (≤ 18 cm)	41	41	100	0.043	3	0.36			ug/kg
PCB Congeners	PCB-197	Fish (≤ 20 cm)	43	43	100	0.043	3	0.38			ug/kg
PCB Congeners	PCB-197	Largemouth bass	3	3	100	0.5	0.98	0.76			ug/kg
PCB Congeners	PCB-197	Mummichog	18	18	100	0.081	0.25	0.15			ug/kg
PCB Congeners	PCB-197	Mussel (estuarine)	3	2	66.7	0.00016	0.00038	0.00027	0.00028	0.00028	ug/kg
PCB Congeners	PCB-197	Mussel (freshwater)	5	5	100	0.00076	0.0018	0.0013			ug/kg
PCB Congeners	PCB-197	Northern pike	1	1	100	0.64	0.64				ug/kg
PCB Congeners	PCB-197	Other forage fish (no mummichog)	10	10	100	0.043	0.17	0.09			ug/kg
PCB Congeners	PCB-197	Smallmouth bass	3	3	100	0.22	0.81	0.51			ug/kg
PCB Congeners	PCB-197	White catfish	19	19	100	0.15	4.6	1.3			ug/kg
PCB Congeners	PCB-197	White perch	22	22	100	0.083	3	0.82			ug/kg
PCB Congeners	PCB-197	White sucker	5	5	100	0.12	1.2	0.48			ug/kg
PCB Congeners	PCB-197	Worms (all)	19	19	100	0.013	0.06	0.027			ug/kg
PCB Congeners	PCB-197	Worms (estuarine sp.)	5	5	100	0.017	0.027	0.021			ug/kg
PCB Congeners	PCB-197	Worms (freshwater sp.)	14	14	100	0.013	0.06	0.029			ug/kg
PCB Congeners	PCB-198	American eel (all)	21	21	100	7.6	160	30			ug/kg
PCB Congeners	PCB-198	Blue crab	24	24	100	1.8	11	4			ug/kg
PCB Congeners	PCB-198	Brown bullhead	6	6	100	3.1	20	10			ug/kg
PCB Congeners	PCB-198	Carp	12	12	100	16	84	43			ug/kg
PCB Congeners	PCB-198	Channel catfish	11	11	100	2	36	17			ug/kg
PCB Congeners	PCB-198	Fish (all)	131	131	100	2	160	23			ug/kg
PCB Congeners	PCB-198	Fish (≤ 11 cm)	23	23	100	2	8.1	4.2			ug/kg
PCB Congeners	PCB-198	Fish (≤ 13 cm)	26	26	100	2	8.1	4.1			ug/kg
PCB Congeners	PCB-198	Fish (≤ 18 cm)	41	41	100	2	74	10			ug/kg
PCB Congeners	PCB-198	Fish (≤ 20 cm)	43	43	100	2	74	11			ug/kg
PCB Congeners	PCB-198	Largemouth bass	3	3	100	18	32	27			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-198	Mummichog	18	18	100	2.4	8.1	4.7			ug/kg
PCB Congeners	PCB-198	Mussel (estuarine)	3	3	100	0.0041	0.0091	0.0058			ug/kg
PCB Congeners	PCB-198	Mussel (freshwater)	5	5	100	0.067	0.11	0.088			ug/kg
PCB Congeners	PCB-198	Northern pike	1	1	100	21	21				ug/kg
PCB Congeners	PCB-198	Other forage fish (no mummichog)	10	10	100	2	5.5	3.2			ug/kg
PCB Congeners	PCB-198	Smallmouth bass	3	3	100	9.2	28	19			ug/kg
PCB Congeners	PCB-198	White catfish	19	19	100	4.9	130	40			ug/kg
PCB Congeners	PCB-198	White perch	22	22	100	2.6	74	21			ug/kg
PCB Congeners	PCB-198	White sucker	5	5	100	4.9	45	18			ug/kg
PCB Congeners	PCB-198	Worms (all)	19	19	100	0.24	2.7	0.95			ug/kg
PCB Congeners	PCB-198	Worms (estuarine sp.)	5	5	100	0.24	0.46	0.35			ug/kg
PCB Congeners	PCB-198	Worms (freshwater sp.)	14	14	100	0.6	2.7	1.2			ug/kg
PCB Congeners	PCB-200	American eel (all)	21	19	90.5	0.051	1.2	0.3	0.0023	0.0036	ug/kg
PCB Congeners	PCB-200	Blue crab	24	8	33.3	0.0091	0.09	0.028	0.0033	0.0091	ug/kg
PCB Congeners	PCB-200	Brown bullhead	6	6	100	0.27	1.9	0.91			ug/kg
PCB Congeners	PCB-200	Carp	12	12	100	1.3	7.3	4			ug/kg
PCB Congeners	PCB-200	Channel catfish	11	11	100	0.14	2.7	1.1			ug/kg
PCB Congeners	PCB-200	Fish (all)	131	129	98.5	0.05	7.3	1.3	0.0023	0.0036	ug/kg
PCB Congeners	PCB-200	Fish (≤ 11 cm)	23	23	100	0.12	0.69	0.3			ug/kg
PCB Congeners	PCB-200	Fish (≤ 13 cm)	26	26	100	0.12	0.69	0.3			ug/kg
PCB Congeners	PCB-200	Fish (≤ 18 cm)	41	41	100	0.054	6.4	0.69			ug/kg
PCB Congeners	PCB-200	Fish (≤ 20 cm)	43	43	100	0.054	6.4	0.71			ug/kg
PCB Congeners	PCB-200	Largemouth bass	3	3	100	0.53	1.3	0.94			ug/kg
PCB Congeners	PCB-200	Mummichog	18	18	100	0.12	0.69	0.31			ug/kg
PCB Congeners	PCB-200	Mussel (estuarine)	3	1	33.3	0.00024	0.00024		0.00013	0.00035	ug/kg
PCB Congeners	PCB-200	Mussel (freshwater)	5	5	100	0.0079	0.012	0.0095			ug/kg
PCB Congeners	PCB-200	Northern pike	1	1	100	1.2	1.2				ug/kg
PCB Congeners	PCB-200	Other forage fish (no mummichog)	10	10	100	0.054	0.5	0.27			ug/kg
PCB Congeners	PCB-200	Smallmouth bass	3	3	100	0.23	1.4	0.88			ug/kg
PCB Congeners	PCB-200	White catfish	19	19	100	0.37	4.9	2.3			ug/kg
PCB Congeners	PCB-200	White perch	22	22	100	0.05	6.4	1.3			ug/kg
PCB Congeners	PCB-200	White sucker	5	5	100	0.34	4.3	1.8			ug/kg
PCB Congeners	PCB-200	Worms (all)	19	19	100	0.0099	0.33	0.11			ug/kg
PCB Congeners	PCB-200	Worms (estuarine sp.)	5	5	100	0.0099	0.031	0.02			ug/kg
PCB Congeners	PCB-200	Worms (freshwater sp.)	14	14	100	0.073	0.33	0.14			ug/kg
PCB Congeners	PCB-201	American eel (all)	21	21	100	0.55	18	3.3			ug/kg
PCB Congeners	PCB-201	Blue crab	24	24	100	0.25	1.3	0.52			ug/kg
PCB Congeners	PCB-201	Brown bullhead	6	6	100	0.37	2.6	1.2			ug/kg
PCB Congeners	PCB-201	Carp	12	12	100	1.9	10	5			ug/kg
PCB Congeners	PCB-201	Channel catfish	11	11	100	0.29	3.8	1.9			ug/kg
PCB Congeners	PCB-201	Fish (all)	131	131	100	0.18	18	2.7			ug/kg
PCB Congeners	PCB-201	Fish (≤ 11 cm)	23	23	100	0.23	1.1	0.54			ug/kg
PCB Congeners	PCB-201	Fish (≤ 13 cm)	26	26	100	0.23	1.1	0.53			ug/kg
PCB Congeners	PCB-201	Fish (≤ 18 cm)	41	41	100	0.18	10	1.3			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-201	Fish (≤ 20 cm)	43	43	100	0.18	10	1.4			ug/kg
PCB Congeners	PCB-201	Largemouth bass	3	3	100	1.6	3	2.5			ug/kg
PCB Congeners	PCB-201	Mummichog	18	18	100	0.3	1.1	0.6			ug/kg
PCB Congeners	PCB-201	Mussel (estuarine)	3	2	66.7	0.00045	0.0013	0.00088	0.00032	0.00032	ug/kg
PCB Congeners	PCB-201	Mussel (freshwater)	5	5	100	0.0057	0.01	0.008			ug/kg
PCB Congeners	PCB-201	Northern pike	1	1	100	2.6	2.6				ug/kg
PCB Congeners	PCB-201	Other forage fish (no mummichog)	10	10	100	0.18	0.8	0.41			ug/kg
PCB Congeners	PCB-201	Smallmouth bass	3	3	100	0.75	2.8	1.8			ug/kg
PCB Congeners	PCB-201	White catfish	19	19	100	0.62	15	4.6			ug/kg
PCB Congeners	PCB-201	White perch	22	22	100	0.26	10	2.8			ug/kg
PCB Congeners	PCB-201	White sucker	5	5	100	0.58	5.4	2.3			ug/kg
PCB Congeners	PCB-201	Worms (all)	19	19	100	0.036	0.34	0.13			ug/kg
PCB Congeners	PCB-201	Worms (estuarine sp.)	5	5	100	0.036	0.074	0.054			ug/kg
PCB Congeners	PCB-201	Worms (freshwater sp.)	14	14	100	0.073	0.34	0.15			ug/kg
PCB Congeners	PCB-202	American eel (all)	21	21	100	2.3	35	7.6			ug/kg
PCB Congeners	PCB-202	Blue crab	24	24	100	0.55	2.4	1.1			ug/kg
PCB Congeners	PCB-202	Brown bullhead	6	6	100	0.85	4.7	2.4			ug/kg
PCB Congeners	PCB-202	Carp	12	12	100	4.7	19	9.6			ug/kg
PCB Congeners	PCB-202	Channel catfish	11	11	100	0.64	8.1	4			ug/kg
PCB Congeners	PCB-202	Fish (all)	131	131	100	0.63	35	5.3			ug/kg
PCB Congeners	PCB-202	Fish (≤ 11 cm)	23	23	100	0.63	2.2	1.2			ug/kg
PCB Congeners	PCB-202	Fish (≤ 13 cm)	26	26	100	0.63	2.2	1.2			ug/kg
PCB Congeners	PCB-202	Fish (≤ 18 cm)	41	41	100	0.63	16	2.6			ug/kg
PCB Congeners	PCB-202	Fish (≤ 20 cm)	43	43	100	0.63	16	2.7			ug/kg
PCB Congeners	PCB-202	Largemouth bass	3	3	100	2.8	6.3	4.6			ug/kg
PCB Congeners	PCB-202	Mummichog	18	18	100	0.67	2.2	1.3			ug/kg
PCB Congeners	PCB-202	Mussel (estuarine)	3	3	100	0.0075	0.017	0.011			ug/kg
PCB Congeners	PCB-202	Mussel (freshwater)	5	5	100	0.021	0.029	0.025			ug/kg
PCB Congeners	PCB-202	Northern pike	1	1	100	5.8	5.8				ug/kg
PCB Congeners	PCB-202	Other forage fish (no mummichog)	10	10	100	0.63	1.9	1			ug/kg
PCB Congeners	PCB-202	Smallmouth bass	3	3	100	1.7	5.8	3.9			ug/kg
PCB Congeners	PCB-202	White catfish	19	19	100	1.4	30	8.2			ug/kg
PCB Congeners	PCB-202	White perch	22	22	100	0.68	16	5.3			ug/kg
PCB Congeners	PCB-202	White sucker	5	5	100	1.4	9.3	4.1			ug/kg
PCB Congeners	PCB-202	Worms (all)	19	19	100	0.067	0.73	0.27			ug/kg
PCB Congeners	PCB-202	Worms (estuarine sp.)	5	5	100	0.067	0.12	0.088			ug/kg
PCB Congeners	PCB-202	Worms (freshwater sp.)	14	14	100	0.16	0.73	0.33			ug/kg
PCB Congeners	PCB-203	American eel (all)	21	21	100	5.1	96	19			ug/kg
PCB Congeners	PCB-203	Blue crab	24	24	100	0.97	7	2.5			ug/kg
PCB Congeners	PCB-203	Brown bullhead	6	6	100	1.8	11	5.7			ug/kg
PCB Congeners	PCB-203	Carp	12	12	100	9.9	50	26			ug/kg
PCB Congeners	PCB-203	Channel catfish	11	11	100	1.3	21	11			ug/kg
PCB Congeners	PCB-203	Fish (all)	131	131	100	1.2	96	15			ug/kg
PCB Congeners	PCB-203	Fish (≤ 11 cm)	23	23	100	1.2	5.3	2.7			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-203	Fish (≤ 13 cm)	26	26	100	1.2	5.3	2.7			ug/kg
PCB Congeners	PCB-203	Fish (≤ 18 cm)	41	41	100	1.2	52	6.8			ug/kg
PCB Congeners	PCB-203	Fish (≤ 20 cm)	43	43	100	1.2	52	7.2			ug/kg
PCB Congeners	PCB-203	Largemouth bass	3	3	100	12	18	16			ug/kg
PCB Congeners	PCB-203	Mummichog	18	18	100	1.5	5.3	3			ug/kg
PCB Congeners	PCB-203	Mussel (estuarine)	3	3	100	0.0018	0.0039	0.0026			ug/kg
PCB Congeners	PCB-203	Mussel (freshwater)	5	5	100	0.04	0.064	0.052			ug/kg
PCB Congeners	PCB-203	Northern pike	1	1	100	14	14				ug/kg
PCB Congeners	PCB-203	Other forage fish (no mummichog)	10	10	100	1.2	3.5	2			ug/kg
PCB Congeners	PCB-203	Smallmouth bass	3	3	100	4.9	18	12			ug/kg
PCB Congeners	PCB-203	White catfish	19	19	100	3.4	91	26			ug/kg
PCB Congeners	PCB-203	White perch	22	22	100	1.6	52	15			ug/kg
PCB Congeners	PCB-203	White sucker	5	5	100	3.8	30	12			ug/kg
PCB Congeners	PCB-203	Worms (all)	19	19	100	0.19	1.4	0.56			ug/kg
PCB Congeners	PCB-203	Worms (estuarine sp.)	5	5	100	0.19	0.38	0.27			ug/kg
PCB Congeners	PCB-203	Worms (freshwater sp.)	14	14	100	0.33	1.4	0.66			ug/kg
PCB Congeners	PCB-204	American eel (all)	21	15	71.4	0.006	0.074	0.024	0.0014	0.0038	ug/kg
PCB Congeners	PCB-204	Blue crab	24	0	0				0.0032	0.009	ug/kg
PCB Congeners	PCB-204	Brown bullhead	6	1	16.7	0.0033	0.0033		0.0025	0.0043	ug/kg
PCB Congeners	PCB-204	Carp	12	10	83.3	0.014	0.059	0.034	0.0046	0.0048	ug/kg
PCB Congeners	PCB-204	Channel catfish	11	8	72.7	0.0098	0.032	0.02	0.003	0.0033	ug/kg
PCB Congeners	PCB-204	Fish (all)	131	103	78.6	0.0013	0.09	0.017	0.00088	0.0065	ug/kg
PCB Congeners	PCB-204	Fish (≤ 11 cm)	23	23	100	0.0016	0.0055	0.0035			ug/kg
PCB Congeners	PCB-204	Fish (≤ 13 cm)	26	26	100	0.0016	0.0055	0.0035			ug/kg
PCB Congeners	PCB-204	Fish (≤ 18 cm)	41	36	87.8	0.0013	0.027	0.0058	0.0018	0.0028	ug/kg
PCB Congeners	PCB-204	Fish (≤ 20 cm)	43	38	88.4	0.0013	0.027	0.0067	0.0018	0.0028	ug/kg
PCB Congeners	PCB-204	Largemouth bass	3	2	66.7	0.01	0.017	0.014	0.0065	0.0065	ug/kg
PCB Congeners	PCB-204	Mummichog	18	18	100	0.0021	0.0055	0.0039			ug/kg
PCB Congeners	PCB-204	Mussel (estuarine)	3	0	0				0.000082	0.0003	ug/kg
PCB Congeners	PCB-204	Mussel (freshwater)	5	0	0				0.00017	0.00022	ug/kg
PCB Congeners	PCB-204	Northern pike	1	1	100	0.019	0.019				ug/kg
PCB Congeners	PCB-204	Other forage fish (no mummichog)	10	10	100	0.0013	0.0055	0.0028			ug/kg
PCB Congeners	PCB-204	Smallmouth bass	3	3	100	0.0062	0.02	0.013			ug/kg
PCB Congeners	PCB-204	White catfish	19	16	84.2	0.0038	0.09	0.027	0.0018	0.0044	ug/kg
PCB Congeners	PCB-204	White perch	22	14	63.6	0.0018	0.027	0.017	0.00088	0.0039	ug/kg
PCB Congeners	PCB-204	White sucker	5	5	100	0.0041	0.017	0.0096			ug/kg
PCB Congeners	PCB-204	Worms (all)	19	0	0				0.0023	0.0055	ug/kg
PCB Congeners	PCB-204	Worms (estuarine sp.)	5	0	0				0.0028	0.0048	ug/kg
PCB Congeners	PCB-204	Worms (freshwater sp.)	14	0	0				0.0023	0.0055	ug/kg
PCB Congeners	PCB-205	American eel (all)	21	21	100	0.23	5.5	0.94			ug/kg
PCB Congeners	PCB-205	Blue crab	24	21	87.5	0.016	0.17	0.066	0.0054	0.0062	ug/kg
PCB Congeners	PCB-205	Brown bullhead	6	6	100	0.14	1	0.49			ug/kg
PCB Congeners	PCB-205	Carp	12	12	100	0.69	3.7	1.8			ug/kg
PCB Congeners	PCB-205	Channel catfish	11	11	100	0.095	1.5	0.74			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-205	Fish (all)	131	130	99.2	0.072	5.5	0.92	0.0056	0.0056	ug/kg
PCB Congeners	PCB-205	Fish (≤ 11 cm)	23	22	95.7	0.072	0.36	0.16	0.0056	0.0056	ug/kg
PCB Congeners	PCB-205	Fish (≤ 13 cm)	26	25	96.2	0.072	0.36	0.16	0.0056	0.0056	ug/kg
PCB Congeners	PCB-205	Fish (≤ 18 cm)	41	40	97.6	0.072	3.6	0.45	0.0056	0.0056	ug/kg
PCB Congeners	PCB-205	Fish (≤ 20 cm)	43	42	97.7	0.072	3.6	0.46	0.0056	0.0056	ug/kg
PCB Congeners	PCB-205	Largemouth bass	3	3	100	0.58	1.2	0.88			ug/kg
PCB Congeners	PCB-205	Mummichog	18	17	94.4	0.072	0.36	0.17	0.0056	0.0056	ug/kg
PCB Congeners	PCB-205	Mussel (estuarine)	3	0	0				0.00024	0.00064	ug/kg
PCB Congeners	PCB-205	Mussel (freshwater)	5	5	100	0.0015	0.0029	0.0022			ug/kg
PCB Congeners	PCB-205	Northern pike	1	1	100	0.88	0.88				ug/kg
PCB Congeners	PCB-205	Other forage fish (no mummichog)	10	10	100	0.091	0.29	0.16			ug/kg
PCB Congeners	PCB-205	Smallmouth bass	3	3	100	0.22	1	0.65			ug/kg
PCB Congeners	PCB-205	White catfish	19	19	100	0.24	5.5	1.7			ug/kg
PCB Congeners	PCB-205	White perch	22	22	100	0.13	3.6	0.92			ug/kg
PCB Congeners	PCB-205	White sucker	5	5	100	0.21	1.8	0.73			ug/kg
PCB Congeners	PCB-205	Worms (all)	19	19	100	0.014	0.11	0.04			ug/kg
PCB Congeners	PCB-205	Worms (estuarine sp.)	5	5	100	0.014	0.027	0.02			ug/kg
PCB Congeners	PCB-205	Worms (freshwater sp.)	14	14	100	0.026	0.11	0.047			ug/kg
PCB Congeners	PCB-206	American eel (all)	21	21	100	3	27	7.6			ug/kg
PCB Congeners	PCB-206	Blue crab	24	24	100	0.42	2.3	0.98			ug/kg
PCB Congeners	PCB-206	Brown bullhead	6	6	100	2.3	6.3	4			ug/kg
PCB Congeners	PCB-206	Carp	12	12	100	7.6	24	14			ug/kg
PCB Congeners	PCB-206	Channel catfish	11	11	100	0.97	14	6.3			ug/kg
PCB Congeners	PCB-206	Fish (all)	131	131	100	0.75	27	6.5			ug/kg
PCB Congeners	PCB-206	Fish (≤ 11 cm)	23	23	100	0.75	2.9	1.5			ug/kg
PCB Congeners	PCB-206	Fish (≤ 13 cm)	26	26	100	0.75	2.9	1.5			ug/kg
PCB Congeners	PCB-206	Fish (≤ 18 cm)	41	41	100	0.75	15	2.9			ug/kg
PCB Congeners	PCB-206	Fish (≤ 20 cm)	43	43	100	0.75	15	3			ug/kg
PCB Congeners	PCB-206	Largemouth bass	3	3	100	4.2	5.8	4.7			ug/kg
PCB Congeners	PCB-206	Mummichog	18	18	100	0.75	2.3	1.5			ug/kg
PCB Congeners	PCB-206	Mussel (estuarine)	3	3	100	0.0014	0.0017	0.0015			ug/kg
PCB Congeners	PCB-206	Mussel (freshwater)	5	5	100	0.034	0.052	0.045			ug/kg
PCB Congeners	PCB-206	Northern pike	1	1	100	6.6	6.6				ug/kg
PCB Congeners	PCB-206	Other forage fish (no mummichog)	10	10	100	1.2	2.9	1.8			ug/kg
PCB Congeners	PCB-206	Smallmouth bass	3	3	100	3.4	9.5	6.5			ug/kg
PCB Congeners	PCB-206	White catfish	19	19	100	2.3	27	9.9			ug/kg
PCB Congeners	PCB-206	White perch	22	22	100	1.3	15	5.6			ug/kg
PCB Congeners	PCB-206	White sucker	5	5	100	2.7	9.5	4.9			ug/kg
PCB Congeners	PCB-206	Worms (all)	19	19	100	0.3	0.86	0.45			ug/kg
PCB Congeners	PCB-206	Worms (estuarine sp.)	5	5	100	0.3	0.39	0.34			ug/kg
PCB Congeners	PCB-206	Worms (freshwater sp.)	14	14	100	0.3	0.86	0.5			ug/kg
PCB Congeners	PCB-207	American eel (all)	21	21	100	0.27	4.1	0.97			ug/kg
PCB Congeners	PCB-207	Blue crab	24	24	100	0.063	0.32	0.14			ug/kg
PCB Congeners	PCB-207	Brown bullhead	6	6	100	0.21	0.78	0.43			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-207	Carp	12	12	100	0.82	3.8	2.1			ug/kg
PCB Congeners	PCB-207	Channel catfish	11	11	100	0.13	1.5	0.73			ug/kg
PCB Congeners	PCB-207	Fish (all)	131	131	100	0.099	4.1	0.84			ug/kg
PCB Congeners	PCB-207	Fish (≤ 11 cm)	23	23	100	0.1	0.29	0.18			ug/kg
PCB Congeners	PCB-207	Fish (≤ 13 cm)	26	26	100	0.1	0.29	0.18			ug/kg
PCB Congeners	PCB-207	Fish (≤ 18 cm)	41	41	100	0.099	2.1	0.35			ug/kg
PCB Congeners	PCB-207	Fish (≤ 20 cm)	43	43	100	0.099	2.1	0.37			ug/kg
PCB Congeners	PCB-207	Largemouth bass	3	3	100	0.53	0.86	0.67			ug/kg
PCB Congeners	PCB-207	Mummichog	18	18	100	0.1	0.29	0.19			ug/kg
PCB Congeners	PCB-207	Mussel (estuarine)	3	0	0				0.00038	0.0013	ug/kg
PCB Congeners	PCB-207	Mussel (freshwater)	5	5	100	0.0023	0.0041	0.0033			ug/kg
PCB Congeners	PCB-207	Northern pike	1	1	100	0.88	0.88				ug/kg
PCB Congeners	PCB-207	Other forage fish (no mummichog)	10	10	100	0.099	0.28	0.16			ug/kg
PCB Congeners	PCB-207	Smallmouth bass	3	3	100	0.34	1.1	0.74			ug/kg
PCB Congeners	PCB-207	White catfish	19	19	100	0.23	4.1	1.4			ug/kg
PCB Congeners	PCB-207	White perch	22	22	100	0.11	2.1	0.72			ug/kg
PCB Congeners	PCB-207	White sucker	5	5	100	0.26	1.2	0.57			ug/kg
PCB Congeners	PCB-207	Worms (all)	19	19	100	0.037	0.1	0.056			ug/kg
PCB Congeners	PCB-207	Worms (estuarine sp.)	5	5	100	0.039	0.049	0.045			ug/kg
PCB Congeners	PCB-207	Worms (freshwater sp.)	14	14	100	0.037	0.1	0.06			ug/kg
PCB Congeners	PCB-208	American eel (all)	21	21	100	1.4	10	3.1			ug/kg
PCB Congeners	PCB-208	Blue crab	24	24	100	0.18	0.92	0.44			ug/kg
PCB Congeners	PCB-208	Brown bullhead	6	6	100	0.94	2.7	1.6			ug/kg
PCB Congeners	PCB-208	Carp	12	12	100	3.7	14	7.7			ug/kg
PCB Congeners	PCB-208	Channel catfish	11	11	100	0.48	5.3	2.6			ug/kg
PCB Congeners	PCB-208	Fish (all)	131	131	100	0.29	14	2.7			ug/kg
PCB Congeners	PCB-208	Fish (≤ 11 cm)	23	23	100	0.32	1.3	0.64			ug/kg
PCB Congeners	PCB-208	Fish (≤ 13 cm)	26	26	100	0.32	1.3	0.64			ug/kg
PCB Congeners	PCB-208	Fish (≤ 18 cm)	41	41	100	0.32	3.5	0.96			ug/kg
PCB Congeners	PCB-208	Fish (≤ 20 cm)	43	43	100	0.32	3.5	0.99			ug/kg
PCB Congeners	PCB-208	Largemouth bass	3	3	100	0.78	2.6	1.6			ug/kg
PCB Congeners	PCB-208	Mummichog	18	18	100	0.32	0.95	0.62			ug/kg
PCB Congeners	PCB-208	Mussel (estuarine)	3	1	33.3	0.00044	0.00044		0.00057	0.0012	ug/kg
PCB Congeners	PCB-208	Mussel (freshwater)	5	5	100	0.016	0.025	0.022			ug/kg
PCB Congeners	PCB-208	Northern pike	1	1	100	2.9	2.9				ug/kg
PCB Congeners	PCB-208	Other forage fish (no mummichog)	10	10	100	0.48	1.3	0.73			ug/kg
PCB Congeners	PCB-208	Smallmouth bass	3	3	100	1.6	3.4	2.5			ug/kg
PCB Congeners	PCB-208	White catfish	19	19	100	0.98	13	4.1			ug/kg
PCB Congeners	PCB-208	White perch	22	22	100	0.29	3.5	1.5			ug/kg
PCB Congeners	PCB-208	White sucker	5	5	100	1.1	3.4	1.8			ug/kg
PCB Congeners	PCB-208	Worms (all)	19	19	100	0.11	0.44	0.22			ug/kg
PCB Congeners	PCB-208	Worms (estuarine sp.)	5	5	100	0.11	0.15	0.13			ug/kg
PCB Congeners	PCB-208	Worms (freshwater sp.)	14	14	100	0.15	0.44	0.25			ug/kg
PCB Congeners	Decachlorobipheny	American eel (all)	21	21	100	1.6	7.6	3.2			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	Decachlorobipheny	Blue crab	24	24	100	0.16	0.73	0.42			ug/kg
PCB Congeners	Decachlorobipheny	Brown bullhead	6	6	100	1.4	3	1.9			ug/kg
PCB Congeners	Decachlorobipheny	Carp	12	12	100	4.2	16	9.4			ug/kg
PCB Congeners	Decachlorobipheny	Channel catfish	11	11	100	0.52	5.5	2.8			ug/kg
PCB Congeners	Decachlorobipheny	Fish (all)	131	131	100	0.26	16	2.9			ug/kg
PCB Congeners	Decachlorobipheny	Fish (≤ 11 cm)	23	23	100	0.28	1.5	0.68			ug/kg
PCB Congeners	Decachlorobipheny	Fish (≤ 13 cm)	26	26	100	0.28	1.5	0.69			ug/kg
PCB Congeners	Decachlorobipheny	Fish (≤ 18 cm)	41	41	100	0.28	3.3	1			ug/kg
PCB Congeners	Decachlorobipheny	Fish (≤ 20 cm)	43	43	100	0.28	3.3	1.1			ug/kg
PCB Congeners	Decachlorobipheny	Largemouth bass	3	3	100	0.26	2.2	1.3			ug/kg
PCB Congeners	Decachlorobipheny	Mummichog	18	18	100	0.28	0.98	0.63			ug/kg
PCB Congeners	Decachlorobipheny	Mussel (estuarine)	3	3	100	0.0011	0.0015	0.0013			ug/kg
PCB Congeners	Decachlorobipheny	Mussel (freshwater)	5	5	100	0.031	0.05	0.041			ug/kg
PCB Congeners	Decachlorobipheny	Northern pike	1	1	100	2.9	2.9				ug/kg
PCB Congeners	Decachlorobipheny	Other forage fish (no mummichog)	10	10	100	0.6	1.5	0.88			ug/kg
PCB Congeners	Decachlorobipheny	Smallmouth bass	3	3	100	2	3.5	2.7			ug/kg
PCB Congeners	Decachlorobipheny	White catfish	19	19	100	0.98	11	3.7			ug/kg
PCB Congeners	Decachlorobipheny	White perch	22	22	100	0.54	3.3	1.9			ug/kg
PCB Congeners	Decachlorobipheny	White sucker	5	5	100	0.66	2.7	1.8			ug/kg
PCB Congeners	Decachlorobipheny	Worms (all)	19	19	100	0.27	0.76	0.38			ug/kg
PCB Congeners	Decachlorobipheny	Worms (estuarine sp.)	5	5	100	0.28	0.33	0.3			ug/kg
PCB Congeners	Decachlorobipheny	Worms (freshwater sp.)	14	14	100	0.27	0.76	0.41			ug/kg
PCB Congeners	Total PCB Congener	American eel (all)	21	21	100	420	5700	1500			ug/kg
PCB Congeners	Total PCB Congener	Blue crab	24	24	100	150	580	320			ug/kg
PCB Congeners	Total PCB Congener	Brown bullhead	6	6	100	260	1700	870			ug/kg
PCB Congeners	Total PCB Congener	Carp	12	12	100	1500	7900	4100			ug/kg
PCB Congeners	Total PCB Congener	Channel catfish	11	11	100	350	2700	1300			ug/kg
PCB Congeners	Total PCB Congener	Fish (all)	131	131	100	170	7900	1800			ug/kg
PCB Congeners	Total PCB Congener	Fish (≤ 11 cm)	23	23	100	240	930	490			ug/kg
PCB Congeners	Total PCB Congener	Fish (≤ 13 cm)	26	26	100	240	930	490			ug/kg
PCB Congeners	Total PCB Congener	Fish (≤ 18 cm)	41	41	100	170	5100	1000			ug/kg
PCB Congeners	Total PCB Congener	Fish (≤ 20 cm)	43	43	100	170	5100	1100			ug/kg
PCB Congeners	Total PCB Congener	Largemouth bass	3	3	100	1100	7900	3700			ug/kg
PCB Congeners	Total PCB Congener	Mummichog	18	18	100	240	930	520			ug/kg
PCB Congeners	Total PCB Congener	Mussel (estuarine)	3	3	100	2.6	18	9.3			ug/kg
PCB Congeners	Total PCB Congener	Mussel (freshwater)	5	5	100	17	30	23			ug/kg
PCB Congeners	Total PCB Congener	Northern pike	1	1	100	2000	2000				ug/kg
PCB Congeners	Total PCB Congener	Other forage fish (no mummichog)	10	10	100	170	870	440			ug/kg
PCB Congeners	Total PCB Congener	Smallmouth bass	3	3	100	630	1400	1000			ug/kg
PCB Congeners	Total PCB Congener	White catfish	19	19	100	630	7300	2700			ug/kg
PCB Congeners	Total PCB Congener	White perch	22	22	100	290	5100	2000			ug/kg
PCB Congeners	Total PCB Congener	White sucker	5	5	100	540	2900	1500			ug/kg
PCB Congeners	Total PCB Congener	Worms (all)	19	19	100	26	530	150			ug/kg
PCB Congeners	Total PCB Congener	Worms (estuarine sp.)	5	5	100	26	130	53			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	Total PCB Congener	Worms (freshwater sp.)	14	14	100	55	530	180			ug/kg
PCB Congeners	Total PCB Congener	American eel (all)	21	21	100	420	5700	1500			ug/kg
PCB Congeners	Total PCB Congener	Blue crab	24	24	100	150	580	320			ug/kg
PCB Congeners	Total PCB Congener	Brown bullhead	6	6	100	260	1700	870			ug/kg
PCB Congeners	Total PCB Congener	Carp	12	12	100	1500	7900	4100			ug/kg
PCB Congeners	Total PCB Congener	Channel catfish	11	11	100	350	2700	1300			ug/kg
PCB Congeners	Total PCB Congener	Fish (all)	131	131	100	170	7900	1800			ug/kg
PCB Congeners	Total PCB Congener	Fish (≤ 11 cm)	23	23	100	240	930	490			ug/kg
PCB Congeners	Total PCB Congener	Fish (≤ 13 cm)	26	26	100	240	930	490			ug/kg
PCB Congeners	Total PCB Congener	Fish (≤ 18 cm)	41	41	100	170	5100	1000			ug/kg
PCB Congeners	Total PCB Congener	Fish (≤ 20 cm)	43	43	100	170	5100	1100			ug/kg
PCB Congeners	Total PCB Congener	Largemouth bass	3	3	100	1100	7900	3700			ug/kg
PCB Congeners	Total PCB Congener	Mummichog	18	18	100	240	930	520			ug/kg
PCB Congeners	Total PCB Congener	Mussel (estuarine)	3	3	100	2.6	18	9.3			ug/kg
PCB Congeners	Total PCB Congener	Mussel (freshwater)	5	5	100	17	30	23			ug/kg
PCB Congeners	Total PCB Congener	Northern pike	1	1	100	2000	2000				ug/kg
PCB Congeners	Total PCB Congener	Other forage fish (no mummichog)	10	10	100	170	870	440			ug/kg
PCB Congeners	Total PCB Congener	Smallmouth bass	3	3	100	630	1400	1000			ug/kg
PCB Congeners	Total PCB Congener	White catfish	19	19	100	630	7300	2700			ug/kg
PCB Congeners	Total PCB Congener	White perch	22	22	100	290	5100	2000			ug/kg
PCB Congeners	Total PCB Congener	White sucker	5	5	100	540	2900	1500			ug/kg
PCB Congeners	Total PCB Congener	Worms (all)	19	19	100	26	530	150			ug/kg
PCB Congeners	Total PCB Congener	Worms (estuarine sp.)	5	5	100	26	130	53			ug/kg
PCB Congeners	Total PCB Congener	Worms (freshwater sp.)	14	14	100	55	530	180			ug/kg
PCB Congeners	Total PCB Congener	American eel (all)	21	21	100	420	5700	1500			ug/kg
PCB Congeners	Total PCB Congener	Blue crab	24	24	100	150	580	320			ug/kg
PCB Congeners	Total PCB Congener	Brown bullhead	6	6	100	260	1700	870			ug/kg
PCB Congeners	Total PCB Congener	Carp	12	12	100	1500	7900	4100			ug/kg
PCB Congeners	Total PCB Congener	Channel catfish	11	11	100	350	2700	1300			ug/kg
PCB Congeners	Total PCB Congener	Fish (all)	131	131	100	170	7900	1800			ug/kg
PCB Congeners	Total PCB Congener	Fish (≤ 11 cm)	23	23	100	240	930	490			ug/kg
PCB Congeners	Total PCB Congener	Fish (≤ 13 cm)	26	26	100	240	930	490			ug/kg
PCB Congeners	Total PCB Congener	Fish (≤ 18 cm)	41	41	100	170	5100	1000			ug/kg
PCB Congeners	Total PCB Congener	Fish (≤ 20 cm)	43	43	100	170	5100	1100			ug/kg
PCB Congeners	Total PCB Congener	Largemouth bass	3	3	100	1100	7900	3700			ug/kg
PCB Congeners	Total PCB Congener	Mummichog	18	18	100	240	930	520			ug/kg
PCB Congeners	Total PCB Congener	Mussel (estuarine)	3	3	100	2.7	18	9.4			ug/kg
PCB Congeners	Total PCB Congener	Mussel (freshwater)	5	5	100	17	30	23			ug/kg
PCB Congeners	Total PCB Congener	Northern pike	1	1	100	2000	2000				ug/kg
PCB Congeners	Total PCB Congener	Other forage fish (no mummichog)	10	10	100	170	870	440			ug/kg
PCB Congeners	Total PCB Congener	Smallmouth bass	3	3	100	630	1400	1000			ug/kg
PCB Congeners	Total PCB Congener	White catfish	19	19	100	630	7300	2700			ug/kg
PCB Congeners	Total PCB Congener	White perch	22	22	100	290	5100	2000			ug/kg
PCB Congeners	Total PCB Congener	White sucker	5	5	100	540	2900	1500			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	Total PCB Congener	Worms (all)	19	19	100	26	530	150			ug/kg
PCB Congeners	Total PCB Congener	Worms (estuarine sp.)	5	5	100	26	130	53			ug/kg
PCB Congeners	Total PCB Congener	Worms (freshwater sp.)	14	14	100	55	530	180			ug/kg
PCB Congeners	PCB TEQ-Bird	American eel (all)	21	21	100	2.6	23	12			ng/kg
PCB Congeners	PCB TEQ-Bird	Blue crab	24	24	100	45	110	88			ng/kg
PCB Congeners	PCB TEQ-Bird	Brown bullhead	6	6	100	20	84	43			ng/kg
PCB Congeners	PCB TEQ-Bird	Carp	12	12	100	67	260	170			ng/kg
PCB Congeners	PCB TEQ-Bird	Channel catfish	11	11	100	11	55	34			ng/kg
PCB Congeners	PCB TEQ-Bird	Fish (all)	131	131	100	2.6	540	87			ng/kg
PCB Congeners	PCB TEQ-Bird	Fish (≤ 11 cm)	23	23	100	17	88	45			ng/kg
PCB Congeners	PCB TEQ-Bird	Fish (≤ 13 cm)	26	26	100	17	88	45			ng/kg
PCB Congeners	PCB TEQ-Bird	Fish (≤ 18 cm)	41	41	100	17	310	94			ng/kg
PCB Congeners	PCB TEQ-Bird	Fish (≤ 20 cm)	43	43	100	17	310	100			ng/kg
PCB Congeners	PCB TEQ-Bird	Largemouth bass	3	3	100	25	540	230			ng/kg
PCB Congeners	PCB TEQ-Bird	Mummichog	18	18	100	17	73	41			ng/kg
PCB Congeners	PCB TEQ-Bird	Mussel (estuarine)	3	3	100	0.29	2.6	1.3			ng/kg
PCB Congeners	PCB TEQ-Bird	Mussel (freshwater)	5	5	100	2.5	5.2	3.8			ng/kg
PCB Congeners	PCB TEQ-Bird	Northern pike	1	1	100	160	160				ng/kg
PCB Congeners	PCB TEQ-Bird	Other forage fish (no mummichog)	10	10	100	20	95	53			ng/kg
PCB Congeners	PCB TEQ-Bird	Smallmouth bass	3	3	100	37	67	50			ng/kg
PCB Congeners	PCB TEQ-Bird	White catfish	19	19	100	18	210	70			ng/kg
PCB Congeners	PCB TEQ-Bird	White perch	22	22	100	31	400	190			ng/kg
PCB Congeners	PCB TEQ-Bird	White sucker	5	5	100	64	170	120			ng/kg
PCB Congeners	PCB TEQ-Bird	Worms (all)	19	19	100	4.3	90	21			ng/kg
PCB Congeners	PCB TEQ-Bird	Worms (estuarine sp.)	5	5	100	4.3	25	8.7			ng/kg
PCB Congeners	PCB TEQ-Bird	Worms (freshwater sp.)	14	14	100	8.8	90	26			ng/kg
PCB Congeners	PCB TEQ-Bird (ND=(	American eel (all)	21	21	100	3.7	25	13			ng/kg
PCB Congeners	PCB TEQ-Bird (ND=(	Blue crab	24	24	100	47	110	88			ng/kg
PCB Congeners	PCB TEQ-Bird (ND=(	Brown bullhead	6	6	100	20	84	43			ng/kg
PCB Congeners	PCB TEQ-Bird (ND=(	Carp	12	12	100	67	260	170			ng/kg
PCB Congeners	PCB TEQ-Bird (ND=(	Channel catfish	11	11	100	12	55	34			ng/kg
PCB Congeners	PCB TEQ-Bird (ND=(	Fish (all)	131	131	100	3.7	560	87			ng/kg
PCB Congeners	PCB TEQ-Bird (ND=(	Fish (≤ 11 cm)	23	23	100	17	88	45			ng/kg
PCB Congeners	PCB TEQ-Bird (ND=(	Fish (≤ 13 cm)	26	26	100	17	88	45			ng/kg
PCB Congeners	PCB TEQ-Bird (ND=(	Fish (≤ 18 cm)	41	41	100	17	310	94			ng/kg
PCB Congeners	PCB TEQ-Bird (ND=(	Fish (≤ 20 cm)	43	43	100	17	310	100			ng/kg
PCB Congeners	PCB TEQ-Bird (ND=(	Largemouth bass	3	3	100	26	560	230			ng/kg
PCB Congeners	PCB TEQ-Bird (ND=(	Mummichog	18	18	100	17	73	41			ng/kg
PCB Congeners	PCB TEQ-Bird (ND=(	Mussel (estuarine)	3	3	100	0.34	2.6	1.3			ng/kg
PCB Congeners	PCB TEQ-Bird (ND=(	Mussel (freshwater)	5	5	100	2.5	5.2	3.8			ng/kg
PCB Congeners	PCB TEQ-Bird (ND=(	Northern pike	1	1	100	160	160				ng/kg
PCB Congeners	PCB TEQ-Bird (ND=(	Other forage fish (no mummichog)	10	10	100	20	95	53			ng/kg
PCB Congeners	PCB TEQ-Bird (ND=(	Smallmouth bass	3	3	100	37	67	50			ng/kg
PCB Congeners	PCB TEQ-Bird (ND=(	White catfish	19	19	100	18	210	70			ng/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB TEQ-Bird (ND=(	White perch	22	22	100	31	400	190			ng/kg
PCB Congeners	PCB TEQ-Bird (ND=(	White sucker	5	5	100	64	170	120			ng/kg
PCB Congeners	PCB TEQ-Bird (ND=(	Worms (all)	19	19	100	4.7	90	22			ng/kg
PCB Congeners	PCB TEQ-Bird (ND=(	Worms (estuarine sp.)	5	5	100	4.7	25	9.1			ng/kg
PCB Congeners	PCB TEQ-Bird (ND=(	Worms (freshwater sp.)	14	14	100	9.1	90	26			ng/kg
PCB Congeners	PCB TEQ-Bird (ND=[	American eel (all)	21	21	100	4.7	31	15			ng/kg
PCB Congeners	PCB TEQ-Bird (ND=[	Blue crab	24	24	100	49	110	88			ng/kg
PCB Congeners	PCB TEQ-Bird (ND=[	Brown bullhead	6	6	100	20	84	43			ng/kg
PCB Congeners	PCB TEQ-Bird (ND=[	Carp	12	12	100	67	260	170			ng/kg
PCB Congeners	PCB TEQ-Bird (ND=[	Channel catfish	11	11	100	12	55	34			ng/kg
PCB Congeners	PCB TEQ-Bird (ND=[	Fish (all)	131	131	100	4.7	570	87			ng/kg
PCB Congeners	PCB TEQ-Bird (ND=[	Fish (≤ 11 cm)	23	23	100	17	88	45			ng/kg
PCB Congeners	PCB TEQ-Bird (ND=[	Fish (≤ 13 cm)	26	26	100	17	88	45			ng/kg
PCB Congeners	PCB TEQ-Bird (ND=[	Fish (≤ 18 cm)	41	41	100	17	310	94			ng/kg
PCB Congeners	PCB TEQ-Bird (ND=[	Fish (≤ 20 cm)	43	43	100	17	310	100			ng/kg
PCB Congeners	PCB TEQ-Bird (ND=[	Largemouth bass	3	3	100	27	570	240			ng/kg
PCB Congeners	PCB TEQ-Bird (ND=[	Mummichog	18	18	100	17	73	41			ng/kg
PCB Congeners	PCB TEQ-Bird (ND=[	Mussel (estuarine)	3	3	100	0.39	2.6	1.3			ng/kg
PCB Congeners	PCB TEQ-Bird (ND=[	Mussel (freshwater)	5	5	100	2.5	5.2	3.8			ng/kg
PCB Congeners	PCB TEQ-Bird (ND=[	Northern pike	1	1	100	160	160				ng/kg
PCB Congeners	PCB TEQ-Bird (ND=[	Other forage fish (no mummichog)	10	10	100	20	95	53			ng/kg
PCB Congeners	PCB TEQ-Bird (ND=[	Smallmouth bass	3	3	100	37	67	50			ng/kg
PCB Congeners	PCB TEQ-Bird (ND=[	White catfish	19	19	100	18	210	70			ng/kg
PCB Congeners	PCB TEQ-Bird (ND=[	White perch	22	22	100	31	400	190			ng/kg
PCB Congeners	PCB TEQ-Bird (ND=[	White sucker	5	5	100	64	170	120			ng/kg
PCB Congeners	PCB TEQ-Bird (ND=[	Worms (all)	19	19	100	5.1	90	22			ng/kg
PCB Congeners	PCB TEQ-Bird (ND=[	Worms (estuarine sp.)	5	5	100	5.1	25	9.6			ng/kg
PCB Congeners	PCB TEQ-Bird (ND=[	Worms (freshwater sp.)	14	14	100	9.4	90	26			ng/kg
PCB Congeners	PCB TEQ-Fish	American eel (all)	21	21	100	0.3	2.3	0.95			ng/kg
PCB Congeners	PCB TEQ-Fish	Blue crab	24	24	100	0.28	1.1	0.7			ng/kg
PCB Congeners	PCB TEQ-Fish	Brown bullhead	6	6	100	0.42	1.6	0.92			ng/kg
PCB Congeners	PCB TEQ-Fish	Carp	12	12	100	1.4	6.5	3.6			ng/kg
PCB Congeners	PCB TEQ-Fish	Channel catfish	11	11	100	0.23	2.7	1.4			ng/kg
PCB Congeners	PCB TEQ-Fish	Fish (all)	131	131	100	0.19	16	1.7			ng/kg
PCB Congeners	PCB TEQ-Fish	Fish (≤ 11 cm)	23	23	100	0.25	0.89	0.54			ng/kg
PCB Congeners	PCB TEQ-Fish	Fish (≤ 13 cm)	26	26	100	0.25	0.89	0.53			ng/kg
PCB Congeners	PCB TEQ-Fish	Fish (≤ 18 cm)	41	41	100	0.19	3.1	0.95			ng/kg
PCB Congeners	PCB TEQ-Fish	Fish (≤ 20 cm)	43	43	100	0.19	3.1	1			ng/kg
PCB Congeners	PCB TEQ-Fish	Largemouth bass	3	3	100	1.1	16	6.4			ng/kg
PCB Congeners	PCB TEQ-Fish	Mummichog	18	18	100	0.27	0.89	0.55			ng/kg
PCB Congeners	PCB TEQ-Fish	Mussel (estuarine)	3	3	100	0.00099	0.013	0.0064			ng/kg
PCB Congeners	PCB TEQ-Fish	Mussel (freshwater)	5	5	100	0.016	0.027	0.021			ng/kg
PCB Congeners	PCB TEQ-Fish	Northern pike	1	1	100	2.3	2.3				ng/kg
PCB Congeners	PCB TEQ-Fish	Other forage fish (no mummichog)	10	10	100	0.19	0.9	0.5			ng/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB TEQ-Fish	Smallmouth bass	3	3	100	0.69	1.4	1			ng/kg
PCB Congeners	PCB TEQ-Fish	White catfish	19	19	100	0.61	7.4	2.6			ng/kg
PCB Congeners	PCB TEQ-Fish	White perch	22	22	100	0.28	3.4	1.8			ng/kg
PCB Congeners	PCB TEQ-Fish	White sucker	5	5	100	0.81	3.2	1.7			ng/kg
PCB Congeners	PCB TEQ-Fish	Worms (all)	19	19	100	0.015	0.44	0.13			ng/kg
PCB Congeners	PCB TEQ-Fish	Worms (estuarine sp.)	5	5	100	0.015	0.14	0.041			ng/kg
PCB Congeners	PCB TEQ-Fish	Worms (freshwater sp.)	14	14	100	0.035	0.44	0.16			ng/kg
PCB Congeners	PCB TEQ-Fish (ND=0	American eel (all)	21	21	100	0.33	2.4	0.99			ng/kg
PCB Congeners	PCB TEQ-Fish (ND=0	Blue crab	24	24	100	0.3	1.1	0.71			ng/kg
PCB Congeners	PCB TEQ-Fish (ND=0	Brown bullhead	6	6	100	0.42	1.6	0.92			ng/kg
PCB Congeners	PCB TEQ-Fish (ND=0	Carp	12	12	100	1.4	6.5	3.6			ng/kg
PCB Congeners	PCB TEQ-Fish (ND=0	Channel catfish	11	11	100	0.23	2.7	1.4			ng/kg
PCB Congeners	PCB TEQ-Fish (ND=0	Fish (all)	131	131	100	0.19	17	1.7			ng/kg
PCB Congeners	PCB TEQ-Fish (ND=0	Fish (≤ 11 cm)	23	23	100	0.25	0.89	0.54			ng/kg
PCB Congeners	PCB TEQ-Fish (ND=0	Fish (≤ 13 cm)	26	26	100	0.25	0.89	0.53			ng/kg
PCB Congeners	PCB TEQ-Fish (ND=0	Fish (≤ 18 cm)	41	41	100	0.19	3.1	0.95			ng/kg
PCB Congeners	PCB TEQ-Fish (ND=0	Fish (≤ 20 cm)	43	43	100	0.19	3.1	1			ng/kg
PCB Congeners	PCB TEQ-Fish (ND=0	Largemouth bass	3	3	100	1.1	17	6.7			ng/kg
PCB Congeners	PCB TEQ-Fish (ND=0	Mummichog	18	18	100	0.27	0.89	0.55			ng/kg
PCB Congeners	PCB TEQ-Fish (ND=0	Mussel (estuarine)	3	3	100	0.0026	0.013	0.0069			ng/kg
PCB Congeners	PCB TEQ-Fish (ND=0	Mussel (freshwater)	5	5	100	0.016	0.027	0.021			ng/kg
PCB Congeners	PCB TEQ-Fish (ND=0	Northern pike	1	1	100	2.3	2.3				ng/kg
PCB Congeners	PCB TEQ-Fish (ND=0	Other forage fish (no mummichog)	10	10	100	0.19	0.9	0.5			ng/kg
PCB Congeners	PCB TEQ-Fish (ND=0	Smallmouth bass	3	3	100	0.69	1.4	1			ng/kg
PCB Congeners	PCB TEQ-Fish (ND=0	White catfish	19	19	100	0.61	7.4	2.6			ng/kg
PCB Congeners	PCB TEQ-Fish (ND=0	White perch	22	22	100	0.28	3.4	1.8			ng/kg
PCB Congeners	PCB TEQ-Fish (ND=0	White sucker	5	5	100	0.81	3.2	1.7			ng/kg
PCB Congeners	PCB TEQ-Fish (ND=0	Worms (all)	19	19	100	0.027	0.44	0.13			ng/kg
PCB Congeners	PCB TEQ-Fish (ND=0	Worms (estuarine sp.)	5	5	100	0.027	0.14	0.054			ng/kg
PCB Congeners	PCB TEQ-Fish (ND=0	Worms (freshwater sp.)	14	14	100	0.05	0.44	0.16			ng/kg
PCB Congeners	PCB TEQ-Fish (ND=D	American eel (all)	21	21	100	0.36	2.6	1			ng/kg
PCB Congeners	PCB TEQ-Fish (ND=D	Blue crab	24	24	100	0.31	1.1	0.72			ng/kg
PCB Congeners	PCB TEQ-Fish (ND=D	Brown bullhead	6	6	100	0.42	1.6	0.92			ng/kg
PCB Congeners	PCB TEQ-Fish (ND=D	Carp	12	12	100	1.4	6.5	3.6			ng/kg
PCB Congeners	PCB TEQ-Fish (ND=D	Channel catfish	11	11	100	0.23	2.8	1.4			ng/kg
PCB Congeners	PCB TEQ-Fish (ND=D	Fish (all)	131	131	100	0.19	17	1.7			ng/kg
PCB Congeners	PCB TEQ-Fish (ND=D	Fish (≤ 11 cm)	23	23	100	0.25	0.89	0.54			ng/kg
PCB Congeners	PCB TEQ-Fish (ND=D	Fish (≤ 13 cm)	26	26	100	0.25	0.89	0.53			ng/kg
PCB Congeners	PCB TEQ-Fish (ND=D	Fish (≤ 18 cm)	41	41	100	0.19	3.1	0.95			ng/kg
PCB Congeners	PCB TEQ-Fish (ND=D	Fish (≤ 20 cm)	43	43	100	0.19	3.1	1			ng/kg
PCB Congeners	PCB TEQ-Fish (ND=D	Largemouth bass	3	3	100	1.1	17	6.7			ng/kg
PCB Congeners	PCB TEQ-Fish (ND=D	Mummichog	18	18	100	0.27	0.89	0.55			ng/kg
PCB Congeners	PCB TEQ-Fish (ND=D	Mussel (estuarine)	3	3	100	0.0043	0.013	0.0075			ng/kg
PCB Congeners	PCB TEQ-Fish (ND=D	Mussel (freshwater)	5	5	100	0.016	0.027	0.021			ng/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB TEQ-Fish (ND=D	Northern pike	1	1	100	2.3	2.3				ng/kg
PCB Congeners	PCB TEQ-Fish (ND=D	Other forage fish (no mummichog)	10	10	100	0.19	0.9	0.5			ng/kg
PCB Congeners	PCB TEQ-Fish (ND=D	Smallmouth bass	3	3	100	0.69	1.4	1			ng/kg
PCB Congeners	PCB TEQ-Fish (ND=D	White catfish	19	19	100	0.62	7.4	2.6			ng/kg
PCB Congeners	PCB TEQ-Fish (ND=D	White perch	22	22	100	0.28	3.4	1.8			ng/kg
PCB Congeners	PCB TEQ-Fish (ND=D	White sucker	5	5	100	0.81	3.2	1.7			ng/kg
PCB Congeners	PCB TEQ-Fish (ND=D	Worms (all)	19	19	100	0.039	0.44	0.14			ng/kg
PCB Congeners	PCB TEQ-Fish (ND=D	Worms (estuarine sp.)	5	5	100	0.039	0.14	0.067			ng/kg
PCB Congeners	PCB TEQ-Fish (ND=D	Worms (freshwater sp.)	14	14	100	0.065	0.44	0.17			ng/kg
PCB Congeners	PCB TEQ-Mammal	American eel (all)	21	21	100	1.8	17	8.3			ng/kg
PCB Congeners	PCB TEQ-Mammal	Blue crab	24	24	100	1.5	12	7.6			ng/kg
PCB Congeners	PCB TEQ-Mammal	Brown bullhead	6	6	100	6.1	22	13			ng/kg
PCB Congeners	PCB TEQ-Mammal	Carp	12	12	100	16	85	47			ng/kg
PCB Congeners	PCB TEQ-Mammal	Channel catfish	11	11	100	2.7	37	19			ng/kg
PCB Congeners	PCB TEQ-Mammal	Fish (all)	131	131	100	1.8	240	22			ng/kg
PCB Congeners	PCB TEQ-Mammal	Fish (≤ 11 cm)	23	23	100	3.3	12	6.8			ng/kg
PCB Congeners	PCB TEQ-Mammal	Fish (≤ 13 cm)	26	26	100	3.3	12	6.7			ng/kg
PCB Congeners	PCB TEQ-Mammal	Fish (≤ 18 cm)	41	41	100	2	36	11			ng/kg
PCB Congeners	PCB TEQ-Mammal	Fish (≤ 20 cm)	43	43	100	2	36	12			ng/kg
PCB Congeners	PCB TEQ-Mammal	Largemouth bass	3	3	100	14	240	94			ng/kg
PCB Congeners	PCB TEQ-Mammal	Mummichog	18	18	100	3.6	12	7.1			ng/kg
PCB Congeners	PCB TEQ-Mammal	Mussel (estuarine)	3	3	100	0.0031	0.11	0.053			ng/kg
PCB Congeners	PCB TEQ-Mammal	Mussel (freshwater)	5	5	100	0.18	0.27	0.22			ng/kg
PCB Congeners	PCB TEQ-Mammal	Northern pike	1	1	100	30	30				ng/kg
PCB Congeners	PCB TEQ-Mammal	Other forage fish (no mummichog)	10	10	100	2	11	5.9			ng/kg
PCB Congeners	PCB TEQ-Mammal	Smallmouth bass	3	3	100	9.4	19	14			ng/kg
PCB Congeners	PCB TEQ-Mammal	White catfish	19	19	100	7.7	95	36			ng/kg
PCB Congeners	PCB TEQ-Mammal	White perch	22	22	100	2.9	40	22			ng/kg
PCB Congeners	PCB TEQ-Mammal	White sucker	5	5	100	11	45	22			ng/kg
PCB Congeners	PCB TEQ-Mammal	Worms (all)	19	19	100	0.046	3.7	1.1			ng/kg
PCB Congeners	PCB TEQ-Mammal	Worms (estuarine sp.)	5	5	100	0.046	1.3	0.3			ng/kg
PCB Congeners	PCB TEQ-Mammal	Worms (freshwater sp.)	14	14	100	0.11	3.7	1.4			ng/kg
PCB Congeners	PCB TEQ-Mammal (	American eel (all)	21	21	100	2.8	19	9.5			ng/kg
PCB Congeners	PCB TEQ-Mammal (	Blue crab	24	24	100	2.8	12	8.2			ng/kg
PCB Congeners	PCB TEQ-Mammal (	Brown bullhead	6	6	100	6.2	23	13			ng/kg
PCB Congeners	PCB TEQ-Mammal (	Carp	12	12	100	16	87	48			ng/kg
PCB Congeners	PCB TEQ-Mammal (	Channel catfish	11	11	100	3.1	38	19			ng/kg
PCB Congeners	PCB TEQ-Mammal (	Fish (all)	131	131	100	2.1	240	22			ng/kg
PCB Congeners	PCB TEQ-Mammal (	Fish (≤ 11 cm)	23	23	100	3.4	12	6.9			ng/kg
PCB Congeners	PCB TEQ-Mammal (	Fish (≤ 13 cm)	26	26	100	3.4	12	6.8			ng/kg
PCB Congeners	PCB TEQ-Mammal (	Fish (≤ 18 cm)	41	41	100	2.1	36	12			ng/kg
PCB Congeners	PCB TEQ-Mammal (	Fish (≤ 20 cm)	43	43	100	2.1	36	12			ng/kg
PCB Congeners	PCB TEQ-Mammal (	Largemouth bass	3	3	100	15	240	94			ng/kg
PCB Congeners	PCB TEQ-Mammal (	Mummichog	18	18	100	3.7	12	7.1			ng/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB TEQ-Mammal (	Mussel (estuarine)	3	3	100	0.04	0.11	0.067			ng/kg
PCB Congeners	PCB TEQ-Mammal (	Mussel (freshwater)	5	5	100	0.19	0.27	0.23			ng/kg
PCB Congeners	PCB TEQ-Mammal (	Northern pike	1	1	100	31	31				ng/kg
PCB Congeners	PCB TEQ-Mammal (	Other forage fish (no mummichog)	10	10	100	2.1	11	6			ng/kg
PCB Congeners	PCB TEQ-Mammal (	Smallmouth bass	3	3	100	10	20	15			ng/kg
PCB Congeners	PCB TEQ-Mammal (	White catfish	19	19	100	8.6	95	36			ng/kg
PCB Congeners	PCB TEQ-Mammal (	White perch	22	22	100	3	41	22			ng/kg
PCB Congeners	PCB TEQ-Mammal (	White sucker	5	5	100	11	45	22			ng/kg
PCB Congeners	PCB TEQ-Mammal (	Worms (all)	19	19	100	0.36	3.8	1.4			ng/kg
PCB Congeners	PCB TEQ-Mammal (	Worms (estuarine sp.)	5	5	100	0.36	1.5	0.68			ng/kg
PCB Congeners	PCB TEQ-Mammal (	Worms (freshwater sp.)	14	14	100	0.51	3.8	1.6			ng/kg
PCB Congeners	PCB TEQ-Mammal (	American eel (all)	21	21	100	3.8	24	11			ng/kg
PCB Congeners	PCB TEQ-Mammal (	Blue crab	24	24	100	3.5	13	8.7			ng/kg
PCB Congeners	PCB TEQ-Mammal (	Brown bullhead	6	6	100	6.4	24	13			ng/kg
PCB Congeners	PCB TEQ-Mammal (	Carp	12	12	100	17	88	48			ng/kg
PCB Congeners	PCB TEQ-Mammal (	Channel catfish	11	11	100	3.5	38	19			ng/kg
PCB Congeners	PCB TEQ-Mammal (	Fish (all)	131	131	100	2.1	250	23			ng/kg
PCB Congeners	PCB TEQ-Mammal (	Fish (≤ 11 cm)	23	23	100	3.4	12	7			ng/kg
PCB Congeners	PCB TEQ-Mammal (	Fish (≤ 13 cm)	26	26	100	3.4	12	6.9			ng/kg
PCB Congeners	PCB TEQ-Mammal (	Fish (≤ 18 cm)	41	41	100	2.1	37	12			ng/kg
PCB Congeners	PCB TEQ-Mammal (	Fish (≤ 20 cm)	43	43	100	2.1	37	12			ng/kg
PCB Congeners	PCB TEQ-Mammal (	Largemouth bass	3	3	100	15	250	98			ng/kg
PCB Congeners	PCB TEQ-Mammal (	Mummichog	18	18	100	3.8	12	7.3			ng/kg
PCB Congeners	PCB TEQ-Mammal (	Mussel (estuarine)	3	3	100	0.053	0.12	0.083			ng/kg
PCB Congeners	PCB TEQ-Mammal (	Mussel (freshwater)	5	5	100	0.2	0.27	0.23			ng/kg
PCB Congeners	PCB TEQ-Mammal (	Northern pike	1	1	100	31	31				ng/kg
PCB Congeners	PCB TEQ-Mammal (	Other forage fish (no mummichog)	10	10	100	2.1	11	6.1			ng/kg
PCB Congeners	PCB TEQ-Mammal (	Smallmouth bass	3	3	100	10	21	15			ng/kg
PCB Congeners	PCB TEQ-Mammal (	White catfish	19	19	100	8.6	100	37			ng/kg
PCB Congeners	PCB TEQ-Mammal (	White perch	22	22	100	3.1	41	22			ng/kg
PCB Congeners	PCB TEQ-Mammal (	White sucker	5	5	100	11	46	23			ng/kg
PCB Congeners	PCB TEQ-Mammal (	Worms (all)	19	19	100	0.68	4	1.7			ng/kg
PCB Congeners	PCB TEQ-Mammal (	Worms (estuarine sp.)	5	5	100	0.68	1.6	1			ng/kg
PCB Congeners	PCB TEQ-Mammal (	Worms (freshwater sp.)	14	14	100	0.87	4	1.9			ng/kg
PCB Congeners	Monochlorobiphen	American eel (all)	21	14	66.7	0.0039	0.031	0.015	0.0014	0.0044	ug/kg
PCB Congeners	Monochlorobiphen	Blue crab	24	9	37.5	0.0029	0.057	0.011	0.0013	0.0045	ug/kg
PCB Congeners	Monochlorobiphen	Brown bullhead	6	6	100	0.0078	0.23	0.097			ug/kg
PCB Congeners	Monochlorobiphen	Carp	12	12	100	0.041	0.83	0.21			ug/kg
PCB Congeners	Monochlorobiphen	Channel catfish	11	11	100	0.06	0.33	0.12			ug/kg
PCB Congeners	Monochlorobiphen	Fish (all)	131	123	93.9	0.0039	0.83	0.093	0.0014	0.0044	ug/kg
PCB Congeners	Monochlorobiphen	Fish (≤ 11 cm)	23	23	100	0.018	0.11	0.049			ug/kg
PCB Congeners	Monochlorobiphen	Fish (≤ 13 cm)	26	26	100	0.018	0.11	0.051			ug/kg
PCB Congeners	Monochlorobiphen	Fish (≤ 18 cm)	41	41	100	0.017	0.27	0.084			ug/kg
PCB Congeners	Monochlorobiphen	Fish (≤ 20 cm)	43	43	100	0.017	0.27	0.09			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	Monochlorobiphen	Largemouth bass	3	3	100	0.024	0.089	0.054			ug/kg
PCB Congeners	Monochlorobiphen	Mummichog	18	18	100	0.018	0.11	0.05			ug/kg
PCB Congeners	Monochlorobiphen	Mussel (estuarine)	3	3	100	0.0068	0.013	0.0099			ug/kg
PCB Congeners	Monochlorobiphen	Mussel (freshwater)	5	5	100	0.0041	0.0054	0.0046			ug/kg
PCB Congeners	Monochlorobiphen	Northern pike	1	1	100	0.11	0.11				ug/kg
PCB Congeners	Monochlorobiphen	Other forage fish (no mummichog)	10	10	100	0.027	0.11	0.056			ug/kg
PCB Congeners	Monochlorobiphen	Smallmouth bass	3	3	100	0.017	0.056	0.04			ug/kg
PCB Congeners	Monochlorobiphen	White catfish	19	18	94.7	0.013	0.13	0.059	0.0038	0.0038	ug/kg
PCB Congeners	Monochlorobiphen	White perch	22	22	100	0.015	0.33	0.16			ug/kg
PCB Congeners	Monochlorobiphen	White sucker	5	5	100	0.02	0.17	0.08			ug/kg
PCB Congeners	Monochlorobiphen	Worms (all)	19	16	84.2	0.0031	0.34	0.06	0.0016	0.002	ug/kg
PCB Congeners	Monochlorobiphen	Worms (estuarine sp.)	5	4	80	0.006	0.059	0.019	0.0016	0.0016	ug/kg
PCB Congeners	Monochlorobiphen	Worms (freshwater sp.)	14	12	85.7	0.0031	0.34	0.074	0.0018	0.002	ug/kg
PCB Congeners	Dichlorobiphenyl	American eel (all)	21	21	100	0.099	0.92	0.41			ug/kg
PCB Congeners	Dichlorobiphenyl	Blue crab	24	24	100	0.63	2	1.3			ug/kg
PCB Congeners	Dichlorobiphenyl	Brown bullhead	6	6	100	0.65	9.8	4.2			ug/kg
PCB Congeners	Dichlorobiphenyl	Carp	12	12	100	2.8	22	9.8			ug/kg
PCB Congeners	Dichlorobiphenyl	Channel catfish	11	11	100	1.4	8.1	3.5			ug/kg
PCB Congeners	Dichlorobiphenyl	Fish (all)	131	131	100	0.099	22	3.9			ug/kg
PCB Congeners	Dichlorobiphenyl	Fish (≤ 11 cm)	23	23	100	0.79	3.4	1.8			ug/kg
PCB Congeners	Dichlorobiphenyl	Fish (≤ 13 cm)	26	26	100	0.79	3.4	1.9			ug/kg
PCB Congeners	Dichlorobiphenyl	Fish (≤ 18 cm)	41	41	100	0.79	14	3.8			ug/kg
PCB Congeners	Dichlorobiphenyl	Fish (≤ 20 cm)	43	43	100	0.79	14	4.1			ug/kg
PCB Congeners	Dichlorobiphenyl	Largemouth bass	3	3	100	0.82	4.1	2.4			ug/kg
PCB Congeners	Dichlorobiphenyl	Mummichog	18	18	100	0.79	3.4	1.8			ug/kg
PCB Congeners	Dichlorobiphenyl	Mussel (estuarine)	3	3	100	0.12	0.37	0.25			ug/kg
PCB Congeners	Dichlorobiphenyl	Mussel (freshwater)	5	5	100	0.34	0.52	0.42			ug/kg
PCB Congeners	Dichlorobiphenyl	Northern pike	1	1	100	4.1	4.1				ug/kg
PCB Congeners	Dichlorobiphenyl	Other forage fish (no mummichog)	10	10	100	1.3	3.6	2.1			ug/kg
PCB Congeners	Dichlorobiphenyl	Smallmouth bass	3	3	100	1.1	2.8	2.1			ug/kg
PCB Congeners	Dichlorobiphenyl	White catfish	19	19	100	0.48	7.1	2.8			ug/kg
PCB Congeners	Dichlorobiphenyl	White perch	22	22	100	1.2	15	7.9			ug/kg
PCB Congeners	Dichlorobiphenyl	White sucker	5	5	100	2.1	6.7	4.1			ug/kg
PCB Congeners	Dichlorobiphenyl	Worms (all)	19	19	100	0.29	13	2			ug/kg
PCB Congeners	Dichlorobiphenyl	Worms (estuarine sp.)	5	5	100	0.29	2.6	0.84			ug/kg
PCB Congeners	Dichlorobiphenyl	Worms (freshwater sp.)	14	14	100	0.33	13	2.4			ug/kg
PCB Congeners	Trichlorobiphenyl	American eel (all)	21	21	100	6.7	52	24			ug/kg
PCB Congeners	Trichlorobiphenyl	Blue crab	24	24	100	11	26	19			ug/kg
PCB Congeners	Trichlorobiphenyl	Brown bullhead	6	6	100	14	160	62			ug/kg
PCB Congeners	Trichlorobiphenyl	Carp	12	12	100	61	510	280			ug/kg
PCB Congeners	Trichlorobiphenyl	Channel catfish	11	11	100	28	73	53			ug/kg
PCB Congeners	Trichlorobiphenyl	Fish (all)	131	131	100	6.7	510	88			ug/kg
PCB Congeners	Trichlorobiphenyl	Fish (≤ 11 cm)	23	23	100	20	83	43			ug/kg
PCB Congeners	Trichlorobiphenyl	Fish (≤ 13 cm)	26	26	100	20	83	44			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	Trichlorobiphenyl	Fish (≤ 18 cm)	41	41	100	17	220	79			ug/kg
PCB Congeners	Trichlorobiphenyl	Fish (≤ 20 cm)	43	43	100	17	230	85			ug/kg
PCB Congeners	Trichlorobiphenyl	Largemouth bass	3	3	100	14	120	65			ug/kg
PCB Congeners	Trichlorobiphenyl	Mummichog	18	18	100	20	83	43			ug/kg
PCB Congeners	Trichlorobiphenyl	Mussel (estuarine)	3	3	100	0.69	3.7	2.1			ug/kg
PCB Congeners	Trichlorobiphenyl	Mussel (freshwater)	5	5	100	3.6	6.8	5.1			ug/kg
PCB Congeners	Trichlorobiphenyl	Northern pike	1	1	100	100	100				ug/kg
PCB Congeners	Trichlorobiphenyl	Other forage fish (no mummichog)	10	10	100	17	97	46			ug/kg
PCB Congeners	Trichlorobiphenyl	Smallmouth bass	3	3	100	24	63	47			ug/kg
PCB Congeners	Trichlorobiphenyl	White catfish	19	19	100	17	160	73			ug/kg
PCB Congeners	Trichlorobiphenyl	White perch	22	22	100	21	290	150			ug/kg
PCB Congeners	Trichlorobiphenyl	White sucker	5	5	100	41	130	83			ug/kg
PCB Congeners	Trichlorobiphenyl	Worms (all)	19	19	100	2	110	19			ug/kg
PCB Congeners	Trichlorobiphenyl	Worms (estuarine sp.)	5	5	100	2	23	6.8			ug/kg
PCB Congeners	Trichlorobiphenyl	Worms (freshwater sp.)	14	14	100	3.5	110	24			ug/kg
PCB Congeners	Tetrachlorobipheny	American eel (all)	21	21	100	31	450	180			ug/kg
PCB Congeners	Tetrachlorobipheny	Blue crab	24	24	100	28	82	59			ug/kg
PCB Congeners	Tetrachlorobipheny	Brown bullhead	6	6	100	53	450	190			ug/kg
PCB Congeners	Tetrachlorobipheny	Carp	12	12	100	230	2100	1100			ug/kg
PCB Congeners	Tetrachlorobipheny	Channel catfish	11	11	100	110	490	230			ug/kg
PCB Congeners	Tetrachlorobipheny	Fish (all)	131	131	100	31	2100	350			ug/kg
PCB Congeners	Tetrachlorobipheny	Fish (≤ 11 cm)	23	23	100	51	240	120			ug/kg
PCB Congeners	Tetrachlorobipheny	Fish (≤ 13 cm)	26	26	100	51	240	120			ug/kg
PCB Congeners	Tetrachlorobipheny	Fish (≤ 18 cm)	41	41	100	35	680	230			ug/kg
PCB Congeners	Tetrachlorobipheny	Fish (≤ 20 cm)	43	43	100	35	850	260			ug/kg
PCB Congeners	Tetrachlorobipheny	Largemouth bass	3	3	100	210	590	410			ug/kg
PCB Congeners	Tetrachlorobipheny	Mummichog	18	18	100	51	240	120			ug/kg
PCB Congeners	Tetrachlorobipheny	Mussel (estuarine)	3	3	100	0.86	7.1	3.6			ug/kg
PCB Congeners	Tetrachlorobipheny	Mussel (freshwater)	5	5	100	5.5	9.6	7.6			ug/kg
PCB Congeners	Tetrachlorobipheny	Northern pike	1	1	100	430	430				ug/kg
PCB Congeners	Tetrachlorobipheny	Other forage fish (no mummichog)	10	10	100	35	250	120			ug/kg
PCB Congeners	Tetrachlorobipheny	Smallmouth bass	3	3	100	110	230	160			ug/kg
PCB Congeners	Tetrachlorobipheny	White catfish	19	19	100	69	1100	450			ug/kg
PCB Congeners	Tetrachlorobipheny	White perch	22	22	100	61	850	450			ug/kg
PCB Congeners	Tetrachlorobipheny	White sucker	5	5	100	100	460	260			ug/kg
PCB Congeners	Tetrachlorobipheny	Worms (all)	19	19	100	6.3	180	42			ug/kg
PCB Congeners	Tetrachlorobipheny	Worms (estuarine sp.)	5	5	100	6.3	44	15			ug/kg
PCB Congeners	Tetrachlorobipheny	Worms (freshwater sp.)	14	14	100	13	180	51			ug/kg
PCB Congeners	Pentachlorobiphenyl	American eel (all)	21	21	100	99	780	310			ug/kg
PCB Congeners	Pentachlorobiphenyl	Blue crab	24	24	100	33	100	71			ug/kg
PCB Congeners	Pentachlorobiphenyl	Brown bullhead	6	6	100	68	380	200			ug/kg
PCB Congeners	Pentachlorobiphenyl	Carp	12	12	100	400	2300	1100			ug/kg
PCB Congeners	Pentachlorobiphenyl	Channel catfish	11	11	100	71	700	340			ug/kg
PCB Congeners	Pentachlorobiphenyl	Fish (all)	131	131	100	39	4200	450			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	Pentachlorobipheny	Fish (≤ 11 cm)	23	23	100	59	230	130			ug/kg
PCB Congeners	Pentachlorobipheny	Fish (≤ 13 cm)	26	26	100	59	230	130			ug/kg
PCB Congeners	Pentachlorobipheny	Fish (≤ 18 cm)	41	41	100	39	940	230			ug/kg
PCB Congeners	Pentachlorobipheny	Fish (≤ 20 cm)	43	43	100	39	940	250			ug/kg
PCB Congeners	Pentachlorobipheny	Largemouth bass	3	3	100	280	4200	1700			ug/kg
PCB Congeners	Pentachlorobipheny	Mummichog	18	18	100	60	230	130			ug/kg
PCB Congeners	Pentachlorobipheny	Mussel (estuarine)	3	3	100	0.44	4.2	2			ug/kg
PCB Congeners	Pentachlorobipheny	Mussel (freshwater)	5	5	100	3.7	6.6	5.2			ug/kg
PCB Congeners	Pentachlorobipheny	Northern pike	1	1	100	570	570				ug/kg
PCB Congeners	Pentachlorobipheny	Other forage fish (no mummichog)	10	10	100	39	210	110			ug/kg
PCB Congeners	Pentachlorobipheny	Smallmouth bass	3	3	100	150	340	250			ug/kg
PCB Congeners	Pentachlorobipheny	White catfish	19	19	100	140	1700	660			ug/kg
PCB Congeners	Pentachlorobipheny	White perch	22	22	100	70	940	440			ug/kg
PCB Congeners	Pentachlorobipheny	White sucker	5	5	100	150	680	340			ug/kg
PCB Congeners	Pentachlorobipheny	Worms (all)	19	19	100	6.1	210	41			ug/kg
PCB Congeners	Pentachlorobipheny	Worms (estuarine sp.)	5	5	100	6.1	32	12			ug/kg
PCB Congeners	Pentachlorobipheny	Worms (freshwater sp.)	14	14	100	16	210	51			ug/kg
PCB Congeners	Hexachlorobipheny	American eel (all)	21	21	100	150	1800	510			ug/kg
PCB Congeners	Hexachlorobipheny	Blue crab	24	24	100	43	180	90			ug/kg
PCB Congeners	Hexachlorobipheny	Brown bullhead	6	6	100	58	400	220			ug/kg
PCB Congeners	Hexachlorobipheny	Carp	12	12	100	430	1700	940			ug/kg
PCB Congeners	Hexachlorobipheny	Channel catfish	11	11	100	57	770	380			ug/kg
PCB Congeners	Hexachlorobipheny	Fish (all)	131	131	100	44	2200	490			ug/kg
PCB Congeners	Hexachlorobipheny	Fish (≤ 11 cm)	23	23	100	51	220	120			ug/kg
PCB Congeners	Hexachlorobipheny	Fish (≤ 13 cm)	26	26	100	51	220	120			ug/kg
PCB Congeners	Hexachlorobipheny	Fish (≤ 18 cm)	41	41	100	44	1700	260			ug/kg
PCB Congeners	Hexachlorobipheny	Fish (≤ 20 cm)	43	43	100	44	1700	280			ug/kg
PCB Congeners	Hexachlorobipheny	Largemouth bass	3	3	100	320	2200	1000			ug/kg
PCB Congeners	Hexachlorobipheny	Mummichog	18	18	100	60	220	130			ug/kg
PCB Congeners	Hexachlorobipheny	Mussel (estuarine)	3	3	100	0.36	2.4	1.2			ug/kg
PCB Congeners	Hexachlorobipheny	Mussel (freshwater)	5	5	100	2.5	4.3	3.4			ug/kg
PCB Congeners	Hexachlorobipheny	Northern pike	1	1	100	530	530				ug/kg
PCB Congeners	Hexachlorobipheny	Other forage fish (no mummichog)	10	10	100	44	180	94			ug/kg
PCB Congeners	Hexachlorobipheny	Smallmouth bass	3	3	100	170	410	300			ug/kg
PCB Congeners	Hexachlorobipheny	White catfish	19	19	100	170	2100	770			ug/kg
PCB Congeners	Hexachlorobipheny	White perch	22	22	100	63	1700	540			ug/kg
PCB Congeners	Hexachlorobipheny	White sucker	5	5	100	150	870	420			ug/kg
PCB Congeners	Hexachlorobipheny	Worms (all)	19	19	100	6.8	120	29			ug/kg
PCB Congeners	Hexachlorobipheny	Worms (estuarine sp.)	5	5	100	6.8	22	11			ug/kg
PCB Congeners	Hexachlorobipheny	Worms (freshwater sp.)	14	14	100	12	120	35			ug/kg
PCB Congeners	Heptachlorobiphen	American eel (all)	21	21	100	73	2100	390			ug/kg
PCB Congeners	Heptachlorobiphen	Blue crab	24	24	100	26	160	58			ug/kg
PCB Congeners	Heptachlorobiphen	Brown bullhead	6	6	100	40	330	160			ug/kg
PCB Congeners	Heptachlorobiphen	Carp	12	12	100	220	1100	570			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	Heptachlorobiphen	Channel catfish	11	11	100	31	450	230			ug/kg
PCB Congeners	Heptachlorobiphen	Fish (all)	131	131	100	26	2100	320			ug/kg
PCB Congeners	Heptachlorobiphen	Fish (≤ 11 cm)	23	23	100	27	140	67			ug/kg
PCB Congeners	Heptachlorobiphen	Fish (≤ 13 cm)	26	26	100	27	140	65			ug/kg
PCB Congeners	Heptachlorobiphen	Fish (≤ 18 cm)	41	41	100	26	1400	170			ug/kg
PCB Congeners	Heptachlorobiphen	Fish (≤ 20 cm)	43	43	100	26	1400	180			ug/kg
PCB Congeners	Heptachlorobiphen	Largemouth bass	3	3	100	200	540	360			ug/kg
PCB Congeners	Heptachlorobiphen	Mummichog	18	18	100	33	140	73			ug/kg
PCB Congeners	Heptachlorobiphen	Mussel (estuarine)	3	3	100	0.11	0.58	0.3			ug/kg
PCB Congeners	Heptachlorobiphen	Mussel (freshwater)	5	5	100	0.78	1.5	1.2			ug/kg
PCB Congeners	Heptachlorobiphen	Northern pike	1	1	100	290	290				ug/kg
PCB Congeners	Heptachlorobiphen	Other forage fish (no mummichog)	10	10	100	26	95	48			ug/kg
PCB Congeners	Heptachlorobiphen	Smallmouth bass	3	3	100	95	280	200			ug/kg
PCB Congeners	Heptachlorobiphen	White catfish	19	19	100	78	1700	560			ug/kg
PCB Congeners	Heptachlorobiphen	White perch	22	22	100	33	1400	360			ug/kg
PCB Congeners	Heptachlorobiphen	White sucker	5	5	100	67	620	270			ug/kg
PCB Congeners	Heptachlorobiphen	Worms (all)	19	19	100	3	31	11			ug/kg
PCB Congeners	Heptachlorobiphen	Worms (estuarine sp.)	5	5	100	3	8	5.2			ug/kg
PCB Congeners	Heptachlorobiphen	Worms (freshwater sp.)	14	14	100	5.5	31	13			ug/kg
PCB Congeners	Octachlorobiphenyl	American eel (all)	21	21	100	23	540	100			ug/kg
PCB Congeners	Octachlorobiphenyl	Blue crab	24	24	100	6.2	39	14			ug/kg
PCB Congeners	Octachlorobiphenyl	Brown bullhead	6	6	100	11	73	36			ug/kg
PCB Congeners	Octachlorobiphenyl	Carp	12	12	100	54	300	150			ug/kg
PCB Congeners	Octachlorobiphenyl	Channel catfish	11	11	100	7.4	120	59			ug/kg
PCB Congeners	Octachlorobiphenyl	Fish (all)	131	131	100	6.9	540	81			ug/kg
PCB Congeners	Octachlorobiphenyl	Fish (≤ 11 cm)	23	23	100	7.2	30	16			ug/kg
PCB Congeners	Octachlorobiphenyl	Fish (≤ 13 cm)	26	26	100	7.2	30	15			ug/kg
PCB Congeners	Octachlorobiphenyl	Fish (≤ 18 cm)	41	41	100	6.9	290	38			ug/kg
PCB Congeners	Octachlorobiphenyl	Fish (≤ 20 cm)	43	43	100	6.9	290	40			ug/kg
PCB Congeners	Octachlorobiphenyl	Largemouth bass	3	3	100	58	98	84			ug/kg
PCB Congeners	Octachlorobiphenyl	Mummichog	18	18	100	8.4	30	17			ug/kg
PCB Congeners	Octachlorobiphenyl	Mussel (estuarine)	3	3	100	0.02	0.047	0.03			ug/kg
PCB Congeners	Octachlorobiphenyl	Mussel (freshwater)	5	5	100	0.22	0.36	0.29			ug/kg
PCB Congeners	Octachlorobiphenyl	Northern pike	1	1	100	76	76				ug/kg
PCB Congeners	Octachlorobiphenyl	Other forage fish (no mummichog)	10	10	100	6.9	21	12			ug/kg
PCB Congeners	Octachlorobiphenyl	Smallmouth bass	3	3	100	27	95	63			ug/kg
PCB Congeners	Octachlorobiphenyl	White catfish	19	19	100	18	480	140			ug/kg
PCB Congeners	Octachlorobiphenyl	White perch	22	22	100	11	290	82			ug/kg
PCB Congeners	Octachlorobiphenyl	White sucker	5	5	100	17	170	69			ug/kg
PCB Congeners	Octachlorobiphenyl	Worms (all)	19	19	100	0.91	7.4	2.8			ug/kg
PCB Congeners	Octachlorobiphenyl	Worms (estuarine sp.)	5	5	100	0.91	1.8	1.3			ug/kg
PCB Congeners	Octachlorobiphenyl	Worms (freshwater sp.)	14	14	100	1.6	7.4	3.3			ug/kg
PCB Congeners	Nonachlorobipheny	American eel (all)	21	21	100	4.7	41	12			ug/kg
PCB Congeners	Nonachlorobipheny	Blue crab	24	24	100	0.66	3.5	1.6			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	Nonachlorobipheny	Brown bullhead	6	6	100	3.4	9.7	6			ug/kg
PCB Congeners	Nonachlorobipheny	Carp	12	12	100	12	40	24			ug/kg
PCB Congeners	Nonachlorobipheny	Channel catfish	11	11	100	1.6	20	9.7			ug/kg
PCB Congeners	Nonachlorobipheny	Fish (all)	131	131	100	1.2	43	10			ug/kg
PCB Congeners	Nonachlorobipheny	Fish (≤ 11 cm)	23	23	100	1.2	4.4	2.3			ug/kg
PCB Congeners	Nonachlorobipheny	Fish (≤ 13 cm)	26	26	100	1.2	4.4	2.4			ug/kg
PCB Congeners	Nonachlorobipheny	Fish (≤ 18 cm)	41	41	100	1.2	20	4.2			ug/kg
PCB Congeners	Nonachlorobipheny	Fish (≤ 20 cm)	43	43	100	1.2	20	4.3			ug/kg
PCB Congeners	Nonachlorobipheny	Largemouth bass	3	3	100	5.6	9.3	7.1			ug/kg
PCB Congeners	Nonachlorobipheny	Mummichog	18	18	100	1.2	3.5	2.3			ug/kg
PCB Congeners	Nonachlorobipheny	Mussel (estuarine)	3	3	100	0.0014	0.0019	0.0017			ug/kg
PCB Congeners	Nonachlorobipheny	Mussel (freshwater)	5	5	100	0.052	0.08	0.07			ug/kg
PCB Congeners	Nonachlorobipheny	Northern pike	1	1	100	11	11				ug/kg
PCB Congeners	Nonachlorobipheny	Other forage fish (no mummichog)	10	10	100	1.8	4.4	2.7			ug/kg
PCB Congeners	Nonachlorobipheny	Smallmouth bass	3	3	100	5.3	14	9.8			ug/kg
PCB Congeners	Nonachlorobipheny	White catfish	19	19	100	3.5	43	15			ug/kg
PCB Congeners	Nonachlorobipheny	White perch	22	22	100	1.9	20	7.8			ug/kg
PCB Congeners	Nonachlorobipheny	White sucker	5	5	100	4.1	14	7.3			ug/kg
PCB Congeners	Nonachlorobipheny	Worms (all)	19	19	100	0.45	1.3	0.73			ug/kg
PCB Congeners	Nonachlorobipheny	Worms (estuarine sp.)	5	5	100	0.45	0.59	0.51			ug/kg
PCB Congeners	Nonachlorobipheny	Worms (freshwater sp.)	14	14	100	0.49	1.3	0.8			ug/kg
PCDDs/PCDFs	1,2,3,4,6,7,8-HpCDI	American eel (all)	21	21	100	0.57	4.1	1.9			ng/kg
PCDDs/PCDFs	1,2,3,4,6,7,8-HpCDI	Blue crab	24	24	100	1.1	3.9	1.8			ng/kg
PCDDs/PCDFs	1,2,3,4,6,7,8-HpCDI	Brown bullhead	6	6	100	2.4	6.5	4.2			ng/kg
PCDDs/PCDFs	1,2,3,4,6,7,8-HpCDI	Carp	12	12	100	7.2	42	22			ng/kg
PCDDs/PCDFs	1,2,3,4,6,7,8-HpCDI	Channel catfish	11	11	100	1.2	4.5	2.1			ng/kg
PCDDs/PCDFs	1,2,3,4,6,7,8-HpCDI	Fish (all)	131	124	94.7	0.51	42	4.8	0.55	1.7	ng/kg
PCDDs/PCDFs	1,2,3,4,6,7,8-HpCDI	Fish (≤ 11 cm)	23	23	100	0.6	12	4.4			ng/kg
PCDDs/PCDFs	1,2,3,4,6,7,8-HpCDI	Fish (≤ 13 cm)	26	26	100	0.6	15	5.1			ng/kg
PCDDs/PCDFs	1,2,3,4,6,7,8-HpCDI	Fish (≤ 18 cm)	41	41	100	0.6	15	4			ng/kg
PCDDs/PCDFs	1,2,3,4,6,7,8-HpCDI	Fish (≤ 20 cm)	43	43	100	0.6	15	3.9			ng/kg
PCDDs/PCDFs	1,2,3,4,6,7,8-HpCDI	Largemouth bass	3	0	0				0.55	1.1	ng/kg
PCDDs/PCDFs	1,2,3,4,6,7,8-HpCDI	Mummichog	18	18	100	0.6	11	3.7			ng/kg
PCDDs/PCDFs	1,2,3,4,6,7,8-HpCDI	Mussel (estuarine)	3	3	100	0.25	0.3	0.28			ng/kg
PCDDs/PCDFs	1,2,3,4,6,7,8-HpCDI	Mussel (freshwater)	5	5	100	0.51	0.85	0.64			ng/kg
PCDDs/PCDFs	1,2,3,4,6,7,8-HpCDI	Northern pike	1	0	0				1	1	ng/kg
PCDDs/PCDFs	1,2,3,4,6,7,8-HpCDI	Other forage fish (no mummichog)	10	10	100	0.87	15	7.1			ng/kg
PCDDs/PCDFs	1,2,3,4,6,7,8-HpCDI	Smallmouth bass	3	2	66.7	1	1.6	1.3	1.7	1.7	ng/kg
PCDDs/PCDFs	1,2,3,4,6,7,8-HpCDI	White catfish	19	19	100	1.4	5.7	3.2			ng/kg
PCDDs/PCDFs	1,2,3,4,6,7,8-HpCDI	White perch	22	20	90.9	0.51	3.2	1.8	0.55	0.72	ng/kg
PCDDs/PCDFs	1,2,3,4,6,7,8-HpCDI	White sucker	5	5	100	0.92	1.3	1.1			ng/kg
PCDDs/PCDFs	1,2,3,4,6,7,8-HpCDI	Worms (all)	19	19	100	1.3	56	10			ng/kg
PCDDs/PCDFs	1,2,3,4,6,7,8-HpCDI	Worms (estuarine sp.)	5	5	100	1.3	1.9	1.6			ng/kg
PCDDs/PCDFs	1,2,3,4,6,7,8-HpCDI	Worms (freshwater sp.)	14	14	100	3.4	56	14			ng/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCDDs/PCDFs	1,2,3,4,7,8-HxCDD	American eel (all)	21	18	85.7	0.35	1.3	0.68	0.19	0.39	ng/kg
PCDDs/PCDFs	1,2,3,4,7,8-HxCDD	Blue crab	24	4	16.7	0.22	0.45	0.37	0.14	0.4	ng/kg
PCDDs/PCDFs	1,2,3,4,7,8-HxCDD	Brown bullhead	6	5	83.3	0.38	1.3	0.88	0.45	0.45	ng/kg
PCDDs/PCDFs	1,2,3,4,7,8-HxCDD	Carp	12	12	100	1.1	3.7	2.4			ng/kg
PCDDs/PCDFs	1,2,3,4,7,8-HxCDD	Channel catfish	11	10	90.9	0.3	1.8	0.92	0.12	0.12	ng/kg
PCDDs/PCDFs	1,2,3,4,7,8-HxCDD	Fish (all)	131	99	75.6	0.14	3.7	0.9	0.047	0.55	ng/kg
PCDDs/PCDFs	1,2,3,4,7,8-HxCDD	Fish (≤ 11 cm)	23	10	43.5	0.15	0.43	0.24	0.19	0.36	ng/kg
PCDDs/PCDFs	1,2,3,4,7,8-HxCDD	Fish (≤ 13 cm)	26	13	50	0.15	0.43	0.24	0.19	0.36	ng/kg
PCDDs/PCDFs	1,2,3,4,7,8-HxCDD	Fish (≤ 18 cm)	41	27	65.9	0.14	1	0.46	0.047	0.36	ng/kg
PCDDs/PCDFs	1,2,3,4,7,8-HxCDD	Fish (≤ 20 cm)	43	29	67.4	0.14	1	0.48	0.047	0.36	ng/kg
PCDDs/PCDFs	1,2,3,4,7,8-HxCDD	Largemouth bass	3	0	0				0.2	0.25	ng/kg
PCDDs/PCDFs	1,2,3,4,7,8-HxCDD	Mummichog	18	5	27.8	0.16	0.37	0.25	0.19	0.36	ng/kg
PCDDs/PCDFs	1,2,3,4,7,8-HxCDD	Mussel (estuarine)	3	0	0				0.04	0.052	ng/kg
PCDDs/PCDFs	1,2,3,4,7,8-HxCDD	Mussel (freshwater)	5	1	20	0.035	0.035		0.042	0.067	ng/kg
PCDDs/PCDFs	1,2,3,4,7,8-HxCDD	Northern pike	1	1	100	0.48	0.48				ng/kg
PCDDs/PCDFs	1,2,3,4,7,8-HxCDD	Other forage fish (no mummichog)	10	9	90	0.14	0.43	0.24	0.047	0.047	ng/kg
PCDDs/PCDFs	1,2,3,4,7,8-HxCDD	Smallmouth bass	3	0	0				0.16	0.23	ng/kg
PCDDs/PCDFs	1,2,3,4,7,8-HxCDD	White catfish	19	18	94.7	0.45	1.8	0.83	0.14	0.14	ng/kg
PCDDs/PCDFs	1,2,3,4,7,8-HxCDD	White perch	22	18	81.8	0.15	1.6	0.75	0.23	0.55	ng/kg
PCDDs/PCDFs	1,2,3,4,7,8-HxCDD	White sucker	5	3	60	0.52	0.89	0.66	0.21	0.22	ng/kg
PCDDs/PCDFs	1,2,3,4,7,8-HxCDD	Worms (all)	19	5	26.3	0.23	0.57	0.41	0.11	0.33	ng/kg
PCDDs/PCDFs	1,2,3,4,7,8-HxCDD	Worms (estuarine sp.)	5	0	0				0.22	0.33	ng/kg
PCDDs/PCDFs	1,2,3,4,7,8-HxCDD	Worms (freshwater sp.)	14	5	35.7	0.23	0.57	0.41	0.11	0.25	ng/kg
PCDDs/PCDFs	1,2,3,6,7,8-HxCDD	American eel (all)	21	21	100	0.6	5.4	2.2			ng/kg
PCDDs/PCDFs	1,2,3,6,7,8-HxCDD	Blue crab	24	24	100	0.33	1.5	0.76			ng/kg
PCDDs/PCDFs	1,2,3,6,7,8-HxCDD	Brown bullhead	6	6	100	1.1	5.1	2.7			ng/kg
PCDDs/PCDFs	1,2,3,6,7,8-HxCDD	Carp	12	12	100	2.6	15	7.8			ng/kg
PCDDs/PCDFs	1,2,3,6,7,8-HxCDD	Channel catfish	11	11	100	0.53	4.5	1.9			ng/kg
PCDDs/PCDFs	1,2,3,6,7,8-HxCDD	Fish (all)	131	116	88.5	0.22	15	2.4	0.16	0.53	ng/kg
PCDDs/PCDFs	1,2,3,6,7,8-HxCDD	Fish (≤ 11 cm)	23	12	52.2	0.37	1.1	0.65	0.23	0.38	ng/kg
PCDDs/PCDFs	1,2,3,6,7,8-HxCDD	Fish (≤ 13 cm)	26	15	57.7	0.37	1.2	0.7	0.23	0.38	ng/kg
PCDDs/PCDFs	1,2,3,6,7,8-HxCDD	Fish (≤ 18 cm)	41	30	73.2	0.22	1.9	0.89	0.23	0.38	ng/kg
PCDDs/PCDFs	1,2,3,6,7,8-HxCDD	Fish (≤ 20 cm)	43	32	74.4	0.22	1.9	0.93	0.23	0.38	ng/kg
PCDDs/PCDFs	1,2,3,6,7,8-HxCDD	Largemouth bass	3	2	66.7	0.48	0.6	0.54	0.22	0.22	ng/kg
PCDDs/PCDFs	1,2,3,6,7,8-HxCDD	Mummichog	18	7	38.9	0.37	0.84	0.57	0.23	0.38	ng/kg
PCDDs/PCDFs	1,2,3,6,7,8-HxCDD	Mussel (estuarine)	3	1	33.3	0.079	0.079		0.043	0.052	ng/kg
PCDDs/PCDFs	1,2,3,6,7,8-HxCDD	Mussel (freshwater)	5	5	100	0.081	0.12	0.1			ng/kg
PCDDs/PCDFs	1,2,3,6,7,8-HxCDD	Northern pike	1	1	100	1.4	1.4				ng/kg
PCDDs/PCDFs	1,2,3,6,7,8-HxCDD	Other forage fish (no mummichog)	10	10	100	0.22	1.2	0.71			ng/kg
PCDDs/PCDFs	1,2,3,6,7,8-HxCDD	Smallmouth bass	3	2	66.7	0.9	1.1	1	0.16	0.16	ng/kg
PCDDs/PCDFs	1,2,3,6,7,8-HxCDD	White catfish	19	19	100	0.71	5.9	2.9			ng/kg
PCDDs/PCDFs	1,2,3,6,7,8-HxCDD	White perch	22	20	90.9	0.31	2.7	1.2	0.53	0.53	ng/kg
PCDDs/PCDFs	1,2,3,6,7,8-HxCDD	White sucker	5	5	100	0.39	0.93	0.68			ng/kg
PCDDs/PCDFs	1,2,3,6,7,8-HxCDD	Worms (all)	19	16	84.2	0.28	2.1	0.76	0.23	0.33	ng/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCDDs/PCDFs	1,2,3,6,7,8-HxCDD	Worms (estuarine sp.)	5	2	40	0.28	0.3	0.29	0.23	0.33	ng/kg
PCDDs/PCDFs	1,2,3,6,7,8-HxCDD	Worms (freshwater sp.)	14	14	100	0.35	2.1	0.83			ng/kg
PCDDs/PCDFs	1,2,3,7,8,9-HxCDD	American eel (all)	21	12	57.1	0.32	1.1	0.64	0.24	0.67	ng/kg
PCDDs/PCDFs	1,2,3,7,8,9-HxCDD	Blue crab	24	12	50	0.23	0.83	0.45	0.18	0.48	ng/kg
PCDDs/PCDFs	1,2,3,7,8,9-HxCDD	Brown bullhead	6	6	100	0.58	1.4	0.98			ng/kg
PCDDs/PCDFs	1,2,3,7,8,9-HxCDD	Carp	12	12	100	0.83	4	2.1			ng/kg
PCDDs/PCDFs	1,2,3,7,8,9-HxCDD	Channel catfish	11	11	100	0.3	1.7	0.74			ng/kg
PCDDs/PCDFs	1,2,3,7,8,9-HxCDD	Fish (all)	131	82	62.6	0.27	4	0.9	0.17	0.93	ng/kg
PCDDs/PCDFs	1,2,3,7,8,9-HxCDD	Fish (≤ 11 cm)	23	2	8.7	0.33	0.48	0.41	0.25	0.93	ng/kg
PCDDs/PCDFs	1,2,3,7,8,9-HxCDD	Fish (≤ 13 cm)	26	4	15.4	0.33	0.48	0.44	0.25	0.93	ng/kg
PCDDs/PCDFs	1,2,3,7,8,9-HxCDD	Fish (≤ 18 cm)	41	16	39	0.27	0.61	0.46	0.23	0.93	ng/kg
PCDDs/PCDFs	1,2,3,7,8,9-HxCDD	Fish (≤ 20 cm)	43	18	41.9	0.27	0.66	0.46	0.23	0.93	ng/kg
PCDDs/PCDFs	1,2,3,7,8,9-HxCDD	Largemouth bass	3	0	0				0.22	0.29	ng/kg
PCDDs/PCDFs	1,2,3,7,8,9-HxCDD	Mummichog	18	2	11.1	0.33	0.48	0.41	0.26	0.93	ng/kg
PCDDs/PCDFs	1,2,3,7,8,9-HxCDD	Mussel (estuarine)	3	0	0				0.11	0.11	ng/kg
PCDDs/PCDFs	1,2,3,7,8,9-HxCDD	Mussel (freshwater)	5	0	0				0.11	0.13	ng/kg
PCDDs/PCDFs	1,2,3,7,8,9-HxCDD	Northern pike	1	1	100	0.56	0.56				ng/kg
PCDDs/PCDFs	1,2,3,7,8,9-HxCDD	Other forage fish (no mummichog)	10	3	30	0.27	0.48	0.4	0.23	0.81	ng/kg
PCDDs/PCDFs	1,2,3,7,8,9-HxCDD	Smallmouth bass	3	0	0				0.18	0.27	ng/kg
PCDDs/PCDFs	1,2,3,7,8,9-HxCDD	White catfish	19	18	94.7	0.41	1.6	0.91	0.17	0.17	ng/kg
PCDDs/PCDFs	1,2,3,7,8,9-HxCDD	White perch	22	16	72.7	0.27	0.83	0.52	0.25	0.66	ng/kg
PCDDs/PCDFs	1,2,3,7,8,9-HxCDD	White sucker	5	1	20	0.5	0.5		0.19	0.31	ng/kg
PCDDs/PCDFs	1,2,3,7,8,9-HxCDD	Worms (all)	19	16	84.2	0.31	1.6	0.62	0.23	0.33	ng/kg
PCDDs/PCDFs	1,2,3,7,8,9-HxCDD	Worms (estuarine sp.)	5	2	40	0.31	0.48	0.4	0.23	0.33	ng/kg
PCDDs/PCDFs	1,2,3,7,8,9-HxCDD	Worms (freshwater sp.)	14	14	100	0.31	1.6	0.65			ng/kg
PCDDs/PCDFs	1,2,3,7,8-PeCDD	American eel (all)	21	8	38.1	0.26	1	0.72	0.17	0.43	ng/kg
PCDDs/PCDFs	1,2,3,7,8-PeCDD	Blue crab	24	23	95.8	0.36	1.5	0.84	0.35	0.35	ng/kg
PCDDs/PCDFs	1,2,3,7,8-PeCDD	Brown bullhead	6	5	83.3	0.76	2.7	1.9	0.4	0.4	ng/kg
PCDDs/PCDFs	1,2,3,7,8-PeCDD	Carp	12	12	100	1.6	9.5	4.7			ng/kg
PCDDs/PCDFs	1,2,3,7,8-PeCDD	Channel catfish	11	11	100	0.42	3.3	1.5			ng/kg
PCDDs/PCDFs	1,2,3,7,8-PeCDD	Fish (all)	131	105	80.2	0.15	9.5	1.8	0.17	0.43	ng/kg
PCDDs/PCDFs	1,2,3,7,8-PeCDD	Fish (≤ 11 cm)	23	14	60.9	0.28	0.72	0.45	0.24	0.34	ng/kg
PCDDs/PCDFs	1,2,3,7,8-PeCDD	Fish (≤ 13 cm)	26	17	65.4	0.28	0.72	0.46	0.24	0.34	ng/kg
PCDDs/PCDFs	1,2,3,7,8-PeCDD	Fish (≤ 18 cm)	41	32	78	0.15	2.7	0.98	0.24	0.34	ng/kg
PCDDs/PCDFs	1,2,3,7,8-PeCDD	Fish (≤ 20 cm)	43	34	79.1	0.15	2.7	1.1	0.24	0.34	ng/kg
PCDDs/PCDFs	1,2,3,7,8-PeCDD	Largemouth bass	3	2	66.7	0.64	0.82	0.73	0.21	0.21	ng/kg
PCDDs/PCDFs	1,2,3,7,8-PeCDD	Mummichog	18	9	50	0.28	0.72	0.45	0.24	0.34	ng/kg
PCDDs/PCDFs	1,2,3,7,8-PeCDD	Mussel (estuarine)	3	2	66.7	0.045	0.046	0.046	0.044	0.044	ng/kg
PCDDs/PCDFs	1,2,3,7,8-PeCDD	Mussel (freshwater)	5	5	100	0.05	0.071	0.06			ng/kg
PCDDs/PCDFs	1,2,3,7,8-PeCDD	Northern pike	1	1	100	2	2				ng/kg
PCDDs/PCDFs	1,2,3,7,8-PeCDD	Other forage fish (no mummichog)	10	10	100	0.15	0.96	0.47			ng/kg
PCDDs/PCDFs	1,2,3,7,8-PeCDD	Smallmouth bass	3	3	100	0.44	0.89	0.68			ng/kg
PCDDs/PCDFs	1,2,3,7,8-PeCDD	White catfish	19	18	94.7	0.48	5.3	2.6	0.18	0.18	ng/kg
PCDDs/PCDFs	1,2,3,7,8-PeCDD	White perch	22	21	95.5	0.45	3.5	1.7	0.21	0.21	ng/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCDDs/PCDFs	1,2,3,7,8-PeCDD	White sucker	5	5	100	0.47	1.5	0.99			ng/kg
PCDDs/PCDFs	1,2,3,7,8-PeCDD	Worms (all)	19	12	63.2	0.23	0.68	0.4	0.2	0.36	ng/kg
PCDDs/PCDFs	1,2,3,7,8-PeCDD	Worms (estuarine sp.)	5	0	0				0.25	0.36	ng/kg
PCDDs/PCDFs	1,2,3,7,8-PeCDD	Worms (freshwater sp.)	14	12	85.7	0.23	0.68	0.4	0.2	0.26	ng/kg
PCDDs/PCDFs	2,3,7,8-TCDD	American eel (all)	21	20	95.2	0.32	47	18	0.21	0.21	ng/kg
PCDDs/PCDFs	2,3,7,8-TCDD	Blue crab	24	24	100	24	86	51			ng/kg
PCDDs/PCDFs	2,3,7,8-TCDD	Brown bullhead	6	6	100	7.8	190	91			ng/kg
PCDDs/PCDFs	2,3,7,8-TCDD	Carp	12	12	100	5.2	1400	410			ng/kg
PCDDs/PCDFs	2,3,7,8-TCDD	Channel catfish	11	11	100	22	160	70			ng/kg
PCDDs/PCDFs	2,3,7,8-TCDD	Fish (all)	131	130	99.2	0.32	1400	110	0.21	0.21	ng/kg
PCDDs/PCDFs	2,3,7,8-TCDD	Fish (≤ 11 cm)	23	23	100	2.4	100	34			ng/kg
PCDDs/PCDFs	2,3,7,8-TCDD	Fish (≤ 13 cm)	26	26	100	2.4	100	34			ng/kg
PCDDs/PCDFs	2,3,7,8-TCDD	Fish (≤ 18 cm)	41	41	100	2.4	230	65			ng/kg
PCDDs/PCDFs	2,3,7,8-TCDD	Fish (≤ 20 cm)	43	43	100	2.4	230	69			ng/kg
PCDDs/PCDFs	2,3,7,8-TCDD	Largemouth bass	3	3	100	0.43	180	82			ng/kg
PCDDs/PCDFs	2,3,7,8-TCDD	Mummichog	18	18	100	11	100	37			ng/kg
PCDDs/PCDFs	2,3,7,8-TCDD	Mussel (estuarine)	3	3	100	0.25	1.2	0.66			ng/kg
PCDDs/PCDFs	2,3,7,8-TCDD	Mussel (freshwater)	5	5	100	0.077	3.6	1.8			ng/kg
PCDDs/PCDFs	2,3,7,8-TCDD	Northern pike	1	1	100	95	95				ng/kg
PCDDs/PCDFs	2,3,7,8-TCDD	Other forage fish (no mummichog)	10	10	100	2.4	93	30			ng/kg
PCDDs/PCDFs	2,3,7,8-TCDD	Smallmouth bass	3	3	100	8	76	39			ng/kg
PCDDs/PCDFs	2,3,7,8-TCDD	White catfish	19	19	100	20	410	170			ng/kg
PCDDs/PCDFs	2,3,7,8-TCDD	White perch	22	22	100	18	250	120			ng/kg
PCDDs/PCDFs	2,3,7,8-TCDD	White sucker	5	5	100	3.1	130	59			ng/kg
PCDDs/PCDFs	2,3,7,8-TCDD	Worms (all)	19	19	100	0.5	140	21			ng/kg
PCDDs/PCDFs	2,3,7,8-TCDD	Worms (estuarine sp.)	5	5	100	1.8	19	6.1			ng/kg
PCDDs/PCDFs	2,3,7,8-TCDD	Worms (freshwater sp.)	14	14	100	0.5	140	27			ng/kg
PCDDs/PCDFs	OCDD	American eel (all)	21	11	52.4	2.2	8.9	5.3	1.6	4.1	ng/kg
PCDDs/PCDFs	OCDD	Blue crab	24	24	100	4.2	18	7.1			ng/kg
PCDDs/PCDFs	OCDD	Brown bullhead	6	2	33.3	22	28	25	8.9	15	ng/kg
PCDDs/PCDFs	OCDD	Carp	12	11	91.7	21	61	34	17	17	ng/kg
PCDDs/PCDFs	OCDD	Channel catfish	11	11	100	2.9	5	3.9			ng/kg
PCDDs/PCDFs	OCDD	Fish (all)	131	109	83.2	1.3	150	20	1.4	17	ng/kg
PCDDs/PCDFs	OCDD	Fish (≤ 11 cm)	23	23	100	2.7	120	43			ng/kg
PCDDs/PCDFs	OCDD	Fish (≤ 13 cm)	26	26	100	2.7	150	48			ng/kg
PCDDs/PCDFs	OCDD	Fish (≤ 18 cm)	41	41	100	2.7	150	35			ng/kg
PCDDs/PCDFs	OCDD	Fish (≤ 20 cm)	43	43	100	2.7	150	34			ng/kg
PCDDs/PCDFs	OCDD	Largemouth bass	3	3	100	5.2	11	7.6			ng/kg
PCDDs/PCDFs	OCDD	Mummichog	18	18	100	2.7	120	36			ng/kg
PCDDs/PCDFs	OCDD	Mussel (estuarine)	3	3	100	3	3.9	3.6			ng/kg
PCDDs/PCDFs	OCDD	Mussel (freshwater)	5	5	100	4.1	12	6.5			ng/kg
PCDDs/PCDFs	OCDD	Northern pike	1	1	100	5.4	5.4				ng/kg
PCDDs/PCDFs	OCDD	Other forage fish (no mummichog)	10	10	100	4	150	66			ng/kg
PCDDs/PCDFs	OCDD	Smallmouth bass	3	3	100	11	15	13			ng/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCDDs/PCDFs	OCDD	White catfish	19	13	68.4	2.7	14	7.6	1.7	4	ng/kg
PCDDs/PCDFs	OCDD	White perch	22	21	95.5	1.4	31	7.7	1.4	1.4	ng/kg
PCDDs/PCDFs	OCDD	White sucker	5	5	100	1.3	8.4	4			ng/kg
PCDDs/PCDFs	OCDD	Worms (all)	19	19	100	7.8	590	100			ng/kg
PCDDs/PCDFs	OCDD	Worms (estuarine sp.)	5	5	100	7.8	15	10			ng/kg
PCDDs/PCDFs	OCDD	Worms (freshwater sp.)	14	14	100	33	590	130			ng/kg
PCDDs/PCDFs	1,2,3,4,6,7,8-HpCDF	American eel (all)	21	21	100	0.36	2.7	1.3			ng/kg
PCDDs/PCDFs	1,2,3,4,6,7,8-HpCDF	Blue crab	24	24	100	1.2	9.8	4.2			ng/kg
PCDDs/PCDFs	1,2,3,4,6,7,8-HpCDF	Brown bullhead	6	6	100	1	5.7	2.3			ng/kg
PCDDs/PCDFs	1,2,3,4,6,7,8-HpCDF	Carp	12	10	83.3	4.7	18	9.2	1.5	1.7	ng/kg
PCDDs/PCDFs	1,2,3,4,6,7,8-HpCDF	Channel catfish	11	11	100	0.48	0.88	0.67			ng/kg
PCDDs/PCDFs	1,2,3,4,6,7,8-HpCDF	Fish (all)	131	122	93.1	0.21	21	2.7	0.31	1.7	ng/kg
PCDDs/PCDFs	1,2,3,4,6,7,8-HpCDF	Fish (≤ 11 cm)	23	22	95.7	0.65	12	3.7	0.32	0.32	ng/kg
PCDDs/PCDFs	1,2,3,4,6,7,8-HpCDF	Fish (≤ 13 cm)	26	25	96.2	0.65	15	4.3	0.32	0.32	ng/kg
PCDDs/PCDFs	1,2,3,4,6,7,8-HpCDF	Fish (≤ 18 cm)	41	40	97.6	0.38	15	3.2	0.32	0.32	ng/kg
PCDDs/PCDFs	1,2,3,4,6,7,8-HpCDF	Fish (≤ 20 cm)	43	42	97.7	0.38	15	3.1	0.32	0.32	ng/kg
PCDDs/PCDFs	1,2,3,4,6,7,8-HpCDF	Largemouth bass	3	1	33.3	0.45	0.45		0.31	0.46	ng/kg
PCDDs/PCDFs	1,2,3,4,6,7,8-HpCDF	Mummichog	18	18	100	0.65	12	3.5			ng/kg
PCDDs/PCDFs	1,2,3,4,6,7,8-HpCDF	Mussel (estuarine)	3	3	100	0.2	0.37	0.28			ng/kg
PCDDs/PCDFs	1,2,3,4,6,7,8-HpCDF	Mussel (freshwater)	5	5	100	0.2	0.51	0.32			ng/kg
PCDDs/PCDFs	1,2,3,4,6,7,8-HpCDF	Northern pike	1	0	0				0.43	0.43	ng/kg
PCDDs/PCDFs	1,2,3,4,6,7,8-HpCDF	Other forage fish (no mummichog)	10	9	90	0.38	15	5.5	0.32	0.32	ng/kg
PCDDs/PCDFs	1,2,3,4,6,7,8-HpCDF	Smallmouth bass	3	0	0				0.33	0.52	ng/kg
PCDDs/PCDFs	1,2,3,4,6,7,8-HpCDF	White catfish	19	19	100	0.44	21	2.5			ng/kg
PCDDs/PCDFs	1,2,3,4,6,7,8-HpCDF	White perch	22	22	100	0.21	1.8	1.2			ng/kg
PCDDs/PCDFs	1,2,3,4,6,7,8-HpCDF	White sucker	5	5	100	0.33	0.78	0.48			ng/kg
PCDDs/PCDFs	1,2,3,4,6,7,8-HpCDF	Worms (all)	19	19	100	1.2	10	4.1			ng/kg
PCDDs/PCDFs	1,2,3,4,6,7,8-HpCDF	Worms (estuarine sp.)	5	5	100	1.2	3.2	1.8			ng/kg
PCDDs/PCDFs	1,2,3,4,6,7,8-HpCDF	Worms (freshwater sp.)	14	14	100	1.9	10	5			ng/kg
PCDDs/PCDFs	1,2,3,4,7,8,9-HpCDF	American eel (all)	21	0	0				0.098	0.46	ng/kg
PCDDs/PCDFs	1,2,3,4,7,8,9-HpCDF	Blue crab	24	0	0				0.12	0.38	ng/kg
PCDDs/PCDFs	1,2,3,4,7,8,9-HpCDF	Brown bullhead	6	0	0				0.28	0.59	ng/kg
PCDDs/PCDFs	1,2,3,4,7,8,9-HpCDF	Carp	12	0	0				0.23	0.82	ng/kg
PCDDs/PCDFs	1,2,3,4,7,8,9-HpCDF	Channel catfish	11	0	0				0.091	0.14	ng/kg
PCDDs/PCDFs	1,2,3,4,7,8,9-HpCDF	Fish (all)	131	11	8.4	0.092	0.65	0.3	0.043	0.82	ng/kg
PCDDs/PCDFs	1,2,3,4,7,8,9-HpCDF	Fish (≤ 11 cm)	23	8	34.8	0.092	0.46	0.26	0.11	0.41	ng/kg
PCDDs/PCDFs	1,2,3,4,7,8,9-HpCDF	Fish (≤ 13 cm)	26	10	38.5	0.092	0.65	0.3	0.075	0.41	ng/kg
PCDDs/PCDFs	1,2,3,4,7,8,9-HpCDF	Fish (≤ 18 cm)	41	11	26.8	0.092	0.65	0.3	0.043	0.41	ng/kg
PCDDs/PCDFs	1,2,3,4,7,8,9-HpCDF	Fish (≤ 20 cm)	43	11	25.6	0.092	0.65	0.3	0.043	0.41	ng/kg
PCDDs/PCDFs	1,2,3,4,7,8,9-HpCDF	Largemouth bass	3	0	0				0.25	0.28	ng/kg
PCDDs/PCDFs	1,2,3,4,7,8,9-HpCDF	Mummichog	18	4	22.2	0.14	0.46	0.31	0.2	0.41	ng/kg
PCDDs/PCDFs	1,2,3,4,7,8,9-HpCDF	Mussel (estuarine)	3	0	0				0.031	0.034	ng/kg
PCDDs/PCDFs	1,2,3,4,7,8,9-HpCDF	Mussel (freshwater)	5	0	0				0.026	0.054	ng/kg
PCDDs/PCDFs	1,2,3,4,7,8,9-HpCDF	Northern pike	1	0	0				0.27	0.27	ng/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCDDs/PCDFs	1,2,3,4,7,8,9-HpCDF	Other forage fish (no mummichog)	10	6	60	0.19	0.65	0.32	0.043	0.11	ng/kg
PCDDs/PCDFs	1,2,3,4,7,8,9-HpCDF	Smallmouth bass	3	0	0				0.22	0.27	ng/kg
PCDDs/PCDFs	1,2,3,4,7,8,9-HpCDF	White catfish	19	0	0				0.12	0.28	ng/kg
PCDDs/PCDFs	1,2,3,4,7,8,9-HpCDF	White perch	22	1	4.5	0.092	0.092		0.077	0.54	ng/kg
PCDDs/PCDFs	1,2,3,4,7,8,9-HpCDF	White sucker	5	0	0				0.14	0.22	ng/kg
PCDDs/PCDFs	1,2,3,4,7,8,9-HpCDF	Worms (all)	19	5	26.3	0.14	0.85	0.48	0.12	0.29	ng/kg
PCDDs/PCDFs	1,2,3,4,7,8,9-HpCDF	Worms (estuarine sp.)	5	0	0				0.18	0.29	ng/kg
PCDDs/PCDFs	1,2,3,4,7,8,9-HpCDF	Worms (freshwater sp.)	14	5	35.7	0.14	0.85	0.48	0.12	0.24	ng/kg
PCDDs/PCDFs	1,2,3,4,7,8-HxCDF	American eel (all)	21	20	95.2	0.25	4.8	1.8	0.2	0.2	ng/kg
PCDDs/PCDFs	1,2,3,4,7,8-HxCDF	Blue crab	24	24	100	1.3	9.3	6.4			ng/kg
PCDDs/PCDFs	1,2,3,4,7,8-HxCDF	Brown bullhead	6	5	83.3	0.79	8.2	3.8	0.33	0.33	ng/kg
PCDDs/PCDFs	1,2,3,4,7,8-HxCDF	Carp	12	12	100	0.6	33	12			ng/kg
PCDDs/PCDFs	1,2,3,4,7,8-HxCDF	Channel catfish	11	11	100	0.42	2.2	1			ng/kg
PCDDs/PCDFs	1,2,3,4,7,8-HxCDF	Fish (all)	131	124	94.7	0.16	33	3.2	0.11	0.33	ng/kg
PCDDs/PCDFs	1,2,3,4,7,8-HxCDF	Fish (≤ 11 cm)	23	23	100	0.16	2.5	1			ng/kg
PCDDs/PCDFs	1,2,3,4,7,8-HxCDF	Fish (≤ 13 cm)	26	26	100	0.16	4.5	1.2			ng/kg
PCDDs/PCDFs	1,2,3,4,7,8-HxCDF	Fish (≤ 18 cm)	41	41	100	0.16	5	1.8			ng/kg
PCDDs/PCDFs	1,2,3,4,7,8-HxCDF	Fish (≤ 20 cm)	43	43	100	0.16	5.6	1.9			ng/kg
PCDDs/PCDFs	1,2,3,4,7,8-HxCDF	Largemouth bass	3	2	66.7	0.55	0.57	0.56	0.14	0.14	ng/kg
PCDDs/PCDFs	1,2,3,4,7,8-HxCDF	Mummichog	18	18	100	0.42	2.5	1.1			ng/kg
PCDDs/PCDFs	1,2,3,4,7,8-HxCDF	Mussel (estuarine)	3	3	100	0.061	0.077	0.069			ng/kg
PCDDs/PCDFs	1,2,3,4,7,8-HxCDF	Mussel (freshwater)	5	5	100	0.049	0.13	0.086			ng/kg
PCDDs/PCDFs	1,2,3,4,7,8-HxCDF	Northern pike	1	1	100	2.2	2.2				ng/kg
PCDDs/PCDFs	1,2,3,4,7,8-HxCDF	Other forage fish (no mummichog)	10	10	100	0.16	4.5	1.4			ng/kg
PCDDs/PCDFs	1,2,3,4,7,8-HxCDF	Smallmouth bass	3	2	66.7	0.62	1.6	1.1	0.11	0.11	ng/kg
PCDDs/PCDFs	1,2,3,4,7,8-HxCDF	White catfish	19	18	94.7	0.45	9.3	3.5	0.12	0.12	ng/kg
PCDDs/PCDFs	1,2,3,4,7,8-HxCDF	White perch	22	22	100	0.28	8.6	3.4			ng/kg
PCDDs/PCDFs	1,2,3,4,7,8-HxCDF	White sucker	5	3	60	0.96	1.1	1	0.14	0.15	ng/kg
PCDDs/PCDFs	1,2,3,4,7,8-HxCDF	Worms (all)	19	19	100	0.3	2.8	1.2			ng/kg
PCDDs/PCDFs	1,2,3,4,7,8-HxCDF	Worms (estuarine sp.)	5	5	100	0.37	1.3	0.73			ng/kg
PCDDs/PCDFs	1,2,3,4,7,8-HxCDF	Worms (freshwater sp.)	14	14	100	0.3	2.8	1.4			ng/kg
PCDDs/PCDFs	1,2,3,6,7,8-HxCDF	American eel (all)	21	19	90.5	0.16	1.7	0.62	0.12	0.17	ng/kg
PCDDs/PCDFs	1,2,3,6,7,8-HxCDF	Blue crab	24	24	100	0.34	2.3	1.4			ng/kg
PCDDs/PCDFs	1,2,3,6,7,8-HxCDF	Brown bullhead	6	5	83.3	0.31	2.9	1.5	0.31	0.31	ng/kg
PCDDs/PCDFs	1,2,3,6,7,8-HxCDF	Carp	12	12	100	0.64	11	4.5			ng/kg
PCDDs/PCDFs	1,2,3,6,7,8-HxCDF	Channel catfish	11	11	100	0.22	0.93	0.5			ng/kg
PCDDs/PCDFs	1,2,3,6,7,8-HxCDF	Fish (all)	131	106	80.9	0.094	11	1.3	0.11	0.31	ng/kg
PCDDs/PCDFs	1,2,3,6,7,8-HxCDF	Fish (≤ 11 cm)	23	13	56.5	0.15	0.73	0.43	0.14	0.23	ng/kg
PCDDs/PCDFs	1,2,3,6,7,8-HxCDF	Fish (≤ 13 cm)	26	16	61.5	0.15	1.2	0.49	0.14	0.23	ng/kg
PCDDs/PCDFs	1,2,3,6,7,8-HxCDF	Fish (≤ 18 cm)	41	30	73.2	0.094	1.5	0.66	0.14	0.23	ng/kg
PCDDs/PCDFs	1,2,3,6,7,8-HxCDF	Fish (≤ 20 cm)	43	32	74.4	0.094	1.5	0.7	0.14	0.23	ng/kg
PCDDs/PCDFs	1,2,3,6,7,8-HxCDF	Largemouth bass	3	0	0				0.14	0.17	ng/kg
PCDDs/PCDFs	1,2,3,6,7,8-HxCDF	Mummichog	18	8	44.4	0.15	0.73	0.47	0.14	0.23	ng/kg
PCDDs/PCDFs	1,2,3,6,7,8-HxCDF	Mussel (estuarine)	3	3	100	0.023	0.036	0.029			ng/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCDDs/PCDFs	1,2,3,6,7,8-HxCDF	Mussel (freshwater)	5	5	100	0.046	0.062	0.053			ng/kg
PCDDs/PCDFs	1,2,3,6,7,8-HxCDF	Northern pike	1	1	100	0.66	0.66				ng/kg
PCDDs/PCDFs	1,2,3,6,7,8-HxCDF	Other forage fish (no mummichog)	10	10	100	0.094	1.2	0.47			ng/kg
PCDDs/PCDFs	1,2,3,6,7,8-HxCDF	Smallmouth bass	3	0	0				0.11	0.28	ng/kg
PCDDs/PCDFs	1,2,3,6,7,8-HxCDF	White catfish	19	18	94.7	0.27	7.8	1.6	0.11	0.11	ng/kg
PCDDs/PCDFs	1,2,3,6,7,8-HxCDF	White perch	22	19	86.4	0.27	2	1	0.15	0.18	ng/kg
PCDDs/PCDFs	1,2,3,6,7,8-HxCDF	White sucker	5	3	60	0.34	0.46	0.4	0.13	0.14	ng/kg
PCDDs/PCDFs	1,2,3,6,7,8-HxCDF	Worms (all)	19	16	84.2	0.19	0.95	0.52	0.1	0.19	ng/kg
PCDDs/PCDFs	1,2,3,6,7,8-HxCDF	Worms (estuarine sp.)	5	3	60	0.19	0.48	0.34	0.12	0.19	ng/kg
PCDDs/PCDFs	1,2,3,6,7,8-HxCDF	Worms (freshwater sp.)	14	13	92.9	0.24	0.95	0.56	0.1	0.1	ng/kg
PCDDs/PCDFs	1,2,3,7,8-PeCDF	American eel (all)	21	0	0				0.07	0.28	ng/kg
PCDDs/PCDFs	1,2,3,7,8-PeCDF	Blue crab	24	24	100	0.51	1.7	1.3			ng/kg
PCDDs/PCDFs	1,2,3,7,8-PeCDF	Brown bullhead	6	5	83.3	0.42	2	1	0.21	0.21	ng/kg
PCDDs/PCDFs	1,2,3,7,8-PeCDF	Carp	12	12	100	0.55	3.3	2			ng/kg
PCDDs/PCDFs	1,2,3,7,8-PeCDF	Channel catfish	11	5	45.5	0.2	0.41	0.27	0.08	0.17	ng/kg
PCDDs/PCDFs	1,2,3,7,8-PeCDF	Fish (all)	131	81	61.8	0.13	3.6	1.1	0.07	0.28	ng/kg
PCDDs/PCDFs	1,2,3,7,8-PeCDF	Fish (≤ 11 cm)	23	11	47.8	0.15	0.63	0.37	0.16	0.25	ng/kg
PCDDs/PCDFs	1,2,3,7,8-PeCDF	Fish (≤ 13 cm)	26	14	53.8	0.15	0.91	0.42	0.16	0.25	ng/kg
PCDDs/PCDFs	1,2,3,7,8-PeCDF	Fish (≤ 18 cm)	41	29	70.7	0.13	2.4	0.89	0.16	0.25	ng/kg
PCDDs/PCDFs	1,2,3,7,8-PeCDF	Fish (≤ 20 cm)	43	31	72.1	0.13	2.5	0.98	0.16	0.25	ng/kg
PCDDs/PCDFs	1,2,3,7,8-PeCDF	Largemouth bass	3	3	100	0.28	2.4	1.1			ng/kg
PCDDs/PCDFs	1,2,3,7,8-PeCDF	Mummichog	18	6	33.3	0.15	0.58	0.32	0.16	0.25	ng/kg
PCDDs/PCDFs	1,2,3,7,8-PeCDF	Mussel (estuarine)	3	0	0				0.026	0.04	ng/kg
PCDDs/PCDFs	1,2,3,7,8-PeCDF	Mussel (freshwater)	5	4	80	0.043	0.066	0.057	0.04	0.04	ng/kg
PCDDs/PCDFs	1,2,3,7,8-PeCDF	Northern pike	1	1	100	1.5	1.5				ng/kg
PCDDs/PCDFs	1,2,3,7,8-PeCDF	Other forage fish (no mummichog)	10	10	100	0.13	0.91	0.48			ng/kg
PCDDs/PCDFs	1,2,3,7,8-PeCDF	Smallmouth bass	3	3	100	0.29	0.56	0.4			ng/kg
PCDDs/PCDFs	1,2,3,7,8-PeCDF	White catfish	19	11	57.9	0.38	2.2	1	0.083	0.23	ng/kg
PCDDs/PCDFs	1,2,3,7,8-PeCDF	White perch	22	20	90.9	0.36	3.6	1.7	0.2	0.2	ng/kg
PCDDs/PCDFs	1,2,3,7,8-PeCDF	White sucker	5	5	100	0.23	0.91	0.58			ng/kg
PCDDs/PCDFs	1,2,3,7,8-PeCDF	Worms (all)	19	16	84.2	0.12	0.56	0.36	0.19	0.2	ng/kg
PCDDs/PCDFs	1,2,3,7,8-PeCDF	Worms (estuarine sp.)	5	2	40	0.32	0.45	0.39	0.19	0.2	ng/kg
PCDDs/PCDFs	1,2,3,7,8-PeCDF	Worms (freshwater sp.)	14	14	100	0.12	0.56	0.35			ng/kg
PCDDs/PCDFs	2,3,4,6,7,8-HxCDF	American eel (all)	21	15	71.4	0.18	0.8	0.38	0.15	0.23	ng/kg
PCDDs/PCDFs	2,3,4,6,7,8-HxCDF	Blue crab	24	23	95.8	0.22	0.66	0.4	0.12	0.12	ng/kg
PCDDs/PCDFs	2,3,4,6,7,8-HxCDF	Brown bullhead	6	4	66.7	0.3	1.5	0.89	0.32	0.35	ng/kg
PCDDs/PCDFs	2,3,4,6,7,8-HxCDF	Carp	12	12	100	0.33	4.7	1.9			ng/kg
PCDDs/PCDFs	2,3,4,6,7,8-HxCDF	Channel catfish	11	10	90.9	0.14	0.96	0.41	0.076	0.076	ng/kg
PCDDs/PCDFs	2,3,4,6,7,8-HxCDF	Fish (all)	131	95	72.5	0.069	4.7	0.68	0.076	0.35	ng/kg
PCDDs/PCDFs	2,3,4,6,7,8-HxCDF	Fish (≤ 11 cm)	23	13	56.5	0.17	0.56	0.36	0.17	0.26	ng/kg
PCDDs/PCDFs	2,3,4,6,7,8-HxCDF	Fish (≤ 13 cm)	26	16	61.5	0.17	0.89	0.4	0.17	0.26	ng/kg
PCDDs/PCDFs	2,3,4,6,7,8-HxCDF	Fish (≤ 18 cm)	41	30	73.2	0.069	0.89	0.41	0.17	0.26	ng/kg
PCDDs/PCDFs	2,3,4,6,7,8-HxCDF	Fish (≤ 20 cm)	43	31	72.1	0.069	0.89	0.41	0.17	0.26	ng/kg
PCDDs/PCDFs	2,3,4,6,7,8-HxCDF	Largemouth bass	3	0	0				0.13	0.17	ng/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCDDs/PCDFs	2,3,4,6,7,8-HxCDF	Mummichog	18	8	44.4	0.18	0.56	0.36	0.17	0.26	ng/kg
PCDDs/PCDFs	2,3,4,6,7,8-HxCDF	Mussel (estuarine)	3	2	66.7	0.033	0.047	0.04	0.025	0.025	ng/kg
PCDDs/PCDFs	2,3,4,6,7,8-HxCDF	Mussel (freshwater)	5	5	100	0.05	0.076	0.063			ng/kg
PCDDs/PCDFs	2,3,4,6,7,8-HxCDF	Northern pike	1	0	0				0.26	0.26	ng/kg
PCDDs/PCDFs	2,3,4,6,7,8-HxCDF	Other forage fish (no mummichog)	10	10	100	0.069	0.89	0.39			ng/kg
PCDDs/PCDFs	2,3,4,6,7,8-HxCDF	Smallmouth bass	3	0	0				0.11	0.23	ng/kg
PCDDs/PCDFs	2,3,4,6,7,8-HxCDF	White catfish	19	18	94.7	0.27	1.5	0.72	0.11	0.11	ng/kg
PCDDs/PCDFs	2,3,4,6,7,8-HxCDF	White perch	22	18	81.8	0.2	0.79	0.49	0.15	0.19	ng/kg
PCDDs/PCDFs	2,3,4,6,7,8-HxCDF	White sucker	5	0	0				0.093	0.14	ng/kg
PCDDs/PCDFs	2,3,4,6,7,8-HxCDF	Worms (all)	19	15	78.9	0.2	1	0.48	0.12	0.19	ng/kg
PCDDs/PCDFs	2,3,4,6,7,8-HxCDF	Worms (estuarine sp.)	5	1	20	0.2	0.2		0.12	0.19	ng/kg
PCDDs/PCDFs	2,3,4,6,7,8-HxCDF	Worms (freshwater sp.)	14	14	100	0.24	1	0.5			ng/kg
PCDDs/PCDFs	2,3,4,7,8-PeCDF	American eel (all)	21	19	90.5	0.17	1.8	0.65	0.16	0.19	ng/kg
PCDDs/PCDFs	2,3,4,7,8-PeCDF	Blue crab	24	24	100	1.2	7.5	5			ng/kg
PCDDs/PCDFs	2,3,4,7,8-PeCDF	Brown bullhead	6	6	100	0.94	8.8	4			ng/kg
PCDDs/PCDFs	2,3,4,7,8-PeCDF	Carp	12	12	100	1.7	29	12			ng/kg
PCDDs/PCDFs	2,3,4,7,8-PeCDF	Channel catfish	11	11	100	0.74	6.4	3.1			ng/kg
PCDDs/PCDFs	2,3,4,7,8-PeCDF	Fish (all)	131	128	97.7	0.17	29	4.2	0.16	0.2	ng/kg
PCDDs/PCDFs	2,3,4,7,8-PeCDF	Fish (≤ 11 cm)	23	22	95.7	0.66	2.6	1.2	0.2	0.2	ng/kg
PCDDs/PCDFs	2,3,4,7,8-PeCDF	Fish (≤ 13 cm)	26	25	96.2	0.6	2.6	1.3	0.2	0.2	ng/kg
PCDDs/PCDFs	2,3,4,7,8-PeCDF	Fish (≤ 18 cm)	41	40	97.6	0.24	8.2	2.6	0.2	0.2	ng/kg
PCDDs/PCDFs	2,3,4,7,8-PeCDF	Fish (≤ 20 cm)	43	42	97.7	0.24	10	2.9	0.2	0.2	ng/kg
PCDDs/PCDFs	2,3,4,7,8-PeCDF	Largemouth bass	3	3	100	0.97	2.4	1.7			ng/kg
PCDDs/PCDFs	2,3,4,7,8-PeCDF	Mummichog	18	17	94.4	0.66	2.6	1.3	0.2	0.2	ng/kg
PCDDs/PCDFs	2,3,4,7,8-PeCDF	Mussel (estuarine)	3	1	33.3	0.17	0.17		0.025	0.037	ng/kg
PCDDs/PCDFs	2,3,4,7,8-PeCDF	Mussel (freshwater)	5	5	100	0.15	0.21	0.18			ng/kg
PCDDs/PCDFs	2,3,4,7,8-PeCDF	Northern pike	1	1	100	6.7	6.7				ng/kg
PCDDs/PCDFs	2,3,4,7,8-PeCDF	Other forage fish (no mummichog)	10	10	100	0.24	2.9	1.3			ng/kg
PCDDs/PCDFs	2,3,4,7,8-PeCDF	Smallmouth bass	3	3	100	0.69	2.6	1.4			ng/kg
PCDDs/PCDFs	2,3,4,7,8-PeCDF	White catfish	19	19	100	0.96	18	6.9			ng/kg
PCDDs/PCDFs	2,3,4,7,8-PeCDF	White perch	22	22	100	0.47	12	5.8			ng/kg
PCDDs/PCDFs	2,3,4,7,8-PeCDF	White sucker	5	5	100	0.75	2.8	1.8			ng/kg
PCDDs/PCDFs	2,3,4,7,8-PeCDF	Worms (all)	19	15	78.9	0.39	2.3	1.1	0.091	0.15	ng/kg
PCDDs/PCDFs	2,3,4,7,8-PeCDF	Worms (estuarine sp.)	5	5	100	0.39	0.77	0.57			ng/kg
PCDDs/PCDFs	2,3,4,7,8-PeCDF	Worms (freshwater sp.)	14	10	71.4	0.52	2.3	1.3	0.091	0.15	ng/kg
PCDDs/PCDFs	2,3,7,8-TCDF	American eel (all)	21	2	9.5	0.18	0.21	0.2	0.06	0.24	ng/kg
PCDDs/PCDFs	2,3,7,8-TCDF	Blue crab	24	24	100	3.4	10	7.2			ng/kg
PCDDs/PCDFs	2,3,7,8-TCDF	Brown bullhead	6	6	100	0.42	2.9	1.3			ng/kg
PCDDs/PCDFs	2,3,7,8-TCDF	Carp	12	12	100	1.7	5	2.9			ng/kg
PCDDs/PCDFs	2,3,7,8-TCDF	Channel catfish	11	10	90.9	0.21	0.83	0.48	0.091	0.091	ng/kg
PCDDs/PCDFs	2,3,7,8-TCDF	Fish (all)	131	110	84	0.18	17	3.3	0.06	0.24	ng/kg
PCDDs/PCDFs	2,3,7,8-TCDF	Fish (≤ 11 cm)	23	23	100	0.5	6.2	1.8			ng/kg
PCDDs/PCDFs	2,3,7,8-TCDF	Fish (≤ 13 cm)	26	26	100	0.5	6.2	2			ng/kg
PCDDs/PCDFs	2,3,7,8-TCDF	Fish (≤ 18 cm)	41	41	100	0.5	13	4.2			ng/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCDDs/PCDFs	2,3,7,8-TCDF	Fish (≤ 20 cm)	43	43	100	0.5	13	4.4			ng/kg
PCDDs/PCDFs	2,3,7,8-TCDF	Largemouth bass	3	3	100	0.85	9.3	3.8			ng/kg
PCDDs/PCDFs	2,3,7,8-TCDF	Mummichog	18	18	100	0.5	2.8	1.2			ng/kg
PCDDs/PCDFs	2,3,7,8-TCDF	Mussel (estuarine)	3	3	100	0.065	0.22	0.13			ng/kg
PCDDs/PCDFs	2,3,7,8-TCDF	Mussel (freshwater)	5	5	100	0.36	0.44	0.4			ng/kg
PCDDs/PCDFs	2,3,7,8-TCDF	Northern pike	1	1	100	11	11				ng/kg
PCDDs/PCDFs	2,3,7,8-TCDF	Other forage fish (no mummichog)	10	10	100	1.2	6.2	3.7			ng/kg
PCDDs/PCDFs	2,3,7,8-TCDF	Smallmouth bass	3	3	100	0.55	1.2	0.85			ng/kg
PCDDs/PCDFs	2,3,7,8-TCDF	White catfish	19	18	94.7	0.19	2.5	0.69	0.07	0.07	ng/kg
PCDDs/PCDFs	2,3,7,8-TCDF	White perch	22	22	100	1.4	17	8.9			ng/kg
PCDDs/PCDFs	2,3,7,8-TCDF	White sucker	5	5	100	3.9	7.3	5.5			ng/kg
PCDDs/PCDFs	2,3,7,8-TCDF	Worms (all)	19	19	100	0.84	7.5	1.7			ng/kg
PCDDs/PCDFs	2,3,7,8-TCDF	Worms (estuarine sp.)	5	5	100	1.2	2.1	1.5			ng/kg
PCDDs/PCDFs	2,3,7,8-TCDF	Worms (freshwater sp.)	14	14	100	0.84	7.5	1.8			ng/kg
PCDDs/PCDFs	OCDF	American eel (all)	21	8	38.1	0.38	1	0.62	0.33	0.6	ng/kg
PCDDs/PCDFs	OCDF	Blue crab	24	23	95.8	0.68	3.2	1.2	0.36	0.36	ng/kg
PCDDs/PCDFs	OCDF	Brown bullhead	6	6	100	1.4	2.9	2			ng/kg
PCDDs/PCDFs	OCDF	Carp	12	10	83.3	1.4	3.6	2.4	0.64	3	ng/kg
PCDDs/PCDFs	OCDF	Channel catfish	11	9	81.8	0.26	0.82	0.52	0.19	0.23	ng/kg
PCDDs/PCDFs	OCDF	Fish (all)	131	90	68.7	0.25	24	2.9	0.15	3	ng/kg
PCDDs/PCDFs	OCDF	Fish (≤ 11 cm)	23	20	87	1.3	18	6.1	0.15	0.54	ng/kg
PCDDs/PCDFs	OCDF	Fish (≤ 13 cm)	26	23	88.5	1.3	24	7.1	0.15	0.54	ng/kg
PCDDs/PCDFs	OCDF	Fish (≤ 18 cm)	41	34	82.9	0.46	24	5.6	0.15	0.54	ng/kg
PCDDs/PCDFs	OCDF	Fish (≤ 20 cm)	43	36	83.7	0.46	24	5.3	0.15	0.54	ng/kg
PCDDs/PCDFs	OCDF	Largemouth bass	3	1	33.3	2	2		0.71	0.87	ng/kg
PCDDs/PCDFs	OCDF	Mummichog	18	16	88.9	1.3	18	5.9	0.51	0.54	ng/kg
PCDDs/PCDFs	OCDF	Mussel (estuarine)	3	3	100	0.35	0.58	0.46			ng/kg
PCDDs/PCDFs	OCDF	Mussel (freshwater)	5	5	100	0.29	0.62	0.43			ng/kg
PCDDs/PCDFs	OCDF	Northern pike	1	0	0				0.84	0.84	ng/kg
PCDDs/PCDFs	OCDF	Other forage fish (no mummichog)	10	9	90	0.46	24	8.8	0.15	0.15	ng/kg
PCDDs/PCDFs	OCDF	Smallmouth bass	3	3	100	2.1	3.1	2.6			ng/kg
PCDDs/PCDFs	OCDF	White catfish	19	13	68.4	0.25	2	0.87	0.17	0.37	ng/kg
PCDDs/PCDFs	OCDF	White perch	22	14	63.6	0.53	3.9	1.5	0.25	0.83	ng/kg
PCDDs/PCDFs	OCDF	White sucker	5	1	20	0.75	0.75		0.3	0.35	ng/kg
PCDDs/PCDFs	OCDF	Worms (all)	19	19	100	1.3	24	6.7			ng/kg
PCDDs/PCDFs	OCDF	Worms (estuarine sp.)	5	5	100	1.3	2.9	1.9			ng/kg
PCDDs/PCDFs	OCDF	Worms (freshwater sp.)	14	14	100	1.9	24	8.4			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird	American eel (all)	21	21	100	0.42	47	18			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird	Blue crab	24	24	100	24	86	52			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird	Brown bullhead	6	6	100	7.9	190	92			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird	Carp	12	12	100	7	1400	410			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird	Channel catfish	11	11	100	22	160	71			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird	Fish (all)	131	131	100	0.37	1400	110			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird	Fish (≤ 11 cm)	23	23	100	2.8	100	34			ng/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCDDs/PCDFs	PCDD TEQ-Bird	Fish (≤ 13 cm)	26	26	100	2.8	100	34			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird	Fish (≤ 18 cm)	41	41	100	2.8	230	65			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird	Fish (≤ 20 cm)	43	43	100	2.8	230	70			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird	Largemouth bass	3	3	100	0.37	180	82			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird	Mummichog	18	18	100	11	100	38			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird	Mussel (estuarine)	3	3	100	0.3	1.2	0.68			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird	Mussel (freshwater)	5	5	100	0.14	3.7	1.8			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird	Northern pike	1	1	100	95	95				ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird	Other forage fish (no mummichog)	10	10	100	2.8	94	30			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird	Smallmouth bass	3	3	100	8.6	76	39			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird	White catfish	19	19	100	21	420	180			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird	White perch	22	22	100	18	250	130			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird	White sucker	5	5	100	3.5	130	60			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird	Worms (all)	19	19	100	0.55	140	22			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird	Worms (estuarine sp.)	5	5	100	1.8	19	6.1			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird	Worms (freshwater sp.)	14	14	100	0.55	140	27			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird (ND	American eel (all)	21	21	100	0.51	47	18			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird (ND	Blue crab	24	24	100	24	86	52			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird (ND	Brown bullhead	6	6	100	8.1	190	92			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird (ND	Carp	12	12	100	7	1400	410			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird (ND	Channel catfish	11	11	100	22	160	71			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird (ND	Fish (all)	131	131	100	0.51	1400	110			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird (ND	Fish (≤ 11 cm)	23	23	100	2.8	100	34			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird (ND	Fish (≤ 13 cm)	26	26	100	2.8	100	34			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird (ND	Fish (≤ 18 cm)	41	41	100	2.8	230	65			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird (ND	Fish (≤ 20 cm)	43	43	100	2.8	230	70			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird (ND	Largemouth bass	3	3	100	0.68	180	82			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird (ND	Mummichog	18	18	100	11	100	38			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird (ND	Mussel (estuarine)	3	3	100	0.3	1.3	0.72			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird (ND	Mussel (freshwater)	5	5	100	0.15	3.7	1.8			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird (ND	Northern pike	1	1	100	96	96				ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird (ND	Other forage fish (no mummichog)	10	10	100	2.8	94	30			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird (ND	Smallmouth bass	3	3	100	8.7	76	39			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird (ND	White catfish	19	19	100	21	420	180			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird (ND	White perch	22	22	100	18	250	130			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird (ND	White sucker	5	5	100	3.6	130	60			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird (ND	Worms (all)	19	19	100	0.65	140	22			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird (ND	Worms (estuarine sp.)	5	5	100	2	19	6.2			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird (ND	Worms (freshwater sp.)	14	14	100	0.65	140	27			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird (ND	American eel (all)	21	21	100	0.59	48	18			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird (ND	Blue crab	24	24	100	25	86	52			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird (ND	Brown bullhead	6	6	100	8.3	190	92			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird (ND	Carp	12	12	100	7	1400	410			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird (ND	Channel catfish	11	11	100	22	160	71			ng/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCDDs/PCDFs	PCDD TEQ-Bird (ND	Fish (all)	131	131	100	0.59	1400	110			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird (ND	Fish (≤ 11 cm)	23	23	100	2.8	100	34			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird (ND	Fish (≤ 13 cm)	26	26	100	2.8	100	34			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird (ND	Fish (≤ 18 cm)	41	41	100	2.8	230	65			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird (ND	Fish (≤ 20 cm)	43	43	100	2.8	230	70			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird (ND	Largemouth bass	3	3	100	0.95	180	82			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird (ND	Mummichog	18	18	100	11	100	38			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird (ND	Mussel (estuarine)	3	3	100	0.31	1.3	0.74			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird (ND	Mussel (freshwater)	5	5	100	0.15	3.7	1.8			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird (ND	Northern pike	1	1	100	96	96				ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird (ND	Other forage fish (no mummichog)	10	10	100	2.8	94	30			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird (ND	Smallmouth bass	3	3	100	8.7	76	39			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird (ND	White catfish	19	19	100	21	420	180			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird (ND	White perch	22	22	100	18	250	130			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird (ND	White sucker	5	5	100	3.7	130	60			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird (ND	Worms (all)	19	19	100	0.76	140	22			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird (ND	Worms (estuarine sp.)	5	5	100	2.2	19	6.3			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird (ND	Worms (freshwater sp.)	14	14	100	0.76	140	27			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish	American eel (all)	21	21	100	0.59	48	18			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish	Blue crab	24	24	100	24	86	52			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish	Brown bullhead	6	6	100	7.8	190	92			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish	Carp	12	12	100	7.4	1400	410			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish	Channel catfish	11	11	100	22	160	72			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish	Fish (all)	131	131	100	0.37	1400	110			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish	Fish (≤ 11 cm)	23	23	100	2.9	100	34			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish	Fish (≤ 13 cm)	26	26	100	2.9	100	34			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish	Fish (≤ 18 cm)	41	41	100	2.9	230	65			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish	Fish (≤ 20 cm)	43	43	100	2.9	230	70			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish	Largemouth bass	3	3	100	0.37	180	82			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish	Mummichog	18	18	100	11	100	38			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish	Mussel (estuarine)	3	3	100	0.3	1.2	0.68			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish	Mussel (freshwater)	5	5	100	0.16	3.7	1.8			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish	Northern pike	1	1	100	95	95				ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish	Other forage fish (no mummichog)	10	10	100	2.9	94	30			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish	Smallmouth bass	3	3	100	8.6	76	39			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish	White catfish	19	19	100	21	420	180			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish	White perch	22	22	100	18	250	130			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish	White sucker	5	5	100	3.5	130	60			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish	Worms (all)	19	19	100	0.52	140	22			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish	Worms (estuarine sp.)	5	5	100	1.8	19	6.1			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish	Worms (freshwater sp.)	14	14	100	0.52	140	27			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish (ND	American eel (all)	21	21	100	0.68	48	18			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish (ND	Blue crab	24	24	100	24	86	52			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish (ND	Brown bullhead	6	6	100	8.1	190	92			ng/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCDDs/PCDFs	PCDD TEQ-Fish (ND=	Carp	12	12	100	7.4	1400	410			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish (ND=	Channel catfish	11	11	100	22	160	72			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish (ND=	Fish (all)	131	131	100	0.68	1400	110			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish (ND=	Fish (≤ 11 cm)	23	23	100	2.9	100	34			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish (ND=	Fish (≤ 13 cm)	26	26	100	2.9	100	34			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish (ND=	Fish (≤ 18 cm)	41	41	100	2.9	230	65			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish (ND=	Fish (≤ 20 cm)	43	43	100	2.9	230	70			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish (ND=	Largemouth bass	3	3	100	0.75	180	82			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish (ND=	Mummichog	18	18	100	11	100	38			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish (ND=	Mussel (estuarine)	3	3	100	0.31	1.3	0.73			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish (ND=	Mussel (freshwater)	5	5	100	0.16	3.7	1.8			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish (ND=	Northern pike	1	1	100	96	96				ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish (ND=	Other forage fish (no mummichog)	10	10	100	2.9	94	30			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish (ND=	Smallmouth bass	3	3	100	8.7	76	39			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish (ND=	White catfish	19	19	100	21	420	180			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish (ND=	White perch	22	22	100	19	250	130			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish (ND=	White sucker	5	5	100	3.7	130	60			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish (ND=	Worms (all)	19	19	100	0.65	140	22			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish (ND=	Worms (estuarine sp.)	5	5	100	2	19	6.2			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish (ND=	Worms (freshwater sp.)	14	14	100	0.65	140	27			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish (ND=	American eel (all)	21	21	100	0.76	48	18			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish (ND=	Blue crab	24	24	100	25	86	52			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish (ND=	Brown bullhead	6	6	100	8.4	190	92			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish (ND=	Carp	12	12	100	7.4	1400	410			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish (ND=	Channel catfish	11	11	100	22	160	72			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish (ND=	Fish (all)	131	131	100	0.76	1400	110			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish (ND=	Fish (≤ 11 cm)	23	23	100	2.9	100	34			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish (ND=	Fish (≤ 13 cm)	26	26	100	2.9	100	35			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish (ND=	Fish (≤ 18 cm)	41	41	100	2.9	230	65			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish (ND=	Fish (≤ 20 cm)	43	43	100	2.9	230	70			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish (ND=	Largemouth bass	3	3	100	1.1	180	82			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish (ND=	Mummichog	18	18	100	12	100	38			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish (ND=	Mussel (estuarine)	3	3	100	0.32	1.3	0.74			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish (ND=	Mussel (freshwater)	5	5	100	0.16	3.7	1.8			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish (ND=	Northern pike	1	1	100	96	96				ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish (ND=	Other forage fish (no mummichog)	10	10	100	2.9	94	30			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish (ND=	Smallmouth bass	3	3	100	8.8	76	39			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish (ND=	White catfish	19	19	100	21	420	180			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish (ND=	White perch	22	22	100	19	250	130			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish (ND=	White sucker	5	5	100	3.8	130	60			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish (ND=	Worms (all)	19	19	100	0.79	140	22			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish (ND=	Worms (estuarine sp.)	5	5	100	2.2	19	6.4			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish (ND=	Worms (freshwater sp.)	14	14	100	0.79	140	27			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	American eel (all)	21	21	100	0.65	47	18			ng/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCDDs/PCDFs	PCDD TEQ-Mammal	Blue crab	24	24	100	24	86	52			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	Brown bullhead	6	6	100	8	190	92			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	Carp	12	12	100	7.3	1400	410			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	Channel catfish	11	11	100	22	160	71			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	Fish (all)	131	131	100	0.37	1400	110			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	Fish (≤ 11 cm)	23	23	100	2.9	100	34			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	Fish (≤ 13 cm)	26	26	100	2.9	100	35			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	Fish (≤ 18 cm)	41	41	100	2.9	230	65			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	Fish (≤ 20 cm)	43	43	100	2.9	230	70			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	Largemouth bass	3	3	100	0.37	180	82			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	Mummichog	18	18	100	11	100	38			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	Mussel (estuarine)	3	3	100	0.3	1.3	0.71			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	Mussel (freshwater)	5	5	100	0.16	3.7	1.8			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	Northern pike	1	1	100	95	95				ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	Other forage fish (no mummichog)	10	10	100	2.9	94	31			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	Smallmouth bass	3	3	100	8.6	76	39			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	White catfish	19	19	100	21	420	180			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	White perch	22	22	100	18	250	130			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	White sucker	5	5	100	3.5	130	60			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	Worms (all)	19	19	100	0.64	140	22			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	Worms (estuarine sp.)	5	5	100	1.8	19	6.1			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	Worms (freshwater sp.)	14	14	100	0.64	140	28			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	American eel (all)	21	21	100	0.74	48	18			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	Blue crab	24	24	100	24	86	52			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	Brown bullhead	6	6	100	8.2	190	92			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	Carp	12	12	100	7.3	1400	410			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	Channel catfish	11	11	100	22	160	71			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	Fish (all)	131	131	100	0.72	1400	110			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	Fish (≤ 11 cm)	23	23	100	2.9	100	34			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	Fish (≤ 13 cm)	26	26	100	2.9	100	35			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	Fish (≤ 18 cm)	41	41	100	2.9	230	65			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	Fish (≤ 20 cm)	43	43	100	2.9	230	70			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	Largemouth bass	3	3	100	0.72	180	82			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	Mummichog	18	18	100	11	100	38			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	Mussel (estuarine)	3	3	100	0.31	1.3	0.73			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	Mussel (freshwater)	5	5	100	0.16	3.7	1.8			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	Northern pike	1	1	100	96	96				ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	Other forage fish (no mummichog)	10	10	100	2.9	94	31			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	Smallmouth bass	3	3	100	8.7	76	39			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	White catfish	19	19	100	21	420	180			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	White perch	22	22	100	19	250	130			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	White sucker	5	5	100	3.7	130	60			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	Worms (all)	19	19	100	0.74	140	22			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	Worms (estuarine sp.)	5	5	100	2	19	6.2			ng/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCDDs/PCDFs	PCDD TEQ-Mammal	Worms (freshwater sp.)	14	14	100	0.74	140	28			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	American eel (all)	21	21	100	0.82	48	19			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	Blue crab	24	24	100	25	86	52			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	Brown bullhead	6	6	100	8.4	190	92			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	Carp	12	12	100	7.3	1400	410			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	Channel catfish	11	11	100	22	160	71			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	Fish (all)	131	131	100	0.82	1400	110			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	Fish (≤ 11 cm)	23	23	100	2.9	100	34			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	Fish (≤ 13 cm)	26	26	100	2.9	100	35			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	Fish (≤ 18 cm)	41	41	100	2.9	230	65			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	Fish (≤ 20 cm)	43	43	100	2.9	230	70			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	Largemouth bass	3	3	100	1	180	82			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	Mummichog	18	18	100	11	100	38			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	Mussel (estuarine)	3	3	100	0.32	1.3	0.74			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	Mussel (freshwater)	5	5	100	0.17	3.7	1.9			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	Northern pike	1	1	100	96	96				ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	Other forage fish (no mummichog)	10	10	100	2.9	94	31			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	Smallmouth bass	3	3	100	8.8	76	39			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	White catfish	19	19	100	21	420	180			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	White perch	22	22	100	19	250	130			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	White sucker	5	5	100	3.7	130	60			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	Worms (all)	19	19	100	0.85	140	22			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	Worms (estuarine sp.)	5	5	100	2.2	19	6.4			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	Worms (freshwater sp.)	14	14	100	0.85	140	28			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird	American eel (all)	21	21	100	0.11	2.6	0.89			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird	Blue crab	24	24	100	5.5	19	13			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird	Brown bullhead	6	6	100	1.7	13	5.9			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird	Carp	12	12	100	3.6	37	17			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird	Channel catfish	11	11	100	1.2	7.1	3.7			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird	Fish (all)	131	131	100	0.11	37	7.4			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird	Fish (≤ 11 cm)	23	23	100	0.73	7	3.2			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird	Fish (≤ 13 cm)	26	26	100	0.73	7.5	3.5			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird	Fish (≤ 18 cm)	41	41	100	0.73	22	7.1			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird	Fish (≤ 20 cm)	43	43	100	0.73	22	7.7			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird	Largemouth bass	3	3	100	1.8	11	5.4			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird	Mummichog	18	18	100	0.73	5.9	2.6			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird	Mussel (estuarine)	3	3	100	0.075	0.41	0.2			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird	Mussel (freshwater)	5	5	100	0.55	0.68	0.6			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird	Northern pike	1	1	100	19	19				ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird	Other forage fish (no mummichog)	10	10	100	1.5	8.8	5.3			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird	Smallmouth bass	3	3	100	1.4	3.9	2.2			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird	White catfish	19	19	100	1.4	21	8.1			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird	White perch	22	22	100	2.1	30	15			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird	White sucker	5	5	100	4.6	9.6	7.3			ng/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCDDs/PCDFs	PCDF TEQ-Bird	Worms (all)	19	19	100	1	7.9	2.8			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird	Worms (estuarine sp.)	5	5	100	1.6	2.9	2.2			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird	Worms (freshwater sp.)	14	14	100	1	7.9	3.1			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird (ND=	American eel (all)	21	21	100	0.3	2.6	0.99			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird (ND=	Blue crab	24	24	100	5.5	19	13			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird (ND=	Brown bullhead	6	6	100	1.8	13	5.9			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird (ND=	Carp	12	12	100	3.7	37	17			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird (ND=	Channel catfish	11	11	100	1.3	7.2	3.7			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird (ND=	Fish (all)	131	131	100	0.3	37	7.5			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird (ND=	Fish (≤ 11 cm)	23	23	100	0.88	7	3.2			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird (ND=	Fish (≤ 13 cm)	26	26	100	0.88	7.5	3.6			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird (ND=	Fish (≤ 18 cm)	41	41	100	0.88	22	7.1			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird (ND=	Fish (≤ 20 cm)	43	43	100	0.88	22	7.7			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird (ND=	Largemouth bass	3	3	100	1.9	11	5.5			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird (ND=	Mummichog	18	18	100	0.88	5.9	2.7			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird (ND=	Mussel (estuarine)	3	3	100	0.092	0.41	0.21			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird (ND=	Mussel (freshwater)	5	5	100	0.55	0.68	0.61			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird (ND=	Northern pike	1	1	100	19	19				ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird (ND=	Other forage fish (no mummichog)	10	10	100	1.5	8.8	5.3			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird (ND=	Smallmouth bass	3	3	100	1.6	4.1	2.4			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird (ND=	White catfish	19	19	100	1.4	21	8.2			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird (ND=	White perch	22	22	100	2.1	30	15			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird (ND=	White sucker	5	5	100	4.7	9.7	7.4			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird (ND=	Worms (all)	19	19	100	1.1	8	2.9			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird (ND=	Worms (estuarine sp.)	5	5	100	1.7	2.9	2.2			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird (ND=	Worms (freshwater sp.)	14	14	100	1.1	8	3.1			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird (ND=	American eel (all)	21	21	100	0.4	2.7	1.1			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird (ND=	Blue crab	24	24	100	5.6	19	13			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird (ND=	Brown bullhead	6	6	100	1.8	13	5.9			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird (ND=	Carp	12	12	100	3.7	37	17			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird (ND=	Channel catfish	11	11	100	1.4	7.2	3.8			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird (ND=	Fish (all)	131	131	100	0.4	37	7.5			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird (ND=	Fish (≤ 11 cm)	23	23	100	1	7	3.3			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird (ND=	Fish (≤ 13 cm)	26	26	100	1	7.5	3.6			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird (ND=	Fish (≤ 18 cm)	41	41	100	1	22	7.1			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird (ND=	Fish (≤ 20 cm)	43	43	100	1	22	7.7			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird (ND=	Largemouth bass	3	3	100	1.9	11	5.6			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird (ND=	Mummichog	18	18	100	1	5.9	2.7			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird (ND=	Mussel (estuarine)	3	3	100	0.11	0.42	0.23			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird (ND=	Mussel (freshwater)	5	5	100	0.56	0.68	0.61			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird (ND=	Northern pike	1	1	100	19	19				ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird (ND=	Other forage fish (no mummichog)	10	10	100	1.5	8.8	5.4			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird (ND=	Smallmouth bass	3	3	100	1.7	4.3	2.6			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird (ND=	White catfish	19	19	100	1.5	21	8.2			ng/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCDDs/PCDFs	PCDF TEQ-Bird (ND=	White perch	22	22	100	2.2	30	15			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird (ND=	White sucker	5	5	100	4.8	9.7	7.4			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird (ND=	Worms (all)	19	19	100	1.1	8	2.9			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird (ND=	Worms (estuarine sp.)	5	5	100	1.7	2.9	2.2			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird (ND=	Worms (freshwater sp.)	14	14	100	1.1	8	3.1			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish	American eel (all)	21	21	100	0.11	1.5	0.57			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish	Blue crab	24	24	100	1.3	5.4	3.8			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish	Brown bullhead	6	6	100	0.54	6	2.6			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish	Carp	12	12	100	1.1	20	8.3			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish	Channel catfish	11	11	100	0.5	3.6	1.8			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish	Fish (all)	131	131	100	0.094	20	2.7			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish	Fish (≤ 11 cm)	23	23	100	0.094	1.9	0.88			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish	Fish (≤ 13 cm)	26	26	100	0.094	2.2	0.96			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish	Fish (≤ 18 cm)	41	41	100	0.094	5.5	1.8			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish	Fish (≤ 20 cm)	43	43	100	0.094	6.4	2			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish	Largemouth bass	3	3	100	0.59	1.4	1.1			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish	Mummichog	18	18	100	0.094	1.9	0.87			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish	Mussel (estuarine)	3	3	100	0.014	0.12	0.051			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish	Mussel (freshwater)	5	5	100	0.11	0.16	0.14			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish	Northern pike	1	1	100	4.2	4.2				ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish	Other forage fish (no mummichog)	10	10	100	0.22	2.2	1.1			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish	Smallmouth bass	3	3	100	0.38	1.5	0.8			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish	White catfish	19	19	100	0.5	11	4			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish	White perch	22	22	100	0.35	8.1	3.9			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish	White sucker	5	5	100	0.56	1.9	1.3			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish	Worms (all)	19	19	100	0.23	1.8	0.77			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish	Worms (estuarine sp.)	5	5	100	0.3	0.7	0.48			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish	Worms (freshwater sp.)	14	14	100	0.23	1.8	0.88			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish (ND=	American eel (all)	21	21	100	0.18	1.5	0.6			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish (ND=	Blue crab	24	24	100	1.3	5.5	3.8			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish (ND=	Brown bullhead	6	6	100	0.61	6	2.7			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish (ND=	Carp	12	12	100	1.2	20	8.4			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish (ND=	Channel catfish	11	11	100	0.52	3.6	1.8			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish (ND=	Fish (all)	131	131	100	0.18	20	2.7			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish (ND=	Fish (≤ 11 cm)	23	23	100	0.19	1.9	0.9			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish (ND=	Fish (≤ 13 cm)	26	26	100	0.19	2.2	0.98			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish (ND=	Fish (≤ 18 cm)	41	41	100	0.19	5.5	1.8			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish (ND=	Fish (≤ 20 cm)	43	43	100	0.19	6.5	2			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish (ND=	Largemouth bass	3	3	100	0.6	1.5	1.2			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish (ND=	Mummichog	18	18	100	0.19	1.9	0.89			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish (ND=	Mussel (estuarine)	3	3	100	0.024	0.12	0.059			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish (ND=	Mussel (freshwater)	5	5	100	0.12	0.16	0.14			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish (ND=	Northern pike	1	1	100	4.3	4.3				ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish (ND=	Other forage fish (no mummichog)	10	10	100	0.23	2.2	1.1			ng/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCDDs/PCDFs	PCDF TEQ-Fish (ND=	Smallmouth bass	3	3	100	0.46	1.6	0.89			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish (ND=	White catfish	19	19	100	0.56	11	4.1			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish (ND=	White perch	22	22	100	0.38	8.2	3.9			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish (ND=	White sucker	5	5	100	0.65	2	1.3			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish (ND=	Worms (all)	19	19	100	0.26	1.8	0.79			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish (ND=	Worms (estuarine sp.)	5	5	100	0.34	0.71	0.51			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish (ND=	Worms (freshwater sp.)	14	14	100	0.26	1.8	0.89			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish (ND=	American eel (all)	21	21	100	0.19	1.5	0.63			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish (ND=	Blue crab	24	24	100	1.3	5.5	3.8			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish (ND=	Brown bullhead	6	6	100	0.68	6	2.7			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish (ND=	Carp	12	12	100	1.2	20	8.4			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish (ND=	Channel catfish	11	11	100	0.54	3.6	1.8			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish (ND=	Fish (all)	131	131	100	0.19	20	2.7			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish (ND=	Fish (≤ 11 cm)	23	23	100	0.29	1.9	0.93			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish (ND=	Fish (≤ 13 cm)	26	26	100	0.29	2.2	1			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish (ND=	Fish (≤ 18 cm)	41	41	100	0.23	5.5	1.8			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish (ND=	Fish (≤ 20 cm)	43	43	100	0.23	6.5	2			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish (ND=	Largemouth bass	3	3	100	0.66	1.6	1.3			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish (ND=	Mummichog	18	18	100	0.29	1.9	0.93			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish (ND=	Mussel (estuarine)	3	3	100	0.034	0.12	0.066			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish (ND=	Mussel (freshwater)	5	5	100	0.12	0.17	0.14			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish (ND=	Northern pike	1	1	100	4.4	4.4				ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish (ND=	Other forage fish (no mummichog)	10	10	100	0.23	2.2	1.1			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish (ND=	Smallmouth bass	3	3	100	0.54	1.7	0.98			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish (ND=	White catfish	19	19	100	0.61	11	4.1			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish (ND=	White perch	22	22	100	0.41	8.2	3.9			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish (ND=	White sucker	5	5	100	0.71	2	1.4			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish (ND=	Worms (all)	19	19	100	0.29	1.8	0.81			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish (ND=	Worms (estuarine sp.)	5	5	100	0.38	0.72	0.53			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish (ND=	Worms (freshwater sp.)	14	14	100	0.29	1.8	0.9			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	American eel (all)	21	21	100	0.11	1.2	0.45			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	Blue crab	24	24	100	1.1	4.4	3.1			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	Brown bullhead	6	6	100	0.38	4.3	1.9			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	Carp	12	12	100	0.86	14	6			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	Channel catfish	11	11	100	0.39	2.4	1.2			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	Fish (all)	131	131	100	0.11	14	2			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	Fish (≤ 11 cm)	23	23	100	0.13	1.5	0.73			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	Fish (≤ 13 cm)	26	26	100	0.13	2	0.8			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	Fish (≤ 18 cm)	41	41	100	0.13	4.4	1.5			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	Fish (≤ 20 cm)	43	43	100	0.13	4.9	1.6			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	Largemouth bass	3	3	100	0.43	1.5	0.93			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	Mummichog	18	18	100	0.13	1.5	0.67			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	Mussel (estuarine)	3	3	100	0.017	0.093	0.045			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	Mussel (freshwater)	5	5	100	0.1	0.14	0.12			ng/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCDDs/PCDFs	PCDF TEQ-Mammal	Northern pike	1	1	100	3.5	3.5				ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	Other forage fish (no mummichog)	10	10	100	0.23	2	1.1			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	Smallmouth bass	3	3	100	0.28	1.1	0.58			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	White catfish	19	19	100	0.34	7.6	2.7			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	White perch	22	22	100	0.33	6.5	3.2			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	White sucker	5	5	100	0.6	1.7	1.2			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	Worms (all)	19	19	100	0.27	1.4	0.68			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	Worms (estuarine sp.)	5	5	100	0.29	0.6	0.44			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	Worms (freshwater sp.)	14	14	100	0.27	1.4	0.77			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	American eel (all)	21	21	100	0.14	1.2	0.49			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	Blue crab	24	24	100	1.1	4.4	3.1			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	Brown bullhead	6	6	100	0.45	4.3	1.9			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	Carp	12	12	100	0.88	14	6			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	Channel catfish	11	11	100	0.41	2.4	1.2			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	Fish (all)	131	131	100	0.14	14	2			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	Fish (≤ 11 cm)	23	23	100	0.2	1.5	0.75			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	Fish (≤ 13 cm)	26	26	100	0.2	2	0.83			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	Fish (≤ 18 cm)	41	41	100	0.2	4.4	1.5			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	Fish (≤ 20 cm)	43	43	100	0.2	5	1.7			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	Largemouth bass	3	3	100	0.46	1.6	1			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	Mummichog	18	18	100	0.2	1.5	0.7			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	Mussel (estuarine)	3	3	100	0.024	0.095	0.051			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	Mussel (freshwater)	5	5	100	0.1	0.14	0.12			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	Northern pike	1	1	100	3.5	3.5				ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	Other forage fish (no mummichog)	10	10	100	0.24	2	1.1			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	Smallmouth bass	3	3	100	0.35	1.2	0.67			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	White catfish	19	19	100	0.39	7.7	2.8			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	White perch	22	22	100	0.36	6.5	3.2			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	White sucker	5	5	100	0.67	1.7	1.2			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	Worms (all)	19	19	100	0.29	1.4	0.7			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	Worms (estuarine sp.)	5	5	100	0.32	0.61	0.46			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	Worms (freshwater sp.)	14	14	100	0.29	1.4	0.78			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	American eel (all)	21	21	100	0.16	1.2	0.51			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	Blue crab	24	24	100	1.1	4.5	3.2			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	Brown bullhead	6	6	100	0.52	4.4	2			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	Carp	12	12	100	0.91	14	6			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	Channel catfish	11	11	100	0.43	2.4	1.2			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	Fish (all)	131	131	100	0.16	14	2.1			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	Fish (≤ 11 cm)	23	23	100	0.28	1.5	0.77			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	Fish (≤ 13 cm)	26	26	100	0.28	2	0.84			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	Fish (≤ 18 cm)	41	41	100	0.24	4.4	1.5			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	Fish (≤ 20 cm)	43	43	100	0.24	5	1.7			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	Largemouth bass	3	3	100	0.5	1.7	1.1			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	Mummichog	18	18	100	0.28	1.5	0.73			ng/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCDDs/PCDFs	PCDF TEQ-Mammal	Mussel (estuarine)	3	3	100	0.031	0.097	0.056			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	Mussel (freshwater)	5	5	100	0.11	0.14	0.12			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	Northern pike	1	1	100	3.6	3.6				ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	Other forage fish (no mummichog)	10	10	100	0.24	2	1.1			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	Smallmouth bass	3	3	100	0.42	1.2	0.72			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	White catfish	19	19	100	0.45	7.7	2.8			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	White perch	22	22	100	0.39	6.5	3.2			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	White sucker	5	5	100	0.77	1.7	1.3			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	Worms (all)	19	19	100	0.31	1.4	0.71			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	Worms (estuarine sp.)	5	5	100	0.36	0.62	0.49			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	Worms (freshwater sp.)	14	14	100	0.31	1.4	0.8			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird	American eel (all)	21	21	100	0.7	48	19			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird	Blue crab	24	24	100	31	100	65			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird	Brown bullhead	6	6	100	9.6	210	99			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird	Carp	12	12	100	11	1400	430			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird	Channel catfish	11	11	100	23	170	76			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird	Fish (all)	131	131	100	0.7	1400	120			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird	Fish (≤ 11 cm)	23	23	100	9.8	110	38			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird	Fish (≤ 13 cm)	26	26	100	9.8	110	38			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird	Fish (≤ 18 cm)	41	41	100	9.1	250	72			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird	Fish (≤ 20 cm)	43	43	100	9.1	250	78			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird	Largemouth bass	3	3	100	12	180	86			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird	Mummichog	18	18	100	12	110	41			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird	Mussel (estuarine)	3	3	100	0.37	1.7	0.91			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird	Mussel (freshwater)	5	5	100	0.7	4.3	2.4			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird	Northern pike	1	1	100	120	120				ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird	Other forage fish (no mummichog)	10	10	100	9.1	100	35			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird	Smallmouth bass	3	3	100	9.8	82	42			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird	White catfish	19	19	100	23	430	180			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird	White perch	22	22	100	21	280	140			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird	White sucker	5	5	100	8	140	68			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird	Worms (all)	19	19	100	2.4	150	25			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird	Worms (estuarine sp.)	5	5	100	3.8	22	8.3			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird	Worms (freshwater sp.)	14	14	100	2.4	150	31			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird (ND	American eel (all)	21	21	100	0.85	49	19			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird (ND	Blue crab	24	24	100	31	100	66			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird (ND	Brown bullhead	6	6	100	9.9	210	99			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird (ND	Carp	12	12	100	11	1400	430			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird (ND	Channel catfish	11	11	100	23	170	76			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird (ND	Fish (all)	131	131	100	0.85	1400	120			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird (ND	Fish (≤ 11 cm)	23	23	100	9.9	110	38			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird (ND	Fish (≤ 13 cm)	26	26	100	9.9	110	38			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird (ND	Fish (≤ 18 cm)	41	41	100	9.2	250	73			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird (ND	Fish (≤ 20 cm)	43	43	100	9.2	250	78			ng/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCDDs/PCDFs	Dioxin TEQ-Bird (ND	Largemouth bass	3	3	100	12	180	86			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird (ND	Mummichog	18	18	100	13	110	41			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird (ND	Mussel (estuarine)	3	3	100	0.39	1.7	0.93			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird (ND	Mussel (freshwater)	5	5	100	0.7	4.3	2.4			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird (ND	Northern pike	1	1	100	120	120				ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird (ND	Other forage fish (no mummichog)	10	10	100	9.2	100	35			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird (ND	Smallmouth bass	3	3	100	9.9	83	42			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird (ND	White catfish	19	19	100	23	430	180			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird (ND	White perch	22	22	100	21	280	140			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird (ND	White sucker	5	5	100	8.2	140	68			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird (ND	Worms (all)	19	19	100	2.5	150	25			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird (ND	Worms (estuarine sp.)	5	5	100	4	22	8.5			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird (ND	Worms (freshwater sp.)	14	14	100	2.5	150	31			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird (ND	American eel (all)	21	21	100	1	49	19			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird (ND	Blue crab	24	24	100	31	100	66			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird (ND	Brown bullhead	6	6	100	10	210	99			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird (ND	Carp	12	12	100	11	1400	430			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird (ND	Channel catfish	11	11	100	23	170	76			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird (ND	Fish (all)	131	131	100	1	1400	120			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird (ND	Fish (≤ 11 cm)	23	23	100	9.9	110	38			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird (ND	Fish (≤ 13 cm)	26	26	100	9.9	110	38			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird (ND	Fish (≤ 18 cm)	41	41	100	9.2	250	73			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird (ND	Fish (≤ 20 cm)	43	43	100	9.2	250	78			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird (ND	Largemouth bass	3	3	100	12	180	86			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird (ND	Mummichog	18	18	100	13	110	41			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird (ND	Mussel (estuarine)	3	3	100	0.42	1.7	0.96			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird (ND	Mussel (freshwater)	5	5	100	0.71	4.3	2.5			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird (ND	Northern pike	1	1	100	120	120				ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird (ND	Other forage fish (no mummichog)	10	10	100	9.2	100	35			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird (ND	Smallmouth bass	3	3	100	10	83	42			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird (ND	White catfish	19	19	100	23	430	180			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird (ND	White perch	22	22	100	21	280	140			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird (ND	White sucker	5	5	100	8.3	140	68			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird (ND	Worms (all)	19	19	100	2.6	150	25			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird (ND	Worms (estuarine sp.)	5	5	100	4.2	22	8.6			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird (ND	Worms (freshwater sp.)	14	14	100	2.6	150	31			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish	American eel (all)	21	21	100	0.77	48	19			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish	Blue crab	24	24	100	26	93	56			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish	Brown bullhead	6	6	100	8.4	200	96			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish	Carp	12	12	100	8.5	1400	420			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish	Channel catfish	11	11	100	23	170	75			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish	Fish (all)	131	131	100	0.77	1400	110			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish	Fish (≤ 11 cm)	23	23	100	3.7	100	35			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish	Fish (≤ 13 cm)	26	26	100	3.7	100	35			ng/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCDDs/PCDFs	Dioxin TEQ-Fish	Fish (≤ 18 cm)	41	41	100	3.7	240	68			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish	Fish (≤ 20 cm)	43	43	100	3.7	240	73			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish	Largemouth bass	3	3	100	1.8	180	82			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish	Mummichog	18	18	100	11	100	38			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish	Mussel (estuarine)	3	3	100	0.31	1.4	0.76			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish	Mussel (freshwater)	5	5	100	0.27	3.8	1.9			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish	Northern pike	1	1	100	100	100				ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish	Other forage fish (no mummichog)	10	10	100	3.7	96	32			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish	Smallmouth bass	3	3	100	8.6	76	39			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish	White catfish	19	19	100	22	430	180			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish	White perch	22	22	100	19	260	130			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish	White sucker	5	5	100	4.1	130	60			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish	Worms (all)	19	19	100	0.92	140	22			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish	Worms (estuarine sp.)	5	5	100	2.3	20	6.6			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish	Worms (freshwater sp.)	14	14	100	0.92	140	28			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish (ND	American eel (all)	21	21	100	0.87	49	19			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish (ND	Blue crab	24	24	100	26	93	56			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish (ND	Brown bullhead	6	6	100	8.7	200	96			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish (ND	Carp	12	12	100	8.5	1400	420			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish (ND	Channel catfish	11	11	100	23	170	75			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish (ND	Fish (all)	131	131	100	0.87	1400	110			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish (ND	Fish (≤ 11 cm)	23	23	100	3.7	100	35			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish (ND	Fish (≤ 13 cm)	26	26	100	3.7	100	35			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish (ND	Fish (≤ 18 cm)	41	41	100	3.7	240	68			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish (ND	Fish (≤ 20 cm)	43	43	100	3.7	240	73			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish (ND	Largemouth bass	3	3	100	2.2	180	82			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish (ND	Mummichog	18	18	100	12	100	39			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish (ND	Mussel (estuarine)	3	3	100	0.33	1.4	0.78			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish (ND	Mussel (freshwater)	5	5	100	0.27	3.8	2			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish (ND	Northern pike	1	1	100	100	100				ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish (ND	Other forage fish (no mummichog)	10	10	100	3.7	96	32			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish (ND	Smallmouth bass	3	3	100	8.7	76	39			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish (ND	White catfish	19	19	100	22	430	180			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish (ND	White perch	22	22	100	19	260	130			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish (ND	White sucker	5	5	100	4.3	130	60			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish (ND	Worms (all)	19	19	100	1.1	140	23			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish (ND	Worms (estuarine sp.)	5	5	100	2.5	20	6.8			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish (ND	Worms (freshwater sp.)	14	14	100	1.1	140	28			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish (ND	American eel (all)	21	21	100	0.97	49	19			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish (ND	Blue crab	24	24	100	27	93	57			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish (ND	Brown bullhead	6	6	100	9.1	200	97			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish (ND	Carp	12	12	100	8.6	1400	420			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish (ND	Channel catfish	11	11	100	23	170	75			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish (ND	Fish (all)	131	131	100	0.97	1400	110			ng/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCDDs/PCDFs	Dioxin TEQ-Fish (ND	Fish (≤ 11 cm)	23	23	100	3.7	100	35			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish (ND	Fish (≤ 13 cm)	26	26	100	3.7	100	36			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish (ND	Fish (≤ 18 cm)	41	41	100	3.7	240	68			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish (ND	Fish (≤ 20 cm)	43	43	100	3.7	240	73			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish (ND	Largemouth bass	3	3	100	2.7	180	83			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish (ND	Mummichog	18	18	100	12	100	39			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish (ND	Mussel (estuarine)	3	3	100	0.35	1.4	0.8			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish (ND	Mussel (freshwater)	5	5	100	0.28	3.8	2			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish (ND	Northern pike	1	1	100	100	100				ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish (ND	Other forage fish (no mummichog)	10	10	100	3.7	96	32			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish (ND	Smallmouth bass	3	3	100	9.5	76	40			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish (ND	White catfish	19	19	100	22	430	180			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish (ND	White perch	22	22	100	19	260	130			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish (ND	White sucker	5	5	100	4.6	130	61			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish (ND	Worms (all)	19	19	100	1.2	140	23			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish (ND	Worms (estuarine sp.)	5	5	100	2.8	20	7			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish (ND	Worms (freshwater sp.)	14	14	100	1.2	140	28			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	American eel (all)	21	21	100	0.77	48	19			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	Blue crab	24	24	100	26	93	56			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	Brown bullhead	6	6	100	8.4	200	96			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	Carp	12	12	100	8.2	1400	420			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	Channel catfish	11	11	100	22	170	74			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	Fish (all)	131	131	100	0.77	1400	110			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	Fish (≤ 11 cm)	23	23	100	3.8	100	35			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	Fish (≤ 13 cm)	26	26	100	3.8	100	35			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	Fish (≤ 18 cm)	41	41	100	3.8	240	67			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	Fish (≤ 20 cm)	43	43	100	3.8	240	72			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	Largemouth bass	3	3	100	1.9	180	82			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	Mummichog	18	18	100	11	100	38			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	Mussel (estuarine)	3	3	100	0.32	1.4	0.76			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	Mussel (freshwater)	5	5	100	0.26	3.8	1.9			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	Northern pike	1	1	100	100	100				ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	Other forage fish (no mummichog)	10	10	100	3.8	96	32			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	Smallmouth bass	3	3	100	8.6	76	39			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	White catfish	19	19	100	22	420	180			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	White perch	22	22	100	19	260	130			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	White sucker	5	5	100	4.1	130	60			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	Worms (all)	19	19	100	1	140	23			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	Worms (estuarine sp.)	5	5	100	2.2	20	6.6			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	Worms (freshwater sp.)	14	14	100	1	140	28			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	American eel (all)	21	21	100	0.89	48	19			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	Blue crab	24	24	100	26	93	56			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	Brown bullhead	6	6	100	8.7	200	96			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	Carp	12	12	100	8.2	1400	420			ng/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCDDs/PCDFs	Dioxin TEQ-Mamma	Channel catfish	11	11	100	22	170	74			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	Fish (all)	131	131	100	0.89	1400	110			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	Fish (≤ 11 cm)	23	23	100	3.8	100	35			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	Fish (≤ 13 cm)	26	26	100	3.8	100	35			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	Fish (≤ 18 cm)	41	41	100	3.8	240	67			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	Fish (≤ 20 cm)	43	43	100	3.8	240	72			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	Largemouth bass	3	3	100	2.3	180	82			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	Mummichog	18	18	100	12	100	38			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	Mussel (estuarine)	3	3	100	0.33	1.4	0.78			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	Mussel (freshwater)	5	5	100	0.27	3.8	2			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	Northern pike	1	1	100	100	100				ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	Other forage fish (no mummichog)	10	10	100	3.8	96	32			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	Smallmouth bass	3	3	100	8.7	76	39			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	White catfish	19	19	100	22	420	180			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	White perch	22	22	100	19	260	130			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	White sucker	5	5	100	4.3	130	60			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	Worms (all)	19	19	100	1.1	140	23			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	Worms (estuarine sp.)	5	5	100	2.5	20	6.8			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	Worms (freshwater sp.)	14	14	100	1.1	140	28			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	American eel (all)	21	21	100	0.99	49	19			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	Blue crab	24	24	100	26	93	56			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	Brown bullhead	6	6	100	9	200	96			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	Carp	12	12	100	8.2	1400	420			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	Channel catfish	11	11	100	22	170	74			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	Fish (all)	131	131	100	0.99	1400	110			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	Fish (≤ 11 cm)	23	23	100	3.8	100	35			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	Fish (≤ 13 cm)	26	26	100	3.8	100	35			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	Fish (≤ 18 cm)	41	41	100	3.8	240	67			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	Fish (≤ 20 cm)	43	43	100	3.8	240	72			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	Largemouth bass	3	3	100	2.7	180	83			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	Mummichog	18	18	100	12	100	39			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	Mussel (estuarine)	3	3	100	0.35	1.4	0.8			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	Mussel (freshwater)	5	5	100	0.27	3.8	2			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	Northern pike	1	1	100	100	100				ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	Other forage fish (no mummichog)	10	10	100	3.8	96	32			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	Smallmouth bass	3	3	100	8.8	76	39			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	White catfish	19	19	100	22	420	180			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	White perch	22	22	100	19	260	130			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	White sucker	5	5	100	4.5	130	61			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	Worms (all)	19	19	100	1.2	140	23			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	Worms (estuarine sp.)	5	5	100	2.7	20	7			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mamma	Worms (freshwater sp.)	14	14	100	1.2	140	28			ng/kg
PCDDs/PCDFs	Total TEQ-Bird	American eel (all)	21	21	100	7.7	62	31			ng/kg
PCDDs/PCDFs	Total TEQ-Bird	Blue crab	24	24	100	79	200	150			ng/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCDDs/PCDFs	Total TEQ-Bird	Brown bullhead	6	6	100	31	290	140			ng/kg
PCDDs/PCDFs	Total TEQ-Bird	Carp	12	12	100	77	1700	600			ng/kg
PCDDs/PCDFs	Total TEQ-Bird	Channel catfish	11	11	100	35	230	110			ng/kg
PCDDs/PCDFs	Total TEQ-Bird	Fish (all)	131	131	100	7.7	1700	210			ng/kg
PCDDs/PCDFs	Total TEQ-Bird	Fish (≤ 11 cm)	23	23	100	30	170	82			ng/kg
PCDDs/PCDFs	Total TEQ-Bird	Fish (≤ 13 cm)	26	26	100	30	170	83			ng/kg
PCDDs/PCDFs	Total TEQ-Bird	Fish (≤ 18 cm)	41	41	100	30	560	170			ng/kg
PCDDs/PCDFs	Total TEQ-Bird	Fish (≤ 20 cm)	43	43	100	30	560	180			ng/kg
PCDDs/PCDFs	Total TEQ-Bird	Largemouth bass	3	3	100	91	560	310			ng/kg
PCDDs/PCDFs	Total TEQ-Bird	Mummichog	18	18	100	30	170	81			ng/kg
PCDDs/PCDFs	Total TEQ-Bird	Mussel (estuarine)	3	3	100	0.66	4.2	2.2			ng/kg
PCDDs/PCDFs	Total TEQ-Bird	Mussel (freshwater)	5	5	100	3.2	9.4	6.2			ng/kg
PCDDs/PCDFs	Total TEQ-Bird	Northern pike	1	1	100	280	280				ng/kg
PCDDs/PCDFs	Total TEQ-Bird	Other forage fish (no mummichog)	10	10	100	32	200	88			ng/kg
PCDDs/PCDFs	Total TEQ-Bird	Smallmouth bass	3	3	100	57	140	88			ng/kg
PCDDs/PCDFs	Total TEQ-Bird	White catfish	19	19	100	42	580	250			ng/kg
PCDDs/PCDFs	Total TEQ-Bird	White perch	22	22	100	52	690	340			ng/kg
PCDDs/PCDFs	Total TEQ-Bird	White sucker	5	5	100	74	310	190			ng/kg
PCDDs/PCDFs	Total TEQ-Bird	Worms (all)	19	19	100	8.1	240	46			ng/kg
PCDDs/PCDFs	Total TEQ-Bird	Worms (estuarine sp.)	5	5	100	8.1	47	17			ng/kg
PCDDs/PCDFs	Total TEQ-Bird	Worms (freshwater sp.)	14	14	100	15	240	57			ng/kg
PCDDs/PCDFs	Total TEQ-Bird (ND=	American eel (all)	21	21	100	8	65	33			ng/kg
PCDDs/PCDFs	Total TEQ-Bird (ND=	Blue crab	24	24	100	81	200	150			ng/kg
PCDDs/PCDFs	Total TEQ-Bird (ND=	Brown bullhead	6	6	100	32	290	140			ng/kg
PCDDs/PCDFs	Total TEQ-Bird (ND=	Carp	12	12	100	77	1700	600			ng/kg
PCDDs/PCDFs	Total TEQ-Bird (ND=	Channel catfish	11	11	100	36	230	110			ng/kg
PCDDs/PCDFs	Total TEQ-Bird (ND=	Fish (all)	131	131	100	8	1700	210			ng/kg
PCDDs/PCDFs	Total TEQ-Bird (ND=	Fish (≤ 11 cm)	23	23	100	30	170	82			ng/kg
PCDDs/PCDFs	Total TEQ-Bird (ND=	Fish (≤ 13 cm)	26	26	100	30	170	83			ng/kg
PCDDs/PCDFs	Total TEQ-Bird (ND=	Fish (≤ 18 cm)	41	41	100	30	560	170			ng/kg
PCDDs/PCDFs	Total TEQ-Bird (ND=	Fish (≤ 20 cm)	43	43	100	30	560	180			ng/kg
PCDDs/PCDFs	Total TEQ-Bird (ND=	Largemouth bass	3	3	100	91	570	320			ng/kg
PCDDs/PCDFs	Total TEQ-Bird (ND=	Mummichog	18	18	100	30	170	81			ng/kg
PCDDs/PCDFs	Total TEQ-Bird (ND=	Mussel (estuarine)	3	3	100	0.73	4.2	2.2			ng/kg
PCDDs/PCDFs	Total TEQ-Bird (ND=	Mussel (freshwater)	5	5	100	3.2	9.4	6.2			ng/kg
PCDDs/PCDFs	Total TEQ-Bird (ND=	Northern pike	1	1	100	280	280				ng/kg
PCDDs/PCDFs	Total TEQ-Bird (ND=	Other forage fish (no mummichog)	10	10	100	32	200	88			ng/kg
PCDDs/PCDFs	Total TEQ-Bird (ND=	Smallmouth bass	3	3	100	57	140	88			ng/kg
PCDDs/PCDFs	Total TEQ-Bird (ND=	White catfish	19	19	100	42	580	250			ng/kg
PCDDs/PCDFs	Total TEQ-Bird (ND=	White perch	22	22	100	52	690	340			ng/kg
PCDDs/PCDFs	Total TEQ-Bird (ND=	White sucker	5	5	100	74	310	190			ng/kg
PCDDs/PCDFs	Total TEQ-Bird (ND=	Worms (all)	19	19	100	8.7	240	47			ng/kg
PCDDs/PCDFs	Total TEQ-Bird (ND=	Worms (estuarine sp.)	5	5	100	8.7	47	18			ng/kg
PCDDs/PCDFs	Total TEQ-Bird (ND=	Worms (freshwater sp.)	14	14	100	15	240	57			ng/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCDDs/PCDFs	Total TEQ-Bird (ND=	American eel (all)	21	21	100	8.2	68	34			ng/kg
PCDDs/PCDFs	Total TEQ-Bird (ND=	Blue crab	24	24	100	81	200	150			ng/kg
PCDDs/PCDFs	Total TEQ-Bird (ND=	Brown bullhead	6	6	100	32	290	140			ng/kg
PCDDs/PCDFs	Total TEQ-Bird (ND=	Carp	12	12	100	77	1700	600			ng/kg
PCDDs/PCDFs	Total TEQ-Bird (ND=	Channel catfish	11	11	100	36	230	110			ng/kg
PCDDs/PCDFs	Total TEQ-Bird (ND=	Fish (all)	131	131	100	8.2	1700	210			ng/kg
PCDDs/PCDFs	Total TEQ-Bird (ND=	Fish (≤ 11 cm)	23	23	100	30	170	83			ng/kg
PCDDs/PCDFs	Total TEQ-Bird (ND=	Fish (≤ 13 cm)	26	26	100	30	170	83			ng/kg
PCDDs/PCDFs	Total TEQ-Bird (ND=	Fish (≤ 18 cm)	41	41	100	30	560	170			ng/kg
PCDDs/PCDFs	Total TEQ-Bird (ND=	Fish (≤ 20 cm)	43	43	100	30	560	180			ng/kg
PCDDs/PCDFs	Total TEQ-Bird (ND=	Largemouth bass	3	3	100	97	580	320			ng/kg
PCDDs/PCDFs	Total TEQ-Bird (ND=	Mummichog	18	18	100	30	170	81			ng/kg
PCDDs/PCDFs	Total TEQ-Bird (ND=	Mussel (estuarine)	3	3	100	0.81	4.3	2.3			ng/kg
PCDDs/PCDFs	Total TEQ-Bird (ND=	Mussel (freshwater)	5	5	100	3.2	9.4	6.2			ng/kg
PCDDs/PCDFs	Total TEQ-Bird (ND=	Northern pike	1	1	100	280	280				ng/kg
PCDDs/PCDFs	Total TEQ-Bird (ND=	Other forage fish (no mummichog)	10	10	100	32	200	88			ng/kg
PCDDs/PCDFs	Total TEQ-Bird (ND=	Smallmouth bass	3	3	100	57	140	88			ng/kg
PCDDs/PCDFs	Total TEQ-Bird (ND=	White catfish	19	19	100	44	580	250			ng/kg
PCDDs/PCDFs	Total TEQ-Bird (ND=	White perch	22	22	100	52	690	340			ng/kg
PCDDs/PCDFs	Total TEQ-Bird (ND=	White sucker	5	5	100	74	310	190			ng/kg
PCDDs/PCDFs	Total TEQ-Bird (ND=	Worms (all)	19	19	100	9.3	240	47			ng/kg
PCDDs/PCDFs	Total TEQ-Bird (ND=	Worms (estuarine sp.)	5	5	100	9.3	48	18			ng/kg
PCDDs/PCDFs	Total TEQ-Bird (ND=	Worms (freshwater sp.)	14	14	100	15	240	57			ng/kg
PCDDs/PCDFs	Total TEQ-Fish	American eel (all)	21	21	100	1.2	50	20			ng/kg
PCDDs/PCDFs	Total TEQ-Fish	Blue crab	24	24	100	26	93	57			ng/kg
PCDDs/PCDFs	Total TEQ-Fish	Brown bullhead	6	6	100	8.8	200	97			ng/kg
PCDDs/PCDFs	Total TEQ-Fish	Carp	12	12	100	9.9	1400	420			ng/kg
PCDDs/PCDFs	Total TEQ-Fish	Channel catfish	11	11	100	23	170	76			ng/kg
PCDDs/PCDFs	Total TEQ-Fish	Fish (all)	131	131	100	1.2	1400	120			ng/kg
PCDDs/PCDFs	Total TEQ-Fish	Fish (≤ 11 cm)	23	23	100	4.3	100	35			ng/kg
PCDDs/PCDFs	Total TEQ-Fish	Fish (≤ 13 cm)	26	26	100	4.3	100	36			ng/kg
PCDDs/PCDFs	Total TEQ-Fish	Fish (≤ 18 cm)	41	41	100	4.3	240	68			ng/kg
PCDDs/PCDFs	Total TEQ-Fish	Fish (≤ 20 cm)	43	43	100	4.3	240	73			ng/kg
PCDDs/PCDFs	Total TEQ-Fish	Largemouth bass	3	3	100	18	180	88			ng/kg
PCDDs/PCDFs	Total TEQ-Fish	Mummichog	18	18	100	12	100	39			ng/kg
PCDDs/PCDFs	Total TEQ-Fish	Mussel (estuarine)	3	3	100	0.31	1.4	0.76			ng/kg
PCDDs/PCDFs	Total TEQ-Fish	Mussel (freshwater)	5	5	100	0.29	3.8	2			ng/kg
PCDDs/PCDFs	Total TEQ-Fish	Northern pike	1	1	100	110	110				ng/kg
PCDDs/PCDFs	Total TEQ-Fish	Other forage fish (no mummichog)	10	10	100	4.3	97	32			ng/kg
PCDDs/PCDFs	Total TEQ-Fish	Smallmouth bass	3	3	100	9.8	82	42			ng/kg
PCDDs/PCDFs	Total TEQ-Fish	White catfish	19	19	100	23	430	180			ng/kg
PCDDs/PCDFs	Total TEQ-Fish	White perch	22	22	100	19	270	130			ng/kg
PCDDs/PCDFs	Total TEQ-Fish	White sucker	5	5	100	4.8	130	62			ng/kg
PCDDs/PCDFs	Total TEQ-Fish	Worms (all)	19	19	100	1	140	23			ng/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCDDs/PCDFs	Total TEQ-Fish	Worms (estuarine sp.)	5	5	100	2.3	20	6.6			ng/kg
PCDDs/PCDFs	Total TEQ-Fish	Worms (freshwater sp.)	14	14	100	1	140	28			ng/kg
PCDDs/PCDFs	Total TEQ-Fish (ND=	American eel (all)	21	21	100	1.3	50	20			ng/kg
PCDDs/PCDFs	Total TEQ-Fish (ND=	Blue crab	24	24	100	26	93	57			ng/kg
PCDDs/PCDFs	Total TEQ-Fish (ND=	Brown bullhead	6	6	100	9.2	200	97			ng/kg
PCDDs/PCDFs	Total TEQ-Fish (ND=	Carp	12	12	100	9.9	1400	420			ng/kg
PCDDs/PCDFs	Total TEQ-Fish (ND=	Channel catfish	11	11	100	23	170	76			ng/kg
PCDDs/PCDFs	Total TEQ-Fish (ND=	Fish (all)	131	131	100	1.3	1400	120			ng/kg
PCDDs/PCDFs	Total TEQ-Fish (ND=	Fish (≤ 11 cm)	23	23	100	4.3	100	35			ng/kg
PCDDs/PCDFs	Total TEQ-Fish (ND=	Fish (≤ 13 cm)	26	26	100	4.3	100	36			ng/kg
PCDDs/PCDFs	Total TEQ-Fish (ND=	Fish (≤ 18 cm)	41	41	100	4.3	240	68			ng/kg
PCDDs/PCDFs	Total TEQ-Fish (ND=	Fish (≤ 20 cm)	43	43	100	4.3	240	73			ng/kg
PCDDs/PCDFs	Total TEQ-Fish (ND=	Largemouth bass	3	3	100	19	180	88			ng/kg
PCDDs/PCDFs	Total TEQ-Fish (ND=	Mummichog	18	18	100	12	100	39			ng/kg
PCDDs/PCDFs	Total TEQ-Fish (ND=	Mussel (estuarine)	3	3	100	0.33	1.4	0.78			ng/kg
PCDDs/PCDFs	Total TEQ-Fish (ND=	Mussel (freshwater)	5	5	100	0.29	3.9	2			ng/kg
PCDDs/PCDFs	Total TEQ-Fish (ND=	Northern pike	1	1	100	110	110				ng/kg
PCDDs/PCDFs	Total TEQ-Fish (ND=	Other forage fish (no mummichog)	10	10	100	4.3	97	32			ng/kg
PCDDs/PCDFs	Total TEQ-Fish (ND=	Smallmouth bass	3	3	100	9.9	83	42			ng/kg
PCDDs/PCDFs	Total TEQ-Fish (ND=	White catfish	19	19	100	23	430	180			ng/kg
PCDDs/PCDFs	Total TEQ-Fish (ND=	White perch	22	22	100	19	270	130			ng/kg
PCDDs/PCDFs	Total TEQ-Fish (ND=	White sucker	5	5	100	5.1	130	63			ng/kg
PCDDs/PCDFs	Total TEQ-Fish (ND=	Worms (all)	19	19	100	1.2	140	23			ng/kg
PCDDs/PCDFs	Total TEQ-Fish (ND=	Worms (estuarine sp.)	5	5	100	2.6	20	6.9			ng/kg
PCDDs/PCDFs	Total TEQ-Fish (ND=	Worms (freshwater sp.)	14	14	100	1.2	140	28			ng/kg
PCDDs/PCDFs	Total TEQ-Fish (ND=	American eel (all)	21	21	100	1.4	51	20			ng/kg
PCDDs/PCDFs	Total TEQ-Fish (ND=	Blue crab	24	24	100	27	93	57			ng/kg
PCDDs/PCDFs	Total TEQ-Fish (ND=	Brown bullhead	6	6	100	9.5	200	97			ng/kg
PCDDs/PCDFs	Total TEQ-Fish (ND=	Carp	12	12	100	10	1400	420			ng/kg
PCDDs/PCDFs	Total TEQ-Fish (ND=	Channel catfish	11	11	100	23	170	76			ng/kg
PCDDs/PCDFs	Total TEQ-Fish (ND=	Fish (all)	131	131	100	1.4	1400	120			ng/kg
PCDDs/PCDFs	Total TEQ-Fish (ND=	Fish (≤ 11 cm)	23	23	100	4.3	100	36			ng/kg
PCDDs/PCDFs	Total TEQ-Fish (ND=	Fish (≤ 13 cm)	26	26	100	4.3	100	36			ng/kg
PCDDs/PCDFs	Total TEQ-Fish (ND=	Fish (≤ 18 cm)	41	41	100	4.3	240	69			ng/kg
PCDDs/PCDFs	Total TEQ-Fish (ND=	Fish (≤ 20 cm)	43	43	100	4.3	240	74			ng/kg
PCDDs/PCDFs	Total TEQ-Fish (ND=	Largemouth bass	3	3	100	20	180	89			ng/kg
PCDDs/PCDFs	Total TEQ-Fish (ND=	Mummichog	18	18	100	12	100	39			ng/kg
PCDDs/PCDFs	Total TEQ-Fish (ND=	Mussel (estuarine)	3	3	100	0.36	1.4	0.81			ng/kg
PCDDs/PCDFs	Total TEQ-Fish (ND=	Mussel (freshwater)	5	5	100	0.29	3.9	2			ng/kg
PCDDs/PCDFs	Total TEQ-Fish (ND=	Northern pike	1	1	100	110	110				ng/kg
PCDDs/PCDFs	Total TEQ-Fish (ND=	Other forage fish (no mummichog)	10	10	100	4.3	97	32			ng/kg
PCDDs/PCDFs	Total TEQ-Fish (ND=	Smallmouth bass	3	3	100	10	83	42			ng/kg
PCDDs/PCDFs	Total TEQ-Fish (ND=	White catfish	19	19	100	23	430	180			ng/kg
PCDDs/PCDFs	Total TEQ-Fish (ND=	White perch	22	22	100	20	270	130			ng/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCDDs/PCDFs	Total TEQ-Fish (ND=	White sucker	5	5	100	5.4	130	63			ng/kg
PCDDs/PCDFs	Total TEQ-Fish (ND=	Worms (all)	19	19	100	1.3	140	23			ng/kg
PCDDs/PCDFs	Total TEQ-Fish (ND=	Worms (estuarine sp.)	5	5	100	2.8	20	7.1			ng/kg
PCDDs/PCDFs	Total TEQ-Fish (ND=	Worms (freshwater sp.)	14	14	100	1.3	140	28			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	American eel (all)	21	21	100	5.5	56	27			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	Blue crab	24	24	100	28	100	63			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	Brown bullhead	6	6	100	14	220	110			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	Carp	12	12	100	24	1500	470			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	Channel catfish	11	11	100	25	210	93			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	Fish (all)	131	131	100	5.5	1500	140			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	Fish (≤ 11 cm)	23	23	100	11	110	42			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	Fish (≤ 13 cm)	26	26	100	11	110	42			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	Fish (≤ 18 cm)	41	41	100	10	270	78			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	Fish (≤ 20 cm)	43	43	100	10	270	84			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	Largemouth bass	3	3	100	83	250	180			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	Mummichog	18	18	100	15	110	45			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	Mussel (estuarine)	3	3	100	0.32	1.5	0.81			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	Mussel (freshwater)	5	5	100	0.44	4.1	2.2			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	Northern pike	1	1	100	130	130				ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	Other forage fish (no mummichog)	10	10	100	10	110	38			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	Smallmouth bass	3	3	100	22	96	53			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	White catfish	19	19	100	34	510	210			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	White perch	22	22	100	25	300	150			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	White sucker	5	5	100	15	170	82			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	Worms (all)	19	19	100	1.9	150	24			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	Worms (estuarine sp.)	5	5	100	2.3	21	6.9			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	Worms (freshwater sp.)	14	14	100	1.9	150	30			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	American eel (all)	21	21	100	5.7	59	28			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	Blue crab	24	24	100	28	100	64			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	Brown bullhead	6	6	100	15	220	110			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	Carp	12	12	100	25	1500	470			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	Channel catfish	11	11	100	26	210	93			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	Fish (all)	131	131	100	5.7	1500	140			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	Fish (≤ 11 cm)	23	23	100	11	110	42			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	Fish (≤ 13 cm)	26	26	100	11	110	42			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	Fish (≤ 18 cm)	41	41	100	10	270	79			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	Fish (≤ 20 cm)	43	43	100	10	270	84			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	Largemouth bass	3	3	100	83	250	180			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	Mummichog	18	18	100	15	110	45			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	Mussel (estuarine)	3	3	100	0.37	1.5	0.84			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	Mussel (freshwater)	5	5	100	0.46	4.1	2.2			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	Northern pike	1	1	100	130	130				ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	Other forage fish (no mummichog)	10	10	100	10	110	38			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	Smallmouth bass	3	3	100	23	96	54			ng/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCDDs/PCDFs	Total TEQ-Mammal	White catfish	19	19	100	35	510	220			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	White perch	22	22	100	25	300	150			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	White sucker	5	5	100	16	170	82			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	Worms (all)	19	19	100	2.2	150	24			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	Worms (estuarine sp.)	5	5	100	2.8	21	7.4			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	Worms (freshwater sp.)	14	14	100	2.2	150	30			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	American eel (all)	21	21	100	5.9	63	30			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	Blue crab	24	24	100	30	100	64			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	Brown bullhead	6	6	100	15	220	110			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	Carp	12	12	100	25	1500	470			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	Channel catfish	11	11	100	26	210	94			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	Fish (all)	131	131	100	5.9	1500	140			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	Fish (≤ 11 cm)	23	23	100	11	110	42			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	Fish (≤ 13 cm)	26	26	100	11	110	42			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	Fish (≤ 18 cm)	41	41	100	10	270	79			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	Fish (≤ 20 cm)	43	43	100	10	270	84			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	Largemouth bass	3	3	100	83	250	180			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	Mummichog	18	18	100	16	110	46			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	Mussel (estuarine)	3	3	100	0.43	1.5	0.88			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	Mussel (freshwater)	5	5	100	0.47	4.1	2.2			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	Northern pike	1	1	100	130	130				ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	Other forage fish (no mummichog)	10	10	100	10	110	38			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	Smallmouth bass	3	3	100	23	96	54			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	White catfish	19	19	100	35	510	220			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	White perch	22	22	100	25	300	150			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	White sucker	5	5	100	16	170	82			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	Worms (all)	19	19	100	2.4	150	25			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	Worms (estuarine sp.)	5	5	100	3.4	22	8.1			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	Worms (freshwater sp.)	14	14	100	2.4	150	31			ng/kg
PCDDs/PCDFs	Total HpCDD	American eel (all)	21	21	100	0.57	4.4	2.1			ng/kg
PCDDs/PCDFs	Total HpCDD	Blue crab	24	24	100	2.6	11	4.4			ng/kg
PCDDs/PCDFs	Total HpCDD	Brown bullhead	6	6	100	3	8.8	5.6			ng/kg
PCDDs/PCDFs	Total HpCDD	Carp	12	12	100	8.2	42	22			ng/kg
PCDDs/PCDFs	Total HpCDD	Channel catfish	11	11	100	1.2	4.5	2.2			ng/kg
PCDDs/PCDFs	Total HpCDD	Fish (all)	131	124	94.7	0.51	42	6.5	0.55	2.4	ng/kg
PCDDs/PCDFs	Total HpCDD	Fish (≤ 11 cm)	23	23	100	0.6	25	10			ng/kg
PCDDs/PCDFs	Total HpCDD	Fish (≤ 13 cm)	26	26	100	0.6	33	11			ng/kg
PCDDs/PCDFs	Total HpCDD	Fish (≤ 18 cm)	41	41	100	0.6	33	8.5			ng/kg
PCDDs/PCDFs	Total HpCDD	Fish (≤ 20 cm)	43	43	100	0.6	33	8.2			ng/kg
PCDDs/PCDFs	Total HpCDD	Largemouth bass	3	0	0				0.95	1.5	ng/kg
PCDDs/PCDFs	Total HpCDD	Mummichog	18	18	100	0.6	24	8.6			ng/kg
PCDDs/PCDFs	Total HpCDD	Mussel (estuarine)	3	3	100	0.82	1.1	0.93			ng/kg
PCDDs/PCDFs	Total HpCDD	Mussel (freshwater)	5	5	100	1.1	1.8	1.3			ng/kg
PCDDs/PCDFs	Total HpCDD	Northern pike	1	0	0				1.2	1.2	ng/kg

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Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCDDs/PCDFs	Total HpCDD	Other forage fish (no mummichog)	10	10	100	1.6	33	15			ng/kg
PCDDs/PCDFs	Total HpCDD	Smallmouth bass	3	2	66.7	1.9	2.6	2.3	2.4	2.4	ng/kg
PCDDs/PCDFs	Total HpCDD	White catfish	19	19	100	1.4	5.9	3.4			ng/kg
PCDDs/PCDFs	Total HpCDD	White perch	22	20	90.9	0.51	7.4	2.7	0.55	0.72	ng/kg
PCDDs/PCDFs	Total HpCDD	White sucker	5	5	100	1	2.2	1.4			ng/kg
PCDDs/PCDFs	Total HpCDD	Worms (all)	19	19	100	2.6	230	28			ng/kg
PCDDs/PCDFs	Total HpCDD	Worms (estuarine sp.)	5	5	100	2.6	4.4	3.3			ng/kg
PCDDs/PCDFs	Total HpCDD	Worms (freshwater sp.)	14	14	100	8.9	230	37			ng/kg
PCDDs/PCDFs	Total HxCDD	American eel (all)	21	21	100	0.66	7.6	3.2			ng/kg
PCDDs/PCDFs	Total HxCDD	Blue crab	24	24	100	1.9	9.4	4.9			ng/kg
PCDDs/PCDFs	Total HxCDD	Brown bullhead	6	6	100	1.7	8.9	4.6			ng/kg
PCDDs/PCDFs	Total HxCDD	Carp	12	12	100	4.5	23	12			ng/kg
PCDDs/PCDFs	Total HxCDD	Channel catfish	11	11	100	0.76	8.1	3.4			ng/kg
PCDDs/PCDFs	Total HxCDD	Fish (all)	131	113	86.3	0.31	23	4.3	0.17	1.2	ng/kg
PCDDs/PCDFs	Total HxCDD	Fish (≤ 11 cm)	23	13	56.5	0.32	4.8	3.1	0.25	0.38	ng/kg
PCDDs/PCDFs	Total HxCDD	Fish (≤ 13 cm)	26	16	61.5	0.32	7.8	3.4	0.25	0.38	ng/kg
PCDDs/PCDFs	Total HxCDD	Fish (≤ 18 cm)	41	31	75.6	0.32	7.8	2.9	0.25	0.38	ng/kg
PCDDs/PCDFs	Total HxCDD	Fish (≤ 20 cm)	43	33	76.7	0.32	7.8	2.9	0.25	0.38	ng/kg
PCDDs/PCDFs	Total HxCDD	Largemouth bass	3	1	33.3	0.49	0.49		0.23	0.34	ng/kg
PCDDs/PCDFs	Total HxCDD	Mummichog	18	8	44.4	0.32	4.7	3	0.25	0.38	ng/kg
PCDDs/PCDFs	Total HxCDD	Mussel (estuarine)	3	3	100	3	3.9	3.5			ng/kg
PCDDs/PCDFs	Total HxCDD	Mussel (freshwater)	5	5	100	0.59	0.72	0.64			ng/kg
PCDDs/PCDFs	Total HxCDD	Northern pike	1	0	0				1.2	1.2	ng/kg
PCDDs/PCDFs	Total HxCDD	Other forage fish (no mummichog)	10	10	100	0.52	7.8	3.5			ng/kg
PCDDs/PCDFs	Total HxCDD	Smallmouth bass	3	0	0				0.17	0.59	ng/kg
PCDDs/PCDFs	Total HxCDD	White catfish	19	19	100	0.71	9.2	4.9			ng/kg
PCDDs/PCDFs	Total HxCDD	White perch	22	20	90.9	0.31	5.1	2.5	0.56	0.57	ng/kg
PCDDs/PCDFs	Total HxCDD	White sucker	5	5	100	0.39	1.9	1.1			ng/kg
PCDDs/PCDFs	Total HxCDD	Worms (all)	19	17	89.5	1.1	14	4.9	0.23	0.33	ng/kg
PCDDs/PCDFs	Total HxCDD	Worms (estuarine sp.)	5	3	60	1.1	1.3	1.2	0.23	0.33	ng/kg
PCDDs/PCDFs	Total HxCDD	Worms (freshwater sp.)	14	14	100	2.3	14	5.7			ng/kg
PCDDs/PCDFs	Total PeCDD	American eel (all)	21	8	38.1	0.26	1	0.72	0.17	0.43	ng/kg
PCDDs/PCDFs	Total PeCDD	Blue crab	24	24	100	3.1	12	7.1			ng/kg
PCDDs/PCDFs	Total PeCDD	Brown bullhead	6	5	83.3	0.76	2.7	1.9	0.4	0.4	ng/kg
PCDDs/PCDFs	Total PeCDD	Carp	12	12	100	1.6	9.5	4.7			ng/kg
PCDDs/PCDFs	Total PeCDD	Channel catfish	11	11	100	0.42	3.3	1.5			ng/kg
PCDDs/PCDFs	Total PeCDD	Fish (all)	131	105	80.2	0.15	9.5	2	0.17	0.43	ng/kg
PCDDs/PCDFs	Total PeCDD	Fish (≤ 11 cm)	23	14	60.9	0.28	1.3	0.69	0.24	0.34	ng/kg
PCDDs/PCDFs	Total PeCDD	Fish (≤ 13 cm)	26	17	65.4	0.28	2.4	0.82	0.24	0.34	ng/kg
PCDDs/PCDFs	Total PeCDD	Fish (≤ 18 cm)	41	32	78	0.15	3.8	1.4	0.24	0.34	ng/kg
PCDDs/PCDFs	Total PeCDD	Fish (≤ 20 cm)	43	34	79.1	0.15	3.8	1.4	0.24	0.34	ng/kg
PCDDs/PCDFs	Total PeCDD	Largemouth bass	3	2	66.7	0.64	0.82	0.73	0.21	0.21	ng/kg
PCDDs/PCDFs	Total PeCDD	Mummichog	18	9	50	0.28	1.2	0.62	0.24	0.34	ng/kg
PCDDs/PCDFs	Total PeCDD	Mussel (estuarine)	3	3	100	1.4	1.6	1.5			ng/kg

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Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCDDs/PCDFs	Total PeCDD	Mussel (freshwater)	5	5	100	0.28	0.45	0.4			ng/kg
PCDDs/PCDFs	Total PeCDD	Northern pike	1	1	100	2	2				ng/kg
PCDDs/PCDFs	Total PeCDD	Other forage fish (no mummichog)	10	10	100	0.15	2.9	1.1			ng/kg
PCDDs/PCDFs	Total PeCDD	Smallmouth bass	3	3	100	0.44	0.89	0.68			ng/kg
PCDDs/PCDFs	Total PeCDD	White catfish	19	18	94.7	0.48	5.9	2.8	0.18	0.18	ng/kg
PCDDs/PCDFs	Total PeCDD	White perch	22	21	95.5	0.45	4.9	2.1	0.21	0.21	ng/kg
PCDDs/PCDFs	Total PeCDD	White sucker	5	5	100	0.47	1.5	0.99			ng/kg
PCDDs/PCDFs	Total PeCDD	Worms (all)	19	15	78.9	0.43	4.6	2.3	0.25	0.36	ng/kg
PCDDs/PCDFs	Total PeCDD	Worms (estuarine sp.)	5	1	20	0.43	0.43		0.25	0.36	ng/kg
PCDDs/PCDFs	Total PeCDD	Worms (freshwater sp.)	14	14	100	1.1	4.6	2.4			ng/kg
PCDDs/PCDFs	Total TCDD	American eel (all)	21	20	95.2	0.38	47	19	0.21	0.21	ng/kg
PCDDs/PCDFs	Total TCDD	Blue crab	24	24	100	36	100	79			ng/kg
PCDDs/PCDFs	Total TCDD	Brown bullhead	6	6	100	7.8	190	91			ng/kg
PCDDs/PCDFs	Total TCDD	Carp	12	12	100	5.2	1400	410			ng/kg
PCDDs/PCDFs	Total TCDD	Channel catfish	11	11	100	22	160	70			ng/kg
PCDDs/PCDFs	Total TCDD	Fish (all)	131	130	99.2	0.38	1400	110	0.21	0.21	ng/kg
PCDDs/PCDFs	Total TCDD	Fish (≤ 11 cm)	23	23	100	3.6	100	34			ng/kg
PCDDs/PCDFs	Total TCDD	Fish (≤ 13 cm)	26	26	100	3.6	100	35			ng/kg
PCDDs/PCDFs	Total TCDD	Fish (≤ 18 cm)	41	41	100	3.6	230	66			ng/kg
PCDDs/PCDFs	Total TCDD	Fish (≤ 20 cm)	43	43	100	3.6	230	70			ng/kg
PCDDs/PCDFs	Total TCDD	Largemouth bass	3	3	100	0.43	180	82			ng/kg
PCDDs/PCDFs	Total TCDD	Mummichog	18	18	100	11	100	38			ng/kg
PCDDs/PCDFs	Total TCDD	Mussel (estuarine)	3	3	100	2.6	5.2	3.8			ng/kg
PCDDs/PCDFs	Total TCDD	Mussel (freshwater)	5	5	100	3.2	7.2	5			ng/kg
PCDDs/PCDFs	Total TCDD	Northern pike	1	1	100	95	95				ng/kg
PCDDs/PCDFs	Total TCDD	Other forage fish (no mummichog)	10	10	100	3.6	100	32			ng/kg
PCDDs/PCDFs	Total TCDD	Smallmouth bass	3	3	100	8	76	39			ng/kg
PCDDs/PCDFs	Total TCDD	White catfish	19	19	100	20	410	170			ng/kg
PCDDs/PCDFs	Total TCDD	White perch	22	22	100	18	250	130			ng/kg
PCDDs/PCDFs	Total TCDD	White sucker	5	5	100	3.1	130	59			ng/kg
PCDDs/PCDFs	Total TCDD	Worms (all)	19	19	100	3.2	160	29			ng/kg
PCDDs/PCDFs	Total TCDD	Worms (estuarine sp.)	5	5	100	3.2	23	7.9			ng/kg
PCDDs/PCDFs	Total TCDD	Worms (freshwater sp.)	14	14	100	4.6	160	37			ng/kg
PCDDs/PCDFs	Total HpCDF	American eel (all)	21	21	100	0.36	2.7	1.4			ng/kg
PCDDs/PCDFs	Total HpCDF	Blue crab	24	24	100	1.5	10	4.4			ng/kg
PCDDs/PCDFs	Total HpCDF	Brown bullhead	6	6	100	1.7	6.8	3.5			ng/kg
PCDDs/PCDFs	Total HpCDF	Carp	12	10	83.3	5.2	18	10	2.4	2.5	ng/kg
PCDDs/PCDFs	Total HpCDF	Channel catfish	11	11	100	0.58	1.1	0.79			ng/kg
PCDDs/PCDFs	Total HpCDF	Fish (all)	131	125	95.4	0.36	23	3.4	0.55	2.5	ng/kg
PCDDs/PCDFs	Total HpCDF	Fish (≤ 11 cm)	23	23	100	0.59	18	5.4			ng/kg
PCDDs/PCDFs	Total HpCDF	Fish (≤ 13 cm)	26	26	100	0.59	23	6.3			ng/kg
PCDDs/PCDFs	Total HpCDF	Fish (≤ 18 cm)	41	41	100	0.59	23	4.9			ng/kg
PCDDs/PCDFs	Total HpCDF	Fish (≤ 20 cm)	43	43	100	0.59	23	4.8			ng/kg
PCDDs/PCDFs	Total HpCDF	Largemouth bass	3	1	33.3	0.97	0.97		0.55	1.2	ng/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCDDs/PCDFs	Total HpCDF	Mummichog	18	18	100	0.65	18	5.1			ng/kg
PCDDs/PCDFs	Total HpCDF	Mussel (estuarine)	3	3	100	0.3	0.49	0.39			ng/kg
PCDDs/PCDFs	Total HpCDF	Mussel (freshwater)	5	5	100	0.43	0.8	0.59			ng/kg
PCDDs/PCDFs	Total HpCDF	Northern pike	1	1	100	1.1	1.1				ng/kg
PCDDs/PCDFs	Total HpCDF	Other forage fish (no mummichog)	10	10	100	0.59	23	8.2			ng/kg
PCDDs/PCDFs	Total HpCDF	Smallmouth bass	3	1	33.3	1.4	1.4		0.93	1.4	ng/kg
PCDDs/PCDFs	Total HpCDF	White catfish	19	19	100	0.45	21	2.6			ng/kg
PCDDs/PCDFs	Total HpCDF	White perch	22	22	100	0.4	2.9	1.8			ng/kg
PCDDs/PCDFs	Total HpCDF	White sucker	5	5	100	0.38	1.2	0.62			ng/kg
PCDDs/PCDFs	Total HpCDF	Worms (all)	19	19	100	1.8	23	8.2			ng/kg
PCDDs/PCDFs	Total HpCDF	Worms (estuarine sp.)	5	5	100	1.8	3.6	2.3			ng/kg
PCDDs/PCDFs	Total HpCDF	Worms (freshwater sp.)	14	14	100	3.2	23	10			ng/kg
PCDDs/PCDFs	Total HxCDF	American eel (all)	21	21	100	0.62	7.2	2.9			ng/kg
PCDDs/PCDFs	Total HxCDF	Blue crab	24	24	100	6.7	27	20			ng/kg
PCDDs/PCDFs	Total HxCDF	Brown bullhead	6	6	100	0.64	18	7.1			ng/kg
PCDDs/PCDFs	Total HxCDF	Carp	12	12	100	2.1	49	20			ng/kg
PCDDs/PCDFs	Total HxCDF	Channel catfish	11	11	100	0.91	4.3	2			ng/kg
PCDDs/PCDFs	Total HxCDF	Fish (all)	131	124	94.7	0.44	49	6.3	0.12	1.8	ng/kg
PCDDs/PCDFs	Total HxCDF	Fish (≤ 11 cm)	23	23	100	0.44	10	3.6			ng/kg
PCDDs/PCDFs	Total HxCDF	Fish (≤ 13 cm)	26	26	100	0.44	17	4.3			ng/kg
PCDDs/PCDFs	Total HxCDF	Fish (≤ 18 cm)	41	41	100	0.44	17	5.2			ng/kg
PCDDs/PCDFs	Total HxCDF	Fish (≤ 20 cm)	43	43	100	0.44	17	5.4			ng/kg
PCDDs/PCDFs	Total HxCDF	Largemouth bass	3	0	0				0.15	0.71	ng/kg
PCDDs/PCDFs	Total HxCDF	Mummichog	18	18	100	0.44	10	3.2			ng/kg
PCDDs/PCDFs	Total HxCDF	Mussel (estuarine)	3	3	100	0.24	0.64	0.41			ng/kg
PCDDs/PCDFs	Total HxCDF	Mussel (freshwater)	5	5	100	0.72	0.97	0.84			ng/kg
PCDDs/PCDFs	Total HxCDF	Northern pike	1	1	100	4.5	4.5				ng/kg
PCDDs/PCDFs	Total HxCDF	Other forage fish (no mummichog)	10	10	100	0.92	17	6.3			ng/kg
PCDDs/PCDFs	Total HxCDF	Smallmouth bass	3	0	0				0.26	1.8	ng/kg
PCDDs/PCDFs	Total HxCDF	White catfish	19	18	94.7	1.2	19	6.6	0.12	0.12	ng/kg
PCDDs/PCDFs	Total HxCDF	White perch	22	22	100	0.57	19	7.6			ng/kg
PCDDs/PCDFs	Total HxCDF	White sucker	5	5	100	0.57	2.8	1.8			ng/kg
PCDDs/PCDFs	Total HxCDF	Worms (all)	19	19	100	1.8	17	7.4			ng/kg
PCDDs/PCDFs	Total HxCDF	Worms (estuarine sp.)	5	5	100	1.8	4.5	2.7			ng/kg
PCDDs/PCDFs	Total HxCDF	Worms (freshwater sp.)	14	14	100	3.1	17	9.1			ng/kg
PCDDs/PCDFs	Total PeCDF	American eel (all)	21	21	100	0.17	4.2	1.7			ng/kg
PCDDs/PCDFs	Total PeCDF	Blue crab	24	24	100	18	75	50			ng/kg
PCDDs/PCDFs	Total PeCDF	Brown bullhead	6	6	100	1.6	19	7.8			ng/kg
PCDDs/PCDFs	Total PeCDF	Carp	12	12	100	2.4	33	15			ng/kg
PCDDs/PCDFs	Total PeCDF	Channel catfish	11	11	100	0.93	9	4			ng/kg
PCDDs/PCDFs	Total PeCDF	Fish (all)	131	131	100	0.17	33	7.6			ng/kg
PCDDs/PCDFs	Total PeCDF	Fish (≤ 11 cm)	23	23	100	0.71	11	4.1			ng/kg
PCDDs/PCDFs	Total PeCDF	Fish (≤ 13 cm)	26	26	100	0.71	17	4.8			ng/kg
PCDDs/PCDFs	Total PeCDF	Fish (≤ 18 cm)	41	41	100	0.71	25	7.7			ng/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCDDs/PCDFs	Total PeCDF	Fish (≤ 20 cm)	43	43	100	0.71	25	8.2			ng/kg
PCDDs/PCDFs	Total PeCDF	Largemouth bass	3	3	100	1.2	6	3.3			ng/kg
PCDDs/PCDFs	Total PeCDF	Mummichog	18	18	100	0.71	11	3.7			ng/kg
PCDDs/PCDFs	Total PeCDF	Mussel (estuarine)	3	3	100	0.42	2	1.1			ng/kg
PCDDs/PCDFs	Total PeCDF	Mussel (freshwater)	5	5	100	1.6	2.9	2.2			ng/kg
PCDDs/PCDFs	Total PeCDF	Northern pike	1	1	100	9.4	9.4				ng/kg
PCDDs/PCDFs	Total PeCDF	Other forage fish (no mummichog)	10	10	100	1.3	17	6.9			ng/kg
PCDDs/PCDFs	Total PeCDF	Smallmouth bass	3	3	100	0.93	3.1	1.7			ng/kg
PCDDs/PCDFs	Total PeCDF	White catfish	19	19	100	0.96	29	9.9			ng/kg
PCDDs/PCDFs	Total PeCDF	White perch	22	22	100	0.47	33	15			ng/kg
PCDDs/PCDFs	Total PeCDF	White sucker	5	5	100	2.2	7.8	4.4			ng/kg
PCDDs/PCDFs	Total PeCDF	Worms (all)	19	19	100	2.8	44	14			ng/kg
PCDDs/PCDFs	Total PeCDF	Worms (estuarine sp.)	5	5	100	2.8	10	5.4			ng/kg
PCDDs/PCDFs	Total PeCDF	Worms (freshwater sp.)	14	14	100	5.2	44	17			ng/kg
PCDDs/PCDFs	Total TCDF	American eel (all)	21	20	95.2	0.5	4.2	2.1	0.11	0.11	ng/kg
PCDDs/PCDFs	Total TCDF	Blue crab	24	24	100	26	120	81			ng/kg
PCDDs/PCDFs	Total TCDF	Brown bullhead	6	6	100	0.42	8.8	3			ng/kg
PCDDs/PCDFs	Total TCDF	Carp	12	12	100	2.3	8.1	4.3			ng/kg
PCDDs/PCDFs	Total TCDF	Channel catfish	11	11	100	1	5.7	3.7			ng/kg
PCDDs/PCDFs	Total TCDF	Fish (all)	131	130	99.2	0.42	44	7.6	0.11	0.11	ng/kg
PCDDs/PCDFs	Total TCDF	Fish (≤ 11 cm)	23	23	100	0.55	11	4.7			ng/kg
PCDDs/PCDFs	Total TCDF	Fish (≤ 13 cm)	26	26	100	0.55	21	5.7			ng/kg
PCDDs/PCDFs	Total TCDF	Fish (≤ 18 cm)	41	41	100	0.55	32	10			ng/kg
PCDDs/PCDFs	Total TCDF	Fish (≤ 20 cm)	43	43	100	0.55	32	11			ng/kg
PCDDs/PCDFs	Total TCDF	Largemouth bass	3	3	100	0.85	35	13			ng/kg
PCDDs/PCDFs	Total TCDF	Mummichog	18	18	100	0.55	11	3.4			ng/kg
PCDDs/PCDFs	Total TCDF	Mussel (estuarine)	3	3	100	1.5	6.7	3.7			ng/kg
PCDDs/PCDFs	Total TCDF	Mussel (freshwater)	5	5	100	4.6	8.9	6.7			ng/kg
PCDDs/PCDFs	Total TCDF	Northern pike	1	1	100	15	15				ng/kg
PCDDs/PCDFs	Total TCDF	Other forage fish (no mummichog)	10	10	100	2.1	21	10			ng/kg
PCDDs/PCDFs	Total TCDF	Smallmouth bass	3	3	100	0.55	2.1	1.4			ng/kg
PCDDs/PCDFs	Total TCDF	White catfish	19	19	100	0.56	19	5.4			ng/kg
PCDDs/PCDFs	Total TCDF	White perch	22	22	100	2	44	21			ng/kg
PCDDs/PCDFs	Total TCDF	White sucker	5	5	100	6	14	9.4			ng/kg
PCDDs/PCDFs	Total TCDF	Worms (all)	19	19	100	7.5	190	43			ng/kg
PCDDs/PCDFs	Total TCDF	Worms (estuarine sp.)	5	5	100	7.5	30	14			ng/kg
PCDDs/PCDFs	Total TCDF	Worms (freshwater sp.)	14	14	100	12	190	54			ng/kg
OC Pesticides	2,4'-DDD	American eel (all)	21	17	81	0.44	9.1	3.8	2.6	13	ug/kg
OC Pesticides	2,4'-DDD	Blue crab	24	8	33.3	0.26	0.87	0.47	0.15	2	ug/kg
OC Pesticides	2,4'-DDD	Brown bullhead	6	6	100	1.7	17	6.7			ug/kg
OC Pesticides	2,4'-DDD	Carp	12	12	100	7.6	110	62			ug/kg
OC Pesticides	2,4'-DDD	Channel catfish	11	11	100	3.8	23	11			ug/kg
OC Pesticides	2,4'-DDD	Fish (all)	131	125	95.4	0.42	110	16	0.82	13	ug/kg
OC Pesticides	2,4'-DDD	Fish (≤ 11 cm)	23	22	95.7	0.42	6.9	1.9	0.82	0.82	ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
OC Pesticides	2,4'-DDD	Fish (≤ 13 cm)	26	25	96.2	0.42	6.9	2.2	0.82	0.82	ug/kg
OC Pesticides	2,4'-DDD	Fish (≤ 18 cm)	41	40	97.6	0.42	55	10	0.82	0.82	ug/kg
OC Pesticides	2,4'-DDD	Fish (≤ 20 cm)	43	42	97.7	0.42	55	11	0.82	0.82	ug/kg
OC Pesticides	2,4'-DDD	Largemouth bass	3	3	100	1.9	7.3	5.5			ug/kg
OC Pesticides	2,4'-DDD	Mummichog	18	17	94.4	0.42	2.6	1.3	0.82	0.82	ug/kg
OC Pesticides	2,4'-DDD	Mussel (estuarine)	3	0	0				1.4	2.6	ug/kg
OC Pesticides	2,4'-DDD	Mussel (freshwater)	5	0	0				1.3	2.5	ug/kg
OC Pesticides	2,4'-DDD	Northern pike	1	1	100	32	32				ug/kg
OC Pesticides	2,4'-DDD	Other forage fish (no mummichog)	10	10	100	0.63	12	4			ug/kg
OC Pesticides	2,4'-DDD	Smallmouth bass	3	3	100	4.4	10	7.8			ug/kg
OC Pesticides	2,4'-DDD	White catfish	19	18	94.7	4.6	29	11	1.6	1.6	ug/kg
OC Pesticides	2,4'-DDD	White perch	22	22	100	3.8	76	29			ug/kg
OC Pesticides	2,4'-DDD	White sucker	5	5	100	4.4	18	11			ug/kg
OC Pesticides	2,4'-DDD	Worms (all)	18	4	22.2	2.4	10	6.7	1.4	4.9	ug/kg
OC Pesticides	2,4'-DDD	Worms (estuarine sp.)	5	0	0				1.4	3.8	ug/kg
OC Pesticides	2,4'-DDD	Worms (freshwater sp.)	13	4	30.8	2.4	10	6.7	1.8	4.9	ug/kg
OC Pesticides	2,4'-DDE	American eel (all)	21	3	14.3	0.39	3	1.8	0.27	12	ug/kg
OC Pesticides	2,4'-DDE	Blue crab	24	10	41.7	0.19	0.76	0.41	0.11	0.89	ug/kg
OC Pesticides	2,4'-DDE	Brown bullhead	6	4	66.7	2	9.5	5.5	0.53	0.55	ug/kg
OC Pesticides	2,4'-DDE	Carp	12	10	83.3	1.5	80	30	1.1	4.8	ug/kg
OC Pesticides	2,4'-DDE	Channel catfish	11	9	81.8	1.6	8.8	4.4	1.4	1.5	ug/kg
OC Pesticides	2,4'-DDE	Fish (all)	131	91	69.5	0.39	80	8.3	0.27	14	ug/kg
OC Pesticides	2,4'-DDE	Fish (≤ 11 cm)	23	17	73.9	0.45	3.7	1.4	0.36	1.1	ug/kg
OC Pesticides	2,4'-DDE	Fish (≤ 13 cm)	26	20	76.9	0.45	3.8	1.5	0.36	1.1	ug/kg
OC Pesticides	2,4'-DDE	Fish (≤ 18 cm)	41	32	78	0.45	16	4.5	0.34	14	ug/kg
OC Pesticides	2,4'-DDE	Fish (≤ 20 cm)	43	34	79.1	0.45	16	4.8	0.34	14	ug/kg
OC Pesticides	2,4'-DDE	Largemouth bass	3	1	33.3	3.5	3.5		1.6	2	ug/kg
OC Pesticides	2,4'-DDE	Mummichog	18	13	72.2	0.45	2	1.3	0.5	1.1	ug/kg
OC Pesticides	2,4'-DDE	Mussel (estuarine)	3	0	0				1.2	1.8	ug/kg
OC Pesticides	2,4'-DDE	Mussel (freshwater)	5	0	0				1.1	1.7	ug/kg
OC Pesticides	2,4'-DDE	Northern pike	1	1	100	9.9	9.9				ug/kg
OC Pesticides	2,4'-DDE	Other forage fish (no mummichog)	10	7	70	0.56	9	2.8	0.34	0.36	ug/kg
OC Pesticides	2,4'-DDE	Smallmouth bass	3	2	66.7	5.2	7.4	6.3	2.2	2.2	ug/kg
OC Pesticides	2,4'-DDE	White catfish	19	17	89.5	2.3	18	7	2.2	3.9	ug/kg
OC Pesticides	2,4'-DDE	White perch	22	20	90.9	1.6	16	9.4	2.4	14	ug/kg
OC Pesticides	2,4'-DDE	White sucker	5	4	80	1.6	7.2	3.9	0.62	0.62	ug/kg
OC Pesticides	2,4'-DDE	Worms (all)	18	2	11.1	2.3	5.5	3.9	1.5	3.7	ug/kg
OC Pesticides	2,4'-DDE	Worms (estuarine sp.)	5	0	0				1.9	2.8	ug/kg
OC Pesticides	2,4'-DDE	Worms (freshwater sp.)	13	2	15.4	2.3	5.5	3.9	1.5	3.7	ug/kg
OC Pesticides	2,4'-DDT	American eel (all)	21	2	9.5	0.67	1.6	1.1	0.39	200	ug/kg
OC Pesticides	2,4'-DDT	Blue crab	24	5	20.8	0.28	0.85	0.48	0.14	1.9	ug/kg
OC Pesticides	2,4'-DDT	Brown bullhead	6	1	16.7	0.96	0.96		0.6	1.9	ug/kg
OC Pesticides	2,4'-DDT	Carp	12	5	41.7	2.5	19	8.3	0.67	4.9	ug/kg
OC Pesticides	2,4'-DDT	Channel catfish	11	2	18.2	1.5	3.7	2.6	1	3.2	ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
OC Pesticides	2,4'-DDT	Fish (all)	131	38	29	0.37	19	3	0.19	200	ug/kg
OC Pesticides	2,4'-DDT	Fish (≤ 11 cm)	23	4	17.4	0.41	0.77	0.52	0.19	1.7	ug/kg
OC Pesticides	2,4'-DDT	Fish (≤ 13 cm)	26	6	23.1	0.37	0.77	0.51	0.19	1.7	ug/kg
OC Pesticides	2,4'-DDT	Fish (≤ 18 cm)	41	15	36.6	0.37	6.6	2	0.19	7.3	ug/kg
OC Pesticides	2,4'-DDT	Fish (≤ 20 cm)	43	15	34.9	0.37	6.6	2	0.19	7.3	ug/kg
OC Pesticides	2,4'-DDT	Largemouth bass	3	1	33.3	1.9	1.9		1.2	1.6	ug/kg
OC Pesticides	2,4'-DDT	Mummichog	18	0	0				0.54	1.7	ug/kg
OC Pesticides	2,4'-DDT	Mussel (estuarine)	3	0	0				1.7	2.7	ug/kg
OC Pesticides	2,4'-DDT	Mussel (freshwater)	5	0	0				0.97	2.7	ug/kg
OC Pesticides	2,4'-DDT	Northern pike	1	1	100	4.8	4.8				ug/kg
OC Pesticides	2,4'-DDT	Other forage fish (no mummichog)	10	7	70	0.37	0.81	0.56	0.19	0.44	ug/kg
OC Pesticides	2,4'-DDT	Smallmouth bass	3	1	33.3	1.2	1.2		1.4	2.6	ug/kg
OC Pesticides	2,4'-DDT	White catfish	19	6	31.6	0.75	2.6	1.7	0.28	3	ug/kg
OC Pesticides	2,4'-DDT	White perch	22	11	50	0.43	9	3.5	0.34	7.3	ug/kg
OC Pesticides	2,4'-DDT	White sucker	5	1	20	2.3	2.3		1.1	1.3	ug/kg
OC Pesticides	2,4'-DDT	Worms (all)	18	0	0				3.1	5.5	ug/kg
OC Pesticides	2,4'-DDT	Worms (estuarine sp.)	5	0	0				3.1	4.6	ug/kg
OC Pesticides	2,4'-DDT	Worms (freshwater sp.)	13	0	0				3.2	5.5	ug/kg
OC Pesticides	4,4'-DDD	American eel (all)	21	20	95.2	7.7	130	64	140	140	ug/kg
OC Pesticides	4,4'-DDD	Blue crab	24	24	100	9.1	28	17			ug/kg
OC Pesticides	4,4'-DDD	Brown bullhead	6	2	33.3	76	87	82	9.5	30	ug/kg
OC Pesticides	4,4'-DDD	Carp	12	9	75	78	350	200	36	240	ug/kg
OC Pesticides	4,4'-DDD	Channel catfish	11	11	100	19	160	65			ug/kg
OC Pesticides	4,4'-DDD	Fish (all)	131	118	90.1	4.6	350	65	9.5	240	ug/kg
OC Pesticides	4,4'-DDD	Fish (≤ 11 cm)	23	23	100	7.7	35	20			ug/kg
OC Pesticides	4,4'-DDD	Fish (≤ 13 cm)	26	26	100	7.7	35	20			ug/kg
OC Pesticides	4,4'-DDD	Fish (≤ 18 cm)	41	38	92.7	4.6	110	30	20	70	ug/kg
OC Pesticides	4,4'-DDD	Fish (≤ 20 cm)	43	40	93	4.6	110	32	20	70	ug/kg
OC Pesticides	4,4'-DDD	Largemouth bass	3	3	100	7.4	41	27			ug/kg
OC Pesticides	4,4'-DDD	Mummichog	18	18	100	7.7	35	20			ug/kg
OC Pesticides	4,4'-DDD	Mussel (estuarine)	3	1	33.3	3	3		1.7	2.7	ug/kg
OC Pesticides	4,4'-DDD	Mussel (freshwater)	5	2	40	1.7	2.1	1.9	1.4	2.8	ug/kg
OC Pesticides	4,4'-DDD	Northern pike	1	1	100	87	87				ug/kg
OC Pesticides	4,4'-DDD	Other forage fish (no mummichog)	10	10	100	4.6	40	18			ug/kg
OC Pesticides	4,4'-DDD	Smallmouth bass	3	3	100	17	61	32			ug/kg
OC Pesticides	4,4'-DDD	White catfish	19	19	100	19	240	75			ug/kg
OC Pesticides	4,4'-DDD	White perch	22	19	86.4	8.1	210	68	20	70	ug/kg
OC Pesticides	4,4'-DDD	White sucker	5	3	60	19	46	36	11	32	ug/kg
OC Pesticides	4,4'-DDD	Worms (all)	18	13	72.2	1.8	17	6.3	2.3	2.9	ug/kg
OC Pesticides	4,4'-DDD	Worms (estuarine sp.)	5	2	40	1.8	3.6	2.7	2.3	2.6	ug/kg
OC Pesticides	4,4'-DDD	Worms (freshwater sp.)	13	11	84.6	2.4	17	6.9	2.3	2.9	ug/kg
OC Pesticides	4,4'-DDE	American eel (all)	21	21	100	20	340	140			ug/kg
OC Pesticides	4,4'-DDE	Blue crab	24	24	100	20	70	44			ug/kg
OC Pesticides	4,4'-DDE	Brown bullhead	6	6	100	18	88	54			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
OC Pesticides	4,4'-DDE	Carp	12	12	100	100	570	270			ug/kg
OC Pesticides	4,4'-DDE	Channel catfish	11	11	100	20	280	130			ug/kg
OC Pesticides	4,4'-DDE	Fish (all)	131	131	100	15	580	120			ug/kg
OC Pesticides	4,4'-DDE	Fish (≤ 11 cm)	23	23	100	15	59	31			ug/kg
OC Pesticides	4,4'-DDE	Fish (≤ 13 cm)	26	26	100	15	59	31			ug/kg
OC Pesticides	4,4'-DDE	Fish (≤ 18 cm)	41	41	100	15	140	50			ug/kg
OC Pesticides	4,4'-DDE	Fish (≤ 20 cm)	43	43	100	15	140	53			ug/kg
OC Pesticides	4,4'-DDE	Largemouth bass	3	3	100	59	96	79			ug/kg
OC Pesticides	4,4'-DDE	Mummichog	18	18	100	17	59	33			ug/kg
OC Pesticides	4,4'-DDE	Mussel (estuarine)	3	2	66.7	2.3	3.9	3.1	2.5	2.5	ug/kg
OC Pesticides	4,4'-DDE	Mussel (freshwater)	5	5	100	2.6	4	3.4			ug/kg
OC Pesticides	4,4'-DDE	Northern pike	1	1	100	130	130				ug/kg
OC Pesticides	4,4'-DDE	Other forage fish (no mummichog)	10	10	100	15	74	29			ug/kg
OC Pesticides	4,4'-DDE	Smallmouth bass	3	3	100	74	150	110			ug/kg
OC Pesticides	4,4'-DDE	White catfish	19	19	100	56	580	180			ug/kg
OC Pesticides	4,4'-DDE	White perch	22	22	100	23	190	95			ug/kg
OC Pesticides	4,4'-DDE	White sucker	5	5	100	37	130	73			ug/kg
OC Pesticides	4,4'-DDE	Worms (all)	18	12	66.7	3.1	20	7.1	1.7	4.3	ug/kg
OC Pesticides	4,4'-DDE	Worms (estuarine sp.)	5	0	0				1.7	3.2	ug/kg
OC Pesticides	4,4'-DDE	Worms (freshwater sp.)	13	12	92.3	3.1	20	7.1	4.3	4.3	ug/kg
OC Pesticides	4,4'-DDT	American eel (all)	21	20	95.2	3.4	37	12	17	17	ug/kg
OC Pesticides	4,4'-DDT	Blue crab	24	20	83.3	0.27	12	2	0.41	1.9	ug/kg
OC Pesticides	4,4'-DDT	Brown bullhead	6	2	33.3	2.8	4.5	3.7	2.2	9.8	ug/kg
OC Pesticides	4,4'-DDT	Carp	12	8	66.7	1.5	24	6.3	2.3	6.7	ug/kg
OC Pesticides	4,4'-DDT	Channel catfish	11	11	100	2.5	17	9.5			ug/kg
OC Pesticides	4,4'-DDT	Fish (all)	131	111	84.7	0.22	37	7.9	0.75	17	ug/kg
OC Pesticides	4,4'-DDT	Fish (≤ 11 cm)	23	17	73.9	0.22	2.8	1.6	0.75	2.4	ug/kg
OC Pesticides	4,4'-DDT	Fish (≤ 13 cm)	26	20	76.9	0.22	2.8	1.7	0.75	2.4	ug/kg
OC Pesticides	4,4'-DDT	Fish (≤ 18 cm)	41	33	80.5	0.22	14	4.2	0.75	6.8	ug/kg
OC Pesticides	4,4'-DDT	Fish (≤ 20 cm)	43	33	76.7	0.22	14	4.2	0.75	8.6	ug/kg
OC Pesticides	4,4'-DDT	Largemouth bass	3	3	100	3.9	32	15			ug/kg
OC Pesticides	4,4'-DDT	Mummichog	18	12	66.7	0.65	2.8	1.7	0.75	2.4	ug/kg
OC Pesticides	4,4'-DDT	Mussel (estuarine)	3	0	0				1.6	2.6	ug/kg
OC Pesticides	4,4'-DDT	Mussel (freshwater)	5	0	0				0.94	2.7	ug/kg
OC Pesticides	4,4'-DDT	Northern pike	1	1	100	13	13				ug/kg
OC Pesticides	4,4'-DDT	Other forage fish (no mummichog)	10	10	100	0.22	4.2	2			ug/kg
OC Pesticides	4,4'-DDT	Smallmouth bass	3	3	100	6.8	8.9	7.8			ug/kg
OC Pesticides	4,4'-DDT	White catfish	19	18	94.7	2.7	31	9.1	2	2	ug/kg
OC Pesticides	4,4'-DDT	White perch	22	18	81.8	1.1	22	8.2	6.7	8.6	ug/kg
OC Pesticides	4,4'-DDT	White sucker	5	5	100	5.3	8.6	6.8			ug/kg
OC Pesticides	4,4'-DDT	Worms (all)	18	0	0				2.2	5	ug/kg
OC Pesticides	4,4'-DDT	Worms (estuarine sp.)	5	0	0				2.5	3.8	ug/kg
OC Pesticides	4,4'-DDT	Worms (freshwater sp.)	13	0	0				2.2	5	ug/kg
OC Pesticides	Aldrin	American eel (all)	21	3	14.3	0.033	0.14	0.1	0.011	0.11	ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
OC Pesticides	Aldrin	Blue crab	24	5	20.8	0.011	0.075	0.037	0.011	0.14	ug/kg
OC Pesticides	Aldrin	Brown bullhead	6	5	83.3	0.076	0.43	0.23	0.086	0.086	ug/kg
OC Pesticides	Aldrin	Carp	12	11	91.7	0.12	0.49	0.27	0.46	0.46	ug/kg
OC Pesticides	Aldrin	Channel catfish	11	11	100	0.15	0.36	0.25			ug/kg
OC Pesticides	Aldrin	Fish (all)	131	73	55.7	0.021	0.49	0.18	0.0077	0.46	ug/kg
OC Pesticides	Aldrin	Fish (≤ 11 cm)	23	7	30.4	0.021	0.26	0.094	0.0077	0.039	ug/kg
OC Pesticides	Aldrin	Fish (≤ 13 cm)	26	10	38.5	0.021	0.26	0.098	0.0077	0.039	ug/kg
OC Pesticides	Aldrin	Fish (≤ 18 cm)	41	19	46.3	0.021	0.27	0.13	0.0077	0.31	ug/kg
OC Pesticides	Aldrin	Fish (≤ 20 cm)	43	20	46.5	0.021	0.29	0.14	0.0077	0.31	ug/kg
OC Pesticides	Aldrin	Largemouth bass	3	2	66.7	0.056	0.098	0.077	0.052	0.052	ug/kg
OC Pesticides	Aldrin	Mummichog	18	2	11.1	0.021	0.042	0.032	0.0077	0.039	ug/kg
OC Pesticides	Aldrin	Mussel (estuarine)	3	2	66.7	0.031	0.033	0.032	0.046	0.046	ug/kg
OC Pesticides	Aldrin	Mussel (freshwater)	5	3	60	0.026	0.07	0.045	0.029	0.032	ug/kg
OC Pesticides	Aldrin	Northern pike	1	0	0				0.14	0.14	ug/kg
OC Pesticides	Aldrin	Other forage fish (no mummichog)	10	9	90	0.028	0.26	0.13	0.027	0.027	ug/kg
OC Pesticides	Aldrin	Smallmouth bass	3	0	0				0.063	0.092	ug/kg
OC Pesticides	Aldrin	White catfish	19	14	73.7	0.084	0.42	0.15	0.023	0.038	ug/kg
OC Pesticides	Aldrin	White perch	22	13	59.1	0.055	0.29	0.15	0.021	0.31	ug/kg
OC Pesticides	Aldrin	White sucker	5	3	60	0.13	0.25	0.19	0.016	0.037	ug/kg
OC Pesticides	Aldrin	Worms (all)	18	8	44.4	0.044	0.39	0.2	0.021	0.27	ug/kg
OC Pesticides	Aldrin	Worms (estuarine sp.)	5	0	0				0.021	0.039	ug/kg
OC Pesticides	Aldrin	Worms (freshwater sp.)	13	8	61.5	0.044	0.39	0.2	0.049	0.27	ug/kg
OC Pesticides	alpha-BHC	American eel (all)	21	4	19	0.11	0.26	0.19	0.018	0.59	ug/kg
OC Pesticides	alpha-BHC	Blue crab	24	10	41.7	0.017	0.041	0.028	0.017	0.18	ug/kg
OC Pesticides	alpha-BHC	Brown bullhead	6	1	16.7	0.085	0.085		0.025	0.089	ug/kg
OC Pesticides	alpha-BHC	Carp	12	4	33.3	0.066	0.15	0.11	0.036	0.55	ug/kg
OC Pesticides	alpha-BHC	Channel catfish	11	1	9.1	0.1	0.1		0.088	0.2	ug/kg
OC Pesticides	alpha-BHC	Fish (all)	131	27	20.6	0.018	0.26	0.088	0.0063	0.59	ug/kg
OC Pesticides	alpha-BHC	Fish (≤ 11 cm)	23	6	26.1	0.018	0.032	0.024	0.0063	0.082	ug/kg
OC Pesticides	alpha-BHC	Fish (≤ 13 cm)	26	6	23.1	0.018	0.032	0.024	0.0063	0.082	ug/kg
OC Pesticides	alpha-BHC	Fish (≤ 18 cm)	41	9	22	0.018	0.14	0.046	0.0063	0.28	ug/kg
OC Pesticides	alpha-BHC	Fish (≤ 20 cm)	43	10	23.3	0.018	0.14	0.053	0.0063	0.28	ug/kg
OC Pesticides	alpha-BHC	Largemouth bass	3	0	0				0.11	0.18	ug/kg
OC Pesticides	alpha-BHC	Mummichog	18	5	27.8	0.02	0.032	0.025	0.011	0.028	ug/kg
OC Pesticides	alpha-BHC	Mussel (estuarine)	3	0	0				0.12	0.14	ug/kg
OC Pesticides	alpha-BHC	Mussel (freshwater)	5	0	0				0.082	0.13	ug/kg
OC Pesticides	alpha-BHC	Northern pike	1	0	0				0.23	0.23	ug/kg
OC Pesticides	alpha-BHC	Other forage fish (no mummichog)	10	1	10	0.018	0.018		0.0063	0.11	ug/kg
OC Pesticides	alpha-BHC	Smallmouth bass	3	0	0				0.12	0.17	ug/kg
OC Pesticides	alpha-BHC	White catfish	19	3	15.8	0.055	0.061	0.057	0.015	0.3	ug/kg
OC Pesticides	alpha-BHC	White perch	22	6	27.3	0.04	0.14	0.095	0.023	0.28	ug/kg
OC Pesticides	alpha-BHC	White sucker	5	2	40	0.048	0.093	0.071	0.017	0.048	ug/kg
OC Pesticides	alpha-BHC	Worms (all)	18	1	5.6	0.11	0.11		0.08	0.33	ug/kg
OC Pesticides	alpha-BHC	Worms (estuarine sp.)	5	1	20	0.11	0.11		0.08	0.19	ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
OC Pesticides	alpha-BHC	Worms (freshwater sp.)	13	0	0				0.093	0.33	ug/kg
OC Pesticides	alpha-Chlordane	American eel (all)	21	21	100	16	87	49			ug/kg
OC Pesticides	alpha-Chlordane	Blue crab	24	24	100	1.4	7.2	3.6			ug/kg
OC Pesticides	alpha-Chlordane	Brown bullhead	6	6	100	27	83	56			ug/kg
OC Pesticides	alpha-Chlordane	Carp	12	12	100	85	220	140			ug/kg
OC Pesticides	alpha-Chlordane	Channel catfish	11	11	100	33	120	77			ug/kg
OC Pesticides	alpha-Chlordane	Fish (all)	131	131	100	6.1	320	61			ug/kg
OC Pesticides	alpha-Chlordane	Fish (≤ 11 cm)	23	23	100	6.1	41	18			ug/kg
OC Pesticides	alpha-Chlordane	Fish (≤ 13 cm)	26	26	100	6.1	41	19			ug/kg
OC Pesticides	alpha-Chlordane	Fish (≤ 18 cm)	41	41	100	6.1	110	34			ug/kg
OC Pesticides	alpha-Chlordane	Fish (≤ 20 cm)	43	43	100	6.1	110	36			ug/kg
OC Pesticides	alpha-Chlordane	Largemouth bass	3	3	100	12	88	46			ug/kg
OC Pesticides	alpha-Chlordane	Mummichog	18	18	100	6.1	41	16			ug/kg
OC Pesticides	alpha-Chlordane	Mussel (estuarine)	3	3	100	0.8	2.9	1.7			ug/kg
OC Pesticides	alpha-Chlordane	Mussel (freshwater)	5	5	100	3.8	5.3	4.4			ug/kg
OC Pesticides	alpha-Chlordane	Northern pike	1	1	100	72	72				ug/kg
OC Pesticides	alpha-Chlordane	Other forage fish (no mummichog)	10	10	100	7.8	50	26			ug/kg
OC Pesticides	alpha-Chlordane	Smallmouth bass	3	3	100	22	47	35			ug/kg
OC Pesticides	alpha-Chlordane	White catfish	19	19	100	21	190	76			ug/kg
OC Pesticides	alpha-Chlordane	White perch	22	22	100	15	320	70			ug/kg
OC Pesticides	alpha-Chlordane	White sucker	5	5	100	37	57	47			ug/kg
OC Pesticides	alpha-Chlordane	Worms (all)	18	17	94.4	0.4	14	4.5	4.2	4.2	ug/kg
OC Pesticides	alpha-Chlordane	Worms (estuarine sp.)	5	5	100	0.4	2.7	1.8			ug/kg
OC Pesticides	alpha-Chlordane	Worms (freshwater sp.)	13	12	92.3	3	14	5.6	4.2	4.2	ug/kg
OC Pesticides	beta-BHC	American eel (all)	21	8	38.1	0.05	0.82	0.34	0.037	0.99	ug/kg
OC Pesticides	beta-BHC	Blue crab	24	14	58.3	0.032	0.26	0.085	0.025	0.16	ug/kg
OC Pesticides	beta-BHC	Brown bullhead	6	0	0				0.042	0.31	ug/kg
OC Pesticides	beta-BHC	Carp	12	5	41.7	0.26	0.38	0.34	0.097	0.77	ug/kg
OC Pesticides	beta-BHC	Channel catfish	11	1	9.1	0.18	0.18		0.11	0.29	ug/kg
OC Pesticides	beta-BHC	Fish (all)	131	44	33.6	0.023	0.82	0.17	0.018	0.99	ug/kg
OC Pesticides	beta-BHC	Fish (≤ 11 cm)	23	14	60.9	0.023	0.12	0.057	0.018	0.11	ug/kg
OC Pesticides	beta-BHC	Fish (≤ 13 cm)	26	14	53.8	0.023	0.12	0.057	0.018	0.11	ug/kg
OC Pesticides	beta-BHC	Fish (≤ 18 cm)	41	17	41.5	0.023	0.14	0.069	0.018	0.39	ug/kg
OC Pesticides	beta-BHC	Fish (≤ 20 cm)	43	18	41.9	0.023	0.17	0.075	0.018	0.39	ug/kg
OC Pesticides	beta-BHC	Largemouth bass	3	0	0				0.16	0.25	ug/kg
OC Pesticides	beta-BHC	Mummichog	18	12	66.7	0.023	0.12	0.059	0.018	0.032	ug/kg
OC Pesticides	beta-BHC	Mussel (estuarine)	3	0	0				0.15	0.18	ug/kg
OC Pesticides	beta-BHC	Mussel (freshwater)	5	0	0				0.1	0.16	ug/kg
OC Pesticides	beta-BHC	Northern pike	1	0	0				0.32	0.32	ug/kg
OC Pesticides	beta-BHC	Other forage fish (no mummichog)	10	2	20	0.037	0.043	0.04	0.03	0.15	ug/kg
OC Pesticides	beta-BHC	Smallmouth bass	3	0	0				0.16	0.25	ug/kg
OC Pesticides	beta-BHC	White catfish	19	7	36.8	0.042	0.12	0.078	0.036	0.43	ug/kg
OC Pesticides	beta-BHC	White perch	22	8	36.4	0.11	0.28	0.18	0.025	0.39	ug/kg
OC Pesticides	beta-BHC	White sucker	5	1	20	0.1	0.1		0.025	0.1	ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
OC Pesticides	beta-BHC	Worms (all)	18	1	5.6	0.89	0.89		0.11	0.48	ug/kg
OC Pesticides	beta-BHC	Worms (estuarine sp.)	5	0	0				0.11	0.28	ug/kg
OC Pesticides	beta-BHC	Worms (freshwater sp.)	13	1	7.7	0.89	0.89		0.12	0.48	ug/kg
OC Pesticides	cis-Nonachlor	American eel (all)	21	21	100	6.8	87	26			ug/kg
OC Pesticides	cis-Nonachlor	Blue crab	24	24	100	2.1	11	5.3			ug/kg
OC Pesticides	cis-Nonachlor	Brown bullhead	6	6	100	6	22	14			ug/kg
OC Pesticides	cis-Nonachlor	Carp	12	12	100	24	69	41			ug/kg
OC Pesticides	cis-Nonachlor	Channel catfish	11	11	100	5.2	50	25			ug/kg
OC Pesticides	cis-Nonachlor	Fish (all)	131	131	100	2.7	95	21			ug/kg
OC Pesticides	cis-Nonachlor	Fish (≤ 11 cm)	23	23	100	2.7	11	6			ug/kg
OC Pesticides	cis-Nonachlor	Fish (≤ 13 cm)	26	26	100	2.7	11	6			ug/kg
OC Pesticides	cis-Nonachlor	Fish (≤ 18 cm)	41	41	100	2.7	29	9.7			ug/kg
OC Pesticides	cis-Nonachlor	Fish (≤ 20 cm)	43	43	100	2.7	30	11			ug/kg
OC Pesticides	cis-Nonachlor	Largemouth bass	3	3	100	6.3	41	24			ug/kg
OC Pesticides	cis-Nonachlor	Mummichog	18	18	100	2.7	11	5.9			ug/kg
OC Pesticides	cis-Nonachlor	Mussel (estuarine)	3	1	33.3	0.62	0.62		0.26	0.34	ug/kg
OC Pesticides	cis-Nonachlor	Mussel (freshwater)	5	5	100	0.89	1.1	1			ug/kg
OC Pesticides	cis-Nonachlor	Northern pike	1	1	100	27	27				ug/kg
OC Pesticides	cis-Nonachlor	Other forage fish (no mummichog)	10	10	100	4.7	12	6.8			ug/kg
OC Pesticides	cis-Nonachlor	Smallmouth bass	3	3	100	18	21	20			ug/kg
OC Pesticides	cis-Nonachlor	White catfish	19	19	100	9.8	95	32			ug/kg
OC Pesticides	cis-Nonachlor	White perch	22	22	100	5.5	30	17			ug/kg
OC Pesticides	cis-Nonachlor	White sucker	5	5	100	9.9	18	14			ug/kg
OC Pesticides	cis-Nonachlor	Worms (all)	18	13	72.2	0.46	4.7	1.4	0.28	1.1	ug/kg
OC Pesticides	cis-Nonachlor	Worms (estuarine sp.)	5	2	40	0.46	0.52	0.49	0.28	0.49	ug/kg
OC Pesticides	cis-Nonachlor	Worms (freshwater sp.)	13	11	84.6	0.63	4.7	1.6	1.1	1.1	ug/kg
OC Pesticides	delta-BHC	American eel (all)	21	1	4.8	0.089	0.089		0.022	0.87	ug/kg
OC Pesticides	delta-BHC	Blue crab	24	8	33.3	0.017	0.052	0.03	0.0084	0.24	ug/kg
OC Pesticides	delta-BHC	Brown bullhead	6	0	0				0.038	0.17	ug/kg
OC Pesticides	delta-BHC	Carp	12	0	0				0.038	0.73	ug/kg
OC Pesticides	delta-BHC	Channel catfish	11	0	0				0.052	0.27	ug/kg
OC Pesticides	delta-BHC	Fish (all)	131	10	7.6	0.011	0.31	0.095	0.0088	0.87	ug/kg
OC Pesticides	delta-BHC	Fish (≤ 11 cm)	23	1	4.3	0.011	0.011		0.0088	0.12	ug/kg
OC Pesticides	delta-BHC	Fish (≤ 13 cm)	26	1	3.8	0.011	0.011		0.0088	0.12	ug/kg
OC Pesticides	delta-BHC	Fish (≤ 18 cm)	41	2	4.9	0.011	0.03	0.021	0.0088	0.36	ug/kg
OC Pesticides	delta-BHC	Fish (≤ 20 cm)	43	3	7	0.011	0.15	0.064	0.0088	0.36	ug/kg
OC Pesticides	delta-BHC	Largemouth bass	3	0	0				0.15	0.24	ug/kg
OC Pesticides	delta-BHC	Mummichog	18	0	0				0.0088	0.035	ug/kg
OC Pesticides	delta-BHC	Mussel (estuarine)	3	1	33.3	0.63	0.63		0.2	0.42	ug/kg
OC Pesticides	delta-BHC	Mussel (freshwater)	5	1	20	0.56	0.56		0.11	0.21	ug/kg
OC Pesticides	delta-BHC	Northern pike	1	0	0				0.32	0.32	ug/kg
OC Pesticides	delta-BHC	Other forage fish (no mummichog)	10	2	20	0.011	0.03	0.021	0.015	0.16	ug/kg
OC Pesticides	delta-BHC	Smallmouth bass	3	0	0				0.16	0.23	ug/kg
OC Pesticides	delta-BHC	White catfish	19	3	15.8	0.04	0.1	0.066	0.016	0.39	ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
OC Pesticides	delta-BHC	White perch	22	4	18.2	0.074	0.31	0.16	0.035	0.36	ug/kg
OC Pesticides	delta-BHC	White sucker	5	0	0				0.024	0.077	ug/kg
OC Pesticides	delta-BHC	Worms (all)	18	0	0				0.099	0.45	ug/kg
OC Pesticides	delta-BHC	Worms (estuarine sp.)	5	0	0				0.099	0.27	ug/kg
OC Pesticides	delta-BHC	Worms (freshwater sp.)	13	0	0				0.11	0.45	ug/kg
OC Pesticides	Dieldrin	American eel (all)	21	21	100	7.6	110	45			ug/kg
OC Pesticides	Dieldrin	Blue crab	24	24	100	2.4	9.1	6.2			ug/kg
OC Pesticides	Dieldrin	Brown bullhead	6	6	100	9.7	34	22			ug/kg
OC Pesticides	Dieldrin	Carp	12	12	100	29	72	48			ug/kg
OC Pesticides	Dieldrin	Channel catfish	11	11	100	18	70	38			ug/kg
OC Pesticides	Dieldrin	Fish (all)	131	131	100	3.5	110	28			ug/kg
OC Pesticides	Dieldrin	Fish (≤ 11 cm)	23	23	100	3.5	28	9.7			ug/kg
OC Pesticides	Dieldrin	Fish (≤ 13 cm)	26	26	100	3.5	28	9.6			ug/kg
OC Pesticides	Dieldrin	Fish (≤ 18 cm)	41	41	100	3.5	47	16			ug/kg
OC Pesticides	Dieldrin	Fish (≤ 20 cm)	43	43	100	3.5	47	17			ug/kg
OC Pesticides	Dieldrin	Largemouth bass	3	3	100	16	40	25			ug/kg
OC Pesticides	Dieldrin	Mummichog	18	18	100	3.5	28	8.6			ug/kg
OC Pesticides	Dieldrin	Mussel (estuarine)	3	3	100	0.64	1.8	1.2			ug/kg
OC Pesticides	Dieldrin	Mussel (freshwater)	5	5	100	2.3	3	2.7			ug/kg
OC Pesticides	Dieldrin	Northern pike	1	1	100	43	43				ug/kg
OC Pesticides	Dieldrin	Other forage fish (no mummichog)	10	10	100	8.4	22	13			ug/kg
OC Pesticides	Dieldrin	Smallmouth bass	3	3	100	16	20	18			ug/kg
OC Pesticides	Dieldrin	White catfish	19	19	100	7.2	48	22			ug/kg
OC Pesticides	Dieldrin	White perch	22	22	100	7.8	47	26			ug/kg
OC Pesticides	Dieldrin	White sucker	5	5	100	16	25	20			ug/kg
OC Pesticides	Dieldrin	Worms (all)	18	18	100	0.57	2.6	1.4			ug/kg
OC Pesticides	Dieldrin	Worms (estuarine sp.)	5	5	100	0.57	2	1.1			ug/kg
OC Pesticides	Dieldrin	Worms (freshwater sp.)	13	13	100	0.79	2.6	1.5			ug/kg
OC Pesticides	Endosulfan I	American eel (all)	21	2	9.5	0.2	0.59	0.4	0.24	5.9	ug/kg
OC Pesticides	Endosulfan I	Blue crab	24	0	0				0.33	7.7	ug/kg
OC Pesticides	Endosulfan I	Brown bullhead	6	3	50	0.97	1.1	1	0.45	0.56	ug/kg
OC Pesticides	Endosulfan I	Carp	12	2	16.7	1.2	4	2.6	0.58	5.8	ug/kg
OC Pesticides	Endosulfan I	Channel catfish	11	3	27.3	0.78	2	1.2	0.56	3.6	ug/kg
OC Pesticides	Endosulfan I	Fish (all)	131	12	9.2	0.2	4	1.1	0.18	10	ug/kg
OC Pesticides	Endosulfan I	Fish (≤ 11 cm)	23	0	0				0.23	1.3	ug/kg
OC Pesticides	Endosulfan I	Fish (≤ 13 cm)	26	0	0				0.23	1.5	ug/kg
OC Pesticides	Endosulfan I	Fish (≤ 18 cm)	41	0	0				0.23	3.2	ug/kg
OC Pesticides	Endosulfan I	Fish (≤ 20 cm)	43	0	0				0.23	3.2	ug/kg
OC Pesticides	Endosulfan I	Largemouth bass	3	0	0				1.1	10	ug/kg
OC Pesticides	Endosulfan I	Mummichog	18	0	0				0.23	0.8	ug/kg
OC Pesticides	Endosulfan I	Mussel (estuarine)	3	0	0				1.2	1.7	ug/kg
OC Pesticides	Endosulfan I	Mussel (freshwater)	5	0	0				1.1	2.5	ug/kg
OC Pesticides	Endosulfan I	Northern pike	1	0	0				2.1	2.1	ug/kg
OC Pesticides	Endosulfan I	Other forage fish (no mummichog)	10	0	0				0.72	1.5	ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
OC Pesticides	Endosulfan I	Smallmouth bass	3	0	0				0.68	2.9	ug/kg
OC Pesticides	Endosulfan I	White catfish	19	0	0				0.22	1.7	ug/kg
OC Pesticides	Endosulfan I	White perch	22	1	4.5	0.22	0.22		0.18	3.2	ug/kg
OC Pesticides	Endosulfan I	White sucker	5	1	20	0.45	0.45		0.25	0.6	ug/kg
OC Pesticides	Endosulfan I	Worms (all)	18	0	0				0.51	1.7	ug/kg
OC Pesticides	Endosulfan I	Worms (estuarine sp.)	5	0	0				0.67	1.4	ug/kg
OC Pesticides	Endosulfan I	Worms (freshwater sp.)	13	0	0				0.51	1.7	ug/kg
OC Pesticides	Endosulfan II	American eel (all)	21	2	9.5	0.37	0.56	0.47	0.31	8.4	ug/kg
OC Pesticides	Endosulfan II	Blue crab	24	0	0				0.38	13	ug/kg
OC Pesticides	Endosulfan II	Brown bullhead	6	0	0				0.76	1.6	ug/kg
OC Pesticides	Endosulfan II	Carp	12	2	16.7	0.71	2.7	1.7	0.6	2.9	ug/kg
OC Pesticides	Endosulfan II	Channel catfish	11	1	9.1	0.89	0.89		0.54	2.6	ug/kg
OC Pesticides	Endosulfan II	Fish (all)	130	6	4.6	0.37	2.7	1.3	0.22	8.4	ug/kg
OC Pesticides	Endosulfan II	Fish (≤ 11 cm)	23	0	0				0.32	1.3	ug/kg
OC Pesticides	Endosulfan II	Fish (≤ 13 cm)	26	0	0				0.32	1.5	ug/kg
OC Pesticides	Endosulfan II	Fish (≤ 18 cm)	41	0	0				0.32	3.1	ug/kg
OC Pesticides	Endosulfan II	Fish (≤ 20 cm)	43	0	0				0.32	3.7	ug/kg
OC Pesticides	Endosulfan II	Largemouth bass	3	0	0				3.1	3.3	ug/kg
OC Pesticides	Endosulfan II	Mummichog	18	0	0				0.32	1.3	ug/kg
OC Pesticides	Endosulfan II	Mussel (estuarine)	3	0	0				2.1	2.5	ug/kg
OC Pesticides	Endosulfan II	Mussel (freshwater)	5	0	0				0.53	3	ug/kg
OC Pesticides	Endosulfan II	Northern pike	1	0	0				5	5	ug/kg
OC Pesticides	Endosulfan II	Other forage fish (no mummichog)	10	0	0				0.92	1.5	ug/kg
OC Pesticides	Endosulfan II	Smallmouth bass	2	0	0				1.8	2.8	ug/kg
OC Pesticides	Endosulfan II	White catfish	19	1	5.3	2.5	2.5		0.32	4.9	ug/kg
OC Pesticides	Endosulfan II	White perch	22	0	0				0.32	3.7	ug/kg
OC Pesticides	Endosulfan II	White sucker	5	0	0				0.22	1.1	ug/kg
OC Pesticides	Endosulfan II	Worms (all)	18	0	0				1.6	3.9	ug/kg
OC Pesticides	Endosulfan II	Worms (estuarine sp.)	5	0	0				1.6	2.6	ug/kg
OC Pesticides	Endosulfan II	Worms (freshwater sp.)	13	0	0				2.1	3.9	ug/kg
OC Pesticides	Endosulfan sulfate	American eel (all)	21	13	61.9	0.35	1.1	0.75	0.16	0.38	ug/kg
OC Pesticides	Endosulfan sulfate	Blue crab	24	15	62.5	0.026	0.63	0.15	0.033	0.31	ug/kg
OC Pesticides	Endosulfan sulfate	Brown bullhead	6	3	50	0.55	0.76	0.67	0.18	0.5	ug/kg
OC Pesticides	Endosulfan sulfate	Carp	12	9	75	0.46	1.5	0.96	0.31	0.66	ug/kg
OC Pesticides	Endosulfan sulfate	Channel catfish	11	2	18.2	0.36	0.95	0.66	0.079	0.35	ug/kg
OC Pesticides	Endosulfan sulfate	Fish (all)	131	74	56.5	0.073	1.5	0.56	0.032	1	ug/kg
OC Pesticides	Endosulfan sulfate	Fish (≤ 11 cm)	23	15	65.2	0.073	0.41	0.19	0.032	0.16	ug/kg
OC Pesticides	Endosulfan sulfate	Fish (≤ 13 cm)	26	18	69.2	0.073	0.41	0.19	0.032	0.16	ug/kg
OC Pesticides	Endosulfan sulfate	Fish (≤ 18 cm)	41	27	65.9	0.073	1.4	0.37	0.032	0.77	ug/kg
OC Pesticides	Endosulfan sulfate	Fish (≤ 20 cm)	43	28	65.1	0.073	1.5	0.41	0.032	0.77	ug/kg
OC Pesticides	Endosulfan sulfate	Largemouth bass	3	3	100	0.094	0.22	0.17			ug/kg
OC Pesticides	Endosulfan sulfate	Mummichog	18	11	61.1	0.073	0.22	0.14	0.032	0.12	ug/kg
OC Pesticides	Endosulfan sulfate	Mussel (estuarine)	3	0	0				0.1	0.42	ug/kg
OC Pesticides	Endosulfan sulfate	Mussel (freshwater)	5	2	40	0.17	0.37	0.27	0.12	0.77	ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
OC Pesticides	Endosulfan sulfate	Northern pike	1	1	100	1.5	1.5				ug/kg
OC Pesticides	Endosulfan sulfate	Other forage fish (no mummichog)	10	9	90	0.11	0.41	0.27	0.16	0.16	ug/kg
OC Pesticides	Endosulfan sulfate	Smallmouth bass	3	2	66.7	0.29	0.33	0.31	0.13	0.13	ug/kg
OC Pesticides	Endosulfan sulfate	White catfish	19	10	52.6	0.2	0.61	0.37	0.05	0.27	ug/kg
OC Pesticides	Endosulfan sulfate	White perch	22	11	50	0.23	1.5	0.84	0.23	1	ug/kg
OC Pesticides	Endosulfan sulfate	White sucker	5	0	0				0.036	0.09	ug/kg
OC Pesticides	Endosulfan sulfate	Worms (all)	18	7	38.9	0.083	0.22	0.13	0.011	0.047	ug/kg
OC Pesticides	Endosulfan sulfate	Worms (estuarine sp.)	5	0	0				0.011	0.023	ug/kg
OC Pesticides	Endosulfan sulfate	Worms (freshwater sp.)	13	7	53.8	0.083	0.22	0.13	0.014	0.047	ug/kg
OC Pesticides	Endrin	American eel (all)	21	1	4.8	0.63	0.63		0.052	3	ug/kg
OC Pesticides	Endrin	Blue crab	24	1	4.2	0.74	0.74		0.16	2.3	ug/kg
OC Pesticides	Endrin	Brown bullhead	6	0	0				0.41	0.81	ug/kg
OC Pesticides	Endrin	Carp	12	1	8.3	0.23	0.23		0.3	4	ug/kg
OC Pesticides	Endrin	Channel catfish	11	1	9.1	0.71	0.71		0.25	0.86	ug/kg
OC Pesticides	Endrin	Fish (all)	131	6	4.6	0.14	0.71	0.35	0.052	4	ug/kg
OC Pesticides	Endrin	Fish (≤ 11 cm)	23	0	0				0.073	0.69	ug/kg
OC Pesticides	Endrin	Fish (≤ 13 cm)	26	0	0				0.073	0.69	ug/kg
OC Pesticides	Endrin	Fish (≤ 18 cm)	41	2	4.9	0.14	0.23	0.19	0.073	1.1	ug/kg
OC Pesticides	Endrin	Fish (≤ 20 cm)	43	2	4.7	0.14	0.23	0.19	0.073	1.1	ug/kg
OC Pesticides	Endrin	Largemouth bass	3	0	0				0.31	0.77	ug/kg
OC Pesticides	Endrin	Mummichog	18	0	0				0.073	0.22	ug/kg
OC Pesticides	Endrin	Mussel (estuarine)	3	0	0				0.24	0.32	ug/kg
OC Pesticides	Endrin	Mussel (freshwater)	5	0	0				0.059	0.42	ug/kg
OC Pesticides	Endrin	Northern pike	1	0	0				0.92	0.92	ug/kg
OC Pesticides	Endrin	Other forage fish (no mummichog)	10	1	10	0.14	0.14		0.18	0.69	ug/kg
OC Pesticides	Endrin	Smallmouth bass	3	0	0				0.2	0.42	ug/kg
OC Pesticides	Endrin	White catfish	19	1	5.3	0.14	0.14		0.056	1.9	ug/kg
OC Pesticides	Endrin	White perch	22	1	4.5	0.23	0.23		0.097	1.1	ug/kg
OC Pesticides	Endrin	White sucker	5	0	0				0.091	0.54	ug/kg
OC Pesticides	Endrin	Worms (all)	18	0	0				0.12	0.55	ug/kg
OC Pesticides	Endrin	Worms (estuarine sp.)	5	0	0				0.12	0.32	ug/kg
OC Pesticides	Endrin	Worms (freshwater sp.)	13	0	0				0.17	0.55	ug/kg
OC Pesticides	Endrin aldehyde	American eel (all)	21	3	14.3	0.069	0.36	0.21	0.021	3.9	ug/kg
OC Pesticides	Endrin aldehyde	Blue crab	24	3	12.5	0.24	3.6	1.6	0.067	4	ug/kg
OC Pesticides	Endrin aldehyde	Brown bullhead	6	1	16.7	0.17	0.17		0.064	0.44	ug/kg
OC Pesticides	Endrin aldehyde	Carp	12	1	8.3	0.69	0.69		0.2	4.3	ug/kg
OC Pesticides	Endrin aldehyde	Channel catfish	11	0	0				0.12	1	ug/kg
OC Pesticides	Endrin aldehyde	Fish (all)	131	10	7.6	0.069	2.2	0.5	0.019	4.3	ug/kg
OC Pesticides	Endrin aldehyde	Fish (≤ 11 cm)	23	0	0				0.019	0.44	ug/kg
OC Pesticides	Endrin aldehyde	Fish (≤ 13 cm)	26	0	0				0.019	0.44	ug/kg
OC Pesticides	Endrin aldehyde	Fish (≤ 18 cm)	41	0	0				0.019	0.96	ug/kg
OC Pesticides	Endrin aldehyde	Fish (≤ 20 cm)	43	0	0				0.019	0.96	ug/kg
OC Pesticides	Endrin aldehyde	Largemouth bass	3	0	0				0.14	0.31	ug/kg
OC Pesticides	Endrin aldehyde	Mummichog	18	0	0				0.019	0.44	ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
OC Pesticides	Endrin aldehyde	Mussel (estuarine)	3	0	0				0.13	0.64	ug/kg
OC Pesticides	Endrin aldehyde	Mussel (freshwater)	5	0	0				0.17	0.77	ug/kg
OC Pesticides	Endrin aldehyde	Northern pike	1	0	0				0.2	0.2	ug/kg
OC Pesticides	Endrin aldehyde	Other forage fish (no mummichog)	10	0	0				0.18	0.34	ug/kg
OC Pesticides	Endrin aldehyde	Smallmouth bass	3	0	0				0.32	0.42	ug/kg
OC Pesticides	Endrin aldehyde	White catfish	19	2	10.5	0.32	2.2	1.3	0.03	1.3	ug/kg
OC Pesticides	Endrin aldehyde	White perch	22	2	9.1	0.13	0.77	0.45	0.045	0.96	ug/kg
OC Pesticides	Endrin aldehyde	White sucker	5	1	20	0.091	0.091		0.034	0.16	ug/kg
OC Pesticides	Endrin aldehyde	Worms (all)	18	1	5.6	0.29	0.29		0.11	4.1	ug/kg
OC Pesticides	Endrin aldehyde	Worms (estuarine sp.)	5	0	0				0.11	0.22	ug/kg
OC Pesticides	Endrin aldehyde	Worms (freshwater sp.)	13	1	7.7	0.29	0.29		0.14	4.1	ug/kg
OC Pesticides	Endrin ketone	American eel (all)	21	2	9.5	0.36	0.43	0.4	0.11	2.5	ug/kg
OC Pesticides	Endrin ketone	Blue crab	24	0	0				0.063	0.28	ug/kg
OC Pesticides	Endrin ketone	Brown bullhead	6	0	0				0.12	0.35	ug/kg
OC Pesticides	Endrin ketone	Carp	12	1	8.3	0.27	0.27		0.16	2.2	ug/kg
OC Pesticides	Endrin ketone	Channel catfish	11	0	0				0.38	1.1	ug/kg
OC Pesticides	Endrin ketone	Fish (all)	130	14	10.8	0.048	1.2	0.24	0.043	2.5	ug/kg
OC Pesticides	Endrin ketone	Fish (≤ 11 cm)	23	6	26.1	0.048	0.17	0.1	0.043	0.18	ug/kg
OC Pesticides	Endrin ketone	Fish (≤ 13 cm)	26	6	23.1	0.048	0.17	0.1	0.043	0.18	ug/kg
OC Pesticides	Endrin ketone	Fish (≤ 18 cm)	41	8	19.5	0.048	0.17	0.11	0.043	2	ug/kg
OC Pesticides	Endrin ketone	Fish (≤ 20 cm)	43	8	18.6	0.048	0.17	0.11	0.043	2	ug/kg
OC Pesticides	Endrin ketone	Largemouth bass	3	0	0				0.29	0.58	ug/kg
OC Pesticides	Endrin ketone	Mummichog	18	1	5.6	0.048	0.048		0.043	0.18	ug/kg
OC Pesticides	Endrin ketone	Mussel (estuarine)	3	0	0				0.27	0.44	ug/kg
OC Pesticides	Endrin ketone	Mussel (freshwater)	5	0	0				0.14	0.44	ug/kg
OC Pesticides	Endrin ketone	Other forage fish (no mummichog)	10	5	50	0.08	0.17	0.11	0.076	0.18	ug/kg
OC Pesticides	Endrin ketone	Smallmouth bass	3	0	0				0.43	0.58	ug/kg
OC Pesticides	Endrin ketone	White catfish	19	1	5.3	0.062	0.062		0.058	1.2	ug/kg
OC Pesticides	Endrin ketone	White perch	22	4	18.2	0.093	1.2	0.42	0.085	2	ug/kg
OC Pesticides	Endrin ketone	White sucker	5	0	0				0.13	0.44	ug/kg
OC Pesticides	Endrin ketone	Worms (all)	18	0	0				0.81	1.9	ug/kg
OC Pesticides	Endrin ketone	Worms (estuarine sp.)	5	0	0				0.81	1.2	ug/kg
OC Pesticides	Endrin ketone	Worms (freshwater sp.)	13	0	0				0.92	1.9	ug/kg
OC Pesticides	gamma-BHC (Lindar	American eel (all)	21	18	85.7	0.041	0.74	0.29	0.33	1.9	ug/kg
OC Pesticides	gamma-BHC (Lindar	Blue crab	24	5	20.8	0.03	0.084	0.058	0.023	0.45	ug/kg
OC Pesticides	gamma-BHC (Lindar	Brown bullhead	6	3	50	0.12	0.28	0.18	0.065	0.16	ug/kg
OC Pesticides	gamma-BHC (Lindar	Carp	12	8	66.7	0.2	0.76	0.44	0.22	1.4	ug/kg
OC Pesticides	gamma-BHC (Lindar	Channel catfish	11	3	27.3	0.21	0.84	0.45	0.092	0.48	ug/kg
OC Pesticides	gamma-BHC (Lindar	Fish (all)	131	77	58.8	0.019	0.84	0.2	0.033	1.9	ug/kg
OC Pesticides	gamma-BHC (Lindar	Fish (≤ 11 cm)	23	16	69.6	0.019	0.078	0.051	0.033	0.2	ug/kg
OC Pesticides	gamma-BHC (Lindar	Fish (≤ 13 cm)	26	16	61.5	0.019	0.078	0.051	0.033	0.2	ug/kg
OC Pesticides	gamma-BHC (Lindar	Fish (≤ 18 cm)	41	24	58.5	0.019	0.18	0.078	0.033	0.67	ug/kg
OC Pesticides	gamma-BHC (Lindar	Fish (≤ 20 cm)	43	26	60.5	0.019	0.19	0.086	0.033	0.67	ug/kg
OC Pesticides	gamma-BHC (Lindar	Largemouth bass	3	0	0				0.32	0.48	ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
OC Pesticides	gamma-BHC (Lindar	Mummichog	18	14	77.8	0.019	0.069	0.048	0.033	0.041	ug/kg
OC Pesticides	gamma-BHC (Lindar	Mussel (estuarine)	3	0	0				0.25	0.3	ug/kg
OC Pesticides	gamma-BHC (Lindar	Mussel (freshwater)	5	0	0				0.17	0.27	ug/kg
OC Pesticides	gamma-BHC (Lindar	Northern pike	1	0	0				0.64	0.64	ug/kg
OC Pesticides	gamma-BHC (Lindar	Other forage fish (no mummichog)	10	2	20	0.06	0.078	0.069	0.038	0.27	ug/kg
OC Pesticides	gamma-BHC (Lindar	Smallmouth bass	3	0	0				0.32	0.48	ug/kg
OC Pesticides	gamma-BHC (Lindar	White catfish	19	11	57.9	0.056	0.23	0.17	0.051	0.71	ug/kg
OC Pesticides	gamma-BHC (Lindar	White perch	22	15	68.2	0.024	0.24	0.14	0.088	0.67	ug/kg
OC Pesticides	gamma-BHC (Lindar	White sucker	5	3	60	0.067	0.13	0.11	0.043	0.056	ug/kg
OC Pesticides	gamma-BHC (Lindar	Worms (all)	18	0	0				0.073	0.32	ug/kg
OC Pesticides	gamma-BHC (Lindar	Worms (estuarine sp.)	5	0	0				0.073	0.18	ug/kg
OC Pesticides	gamma-BHC (Lindar	Worms (freshwater sp.)	13	0	0				0.081	0.32	ug/kg
OC Pesticides	gamma-Chlordane	American eel (all)	21	21	100	6	26	16			ug/kg
OC Pesticides	gamma-Chlordane	Blue crab	24	24	100	0.18	1.5	0.52			ug/kg
OC Pesticides	gamma-Chlordane	Brown bullhead	6	6	100	10	49	31			ug/kg
OC Pesticides	gamma-Chlordane	Carp	12	12	100	41	130	80			ug/kg
OC Pesticides	gamma-Chlordane	Channel catfish	11	11	100	17	64	37			ug/kg
OC Pesticides	gamma-Chlordane	Fish (all)	131	131	100	1.7	130	27			ug/kg
OC Pesticides	gamma-Chlordane	Fish (≤ 11 cm)	23	23	100	2.3	19	6.9			ug/kg
OC Pesticides	gamma-Chlordane	Fish (≤ 13 cm)	26	26	100	2.3	19	7.4			ug/kg
OC Pesticides	gamma-Chlordane	Fish (≤ 18 cm)	41	41	100	1.7	40	13			ug/kg
OC Pesticides	gamma-Chlordane	Fish (≤ 20 cm)	43	43	100	1.7	40	13			ug/kg
OC Pesticides	gamma-Chlordane	Largemouth bass	3	3	100	4.2	20	12			ug/kg
OC Pesticides	gamma-Chlordane	Mummichog	18	18	100	2.3	12	5.6			ug/kg
OC Pesticides	gamma-Chlordane	Mussel (estuarine)	3	3	100	0.29	2.3	1.3			ug/kg
OC Pesticides	gamma-Chlordane	Mussel (freshwater)	5	5	100	2.7	3.6	3			ug/kg
OC Pesticides	gamma-Chlordane	Northern pike	1	1	100	31	31				ug/kg
OC Pesticides	gamma-Chlordane	Other forage fish (no mummichog)	10	10	100	1.7	27	12			ug/kg
OC Pesticides	gamma-Chlordane	Smallmouth bass	3	3	100	7.3	15	11			ug/kg
OC Pesticides	gamma-Chlordane	White catfish	19	19	100	9.8	69	35			ug/kg
OC Pesticides	gamma-Chlordane	White perch	22	22	100	4.2	69	22			ug/kg
OC Pesticides	gamma-Chlordane	White sucker	5	5	100	14	36	23			ug/kg
OC Pesticides	gamma-Chlordane	Worms (all)	18	16	88.9	0.39	12	3.9	0.68	3.3	ug/kg
OC Pesticides	gamma-Chlordane	Worms (estuarine sp.)	5	4	80	0.39	2.2	1.3	0.68	0.68	ug/kg
OC Pesticides	gamma-Chlordane	Worms (freshwater sp.)	13	12	92.3	2.7	12	4.7	3.3	3.3	ug/kg
OC Pesticides	Heptachlor	American eel (all)	21	11	52.4	0.013	0.13	0.057	0.0064	0.082	ug/kg
OC Pesticides	Heptachlor	Blue crab	24	5	20.8	0.014	0.038	0.025	0.0087	0.12	ug/kg
OC Pesticides	Heptachlor	Brown bullhead	6	2	33.3	0.034	0.066	0.05	0.023	0.087	ug/kg
OC Pesticides	Heptachlor	Carp	12	9	75	0.16	0.33	0.24	0.11	0.28	ug/kg
OC Pesticides	Heptachlor	Channel catfish	11	8	72.7	0.08	0.28	0.19	0.048	0.084	ug/kg
OC Pesticides	Heptachlor	Fish (all)	131	66	50.4	0.013	0.4	0.12	0.0038	0.28	ug/kg
OC Pesticides	Heptachlor	Fish (≤ 11 cm)	23	4	17.4	0.015	0.099	0.058	0.011	0.059	ug/kg
OC Pesticides	Heptachlor	Fish (≤ 13 cm)	26	5	19.2	0.015	0.099	0.05	0.011	0.059	ug/kg
OC Pesticides	Heptachlor	Fish (≤ 18 cm)	41	10	24.4	0.015	0.17	0.083	0.011	0.15	ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
OC Pesticides	Heptachlor	Fish (≤ 20 cm)	43	12	27.9	0.015	0.17	0.095	0.011	0.15	ug/kg
OC Pesticides	Heptachlor	Largemouth bass	3	3	100	0.054	0.4	0.2			ug/kg
OC Pesticides	Heptachlor	Mummichog	18	0	0				0.011	0.028	ug/kg
OC Pesticides	Heptachlor	Mussel (estuarine)	3	0	0				0.016	0.07	ug/kg
OC Pesticides	Heptachlor	Mussel (freshwater)	5	1	20	0.06	0.06		0.039	0.1	ug/kg
OC Pesticides	Heptachlor	Northern pike	1	1	100	0.15	0.15				ug/kg
OC Pesticides	Heptachlor	Other forage fish (no mummichog)	10	6	60	0.017	0.099	0.062	0.026	0.059	ug/kg
OC Pesticides	Heptachlor	Smallmouth bass	3	3	100	0.076	0.13	0.095			ug/kg
OC Pesticides	Heptachlor	White catfish	19	14	73.7	0.025	0.13	0.065	0.0038	0.073	ug/kg
OC Pesticides	Heptachlor	White perch	22	8	36.4	0.015	0.17	0.11	0.021	0.15	ug/kg
OC Pesticides	Heptachlor	White sucker	5	1	20	0.23	0.23		0.018	0.088	ug/kg
OC Pesticides	Heptachlor	Worms (all)	18	1	5.6	0.084	0.084		0.0014	0.015	ug/kg
OC Pesticides	Heptachlor	Worms (estuarine sp.)	5	0	0				0.0043	0.011	ug/kg
OC Pesticides	Heptachlor	Worms (freshwater sp.)	13	1	7.7	0.084	0.084		0.0014	0.015	ug/kg
OC Pesticides	Heptachlor epoxide	American eel (all)	21	21	100	3.1	31	18			ug/kg
OC Pesticides	Heptachlor epoxide	Blue crab	24	24	100	1.8	14	5.3			ug/kg
OC Pesticides	Heptachlor epoxide	Brown bullhead	6	6	100	4.5	13	9.1			ug/kg
OC Pesticides	Heptachlor epoxide	Carp	12	12	100	13	27	19			ug/kg
OC Pesticides	Heptachlor epoxide	Channel catfish	11	11	100	8	30	18			ug/kg
OC Pesticides	Heptachlor epoxide	Fish (all)	131	131	100	0.84	31	11			ug/kg
OC Pesticides	Heptachlor epoxide	Fish (≤ 11 cm)	23	23	100	0.84	8.7	3.1			ug/kg
OC Pesticides	Heptachlor epoxide	Fish (≤ 13 cm)	26	26	100	0.84	8.7	3			ug/kg
OC Pesticides	Heptachlor epoxide	Fish (≤ 18 cm)	41	41	100	0.84	18	5.8			ug/kg
OC Pesticides	Heptachlor epoxide	Fish (≤ 20 cm)	43	43	100	0.84	18	6			ug/kg
OC Pesticides	Heptachlor epoxide	Largemouth bass	3	3	100	7.2	16	11			ug/kg
OC Pesticides	Heptachlor epoxide	Mummichog	18	18	100	0.84	8.7	2.5			ug/kg
OC Pesticides	Heptachlor epoxide	Mussel (estuarine)	3	3	100	0.15	0.43	0.34			ug/kg
OC Pesticides	Heptachlor epoxide	Mussel (freshwater)	5	5	100	0.96	1.3	1.1			ug/kg
OC Pesticides	Heptachlor epoxide	Northern pike	1	1	100	14	14				ug/kg
OC Pesticides	Heptachlor epoxide	Other forage fish (no mummichog)	10	10	100	2.7	6.8	4.6			ug/kg
OC Pesticides	Heptachlor epoxide	Smallmouth bass	3	3	100	5	7.6	6.6			ug/kg
OC Pesticides	Heptachlor epoxide	White catfish	19	19	100	2.7	19	9.1			ug/kg
OC Pesticides	Heptachlor epoxide	White perch	22	22	100	2.8	18	10			ug/kg
OC Pesticides	Heptachlor epoxide	White sucker	5	5	100	5.4	10	7.3			ug/kg
OC Pesticides	Heptachlor epoxide	Worms (all)	18	15	83.3	0.082	0.64	0.32	0.15	0.25	ug/kg
OC Pesticides	Heptachlor epoxide	Worms (estuarine sp.)	5	4	80	0.082	0.23	0.16	0.15	0.15	ug/kg
OC Pesticides	Heptachlor epoxide	Worms (freshwater sp.)	13	11	84.6	0.15	0.64	0.38	0.17	0.25	ug/kg
OC Pesticides	Hexachlorobenzene	American eel (all)	21	21	100	1.4	16	6.5			ug/kg
OC Pesticides	Hexachlorobenzene	Blue crab	24	24	100	1	3.2	2.4			ug/kg
OC Pesticides	Hexachlorobenzene	Brown bullhead	6	5	83.3	0.98	7.2	2.9	5.7	5.7	ug/kg
OC Pesticides	Hexachlorobenzene	Carp	12	11	91.7	2.6	20	12	2.9	2.9	ug/kg
OC Pesticides	Hexachlorobenzene	Channel catfish	11	11	100	1.5	29	5.8			ug/kg
OC Pesticides	Hexachlorobenzene	Fish (all)	131	127	96.9	0.13	29	4.9	0.094	5.7	ug/kg
OC Pesticides	Hexachlorobenzene	Fish (≤ 11 cm)	23	22	95.7	0.13	1.6	0.43	0.094	0.094	ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
OC Pesticides	Hexachlorobenzene	Fish (≤ 13 cm)	26	25	96.2	0.13	2.1	0.57	0.094	0.094	ug/kg
OC Pesticides	Hexachlorobenzene	Fish (≤ 18 cm)	41	40	97.6	0.13	8.3	2.1	0.094	0.094	ug/kg
OC Pesticides	Hexachlorobenzene	Fish (≤ 20 cm)	43	42	97.7	0.13	8.3	2.3	0.094	0.094	ug/kg
OC Pesticides	Hexachlorobenzene	Largemouth bass	3	3	100	0.72	2.3	1.4			ug/kg
OC Pesticides	Hexachlorobenzene	Mummichog	18	17	94.4	0.13	0.36	0.22	0.094	0.094	ug/kg
OC Pesticides	Hexachlorobenzene	Mussel (estuarine)	3	0	0				0.019	0.032	ug/kg
OC Pesticides	Hexachlorobenzene	Mussel (freshwater)	5	5	100	0.13	0.24	0.18			ug/kg
OC Pesticides	Hexachlorobenzene	Northern pike	1	1	100	3.1	3.1				ug/kg
OC Pesticides	Hexachlorobenzene	Other forage fish (no mummichog)	10	10	100	0.5	8.3	1.9			ug/kg
OC Pesticides	Hexachlorobenzene	Smallmouth bass	3	3	100	0.67	2.6	1.7			ug/kg
OC Pesticides	Hexachlorobenzene	White catfish	19	19	100	1.5	15	5.3			ug/kg
OC Pesticides	Hexachlorobenzene	White perch	22	21	95.5	0.9	11	5.7	0.48	0.48	ug/kg
OC Pesticides	Hexachlorobenzene	White sucker	5	5	100	0.6	4.6	2.3			ug/kg
OC Pesticides	Hexachlorobenzene	Worms (all)	18	17	94.4	0.17	2.1	0.46	0.14	0.14	ug/kg
OC Pesticides	Hexachlorobenzene	Worms (estuarine sp.)	5	5	100	0.31	0.84	0.46			ug/kg
OC Pesticides	Hexachlorobenzene	Worms (freshwater sp.)	13	12	92.3	0.17	2.1	0.46	0.14	0.14	ug/kg
OC Pesticides	Methoxychlor	American eel (all)	21	0	0				0.14	6.8	ug/kg
OC Pesticides	Methoxychlor	Blue crab	24	0	0				0.062	1.9	ug/kg
OC Pesticides	Methoxychlor	Brown bullhead	6	0	0				0.099	0.52	ug/kg
OC Pesticides	Methoxychlor	Carp	12	0	0				0.22	2.4	ug/kg
OC Pesticides	Methoxychlor	Channel catfish	11	0	0				0.39	3.9	ug/kg
OC Pesticides	Methoxychlor	Fish (all)	130	1	0.8	0.55	0.55		0.054	6.8	ug/kg
OC Pesticides	Methoxychlor	Fish (≤ 11 cm)	23	0	0				0.28	1	ug/kg
OC Pesticides	Methoxychlor	Fish (≤ 13 cm)	26	0	0				0.28	1	ug/kg
OC Pesticides	Methoxychlor	Fish (≤ 18 cm)	41	0	0				0.086	1	ug/kg
OC Pesticides	Methoxychlor	Fish (≤ 20 cm)	43	0	0				0.086	1.3	ug/kg
OC Pesticides	Methoxychlor	Largemouth bass	3	0	0				0.57	1	ug/kg
OC Pesticides	Methoxychlor	Mummichog	18	0	0				0.28	1	ug/kg
OC Pesticides	Methoxychlor	Mussel (estuarine)	3	0	0				0.58	0.8	ug/kg
OC Pesticides	Methoxychlor	Mussel (freshwater)	5	0	0				0.077	0.64	ug/kg
OC Pesticides	Methoxychlor	Other forage fish (no mummichog)	10	0	0				0.25	0.88	ug/kg
OC Pesticides	Methoxychlor	Smallmouth bass	3	0	0				0.46	0.81	ug/kg
OC Pesticides	Methoxychlor	White catfish	19	0	0				0.054	1.9	ug/kg
OC Pesticides	Methoxychlor	White perch	22	1	4.5	0.55	0.55		0.086	1.3	ug/kg
OC Pesticides	Methoxychlor	White sucker	5	0	0				0.18	0.3	ug/kg
OC Pesticides	Methoxychlor	Worms (all)	18	3	16.7	1.3	5.7	3.1	0.49	2.3	ug/kg
OC Pesticides	Methoxychlor	Worms (estuarine sp.)	5	0	0				0.49	1	ug/kg
OC Pesticides	Methoxychlor	Worms (freshwater sp.)	13	3	23.1	1.3	5.7	3.1	1.2	2.3	ug/kg
OC Pesticides	Octachlorostyrene	Worms (all)	18	3	16.7	0.017	0.17	0.073	0.0015	0.04	ug/kg
OC Pesticides	Octachlorostyrene	Worms (estuarine sp.)	5	0	0				0.0026	0.04	ug/kg
OC Pesticides	Octachlorostyrene	Worms (freshwater sp.)	13	3	23.1	0.017	0.17	0.073	0.0015	0.027	ug/kg
OC Pesticides	Oxychlordane	American eel (all)	21	21	100	5.7	130	45			ug/kg
OC Pesticides	Oxychlordane	Blue crab	24	24	100	10	44	23			ug/kg
OC Pesticides	Oxychlordane	Brown bullhead	6	6	100	4.6	11	8			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
OC Pesticides	Oxychlordane	Carp	12	12	100	10	28	17			ug/kg
OC Pesticides	Oxychlordane	Channel catfish	11	11	100	4.4	46	24			ug/kg
OC Pesticides	Oxychlordane	Fish (all)	131	130	99.2	1.5	130	18	3.3	3.3	ug/kg
OC Pesticides	Oxychlordane	Fish (≤ 11 cm)	23	22	95.7	1.5	12	3.6	3.3	3.3	ug/kg
OC Pesticides	Oxychlordane	Fish (≤ 13 cm)	26	25	96.2	1.5	12	3.5	3.3	3.3	ug/kg
OC Pesticides	Oxychlordane	Fish (≤ 18 cm)	41	40	97.6	1.5	17	5.9	3.3	3.3	ug/kg
OC Pesticides	Oxychlordane	Fish (≤ 20 cm)	43	42	97.7	1.5	17	6.3	3.3	3.3	ug/kg
OC Pesticides	Oxychlordane	Largemouth bass	3	3	100	7.3	45	23			ug/kg
OC Pesticides	Oxychlordane	Mummichog	18	17	94.4	1.5	12	3.5	3.3	3.3	ug/kg
OC Pesticides	Oxychlordane	Mussel (estuarine)	3	2	66.7	0.064	0.089	0.077	0.13	0.13	ug/kg
OC Pesticides	Oxychlordane	Mussel (freshwater)	5	5	100	0.35	0.51	0.4			ug/kg
OC Pesticides	Oxychlordane	Northern pike	1	1	100	19	19				ug/kg
OC Pesticides	Oxychlordane	Other forage fish (no mummichog)	10	10	100	1.6	7.1	4.1			ug/kg
OC Pesticides	Oxychlordane	Smallmouth bass	3	3	100	15	21	19			ug/kg
OC Pesticides	Oxychlordane	White catfish	19	19	100	5.6	57	18			ug/kg
OC Pesticides	Oxychlordane	White perch	22	22	100	2.9	34	11			ug/kg
OC Pesticides	Oxychlordane	White sucker	5	5	100	6.3	9.9	8.1			ug/kg
OC Pesticides	Oxychlordane	Worms (all)	18	10	55.6	0.077	0.28	0.19	0.02	0.21	ug/kg
OC Pesticides	Oxychlordane	Worms (estuarine sp.)	5	2	40	0.077	0.11	0.094	0.095	0.14	ug/kg
OC Pesticides	Oxychlordane	Worms (freshwater sp.)	13	8	61.5	0.095	0.28	0.21	0.02	0.21	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	American eel (all)	21	21	100	3.7	130	65			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Blue crab	24	24	100	9.1	29	17			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Brown bullhead	6	6	100	1.7	100	33			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Carp	12	12	100	7.6	460	210			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Channel catfish	11	11	100	26	180	76			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Fish (all)	131	131	100	1.7	460	71			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Fish (≤ 11 cm)	23	23	100	8.1	37	21			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Fish (≤ 13 cm)	26	26	100	8.1	37	22			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Fish (≤ 18 cm)	41	41	100	5.2	170	38			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Fish (≤ 20 cm)	43	43	100	5.2	170	41			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Largemouth bass	3	3	100	9.4	48	32			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Mummichog	18	18	100	8.1	37	22			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Mussel (estuarine)	3	1	33.3	3	3		1.7	2.7	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Mussel (freshwater)	5	2	40	1.7	2.1	1.9	1.5	2.8	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Northern pike	1	1	100	120	120				ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Other forage fish (no mummichog)	10	10	100	5.2	52	22			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Smallmouth bass	3	3	100	9.7	72	34			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	White catfish	19	19	100	14	270	72			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	White perch	22	22	100	9.1	290	88			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	White sucker	5	5	100	6.3	61	32			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Worms (all)	18	13	72.2	1.8	27	8.4	2.4	3.8	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Worms (estuarine sp.)	5	2	40	1.8	3.6	2.7	2.4	3.8	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Worms (freshwater sp.)	13	11	84.6	2.4	27	9.4	2.9	3	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	American eel (all)	21	21	100	8.1	140	69			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
OC Pesticides	Total 2,4' and 4,4' D	Blue crab	24	24	100	9.2	29	18			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Brown bullhead	6	6	100	6.5	100	40			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Carp	12	12	100	26	460	230			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Channel catfish	11	11	100	26	180	76			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Fish (all)	131	131	100	5.2	460	77			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Fish (≤ 11 cm)	23	23	100	8.1	37	21			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Fish (≤ 13 cm)	26	26	100	8.1	37	22			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Fish (≤ 18 cm)	41	41	100	5.2	170	40			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Fish (≤ 20 cm)	43	43	100	5.2	170	43			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Largemouth bass	3	3	100	9.4	48	33			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Mummichog	18	18	100	8.1	37	22			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Mussel (estuarine)	3	1	33.3	4.3	4.3		1.7	2.7	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Mussel (freshwater)	5	2	40	2.4	3.4	2.9	1.5	2.8	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Northern pike	1	1	100	120	120				ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Other forage fish (no mummichog)	10	10	100	5.2	52	22			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Smallmouth bass	3	3	100	21	73	40			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	White catfish	19	19	100	21	270	87			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	White perch	22	22	100	12	290	92			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	White sucker	5	5	100	16	61	41			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Worms (all)	18	13	72.2	2.5	27	9.4	2.4	3.8	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Worms (estuarine sp.)	5	2	40	2.5	5.1	3.8	2.4	3.8	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Worms (freshwater sp.)	13	11	84.6	3.6	27	10	2.9	3	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	American eel (all)	21	21	100	8.1	140	72			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Blue crab	24	24	100	9.6	29	18			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Brown bullhead	6	6	100	11	100	47			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Carp	12	12	100	44	460	240			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Channel catfish	11	11	100	26	180	76			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Fish (all)	131	131	100	5.2	460	82			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Fish (≤ 11 cm)	23	23	100	8.1	37	21			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Fish (≤ 13 cm)	26	26	100	8.1	37	22			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Fish (≤ 18 cm)	41	41	100	5.2	170	42			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Fish (≤ 20 cm)	43	43	100	5.2	170	45			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Largemouth bass	3	3	100	9.4	48	33			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Mummichog	18	18	100	8.1	37	22			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Mussel (estuarine)	3	1	33.3	5.6	5.6		1.7	2.7	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Mussel (freshwater)	5	2	40	3	4.6	3.8	1.5	2.8	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Northern pike	1	1	100	120	120				ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Other forage fish (no mummichog)	10	10	100	5.2	52	22			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Smallmouth bass	3	3	100	21	73	46			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	White catfish	19	19	100	22	270	100			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	White perch	22	22	100	12	290	96			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	White sucker	5	5	100	23	82	49			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Worms (all)	18	13	72.2	3.2	27	10	2.4	3.8	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Worms (estuarine sp.)	5	2	40	3.2	6.5	4.9	2.4	3.8	ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
OC Pesticides	Total 2,4' and 4,4' D	Worms (freshwater sp.)	13	11	84.6	4.5	27	11	2.9	3	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	American eel (all)	21	21	100	20	340	140			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Blue crab	24	24	100	20	70	44			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Brown bullhead	6	6	100	18	98	58			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Carp	12	12	100	100	650	290			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Channel catfish	11	11	100	21	290	130			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Fish (all)	131	131	100	15	650	120			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Fish (≤ 11 cm)	23	23	100	15	61	32			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Fish (≤ 13 cm)	26	26	100	15	61	33			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Fish (≤ 18 cm)	41	41	100	15	160	54			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Fish (≤ 20 cm)	43	43	100	15	160	57			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Largemouth bass	3	3	100	59	100	80			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Mummichog	18	18	100	17	61	34			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Mussel (estuarine)	3	2	66.7	2.3	3.9	3.1	2.5	2.5	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Mussel (freshwater)	5	5	100	2.6	4	3.4			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Northern pike	1	1	100	140	140				ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Other forage fish (no mummichog)	10	10	100	15	83	31			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Smallmouth bass	3	3	100	74	150	110			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	White catfish	19	19	100	23	600	180			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	White perch	22	22	100	23	200	100			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	White sucker	5	5	100	37	130	74			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Worms (all)	18	12	66.7	3.1	26	7.8	2.1	4.3	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Worms (estuarine sp.)	5	0	0				2.1	3.2	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Worms (freshwater sp.)	13	12	92.3	3.1	26	7.8	4.3	4.3	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	American eel (all)	21	21	100	20	350	140			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Blue crab	24	24	100	20	70	45			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Brown bullhead	6	6	100	18	98	58			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Carp	12	12	100	100	650	290			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Channel catfish	11	11	100	21	290	130			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Fish (all)	131	131	100	15	650	120			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Fish (≤ 11 cm)	23	23	100	15	61	32			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Fish (≤ 13 cm)	26	26	100	15	61	33			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Fish (≤ 18 cm)	41	41	100	15	160	54			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Fish (≤ 20 cm)	43	43	100	15	160	57			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Largemouth bass	3	3	100	60	100	81			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Mummichog	18	18	100	17	61	34			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Mussel (estuarine)	3	2	66.7	2.9	4.7	3.8	2.5	2.5	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Mussel (freshwater)	5	5	100	3.3	4.7	4.2			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Northern pike	1	1	100	140	140				ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Other forage fish (no mummichog)	10	10	100	15	83	31			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Smallmouth bass	3	3	100	74	150	110			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	White catfish	19	19	100	58	600	190			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	White perch	22	22	100	24	200	100			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	White sucker	5	5	100	38	130	75			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
OC Pesticides	Total 2,4' and 4,4' D	Worms (all)	18	12	66.7	4.3	26	8.8	2.1	4.3	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Worms (estuarine sp.)	5	0	0				2.1	3.2	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Worms (freshwater sp.)	13	12	92.3	4.3	26	8.8	4.3	4.3	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	American eel (all)	21	21	100	20	350	150			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Blue crab	24	24	100	21	70	45			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Brown bullhead	6	6	100	19	98	58			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Carp	12	12	100	100	650	290			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Channel catfish	11	11	100	22	290	130			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Fish (all)	131	131	100	15	650	130			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Fish (≤ 11 cm)	23	23	100	15	61	33			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Fish (≤ 13 cm)	26	26	100	15	61	33			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Fish (≤ 18 cm)	41	41	100	15	160	54			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Fish (≤ 20 cm)	43	43	100	15	160	57			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Largemouth bass	3	3	100	62	100	84			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Mummichog	18	18	100	17	61	35			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Mussel (estuarine)	3	2	66.7	3.5	5.4	4.5	2.5	2.5	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Mussel (freshwater)	5	5	100	3.9	5.5	4.9			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Northern pike	1	1	100	140	140				ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Other forage fish (no mummichog)	10	10	100	15	83	31			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Smallmouth bass	3	3	100	81	150	120			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	White catfish	19	19	100	58	600	200			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	White perch	22	22	100	25	200	100			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	White sucker	5	5	100	38	130	75			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Worms (all)	18	12	66.7	5.5	26	9.8	2.1	4.3	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Worms (estuarine sp.)	5	0	0				2.1	3.2	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Worms (freshwater sp.)	13	12	92.3	5.5	26	9.8	4.3	4.3	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	American eel (all)	21	20	95.2	3.4	37	13	200	200	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Blue crab	24	20	83.3	0.29	12	2.1	0.42	1.9	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Brown bullhead	6	2	33.3	2.8	5.5	4.2	2.2	9.8	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Carp	12	9	75	1.5	43	10	2.3	5.2	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Channel catfish	11	11	100	2.5	17	9.9			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Fish (all)	131	113	86.3	0.22	43	8.7	0.75	200	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Fish (≤ 11 cm)	23	17	73.9	0.22	2.9	1.7	0.75	2.4	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Fish (≤ 13 cm)	26	20	76.9	0.22	2.9	1.8	0.75	2.4	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Fish (≤ 18 cm)	41	34	82.9	0.22	20	5	0.75	7.3	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Fish (≤ 20 cm)	43	34	79.1	0.22	20	5	0.75	8.6	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Largemouth bass	3	3	100	3.9	32	16			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Mummichog	18	12	66.7	0.65	2.8	1.7	0.75	2.4	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Mussel (estuarine)	3	0	0				1.7	2.7	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Mussel (freshwater)	5	0	0				0.97	2.7	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Northern pike	1	1	100	18	18				ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Other forage fish (no mummichog)	10	10	100	0.22	5	2.4			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Smallmouth bass	3	3	100	6.8	9.6	8.1			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	White catfish	19	18	94.7	2.7	33	9.6	2	2	ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
OC Pesticides	Total 2,4' and 4,4' D	White perch	22	19	86.4	1.5	31	9.8	7.3	8.6	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	White sucker	5	5	100	2.8	8.6	6.3			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Worms (all)	18	0	0				3.1	5.5	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Worms (estuarine sp.)	5	0	0				3.1	4.6	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Worms (freshwater sp.)	13	0	0				3.2	5.5	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	American eel (all)	21	20	95.2	3.6	39	14	200	200	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Blue crab	24	20	83.3	0.32	12	2.4	0.42	1.9	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Brown bullhead	6	2	33.3	3.1	5.5	4.3	2.2	9.8	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Carp	12	9	75	1.8	43	11	2.3	5.2	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Channel catfish	11	11	100	3.1	19	11			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Fish (all)	131	113	86.3	0.32	43	9.6	0.75	200	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Fish (≤ 11 cm)	23	17	73.9	0.32	3.3	2.1	0.75	2.4	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Fish (≤ 13 cm)	26	20	76.9	0.32	3.3	2.1	0.75	2.4	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Fish (≤ 18 cm)	41	34	82.9	0.32	20	5.5	0.75	7.3	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Fish (≤ 20 cm)	43	34	79.1	0.32	20	5.5	0.75	8.6	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Largemouth bass	3	3	100	4.8	33	17			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Mummichog	18	12	66.7	0.94	3.3	2.2	0.75	2.4	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Mussel (estuarine)	3	0	0				1.7	2.7	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Mussel (freshwater)	5	0	0				0.97	2.7	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Northern pike	1	1	100	18	18				ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Other forage fish (no mummichog)	10	10	100	0.32	5	2.5			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Smallmouth bass	3	3	100	8	10	9.2			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	White catfish	19	18	94.7	2.9	33	11	2	2	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	White perch	22	19	86.4	1.5	31	11	7.3	8.6	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	White sucker	5	5	100	6.1	9.7	8			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Worms (all)	18	0	0				3.1	5.5	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Worms (estuarine sp.)	5	0	0				3.1	4.6	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Worms (freshwater sp.)	13	0	0				3.2	5.5	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	American eel (all)	21	20	95.2	3.8	41	15	200	200	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Blue crab	24	20	83.3	0.36	12	2.7	0.42	1.9	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Brown bullhead	6	2	33.3	3.4	5.5	4.5	2.2	9.8	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Carp	12	9	75	2.2	43	12	2.3	5.2	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Channel catfish	11	11	100	3.8	23	13			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Fish (all)	131	113	86.3	0.41	43	10	0.75	200	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Fish (≤ 11 cm)	23	17	73.9	0.41	4.1	2.4	0.75	2.4	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Fish (≤ 13 cm)	26	20	76.9	0.41	4.1	2.4	0.75	2.4	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Fish (≤ 18 cm)	41	34	82.9	0.41	20	6	0.75	7.3	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Fish (≤ 20 cm)	43	34	79.1	0.41	20	6	0.75	8.6	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Largemouth bass	3	3	100	5.7	35	18			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Mummichog	18	12	66.7	1.2	4.1	2.6	0.75	2.4	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Mussel (estuarine)	3	0	0				1.7	2.7	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Mussel (freshwater)	5	0	0				0.97	2.7	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Northern pike	1	1	100	18	18				ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Other forage fish (no mummichog)	10	10	100	0.41	5	2.5			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
OC Pesticides	Total 2,4' and 4,4' D	Smallmouth bass	3	3	100	9.2	13	11			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	White catfish	19	18	94.7	3.2	33	11	2	2	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	White perch	22	19	86.4	1.5	31	11	7.3	8.6	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	White sucker	5	5	100	7	13	10			ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Worms (all)	18	0	0				3.1	5.5	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Worms (estuarine sp.)	5	0	0				3.1	4.6	ug/kg
OC Pesticides	Total 2,4' and 4,4' D	Worms (freshwater sp.)	13	0	0				3.2	5.5	ug/kg
OC Pesticides	Total 4,4' DDT	American eel (all)	21	21	100	31	470	220			ug/kg
OC Pesticides	Total 4,4' DDT	Blue crab	24	24	100	30	100	62			ug/kg
OC Pesticides	Total 4,4' DDT	Brown bullhead	6	6	100	18	180	83			ug/kg
OC Pesticides	Total 4,4' DDT	Carp	12	12	100	100	920	420			ug/kg
OC Pesticides	Total 4,4' DDT	Channel catfish	11	11	100	39	450	200			ug/kg
OC Pesticides	Total 4,4' DDT	Fish (all)	131	131	100	18	920	180			ug/kg
OC Pesticides	Total 4,4' DDT	Fish (≤ 11 cm)	23	23	100	25	97	52			ug/kg
OC Pesticides	Total 4,4' DDT	Fish (≤ 13 cm)	26	26	100	25	97	52			ug/kg
OC Pesticides	Total 4,4' DDT	Fish (≤ 18 cm)	41	41	100	21	260	82			ug/kg
OC Pesticides	Total 4,4' DDT	Fish (≤ 20 cm)	43	43	100	21	260	87			ug/kg
OC Pesticides	Total 4,4' DDT	Largemouth bass	3	3	100	72	150	120			ug/kg
OC Pesticides	Total 4,4' DDT	Mummichog	18	18	100	25	97	55			ug/kg
OC Pesticides	Total 4,4' DDT	Mussel (estuarine)	3	2	66.7	2.3	6.9	4.6	2.7	2.7	ug/kg
OC Pesticides	Total 4,4' DDT	Mussel (freshwater)	5	5	100	2.6	5.9	4.2			ug/kg
OC Pesticides	Total 4,4' DDT	Northern pike	1	1	100	230	230				ug/kg
OC Pesticides	Total 4,4' DDT	Other forage fish (no mummichog)	10	10	100	21	120	49			ug/kg
OC Pesticides	Total 4,4' DDT	Smallmouth bass	3	3	100	98	210	140			ug/kg
OC Pesticides	Total 4,4' DDT	White catfish	19	19	100	26	840	250			ug/kg
OC Pesticides	Total 4,4' DDT	White perch	22	22	100	34	400	160			ug/kg
OC Pesticides	Total 4,4' DDT	White sucker	5	5	100	59	130	99			ug/kg
OC Pesticides	Total 4,4' DDT	Worms (all)	18	15	83.3	1.8	27	11	3.4	3.8	ug/kg
OC Pesticides	Total 4,4' DDT	Worms (estuarine sp.)	5	2	40	1.8	3.6	2.7	3.4	3.8	ug/kg
OC Pesticides	Total 4,4' DDT	Worms (freshwater sp.)	13	13	100	3.6	27	13			ug/kg
OC Pesticides	Total 4,4' DDT (ND=	American eel (all)	21	21	100	31	480	220			ug/kg
OC Pesticides	Total 4,4' DDT (ND=	Blue crab	24	24	100	30	100	63			ug/kg
OC Pesticides	Total 4,4' DDT (ND=	Brown bullhead	6	6	100	24	180	92			ug/kg
OC Pesticides	Total 4,4' DDT (ND=	Carp	12	12	100	120	920	430			ug/kg
OC Pesticides	Total 4,4' DDT (ND=	Channel catfish	11	11	100	41	450	200			ug/kg
OC Pesticides	Total 4,4' DDT (ND=	Fish (all)	131	131	100	21	920	190			ug/kg
OC Pesticides	Total 4,4' DDT (ND=	Fish (≤ 11 cm)	23	23	100	25	97	52			ug/kg
OC Pesticides	Total 4,4' DDT (ND=	Fish (≤ 13 cm)	26	26	100	25	97	52			ug/kg
OC Pesticides	Total 4,4' DDT (ND=	Fish (≤ 18 cm)	41	41	100	21	260	84			ug/kg
OC Pesticides	Total 4,4' DDT (ND=	Fish (≤ 20 cm)	43	43	100	21	260	89			ug/kg
OC Pesticides	Total 4,4' DDT (ND=	Largemouth bass	3	3	100	73	150	120			ug/kg
OC Pesticides	Total 4,4' DDT (ND=	Mummichog	18	18	100	25	97	55			ug/kg
OC Pesticides	Total 4,4' DDT (ND=	Mussel (estuarine)	3	2	66.7	4	7.7	5.9	2.7	2.7	ug/kg
OC Pesticides	Total 4,4' DDT (ND=	Mussel (freshwater)	5	5	100	4	6.9	5.8			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
OC Pesticides	Total 4,4' DDT (ND=	Northern pike	1	1	100	230	230				ug/kg
OC Pesticides	Total 4,4' DDT (ND=	Other forage fish (no mummichog)	10	10	100	21	120	49			ug/kg
OC Pesticides	Total 4,4' DDT (ND=	Smallmouth bass	3	3	100	98	210	150			ug/kg
OC Pesticides	Total 4,4' DDT (ND=	White catfish	19	19	100	79	840	260			ug/kg
OC Pesticides	Total 4,4' DDT (ND=	White perch	22	22	100	34	400	170			ug/kg
OC Pesticides	Total 4,4' DDT (ND=	White sucker	5	5	100	61	170	110			ug/kg
OC Pesticides	Total 4,4' DDT (ND=	Worms (all)	18	15	83.3	4.2	28	13	3.4	3.8	ug/kg
OC Pesticides	Total 4,4' DDT (ND=	Worms (estuarine sp.)	5	2	40	4.2	5.7	5	3.4	3.8	ug/kg
OC Pesticides	Total 4,4' DDT (ND=	Worms (freshwater sp.)	13	13	100	6.9	28	15			ug/kg
OC Pesticides	Total 4,4' DDT (ND=	American eel (all)	21	21	100	31	490	230			ug/kg
OC Pesticides	Total 4,4' DDT (ND=	Blue crab	24	24	100	31	100	64			ug/kg
OC Pesticides	Total 4,4' DDT (ND=	Brown bullhead	6	6	100	30	180	100			ug/kg
OC Pesticides	Total 4,4' DDT (ND=	Carp	12	12	100	140	920	450			ug/kg
OC Pesticides	Total 4,4' DDT (ND=	Channel catfish	11	11	100	44	450	200			ug/kg
OC Pesticides	Total 4,4' DDT (ND=	Fish (all)	131	131	100	21	920	190			ug/kg
OC Pesticides	Total 4,4' DDT (ND=	Fish (≤ 11 cm)	23	23	100	25	97	52			ug/kg
OC Pesticides	Total 4,4' DDT (ND=	Fish (≤ 13 cm)	26	26	100	25	97	52			ug/kg
OC Pesticides	Total 4,4' DDT (ND=	Fish (≤ 18 cm)	41	41	100	21	260	86			ug/kg
OC Pesticides	Total 4,4' DDT (ND=	Fish (≤ 20 cm)	43	43	100	21	260	91			ug/kg
OC Pesticides	Total 4,4' DDT (ND=	Largemouth bass	3	3	100	73	150	120			ug/kg
OC Pesticides	Total 4,4' DDT (ND=	Mummichog	18	18	100	25	97	55			ug/kg
OC Pesticides	Total 4,4' DDT (ND=	Mussel (estuarine)	3	2	66.7	5.6	8.5	7.1	2.7	2.7	ug/kg
OC Pesticides	Total 4,4' DDT (ND=	Mussel (freshwater)	5	5	100	5.4	8.9	7.2			ug/kg
OC Pesticides	Total 4,4' DDT (ND=	Northern pike	1	1	100	230	230				ug/kg
OC Pesticides	Total 4,4' DDT (ND=	Other forage fish (no mummichog)	10	10	100	21	120	49			ug/kg
OC Pesticides	Total 4,4' DDT (ND=	Smallmouth bass	3	3	100	98	210	150			ug/kg
OC Pesticides	Total 4,4' DDT (ND=	White catfish	19	19	100	79	840	270			ug/kg
OC Pesticides	Total 4,4' DDT (ND=	White perch	22	22	100	34	400	170			ug/kg
OC Pesticides	Total 4,4' DDT (ND=	White sucker	5	5	100	62	200	120			ug/kg
OC Pesticides	Total 4,4' DDT (ND=	Worms (all)	18	15	83.3	6.5	30	16	3.4	3.8	ug/kg
OC Pesticides	Total 4,4' DDT (ND=	Worms (estuarine sp.)	5	2	40	6.5	7.8	7.2	3.4	3.8	ug/kg
OC Pesticides	Total 4,4' DDT (ND=	Worms (freshwater sp.)	13	13	100	9.4	30	17			ug/kg
OC Pesticides	Total Chlordane	American eel (all)	21	21	100	43	290	150			ug/kg
OC Pesticides	Total Chlordane	Blue crab	24	24	100	14	61	32			ug/kg
OC Pesticides	Total Chlordane	Brown bullhead	6	6	100	65	220	140			ug/kg
OC Pesticides	Total Chlordane	Carp	12	12	100	200	560	360			ug/kg
OC Pesticides	Total Chlordane	Channel catfish	11	11	100	84	350	200			ug/kg
OC Pesticides	Total Chlordane	Fish (all)	131	131	100	15	560	150			ug/kg
OC Pesticides	Total Chlordane	Fish (≤ 11 cm)	23	23	100	15	87	41			ug/kg
OC Pesticides	Total Chlordane	Fish (≤ 13 cm)	26	26	100	15	87	42			ug/kg
OC Pesticides	Total Chlordane	Fish (≤ 18 cm)	41	41	100	15	220	74			ug/kg
OC Pesticides	Total Chlordane	Fish (≤ 20 cm)	43	43	100	15	220	79			ug/kg
OC Pesticides	Total Chlordane	Largemouth bass	3	3	100	35	220	120			ug/kg
OC Pesticides	Total Chlordane	Mummichog	18	18	100	15	87	36			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
OC Pesticides	Total Chlordane	Mussel (estuarine)	3	3	100	1.6	8.3	4.6			ug/kg
OC Pesticides	Total Chlordane	Mussel (freshwater)	5	5	100	11	14	12			ug/kg
OC Pesticides	Total Chlordane	Northern pike	1	1	100	180	180				ug/kg
OC Pesticides	Total Chlordane	Other forage fish (no mummichog)	10	10	100	23	120	61			ug/kg
OC Pesticides	Total Chlordane	Smallmouth bass	3	3	100	67	120	96			ug/kg
OC Pesticides	Total Chlordane	White catfish	19	19	100	48	470	190			ug/kg
OC Pesticides	Total Chlordane	White perch	22	22	100	36	480	140			ug/kg
OC Pesticides	Total Chlordane	White sucker	5	5	100	69	150	110			ug/kg
OC Pesticides	Total Chlordane	Worms (all)	18	18	100	0.87	40	12			ug/kg
OC Pesticides	Total Chlordane	Worms (estuarine sp.)	5	5	100	0.87	6.6	4.2			ug/kg
OC Pesticides	Total Chlordane	Worms (freshwater sp.)	13	13	100	7.3	40	15			ug/kg
OC Pesticides	Total Chlordane (ND	American eel (all)	21	21	100	43	290	150			ug/kg
OC Pesticides	Total Chlordane (ND	Blue crab	24	24	100	14	61	33			ug/kg
OC Pesticides	Total Chlordane (ND	Brown bullhead	6	6	100	65	220	140			ug/kg
OC Pesticides	Total Chlordane (ND	Carp	12	12	100	200	560	360			ug/kg
OC Pesticides	Total Chlordane (ND	Channel catfish	11	11	100	84	350	200			ug/kg
OC Pesticides	Total Chlordane (ND	Fish (all)	131	131	100	15	560	150			ug/kg
OC Pesticides	Total Chlordane (ND	Fish (≤ 11 cm)	23	23	100	15	87	41			ug/kg
OC Pesticides	Total Chlordane (ND	Fish (≤ 13 cm)	26	26	100	15	87	42			ug/kg
OC Pesticides	Total Chlordane (ND	Fish (≤ 18 cm)	41	41	100	15	220	75			ug/kg
OC Pesticides	Total Chlordane (ND	Fish (≤ 20 cm)	43	43	100	15	220	79			ug/kg
OC Pesticides	Total Chlordane (ND	Largemouth bass	3	3	100	35	220	120			ug/kg
OC Pesticides	Total Chlordane (ND	Mummichog	18	18	100	15	87	36			ug/kg
OC Pesticides	Total Chlordane (ND	Mussel (estuarine)	3	3	100	1.7	8.3	4.7			ug/kg
OC Pesticides	Total Chlordane (ND	Mussel (freshwater)	5	5	100	11	14	12			ug/kg
OC Pesticides	Total Chlordane (ND	Northern pike	1	1	100	180	180				ug/kg
OC Pesticides	Total Chlordane (ND	Other forage fish (no mummichog)	10	10	100	23	120	61			ug/kg
OC Pesticides	Total Chlordane (ND	Smallmouth bass	3	3	100	67	120	96			ug/kg
OC Pesticides	Total Chlordane (ND	White catfish	19	19	100	56	470	190			ug/kg
OC Pesticides	Total Chlordane (ND	White perch	22	22	100	36	480	140			ug/kg
OC Pesticides	Total Chlordane (ND	White sucker	5	5	100	75	150	110			ug/kg
OC Pesticides	Total Chlordane (ND	Worms (all)	18	18	100	1.3	40	13			ug/kg
OC Pesticides	Total Chlordane (ND	Worms (estuarine sp.)	5	5	100	1.3	6.9	4.5			ug/kg
OC Pesticides	Total Chlordane (ND	Worms (freshwater sp.)	13	13	100	8.3	40	16			ug/kg
OC Pesticides	Total Chlordane (ND	American eel (all)	21	21	100	43	290	150			ug/kg
OC Pesticides	Total Chlordane (ND	Blue crab	24	24	100	14	62	33			ug/kg
OC Pesticides	Total Chlordane (ND	Brown bullhead	6	6	100	65	220	140			ug/kg
OC Pesticides	Total Chlordane (ND	Carp	12	12	100	200	560	360			ug/kg
OC Pesticides	Total Chlordane (ND	Channel catfish	11	11	100	85	350	200			ug/kg
OC Pesticides	Total Chlordane (ND	Fish (all)	131	131	100	15	560	150			ug/kg
OC Pesticides	Total Chlordane (ND	Fish (≤ 11 cm)	23	23	100	15	87	41			ug/kg
OC Pesticides	Total Chlordane (ND	Fish (≤ 13 cm)	26	26	100	15	87	43			ug/kg
OC Pesticides	Total Chlordane (ND	Fish (≤ 18 cm)	41	41	100	15	220	75			ug/kg
OC Pesticides	Total Chlordane (ND	Fish (≤ 20 cm)	43	43	100	15	220	79			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
OC Pesticides	Total Chlordane (ND	Largemouth bass	3	3	100	35	220	120			ug/kg
OC Pesticides	Total Chlordane (ND	Mummichog	18	18	100	15	87	36			ug/kg
OC Pesticides	Total Chlordane (ND	Mussel (estuarine)	3	3	100	1.8	8.3	4.8			ug/kg
OC Pesticides	Total Chlordane (ND	Mussel (freshwater)	5	5	100	11	14	12			ug/kg
OC Pesticides	Total Chlordane (ND	Northern pike	1	1	100	180	180				ug/kg
OC Pesticides	Total Chlordane (ND	Other forage fish (no mummichog)	10	10	100	23	120	61			ug/kg
OC Pesticides	Total Chlordane (ND	Smallmouth bass	3	3	100	67	120	96			ug/kg
OC Pesticides	Total Chlordane (ND	White catfish	19	19	100	63	470	200			ug/kg
OC Pesticides	Total Chlordane (ND	White perch	22	22	100	36	480	140			ug/kg
OC Pesticides	Total Chlordane (ND	White sucker	5	5	100	82	150	110			ug/kg
OC Pesticides	Total Chlordane (ND	Worms (all)	18	18	100	1.6	40	13			ug/kg
OC Pesticides	Total Chlordane (ND	Worms (estuarine sp.)	5	5	100	1.6	7.2	4.7			ug/kg
OC Pesticides	Total Chlordane (ND	Worms (freshwater sp.)	13	13	100	9.3	40	16			ug/kg
OC Pesticides	Total DDx	American eel (all)	21	21	100	32	470	220			ug/kg
OC Pesticides	Total DDx	Blue crab	24	24	100	30	100	62			ug/kg
OC Pesticides	Total DDx	Brown bullhead	6	6	100	20	200	93			ug/kg
OC Pesticides	Total DDx	Carp	12	12	100	110	1100	510			ug/kg
OC Pesticides	Total DDx	Channel catfish	11	11	100	48	490	220			ug/kg
OC Pesticides	Total DDx	Fish (all)	131	131	100	20	1100	200			ug/kg
OC Pesticides	Total DDx	Fish (≤ 11 cm)	23	23	100	26	100	55			ug/kg
OC Pesticides	Total DDx	Fish (≤ 13 cm)	26	26	100	26	100	56			ug/kg
OC Pesticides	Total DDx	Fish (≤ 18 cm)	41	41	100	22	340	95			ug/kg
OC Pesticides	Total DDx	Fish (≤ 20 cm)	43	43	100	22	340	100			ug/kg
OC Pesticides	Total DDx	Largemouth bass	3	3	100	72	160	130			ug/kg
OC Pesticides	Total DDx	Mummichog	18	18	100	26	100	57			ug/kg
OC Pesticides	Total DDx	Mussel (estuarine)	3	2	66.7	2.3	6.9	4.6	2.7	2.7	ug/kg
OC Pesticides	Total DDx	Mussel (freshwater)	5	5	100	2.6	5.9	4.2			ug/kg
OC Pesticides	Total DDx	Northern pike	1	1	100	280	280				ug/kg
OC Pesticides	Total DDx	Other forage fish (no mummichog)	10	10	100	22	140	55			ug/kg
OC Pesticides	Total DDx	Smallmouth bass	3	3	100	100	230	150			ug/kg
OC Pesticides	Total DDx	White catfish	19	19	100	43	870	250			ug/kg
OC Pesticides	Total DDx	White perch	22	22	100	38	490	200			ug/kg
OC Pesticides	Total DDx	White sucker	5	5	100	63	150	110			ug/kg
OC Pesticides	Total DDx	Worms (all)	18	15	83.3	1.8	33	13	3.8	4.6	ug/kg
OC Pesticides	Total DDx	Worms (estuarine sp.)	5	2	40	1.8	3.6	2.7	3.8	4.6	ug/kg
OC Pesticides	Total DDx	Worms (freshwater sp.)	13	13	100	3.6	33	15			ug/kg
OC Pesticides	Total DDx (ND=0.5D	American eel (all)	21	21	100	32	590	230			ug/kg
OC Pesticides	Total DDx (ND=0.5D	Blue crab	24	24	100	32	100	65			ug/kg
OC Pesticides	Total DDx (ND=0.5D	Brown bullhead	6	6	100	26	200	100			ug/kg
OC Pesticides	Total DDx (ND=0.5D	Carp	12	12	100	130	1100	530			ug/kg
OC Pesticides	Total DDx (ND=0.5D	Channel catfish	11	11	100	52	490	220			ug/kg
OC Pesticides	Total DDx (ND=0.5D	Fish (all)	131	131	100	22	1100	210			ug/kg
OC Pesticides	Total DDx (ND=0.5D	Fish (≤ 11 cm)	23	23	100	27	100	56			ug/kg
OC Pesticides	Total DDx (ND=0.5D	Fish (≤ 13 cm)	26	26	100	27	100	56			ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
OC Pesticides	Total DDx (ND=0.5D	Fish (≤ 18 cm)	41	41	100	22	340	98			ug/kg
OC Pesticides	Total DDx (ND=0.5D	Fish (≤ 20 cm)	43	43	100	22	340	110			ug/kg
OC Pesticides	Total DDx (ND=0.5D	Largemouth bass	3	3	100	74	160	130			ug/kg
OC Pesticides	Total DDx (ND=0.5D	Mummichog	18	18	100	27	100	58			ug/kg
OC Pesticides	Total DDx (ND=0.5D	Mussel (estuarine)	3	2	66.7	6.1	11	8.6	2.7	2.7	ug/kg
OC Pesticides	Total DDx (ND=0.5D	Mussel (freshwater)	5	5	100	6.1	10	8.3			ug/kg
OC Pesticides	Total DDx (ND=0.5D	Northern pike	1	1	100	280	280				ug/kg
OC Pesticides	Total DDx (ND=0.5D	Other forage fish (no mummichog)	10	10	100	22	140	55			ug/kg
OC Pesticides	Total DDx (ND=0.5D	Smallmouth bass	3	3	100	110	240	170			ug/kg
OC Pesticides	Total DDx (ND=0.5D	White catfish	19	19	100	82	870	280			ug/kg
OC Pesticides	Total DDx (ND=0.5D	White perch	22	22	100	41	490	210			ug/kg
OC Pesticides	Total DDx (ND=0.5D	White sucker	5	5	100	66	190	120			ug/kg
OC Pesticides	Total DDx (ND=0.5D	Worms (all)	18	15	83.3	7.5	39	20	3.8	4.6	ug/kg
OC Pesticides	Total DDx (ND=0.5D	Worms (estuarine sp.)	5	2	40	7.5	9.9	8.7	3.8	4.6	ug/kg
OC Pesticides	Total DDx (ND=0.5D	Worms (freshwater sp.)	13	13	100	11	39	22			ug/kg
OC Pesticides	Total DDx (ND=DL)	American eel (all)	21	21	100	32	710	240			ug/kg
OC Pesticides	Total DDx (ND=DL)	Blue crab	24	24	100	34	100	67			ug/kg
OC Pesticides	Total DDx (ND=DL)	Brown bullhead	6	6	100	33	200	110			ug/kg
OC Pesticides	Total DDx (ND=DL)	Carp	12	12	100	150	1100	540			ug/kg
OC Pesticides	Total DDx (ND=DL)	Channel catfish	11	11	100	56	490	220			ug/kg
OC Pesticides	Total DDx (ND=DL)	Fish (all)	131	131	100	23	1100	220			ug/kg
OC Pesticides	Total DDx (ND=DL)	Fish (≤ 11 cm)	23	23	100	27	100	56			ug/kg
OC Pesticides	Total DDx (ND=DL)	Fish (≤ 13 cm)	26	26	100	27	100	57			ug/kg
OC Pesticides	Total DDx (ND=DL)	Fish (≤ 18 cm)	41	41	100	23	340	100			ug/kg
OC Pesticides	Total DDx (ND=DL)	Fish (≤ 20 cm)	43	43	100	23	340	110			ug/kg
OC Pesticides	Total DDx (ND=DL)	Largemouth bass	3	3	100	75	160	130			ug/kg
OC Pesticides	Total DDx (ND=DL)	Mummichog	18	18	100	27	100	59			ug/kg
OC Pesticides	Total DDx (ND=DL)	Mussel (estuarine)	3	2	66.7	9.9	14	12	2.7	2.7	ug/kg
OC Pesticides	Total DDx (ND=DL)	Mussel (freshwater)	5	5	100	9.6	16	13			ug/kg
OC Pesticides	Total DDx (ND=DL)	Northern pike	1	1	100	280	280				ug/kg
OC Pesticides	Total DDx (ND=DL)	Other forage fish (no mummichog)	10	10	100	23	140	56			ug/kg
OC Pesticides	Total DDx (ND=DL)	Smallmouth bass	3	3	100	110	240	170			ug/kg
OC Pesticides	Total DDx (ND=DL)	White catfish	19	19	100	91	870	310			ug/kg
OC Pesticides	Total DDx (ND=DL)	White perch	22	22	100	43	490	210			ug/kg
OC Pesticides	Total DDx (ND=DL)	White sucker	5	5	100	69	230	140			ug/kg
OC Pesticides	Total DDx (ND=DL)	Worms (all)	18	15	83.3	13	44	26	3.8	4.6	ug/kg
OC Pesticides	Total DDx (ND=DL)	Worms (estuarine sp.)	5	2	40	13	16	15	3.8	4.6	ug/kg
OC Pesticides	Total DDx (ND=DL)	Worms (freshwater sp.)	13	13	100	18	44	28			ug/kg
OC Pesticides	Total Endosulfan	American eel (all)	21	13	61.9	0.35	1.5	0.88	0.31	2.9	ug/kg
OC Pesticides	Total Endosulfan	Blue crab	24	15	62.5	0.042	13	2.1	0.4	8.1	ug/kg
OC Pesticides	Total Endosulfan	Brown bullhead	6	4	66.7	0.55	1.7	1.3	0.91	1	ug/kg
OC Pesticides	Total Endosulfan	Carp	12	9	75	0.46	8.2	1.9	1.5	2.5	ug/kg
OC Pesticides	Total Endosulfan	Channel catfish	11	5	45.5	0.49	2	1.1	1.1	3.9	ug/kg
OC Pesticides	Total Endosulfan	Fish (all)	131	79	60.3	0.073	8.2	0.82	0.28	3.9	ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
OC Pesticides	Total Endosulfan	Fish (≤ 11 cm)	23	15	65.2	0.073	0.41	0.19	0.48	1.3	ug/kg
OC Pesticides	Total Endosulfan	Fish (≤ 13 cm)	26	18	69.2	0.073	0.41	0.19	0.48	1.3	ug/kg
OC Pesticides	Total Endosulfan	Fish (≤ 18 cm)	41	27	65.9	0.073	1.4	0.37	0.48	3.2	ug/kg
OC Pesticides	Total Endosulfan	Fish (≤ 20 cm)	43	28	65.1	0.073	1.5	0.41	0.48	3.2	ug/kg
OC Pesticides	Total Endosulfan	Largemouth bass	3	3	100	0.2	0.98	0.68			ug/kg
OC Pesticides	Total Endosulfan	Mummichog	18	11	61.1	0.073	0.22	0.14	0.48	1.3	ug/kg
OC Pesticides	Total Endosulfan	Mussel (estuarine)	3	0	0				2.1	2.5	ug/kg
OC Pesticides	Total Endosulfan	Mussel (freshwater)	5	2	40	0.17	0.37	0.27	1.1	3	ug/kg
OC Pesticides	Total Endosulfan	Northern pike	1	1	100	1.5	1.5				ug/kg
OC Pesticides	Total Endosulfan	Other forage fish (no mummichog)	10	9	90	0.11	0.41	0.27	0.97	0.97	ug/kg
OC Pesticides	Total Endosulfan	Smallmouth bass	3	2	66.7	0.33	0.68	0.51	2.8	2.8	ug/kg
OC Pesticides	Total Endosulfan	White catfish	19	10	52.6	0.31	3	0.7	0.42	3	ug/kg
OC Pesticides	Total Endosulfan	White perch	22	11	50	0.23	1.5	0.87	0.71	3.2	ug/kg
OC Pesticides	Total Endosulfan	White sucker	5	1	20	0.48	0.48		0.28	1.1	ug/kg
OC Pesticides	Total Endosulfan	Worms (all)	18	7	38.9	0.083	0.22	0.13	1.6	3.9	ug/kg
OC Pesticides	Total Endosulfan	Worms (estuarine sp.)	5	0	0				1.6	2.6	ug/kg
OC Pesticides	Total Endosulfan	Worms (freshwater sp.)	13	7	53.8	0.083	0.22	0.13	2.9	3.9	ug/kg
OC Pesticides	Total Endosulfan (N	American eel (all)	21	13	61.9	1.1	8	2.8	0.31	2.9	ug/kg
OC Pesticides	Total Endosulfan (N	Blue crab	24	15	62.5	0.91	14	3.9	0.4	8.1	ug/kg
OC Pesticides	Total Endosulfan (N	Brown bullhead	6	4	66.7	1.2	2.5	1.9	0.91	1	ug/kg
OC Pesticides	Total Endosulfan (N	Carp	12	9	75	1.3	8.2	3.5	1.5	2.5	ug/kg
OC Pesticides	Total Endosulfan (N	Channel catfish	11	5	45.5	0.99	3	1.9	1.1	3.9	ug/kg
OC Pesticides	Total Endosulfan (N	Fish (all)	131	79	60.3	0.43	13	2.4	0.28	3.9	ug/kg
OC Pesticides	Total Endosulfan (N	Fish (≤ 11 cm)	23	15	65.2	0.43	1.7	0.93	0.48	1.3	ug/kg
OC Pesticides	Total Endosulfan (N	Fish (≤ 13 cm)	26	18	69.2	0.43	1.7	1	0.48	1.3	ug/kg
OC Pesticides	Total Endosulfan (N	Fish (≤ 18 cm)	41	27	65.9	0.43	3.8	1.3	0.48	3.2	ug/kg
OC Pesticides	Total Endosulfan (N	Fish (≤ 20 cm)	43	28	65.1	0.43	4.2	1.4	0.48	3.2	ug/kg
OC Pesticides	Total Endosulfan (N	Largemouth bass	3	3	100	4.1	13	7.7			ug/kg
OC Pesticides	Total Endosulfan (N	Mummichog	18	11	61.1	0.43	1.2	0.78	0.48	1.3	ug/kg
OC Pesticides	Total Endosulfan (N	Mussel (estuarine)	3	0	0				2.1	2.5	ug/kg
OC Pesticides	Total Endosulfan (N	Mussel (freshwater)	5	2	40	2	2.2	2.1	1.1	3	ug/kg
OC Pesticides	Total Endosulfan (N	Northern pike	1	1	100	8.4	8.4				ug/kg
OC Pesticides	Total Endosulfan (N	Other forage fish (no mummichog)	10	9	90	0.94	1.8	1.4	0.97	0.97	ug/kg
OC Pesticides	Total Endosulfan (N	Smallmouth bass	3	2	66.7	2.5	7.4	5	2.8	2.8	ug/kg
OC Pesticides	Total Endosulfan (N	White catfish	19	10	52.6	0.54	6.8	2.3	0.42	3	ug/kg
OC Pesticides	Total Endosulfan (N	White perch	22	11	50	0.91	4.2	2	0.71	3.2	ug/kg
OC Pesticides	Total Endosulfan (N	White sucker	5	1	20	0.65	0.65		0.28	1.1	ug/kg
OC Pesticides	Total Endosulfan (N	Worms (all)	18	7	38.9	1.5	2.5	2.1	1.6	3.9	ug/kg
OC Pesticides	Total Endosulfan (N	Worms (estuarine sp.)	5	0	0				1.6	2.6	ug/kg
OC Pesticides	Total Endosulfan (N	Worms (freshwater sp.)	13	7	53.8	1.5	2.5	2.1	2.9	3.9	ug/kg
OC Pesticides	Total Endosulfan (N	American eel (all)	21	13	61.9	1.2	15	4.7	0.31	2.9	ug/kg
OC Pesticides	Total Endosulfan (N	Blue crab	24	15	62.5	1.6	23	5.6	0.4	8.1	ug/kg
OC Pesticides	Total Endosulfan (N	Brown bullhead	6	4	66.7	1.8	3.3	2.5	0.91	1	ug/kg
OC Pesticides	Total Endosulfan (N	Carp	12	9	75	2	9.5	5.1	1.5	2.5	ug/kg

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
OC Pesticides	Total Endosulfan (N	Channel catfish	11	5	45.5	1	4	2.6	1.1	3.9	ug/kg
OC Pesticides	Total Endosulfan (N	Fish (all)	131	79	60.3	0.68	25	4.1	0.28	3.9	ug/kg
OC Pesticides	Total Endosulfan (N	Fish (≤ 11 cm)	23	15	65.2	0.79	3	1.7	0.48	1.3	ug/kg
OC Pesticides	Total Endosulfan (N	Fish (≤ 13 cm)	26	18	69.2	0.79	3.2	1.8	0.48	1.3	ug/kg
OC Pesticides	Total Endosulfan (N	Fish (≤ 18 cm)	41	27	65.9	0.79	6.4	2.3	0.48	3.2	ug/kg
OC Pesticides	Total Endosulfan (N	Fish (≤ 20 cm)	43	28	65.1	0.79	6.8	2.4	0.48	3.2	ug/kg
OC Pesticides	Total Endosulfan (N	Largemouth bass	3	3	100	7.1	25	15			ug/kg
OC Pesticides	Total Endosulfan (N	Mummichog	18	11	61.1	0.79	2.2	1.4	0.48	1.3	ug/kg
OC Pesticides	Total Endosulfan (N	Mussel (estuarine)	3	0	0				2.1	2.5	ug/kg
OC Pesticides	Total Endosulfan (N	Mussel (freshwater)	5	2	40	3.6	4.2	3.9	1.1	3	ug/kg
OC Pesticides	Total Endosulfan (N	Northern pike	1	1	100	16	16				ug/kg
OC Pesticides	Total Endosulfan (N	Other forage fish (no mummichog)	10	9	90	1.8	3.3	2.5	0.97	0.97	ug/kg
OC Pesticides	Total Endosulfan (N	Smallmouth bass	3	2	66.7	4.3	15	9.7	2.8	2.8	ug/kg
OC Pesticides	Total Endosulfan (N	White catfish	19	10	52.6	0.68	14	3.9	0.42	3	ug/kg
OC Pesticides	Total Endosulfan (N	White perch	22	11	50	1.1	6.8	3.1	0.71	3.2	ug/kg
OC Pesticides	Total Endosulfan (N	White sucker	5	1	20	0.85	0.85		0.28	1.1	ug/kg
OC Pesticides	Total Endosulfan (N	Worms (all)	18	7	38.9	2.9	4.9	4	1.6	3.9	ug/kg
OC Pesticides	Total Endosulfan (N	Worms (estuarine sp.)	5	0	0				1.6	2.6	ug/kg
OC Pesticides	Total Endosulfan (N	Worms (freshwater sp.)	13	7	53.8	2.9	4.9	4	2.9	3.9	ug/kg
OC Pesticides	trans-Nonachlor	American eel (all)	21	20	95.2	5.9	31	15	6.5	6.5	ug/kg
OC Pesticides	trans-Nonachlor	Blue crab	24	22	91.7	0.17	6	0.88	0.23	0.33	ug/kg
OC Pesticides	trans-Nonachlor	Brown bullhead	6	6	100	11	58	32			ug/kg
OC Pesticides	trans-Nonachlor	Carp	12	12	100	36	130	73			ug/kg
OC Pesticides	trans-Nonachlor	Channel catfish	11	11	100	24	66	36			ug/kg
OC Pesticides	trans-Nonachlor	Fish (all)	131	128	97.7	1.4	130	25	6	23	ug/kg
OC Pesticides	trans-Nonachlor	Fish (≤ 11 cm)	23	23	100	2.1	17	6.4			ug/kg
OC Pesticides	trans-Nonachlor	Fish (≤ 13 cm)	26	26	100	2.1	17	6.9			ug/kg
OC Pesticides	trans-Nonachlor	Fish (≤ 18 cm)	41	40	97.6	1.4	34	12	23	23	ug/kg
OC Pesticides	trans-Nonachlor	Fish (≤ 20 cm)	43	42	97.7	1.4	34	12	23	23	ug/kg
OC Pesticides	trans-Nonachlor	Largemouth bass	3	3	100	4.8	25	13			ug/kg
OC Pesticides	trans-Nonachlor	Mummichog	18	18	100	2.1	11	5			ug/kg
OC Pesticides	trans-Nonachlor	Mussel (estuarine)	3	3	100	0.43	2.4	1.3			ug/kg
OC Pesticides	trans-Nonachlor	Mussel (freshwater)	5	5	100	3.3	4	3.5			ug/kg
OC Pesticides	trans-Nonachlor	Northern pike	1	1	100	32	32				ug/kg
OC Pesticides	trans-Nonachlor	Other forage fish (no mummichog)	10	10	100	1.4	22	12			ug/kg
OC Pesticides	trans-Nonachlor	Smallmouth bass	3	3	100	7.3	14	11			ug/kg
OC Pesticides	trans-Nonachlor	White catfish	19	19	100	7.9	66	34			ug/kg
OC Pesticides	trans-Nonachlor	White perch	22	21	95.5	5.3	45	20	23	23	ug/kg
OC Pesticides	trans-Nonachlor	White sucker	5	4	80	15	33	24	6	6	ug/kg
OC Pesticides	trans-Nonachlor	Worms (all)	18	16	88.9	1.1	11	3.9	0.33	2	ug/kg
OC Pesticides	trans-Nonachlor	Worms (estuarine sp.)	5	4	80	1.1	1.7	1.4	0.33	0.33	ug/kg
OC Pesticides	trans-Nonachlor	Worms (freshwater sp.)	13	12	92.3	2.9	11	4.7	2	2	ug/kg
Conventionals	Lipids	American eel (all)	21	21	100	2.5	12	6.5			%
Conventionals	Lipids	Blue crab	24	24	100	0.72	2	1.2			%

Tissue summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
Conventionals	Lipids	Brown bullhead	6	6	100	2.2	18	6.2			%
Conventionals	Lipids	Carp	12	12	100	2.8	8.1	5.4			%
Conventionals	Lipids	Channel catfish	11	11	100	4.8	11	7.8			%
Conventionals	Lipids	Fish (all)	131	131	100	1.3	18	4.6			%
Conventionals	Lipids	Fish (≤ 11 cm)	23	23	100	1.4	4.3	2.2			%
Conventionals	Lipids	Fish (≤ 13 cm)	26	26	100	1.4	4.3	2.2			%
Conventionals	Lipids	Fish (≤ 18 cm)	41	41	100	1.4	6.4	2.9			%
Conventionals	Lipids	Fish (≤ 20 cm)	43	43	100	1.4	6.4	2.9			%
Conventionals	Lipids	Largemouth bass	3	3	100	2.1	2.9	2.5			%
Conventionals	Lipids	Mummichog	18	18	100	1.4	3.1	2			%
Conventionals	Lipids	Mussel (estuarine)	3	3	100	0.24	0.49	0.37			%
Conventionals	Lipids	Mussel (freshwater)	5	5	100	0.36	0.77	0.54			%
Conventionals	Lipids	Northern pike	1	1	100	4.3	4.3				%
Conventionals	Lipids	Other forage fish (no mummichog)	10	10	100	1.7	4.3	2.5			%
Conventionals	Lipids	Smallmouth bass	3	3	100	2.2	2.5	2.3			%
Conventionals	Lipids	White catfish	19	19	100	1.7	7.1	4.6			%
Conventionals	Lipids	White perch	22	22	100	1.3	9	4.3			%
Conventionals	Lipids	White sucker	5	5	100	3	4.8	3.9			%
Conventionals	Lipids	Worms (all)	19	19	100	0.64	1.3	1			%
Conventionals	Lipids	Worms (estuarine sp.)	5	5	100	1.1	1.3	1.2			%
Conventionals	Lipids	Worms (freshwater sp.)	14	14	100	0.64	1.2	0.98			%
Conventionals	Percent moisture	American eel (all)	21	21	100	64.9	76.8	69.5			%
Conventionals	Percent moisture	Blue crab	24	24	100	76.7	83.1	79.1			%
Conventionals	Percent moisture	Brown bullhead	6	6	100	69.6	76	73.2			%
Conventionals	Percent moisture	Carp	12	12	100	58.4	71	65.9			%
Conventionals	Percent moisture	Channel catfish	11	11	100	68	76	71.9			%
Conventionals	Percent moisture	Fish (all)	131	131	100	58.4	81.5	72.3			%
Conventionals	Percent moisture	Fish (≤ 11 cm)	23	23	100	73.6	81.3	75.7			%
Conventionals	Percent moisture	Fish (≤ 13 cm)	26	26	100	67.6	81.3	75.5			%
Conventionals	Percent moisture	Fish (≤ 18 cm)	41	41	100	67.6	81.3	74.1			%
Conventionals	Percent moisture	Fish (≤ 20 cm)	43	43	100	67.6	81.3	73.9			%
Conventionals	Percent moisture	Largemouth bass	3	3	100	73	75.7	74.6			%
Conventionals	Percent moisture	Mummichog	18	18	100	73.6	77.3	75.2			%
Conventionals	Percent moisture	Mussel (estuarine)	3	3	100	94.1	95.2	94.5			%
Conventionals	Percent moisture	Mussel (freshwater)	5	5	100	89.9	91.3	90.8			%
Conventionals	Percent moisture	Northern pike	1	1	100	72.4	72.4				%
Conventionals	Percent moisture	Other forage fish (no mummichog)	10	10	100	67.6	81.3	75.8			%
Conventionals	Percent moisture	Smallmouth bass	3	3	100	73.8	74.7	74.3			%
Conventionals	Percent moisture	White catfish	19	19	100	68.6	81.5	74.7			%
Conventionals	Percent moisture	White perch	22	22	100	66.4	76.8	71			%
Conventionals	Percent moisture	White sucker	5	5	100	74.5	77.1	75.9			%
Conventionals	Percent moisture	Worms (all)	19	19	100	84.3	90.8	88.1			%
Conventionals	Percent moisture	Worms (estuarine sp.)	5	5	100	84.3	85.6	85.1			%
Conventionals	Percent moisture	Worms (freshwater sp.)	14	14	100	87.8	90.8	89.2			%

Summary statistics workbook for CPG tissue, sediment, and water COIs

Purpose:

This workbook provides basic summary statistics for all COIs in tissue, sediment, and water sample groups evaluated as part of the SLERA.

Worksheets:

Tissue group reference	Provides sample counts and descriptions for all tissue groups
Tissue statistics	Provides tissue statistics, by summary group, for all detected chemicals.
Sediment group reference	Provides sample counts and descriptions for all sediment groups
Sediment statistics	Provides sediment statistics, by summary group, for all detected chemicals.
Surface water group reference	Provides sample counts and descriptions for all surface water groups
Surface water statistics	Provides surface water statistics, by summary group, for all detected chemicals.

Usage:

These basic summary statistics for LPRSA tissue, sediment, and water can be explored easily by using Excel filters as follows:

1. Review the **Tissue group reference** and **Sediment group reference** worksheets to identify sample groups of interest
2. Filter the **Tissue statistics** or **Sediment statistics** worksheets to identify chemicals and/or groups of interest.

Example 1: To explore PAH concentrations for American eel tissue screened for the SLERA, filter on **Chemical Group** ("PAHs") and **Sample Group** ("American eel (all)").

Overview of sediment summary groups

Sample Group	Group Description	Location Counts by Group		
		SLERA		
		Sediment screen	Sediment/diet screen	Diet screen
Sitewide sediment	Study area excluding dredged locations and tributaries above head-of-tide		430	
Sitewide sediment (≥ RM 4)	Study area at or above RM 4, excluding dredged locations and tributaries above head-of-tide	335		
Sitewide sediment (< RM 13)	Study area below RM 13, excluding dredged locations and tributaries above head-of-tide	381		
Mudflat (all)	All study area mudflat locations, excluding dredged locations and tributaries above head-of-tide			137

Sediment summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
Metals	Antimony	Sediment, mudflats (all)	136	134	98.5	0.03	11.8	1.1	0.034	0.052	mg/kg
Metals	Antimony	Sediment < RM 13	378	376	99.5	0.03	11.8	0.99	0.034	0.052	mg/kg
Metals	Antimony	Sediment ≥ RM 4	331	328	99.1	0.03	11.8	0.97	0.034	0.052	mg/kg
Metals	Antimony	Sediment, sitewide	426	423	99.3	0.03	11.8	0.98	0.034	0.052	mg/kg
Metals	Arsenic	Sediment, mudflats (all)	136	136	100	0.48	37.4	7.7			mg/kg
Metals	Arsenic	Sediment < RM 13	378	378	100	0.48	118	8.2			mg/kg
Metals	Arsenic	Sediment ≥ RM 4	331	331	100	0.48	68.6	6.6			mg/kg
Metals	Arsenic	Sediment, sitewide	426	426	100	0.48	118	7.6			mg/kg
Metals	Beryllium	Sediment, mudflats (all)	136	136	100	0.126	0.905	0.46			mg/kg
Metals	Beryllium	Sediment < RM 13	378	378	100	0.099	1.22	0.48			mg/kg
Metals	Beryllium	Sediment ≥ RM 4	331	331	100	0.099	1.22	0.41			mg/kg
Metals	Beryllium	Sediment, sitewide	426	426	100	0.099	1.22	0.45			mg/kg
Metals	Cadmium	Sediment, mudflats (all)	136	136	100	0.074	34.7	3.5			mg/kg
Metals	Cadmium	Sediment < RM 13	378	378	100	0.053	46.6	4			mg/kg
Metals	Cadmium	Sediment ≥ RM 4	331	331	100	0.053	46.6	3.9			mg/kg
Metals	Cadmium	Sediment, sitewide	426	426	100	0.053	46.6	3.7			mg/kg
Metals	Chromium	Sediment, mudflats (all)	136	136	100	4.03	1180	120			mg/kg
Metals	Chromium	Sediment < RM 13	378	378	100	4.03	1580	130			mg/kg
Metals	Chromium	Sediment ≥ RM 4	331	331	100	4.03	1580	120			mg/kg
Metals	Chromium	Sediment, sitewide	426	426	100	4.03	1580	120			mg/kg
Metals	Cobalt	Sediment, mudflats (all)	135	135	100	2.19	16.5	7.4			mg/kg
Metals	Cobalt	Sediment < RM 13	375	375	100	1.8	25.6	7.6			mg/kg
Metals	Cobalt	Sediment ≥ RM 4	331	331	100	1.8	25.6	6.8			mg/kg
Metals	Cobalt	Sediment, sitewide	423	423	100	1.8	25.6	7.2			mg/kg
Metals	Copper	Sediment, mudflats (all)	151	151	100	4.19	706	150			mg/kg
Metals	Copper	Sediment < RM 13	444	444	100	4.19	930	160			mg/kg
Metals	Copper	Sediment ≥ RM 4	380	380	100	4.19	787	140			mg/kg
Metals	Copper	Sediment, sitewide	503	503	100	4.19	930	140			mg/kg
Metals	Lead	Sediment, mudflats (all)	134	134	100	3.94	2050	240			mg/kg
Metals	Lead	Sediment < RM 13	377	377	100	3.94	2050	240			mg/kg
Metals	Lead	Sediment ≥ RM 4	328	328	100	3.94	2050	230			mg/kg
Metals	Lead	Sediment, sitewide	422	422	100	3.94	2050	230			mg/kg
Metals	Mercury	Sediment, mudflats (all)	136	136	100	21.5	21500	2400			ug/kg
Metals	Mercury	Sediment < RM 13	381	381	100	17.8	24300	2400			ug/kg
Metals	Mercury	Sediment ≥ RM 4	334	334	100	16.1	24300	2200			ug/kg
Metals	Mercury	Sediment, sitewide	429	429	100	16.1	24300	2200			ug/kg
Metals	Methyl mercury	Sediment, mudflats (all)	57	56	98.2	0.035	23	3.3	0.089	0.089	ug/kg
Metals	Methyl mercury	Sediment < RM 13	113	113	100	0.035	23	3.4			ug/kg
Metals	Methyl mercury	Sediment ≥ RM 4	100	99	99	0.035	23	2.8	0.089	0.089	ug/kg
Metals	Methyl mercury	Sediment, sitewide	137	136	99.3	0.035	23	2.9	0.089	0.089	ug/kg

Sediment summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
Metals	Nickel	Sediment, mudflats (all)	151	151	100	4.75	130	28			mg/kg
Metals	Nickel	Sediment < RM 13	444	444	100	4.15	200	29			mg/kg
Metals	Nickel	Sediment ≥ RM 4	378	378	100	4.15	200	27			mg/kg
Metals	Nickel	Sediment, sitewide	501	501	100	4.15	200	28			mg/kg
Metals	Selenium	Sediment, mudflats (all)	130	118	90.8	0.038	3.2	0.96	0.036	1.39	mg/kg
Metals	Selenium	Sediment < RM 13	358	316	88.3	0.058	5.2	1	0.5	2	mg/kg
Metals	Selenium	Sediment ≥ RM 4	314	250	79.6	0.038	3.3	0.84	0.033	2	mg/kg
Metals	Selenium	Sediment, sitewide	406	341	84	0.038	5.2	0.95	0.033	2	mg/kg
Metals	Silver	Sediment, mudflats (all)	136	136	100	0.023	13.7	2.5			mg/kg
Metals	Silver	Sediment < RM 13	378	378	100	0.023	20.4	2.7			mg/kg
Metals	Silver	Sediment ≥ RM 4	331	331	100	0.023	20.4	2.5			mg/kg
Metals	Silver	Sediment, sitewide	426	426	100	0.023	20.4	2.5			mg/kg
Metals	Thallium	Sediment, mudflats (all)	136	135	99.3	0.029	0.52	0.16	0.041	0.041	mg/kg
Metals	Thallium	Sediment < RM 13	378	374	98.9	0.023	0.997	0.16	0.019	0.041	mg/kg
Metals	Thallium	Sediment ≥ RM 4	331	327	98.8	0.021	0.611	0.14	0.019	0.041	mg/kg
Metals	Thallium	Sediment, sitewide	426	422	99.1	0.021	0.997	0.15	0.019	0.041	mg/kg
Metals	Vanadium	Sediment, mudflats (all)	136	136	100	7.2	110	26			mg/kg
Metals	Vanadium	Sediment < RM 13	378	378	100	3.99	110	26			mg/kg
Metals	Vanadium	Sediment ≥ RM 4	331	331	100	3.99	110	23			mg/kg
Metals	Vanadium	Sediment, sitewide	426	426	100	3.99	110	24			mg/kg
Metals	Zinc	Sediment, mudflats (all)	136	136	100	23.5	1710	460			mg/kg
Metals	Zinc	Sediment < RM 13	378	378	100	23.5	2000	450			mg/kg
Metals	Zinc	Sediment ≥ RM 4	331	331	100	23.5	2000	420			mg/kg
Metals	Zinc	Sediment, sitewide	426	426	100	23.5	2000	420			mg/kg
Metals (SEM)	Cadmium	Sediment, mudflats (all)	101	96	95	0.000426	0.0787	0.0072	0.00091	0.0032	umol/g
Metals (SEM)	Cadmium	Sediment < RM 13	258	250	96.9	0.000426	0.09338	0.0082	0.00072	0.0025	umol/g
Metals (SEM)	Cadmium	Sediment ≥ RM 4	223	213	95.5	0.000566	0.09338	0.0078	0.00072	0.0032	umol/g
Metals (SEM)	Cadmium	Sediment, sitewide	291	275	94.5	0.000426	0.09338	0.0077	0.00072	0.0032	umol/g
Metals (SEM)	Copper	Sediment, mudflats (all)	101	101	100	0.009	2.57	0.28			umol/g
Metals (SEM)	Copper	Sediment < RM 13	258	257	99.6	0.00296	4.77558	0.35	0.0013	0.0013	umol/g
Metals (SEM)	Copper	Sediment ≥ RM 4	223	223	100	0.0104	3.62	0.33			umol/g
Metals (SEM)	Copper	Sediment, sitewide	291	290	99.7	0.00296	4.77558	0.33	0.0013	0.0013	umol/g
Metals (SEM)	Lead	Sediment, mudflats (all)	101	101	100	0.00713	1.36905	0.22			umol/g
Metals (SEM)	Lead	Sediment < RM 13	258	257	99.6	0.00946	2.17	0.26	0.0013	0.0013	umol/g
Metals (SEM)	Lead	Sediment ≥ RM 4	223	223	100	0.00713	2.17	0.25			umol/g
Metals (SEM)	Lead	Sediment, sitewide	291	290	99.7	0.00713	2.17	0.25	0.0013	0.0013	umol/g
Metals (SEM)	Nickel	Sediment, mudflats (all)	101	101	100	0.00686	0.491	0.059			umol/g
Metals (SEM)	Nickel	Sediment < RM 13	256	255	99.6	0.00673	0.608	0.064	0.00088	0.0009	umol/g
Metals (SEM)	Nickel	Sediment ≥ RM 4	221	221	100	0.00745	0.552	0.055			umol/g
Metals (SEM)	Nickel	Sediment, sitewide	289	288	99.7	0.00673	0.608	0.06	0.00088	0.0009	umol/g
Metals (SEM)	Silver	Sediment, mudflats (all)	54	6	11.1	0.000499	0.00333	0.00131	0.00026	0.004	umol/g
Metals (SEM)	Silver	Sediment < RM 13	106	21	19.8	0.000214	0.00514	0.00159	0.00022	0.004	umol/g
Metals (SEM)	Silver	Sediment ≥ RM 4	96	21	21.9	0.000214	0.00514	0.00136	0.00022	0.004	umol/g

Sediment summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
Metals (SEM)	Silver	Sediment, sitewide	129	23	17.8	0.000214	0.00514	0.00154	0.00022	0.004	umol/g
Metals (SEM)	Zinc	Sediment, mudflats (all)	101	101	100	0.381	162	8.25			umol/g
Metals (SEM)	Zinc	Sediment < RM 13	258	258	100	0.000917	162	6.7			umol/g
Metals (SEM)	Zinc	Sediment ≥ RM 4	223	223	100	0.233	162	7.8			umol/g
Metals (SEM)	Zinc	Sediment, sitewide	291	291	100	0.000917	162	6.9			umol/g
Butyltin	Monobutyltin	Sediment, mudflats (all)	136	119	87.5	0.73	75	20	1.2	23	ug/kg
Butyltin	Monobutyltin	Sediment < RM 13	378	335	88.6	0.37	210	21	1.2	25	ug/kg
Butyltin	Monobutyltin	Sediment ≥ RM 4	331	286	86.4	0.37	210	18	1.2	25	ug/kg
Butyltin	Monobutyltin	Sediment, sitewide	426	376	88.3	0.37	210	19	1.2	25	ug/kg
Butyltin	Dibutyltin	Sediment, mudflats (all)	136	124	91.2	0.9	250	40	1.2	12	ug/kg
Butyltin	Dibutyltin	Sediment < RM 13	378	352	93.1	0.89	2300	48	1.2	25	ug/kg
Butyltin	Dibutyltin	Sediment ≥ RM 4	331	302	91.2	0.89	2300	42	1.2	25	ug/kg
Butyltin	Dibutyltin	Sediment, sitewide	426	393	92.3	0.89	2300	44	1.2	25	ug/kg
Butyltin	Tributyltin	Sediment, mudflats (all)	136	116	85.3	0.61	180	22	1.2	17	ug/kg
Butyltin	Tributyltin	Sediment < RM 13	378	333	88.1	0.39	270	23	1.2	27	ug/kg
Butyltin	Tributyltin	Sediment ≥ RM 4	331	271	81.9	0.39	270	21	1.1	27	ug/kg
Butyltin	Tributyltin	Sediment, sitewide	426	361	84.7	0.39	270	21	1.1	27	ug/kg
Butyltin	Tetrabutyltin	Sediment, mudflats (all)	136	23	16.9	1.1	250	23	1.2	19	ug/kg
Butyltin	Tetrabutyltin	Sediment < RM 13	378	58	15.3	1.1	250	13	1.2	34	ug/kg
Butyltin	Tetrabutyltin	Sediment ≥ RM 4	331	38	11.5	1.7	51	11	1.1	34	ug/kg
Butyltin	Tetrabutyltin	Sediment, sitewide	426	58	13.6	1.1	250	13	1.1	34	ug/kg
PAHs	1-Methylnaphthalene	Sediment, mudflats (all)	136	132	97.1	1.82	2100	180	4.77	40.2	ug/kg
PAHs	1-Methylnaphthalene	Sediment < RM 13	379	370	97.6	1.82	198000	930	0.6	110	ug/kg
PAHs	1-Methylnaphthalene	Sediment ≥ RM 4	332	321	96.7	1.82	198000	1000	0.6	110	ug/kg
PAHs	1-Methylnaphthalene	Sediment, sitewide	427	416	97.4	1.82	198000	880	0.6	110	ug/kg
PAHs	1-Methylphenanthrene	Sediment, mudflats (all)	136	134	98.5	3.6	12300	630	0.977	13	ug/kg
PAHs	1-Methylphenanthrene	Sediment < RM 13	379	377	99.5	0.3	44500	1100	0.977	13	ug/kg
PAHs	1-Methylphenanthrene	Sediment ≥ RM 4	332	330	99.4	0.3	44500	1100	0.977	13	ug/kg
PAHs	1-Methylphenanthrene	Sediment, sitewide	427	425	99.5	0.3	44500	1100	0.977	13	ug/kg
PAHs	2,3,5-Trimethylnaphthalene	Sediment, mudflats (all)	136	134	98.5	0.585	3600	150	1.95	6.5	ug/kg
PAHs	2,3,5-Trimethylnaphthalene	Sediment < RM 13	379	368	97.1	0.585	14800	270	0.059	7.7	ug/kg
PAHs	2,3,5-Trimethylnaphthalene	Sediment ≥ RM 4	332	321	96.7	0.585	14800	260	0.059	6.5	ug/kg
PAHs	2,3,5-Trimethylnaphthalene	Sediment, sitewide	427	414	97	0.585	14800	260	0.059	7.7	ug/kg
PAHs	2,6-Dimethylnaphthalene	Sediment, mudflats (all)	136	134	98.5	0.989	3670	200	1.95	10	ug/kg
PAHs	2,6-Dimethylnaphthalene	Sediment < RM 13	379	373	98.4	0.989	54900	480	0.18	10	ug/kg
PAHs	2,6-Dimethylnaphthalene	Sediment ≥ RM 4	332	324	97.6	0.989	54900	510	0.18	12	ug/kg
PAHs	2,6-Dimethylnaphthalene	Sediment, sitewide	427	419	98.1	0.989	54900	460	0.18	12	ug/kg
PAHs	2-Methylnaphthalene	Sediment, mudflats (all)	136	130	95.6	3.3	3400	280	9.53	418	ug/kg
PAHs	2-Methylnaphthalene	Sediment < RM 13	379	366	96.6	3.3	145000	860	1.2	4930	ug/kg
PAHs	2-Methylnaphthalene	Sediment ≥ RM 4	332	316	95.2	3.3	145000	980	1.2	4930	ug/kg
PAHs	2-Methylnaphthalene	Sediment, sitewide	427	411	96.3	3.3	145000	840	1.2	4930	ug/kg
PAHs	Acenaphthene	Sediment, mudflats (all)	136	134	98.5	1.3	5610	400	0.977	12	ug/kg
PAHs	Acenaphthene	Sediment < RM 13	379	375	98.9	1.3	142000	1100	0.81	12	ug/kg

Sediment summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PAHs	Acenaphthene	Sediment ≥ RM 4	332	328	98.8	1.3	142000	1200	0.81	12	ug/kg
PAHs	Acenaphthene	Sediment, sitewide	427	423	99.1	1.3	142000	1000	0.81	12	ug/kg
PAHs	Acenaphthylene	Sediment, mudflats (all)	136	135	99.3	0.192	7000	390	16	16	ug/kg
PAHs	Acenaphthylene	Sediment < RM 13	379	377	99.5	0.192	7870	430	0.14	16	ug/kg
PAHs	Acenaphthylene	Sediment ≥ RM 4	332	330	99.4	0.192	7870	440	0.14	16	ug/kg
PAHs	Acenaphthylene	Sediment, sitewide	427	425	99.5	0.192	7870	450	0.14	16	ug/kg
PAHs	Anthracene	Sediment, mudflats (all)	136	135	99.3	0.216	9190	880	16	16	ug/kg
PAHs	Anthracene	Sediment < RM 13	379	377	99.5	0.216	60800	1500	0.41	16	ug/kg
PAHs	Anthracene	Sediment ≥ RM 4	332	330	99.4	0.216	60800	1500	0.41	16	ug/kg
PAHs	Anthracene	Sediment, sitewide	427	425	99.5	0.216	60800	1500	0.41	16	ug/kg
PAHs	Benzo(a)anthracene	Sediment, mudflats (all)	136	136	100	1.1	15600	2600			ug/kg
PAHs	Benzo(a)anthracene	Sediment < RM 13	379	378	99.7	1.1	41000	3400	0.89	0.89	ug/kg
PAHs	Benzo(a)anthracene	Sediment ≥ RM 4	332	331	99.7	1.1	40100	3300	0.89	0.89	ug/kg
PAHs	Benzo(a)anthracene	Sediment, sitewide	427	426	99.8	1.1	41000	3400	0.89	0.89	ug/kg
PAHs	Benzo(a)pyrene	Sediment, mudflats (all)	136	136	100	1.62	12000	3200			ug/kg
PAHs	Benzo(a)pyrene	Sediment < RM 13	379	378	99.7	1.62	41000	3800	0.6	0.6	ug/kg
PAHs	Benzo(a)pyrene	Sediment ≥ RM 4	332	331	99.7	1.62	41000	3700	0.6	0.6	ug/kg
PAHs	Benzo(a)pyrene	Sediment, sitewide	427	426	99.8	1.62	41000	3800	0.6	0.6	ug/kg
PAHs	Benzo(b/j)fluoranthene	Sediment, mudflats (all)	136	136	100	2.35	16800	3700			ug/kg
PAHs	Benzo(b/j)fluoranthene	Sediment < RM 13	379	378	99.7	2.35	54800	4300	1.2	1.2	ug/kg
PAHs	Benzo(b/j)fluoranthene	Sediment ≥ RM 4	332	331	99.7	2.35	54800	4200	1.2	1.2	ug/kg
PAHs	Benzo(b/j)fluoranthene	Sediment, sitewide	427	426	99.8	2.35	54800	4200	1.2	1.2	ug/kg
PAHs	Benzo(e)pyrene	Sediment, mudflats (all)	136	136	100	1.31	7700	2200			ug/kg
PAHs	Benzo(e)pyrene	Sediment < RM 13	379	378	99.7	1.31	25600	2600	0.73	0.73	ug/kg
PAHs	Benzo(e)pyrene	Sediment ≥ RM 4	332	331	99.7	1.31	25600	2600	0.73	0.73	ug/kg
PAHs	Benzo(e)pyrene	Sediment, sitewide	427	426	99.8	1.31	25600	2600	0.73	0.73	ug/kg
PAHs	Benzo(g,h,i)perylene	Sediment, mudflats (all)	136	136	100	1.53	8200	2100			ug/kg
PAHs	Benzo(g,h,i)perylene	Sediment < RM 13	379	378	99.7	1.53	22500	2400	1.2	1.2	ug/kg
PAHs	Benzo(g,h,i)perylene	Sediment ≥ RM 4	332	331	99.7	1.53	22500	2300	1.2	1.2	ug/kg
PAHs	Benzo(g,h,i)perylene	Sediment, sitewide	427	426	99.8	1.53	22500	2400	1.2	1.2	ug/kg
PAHs	Benzo(k)fluoranthene	Sediment, mudflats (all)	136	136	100	1.2	8950	1700			ug/kg
PAHs	Benzo(k)fluoranthene	Sediment < RM 13	379	378	99.7	1.2	24000	2100	0.032	0.032	ug/kg
PAHs	Benzo(k)fluoranthene	Sediment ≥ RM 4	332	331	99.7	1.2	24000	2100	0.032	0.032	ug/kg
PAHs	Benzo(k)fluoranthene	Sediment, sitewide	427	426	99.8	1.2	24000	2100	0.032	0.032	ug/kg
PAHs	Chrysene	Sediment, mudflats (all)	136	136	100	1.92	14500	3600			ug/kg
PAHs	Chrysene	Sediment < RM 13	379	379	100	1.3	53100	4700			ug/kg
PAHs	Chrysene	Sediment ≥ RM 4	332	332	100	1.3	53100	4500			ug/kg
PAHs	Chrysene	Sediment, sitewide	427	427	100	1.3	53100	4600			ug/kg
PAHs	Dibenzo(a,h)anthracene	Sediment, mudflats (all)	136	133	97.8	3.48	2200	390	0.977	32	ug/kg
PAHs	Dibenzo(a,h)anthracene	Sediment < RM 13	379	371	97.9	3.48	4700	420	0.044	140	ug/kg
PAHs	Dibenzo(a,h)anthracene	Sediment ≥ RM 4	332	327	98.5	3.48	3040	410	0.044	57	ug/kg
PAHs	Dibenzo(a,h)anthracene	Sediment, sitewide	427	419	98.1	3.48	4700	430	0.044	140	ug/kg
PAHs	Dibenzothiophene	Sediment, mudflats (all)	136	134	98.5	0.193	1500	190	21	28	ug/kg

Sediment summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PAHs	Dibenzothiophene	Sediment < RM 13	379	377	99.5	0.193	9260	310	21	28	ug/kg
PAHs	Dibenzothiophene	Sediment ≥ RM 4	332	330	99.4	0.193	9260	330	21	28	ug/kg
PAHs	Dibenzothiophene	Sediment, sitewide	427	425	99.5	0.193	9260	310	21	28	ug/kg
PAHs	Fluoranthene	Sediment, mudflats (all)	136	136	100	2.63	23300	4600			ug/kg
PAHs	Fluoranthene	Sediment < RM 13	379	379	100	1.9	163000	6500			ug/kg
PAHs	Fluoranthene	Sediment ≥ RM 4	332	332	100	1.9	163000	6500			ug/kg
PAHs	Fluoranthene	Sediment, sitewide	427	427	100	1.9	163000	6400			ug/kg
PAHs	Fluorene	Sediment, mudflats (all)	136	134	98.5	1.7	4200	390	0.977	28	ug/kg
PAHs	Fluorene	Sediment < RM 13	379	375	98.9	1.7	66400	770	0.82	28	ug/kg
PAHs	Fluorene	Sediment ≥ RM 4	332	328	98.8	1.7	66400	850	0.82	28	ug/kg
PAHs	Fluorene	Sediment, sitewide	427	423	99.1	1.7	66400	770	0.82	28	ug/kg
PAHs	Indeno(1,2,3-cd)pyrene	Sediment, mudflats (all)	136	136	100	1.25	8900	1900			ug/kg
PAHs	Indeno(1,2,3-cd)pyrene	Sediment < RM 13	379	378	99.7	1.25	18500	2100	0.71	0.71	ug/kg
PAHs	Indeno(1,2,3-cd)pyrene	Sediment ≥ RM 4	332	331	99.7	1.25	18500	2100	0.71	0.71	ug/kg
PAHs	Indeno(1,2,3-cd)pyrene	Sediment, sitewide	427	426	99.8	1.25	18500	2100	0.71	0.71	ug/kg
PAHs	Naphthalene	Sediment, mudflats (all)	136	125	91.9	5.87	14000	540	19.1	440	ug/kg
PAHs	Naphthalene	Sediment < RM 13	379	347	91.6	5.87	252000	1500	3	9860	ug/kg
PAHs	Naphthalene	Sediment ≥ RM 4	332	300	90.4	5.87	252000	1700	3	9860	ug/kg
PAHs	Naphthalene	Sediment, sitewide	427	389	91.1	5.87	252000	1500	3	9860	ug/kg
PAHs	Perylene	Sediment, mudflats (all)	136	136	100	12.9	2300	670			ug/kg
PAHs	Perylene	Sediment < RM 13	379	379	100	12.9	10100	790			ug/kg
PAHs	Perylene	Sediment ≥ RM 4	332	332	100	12.9	7730	770			ug/kg
PAHs	Perylene	Sediment, sitewide	427	427	100	12.9	10100	780			ug/kg
PAHs	Phenanthrene	Sediment, mudflats (all)	136	135	99.3	15.4	33300	2800	1.95	1.95	ug/kg
PAHs	Phenanthrene	Sediment < RM 13	379	377	99.5	15.4	220000	4800	1.95	2.6	ug/kg
PAHs	Phenanthrene	Sediment ≥ RM 4	332	330	99.4	15.4	220000	5100	1.95	2.6	ug/kg
PAHs	Phenanthrene	Sediment, sitewide	427	425	99.5	15.4	220000	4700	1.95	2.6	ug/kg
PAHs	Pyrene	Sediment, mudflats (all)	136	136	100	3.04	20800	4400			ug/kg
PAHs	Pyrene	Sediment < RM 13	379	379	100	3	123000	6300			ug/kg
PAHs	Pyrene	Sediment ≥ RM 4	332	332	100	3	123000	6200			ug/kg
PAHs	Pyrene	Sediment, sitewide	427	427	100	3	123000	6200			ug/kg
PAHs	Total benzofluoranthenes	Sediment, mudflats (all)	136	136	100	3.55	25800	5400			ug/kg
PAHs	Total benzofluoranthenes	Sediment < RM 13	379	378	99.7	3.55	76900	6400	1.2	1.2	ug/kg
PAHs	Total benzofluoranthenes	Sediment ≥ RM 4	332	331	99.7	3.55	76900	6300	1.2	1.2	ug/kg
PAHs	Total benzofluoranthenes	Sediment, sitewide	427	426	99.8	3.55	76900	6300	1.2	1.2	ug/kg
PAHs	Total benzofluoranthenes (ND=0.5DL)	Sediment, mudflats (all)	136	136	100	3.55	25800	5400			ug/kg
PAHs	Total benzofluoranthenes (ND=0.5DL)	Sediment < RM 13	379	378	99.7	3.55	76900	6400	1.2	1.2	ug/kg
PAHs	Total benzofluoranthenes (ND=0.5DL)	Sediment ≥ RM 4	332	331	99.7	3.55	76900	6300	1.2	1.2	ug/kg
PAHs	Total benzofluoranthenes (ND=0.5DL)	Sediment, sitewide	427	426	99.8	3.55	76900	6300	1.2	1.2	ug/kg
PAHs	Total benzofluoranthenes (ND=DL)	Sediment, mudflats (all)	136	136	100	3.55	25800	5400			ug/kg
PAHs	Total benzofluoranthenes (ND=DL)	Sediment < RM 13	379	378	99.7	3.55	76900	6400	1.2	1.2	ug/kg
PAHs	Total benzofluoranthenes (ND=DL)	Sediment ≥ RM 4	332	331	99.7	3.55	76900	6300	1.2	1.2	ug/kg
PAHs	Total benzofluoranthenes (ND=DL)	Sediment, sitewide	427	426	99.8	3.55	76900	6300	1.2	1.2	ug/kg

Sediment summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PAHs	Total carcinogenic PAHs	Sediment, mudflats (all)	136	136	100	2.1	16000	4400			ug/kg
PAHs	Total carcinogenic PAHs	Sediment < RM 13	379	379	100	0.0013	53300	5200			ug/kg
PAHs	Total carcinogenic PAHs	Sediment ≥ RM 4	332	332	100	0.0013	53300	5100			ug/kg
PAHs	Total carcinogenic PAHs	Sediment, sitewide	427	427	100	0.0013	53300	5200			ug/kg
PAHs	Total carcinogenic PAHs (ND=0.5DL)	Sediment, mudflats (all)	136	136	100	2.59	16000	4400			ug/kg
PAHs	Total carcinogenic PAHs (ND=0.5DL)	Sediment < RM 13	379	379	100	0.46	53300	5200			ug/kg
PAHs	Total carcinogenic PAHs (ND=0.5DL)	Sediment ≥ RM 4	332	332	100	0.46	53300	5100			ug/kg
PAHs	Total carcinogenic PAHs (ND=0.5DL)	Sediment, sitewide	427	427	100	0.46	53300	5200			ug/kg
PAHs	Total carcinogenic PAHs (ND=DL)	Sediment, mudflats (all)	136	136	100	3.08	16000	4400			ug/kg
PAHs	Total carcinogenic PAHs (ND=DL)	Sediment < RM 13	379	379	100	0.93	53300	5200			ug/kg
PAHs	Total carcinogenic PAHs (ND=DL)	Sediment ≥ RM 4	332	332	100	0.93	53300	5100			ug/kg
PAHs	Total carcinogenic PAHs (ND=DL)	Sediment, sitewide	427	427	100	0.93	53300	5200			ug/kg
PAHs	Total HPAHs	Sediment, mudflats (all)	136	136	100	16.6	114000	28000			ug/kg
PAHs	Total HPAHs	Sediment < RM 13	379	379	100	6.2	510000	36000			ug/kg
PAHs	Total HPAHs	Sediment ≥ RM 4	332	332	100	6.2	510000	35000			ug/kg
PAHs	Total HPAHs	Sediment, sitewide	427	427	100	6.2	510000	36000			ug/kg
PAHs	Total HPAHs (ND=0.5DL)	Sediment, mudflats (all)	136	136	100	17.1	114000	28000			ug/kg
PAHs	Total HPAHs (ND=0.5DL)	Sediment < RM 13	379	379	100	8.5	510000	36000			ug/kg
PAHs	Total HPAHs (ND=0.5DL)	Sediment ≥ RM 4	332	332	100	8.5	510000	35000			ug/kg
PAHs	Total HPAHs (ND=0.5DL)	Sediment, sitewide	427	427	100	8.5	510000	36000			ug/kg
PAHs	Total HPAHs (ND=DL)	Sediment, mudflats (all)	136	136	100	17.6	114000	28000			ug/kg
PAHs	Total HPAHs (ND=DL)	Sediment < RM 13	379	379	100	11	510000	36000			ug/kg
PAHs	Total HPAHs (ND=DL)	Sediment ≥ RM 4	332	332	100	11	510000	35000			ug/kg
PAHs	Total HPAHs (ND=DL)	Sediment, sitewide	427	427	100	11	510000	36000			ug/kg
PAHs	Total LPAHs	Sediment, mudflats (all)	136	136	100	0.408	55000	5300			ug/kg
PAHs	Total LPAHs	Sediment < RM 13	379	378	99.7	0.408	749000	9900	3	3	ug/kg
PAHs	Total LPAHs	Sediment ≥ RM 4	332	331	99.7	0.408	749000	11000	3	3	ug/kg
PAHs	Total LPAHs	Sediment, sitewide	427	426	99.8	0.408	749000	9800	3	3	ug/kg
PAHs	Total LPAHs (ND=0.5DL)	Sediment, mudflats (all)	136	136	100	12.1	55000	5300			ug/kg
PAHs	Total LPAHs (ND=0.5DL)	Sediment < RM 13	379	378	99.7	12.1	749000	9900	3	3	ug/kg
PAHs	Total LPAHs (ND=0.5DL)	Sediment ≥ RM 4	332	331	99.7	12.1	749000	11000	3	3	ug/kg
PAHs	Total LPAHs (ND=0.5DL)	Sediment, sitewide	427	426	99.8	12.1	749000	9800	3	3	ug/kg
PAHs	Total LPAHs (ND=DL)	Sediment, mudflats (all)	136	136	100	23.8	55000	5300			ug/kg
PAHs	Total LPAHs (ND=DL)	Sediment < RM 13	379	378	99.7	23.8	749000	10000	3	3	ug/kg
PAHs	Total LPAHs (ND=DL)	Sediment ≥ RM 4	332	331	99.7	23.8	749000	11000	3	3	ug/kg
PAHs	Total LPAHs (ND=DL)	Sediment, sitewide	427	426	99.8	23.8	749000	9800	3	3	ug/kg
PAHs	Total PAHs	Sediment, mudflats (all)	136	136	100	17	160000	33000			ug/kg
PAHs	Total PAHs	Sediment < RM 13	379	379	100	6.2	1090000	46000			ug/kg
PAHs	Total PAHs	Sediment ≥ RM 4	332	332	100	6.2	1090000	46000			ug/kg
PAHs	Total PAHs	Sediment, sitewide	427	427	100	6.2	1090000	45000			ug/kg
PAHs	Total PAHs (ND=0.5DL)	Sediment, mudflats (all)	136	136	100	29.2	160000	33000			ug/kg
PAHs	Total PAHs (ND=0.5DL)	Sediment < RM 13	379	379	100	12	1090000	46000			ug/kg
PAHs	Total PAHs (ND=0.5DL)	Sediment ≥ RM 4	332	332	100	12	1090000	46000			ug/kg

Sediment summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PAHs	Total PAHs (ND=0.5DL)	Sediment, sitewide	427	427	100	12	1090000	45000			ug/kg
PAHs	Total PAHs (ND=DL)	Sediment, mudflats (all)	136	136	100	41.4	160000	33000			ug/kg
PAHs	Total PAHs (ND=DL)	Sediment < RM 13	379	379	100	19	1090000	46000			ug/kg
PAHs	Total PAHs (ND=DL)	Sediment ≥ RM 4	332	332	100	19	1090000	46000			ug/kg
PAHs	Total PAHs (ND=DL)	Sediment, sitewide	427	427	100	19	1090000	45000			ug/kg
Alk PAHs	C1-Benzanthracene/chrysenes	Sediment, mudflats (all)	136	136	100	1.51	13000	2600			ug/kg
Alk PAHs	C1-Benzanthracene/chrysenes	Sediment < RM 13	379	379	100	1.4	54900	3700			ug/kg
Alk PAHs	C1-Benzanthracene/chrysenes	Sediment ≥ RM 4	332	332	100	1.4	54900	3500			ug/kg
Alk PAHs	C1-Benzanthracene/chrysenes	Sediment, sitewide	427	427	100	1.4	54900	3600			ug/kg
Alk PAHs	C1-Dibenzothiophenes	Sediment, mudflats (all)	136	135	99.3	2.03	4000	610	0.977	0.977	ug/kg
Alk PAHs	C1-Dibenzothiophenes	Sediment < RM 13	379	376	99.2	2.03	9600	610	0.977	10	ug/kg
Alk PAHs	C1-Dibenzothiophenes	Sediment ≥ RM 4	332	328	98.8	2.03	9600	590	0.977	10	ug/kg
Alk PAHs	C1-Dibenzothiophenes	Sediment, sitewide	427	423	99.1	2.03	9600	590	0.977	10	ug/kg
Alk PAHs	C1-Fluorenes	Sediment, mudflats (all)	136	135	99.3	2.02	5400	640	0.977	0.977	ug/kg
Alk PAHs	C1-Fluorenes	Sediment < RM 13	379	377	99.5	1.5	42000	780	0.977	10	ug/kg
Alk PAHs	C1-Fluorenes	Sediment ≥ RM 4	332	328	98.8	1.5	42000	730	0.977	30	ug/kg
Alk PAHs	C1-Fluorenes	Sediment, sitewide	427	423	99.1	1.5	42000	750	0.977	30	ug/kg
Alk PAHs	C1-Phenanthrene/anthracenes	Sediment, mudflats (all)	136	135	99.3	14.2	23000	3200	0.977	0.977	ug/kg
Alk PAHs	C1-Phenanthrene/anthracenes	Sediment < RM 13	379	377	99.5	2.6	137000	3900	0.977	40	ug/kg
Alk PAHs	C1-Phenanthrene/anthracenes	Sediment ≥ RM 4	332	330	99.4	2.6	137000	3600	0.977	40	ug/kg
Alk PAHs	C1-Phenanthrene/anthracenes	Sediment, sitewide	427	425	99.5	2.6	137000	3700	0.977	40	ug/kg
Alk PAHs	C1-Pyrene/fluoranthenes	Sediment, mudflats (all)	136	136	100	1.5	45000	6200			ug/kg
Alk PAHs	C1-Pyrene/fluoranthenes	Sediment < RM 13	379	379	100	1.5	75400	5500			ug/kg
Alk PAHs	C1-Pyrene/fluoranthenes	Sediment ≥ RM 4	332	332	100	1.5	75400	5100			ug/kg
Alk PAHs	C1-Pyrene/fluoranthenes	Sediment, sitewide	427	427	100	1.5	75400	5400			ug/kg
Alk PAHs	C2-Benzanthracene/chrysenes	Sediment, mudflats (all)	136	135	99.3	8.58	19000	2700	0.977	0.977	ug/kg
Alk PAHs	C2-Benzanthracene/chrysenes	Sediment < RM 13	379	377	99.5	8.58	22900	2400	0.977	1.3	ug/kg
Alk PAHs	C2-Benzanthracene/chrysenes	Sediment ≥ RM 4	332	330	99.4	8.58	22900	2200	0.977	1.3	ug/kg
Alk PAHs	C2-Benzanthracene/chrysenes	Sediment, sitewide	427	425	99.5	8.58	22900	2300	0.977	1.3	ug/kg
Alk PAHs	C2-Dibenzothiophenes	Sediment, mudflats (all)	136	135	99.3	2.76	7300	1100	0.977	0.977	ug/kg
Alk PAHs	C2-Dibenzothiophenes	Sediment < RM 13	379	375	98.9	2.76	9500	980	0.977	190	ug/kg
Alk PAHs	C2-Dibenzothiophenes	Sediment ≥ RM 4	332	328	98.8	2.76	9500	920	0.977	190	ug/kg
Alk PAHs	C2-Dibenzothiophenes	Sediment, sitewide	427	423	99.1	2.76	9500	940	0.977	190	ug/kg
Alk PAHs	C2-Fluorenes	Sediment, mudflats (all)	136	135	99.3	2.83	6800	1100	0.977	0.977	ug/kg
Alk PAHs	C2-Fluorenes	Sediment < RM 13	378	376	99.5	1.4	30300	1100	0.977	10	ug/kg
Alk PAHs	C2-Fluorenes	Sediment ≥ RM 4	331	327	98.8	1.4	30300	990	0.977	30	ug/kg
Alk PAHs	C2-Fluorenes	Sediment, sitewide	426	422	99.1	1.4	30300	1100	0.977	30	ug/kg
Alk PAHs	C2-Naphthalenes	Sediment, mudflats (all)	136	135	99.3	2.4	12200	890	1.95	1.95	ug/kg
Alk PAHs	C2-Naphthalenes	Sediment < RM 13	379	377	99.5	1.9	196000	1600	1.95	5.2	ug/kg
Alk PAHs	C2-Naphthalenes	Sediment ≥ RM 4	332	329	99.1	1.9	196000	1700	1.95	44	ug/kg
Alk PAHs	C2-Naphthalenes	Sediment, sitewide	427	424	99.3	1.9	196000	1500	1.95	44	ug/kg
Alk PAHs	C2-Phenanthrene/anthracenes	Sediment, mudflats (all)	136	135	99.3	11.1	28900	3500	0.977	0.977	ug/kg
Alk PAHs	C2-Phenanthrene/anthracenes	Sediment < RM 13	379	378	99.7	4.1	70300	3700	0.977	0.977	ug/kg

Sediment summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
Alk PAHs	C2-Phenanthrene/anthracenes	Sediment ≥ RM 4	332	330	99.4	4.1	70300	3400	0.977	33	ug/kg
Alk PAHs	C2-Phenanthrene/anthracenes	Sediment, sitewide	427	425	99.5	4.1	70300	3600	0.977	33	ug/kg
Alk PAHs	C3-Benzanthracene/chrysenes	Sediment, mudflats (all)	136	135	99.3	3.98	15000	1800	0.977	0.977	ug/kg
Alk PAHs	C3-Benzanthracene/chrysenes	Sediment < RM 13	379	377	99.5	3.98	15000	1300	0.977	1.3	ug/kg
Alk PAHs	C3-Benzanthracene/chrysenes	Sediment ≥ RM 4	332	330	99.4	3.98	14000	1100	0.977	1.3	ug/kg
Alk PAHs	C3-Benzanthracene/chrysenes	Sediment, sitewide	427	425	99.5	3.98	15000	1200	0.977	1.3	ug/kg
Alk PAHs	C3-Dibenzothiophenes	Sediment, mudflats (all)	136	135	99.3	2.86	8300	1200	0.977	0.977	ug/kg
Alk PAHs	C3-Dibenzothiophenes	Sediment < RM 13	379	377	99.5	2.86	8300	1000	0.977	1.3	ug/kg
Alk PAHs	C3-Dibenzothiophenes	Sediment ≥ RM 4	332	328	98.8	2.86	7200	940	0.977	87	ug/kg
Alk PAHs	C3-Dibenzothiophenes	Sediment, sitewide	427	423	99.1	2.86	8300	950	0.977	87	ug/kg
Alk PAHs	C3-Fluorenes	Sediment, mudflats (all)	136	135	99.3	2.02	11000	1400	0.977	0.977	ug/kg
Alk PAHs	C3-Fluorenes	Sediment < RM 13	379	376	99.2	2.02	14400	1100	0.977	10	ug/kg
Alk PAHs	C3-Fluorenes	Sediment ≥ RM 4	332	327	98.5	2.02	12900	1000	0.977	30	ug/kg
Alk PAHs	C3-Fluorenes	Sediment, sitewide	427	422	98.8	2.02	14400	1100	0.977	30	ug/kg
Alk PAHs	C3-Naphthalenes	Sediment, mudflats (all)	136	135	99.3	2.61	15700	1100	1.95	1.95	ug/kg
Alk PAHs	C3-Naphthalenes	Sediment < RM 13	379	377	99.5	2.4	72500	1400	1.95	700	ug/kg
Alk PAHs	C3-Naphthalenes	Sediment ≥ RM 4	332	330	99.4	2.4	72500	1300	1.95	6	ug/kg
Alk PAHs	C3-Naphthalenes	Sediment, sitewide	427	424	99.3	2.4	72500	1400	1.95	700	ug/kg
Alk PAHs	C3-Phenanthrene/anthracenes	Sediment, mudflats (all)	136	135	99.3	7.79	14300	2400	0.977	0.977	ug/kg
Alk PAHs	C3-Phenanthrene/anthracenes	Sediment < RM 13	379	378	99.7	2.7	28600	2400	0.977	0.977	ug/kg
Alk PAHs	C3-Phenanthrene/anthracenes	Sediment ≥ RM 4	332	329	99.1	2.7	28600	2200	0.977	330	ug/kg
Alk PAHs	C3-Phenanthrene/anthracenes	Sediment, sitewide	427	424	99.3	2.7	28600	2300	0.977	330	ug/kg
Alk PAHs	C4-Benzanthracene/chrysenes	Sediment, mudflats (all)	136	135	99.3	2.14	9500	1000	0.977	0.977	ug/kg
Alk PAHs	C4-Benzanthracene/chrysenes	Sediment < RM 13	379	377	99.5	2.14	9500	640	0.977	1.3	ug/kg
Alk PAHs	C4-Benzanthracene/chrysenes	Sediment ≥ RM 4	332	329	99.1	2.14	7600	560	0.977	81	ug/kg
Alk PAHs	C4-Benzanthracene/chrysenes	Sediment, sitewide	427	424	99.3	2.14	9500	610	0.977	81	ug/kg
Alk PAHs	C4-Dibenzothiophenes	Sediment, mudflats (all)	136	134	98.5	1.47	2440	400	0.977	50.1	ug/kg
Alk PAHs	C4-Dibenzothiophenes	Sediment < RM 13	379	370	97.6	1.47	3410	450	0.977	2500	ug/kg
Alk PAHs	C4-Dibenzothiophenes	Sediment ≥ RM 4	332	321	96.7	1.47	3410	440	0.977	2500	ug/kg
Alk PAHs	C4-Dibenzothiophenes	Sediment, sitewide	427	416	97.4	1.47	3410	430	0.977	2500	ug/kg
Alk PAHs	C4-Naphthalenes	Sediment, mudflats (all)	136	135	99.3	2.41	9220	1000	0.977	0.977	ug/kg
Alk PAHs	C4-Naphthalenes	Sediment < RM 13	378	377	99.7	1.7	25900	1100	0.977	0.977	ug/kg
Alk PAHs	C4-Naphthalenes	Sediment ≥ RM 4	331	328	99.1	1.7	24000	980	0.977	30	ug/kg
Alk PAHs	C4-Naphthalenes	Sediment, sitewide	426	423	99.3	1.7	25900	1000	0.977	30	ug/kg
Alk PAHs	C4-Phenanthrene/anthracenes	Sediment, mudflats (all)	136	134	98.5	2.89	7600	1200	0.977	120	ug/kg
Alk PAHs	C4-Phenanthrene/anthracenes	Sediment < RM 13	379	378	99.7	1.6	12000	1100	0.977	0.977	ug/kg
Alk PAHs	C4-Phenanthrene/anthracenes	Sediment ≥ RM 4	332	328	98.8	1.6	11100	1000	0.977	120	ug/kg
Alk PAHs	C4-Phenanthrene/anthracenes	Sediment, sitewide	427	423	99.1	1.6	12000	1000	0.977	120	ug/kg
SVOCs	1,1'-Biphenyl	Sediment, mudflats (all)	136	2	1.5	55.8	65.1	60.5	168	9560	ug/kg
SVOCs	1,1'-Biphenyl	Sediment < RM 13	379	22	5.8	21.5	15400	1100	167	9560	ug/kg
SVOCs	1,1'-Biphenyl	Sediment ≥ RM 4	332	18	5.4	21.5	15400	1300	167	9560	ug/kg
SVOCs	1,1'-Biphenyl	Sediment, sitewide	427	23	5.4	21.5	15400	1100	167	9560	ug/kg
SVOCs	2,4-Dinitrotoluene	Sediment, mudflats (all)	136	0	0				168	9560	ug/kg

Sediment summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
SVOCs	2,4-Dinitrotoluene	Sediment < RM 13	379	1	0.3	1070	1070		126	11900	ug/kg
SVOCs	2,4-Dinitrotoluene	Sediment ≥ RM 4	332	1	0.3	1070	1070		126	11900	ug/kg
SVOCs	2,4-Dinitrotoluene	Sediment, sitewide	427	1	0.2	1070	1070		126	11900	ug/kg
SVOCs	2,6-Dinitrotoluene	Sediment, mudflats (all)	136	0	0				168	9560	ug/kg
SVOCs	2,6-Dinitrotoluene	Sediment < RM 13	379	0	0				126	11900	ug/kg
SVOCs	2,6-Dinitrotoluene	Sediment ≥ RM 4	332	1	0.3	1100	1100		126	11900	ug/kg
SVOCs	2,6-Dinitrotoluene	Sediment, sitewide	427	1	0.2	1100	1100		126	11900	ug/kg
SVOCs	4-Methylphenol	Sediment, mudflats (all)	136	2	1.5	149	390	270	168	9560	ug/kg
SVOCs	4-Methylphenol	Sediment < RM 13	379	9	2.4	130	1600	470	126	11900	ug/kg
SVOCs	4-Methylphenol	Sediment ≥ RM 4	332	9	2.7	130	1600	470	126	11900	ug/kg
SVOCs	4-Methylphenol	Sediment, sitewide	427	10	2.3	130	1600	460	126	11900	ug/kg
SVOCs	Acetophenone	Sediment, mudflats (all)	136	29	21.3	56	3600	1300	168	9560	ug/kg
SVOCs	Acetophenone	Sediment < RM 13	379	68	17.9	40.9	3600	750	126	11900	ug/kg
SVOCs	Acetophenone	Sediment ≥ RM 4	332	53	16	40.9	2600	490	126	11900	ug/kg
SVOCs	Acetophenone	Sediment, sitewide	427	78	18.3	40.9	3600	690	126	11900	ug/kg
SVOCs	Benzaldehyde	Sediment, mudflats (all)	132	88	66.7	24	2400	390	168	9560	ug/kg
SVOCs	Benzaldehyde	Sediment < RM 13	374	217	58	21.8	2400	340	167	11900	ug/kg
SVOCs	Benzaldehyde	Sediment ≥ RM 4	328	191	58.2	21.8	1700	330	167	11900	ug/kg
SVOCs	Benzaldehyde	Sediment, sitewide	422	245	58.1	21.8	2400	340	167	11900	ug/kg
SVOCs	Bis-(2-ethylhexyl)phthalate	Sediment, mudflats (all)	136	123	90.4	53.9	287000	14000	168	4900	ug/kg
SVOCs	Bis-(2-ethylhexyl)phthalate	Sediment < RM 13	379	358	94.5	53.9	287000	13000	168	11000	ug/kg
SVOCs	Bis-(2-ethylhexyl)phthalate	Sediment ≥ RM 4	332	307	92.5	53.9	287000	13000	168	11000	ug/kg
SVOCs	Bis-(2-ethylhexyl)phthalate	Sediment, sitewide	427	399	93.4	53.9	287000	12000	168	11000	ug/kg
SVOCs	Butylbenzylphthalate	Sediment, mudflats (all)	136	63	46.3	47	22400	810	168	9560	ug/kg
SVOCs	Butylbenzylphthalate	Sediment < RM 13	379	187	49.3	51.8	25000	720	126	11900	ug/kg
SVOCs	Butylbenzylphthalate	Sediment ≥ RM 4	332	140	42.2	46	25000	860	126	11900	ug/kg
SVOCs	Butylbenzylphthalate	Sediment, sitewide	427	198	46.4	46	25000	690	126	11900	ug/kg
SVOCs	Caprolactam	Sediment, mudflats (all)	136	2	1.5	74	270	170	170	18600	ug/kg
SVOCs	Caprolactam	Sediment < RM 13	379	2	0.5	140	270	210	170	23100	ug/kg
SVOCs	Caprolactam	Sediment ≥ RM 4	332	2	0.6	74	270	170	170	23100	ug/kg
SVOCs	Caprolactam	Sediment, sitewide	427	3	0.7	74	270	160	170	23100	ug/kg
SVOCs	Carbazole	Sediment, mudflats (all)	136	63	46.3	48.2	900	200	168	9560	ug/kg
SVOCs	Carbazole	Sediment < RM 13	379	213	56.2	46.2	9900	370	167	9560	ug/kg
SVOCs	Carbazole	Sediment ≥ RM 4	332	198	59.6	45	9900	380	167	9560	ug/kg
SVOCs	Carbazole	Sediment, sitewide	427	246	57.6	45	9900	340	167	9560	ug/kg
SVOCs	Dibenzofuran	Sediment, mudflats (all)	136	18	13.2	40.8	390	130	168	9560	ug/kg
SVOCs	Dibenzofuran	Sediment < RM 13	379	94	24.8	40.8	9970	490	167	9560	ug/kg
SVOCs	Dibenzofuran	Sediment ≥ RM 4	332	90	27.1	40.8	9970	490	167	9560	ug/kg
SVOCs	Dibenzofuran	Sediment, sitewide	427	108	25.3	40.8	9970	440	167	9560	ug/kg
SVOCs	Diethylphthalate	Sediment, mudflats (all)	136	1	0.7	300	300		168	9560	ug/kg
SVOCs	Diethylphthalate	Sediment < RM 13	379	3	0.8	130	300	190	126	11900	ug/kg
SVOCs	Diethylphthalate	Sediment ≥ RM 4	332	0	0				126	11900	ug/kg
SVOCs	Diethylphthalate	Sediment, sitewide	427	3	0.7	130	300	190	126	11900	ug/kg

Sediment summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
SVOCs	Dimethylphthalate	Sediment, mudflats (all)	136	1	0.7	165	165		168	9560	ug/kg
SVOCs	Dimethylphthalate	Sediment < RM 13	379	1	0.3	165	165		126	11900	ug/kg
SVOCs	Dimethylphthalate	Sediment ≥ RM 4	332	1	0.3	165	165		126	11900	ug/kg
SVOCs	Dimethylphthalate	Sediment, sitewide	427	1	0.2	165	165		126	11900	ug/kg
SVOCs	Di-n-butylphthalate	Sediment, mudflats (all)	136	11	8.1	56	380	140	168	9560	ug/kg
SVOCs	Di-n-butylphthalate	Sediment < RM 13	379	36	9.5	66.4	830	240	126	11900	ug/kg
SVOCs	Di-n-butylphthalate	Sediment ≥ RM 4	332	29	8.7	53.1	830	220	126	11900	ug/kg
SVOCs	Di-n-butylphthalate	Sediment, sitewide	427	41	9.6	53.1	830	230	126	11900	ug/kg
SVOCs	Di-n-octylphthalate	Sediment, mudflats (all)	136	71	52.2	44	21500	1300	170	18600	ug/kg
SVOCs	Di-n-octylphthalate	Sediment < RM 13	379	248	65.4	31.7	45100	1600	170	18600	ug/kg
SVOCs	Di-n-octylphthalate	Sediment ≥ RM 4	332	207	62.3	31	45100	1800	170	18600	ug/kg
SVOCs	Di-n-octylphthalate	Sediment, sitewide	427	260	60.9	31	45100	1600	170	18600	ug/kg
SVOCs	Isophorone	Sediment, mudflats (all)	136	1	0.7	139	139		168	9560	ug/kg
SVOCs	Isophorone	Sediment < RM 13	379	5	1.3	135	24500	5080	126	11900	ug/kg
SVOCs	Isophorone	Sediment ≥ RM 4	332	3	0.9	135	458	255	126	11900	ug/kg
SVOCs	Isophorone	Sediment, sitewide	427	5	1.2	135	24500	5080	126	11900	ug/kg
SVOCs	n-Nitroso-di-n-propylamine	Sediment, mudflats (all)	136	0	0				168	9560	ug/kg
SVOCs	n-Nitroso-di-n-propylamine	Sediment < RM 13	379	0	0				126	11900	ug/kg
SVOCs	n-Nitroso-di-n-propylamine	Sediment ≥ RM 4	332	1	0.3	560	560		126	11900	ug/kg
SVOCs	n-Nitroso-di-n-propylamine	Sediment, sitewide	427	1	0.2	560	560		126	11900	ug/kg
SVOCs	n-Nitrosodiphenylamine	Sediment, mudflats (all)	136	3	2.2	39	227	135	168	9560	ug/kg
SVOCs	n-Nitrosodiphenylamine	Sediment < RM 13	379	19	5	39	2180	330	126	11900	ug/kg
SVOCs	n-Nitrosodiphenylamine	Sediment ≥ RM 4	332	18	5.4	39	2180	320	126	11900	ug/kg
SVOCs	n-Nitrosodiphenylamine	Sediment, sitewide	427	22	5.2	39	2180	300	126	11900	ug/kg
SVOCs	Pentachlorophenol	Sediment, mudflats (all)	136	1	0.7	370	370		325	18600	ug/kg
SVOCs	Pentachlorophenol	Sediment < RM 13	379	1	0.3	370	370		244	23100	ug/kg
SVOCs	Pentachlorophenol	Sediment ≥ RM 4	332	0	0				244	23100	ug/kg
SVOCs	Pentachlorophenol	Sediment, sitewide	427	1	0.2	370	370		244	23100	ug/kg
SVOCs	Phenol	Sediment, mudflats (all)	136	7	5.1	240	860	440	168	9560	ug/kg
SVOCs	Phenol	Sediment < RM 13	379	7	1.8	280	860	440	126	11900	ug/kg
SVOCs	Phenol	Sediment ≥ RM 4	332	5	1.5	240	520	360	126	11900	ug/kg
SVOCs	Phenol	Sediment, sitewide	427	8	1.9	240	860	420	126	11900	ug/kg
PCB Aroclors	Aroclor-1242	Sediment, mudflats (all)	73	69	94.5	9.4	4250	360	0.54	58	ug/kg
PCB Aroclors	Aroclor-1242	Sediment < RM 13	187	181	96.8	1.2	4900	440	0.52	58	ug/kg
PCB Aroclors	Aroclor-1242	Sediment ≥ RM 4	164	154	93.9	0.96	4900	350	0.52	58	ug/kg
PCB Aroclors	Aroclor-1242	Sediment, sitewide	226	215	95.1	0.96	4900	380	0.52	58	ug/kg
PCB Aroclors	Aroclor-1254	Sediment, mudflats (all)	73	71	97.3	19	1700	410	0.54	49	ug/kg
PCB Aroclors	Aroclor-1254	Sediment < RM 13	187	181	96.8	1.1	4800	470	0.87	49	ug/kg
PCB Aroclors	Aroclor-1254	Sediment ≥ RM 4	164	158	96.3	1.1	4800	380	0.54	49	ug/kg
PCB Aroclors	Aroclor-1254	Sediment, sitewide	226	219	96.9	1.1	4800	410	0.54	49	ug/kg
PCB Aroclors	Aroclor-1260	Sediment, mudflats (all)	73	54	74	9.6	581	200	0.54	170	ug/kg
PCB Aroclors	Aroclor-1260	Sediment < RM 13	187	160	85.6	1.4	1400	210	0.65	91	ug/kg
PCB Aroclors	Aroclor-1260	Sediment ≥ RM 4	164	119	72.6	0.8	1200	180	0.52	170	ug/kg

Sediment summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Aroclors	Aroclor-1260	Sediment, sitewide	226	176	77.9	0.8	1400	200	0.52	170	ug/kg
PCB Aroclors	Aroclor-1268	Sediment, mudflats (all)	73	0	0				0.54	170	ug/kg
PCB Aroclors	Aroclor-1268	Sediment < RM 13	187	1	0.5	300	300		0.47	120	ug/kg
PCB Aroclors	Aroclor-1268	Sediment ≥ RM 4	164	1	0.6	300	300		0.47	170	ug/kg
PCB Aroclors	Aroclor-1268	Sediment, sitewide	226	1	0.4	300	300		0.47	170	ug/kg
PCB Aroclors	Total PCB Aroclors	Sediment, mudflats (all)	73	72	98.6	38	6500	890	0.54	0.54	ug/kg
PCB Aroclors	Total PCB Aroclors	Sediment < RM 13	187	184	98.4	2.3	7800	1100	0.87	2	ug/kg
PCB Aroclors	Total PCB Aroclors	Sediment ≥ RM 4	164	161	98.2	2.3	7800	840	0.54	2	ug/kg
PCB Aroclors	Total PCB Aroclors	Sediment, sitewide	226	222	98.2	2.3	7800	930	0.54	2	ug/kg
PCB Aroclors	Total PCB Aroclors (ND=0.5DL)	Sediment, mudflats (all)	73	72	98.6	42	6700	1100	0.54	0.54	ug/kg
PCB Aroclors	Total PCB Aroclors (ND=0.5DL)	Sediment < RM 13	187	184	98.4	4.6	7900	1200	0.87	2	ug/kg
PCB Aroclors	Total PCB Aroclors (ND=0.5DL)	Sediment ≥ RM 4	164	161	98.2	4.6	7900	990	0.54	2	ug/kg
PCB Aroclors	Total PCB Aroclors (ND=0.5DL)	Sediment, sitewide	226	222	98.2	4.6	7900	1100	0.54	2	ug/kg
PCB Aroclors	Total PCB Aroclors (ND=DL)	Sediment, mudflats (all)	73	72	98.6	46	6900	1300	0.54	0.54	ug/kg
PCB Aroclors	Total PCB Aroclors (ND=DL)	Sediment < RM 13	187	184	98.4	6.9	8100	1400	0.87	2	ug/kg
PCB Aroclors	Total PCB Aroclors (ND=DL)	Sediment ≥ RM 4	164	161	98.2	6.1	8100	1100	0.54	2	ug/kg
PCB Aroclors	Total PCB Aroclors (ND=DL)	Sediment, sitewide	226	222	98.2	6.1	8100	1200	0.54	2	ug/kg
PCB Congener	PCB-1	Sediment, mudflats (all)	136	128	94.1	0.00935	29.4	1.4	0.00736	0.52	ug/kg
PCB Congener	PCB-1	Sediment < RM 13	381	369	96.9	0.00253	29.4	1.5	0.00073	0.58	ug/kg
PCB Congener	PCB-1	Sediment ≥ RM 4	334	318	95.2	0.00253	29.4	1.4	0.00071	0.58	ug/kg
PCB Congener	PCB-1	Sediment, sitewide	429	413	96.3	0.00253	29.4	1.4	0.00071	0.58	ug/kg
PCB Congener	PCB-2	Sediment, mudflats (all)	136	128	94.1	0.00433	7.03	0.47	0.00503	0.19	ug/kg
PCB Congener	PCB-2	Sediment < RM 13	381	360	94.5	0.00132	12.2	0.52	0.00026	0.393	ug/kg
PCB Congener	PCB-2	Sediment ≥ RM 4	334	310	92.8	0.00132	12.2	0.48	0.00026	0.393	ug/kg
PCB Congener	PCB-2	Sediment, sitewide	429	403	93.9	0.00132	12.2	0.47	0.00026	0.393	ug/kg
PCB Congener	PCB-3	Sediment, mudflats (all)	136	133	97.8	0.0131	22.9	1.3	0.0102	0.11	ug/kg
PCB Congener	PCB-3	Sediment < RM 13	381	375	98.4	0.00229	23.6	1.4	0.00081	0.54	ug/kg
PCB Congener	PCB-3	Sediment ≥ RM 4	334	327	97.9	0.00179	22.9	1.3	0.00081	0.54	ug/kg
PCB Congener	PCB-3	Sediment, sitewide	429	422	98.4	0.00179	23.6	1.3	0.00081	0.54	ug/kg
PCB Congener	PCB-4	Sediment, mudflats (all)	136	131	96.3	0.00754	137	8.2	0.111	0.47	ug/kg
PCB Congener	PCB-4	Sediment < RM 13	381	374	98.2	0.00754	184	8.7	0.111	2.96	ug/kg
PCB Congener	PCB-4	Sediment ≥ RM 4	334	326	97.6	0.00754	184	8.5	0.111	2.96	ug/kg
PCB Congener	PCB-4	Sediment, sitewide	429	421	98.1	0.00754	184	8.1	0.111	2.96	ug/kg
PCB Congener	PCB-5	Sediment, mudflats (all)	136	115	84.6	0.00132	6.23	0.3	0.00031	0.205	ug/kg
PCB Congener	PCB-5	Sediment < RM 13	381	295	77.4	0.000299	8.33	0.33	0.00049	2.33	ug/kg
PCB Congener	PCB-5	Sediment ≥ RM 4	334	254	76	0.000299	8.33	0.32	0.00031	2.33	ug/kg
PCB Congener	PCB-5	Sediment, sitewide	429	331	77.2	0.000299	8.33	0.31	0.00031	2.33	ug/kg
PCB Congener	PCB-6	Sediment, mudflats (all)	136	130	95.6	0.00344	190	5.8	0.0211	0.19	ug/kg
PCB Congener	PCB-6	Sediment < RM 13	381	375	98.4	0.00344	190	5.5	0.0211	0.237	ug/kg
PCB Congener	PCB-6	Sediment ≥ RM 4	334	327	97.9	0.00344	190	5.5	0.0211	0.237	ug/kg
PCB Congener	PCB-6	Sediment, sitewide	429	422	98.4	0.00344	190	5.1	0.0211	0.237	ug/kg
PCB Congener	PCB-7	Sediment, mudflats (all)	136	126	92.6	0.00312	14.9	0.74	0.00359	0.129	ug/kg
PCB Congener	PCB-7	Sediment < RM 13	381	346	90.8	0.00251	14.9	0.75	0.00146	2.25	ug/kg

Sediment summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congener	PCB-7	Sediment ≥ RM 4	334	301	90.1	0.00251	14.9	0.72	0.00146	2.25	ug/kg
PCB Congener	PCB-7	Sediment, sitewide	429	392	91.4	0.00251	14.9	0.69	0.00146	2.25	ug/kg
PCB Congener	PCB-8	Sediment, mudflats (all)	136	133	97.8	0.0222	350	20	0.0197	0.12	ug/kg
PCB Congener	PCB-8	Sediment < RM 13	381	379	99.5	0.014	536	20	0.0197	0.0374	ug/kg
PCB Congener	PCB-8	Sediment ≥ RM 4	334	331	99.1	0.014	536	20	0.0197	0.12	ug/kg
PCB Congener	PCB-8	Sediment, sitewide	429	426	99.3	0.014	536	19	0.0197	0.12	ug/kg
PCB Congener	PCB-9	Sediment, mudflats (all)	136	127	93.4	0.00482	25.9	1.2	0.00445	0.148	ug/kg
PCB Congener	PCB-9	Sediment < RM 13	381	356	93.4	0.00146	30.7	1.3	0.00254	2.26	ug/kg
PCB Congener	PCB-9	Sediment ≥ RM 4	334	307	91.9	0.00146	30.7	1.2	0.00254	2.26	ug/kg
PCB Congener	PCB-9	Sediment, sitewide	429	399	93	0.00146	30.7	1.1	0.00254	2.26	ug/kg
PCB Congener	PCB-10	Sediment, mudflats (all)	136	120	88.2	0.00303	5.71	0.39	0.0019	0.189	ug/kg
PCB Congener	PCB-10	Sediment < RM 13	381	342	89.8	0.00115	6.49	0.4	0.0013	2.43	ug/kg
PCB Congener	PCB-10	Sediment ≥ RM 4	334	295	88.3	0.00115	6.13	0.37	0.0013	2.43	ug/kg
PCB Congener	PCB-10	Sediment, sitewide	429	384	89.5	0.00115	6.49	0.37	0.0013	2.43	ug/kg
PCB Congener	PCB-11	Sediment, mudflats (all)	136	128	94.1	0.165	200	14	0.0536	0.25	ug/kg
PCB Congener	PCB-11	Sediment < RM 13	381	368	96.6	0.0335	443	15	0.0156	0.34	ug/kg
PCB Congener	PCB-11	Sediment ≥ RM 4	334	319	95.5	0.0335	443	14	0.0156	0.34	ug/kg
PCB Congener	PCB-11	Sediment, sitewide	429	412	96	0.0335	443	14	0.0156	0.34	ug/kg
PCB Congener	PCB-12	Sediment, mudflats (all)	136	133	97.8	0.00631	60.2	2.8	0.00621	0.13	ug/kg
PCB Congener	PCB-12	Sediment < RM 13	381	373	97.9	0.00558	60.2	2.8	0.00509	2.21	ug/kg
PCB Congener	PCB-12	Sediment ≥ RM 4	334	326	97.6	0.00558	60.2	2.6	0.00509	2.21	ug/kg
PCB Congener	PCB-12	Sediment, sitewide	429	421	98.1	0.00558	60.2	2.6	0.00509	2.21	ug/kg
PCB Congener	PCB-14	Sediment, mudflats (all)	136	26	19.1	0.0018	0.171	0.05	0.00028	0.174	ug/kg
PCB Congener	PCB-14	Sediment < RM 13	381	80	21	0.00045	0.623	0.053	0.00043	1.9	ug/kg
PCB Congener	PCB-14	Sediment ≥ RM 4	334	63	18.9	0.00045	0.623	0.059	0.00028	1.9	ug/kg
PCB Congener	PCB-14	Sediment, sitewide	429	80	18.6	0.00045	0.623	0.053	0.00028	1.9	ug/kg
PCB Congener	PCB-15	Sediment, mudflats (all)	136	135	99.3	0.0276	194	16	0.0773	0.0773	ug/kg
PCB Congener	PCB-15	Sediment < RM 13	381	380	99.7	0.021	249	17	0.0773	0.0773	ug/kg
PCB Congener	PCB-15	Sediment ≥ RM 4	334	333	99.7	0.021	249	16	0.0773	0.0773	ug/kg
PCB Congener	PCB-15	Sediment, sitewide	429	428	99.8	0.021	249	15	0.0773	0.0773	ug/kg
PCB Congener	PCB-16	Sediment, mudflats (all)	136	133	97.8	0.0459	358	22	0.01	0.109	ug/kg
PCB Congener	PCB-16	Sediment < RM 13	381	376	98.7	0.0189	561	24	0.01	0.208	ug/kg
PCB Congener	PCB-16	Sediment ≥ RM 4	334	330	98.8	0.0189	561	24	0.01	0.208	ug/kg
PCB Congener	PCB-16	Sediment, sitewide	429	424	98.8	0.0189	561	22	0.01	0.208	ug/kg
PCB Congener	PCB-17	Sediment, mudflats (all)	136	133	97.8	0.0112	368	25	0.0216	0.33	ug/kg
PCB Congener	PCB-17	Sediment < RM 13	381	377	99	0.0112	524	27	0.0141	0.174	ug/kg
PCB Congener	PCB-17	Sediment ≥ RM 4	334	330	98.8	0.0112	524	27	0.0216	0.33	ug/kg
PCB Congener	PCB-17	Sediment, sitewide	429	424	98.8	0.0112	524	25	0.0141	0.33	ug/kg
PCB Congener	PCB-18	Sediment, mudflats (all)	136	132	97.1	0.0969	710	48	0.0214	0.62	ug/kg
PCB Congener	PCB-18	Sediment < RM 13	381	378	99.2	0.0352	1100	53	0.0214	0.243	ug/kg
PCB Congener	PCB-18	Sediment ≥ RM 4	334	330	98.8	0.0497	1100	53	0.0214	0.62	ug/kg
PCB Congener	PCB-18	Sediment, sitewide	429	425	99.1	0.0352	1100	49	0.0214	0.62	ug/kg
PCB Congener	PCB-19	Sediment, mudflats (all)	136	135	99.3	0.00276	65.5	4.8	0.16	0.16	ug/kg

Sediment summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congener	PCB-19	Sediment < RM 13	381	375	98.4	0.00276	117	5.3	0.00527	1.84	ug/kg
PCB Congener	PCB-19	Sediment ≥ RM 4	334	328	98.2	0.00276	117	5.2	0.00527	1.84	ug/kg
PCB Congener	PCB-19	Sediment, sitewide	429	422	98.4	0.00276	117	4.9	0.00527	1.84	ug/kg
PCB Congener	PCB-20	Sediment, mudflats (all)	136	135	99.3	0.0609	923	76	0.155	0.155	ug/kg
PCB Congener	PCB-20	Sediment < RM 13	381	380	99.7	0.057	1580	82	0.155	0.155	ug/kg
PCB Congener	PCB-20	Sediment ≥ RM 4	334	333	99.7	0.0609	1580	80	0.155	0.155	ug/kg
PCB Congener	PCB-20	Sediment, sitewide	429	428	99.8	0.057	1580	76	0.155	0.155	ug/kg
PCB Congener	PCB-21	Sediment, mudflats (all)	136	134	98.5	0.0167	532	32	0.0198	0.0368	ug/kg
PCB Congener	PCB-21	Sediment < RM 13	381	379	99.5	0.0167	882	35	0.0198	0.0368	ug/kg
PCB Congener	PCB-21	Sediment ≥ RM 4	334	332	99.4	0.0167	882	34	0.0198	0.0368	ug/kg
PCB Congener	PCB-21	Sediment, sitewide	429	427	99.5	0.0167	882	32	0.0198	0.0368	ug/kg
PCB Congener	PCB-22	Sediment, mudflats (all)	136	134	98.5	0.0153	332	24	0.0184	0.0374	ug/kg
PCB Congener	PCB-22	Sediment < RM 13	381	378	99.2	0.0153	520	25	0.0108	0.0374	ug/kg
PCB Congener	PCB-22	Sediment ≥ RM 4	334	332	99.4	0.0153	520	25	0.0184	0.0374	ug/kg
PCB Congener	PCB-22	Sediment, sitewide	429	426	99.3	0.0153	520	23	0.0108	0.0374	ug/kg
PCB Congener	PCB-23	Sediment, mudflats (all)	136	54	39.7	0.00075	1.05	0.15	0.00106	0.071	ug/kg
PCB Congener	PCB-23	Sediment < RM 13	381	163	42.8	0.002	1.39	0.14	0.00034	0.96	ug/kg
PCB Congener	PCB-23	Sediment ≥ RM 4	334	136	40.7	0.00075	1.39	0.14	0.00034	0.96	ug/kg
PCB Congener	PCB-23	Sediment, sitewide	429	176	41	0.00075	1.39	0.13	0.00034	0.96	ug/kg
PCB Congener	PCB-24	Sediment, mudflats (all)	136	124	91.2	0.00495	10.3	0.68	0.00093	0.0534	ug/kg
PCB Congener	PCB-24	Sediment < RM 13	381	344	90.3	0.00161	12.6	0.73	0.00065	1.26	ug/kg
PCB Congener	PCB-24	Sediment ≥ RM 4	334	298	89.2	0.00161	12.6	0.72	0.00065	1.26	ug/kg
PCB Congener	PCB-24	Sediment, sitewide	429	388	90.4	0.00161	12.6	0.67	0.00065	1.26	ug/kg
PCB Congener	PCB-25	Sediment, mudflats (all)	136	135	99.3	0.00395	149	8.3	0.0161	0.0161	ug/kg
PCB Congener	PCB-25	Sediment < RM 13	381	378	99.2	0.00395	149	8.6	0.00973	0.117	ug/kg
PCB Congener	PCB-25	Sediment ≥ RM 4	334	332	99.4	0.00395	149	8.5	0.0161	0.117	ug/kg
PCB Congener	PCB-25	Sediment, sitewide	429	426	99.3	0.00395	149	8	0.00973	0.117	ug/kg
PCB Congener	PCB-26	Sediment, mudflats (all)	136	135	99.3	0.00768	172	13	0.0241	0.0241	ug/kg
PCB Congener	PCB-26	Sediment < RM 13	381	379	99.5	0.00768	248	14	0.0101	0.0241	ug/kg
PCB Congener	PCB-26	Sediment ≥ RM 4	334	333	99.7	0.00768	248	13	0.0241	0.0241	ug/kg
PCB Congener	PCB-26	Sediment, sitewide	429	427	99.5	0.00768	248	13	0.0101	0.0241	ug/kg
PCB Congener	PCB-27	Sediment, mudflats (all)	136	135	99.3	0.00264	49.2	3.7	0.099	0.099	ug/kg
PCB Congener	PCB-27	Sediment < RM 13	381	378	99.2	0.00264	71.6	4.1	0.0105	1.08	ug/kg
PCB Congener	PCB-27	Sediment ≥ RM 4	334	331	99.1	0.00264	71.6	4	0.099	1.08	ug/kg
PCB Congener	PCB-27	Sediment, sitewide	429	425	99.1	0.00264	71.6	3.8	0.0105	1.08	ug/kg
PCB Congener	PCB-31	Sediment, mudflats (all)	136	134	98.5	0.0398	849	64	0.0406	0.0982	ug/kg
PCB Congener	PCB-31	Sediment < RM 13	381	379	99.5	0.0391	1460	70	0.0406	0.0982	ug/kg
PCB Congener	PCB-31	Sediment ≥ RM 4	334	332	99.4	0.0398	1460	68	0.0406	0.0982	ug/kg
PCB Congener	PCB-31	Sediment, sitewide	429	427	99.5	0.0391	1460	64	0.0406	0.0982	ug/kg
PCB Congener	PCB-32	Sediment, mudflats (all)	136	134	98.5	0.0101	224	16	0.0154	0.12	ug/kg
PCB Congener	PCB-32	Sediment < RM 13	381	377	99	0.0101	336	18	0.00997	0.123	ug/kg
PCB Congener	PCB-32	Sediment ≥ RM 4	334	331	99.1	0.0101	336	17	0.0154	0.123	ug/kg
PCB Congener	PCB-32	Sediment, sitewide	429	425	99.1	0.0101	336	16	0.00997	0.123	ug/kg

Sediment summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congener	PCB-34	Sediment, mudflats (all)	136	122	89.7	0.00325	5.42	0.51	0.0011	0.029	ug/kg
PCB Congener	PCB-34	Sediment < RM 13	381	346	90.8	0.000833	10.5	0.55	0.0011	0.945	ug/kg
PCB Congener	PCB-34	Sediment ≥ RM 4	334	296	88.6	0.000833	10.5	0.56	0.0011	0.945	ug/kg
PCB Congener	PCB-34	Sediment, sitewide	429	387	90.2	0.000833	10.5	0.51	0.0011	0.945	ug/kg
PCB Congener	PCB-35	Sediment, mudflats (all)	136	133	97.8	0.00341	24.4	2.2	0.00299	0.022	ug/kg
PCB Congener	PCB-35	Sediment < RM 13	381	369	96.9	0.00341	33.9	2.3	0.0026	0.971	ug/kg
PCB Congener	PCB-35	Sediment ≥ RM 4	334	322	96.4	0.00297	33.9	2.1	0.0026	0.971	ug/kg
PCB Congener	PCB-35	Sediment, sitewide	429	416	97	0.00297	33.9	2.1	0.0026	0.971	ug/kg
PCB Congener	PCB-36	Sediment, mudflats (all)	136	40	29.4	0.0014	0.178	0.033	0.00065	0.158	ug/kg
PCB Congener	PCB-36	Sediment < RM 13	381	120	31.5	0.00298	0.2	0.04	0.00033	0.938	ug/kg
PCB Congener	PCB-36	Sediment ≥ RM 4	334	93	27.8	0.0014	0.188	0.038	0.00033	0.938	ug/kg
PCB Congener	PCB-36	Sediment, sitewide	429	131	30.5	0.0014	0.2	0.038	0.00033	0.938	ug/kg
PCB Congener	PCB-37	Sediment, mudflats (all)	136	135	99.3	0.034	279	22	0.0625	0.0625	ug/kg
PCB Congener	PCB-37	Sediment < RM 13	381	380	99.7	0.0197	443	23	0.0625	0.0625	ug/kg
PCB Congener	PCB-37	Sediment ≥ RM 4	334	333	99.7	0.0292	443	23	0.0625	0.0625	ug/kg
PCB Congener	PCB-37	Sediment, sitewide	429	428	99.8	0.0197	443	21	0.0625	0.0625	ug/kg
PCB Congener	PCB-38	Sediment, mudflats (all)	136	48	35.3	0.0018	0.568	0.12	0.00076	0.0728	ug/kg
PCB Congener	PCB-38	Sediment < RM 13	381	139	36.5	0.000462	0.797	0.11	0.00035	0.99	ug/kg
PCB Congener	PCB-38	Sediment ≥ RM 4	334	120	35.9	0.000462	0.797	0.12	0.00035	0.99	ug/kg
PCB Congener	PCB-38	Sediment, sitewide	429	151	35.2	0.000462	0.797	0.1	0.00035	0.99	ug/kg
PCB Congener	PCB-39	Sediment, mudflats (all)	136	94	69.1	0.00207	4.35	0.51	0.00102	0.0715	ug/kg
PCB Congener	PCB-39	Sediment < RM 13	381	303	79.5	0.00134	7.41	0.47	0.00102	0.88	ug/kg
PCB Congener	PCB-39	Sediment ≥ RM 4	334	259	77.5	0.00134	7.41	0.49	0.00102	0.88	ug/kg
PCB Congener	PCB-39	Sediment, sitewide	429	337	78.6	0.00134	7.41	0.45	0.00102	0.88	ug/kg
PCB Congener	PCB-40	Sediment, mudflats (all)	136	135	99.3	0.0211	314	31	0.0673	0.0673	ug/kg
PCB Congener	PCB-40	Sediment < RM 13	381	379	99.5	0.0163	568	35	0.00064	0.0673	ug/kg
PCB Congener	PCB-40	Sediment ≥ RM 4	334	332	99.4	0.0211	568	34	0.00064	0.0673	ug/kg
PCB Congener	PCB-40	Sediment, sitewide	429	427	99.5	0.0163	568	32	0.00064	0.0673	ug/kg
PCB Congener	PCB-41	Sediment, mudflats (all)	117	113	96.6	0.00176	83.5	5.2	0.00281	0.0195	ug/kg
PCB Congener	PCB-41	Sediment < RM 13	300	294	98	0.00176	143	5.9	0.00281	0.0195	ug/kg
PCB Congener	PCB-41	Sediment ≥ RM 4	266	261	98.1	0.00176	143	5.9	0.00281	0.0195	ug/kg
PCB Congener	PCB-41	Sediment, sitewide	332	326	98.2	0.00176	143	5.5	0.00281	0.0195	ug/kg
PCB Congener	PCB-42	Sediment, mudflats (all)	136	135	99.3	0.0113	199	19	0.0377	0.0377	ug/kg
PCB Congener	PCB-42	Sediment < RM 13	381	379	99.5	0.0113	377	21	0.0106	0.0377	ug/kg
PCB Congener	PCB-42	Sediment ≥ RM 4	334	333	99.7	0.0113	377	20	0.0377	0.0377	ug/kg
PCB Congener	PCB-42	Sediment, sitewide	429	427	99.5	0.0113	377	19	0.0106	0.0377	ug/kg
PCB Congener	PCB-43	Sediment, mudflats (all)	136	133	97.8	0.00114	32.2	2.8	0.00247	0.0209	ug/kg
PCB Congener	PCB-43	Sediment < RM 13	381	371	97.4	0.00114	66.4	3	0.00247	1.4	ug/kg
PCB Congener	PCB-43	Sediment ≥ RM 4	334	326	97.6	0.00114	66.4	3	0.00247	1.4	ug/kg
PCB Congener	PCB-43	Sediment, sitewide	429	419	97.7	0.00114	66.4	2.8	0.00247	1.4	ug/kg
PCB Congener	PCB-44	Sediment, mudflats (all)	136	133	97.8	0.058	689	73	0.0458	1.98	ug/kg
PCB Congener	PCB-44	Sediment < RM 13	381	378	99.2	0.042	1330	82	0.0458	1.98	ug/kg
PCB Congener	PCB-44	Sediment ≥ RM 4	334	331	99.1	0.058	1330	78	0.0458	1.98	ug/kg

Sediment summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congener	PCB-44	Sediment, sitewide	429	426	99.3	0.042	1330	75	0.0458	1.98	ug/kg
PCB Congener	PCB-45	Sediment, mudflats (all)	136	134	98.5	0.0057	132	11	0.00551	0.023	ug/kg
PCB Congener	PCB-45	Sediment < RM 13	381	378	99.2	0.0057	254	14	0.0108	0.198	ug/kg
PCB Congener	PCB-45	Sediment ≥ RM 4	334	331	99.1	0.0057	254	13	0.00551	0.198	ug/kg
PCB Congener	PCB-45	Sediment, sitewide	429	425	99.1	0.0057	254	13	0.00551	0.198	ug/kg
PCB Congener	PCB-46	Sediment, mudflats (all)	136	132	97.1	0.00235	53.5	4.6	0.00437	0.0204	ug/kg
PCB Congener	PCB-46	Sediment < RM 13	381	375	98.4	0.00235	102	5.1	0.00437	1.84	ug/kg
PCB Congener	PCB-46	Sediment ≥ RM 4	334	328	98.2	0.00235	102	5	0.00437	1.84	ug/kg
PCB Congener	PCB-46	Sediment, sitewide	429	422	98.4	0.00235	102	4.7	0.00437	1.84	ug/kg
PCB Congener	PCB-48	Sediment, mudflats (all)	136	134	98.5	0.00432	176	15	0.0073	0.0178	ug/kg
PCB Congener	PCB-48	Sediment < RM 13	381	377	99	0.00432	338	16	0.0073	0.189	ug/kg
PCB Congener	PCB-48	Sediment ≥ RM 4	334	331	99.1	0.00432	338	16	0.0073	0.189	ug/kg
PCB Congener	PCB-48	Sediment, sitewide	429	425	99.1	0.00432	338	15	0.0073	0.189	ug/kg
PCB Congener	PCB-49	Sediment, mudflats (all)	136	135	99.3	0.0274	394	43	0.093	0.093	ug/kg
PCB Congener	PCB-49	Sediment < RM 13	381	380	99.7	0.0216	744	47	0.093	0.093	ug/kg
PCB Congener	PCB-49	Sediment ≥ RM 4	334	333	99.7	0.0274	744	45	0.093	0.093	ug/kg
PCB Congener	PCB-49	Sediment, sitewide	429	428	99.8	0.0216	744	44	0.093	0.093	ug/kg
PCB Congener	PCB-50	Sediment, mudflats (all)	136	134	98.5	0.00691	113	12	0.00512	0.028	ug/kg
PCB Congener	PCB-50	Sediment < RM 13	381	378	99.2	0.00691	228	13	0.00921	0.183	ug/kg
PCB Congener	PCB-50	Sediment ≥ RM 4	334	331	99.1	0.00691	228	13	0.00512	0.183	ug/kg
PCB Congener	PCB-50	Sediment, sitewide	429	425	99.1	0.00691	228	12	0.00512	0.183	ug/kg
PCB Congener	PCB-51	Sediment, mudflats (all)	117	114	97.4	0.0053	38.2	7.8	0.00475	0.343	ug/kg
PCB Congener	PCB-51	Sediment < RM 13	300	296	98.7	0.0053	68.8	9.2	0.00475	0.343	ug/kg
PCB Congener	PCB-51	Sediment ≥ RM 4	266	263	98.9	0.0053	68.8	7.8	0.00475	0.343	ug/kg
PCB Congener	PCB-51	Sediment, sitewide	332	328	98.8	0.0053	68.8	8.5	0.00475	0.343	ug/kg
PCB Congener	PCB-52	Sediment, mudflats (all)	136	134	98.5	0.058	788	76	0.0512	0.177	ug/kg
PCB Congener	PCB-52	Sediment < RM 13	381	379	99.5	0.0558	1400	85	0.0512	0.177	ug/kg
PCB Congener	PCB-52	Sediment ≥ RM 4	334	332	99.4	0.058	1400	82	0.0512	0.177	ug/kg
PCB Congener	PCB-52	Sediment, sitewide	429	427	99.5	0.0558	1400	78	0.0512	0.177	ug/kg
PCB Congener	PCB-54	Sediment, mudflats (all)	136	128	94.1	0.000705	4.18	0.73	0.00297	0.0371	ug/kg
PCB Congener	PCB-54	Sediment < RM 13	381	362	95	0.000705	7.38	0.97	0.00297	1.33	ug/kg
PCB Congener	PCB-54	Sediment ≥ RM 4	334	310	92.8	0.000705	7.38	0.83	0.00297	1.33	ug/kg
PCB Congener	PCB-54	Sediment, sitewide	429	403	93.9	0.000705	7.38	0.89	0.00297	1.33	ug/kg
PCB Congener	PCB-55	Sediment, mudflats (all)	136	114	83.8	0.00467	11.5	0.94	0.00109	0.129	ug/kg
PCB Congener	PCB-55	Sediment < RM 13	381	306	80.3	0.00173	22	1.1	0.00109	1.16	ug/kg
PCB Congener	PCB-55	Sediment ≥ RM 4	334	266	79.6	0.00173	22	1	0.00109	1.16	ug/kg
PCB Congener	PCB-55	Sediment, sitewide	429	341	79.5	0.00173	22	1	0.00109	1.16	ug/kg
PCB Congener	PCB-56	Sediment, mudflats (all)	136	136	100	0.0223	345	27			ug/kg
PCB Congener	PCB-56	Sediment < RM 13	381	381	100	0.0166	641	31			ug/kg
PCB Congener	PCB-56	Sediment ≥ RM 4	334	334	100	0.0223	641	30			ug/kg
PCB Congener	PCB-56	Sediment, sitewide	429	429	100	0.0166	641	28			ug/kg
PCB Congener	PCB-57	Sediment, mudflats (all)	136	119	87.5	0.00433	3.44	0.39	0.00107	0.037	ug/kg
PCB Congener	PCB-57	Sediment < RM 13	381	331	86.9	0.00108	5.43	0.37	0.00048	1.11	ug/kg

Sediment summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congener	PCB-57	Sediment ≥ RM 4	334	283	84.7	0.00108	5.43	0.37	0.00048	1.11	ug/kg
PCB Congener	PCB-57	Sediment, sitewide	429	372	86.7	0.00108	5.43	0.34	0.00048	1.11	ug/kg
PCB Congener	PCB-58	Sediment, mudflats (all)	136	114	83.8	0.00213	1.68	0.22	0.00105	0.0365	ug/kg
PCB Congener	PCB-58	Sediment < RM 13	381	309	81.1	0.000973	2.83	0.24	0.00047	1.1	ug/kg
PCB Congener	PCB-58	Sediment ≥ RM 4	334	258	77.2	0.000772	2.83	0.24	0.00047	1.1	ug/kg
PCB Congener	PCB-58	Sediment, sitewide	429	343	80	0.000772	2.83	0.22	0.00047	1.1	ug/kg
PCB Congener	PCB-59	Sediment, mudflats (all)	136	135	99.3	0.00433	57.9	5.9	0.013	0.013	ug/kg
PCB Congener	PCB-59	Sediment < RM 13	381	378	99.2	0.00433	112	6.3	0.00729	0.136	ug/kg
PCB Congener	PCB-59	Sediment ≥ RM 4	334	332	99.4	0.00433	112	6.1	0.013	0.136	ug/kg
PCB Congener	PCB-59	Sediment, sitewide	429	426	99.3	0.00433	112	5.8	0.00729	0.136	ug/kg
PCB Congener	PCB-60	Sediment, mudflats (all)	136	135	99.3	0.007	174	11	0.0203	0.0203	ug/kg
PCB Congener	PCB-60	Sediment < RM 13	381	379	99.5	0.007	322	13	0.0106	0.0203	ug/kg
PCB Congener	PCB-60	Sediment ≥ RM 4	334	333	99.7	0.007	322	12	0.0203	0.0203	ug/kg
PCB Congener	PCB-60	Sediment, sitewide	429	427	99.5	0.007	322	12	0.0106	0.0203	ug/kg
PCB Congener	PCB-61	Sediment, mudflats (all)	136	135	99.3	0.064	1160	100	0.177	0.177	ug/kg
PCB Congener	PCB-61	Sediment < RM 13	381	380	99.7	0.0593	2170	110	0.177	0.177	ug/kg
PCB Congener	PCB-61	Sediment ≥ RM 4	334	333	99.7	0.064	2170	110	0.177	0.177	ug/kg
PCB Congener	PCB-61	Sediment, sitewide	429	428	99.8	0.0593	2170	100	0.177	0.177	ug/kg
PCB Congener	PCB-63	Sediment, mudflats (all)	136	133	97.8	0.0012	26.5	2.4	0.00315	0.0194	ug/kg
PCB Congener	PCB-63	Sediment < RM 13	381	372	97.6	0.0012	50.7	2.6	0.00315	1.03	ug/kg
PCB Congener	PCB-63	Sediment ≥ RM 4	334	326	97.6	0.0012	50.7	2.5	0.00315	1.03	ug/kg
PCB Congener	PCB-63	Sediment, sitewide	429	420	97.9	0.0012	50.7	2.4	0.00315	1.03	ug/kg
PCB Congener	PCB-64	Sediment, mudflats (all)	136	134	98.5	0.0217	278	26	0.0178	0.0517	ug/kg
PCB Congener	PCB-64	Sediment < RM 13	381	378	99.2	0.0108	488	28	0.00043	0.0517	ug/kg
PCB Congener	PCB-64	Sediment ≥ RM 4	334	331	99.1	0.0217	488	27	0.00043	0.0517	ug/kg
PCB Congener	PCB-64	Sediment, sitewide	429	426	99.3	0.0108	488	26	0.00043	0.0517	ug/kg
PCB Congener	PCB-66	Sediment, mudflats (all)	136	135	99.3	0.0545	620	56	0.132	0.132	ug/kg
PCB Congener	PCB-66	Sediment < RM 13	381	380	99.7	0.0344	1240	63	0.132	0.132	ug/kg
PCB Congener	PCB-66	Sediment ≥ RM 4	334	333	99.7	0.0545	1240	61	0.132	0.132	ug/kg
PCB Congener	PCB-66	Sediment, sitewide	429	428	99.8	0.0344	1240	58	0.132	0.132	ug/kg
PCB Congener	PCB-67	Sediment, mudflats (all)	136	133	97.8	0.00145	26.8	2.2	0.0031	0.02	ug/kg
PCB Congener	PCB-67	Sediment < RM 13	381	371	97.4	0.00145	41.3	2.4	0.0031	0.997	ug/kg
PCB Congener	PCB-67	Sediment ≥ RM 4	334	325	97.3	0.00145	41.3	2.4	0.0031	0.997	ug/kg
PCB Congener	PCB-67	Sediment, sitewide	429	419	97.7	0.00145	41.3	2.2	0.0031	0.997	ug/kg
PCB Congener	PCB-68	Sediment, mudflats (all)	136	128	94.1	0.000733	2.82	0.41	0.00313	0.0317	ug/kg
PCB Congener	PCB-68	Sediment < RM 13	381	357	93.7	0.000733	3.91	0.46	0.00183	1	ug/kg
PCB Congener	PCB-68	Sediment ≥ RM 4	334	308	92.2	0.000733	3.91	0.43	0.00183	1	ug/kg
PCB Congener	PCB-68	Sediment, sitewide	429	400	93.2	0.000733	3.91	0.43	0.00183	1	ug/kg
PCB Congener	PCB-72	Sediment, mudflats (all)	136	128	94.1	0.00083	4.44	0.59	0.00209	0.034	ug/kg
PCB Congener	PCB-72	Sediment < RM 13	381	362	95	0.00083	7.23	0.64	0.00237	1.08	ug/kg
PCB Congener	PCB-72	Sediment ≥ RM 4	334	314	94	0.00083	7.23	0.62	0.00209	1.08	ug/kg
PCB Congener	PCB-72	Sediment, sitewide	429	406	94.6	0.00083	7.23	0.6	0.00209	1.08	ug/kg
PCB Congener	PCB-73	Sediment, mudflats (all)	117	93	79.5	0.000565	1.1	0.23	0.00084	0.0265	ug/kg

Sediment summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congener	PCB-73	Sediment < RM 13	300	244	81.3	0.000565	1.35	0.26	0.00159	0.0706	ug/kg
PCB Congener	PCB-73	Sediment ≥ RM 4	266	217	81.6	0.000565	1.35	0.23	0.00084	0.0706	ug/kg
PCB Congener	PCB-73	Sediment, sitewide	332	271	81.6	0.000565	1.35	0.24	0.00084	0.0706	ug/kg
PCB Congener	PCB-77	Sediment, mudflats (all)	136	135	99.3	0.00964	100	8.4	0.0111	0.0111	ug/kg
PCB Congener	PCB-77	Sediment < RM 13	381	377	99	0.00818	144	8.6	0.0111	1.04	ug/kg
PCB Congener	PCB-77	Sediment ≥ RM 4	334	332	99.4	0.00818	144	8.1	0.129	1.04	ug/kg
PCB Congener	PCB-77	Sediment, sitewide	429	425	99.1	0.00818	144	7.9	0.0111	1.04	ug/kg
PCB Congener	PCB-78	Sediment, mudflats (all)	136	4	2.9	0.0065	0.03	0.015	0.0011	0.186	ug/kg
PCB Congener	PCB-78	Sediment < RM 13	381	13	3.4	0.00121	0.349	0.065	0.00049	1.15	ug/kg
PCB Congener	PCB-78	Sediment ≥ RM 4	334	12	3.6	0.00121	0.349	0.066	0.00049	1.15	ug/kg
PCB Congener	PCB-78	Sediment, sitewide	429	15	3.5	0.00121	0.349	0.057	0.00049	1.15	ug/kg
PCB Congener	PCB-79	Sediment, mudflats (all)	136	121	89	0.00349	4.12	0.51	0.00097	0.0278	ug/kg
PCB Congener	PCB-79	Sediment < RM 13	381	352	92.4	0.00105	13	0.58	0.00097	1.01	ug/kg
PCB Congener	PCB-79	Sediment ≥ RM 4	334	307	91.9	0.00105	13	0.56	0.00097	1.01	ug/kg
PCB Congener	PCB-79	Sediment, sitewide	429	396	92.3	0.00105	13	0.54	0.00097	1.01	ug/kg
PCB Congener	PCB-80	Sediment, mudflats (all)	136	7	5.1	0.00265	0.328	0.081	0.00081	0.153	ug/kg
PCB Congener	PCB-80	Sediment < RM 13	381	21	5.5	0.0046	0.36	0.11	0.00042	0.982	ug/kg
PCB Congener	PCB-80	Sediment ≥ RM 4	334	15	4.5	0.00265	0.36	0.081	0.00042	0.982	ug/kg
PCB Congener	PCB-80	Sediment, sitewide	429	24	5.6	0.00265	0.36	0.095	0.00042	0.982	ug/kg
PCB Congener	PCB-81	Sediment, mudflats (all)	136	109	80.1	0.00157	2.9	0.24	0.00118	0.131	ug/kg
PCB Congener	PCB-81	Sediment < RM 13	381	282	74	0.00142	4.62	0.27	0.00045	1.03	ug/kg
PCB Congener	PCB-81	Sediment ≥ RM 4	334	234	70.1	0.00142	4.62	0.27	0.00045	1.03	ug/kg
PCB Congener	PCB-81	Sediment, sitewide	429	311	72.5	0.00142	4.62	0.25	0.00045	1.03	ug/kg
PCB Congener	PCB-82	Sediment, mudflats (all)	136	136	100	0.00553	85.6	7.6			ug/kg
PCB Congener	PCB-82	Sediment < RM 13	381	377	99	0.00553	250	9.1	0.0107	0.268	ug/kg
PCB Congener	PCB-82	Sediment ≥ RM 4	334	331	99.1	0.00553	250	8.9	0.0239	0.268	ug/kg
PCB Congener	PCB-82	Sediment, sitewide	429	425	99.1	0.00553	250	8.4	0.0107	0.268	ug/kg
PCB Congener	PCB-83	Sediment, mudflats (all)	136	132	97.1	0.00502	150	6.4	0.00348	0.018	ug/kg
PCB Congener	PCB-83	Sediment < RM 13	381	371	97.4	0.00502	355	9.6	0.00348	0.086	ug/kg
PCB Congener	PCB-83	Sediment ≥ RM 4	334	326	97.6	0.00502	355	8.3	0.00348	0.086	ug/kg
PCB Congener	PCB-83	Sediment, sitewide	429	419	97.7	0.00502	355	8.8	0.00348	0.086	ug/kg
PCB Congener	PCB-84	Sediment, mudflats (all)	136	135	99.3	0.0223	157	17	0.0104	0.0104	ug/kg
PCB Congener	PCB-84	Sediment < RM 13	381	379	99.5	0.0223	610	20	0.0103	0.0104	ug/kg
PCB Congener	PCB-84	Sediment ≥ RM 4	334	333	99.7	0.0223	610	19	0.0104	0.0104	ug/kg
PCB Congener	PCB-84	Sediment, sitewide	429	427	99.5	0.0223	610	18	0.0103	0.0104	ug/kg
PCB Congener	PCB-85	Sediment, mudflats (all)	136	133	97.8	0.00904	93.8	9.1	0.0087	0.836	ug/kg
PCB Congener	PCB-85	Sediment < RM 13	381	374	98.2	0.00904	290	11	0.0068	0.836	ug/kg
PCB Congener	PCB-85	Sediment ≥ RM 4	334	329	98.5	0.00904	290	11	0.0068	0.836	ug/kg
PCB Congener	PCB-85	Sediment, sitewide	429	422	98.4	0.00904	290	9.9	0.0068	0.836	ug/kg
PCB Congener	PCB-86	Sediment, mudflats (all)	136	136	100	0.0291	370	37			ug/kg
PCB Congener	PCB-86	Sediment < RM 13	381	380	99.7	0.0291	1500	44	0.00767	0.0077	ug/kg
PCB Congener	PCB-86	Sediment ≥ RM 4	334	334	100	0.0291	1500	43			ug/kg
PCB Congener	PCB-86	Sediment, sitewide	429	428	99.8	0.0291	1500	41	0.00767	0.0077	ug/kg

Sediment summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congener	PCB-88	Sediment, mudflats (all)	136	27	19.9	0.148	41.6	5.2	0.00049	1.13	ug/kg
PCB Congener	PCB-88	Sediment < RM 13	381	106	27.8	0.017	93.6	6.9	0.00076	1.4	ug/kg
PCB Congener	PCB-88	Sediment ≥ RM 4	334	91	27.2	0.017	93.6	5.7	0.00049	1.4	ug/kg
PCB Congener	PCB-88	Sediment, sitewide	429	123	28.7	0.017	93.6	6.2	0.00049	1.4	ug/kg
PCB Congener	PCB-89	Sediment, mudflats (all)	136	128	94.1	0.0148	11.3	1.1	0.0008	0.046	ug/kg
PCB Congener	PCB-89	Sediment < RM 13	381	358	94	0.00207	22.1	1.3	0.0008	1.52	ug/kg
PCB Congener	PCB-89	Sediment ≥ RM 4	334	310	92.8	0.00207	22.1	1.3	0.0008	1.52	ug/kg
PCB Congener	PCB-89	Sediment, sitewide	429	402	93.7	0.00207	22.1	1.2	0.0008	1.52	ug/kg
PCB Congener	PCB-90	Sediment, mudflats (all)	136	136	100	0.0426	481	57			ug/kg
PCB Congener	PCB-90	Sediment < RM 13	381	381	100	0.039	2300	67			ug/kg
PCB Congener	PCB-90	Sediment ≥ RM 4	334	334	100	0.0426	2300	65			ug/kg
PCB Congener	PCB-90	Sediment, sitewide	429	429	100	0.039	2300	62			ug/kg
PCB Congener	PCB-91	Sediment, mudflats (all)	117	114	97.4	0.00601	80.6	9.5	0.0018	0.013	ug/kg
PCB Congener	PCB-91	Sediment < RM 13	300	289	96.3	0.00601	220	11	0.0018	0.013	ug/kg
PCB Congener	PCB-91	Sediment ≥ RM 4	266	258	97	0.00601	220	10	0.0011	0.011	ug/kg
PCB Congener	PCB-91	Sediment, sitewide	332	320	96.4	0.00601	220	10	0.0011	0.013	ug/kg
PCB Congener	PCB-92	Sediment, mudflats (all)	136	136	100	0.0089	88.1	11			ug/kg
PCB Congener	PCB-92	Sediment < RM 13	381	380	99.7	0.0089	410	13	0.0092	0.0092	ug/kg
PCB Congener	PCB-92	Sediment ≥ RM 4	334	334	100	0.0089	410	12			ug/kg
PCB Congener	PCB-92	Sediment, sitewide	429	428	99.8	0.0089	410	12	0.0092	0.0092	ug/kg
PCB Congener	PCB-93	Sediment, mudflats (all)	136	133	97.8	0.0073	11.4	2.2	0.00258	0.0149	ug/kg
PCB Congener	PCB-93	Sediment < RM 13	381	372	97.6	0.0073	40	2.7	0.00258	0.134	ug/kg
PCB Congener	PCB-93	Sediment ≥ RM 4	334	324	97	0.00563	13.1	2.2	0.00258	0.134	ug/kg
PCB Congener	PCB-93	Sediment, sitewide	429	417	97.2	0.00563	40	2.5	0.00258	0.134	ug/kg
PCB Congener	PCB-94	Sediment, mudflats (all)	136	128	94.1	0.00166	4.21	0.74	0.00278	0.046	ug/kg
PCB Congener	PCB-94	Sediment < RM 13	381	358	94	0.00166	6.2	0.87	0.00087	1.52	ug/kg
PCB Congener	PCB-94	Sediment ≥ RM 4	334	308	92.2	0.00166	6.2	0.78	0.00087	1.52	ug/kg
PCB Congener	PCB-94	Sediment, sitewide	429	400	93.2	0.00166	6.2	0.8	0.00087	1.52	ug/kg
PCB Congener	PCB-95	Sediment, mudflats (all)	136	136	100	0.0341	380	44			ug/kg
PCB Congener	PCB-95	Sediment < RM 13	381	381	100	0.0223	1600	52			ug/kg
PCB Congener	PCB-95	Sediment ≥ RM 4	334	334	100	0.0341	1600	50			ug/kg
PCB Congener	PCB-95	Sediment, sitewide	429	429	100	0.0223	1600	48			ug/kg
PCB Congener	PCB-96	Sediment, mudflats (all)	136	131	96.3	0.00132	6.31	0.78	0.00196	0.0344	ug/kg
PCB Congener	PCB-96	Sediment < RM 13	381	365	95.8	0.00132	12.5	0.91	0.00196	1.14	ug/kg
PCB Congener	PCB-96	Sediment ≥ RM 4	334	317	94.9	0.00132	12.5	0.86	0.00196	1.14	ug/kg
PCB Congener	PCB-96	Sediment, sitewide	429	410	95.6	0.00132	12.5	0.84	0.00196	1.14	ug/kg
PCB Congener	PCB-98	Sediment, mudflats (all)	136	64	47.1	0.00336	11.8	0.79	0.00049	0.861	ug/kg
PCB Congener	PCB-98	Sediment < RM 13	381	195	51.2	0.00336	23.7	1.4	0.00092	1.31	ug/kg
PCB Congener	PCB-98	Sediment ≥ RM 4	334	169	50.6	0.0027	23.7	1.1	0.00049	1.31	ug/kg
PCB Congener	PCB-98	Sediment, sitewide	429	219	51	0.0027	23.7	1.2	0.00049	1.31	ug/kg
PCB Congener	PCB-99	Sediment, mudflats (all)	117	117	100	0.0226	223	30			ug/kg
PCB Congener	PCB-99	Sediment < RM 13	300	299	99.7	0.013	750	35	0.0023	0.0023	ug/kg
PCB Congener	PCB-99	Sediment ≥ RM 4	266	265	99.6	0.0226	750	35	0.0023	0.0023	ug/kg

Sediment summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congener	PCB-99	Sediment, sitewide	332	331	99.7	0.013	750	33	0.0023	0.0023	ug/kg
PCB Congener	PCB-102	Sediment, mudflats (all)	117	114	97.4	0.00336	19.7	3	0.00263	0.013	ug/kg
PCB Congener	PCB-102	Sediment < RM 13	300	291	97	0.00336	57	3.6	0.00263	0.174	ug/kg
PCB Congener	PCB-102	Sediment ≥ RM 4	266	261	98.1	0.00336	57	3.4	0.00263	0.0199	ug/kg
PCB Congener	PCB-102	Sediment, sitewide	332	322	97	0.00336	57	3.3	0.00263	0.174	ug/kg
PCB Congener	PCB-103	Sediment, mudflats (all)	136	129	94.9	0.00208	6.82	1	0.00249	0.0403	ug/kg
PCB Congener	PCB-103	Sediment < RM 13	381	366	96.1	0.002	7.7	1.2	0.00249	1.33	ug/kg
PCB Congener	PCB-103	Sediment ≥ RM 4	334	317	94.9	0.002	7.7	1.1	0.00249	1.33	ug/kg
PCB Congener	PCB-103	Sediment, sitewide	429	408	95.1	0.002	7.7	1.1	0.00249	1.33	ug/kg
PCB Congener	PCB-104	Sediment, mudflats (all)	136	115	84.6	0.0026	1.51	0.26	0.00069	0.152	ug/kg
PCB Congener	PCB-104	Sediment < RM 13	381	336	88.2	0.00225	2.15	0.3	0.00058	1.01	ug/kg
PCB Congener	PCB-104	Sediment ≥ RM 4	334	286	85.6	0.00225	2.15	0.25	0.00058	1.01	ug/kg
PCB Congener	PCB-104	Sediment, sitewide	429	372	86.7	0.00225	2.15	0.27	0.00058	1.01	ug/kg
PCB Congener	PCB-105	Sediment, mudflats (all)	136	136	100	0.0199	201	20			ug/kg
PCB Congener	PCB-105	Sediment < RM 13	381	380	99.7	0.0199	780	24	0.0076	0.0076	ug/kg
PCB Congener	PCB-105	Sediment ≥ RM 4	334	334	100	0.0199	780	23			ug/kg
PCB Congener	PCB-105	Sediment, sitewide	429	428	99.8	0.0199	780	22	0.0076	0.0076	ug/kg
PCB Congener	PCB-106	Sediment, mudflats (all)	136	23	16.9	0.00289	0.369	0.089	0.00037	0.756	ug/kg
PCB Congener	PCB-106	Sediment < RM 13	381	59	15.5	0.00289	0.724	0.12	0.00042	0.948	ug/kg
PCB Congener	PCB-106	Sediment ≥ RM 4	334	50	15	0.00289	0.724	0.13	0.00037	0.948	ug/kg
PCB Congener	PCB-106	Sediment, sitewide	429	59	13.8	0.00289	0.724	0.12	0.00037	0.948	ug/kg
PCB Congener	PCB-107	Sediment, mudflats (all)	136	133	97.8	0.00404	16.7	2.1	0.00213	0.0114	ug/kg
PCB Congener	PCB-107	Sediment < RM 13	381	372	97.6	0.00404	85	2.6	0.00213	0.155	ug/kg
PCB Congener	PCB-107	Sediment ≥ RM 4	334	326	97.6	0.00404	85	2.4	0.00213	0.155	ug/kg
PCB Congener	PCB-107	Sediment, sitewide	429	420	97.9	0.00404	85	2.4	0.00213	0.155	ug/kg
PCB Congener	PCB-108	Sediment, mudflats (all)	40	40	100	0.0422	8.93	1.2			ug/kg
PCB Congener	PCB-108	Sediment < RM 13	101	98	97	0.00244	27	1.5	0.00465	0.967	ug/kg
PCB Congener	PCB-108	Sediment ≥ RM 4	81	78	96.3	0.00244	27	1.4	0.00465	0.967	ug/kg
PCB Congener	PCB-108	Sediment, sitewide	118	115	97.5	0.00244	27	1.4	0.00465	0.967	ug/kg
PCB Congener	PCB-109	Sediment, mudflats (all)	96	94	97.9	0.00791	27.9	4	0.0019	0.0106	ug/kg
PCB Congener	PCB-109	Sediment < RM 13	280	276	98.6	0.00791	120	4.4	0.0019	0.0157	ug/kg
PCB Congener	PCB-109	Sediment ≥ RM 4	253	250	98.8	0.00791	120	4.4	0.0019	0.0157	ug/kg
PCB Congener	PCB-109	Sediment, sitewide	311	307	98.7	0.00791	120	4.1	0.0019	0.0157	ug/kg
PCB Congener	PCB-110	Sediment, mudflats (all)	136	136	100	0.0605	532	61			ug/kg
PCB Congener	PCB-110	Sediment < RM 13	381	379	99.5	0.026	2100	71	0.0041	0.0646	ug/kg
PCB Congener	PCB-110	Sediment ≥ RM 4	334	332	99.4	0.0605	2100	69	0.0041	0.0646	ug/kg
PCB Congener	PCB-110	Sediment, sitewide	429	427	99.5	0.026	2100	66	0.0041	0.0646	ug/kg
PCB Congener	PCB-111	Sediment, mudflats (all)	136	36	26.5	0.0029	0.226	0.047	0.00043	0.713	ug/kg
PCB Congener	PCB-111	Sediment < RM 13	381	105	27.6	0.000899	0.435	0.059	0.00054	0.951	ug/kg
PCB Congener	PCB-111	Sediment ≥ RM 4	334	79	23.7	0.000899	0.435	0.065	0.00043	0.951	ug/kg
PCB Congener	PCB-111	Sediment, sitewide	429	110	25.6	0.000899	0.435	0.057	0.00043	0.951	ug/kg
PCB Congener	PCB-112	Sediment, mudflats (all)	136	37	27.2	0.0096	5.07	0.32	0.0004	0.726	ug/kg
PCB Congener	PCB-112	Sediment < RM 13	381	84	22	0.0055	24	0.86	0.00056	1.03	ug/kg

Sediment summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congener	PCB-112	Sediment ≥ RM 4	334	74	22.2	0.0055	24	0.96	0.0004	1.03	ug/kg
PCB Congener	PCB-112	Sediment, sitewide	429	87	20.3	0.0055	24	0.84	0.0004	1.03	ug/kg
PCB Congener	PCB-114	Sediment, mudflats (all)	136	130	95.6	0.00155	13.7	1.3	0.00215	0.014	ug/kg
PCB Congener	PCB-114	Sediment < RM 13	381	364	95.5	0.00147	51	1.5	0.00186	0.769	ug/kg
PCB Congener	PCB-114	Sediment ≥ RM 4	334	318	95.2	0.00147	51	1.5	0.00186	0.769	ug/kg
PCB Congener	PCB-114	Sediment, sitewide	429	411	95.8	0.00147	51	1.4	0.00186	0.769	ug/kg
PCB Congener	PCB-115	Sediment, mudflats (all)	117	57	48.7	0.00216	10	1.3	0.00035	0.748	ug/kg
PCB Congener	PCB-115	Sediment < RM 13	300	157	52.3	0.00216	27	1.6	0.00092	0.748	ug/kg
PCB Congener	PCB-115	Sediment ≥ RM 4	266	136	51.1	0.00216	27	1.6	0.00035	0.748	ug/kg
PCB Congener	PCB-115	Sediment, sitewide	332	169	50.9	0.00216	27	1.5	0.00035	0.748	ug/kg
PCB Congener	PCB-117	Sediment, mudflats (all)	117	101	86.3	0.00229	66.6	2.2	0.00087	0.139	ug/kg
PCB Congener	PCB-117	Sediment < RM 13	300	256	85.3	0.00229	66.6	2.2	0.0011	0.224	ug/kg
PCB Congener	PCB-117	Sediment ≥ RM 4	266	222	83.5	0.00229	66.6	2.2	0.00087	0.224	ug/kg
PCB Congener	PCB-117	Sediment, sitewide	332	278	83.7	0.00229	66.6	2.1	0.00087	0.224	ug/kg
PCB Congener	PCB-118	Sediment, mudflats (all)	136	136	100	0.0426	405	48			ug/kg
PCB Congener	PCB-118	Sediment < RM 13	381	381	100	0.0243	1700	54			ug/kg
PCB Congener	PCB-118	Sediment ≥ RM 4	334	334	100	0.0426	1700	53			ug/kg
PCB Congener	PCB-118	Sediment, sitewide	429	429	100	0.0243	1700	50			ug/kg
PCB Congener	PCB-120	Sediment, mudflats (all)	136	93	68.4	0.000836	1.03	0.17	0.00081	0.716	ug/kg
PCB Congener	PCB-120	Sediment < RM 13	381	250	65.6	0.000836	1.58	0.2	0.00056	0.979	ug/kg
PCB Congener	PCB-120	Sediment ≥ RM 4	334	199	59.6	0.000836	1.58	0.19	0.00056	0.979	ug/kg
PCB Congener	PCB-120	Sediment, sitewide	429	271	63.2	0.000836	1.58	0.19	0.00056	0.979	ug/kg
PCB Congener	PCB-121	Sediment, mudflats (all)	136	52	38.2	0.00267	0.493	0.039	0.00042	0.728	ug/kg
PCB Congener	PCB-121	Sediment < RM 13	381	125	32.8	0.00267	0.493	0.044	0.00054	0.986	ug/kg
PCB Congener	PCB-121	Sediment ≥ RM 4	334	98	29.3	0.00063	0.493	0.038	0.00042	0.986	ug/kg
PCB Congener	PCB-121	Sediment, sitewide	429	135	31.5	0.00063	0.493	0.042	0.00042	0.986	ug/kg
PCB Congener	PCB-122	Sediment, mudflats (all)	136	129	94.9	0.00244	6.53	0.74	0.0024	0.0168	ug/kg
PCB Congener	PCB-122	Sediment < RM 13	381	358	94	0.00193	28	0.9	0.00227	1.03	ug/kg
PCB Congener	PCB-122	Sediment ≥ RM 4	334	312	93.4	0.00193	28	0.87	0.00227	1.03	ug/kg
PCB Congener	PCB-122	Sediment, sitewide	429	403	93.9	0.00193	28	0.83	0.00227	1.03	ug/kg
PCB Congener	PCB-123	Sediment, mudflats (all)	136	132	97.1	0.00355	8.58	0.98	0.00218	0.0138	ug/kg
PCB Congener	PCB-123	Sediment < RM 13	381	366	96.1	0.00143	30	1.1	0.00218	0.938	ug/kg
PCB Congener	PCB-123	Sediment ≥ RM 4	334	319	95.5	0.00143	30	1	0.00218	0.938	ug/kg
PCB Congener	PCB-123	Sediment, sitewide	429	412	96	0.00143	30	1	0.00218	0.938	ug/kg
PCB Congener	PCB-126	Sediment, mudflats (all)	136	126	92.6	0.0027	2.03	0.21	0.00094	0.0355	ug/kg
PCB Congener	PCB-126	Sediment < RM 13	381	331	86.9	0.00137	2.3	0.22	0.00057	1.12	ug/kg
PCB Congener	PCB-126	Sediment ≥ RM 4	334	282	84.4	0.00137	2.3	0.21	0.00057	1.12	ug/kg
PCB Congener	PCB-126	Sediment, sitewide	429	371	86.5	0.00137	2.3	0.2	0.00057	1.12	ug/kg
PCB Congener	PCB-127	Sediment, mudflats (all)	136	11	8.1	0.0226	0.389	0.099	0.00044	0.714	ug/kg
PCB Congener	PCB-127	Sediment < RM 13	381	32	8.4	0.00118	3.4	0.22	0.00042	0.937	ug/kg
PCB Congener	PCB-127	Sediment ≥ RM 4	334	23	6.9	0.00118	3.4	0.29	0.00042	0.937	ug/kg
PCB Congener	PCB-127	Sediment, sitewide	429	36	8.4	0.00118	3.4	0.2	0.00042	0.937	ug/kg
PCB Congener	PCB-128	Sediment, mudflats (all)	136	136	100	0.00979	55.2	7.5			ug/kg

Sediment summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congener	PCB-128	Sediment < RM 13	381	379	99.5	0.00979	390	8.9	0.0159	0.0307	ug/kg
PCB Congener	PCB-128	Sediment ≥ RM 4	334	333	99.7	0.00979	390	8.7	0.0307	0.0307	ug/kg
PCB Congener	PCB-128	Sediment, sitewide	429	427	99.5	0.00979	390	8.2	0.0159	0.0307	ug/kg
PCB Congener	PCB-129	Sediment, mudflats (all)	136	136	100	0.0684	359	52			ug/kg
PCB Congener	PCB-129	Sediment < RM 13	381	380	99.7	0.0457	1600	59	0.0082	0.0082	ug/kg
PCB Congener	PCB-129	Sediment ≥ RM 4	334	333	99.7	0.065	1600	56	0.0082	0.0082	ug/kg
PCB Congener	PCB-129	Sediment, sitewide	429	428	99.8	0.0457	1600	54	0.0082	0.0082	ug/kg
PCB Congener	PCB-130	Sediment, mudflats (all)	136	134	98.5	0.0136	21.8	3.2	0.00218	0.0142	ug/kg
PCB Congener	PCB-130	Sediment < RM 13	381	374	98.2	0.00427	120	3.7	0.00218	2.02	ug/kg
PCB Congener	PCB-130	Sediment ≥ RM 4	334	328	98.2	0.00427	120	3.5	0.00218	2.02	ug/kg
PCB Congener	PCB-130	Sediment, sitewide	429	422	98.4	0.00427	120	3.4	0.00218	2.02	ug/kg
PCB Congener	PCB-131	Sediment, mudflats (all)	136	127	93.4	0.0024	5.47	0.73	0.00162	0.0652	ug/kg
PCB Congener	PCB-131	Sediment < RM 13	381	357	93.7	0.00145	31	0.85	0.00162	2.07	ug/kg
PCB Congener	PCB-131	Sediment ≥ RM 4	334	310	92.8	0.00145	31	0.84	0.00162	2.07	ug/kg
PCB Congener	PCB-131	Sediment, sitewide	429	401	93.5	0.00145	31	0.79	0.00162	2.07	ug/kg
PCB Congener	PCB-132	Sediment, mudflats (all)	136	136	100	0.0197	122	17			ug/kg
PCB Congener	PCB-132	Sediment < RM 13	381	380	99.7	0.0197	560	20	0.00649	0.0065	ug/kg
PCB Congener	PCB-132	Sediment ≥ RM 4	334	334	100	0.0197	560	19			ug/kg
PCB Congener	PCB-132	Sediment, sitewide	429	428	99.8	0.0197	560	18	0.00649	0.0065	ug/kg
PCB Congener	PCB-133	Sediment, mudflats (all)	136	132	97.1	0.00518	5.74	0.85	0.0015	0.0133	ug/kg
PCB Congener	PCB-133	Sediment < RM 13	381	366	96.1	0.00171	20	0.97	0.0015	1.9	ug/kg
PCB Congener	PCB-133	Sediment ≥ RM 4	334	320	95.8	0.00171	20	0.9	0.0015	1.9	ug/kg
PCB Congener	PCB-133	Sediment, sitewide	429	412	96	0.00171	20	0.9	0.0015	1.9	ug/kg
PCB Congener	PCB-134	Sediment, mudflats (all)	136	134	98.5	0.0106	21.5	3.1	0.00225	0.0066	ug/kg
PCB Congener	PCB-134	Sediment < RM 13	381	376	98.7	0.00513	130	3.7	0.00225	2.02	ug/kg
PCB Congener	PCB-134	Sediment ≥ RM 4	334	330	98.8	0.00513	130	3.5	0.00225	2.02	ug/kg
PCB Congener	PCB-134	Sediment, sitewide	429	424	98.8	0.00513	130	3.4	0.00225	2.02	ug/kg
PCB Congener	PCB-135	Sediment, mudflats (all)	136	136	100	0.0184	126	18			ug/kg
PCB Congener	PCB-135	Sediment < RM 13	381	379	99.5	0.0184	340	21	0.00598	0.0063	ug/kg
PCB Congener	PCB-135	Sediment ≥ RM 4	334	334	100	0.0184	340	19			ug/kg
PCB Congener	PCB-135	Sediment, sitewide	429	427	99.5	0.0184	340	19	0.00598	0.0063	ug/kg
PCB Congener	PCB-136	Sediment, mudflats (all)	136	136	100	0.00673	47.9	6.7			ug/kg
PCB Congener	PCB-136	Sediment < RM 13	381	379	99.5	0.00673	210	7.8	0.00449	1.48	ug/kg
PCB Congener	PCB-136	Sediment ≥ RM 4	334	332	99.4	0.00673	210	7.2	0.0778	1.48	ug/kg
PCB Congener	PCB-136	Sediment, sitewide	429	426	99.3	0.00673	210	7.2	0.00449	1.48	ug/kg
PCB Congener	PCB-137	Sediment, mudflats (all)	136	133	97.8	0.0113	15.7	2.2	0.00192	0.0117	ug/kg
PCB Congener	PCB-137	Sediment < RM 13	381	369	96.9	0.00336	99	2.5	0.00192	1.74	ug/kg
PCB Congener	PCB-137	Sediment ≥ RM 4	334	326	97.6	0.00336	99	2.4	0.00192	1.74	ug/kg
PCB Congener	PCB-137	Sediment, sitewide	429	417	97.2	0.00336	99	2.3	0.00192	1.74	ug/kg
PCB Congener	PCB-139	Sediment, mudflats (all)	136	132	97.1	0.0044	6.08	0.95	0.00176	0.026	ug/kg
PCB Congener	PCB-139	Sediment < RM 13	381	365	95.8	0.00164	35	1.1	0.00176	1.73	ug/kg
PCB Congener	PCB-139	Sediment ≥ RM 4	334	321	96.1	0.00164	35	1.1	0.00176	1.73	ug/kg
PCB Congener	PCB-139	Sediment, sitewide	429	412	96	0.00164	35	1	0.00176	1.73	ug/kg

Sediment summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congener	PCB-141	Sediment, mudflats (all)	136	136	100	0.00963	68.1	9.5			ug/kg
PCB Congener	PCB-141	Sediment < RM 13	381	379	99.5	0.00963	240	11	0.004	0.0063	ug/kg
PCB Congener	PCB-141	Sediment ≥ RM 4	334	333	99.7	0.00963	240	10	0.004	0.004	ug/kg
PCB Congener	PCB-141	Sediment, sitewide	429	427	99.5	0.00963	240	10	0.004	0.0063	ug/kg
PCB Congener	PCB-142	Sediment, mudflats (all)	136	19	14	0.00344	0.119	0.036	0.00028	0.214	ug/kg
PCB Congener	PCB-142	Sediment < RM 13	381	44	11.5	0.00344	0.195	0.045	0.00058	1.99	ug/kg
PCB Congener	PCB-142	Sediment ≥ RM 4	334	34	10.2	0.00344	0.189	0.047	0.00028	1.99	ug/kg
PCB Congener	PCB-142	Sediment, sitewide	429	44	10.3	0.00344	0.195	0.045	0.00028	1.99	ug/kg
PCB Congener	PCB-143	Sediment, mudflats (all)	117	63	53.8	0.00105	1.04	0.17	0.00025	0.038	ug/kg
PCB Congener	PCB-143	Sediment < RM 13	300	159	53	0.00105	1.55	0.19	0.00051	0.0596	ug/kg
PCB Congener	PCB-143	Sediment ≥ RM 4	266	140	52.6	0.00105	1.55	0.19	0.00025	0.0407	ug/kg
PCB Congener	PCB-143	Sediment, sitewide	332	170	51.2	0.00105	1.55	0.18	0.00025	0.0596	ug/kg
PCB Congener	PCB-144	Sediment, mudflats (all)	136	135	99.3	0.00933	17.4	2.4	0.00182	0.0018	ug/kg
PCB Congener	PCB-144	Sediment < RM 13	381	375	98.4	0.00424	66	2.8	0.00182	1.87	ug/kg
PCB Congener	PCB-144	Sediment ≥ RM 4	334	330	98.8	0.00424	66	2.6	0.00182	1.87	ug/kg
PCB Congener	PCB-144	Sediment, sitewide	429	423	98.6	0.00424	66	2.6	0.00182	1.87	ug/kg
PCB Congener	PCB-145	Sediment, mudflats (all)	136	43	31.6	0.00194	0.159	0.035	0.00022	0.152	ug/kg
PCB Congener	PCB-145	Sediment < RM 13	381	132	34.6	0.0014	1.1	0.045	0.00045	1.42	ug/kg
PCB Congener	PCB-145	Sediment ≥ RM 4	334	117	35	0.0014	1.1	0.047	0.00022	1.42	ug/kg
PCB Congener	PCB-145	Sediment, sitewide	429	141	32.9	0.0014	1.1	0.044	0.00022	1.42	ug/kg
PCB Congener	PCB-146	Sediment, mudflats (all)	136	136	100	0.00914	57.1	7.5			ug/kg
PCB Congener	PCB-146	Sediment < RM 13	381	380	99.7	0.00914	160	8.5	0.00585	0.0059	ug/kg
PCB Congener	PCB-146	Sediment ≥ RM 4	334	334	100	0.00914	160	7.9			ug/kg
PCB Congener	PCB-146	Sediment, sitewide	429	428	99.8	0.00914	160	7.8	0.00585	0.0059	ug/kg
PCB Congener	PCB-147	Sediment, mudflats (all)	136	136	100	0.0461	277	41			ug/kg
PCB Congener	PCB-147	Sediment < RM 13	381	381	100	0.0304	860	48			ug/kg
PCB Congener	PCB-147	Sediment ≥ RM 4	334	334	100	0.0461	860	43			ug/kg
PCB Congener	PCB-147	Sediment, sitewide	429	429	100	0.0304	860	44			ug/kg
PCB Congener	PCB-148	Sediment, mudflats (all)	136	114	83.8	0.0022	0.741	0.15	0.00057	0.212	ug/kg
PCB Congener	PCB-148	Sediment < RM 13	381	296	77.7	0.00256	4.6	0.19	0.00057	1.98	ug/kg
PCB Congener	PCB-148	Sediment ≥ RM 4	334	252	75.4	0.0022	0.741	0.15	0.00057	1.98	ug/kg
PCB Congener	PCB-148	Sediment, sitewide	429	328	76.5	0.0022	4.6	0.17	0.00057	1.98	ug/kg
PCB Congener	PCB-150	Sediment, mudflats (all)	136	119	87.5	0.000799	1.63	0.17	0.00045	0.148	ug/kg
PCB Congener	PCB-150	Sediment < RM 13	381	329	86.4	0.000799	6.4	0.22	0.00063	1.38	ug/kg
PCB Congener	PCB-150	Sediment ≥ RM 4	334	276	82.6	0.000799	1.3	0.16	0.00045	1.38	ug/kg
PCB Congener	PCB-150	Sediment, sitewide	429	362	84.4	0.000799	6.4	0.2	0.00045	1.38	ug/kg
PCB Congener	PCB-152	Sediment, mudflats (all)	136	111	81.6	0.00261	0.373	0.12	0.00043	0.151	ug/kg
PCB Congener	PCB-152	Sediment < RM 13	381	305	80.1	0.00144	3.7	0.15	0.00043	1.41	ug/kg
PCB Congener	PCB-152	Sediment ≥ RM 4	334	259	77.5	0.00144	2.1	0.13	0.00043	1.41	ug/kg
PCB Congener	PCB-152	Sediment, sitewide	429	337	78.6	0.00144	3.7	0.14	0.00043	1.41	ug/kg
PCB Congener	PCB-153	Sediment, mudflats (all)	136	136	100	0.0517	281	44			ug/kg
PCB Congener	PCB-153	Sediment < RM 13	381	381	100	0.0417	970	49			ug/kg
PCB Congener	PCB-153	Sediment ≥ RM 4	334	334	100	0.0517	970	45			ug/kg

Sediment summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congener	PCB-153	Sediment, sitewide	429	429	100	0.0417	970	45			ug/kg
PCB Congener	PCB-154	Sediment, mudflats (all)	136	131	96.3	0.00454	7.56	1	0.00158	0.0166	ug/kg
PCB Congener	PCB-154	Sediment < RM 13	381	367	96.3	0.00175	24	1.3	0.00158	1.64	ug/kg
PCB Congener	PCB-154	Sediment ≥ RM 4	334	318	95.2	0.00175	11	0.97	0.00158	1.64	ug/kg
PCB Congener	PCB-154	Sediment, sitewide	429	410	95.6	0.00175	24	1.1	0.00158	1.64	ug/kg
PCB Congener	PCB-155	Sediment, mudflats (all)	136	121	89	0.0016	59.4	1.1	0.00052	0.115	ug/kg
PCB Congener	PCB-155	Sediment < RM 13	381	347	91.1	0.00198	59.4	0.77	0.00061	1.34	ug/kg
PCB Congener	PCB-155	Sediment ≥ RM 4	334	281	84.1	0.0012	59.4	0.78	0.00052	1.34	ug/kg
PCB Congener	PCB-155	Sediment, sitewide	429	371	86.5	0.0012	59.4	0.73	0.00052	1.34	ug/kg
PCB Congener	PCB-156	Sediment, mudflats (all)	136	136	100	0.00829	48.9	6.3			ug/kg
PCB Congener	PCB-156	Sediment < RM 13	381	376	98.7	0.00731	340	7.3	0.0202	1.43	ug/kg
PCB Congener	PCB-156	Sediment ≥ RM 4	334	331	99.1	0.00731	340	7.1	0.0354	1.43	ug/kg
PCB Congener	PCB-156	Sediment, sitewide	429	424	98.8	0.00731	340	6.8	0.0202	1.43	ug/kg
PCB Congener	PCB-158	Sediment, mudflats (all)	136	136	100	0.00611	39.7	5.1			ug/kg
PCB Congener	PCB-158	Sediment < RM 13	381	379	99.5	0.00611	210	5.9	0.00439	0.0079	ug/kg
PCB Congener	PCB-158	Sediment ≥ RM 4	334	333	99.7	0.00611	210	5.6	0.00789	0.0079	ug/kg
PCB Congener	PCB-158	Sediment, sitewide	429	427	99.5	0.00611	210	5.4	0.00439	0.0079	ug/kg
PCB Congener	PCB-159	Sediment, mudflats (all)	136	67	49.3	0.012	3.05	0.48	0.00072	0.0839	ug/kg
PCB Congener	PCB-159	Sediment < RM 13	381	208	54.6	0.000725	4.8	0.49	0.00072	1.32	ug/kg
PCB Congener	PCB-159	Sediment ≥ RM 4	334	184	55.1	0.000725	4.8	0.47	0.00072	1.32	ug/kg
PCB Congener	PCB-159	Sediment, sitewide	429	243	56.6	0.000725	4.8	0.44	0.00072	1.32	ug/kg
PCB Congener	PCB-160	Sediment, mudflats (all)	117	7	6	0.0195	0.11	0.051	0.00021	0.032	ug/kg
PCB Congener	PCB-160	Sediment < RM 13	300	16	5.3	0.0073	37	2.4	0.00044	0.046	ug/kg
PCB Congener	PCB-160	Sediment ≥ RM 4	266	16	6	0.0073	37	2.4	0.00021	0.0326	ug/kg
PCB Congener	PCB-160	Sediment, sitewide	332	16	4.8	0.0073	37	2.4	0.00021	0.046	ug/kg
PCB Congener	PCB-161	Sediment, mudflats (all)	136	4	2.9	0.00282	0.41	0.11	0.00025	0.141	ug/kg
PCB Congener	PCB-161	Sediment < RM 13	381	7	1.8	0.00282	0.41	0.072	0.00045	1.32	ug/kg
PCB Congener	PCB-161	Sediment ≥ RM 4	334	7	2.1	0.00282	0.028	0.017	0.00025	1.32	ug/kg
PCB Congener	PCB-161	Sediment, sitewide	429	8	1.9	0.00282	0.41	0.066	0.00025	1.32	ug/kg
PCB Congener	PCB-162	Sediment, mudflats (all)	136	115	84.6	0.00106	2.14	0.32	0.00219	0.037	ug/kg
PCB Congener	PCB-162	Sediment < RM 13	381	313	82.2	0.000585	6.2	0.36	0.00219	1.31	ug/kg
PCB Congener	PCB-162	Sediment ≥ RM 4	334	262	78.4	0.000585	6.2	0.31	0.002	1.31	ug/kg
PCB Congener	PCB-162	Sediment, sitewide	429	347	80.9	0.000585	6.2	0.33	0.002	1.31	ug/kg
PCB Congener	PCB-164	Sediment, mudflats (all)	136	135	99.3	0.0189	24.8	3.5	0.00134	0.0013	ug/kg
PCB Congener	PCB-164	Sediment < RM 13	381	376	98.7	0.00513	100	4	0.00134	1.38	ug/kg
PCB Congener	PCB-164	Sediment ≥ RM 4	334	330	98.8	0.00513	100	3.7	0.00134	1.38	ug/kg
PCB Congener	PCB-164	Sediment, sitewide	429	424	98.8	0.00513	100	3.7	0.00134	1.38	ug/kg
PCB Congener	PCB-165	Sediment, mudflats (all)	136	40	29.4	0.0035	0.112	0.028	0.00036	0.155	ug/kg
PCB Congener	PCB-165	Sediment < RM 13	381	107	28.1	0.0036	1.7	0.053	0.0005	1.45	ug/kg
PCB Congener	PCB-165	Sediment ≥ RM 4	334	86	25.7	0.0035	0.161	0.034	0.00036	1.45	ug/kg
PCB Congener	PCB-165	Sediment, sitewide	429	112	26.1	0.0035	1.7	0.051	0.00036	1.45	ug/kg
PCB Congener	PCB-167	Sediment, mudflats (all)	136	135	99.3	0.00303	14.3	2.1	0.0144	0.0144	ug/kg
PCB Congener	PCB-167	Sediment < RM 13	381	377	99	0.00303	88	2.3	0.0144	0.95	ug/kg

Sediment summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congener	PCB-167	Sediment ≥ RM 4	334	331	99.1	0.00303	88	2.2	0.0144	0.95	ug/kg
PCB Congener	PCB-167	Sediment, sitewide	429	425	99.1	0.00303	88	2.1	0.0144	0.95	ug/kg
PCB Congener	PCB-169	Sediment, mudflats (all)	136	23	16.9	0.0208	0.6	0.15	0.00108	0.289	ug/kg
PCB Congener	PCB-169	Sediment < RM 13	381	72	18.9	0.00189	2.22	0.22	0.00108	1.37	ug/kg
PCB Congener	PCB-169	Sediment ≥ RM 4	334	50	15	0.00189	2.22	0.21	0.00108	1.37	ug/kg
PCB Congener	PCB-169	Sediment, sitewide	429	81	18.9	0.00189	2.22	0.2	0.00108	1.37	ug/kg
PCB Congener	PCB-170	Sediment, mudflats (all)	136	136	100	0.015	96.8	12			ug/kg
PCB Congener	PCB-170	Sediment < RM 13	381	380	99.7	0.015	140	14	0.011	0.011	ug/kg
PCB Congener	PCB-170	Sediment ≥ RM 4	334	334	100	0.015	140	12			ug/kg
PCB Congener	PCB-170	Sediment, sitewide	429	428	99.8	0.015	140	12	0.011	0.011	ug/kg
PCB Congener	PCB-171	Sediment, mudflats (all)	136	136	100	0.00403	27.8	3.8			ug/kg
PCB Congener	PCB-171	Sediment < RM 13	381	378	99.2	0.00403	50	4.3	0.0108	1.83	ug/kg
PCB Congener	PCB-171	Sediment ≥ RM 4	334	332	99.4	0.00403	50	3.9	0.0326	1.83	ug/kg
PCB Congener	PCB-171	Sediment, sitewide	429	426	99.3	0.00403	50	4	0.0108	1.83	ug/kg
PCB Congener	PCB-172	Sediment, mudflats (all)	136	135	99.3	0.0123	15.6	2.1	0.0026	0.0026	ug/kg
PCB Congener	PCB-172	Sediment < RM 13	381	374	98.2	0.00383	22	2.5	0.0026	1.82	ug/kg
PCB Congener	PCB-172	Sediment ≥ RM 4	334	328	98.2	0.00383	22	2.2	0.0026	1.82	ug/kg
PCB Congener	PCB-172	Sediment, sitewide	429	422	98.4	0.00383	22	2.2	0.0026	1.82	ug/kg
PCB Congener	PCB-174	Sediment, mudflats (all)	136	135	99.3	0.0178	107	14	0.021	0.021	ug/kg
PCB Congener	PCB-174	Sediment < RM 13	381	379	99.5	0.0178	140	16	0.011	0.021	ug/kg
PCB Congener	PCB-174	Sediment ≥ RM 4	334	333	99.7	0.0178	140	15	0.021	0.021	ug/kg
PCB Congener	PCB-174	Sediment, sitewide	429	427	99.5	0.0178	140	15	0.011	0.021	ug/kg
PCB Congener	PCB-175	Sediment, mudflats (all)	136	131	96.3	0.00299	4.09	0.62	0.00176	0.0197	ug/kg
PCB Congener	PCB-175	Sediment < RM 13	381	364	95.5	0.00283	7.4	0.72	0.00059	1.63	ug/kg
PCB Congener	PCB-175	Sediment ≥ RM 4	334	316	94.6	0.00283	7.4	0.65	0.00059	1.63	ug/kg
PCB Congener	PCB-175	Sediment, sitewide	429	408	95.1	0.00283	7.4	0.66	0.00059	1.63	ug/kg
PCB Congener	PCB-176	Sediment, mudflats (all)	136	136	100	0.00141	10.7	1.6			ug/kg
PCB Congener	PCB-176	Sediment < RM 13	381	379	99.5	0.00141	15	1.8	0.00435	1.24	ug/kg
PCB Congener	PCB-176	Sediment ≥ RM 4	334	333	99.7	0.00141	15	1.6	1.24	1.24	ug/kg
PCB Congener	PCB-176	Sediment, sitewide	429	427	99.5	0.00141	15	1.7	0.00435	1.24	ug/kg
PCB Congener	PCB-177	Sediment, mudflats (all)	136	136	100	0.011	57	7.7			ug/kg
PCB Congener	PCB-177	Sediment < RM 13	381	380	99.7	0.011	71.2	8.7	0.011	0.011	ug/kg
PCB Congener	PCB-177	Sediment ≥ RM 4	334	334	100	0.011	71.2	7.8			ug/kg
PCB Congener	PCB-177	Sediment, sitewide	429	428	99.8	0.011	71.2	8	0.011	0.011	ug/kg
PCB Congener	PCB-178	Sediment, mudflats (all)	136	136	100	0.00267	17.7	2.7			ug/kg
PCB Congener	PCB-178	Sediment < RM 13	381	379	99.5	0.00267	41	3.2	0.00619	1.77	ug/kg
PCB Congener	PCB-178	Sediment ≥ RM 4	334	333	99.7	0.00267	41	2.8	1.77	1.77	ug/kg
PCB Congener	PCB-178	Sediment, sitewide	429	427	99.5	0.00267	41	2.9	0.00619	1.77	ug/kg
PCB Congener	PCB-179	Sediment, mudflats (all)	136	136	100	0.00703	38.5	6.1			ug/kg
PCB Congener	PCB-179	Sediment < RM 13	381	380	99.7	0.00703	85	7	0.00474	0.0047	ug/kg
PCB Congener	PCB-179	Sediment ≥ RM 4	334	334	100	0.00703	85	6.2			ug/kg
PCB Congener	PCB-179	Sediment, sitewide	429	428	99.8	0.00703	85	6.4	0.00474	0.0047	ug/kg
PCB Congener	PCB-180	Sediment, mudflats (all)	136	136	100	0.0394	212	31			ug/kg

Sediment summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congener	PCB-180	Sediment < RM 13	381	381	100	0.0391	360	35			ug/kg
PCB Congener	PCB-180	Sediment ≥ RM 4	334	334	100	0.0394	360	31			ug/kg
PCB Congener	PCB-180	Sediment, sitewide	429	429	100	0.0391	360	32			ug/kg
PCB Congener	PCB-181	Sediment, mudflats (all)	136	106	77.9	0.00227	0.684	0.13	0.00101	0.119	ug/kg
PCB Congener	PCB-181	Sediment < RM 13	381	251	65.9	0.00227	4.6	0.18	0.00059	1.63	ug/kg
PCB Congener	PCB-181	Sediment ≥ RM 4	334	210	62.9	0.00227	4.6	0.17	0.00059	1.63	ug/kg
PCB Congener	PCB-181	Sediment, sitewide	429	278	64.8	0.00227	4.6	0.17	0.00059	1.63	ug/kg
PCB Congener	PCB-182	Sediment, mudflats (all)	136	102	75	0.00243	0.97	0.11	0.00096	0.116	ug/kg
PCB Congener	PCB-182	Sediment < RM 13	381	244	64	0.00187	18	0.2	0.00057	1.59	ug/kg
PCB Congener	PCB-182	Sediment ≥ RM 4	334	196	58.7	0.00187	18	0.22	0.00057	1.59	ug/kg
PCB Congener	PCB-182	Sediment, sitewide	429	262	61.1	0.00187	18	0.19	0.00057	1.59	ug/kg
PCB Congener	PCB-183	Sediment, mudflats (all)	136	135	99.3	0.0115	60.6	7.7	0.0179	0.0179	ug/kg
PCB Congener	PCB-183	Sediment < RM 13	381	379	99.5	0.0115	99	9.4	0.01	0.0179	ug/kg
PCB Congener	PCB-183	Sediment ≥ RM 4	334	333	99.7	0.0115	99	8.4	0.0179	0.0179	ug/kg
PCB Congener	PCB-183	Sediment, sitewide	429	427	99.5	0.0115	99	8.6	0.01	0.0179	ug/kg
PCB Congener	PCB-184	Sediment, mudflats (all)	136	101	74.3	0.0015	1.06	0.075	0.00064	0.111	ug/kg
PCB Congener	PCB-184	Sediment < RM 13	381	247	64.8	0.00121	1.06	0.068	0.00045	1.35	ug/kg
PCB Congener	PCB-184	Sediment ≥ RM 4	334	199	59.6	0.00093	1.06	0.063	0.00045	1.35	ug/kg
PCB Congener	PCB-184	Sediment, sitewide	429	265	61.8	0.00093	1.06	0.064	0.00045	1.35	ug/kg
PCB Congener	PCB-185	Sediment, mudflats (all)	117	105	89.7	0.00612	111	2.4	0.0021	0.0669	ug/kg
PCB Congener	PCB-185	Sediment < RM 13	300	273	91	0.00612	111	2	0.0021	0.0858	ug/kg
PCB Congener	PCB-185	Sediment ≥ RM 4	266	242	91	0.00612	111	1.9	0.0021	0.0858	ug/kg
PCB Congener	PCB-185	Sediment, sitewide	332	303	91.3	0.00612	111	1.9	0.0021	0.0858	ug/kg
PCB Congener	PCB-186	Sediment, mudflats (all)	136	3	2.2	0.0039	0.0159	0.0083	0.00025	0.108	ug/kg
PCB Congener	PCB-186	Sediment < RM 13	381	11	2.9	0.0039	0.11	0.021	0.00043	1.31	ug/kg
PCB Congener	PCB-186	Sediment ≥ RM 4	334	10	3	0.0039	0.11	0.022	0.00025	1.31	ug/kg
PCB Congener	PCB-186	Sediment, sitewide	429	11	2.6	0.0039	0.11	0.021	0.00025	1.31	ug/kg
PCB Congener	PCB-187	Sediment, mudflats (all)	136	136	100	0.0271	117	18			ug/kg
PCB Congener	PCB-187	Sediment < RM 13	381	379	99.5	0.0271	280	20	0.00947	0.02	ug/kg
PCB Congener	PCB-187	Sediment ≥ RM 4	334	333	99.7	0.0271	280	18	0.02	0.02	ug/kg
PCB Congener	PCB-187	Sediment, sitewide	429	427	99.5	0.0271	280	19	0.00947	0.02	ug/kg
PCB Congener	PCB-188	Sediment, mudflats (all)	136	101	74.3	0.0016	0.341	0.054	0.00065	0.101	ug/kg
PCB Congener	PCB-188	Sediment < RM 13	381	256	67.2	0.000525	3.5	0.076	0.00049	1.22	ug/kg
PCB Congener	PCB-188	Sediment ≥ RM 4	334	210	62.9	0.000525	0.266	0.052	0.00049	1.22	ug/kg
PCB Congener	PCB-188	Sediment, sitewide	429	280	65.3	0.000525	3.5	0.071	0.00049	1.22	ug/kg
PCB Congener	PCB-189	Sediment, mudflats (all)	136	133	97.8	0.00408	3.56	0.5	0.00216	0.017	ug/kg
PCB Congener	PCB-189	Sediment < RM 13	381	365	95.8	0.0012	11	0.57	0.00195	1.15	ug/kg
PCB Congener	PCB-189	Sediment ≥ RM 4	334	318	95.2	0.0012	11	0.52	0.00195	1.15	ug/kg
PCB Congener	PCB-189	Sediment, sitewide	429	410	95.6	0.0012	11	0.52	0.00195	1.15	ug/kg
PCB Congener	PCB-190	Sediment, mudflats (all)	136	135	99.3	0.0141	16.5	2.4	0.00201	0.002	ug/kg
PCB Congener	PCB-190	Sediment < RM 13	381	377	99	0.00469	29	2.7	0.00201	1.26	ug/kg
PCB Congener	PCB-190	Sediment ≥ RM 4	334	330	98.8	0.00469	29	2.4	0.00201	1.26	ug/kg
PCB Congener	PCB-190	Sediment, sitewide	429	424	98.8	0.00469	29	2.5	0.00201	1.26	ug/kg

Sediment summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congener	PCB-191	Sediment, mudflats (all)	136	129	94.9	0.00394	3.2	0.51	0.00142	0.0324	ug/kg
PCB Congener	PCB-191	Sediment < RM 13	381	357	93.7	0.00089	7.4	0.59	0.00142	1.24	ug/kg
PCB Congener	PCB-191	Sediment ≥ RM 4	334	310	92.8	0.00089	7.4	0.53	0.00142	1.24	ug/kg
PCB Congener	PCB-191	Sediment, sitewide	429	401	93.5	0.00089	7.4	0.55	0.00142	1.24	ug/kg
PCB Congener	PCB-192	Sediment, mudflats (all)	136	0	0				0.0009	0.114	ug/kg
PCB Congener	PCB-192	Sediment < RM 13	381	4	1	0.0084	0.224	0.065	0.0005	1.39	ug/kg
PCB Congener	PCB-192	Sediment ≥ RM 4	334	2	0.6	0.0084	0.224	0.12	0.0005	1.39	ug/kg
PCB Congener	PCB-192	Sediment, sitewide	429	4	0.9	0.0084	0.224	0.065	0.0005	1.39	ug/kg
PCB Congener	PCB-194	Sediment, mudflats (all)	136	136	100	0.0137	49	7.6			ug/kg
PCB Congener	PCB-194	Sediment < RM 13	381	380	99.7	0.0137	200	9.2	0.0143	0.0143	ug/kg
PCB Congener	PCB-194	Sediment ≥ RM 4	334	334	100	0.0137	200	8.3			ug/kg
PCB Congener	PCB-194	Sediment, sitewide	429	428	99.8	0.0137	200	8.4	0.0143	0.0143	ug/kg
PCB Congener	PCB-195	Sediment, mudflats (all)	136	135	99.3	0.0157	19.6	2.9	0.00557	0.0056	ug/kg
PCB Congener	PCB-195	Sediment < RM 13	381	375	98.4	0.00312	58	3.5	0.00557	1.96	ug/kg
PCB Congener	PCB-195	Sediment ≥ RM 4	334	329	98.5	0.00312	58	3.1	0.00557	1.96	ug/kg
PCB Congener	PCB-195	Sediment, sitewide	429	423	98.6	0.00312	58	3.2	0.00557	1.96	ug/kg
PCB Congener	PCB-196	Sediment, mudflats (all)	136	136	100	0.00594	23.5	3.7			ug/kg
PCB Congener	PCB-196	Sediment < RM 13	381	379	99.5	0.00594	120	4.5	0.00731	2.16	ug/kg
PCB Congener	PCB-196	Sediment ≥ RM 4	334	333	99.7	0.00594	120	4.1	2.16	2.16	ug/kg
PCB Congener	PCB-196	Sediment, sitewide	429	427	99.5	0.00594	120	4.1	0.00731	2.16	ug/kg
PCB Congener	PCB-197	Sediment, mudflats (all)	136	131	96.3	0.00146	1.62	0.26	0.00174	0.019	ug/kg
PCB Congener	PCB-197	Sediment < RM 13	381	358	94	0.00146	7	0.32	0.00049	1.61	ug/kg
PCB Congener	PCB-197	Sediment ≥ RM 4	334	311	93.1	0.00146	7	0.29	0.00049	1.61	ug/kg
PCB Congener	PCB-197	Sediment, sitewide	429	401	93.5	0.00146	7	0.3	0.00049	1.61	ug/kg
PCB Congener	PCB-198	Sediment, mudflats (all)	136	136	100	0.0205	55.7	9.4			ug/kg
PCB Congener	PCB-198	Sediment < RM 13	381	380	99.7	0.0205	340	11	0.00751	0.0075	ug/kg
PCB Congener	PCB-198	Sediment ≥ RM 4	334	334	100	0.0205	340	10			ug/kg
PCB Congener	PCB-198	Sediment, sitewide	429	428	99.8	0.0205	340	10	0.00751	0.0075	ug/kg
PCB Congener	PCB-200	Sediment, mudflats (all)	136	134	98.5	0.00363	6.26	1	0.00178	0.0054	ug/kg
PCB Congener	PCB-200	Sediment < RM 13	381	370	97.1	0.00279	55	1.3	0.00178	1.58	ug/kg
PCB Congener	PCB-200	Sediment ≥ RM 4	334	325	97.3	0.00279	55	1.2	0.00178	1.58	ug/kg
PCB Congener	PCB-200	Sediment, sitewide	429	418	97.4	0.00279	55	1.2	0.00178	1.58	ug/kg
PCB Congener	PCB-201	Sediment, mudflats (all)	136	134	98.5	0.00698	6.12	1.2	0.00175	0.0056	ug/kg
PCB Congener	PCB-201	Sediment < RM 13	381	374	98.2	0.00337	60	1.5	0.00175	1.53	ug/kg
PCB Congener	PCB-201	Sediment ≥ RM 4	334	329	98.5	0.00337	60	1.4	0.00175	1.53	ug/kg
PCB Congener	PCB-201	Sediment, sitewide	429	422	98.4	0.00337	60	1.4	0.00175	1.53	ug/kg
PCB Congener	PCB-202	Sediment, mudflats (all)	136	136	100	0.00636	18.7	2.4			ug/kg
PCB Congener	PCB-202	Sediment < RM 13	381	379	99.5	0.00636	87	2.9	0.00543	1.72	ug/kg
PCB Congener	PCB-202	Sediment ≥ RM 4	334	333	99.7	0.00636	87	2.7	1.72	1.72	ug/kg
PCB Congener	PCB-202	Sediment, sitewide	429	427	99.5	0.00636	87	2.7	0.00543	1.72	ug/kg
PCB Congener	PCB-203	Sediment, mudflats (all)	136	136	100	0.0111	32.3	5.4			ug/kg
PCB Congener	PCB-203	Sediment < RM 13	381	379	99.5	0.0111	190	6.5	0.00685	1.99	ug/kg
PCB Congener	PCB-203	Sediment ≥ RM 4	334	333	99.7	0.0111	190	6	1.99	1.99	ug/kg

Sediment summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congener	PCB-203	Sediment, sitewide	429	427	99.5	0.0111	190	6	0.00685	1.99	ug/kg
PCB Congener	PCB-204	Sediment, mudflats (all)	136	15	11	0.00263	0.0422	0.013	0.00052	0.135	ug/kg
PCB Congener	PCB-204	Sediment < RM 13	381	43	11.3	0.00263	0.898	0.036	0.00051	1.67	ug/kg
PCB Congener	PCB-204	Sediment ≥ RM 4	334	33	9.9	0.00263	0.898	0.042	0.00051	1.67	ug/kg
PCB Congener	PCB-204	Sediment, sitewide	429	43	10	0.00263	0.898	0.036	0.00051	1.67	ug/kg
PCB Congener	PCB-205	Sediment, mudflats (all)	136	130	95.6	0.00257	2.33	0.4	0.00179	0.0331	ug/kg
PCB Congener	PCB-205	Sediment < RM 13	381	355	93.2	0.00195	9	0.49	0.00034	1.52	ug/kg
PCB Congener	PCB-205	Sediment ≥ RM 4	334	308	92.2	0.00195	9	0.44	0.00034	1.52	ug/kg
PCB Congener	PCB-205	Sediment, sitewide	429	399	93	0.00195	9	0.45	0.00034	1.52	ug/kg
PCB Congener	PCB-206	Sediment, mudflats (all)	136	136	100	0.0228	53.8	6.5			ug/kg
PCB Congener	PCB-206	Sediment < RM 13	381	379	99.5	0.0228	778	9.3	0.0193	2.3	ug/kg
PCB Congener	PCB-206	Sediment ≥ RM 4	334	333	99.7	0.0228	778	9.2	2.3	2.3	ug/kg
PCB Congener	PCB-206	Sediment, sitewide	429	427	99.5	0.0228	778	8.4	0.0193	2.3	ug/kg
PCB Congener	PCB-207	Sediment, mudflats (all)	136	133	97.8	0.00656	4.49	0.64	0.00364	0.0067	ug/kg
PCB Congener	PCB-207	Sediment < RM 13	381	365	95.8	0.00437	136	1.1	0.00307	1.53	ug/kg
PCB Congener	PCB-207	Sediment ≥ RM 4	334	318	95.2	0.00441	136	1.2	0.00307	1.53	ug/kg
PCB Congener	PCB-207	Sediment, sitewide	429	412	96	0.00437	136	1	0.00307	1.53	ug/kg
PCB Congener	PCB-208	Sediment, mudflats (all)	136	136	100	0.0098	29.2	2.5			ug/kg
PCB Congener	PCB-208	Sediment < RM 13	381	377	99	0.0098	394	3.7	0.00755	1.52	ug/kg
PCB Congener	PCB-208	Sediment ≥ RM 4	334	331	99.1	0.0098	394	3.8	0.00755	1.52	ug/kg
PCB Congener	PCB-208	Sediment, sitewide	429	425	99.1	0.0098	394	3.4	0.00755	1.52	ug/kg
PCB Congener	Decachlorobiphenyl	Sediment, mudflats (all)	136	136	100	0.0218	124	6.4			ug/kg
PCB Congener	Decachlorobiphenyl	Sediment < RM 13	381	379	99.5	0.0218	1630	10	0.0129	0.198	ug/kg
PCB Congener	Decachlorobiphenyl	Sediment ≥ RM 4	334	332	99.4	0.0218	1630	11	0.0129	0.198	ug/kg
PCB Congener	Decachlorobiphenyl	Sediment, sitewide	429	427	99.5	0.0218	1630	9.6	0.0129	0.198	ug/kg
PCB Congener	Total PCB Congeners	Sediment, mudflats (all)	136	136	100	1.34	16900	1700			ug/kg
PCB Congener	Total PCB Congeners	Sediment < RM 13	381	381	100	1.34	28600	2000			ug/kg
PCB Congener	Total PCB Congeners	Sediment ≥ RM 4	334	334	100	1.34	28600	1900			ug/kg
PCB Congener	Total PCB Congeners	Sediment, sitewide	429	429	100	1.34	28600	1800			ug/kg
PCB Congener	Total PCB Congeners (ND=0.5DL)	Sediment, mudflats (all)	136	136	100	1.67	16900	1700			ug/kg
PCB Congener	Total PCB Congeners (ND=0.5DL)	Sediment < RM 13	381	381	100	1.67	28600	2000			ug/kg
PCB Congener	Total PCB Congeners (ND=0.5DL)	Sediment ≥ RM 4	334	334	100	1.67	28600	1900			ug/kg
PCB Congener	Total PCB Congeners (ND=0.5DL)	Sediment, sitewide	429	429	100	1.67	28600	1800			ug/kg
PCB Congener	Total PCB Congeners (ND=DL)	Sediment, mudflats (all)	136	136	100	2	16900	1700			ug/kg
PCB Congener	Total PCB Congeners (ND=DL)	Sediment < RM 13	381	381	100	2	28600	2000			ug/kg
PCB Congener	Total PCB Congeners (ND=DL)	Sediment ≥ RM 4	334	334	100	2	28600	1900			ug/kg
PCB Congener	Total PCB Congeners (ND=DL)	Sediment, sitewide	429	429	100	2	28600	1800			ug/kg
PCB Congener	PCB TEQ-Bird	Sediment, mudflats (all)	136	136	100	0.485	5480	460			ng/kg
PCB Congener	PCB TEQ-Bird	Sediment < RM 13	381	381	100	0.000243	7930	470			ng/kg
PCB Congener	PCB TEQ-Bird	Sediment ≥ RM 4	334	334	100	0.249	7930	450			ng/kg
PCB Congener	PCB TEQ-Bird	Sediment, sitewide	429	429	100	0.000243	7930	430			ng/kg
PCB Congener	PCB TEQ-Bird (ND=0.5DL)	Sediment, mudflats (all)	136	136	100	0.854	5480	460			ng/kg
PCB Congener	PCB TEQ-Bird (ND=0.5DL)	Sediment < RM 13	381	381	100	0.466	7930	470			ng/kg

Sediment summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congener	PCB TEQ-Bird (ND=0.5DL)	Sediment ≥ RM 4	334	334	100	0.466	7930	450			ng/kg
PCB Congener	PCB TEQ-Bird (ND=0.5DL)	Sediment, sitewide	429	429	100	0.466	7930	430			ng/kg
PCB Congener	PCB TEQ-Bird (ND=DL)	Sediment, mudflats (all)	136	136	100	1.01	5480	460			ng/kg
PCB Congener	PCB TEQ-Bird (ND=DL)	Sediment < RM 13	381	381	100	0.517	7930	470			ng/kg
PCB Congener	PCB TEQ-Bird (ND=DL)	Sediment ≥ RM 4	334	334	100	0.517	7930	450			ng/kg
PCB Congener	PCB TEQ-Bird (ND=DL)	Sediment, sitewide	429	429	100	0.517	7930	430			ng/kg
PCB Congener	PCB TEQ-Fish	Sediment, mudflats (all)	136	136	100	0.00133	22.9	2.3			ng/kg
PCB Congener	PCB TEQ-Fish	Sediment < RM 13	381	381	100	0.000122	33.1	2.3			ng/kg
PCB Congener	PCB TEQ-Fish	Sediment ≥ RM 4	334	334	100	0.00133	33.1	2.2			ng/kg
PCB Congener	PCB TEQ-Fish	Sediment, sitewide	429	429	100	0.000122	33.1	2.2			ng/kg
PCB Congener	PCB TEQ-Fish (ND=0.5DL)	Sediment, mudflats (all)	136	136	100	0.00513	22.9	2.3			ng/kg
PCB Congener	PCB TEQ-Fish (ND=0.5DL)	Sediment < RM 13	381	381	100	0.00296	33.2	2.4			ng/kg
PCB Congener	PCB TEQ-Fish (ND=0.5DL)	Sediment ≥ RM 4	334	334	100	0.00296	33.2	2.3			ng/kg
PCB Congener	PCB TEQ-Fish (ND=0.5DL)	Sediment, sitewide	429	429	100	0.00296	33.2	2.2			ng/kg
PCB Congener	PCB TEQ-Fish (ND=DL)	Sediment, mudflats (all)	136	136	100	0.0078	22.9	2.3			ng/kg
PCB Congener	PCB TEQ-Fish (ND=DL)	Sediment < RM 13	381	381	100	0.00449	33.2	2.4			ng/kg
PCB Congener	PCB TEQ-Fish (ND=DL)	Sediment ≥ RM 4	334	334	100	0.00449	33.2	2.3			ng/kg
PCB Congener	PCB TEQ-Fish (ND=DL)	Sediment, sitewide	429	429	100	0.00449	33.2	2.2			ng/kg
PCB Congener	PCB TEQ-Mammal	Sediment, mudflats (all)	136	136	100	0.00318	213	23			ng/kg
PCB Congener	PCB TEQ-Mammal	Sediment < RM 13	381	381	100	0.000729	266	24			ng/kg
PCB Congener	PCB TEQ-Mammal	Sediment ≥ RM 4	334	334	100	0.00318	266	22			ng/kg
PCB Congener	PCB TEQ-Mammal	Sediment, sitewide	429	429	100	0.000729	266	22			ng/kg
PCB Congener	PCB TEQ-Mammal (ND=0.5DL)	Sediment, mudflats (all)	136	136	100	0.0702	215	24			ng/kg
PCB Congener	PCB TEQ-Mammal (ND=0.5DL)	Sediment < RM 13	381	381	100	0.0702	268	25			ng/kg
PCB Congener	PCB TEQ-Mammal (ND=0.5DL)	Sediment ≥ RM 4	334	334	100	0.0702	268	23			ng/kg
PCB Congener	PCB TEQ-Mammal (ND=0.5DL)	Sediment, sitewide	429	429	100	0.0702	268	23			ng/kg
PCB Congener	PCB TEQ-Mammal (ND=DL)	Sediment, mudflats (all)	136	136	100	0.133	217	25			ng/kg
PCB Congener	PCB TEQ-Mammal (ND=DL)	Sediment < RM 13	381	381	100	0.118	271	26			ng/kg
PCB Congener	PCB TEQ-Mammal (ND=DL)	Sediment ≥ RM 4	334	334	100	0.118	271	25			ng/kg
PCB Congener	PCB TEQ-Mammal (ND=DL)	Sediment, sitewide	429	429	100	0.118	271	24			ng/kg
PCB Congener	Monochlorobiphenyl	Sediment, mudflats (all)	136	136	100	0.0253	56.7	3.1			ug/kg
PCB Congener	Monochlorobiphenyl	Sediment < RM 13	381	377	99	0.00615	61.5	3.4	0.00081	0.54	ug/kg
PCB Congener	Monochlorobiphenyl	Sediment ≥ RM 4	334	330	98.8	0.00179	61.5	3.1	0.00081	0.54	ug/kg
PCB Congener	Monochlorobiphenyl	Sediment, sitewide	429	425	99.1	0.00179	61.5	3.1	0.00081	0.54	ug/kg
PCB Congener	Dichlorobiphenyl	Sediment, mudflats (all)	136	134	98.5	0.167	1110	69	0.119	0.248	ug/kg
PCB Congener	Dichlorobiphenyl	Sediment < RM 13	381	379	99.5	0.0497	1580	71	0.119	0.248	ug/kg
PCB Congener	Dichlorobiphenyl	Sediment ≥ RM 4	334	332	99.4	0.0497	1580	68	0.119	0.248	ug/kg
PCB Congener	Dichlorobiphenyl	Sediment, sitewide	429	427	99.5	0.0497	1580	65	0.119	0.248	ug/kg
PCB Congener	Trichlorobiphenyl	Sediment, mudflats (all)	136	135	99.3	0.253	4680	360	1.11	1.11	ug/kg
PCB Congener	Trichlorobiphenyl	Sediment < RM 13	381	380	99.7	0.169	8000	390	1.11	1.11	ug/kg
PCB Congener	Trichlorobiphenyl	Sediment ≥ RM 4	334	333	99.7	0.253	8000	380	1.11	1.11	ug/kg
PCB Congener	Trichlorobiphenyl	Sediment, sitewide	429	428	99.8	0.169	8000	360	1.11	1.11	ug/kg
PCB Congener	Tetrachlorobiphenyl	Sediment, mudflats (all)	136	135	99.3	0.385	5810	540	1.11	1.11	ug/kg

Sediment summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congener	Tetrachlorobiphenyl	Sediment < RM 13	381	380	99.7	0.257	10800	600	1.11	1.11	ug/kg
PCB Congener	Tetrachlorobiphenyl	Sediment ≥ RM 4	334	333	99.7	0.385	10800	580	1.11	1.11	ug/kg
PCB Congener	Tetrachlorobiphenyl	Sediment, sitewide	429	428	99.8	0.257	10800	550	1.11	1.11	ug/kg
PCB Congener	Pentachlorobiphenyl	Sediment, mudflats (all)	136	136	100	0.291	3270	370			ug/kg
PCB Congener	Pentachlorobiphenyl	Sediment < RM 13	381	381	100	0.125	13000	430			ug/kg
PCB Congener	Pentachlorobiphenyl	Sediment ≥ RM 4	334	334	100	0.291	13000	420			ug/kg
PCB Congener	Pentachlorobiphenyl	Sediment, sitewide	429	429	100	0.125	13000	400			ug/kg
PCB Congener	Hexachlorobiphenyl	Sediment, mudflats (all)	136	136	100	0.257	1600	240			ug/kg
PCB Congener	Hexachlorobiphenyl	Sediment < RM 13	381	381	100	0.118	6600	270			ug/kg
PCB Congener	Hexachlorobiphenyl	Sediment ≥ RM 4	334	334	100	0.257	6600	250			ug/kg
PCB Congener	Hexachlorobiphenyl	Sediment, sitewide	429	429	100	0.118	6600	250			ug/kg
PCB Congener	Heptachlorobiphenyl	Sediment, mudflats (all)	136	136	100	0.137	790	110			ug/kg
PCB Congener	Heptachlorobiphenyl	Sediment < RM 13	381	381	100	0.0391	1200	130			ug/kg
PCB Congener	Heptachlorobiphenyl	Sediment ≥ RM 4	334	334	100	0.137	1200	110			ug/kg
PCB Congener	Heptachlorobiphenyl	Sediment, sitewide	429	429	100	0.0391	1200	120			ug/kg
PCB Congener	Octachlorobiphenyl	Sediment, mudflats (all)	136	136	100	0.0576	193	34			ug/kg
PCB Congener	Octachlorobiphenyl	Sediment < RM 13	381	380	99.7	0.0576	1100	41	0.00824	0.0082	ug/kg
PCB Congener	Octachlorobiphenyl	Sediment ≥ RM 4	334	334	100	0.0576	1100	38			ug/kg
PCB Congener	Octachlorobiphenyl	Sediment, sitewide	429	428	99.8	0.0576	1100	38	0.00824	0.0082	ug/kg
PCB Congener	Nonachlorobiphenyl	Sediment, mudflats (all)	136	136	100	0.0374	85.8	9.6			ug/kg
PCB Congener	Nonachlorobiphenyl	Sediment < RM 13	381	379	99.5	0.0374	1310	14	0.0164	2.3	ug/kg
PCB Congener	Nonachlorobiphenyl	Sediment ≥ RM 4	334	333	99.7	0.0374	1310	14	2.3	2.3	ug/kg
PCB Congener	Nonachlorobiphenyl	Sediment, sitewide	429	427	99.5	0.0374	1310	13	0.0164	2.3	ug/kg
PCDDs/PCDFs	1,2,3,4,6,7,8-HpCDD	Sediment, mudflats (all)	136	136	100	3.92	3360	490			ng/kg
PCDDs/PCDFs	1,2,3,4,6,7,8-HpCDD	Sediment < RM 13	380	377	99.2	3.92	3360	520	3.89	6.95	ng/kg
PCDDs/PCDFs	1,2,3,4,6,7,8-HpCDD	Sediment ≥ RM 4	333	331	99.4	3.92	3360	470	3.89	5.6	ng/kg
PCDDs/PCDFs	1,2,3,4,6,7,8-HpCDD	Sediment, sitewide	428	425	99.3	3.92	3360	480	3.89	6.95	ng/kg
PCDDs/PCDFs	1,2,3,4,7,8-HxCDD	Sediment, mudflats (all)	136	128	94.1	0.325	33.8	7	0.101	2.41	ng/kg
PCDDs/PCDFs	1,2,3,4,7,8-HxCDD	Sediment < RM 13	380	355	93.4	0.0729	76.8	7.3	0.101	2.41	ng/kg
PCDDs/PCDFs	1,2,3,4,7,8-HxCDD	Sediment ≥ RM 4	333	307	92.2	0.0729	76.8	6.7	0.101	2.41	ng/kg
PCDDs/PCDFs	1,2,3,4,7,8-HxCDD	Sediment, sitewide	428	401	93.7	0.0729	76.8	6.6	0.101	2.41	ng/kg
PCDDs/PCDFs	1,2,3,6,7,8-HxCDD	Sediment, mudflats (all)	136	134	98.5	0.117	338	30	1.41	2.71	ng/kg
PCDDs/PCDFs	1,2,3,6,7,8-HxCDD	Sediment < RM 13	380	370	97.4	0.117	338	31	0.18	2.71	ng/kg
PCDDs/PCDFs	1,2,3,6,7,8-HxCDD	Sediment ≥ RM 4	333	322	96.7	0.117	338	29	0.236	2.71	ng/kg
PCDDs/PCDFs	1,2,3,6,7,8-HxCDD	Sediment, sitewide	428	416	97.2	0.117	338	29	0.18	2.71	ng/kg
PCDDs/PCDFs	1,2,3,7,8,9-HxCDD	Sediment, mudflats (all)	136	132	97.1	0.69	192	17	0.178	3.08	ng/kg
PCDDs/PCDFs	1,2,3,7,8,9-HxCDD	Sediment < RM 13	380	365	96.1	0.433	192	18	0.113	3.08	ng/kg
PCDDs/PCDFs	1,2,3,7,8,9-HxCDD	Sediment ≥ RM 4	333	316	94.9	0.297	192	16	0.113	3.08	ng/kg
PCDDs/PCDFs	1,2,3,7,8,9-HxCDD	Sediment, sitewide	428	410	95.8	0.297	192	16	0.113	3.08	ng/kg
PCDDs/PCDFs	1,2,3,7,8-PeCDD	Sediment, mudflats (all)	136	126	92.6	0.34	269	11	0.109	3.05	ng/kg
PCDDs/PCDFs	1,2,3,7,8-PeCDD	Sediment < RM 13	380	351	92.4	0.118	269	10	0.0849	3.05	ng/kg
PCDDs/PCDFs	1,2,3,7,8-PeCDD	Sediment ≥ RM 4	333	302	90.7	0.118	269	10	0.0849	3.05	ng/kg
PCDDs/PCDFs	1,2,3,7,8-PeCDD	Sediment, sitewide	428	396	92.5	0.118	269	9.4	0.0849	3.05	ng/kg

Sediment summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCDDs/PCDFs	2,3,7,8-TCDD	Sediment, mudflats (all)	136	133	97.8	0.2	34100	1300	0.246	0.434	ng/kg
PCDDs/PCDFs	2,3,7,8-TCDD	Sediment < RM 13	380	378	99.5	0.416	51100	1400	0.0319	0.833	ng/kg
PCDDs/PCDFs	2,3,7,8-TCDD	Sediment ≥ RM 4	333	324	97.3	0.2	51100	1500	0.0319	0.486	ng/kg
PCDDs/PCDFs	2,3,7,8-TCDD	Sediment, sitewide	428	418	97.7	0.2	51100	1300	0.0319	0.833	ng/kg
PCDDs/PCDFs	OCDD	Sediment, mudflats (all)	136	136	100	75.1	32200	5500			ng/kg
PCDDs/PCDFs	OCDD	Sediment < RM 13	380	378	99.5	53.9	38400	5800	43.3	57.3	ng/kg
PCDDs/PCDFs	OCDD	Sediment ≥ RM 4	333	331	99.4	53.9	38400	5300	43.3	57.3	ng/kg
PCDDs/PCDFs	OCDD	Sediment, sitewide	428	426	99.5	53.9	38400	5300	43.3	57.3	ng/kg
PCDDs/PCDFs	1,2,3,4,6,7,8-HpCDF	Sediment, mudflats (all)	136	136	100	1.03	3300	600			ng/kg
PCDDs/PCDFs	1,2,3,4,6,7,8-HpCDF	Sediment < RM 13	380	377	99.2	1.03	5900	630	1.62	3.1	ng/kg
PCDDs/PCDFs	1,2,3,4,6,7,8-HpCDF	Sediment ≥ RM 4	333	331	99.4	1.03	5900	490	1.62	2.28	ng/kg
PCDDs/PCDFs	1,2,3,4,6,7,8-HpCDF	Sediment, sitewide	428	425	99.3	1.03	5900	570	1.62	3.1	ng/kg
PCDDs/PCDFs	1,2,3,4,7,8,9-HpCDF	Sediment, mudflats (all)	136	130	95.6	0.662	101	22	0.094	2.36	ng/kg
PCDDs/PCDFs	1,2,3,4,7,8,9-HpCDF	Sediment < RM 13	380	353	92.9	0.0782	253	24	0.094	10.6	ng/kg
PCDDs/PCDFs	1,2,3,4,7,8,9-HpCDF	Sediment ≥ RM 4	333	306	91.9	0.0782	253	20	0.094	10.6	ng/kg
PCDDs/PCDFs	1,2,3,4,7,8,9-HpCDF	Sediment, sitewide	428	399	93.2	0.0782	253	22	0.094	10.6	ng/kg
PCDDs/PCDFs	1,2,3,4,7,8-HxCDF	Sediment, mudflats (all)	136	135	99.3	0.14	820	140	1.01	1.01	ng/kg
PCDDs/PCDFs	1,2,3,4,7,8-HxCDF	Sediment < RM 13	380	375	98.7	0.14	1500	150	0.616	1.19	ng/kg
PCDDs/PCDFs	1,2,3,4,7,8-HxCDF	Sediment ≥ RM 4	333	329	98.8	0.14	1500	110	0.616	1.19	ng/kg
PCDDs/PCDFs	1,2,3,4,7,8-HxCDF	Sediment, sitewide	428	423	98.8	0.14	1500	130	0.616	1.19	ng/kg
PCDDs/PCDFs	1,2,3,6,7,8-HxCDF	Sediment, mudflats (all)	136	133	97.8	0.1	171	35	0.975	1.35	ng/kg
PCDDs/PCDFs	1,2,3,6,7,8-HxCDF	Sediment < RM 13	380	370	97.4	0.1	291	36	0.111	1.35	ng/kg
PCDDs/PCDFs	1,2,3,6,7,8-HxCDF	Sediment ≥ RM 4	333	320	96.1	0.1	291	30	0.111	1.35	ng/kg
PCDDs/PCDFs	1,2,3,6,7,8-HxCDF	Sediment, sitewide	428	414	96.7	0.1	291	33	0.111	1.35	ng/kg
PCDDs/PCDFs	1,2,3,7,8,9-HxCDF	Sediment, mudflats (all)	136	37	27.2	0.12	16	1.7	0.0734	3.46	ng/kg
PCDDs/PCDFs	1,2,3,7,8,9-HxCDF	Sediment < RM 13	380	110	28.9	0.101	19.7	1.9	0.0363	5.83	ng/kg
PCDDs/PCDFs	1,2,3,7,8,9-HxCDF	Sediment ≥ RM 4	333	85	25.5	0.101	19.7	2	0.0363	5.83	ng/kg
PCDDs/PCDFs	1,2,3,7,8,9-HxCDF	Sediment, sitewide	428	119	27.8	0.101	19.7	1.9	0.0363	5.83	ng/kg
PCDDs/PCDFs	1,2,3,7,8-PeCDF	Sediment, mudflats (all)	136	128	94.1	0.283	70.2	12	0.0741	5.36	ng/kg
PCDDs/PCDFs	1,2,3,7,8-PeCDF	Sediment < RM 13	380	362	95.3	0.283	97.3	12	0.0717	5.36	ng/kg
PCDDs/PCDFs	1,2,3,7,8-PeCDF	Sediment ≥ RM 4	333	314	94.3	0.118	94.2	11	0.0717	5.36	ng/kg
PCDDs/PCDFs	1,2,3,7,8-PeCDF	Sediment, sitewide	428	409	95.6	0.118	97.3	11	0.0717	5.36	ng/kg
PCDDs/PCDFs	2,3,4,6,7,8-HxCDF	Sediment, mudflats (all)	136	133	97.8	0.0841	142	24	1.04	1.36	ng/kg
PCDDs/PCDFs	2,3,4,6,7,8-HxCDF	Sediment < RM 13	380	369	97.1	0.0841	182	25	0.109	1.36	ng/kg
PCDDs/PCDFs	2,3,4,6,7,8-HxCDF	Sediment ≥ RM 4	333	323	97	0.0841	182	22	0.109	1.36	ng/kg
PCDDs/PCDFs	2,3,4,6,7,8-HxCDF	Sediment, sitewide	428	417	97.4	0.0841	182	23	0.109	1.36	ng/kg
PCDDs/PCDFs	2,3,4,7,8-PeCDF	Sediment, mudflats (all)	136	132	97.1	0.093	541	41	0.0683	1.24	ng/kg
PCDDs/PCDFs	2,3,4,7,8-PeCDF	Sediment < RM 13	380	373	98.2	0.093	541	41	0.0683	1.24	ng/kg
PCDDs/PCDFs	2,3,4,7,8-PeCDF	Sediment ≥ RM 4	333	326	97.9	0.093	541	36	0.0683	1.24	ng/kg
PCDDs/PCDFs	2,3,4,7,8-PeCDF	Sediment, sitewide	428	420	98.1	0.093	541	38	0.0683	1.24	ng/kg
PCDDs/PCDFs	2,3,7,8-TCDF	Sediment, mudflats (all)	136	131	96.3	0.409	295	29	0.0808	3.2	ng/kg
PCDDs/PCDFs	2,3,7,8-TCDF	Sediment < RM 13	380	363	95.5	0.363	334	32	0.0808	15.1	ng/kg
PCDDs/PCDFs	2,3,7,8-TCDF	Sediment ≥ RM 4	333	313	94	0.363	334	30	0.0808	15.1	ng/kg

Sediment summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCDDs/PCDFs	2,3,7,8-TCDF	Sediment, sitewide	428	406	94.9	0.363	334	29	0.0808	15.1	ng/kg
PCDDs/PCDFs	OCDF	Sediment, mudflats (all)	136	134	98.5	1.3	9080	1200	21	50.2	ng/kg
PCDDs/PCDFs	OCDF	Sediment < RM 13	380	375	98.7	1.3	15700	1200	3.13	5.71	ng/kg
PCDDs/PCDFs	OCDF	Sediment ≥ RM 4	333	327	98.2	1.3	15700	970	3.13	50.2	ng/kg
PCDDs/PCDFs	OCDF	Sediment, sitewide	428	421	98.4	1.3	15700	1100	3.13	50.2	ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird	Sediment, mudflats (all)	136	136	100	0.443	34400	1200			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird	Sediment < RM 13	380	380	100	0.0144	51200	1400			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird	Sediment ≥ RM 4	333	333	100	0.0688	51200	1400			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird	Sediment, sitewide	428	428	100	0.0144	51200	1200			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird (ND=0.5DL)	Sediment, mudflats (all)	136	136	100	0.509	34400	1200			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird (ND=0.5DL)	Sediment < RM 13	380	380	100	0.266	51200	1400			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird (ND=0.5DL)	Sediment ≥ RM 4	333	333	100	0.162	51200	1400			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird (ND=0.5DL)	Sediment, sitewide	428	428	100	0.162	51200	1200			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird (ND=DL)	Sediment, mudflats (all)	136	136	100	0.575	34400	1200			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird (ND=DL)	Sediment < RM 13	380	380	100	0.287	51200	1400			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird (ND=DL)	Sediment ≥ RM 4	333	333	100	0.254	51200	1400			ng/kg
PCDDs/PCDFs	PCDD TEQ-Bird (ND=DL)	Sediment, sitewide	428	428	100	0.254	51200	1200			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish	Sediment, mudflats (all)	136	136	100	0.443	34400	1200			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish	Sediment < RM 13	380	380	100	0.0144	51200	1400			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish	Sediment ≥ RM 4	333	333	100	0.0974	51200	1400			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish	Sediment, sitewide	428	428	100	0.0144	51200	1200			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish (ND=0.5DL)	Sediment, mudflats (all)	136	136	100	0.524	34400	1200			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish (ND=0.5DL)	Sediment < RM 13	380	380	100	0.304	51200	1400			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish (ND=0.5DL)	Sediment ≥ RM 4	333	333	100	0.19	51200	1400			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish (ND=0.5DL)	Sediment, sitewide	428	428	100	0.19	51200	1200			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish (ND=DL)	Sediment, mudflats (all)	136	136	100	0.605	34400	1200			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish (ND=DL)	Sediment < RM 13	380	380	100	0.325	51200	1400			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish (ND=DL)	Sediment ≥ RM 4	333	333	100	0.283	51200	1400			ng/kg
PCDDs/PCDFs	PCDD TEQ-Fish (ND=DL)	Sediment, sitewide	428	428	100	0.283	51200	1200			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	Sediment, mudflats (all)	136	136	100	0.542	34400	1300			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	Sediment < RM 13	380	380	100	0.0432	51200	1400			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	Sediment ≥ RM 4	333	333	100	0.224	51200	1500			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal	Sediment, sitewide	428	428	100	0.0432	51200	1200			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal (ND=0.5DL)	Sediment, mudflats (all)	136	136	100	0.61	34400	1300			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal (ND=0.5DL)	Sediment < RM 13	380	380	100	0.356	51200	1400			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal (ND=0.5DL)	Sediment ≥ RM 4	333	333	100	0.316	51200	1500			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal (ND=0.5DL)	Sediment, sitewide	428	428	100	0.316	51200	1200			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal (ND=DL)	Sediment, mudflats (all)	136	136	100	0.678	34400	1300			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal (ND=DL)	Sediment < RM 13	380	380	100	0.409	51200	1400			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal (ND=DL)	Sediment ≥ RM 4	333	333	100	0.409	51200	1500			ng/kg
PCDDs/PCDFs	PCDD TEQ-Mammal (ND=DL)	Sediment, sitewide	428	428	100	0.409	51200	1200			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird	Sediment, mudflats (all)	136	136	100	0.0428	908	95			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird	Sediment < RM 13	380	380	100	0.0383	908	99			ng/kg

Sediment summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCDDs/PCDFs	PCDF TEQ-Bird	Sediment ≥ RM 4	333	333	100	0.0383	908	86			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird	Sediment, sitewide	428	428	100	0.0383	908	90			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird (ND=0.5DL)	Sediment, mudflats (all)	136	136	100	0.125	908	95			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird (ND=0.5DL)	Sediment < RM 13	380	380	100	0.125	908	99			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird (ND=0.5DL)	Sediment ≥ RM 4	333	333	100	0.125	908	86			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird (ND=0.5DL)	Sediment, sitewide	428	428	100	0.125	908	90			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird (ND=DL)	Sediment, mudflats (all)	136	136	100	0.208	908	95			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird (ND=DL)	Sediment < RM 13	380	380	100	0.208	908	99			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird (ND=DL)	Sediment ≥ RM 4	333	333	100	0.208	908	86			ng/kg
PCDDs/PCDFs	PCDF TEQ-Bird (ND=DL)	Sediment, sitewide	428	428	100	0.208	908	90			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish	Sediment, mudflats (all)	136	136	100	0.0428	355	48			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish	Sediment < RM 13	380	380	100	0.0226	424	49			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish	Sediment ≥ RM 4	333	333	100	0.0383	424	41			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish	Sediment, sitewide	428	428	100	0.0226	424	45			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish (ND=0.5DL)	Sediment, mudflats (all)	136	136	100	0.0679	355	48			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish (ND=0.5DL)	Sediment < RM 13	380	380	100	0.0679	425	49			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish (ND=0.5DL)	Sediment ≥ RM 4	333	333	100	0.0679	425	41			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish (ND=0.5DL)	Sediment, sitewide	428	428	100	0.0679	425	45			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish (ND=DL)	Sediment, mudflats (all)	136	136	100	0.093	355	48			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish (ND=DL)	Sediment < RM 13	380	380	100	0.093	425	49			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish (ND=DL)	Sediment ≥ RM 4	333	333	100	0.093	425	41			ng/kg
PCDDs/PCDFs	PCDF TEQ-Fish (ND=DL)	Sediment, sitewide	428	428	100	0.093	425	45			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	Sediment, mudflats (all)	136	136	100	0.0431	262	41			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	Sediment < RM 13	380	380	100	0.0135	384	43			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	Sediment ≥ RM 4	333	333	100	0.0383	384	35			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal	Sediment, sitewide	428	428	100	0.0135	384	39			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal (ND=0.5DL)	Sediment, mudflats (all)	136	136	100	0.0626	262	41			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal (ND=0.5DL)	Sediment < RM 13	380	380	100	0.0626	385	43			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal (ND=0.5DL)	Sediment ≥ RM 4	333	333	100	0.0626	385	35			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal (ND=0.5DL)	Sediment, sitewide	428	428	100	0.0626	385	39			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal (ND=DL)	Sediment, mudflats (all)	136	136	100	0.0822	262	41			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal (ND=DL)	Sediment < RM 13	380	380	100	0.0822	385	43			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal (ND=DL)	Sediment ≥ RM 4	333	333	100	0.0822	385	35			ng/kg
PCDDs/PCDFs	PCDF TEQ-Mammal (ND=DL)	Sediment, sitewide	428	428	100	0.0822	385	39			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird	Sediment, mudflats (all)	136	136	100	0.486	35000	1300			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird	Sediment < RM 13	380	380	100	0.0595	51600	1500			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird	Sediment ≥ RM 4	333	333	100	0.326	51600	1500			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird	Sediment, sitewide	428	428	100	0.0595	51600	1300			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird (ND=0.5DL)	Sediment, mudflats (all)	136	136	100	0.635	35000	1300			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird (ND=0.5DL)	Sediment < RM 13	380	380	100	0.635	51600	1500			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird (ND=0.5DL)	Sediment ≥ RM 4	333	333	100	0.635	51600	1500			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird (ND=0.5DL)	Sediment, sitewide	428	428	100	0.635	51600	1300			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird (ND=DL)	Sediment, mudflats (all)	136	136	100	0.783	35000	1300			ng/kg

Sediment summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCDDs/PCDFs	Dioxin TEQ-Bird (ND=DL)	Sediment < RM 13	380	380	100	0.783	51600	1500			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird (ND=DL)	Sediment ≥ RM 4	333	333	100	0.783	51600	1500			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Bird (ND=DL)	Sediment, sitewide	428	428	100	0.783	51600	1300			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish	Sediment, mudflats (all)	136	136	100	0.486	34700	1300			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish	Sediment < RM 13	380	380	100	0.037	51400	1400			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish	Sediment ≥ RM 4	333	333	100	0.285	51400	1500			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish	Sediment, sitewide	428	428	100	0.037	51400	1300			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish (ND=0.5DL)	Sediment, mudflats (all)	136	136	100	0.592	34700	1300			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish (ND=0.5DL)	Sediment < RM 13	380	380	100	0.592	51400	1400			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish (ND=0.5DL)	Sediment ≥ RM 4	333	333	100	0.392	51400	1500			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish (ND=0.5DL)	Sediment, sitewide	428	428	100	0.392	51400	1300			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish (ND=DL)	Sediment, mudflats (all)	136	136	100	0.698	34700	1300			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish (ND=DL)	Sediment < RM 13	380	380	100	0.698	51400	1400			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish (ND=DL)	Sediment ≥ RM 4	333	333	100	0.5	51400	1500			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Fish (ND=DL)	Sediment, sitewide	428	428	100	0.5	51400	1300			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mammal	Sediment, mudflats (all)	136	136	100	0.585	34600	1300			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mammal	Sediment < RM 13	380	380	100	0.0567	51400	1400			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mammal	Sediment ≥ RM 4	333	333	100	0.385	51400	1500			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mammal	Sediment, sitewide	428	428	100	0.0567	51400	1300			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mammal (ND=0.5DL)	Sediment, mudflats (all)	136	136	100	0.673	34600	1300			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mammal (ND=0.5DL)	Sediment < RM 13	380	380	100	0.673	51400	1400			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mammal (ND=0.5DL)	Sediment ≥ RM 4	333	333	100	0.504	51400	1500			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mammal (ND=0.5DL)	Sediment, sitewide	428	428	100	0.504	51400	1300			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mammal (ND=DL)	Sediment, mudflats (all)	136	136	100	0.761	34600	1300			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mammal (ND=DL)	Sediment < RM 13	380	380	100	0.761	51400	1400			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mammal (ND=DL)	Sediment ≥ RM 4	333	333	100	0.623	51400	1500			ng/kg
PCDDs/PCDFs	Dioxin TEQ-Mammal (ND=DL)	Sediment, sitewide	428	428	100	0.623	51400	1300			ng/kg
PCDDs/PCDFs	Total TEQ-Bird	Sediment, mudflats (all)	136	136	100	0.972	37000	1800			ng/kg
PCDDs/PCDFs	Total TEQ-Bird	Sediment < RM 13	380	380	100	0.972	55500	2000			ng/kg
PCDDs/PCDFs	Total TEQ-Bird	Sediment ≥ RM 4	333	333	100	0.972	55500	2000			ng/kg
PCDDs/PCDFs	Total TEQ-Bird	Sediment, sitewide	428	428	100	0.972	55500	1800			ng/kg
PCDDs/PCDFs	Total TEQ-Bird (ND=0.5DL)	Sediment, mudflats (all)	136	136	100	1.49	37000	1800			ng/kg
PCDDs/PCDFs	Total TEQ-Bird (ND=0.5DL)	Sediment < RM 13	380	380	100	1.49	55500	2000			ng/kg
PCDDs/PCDFs	Total TEQ-Bird (ND=0.5DL)	Sediment ≥ RM 4	333	333	100	1.49	55500	2000			ng/kg
PCDDs/PCDFs	Total TEQ-Bird (ND=0.5DL)	Sediment, sitewide	428	428	100	1.49	55500	1800			ng/kg
PCDDs/PCDFs	Total TEQ-Bird (ND=DL)	Sediment, mudflats (all)	136	136	100	2.01	37000	1800			ng/kg
PCDDs/PCDFs	Total TEQ-Bird (ND=DL)	Sediment < RM 13	380	380	100	1.81	55500	2000			ng/kg
PCDDs/PCDFs	Total TEQ-Bird (ND=DL)	Sediment ≥ RM 4	333	333	100	1.81	55500	2000			ng/kg
PCDDs/PCDFs	Total TEQ-Bird (ND=DL)	Sediment, sitewide	428	428	100	1.81	55500	1800			ng/kg
PCDDs/PCDFs	Total TEQ-Fish	Sediment, mudflats (all)	136	136	100	0.488	34700	1300			ng/kg
PCDDs/PCDFs	Total TEQ-Fish	Sediment < RM 13	380	380	100	0.0457	51400	1400			ng/kg
PCDDs/PCDFs	Total TEQ-Fish	Sediment ≥ RM 4	333	333	100	0.289	51400	1500			ng/kg
PCDDs/PCDFs	Total TEQ-Fish	Sediment, sitewide	428	428	100	0.0457	51400	1300			ng/kg

Sediment summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCDDs/PCDFs	Total TEQ-Fish (ND=0.5DL)	Sediment, mudflats (all)	136	136	100	0.603	34700	1300			ng/kg
PCDDs/PCDFs	Total TEQ-Fish (ND=0.5DL)	Sediment < RM 13	380	380	100	0.603	51400	1400			ng/kg
PCDDs/PCDFs	Total TEQ-Fish (ND=0.5DL)	Sediment ≥ RM 4	333	333	100	0.403	51400	1500			ng/kg
PCDDs/PCDFs	Total TEQ-Fish (ND=0.5DL)	Sediment, sitewide	428	428	100	0.403	51400	1300			ng/kg
PCDDs/PCDFs	Total TEQ-Fish (ND=DL)	Sediment, mudflats (all)	136	136	100	0.718	34700	1300			ng/kg
PCDDs/PCDFs	Total TEQ-Fish (ND=DL)	Sediment < RM 13	380	380	100	0.718	51400	1400			ng/kg
PCDDs/PCDFs	Total TEQ-Fish (ND=DL)	Sediment ≥ RM 4	333	333	100	0.517	51400	1500			ng/kg
PCDDs/PCDFs	Total TEQ-Fish (ND=DL)	Sediment, sitewide	428	428	100	0.517	51400	1300			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	Sediment, mudflats (all)	136	136	100	0.588	34700	1300			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	Sediment < RM 13	380	380	100	0.0813	51500	1500			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	Sediment ≥ RM 4	333	333	100	0.397	51500	1500			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal	Sediment, sitewide	428	428	100	0.0813	51500	1300			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal (ND=0.5DL)	Sediment, mudflats (all)	136	136	100	0.898	34700	1300			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal (ND=0.5DL)	Sediment < RM 13	380	380	100	0.898	51500	1500			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal (ND=0.5DL)	Sediment ≥ RM 4	333	333	100	0.69	51500	1500			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal (ND=0.5DL)	Sediment, sitewide	428	428	100	0.69	51500	1300			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal (ND=DL)	Sediment, mudflats (all)	136	136	100	1.21	34700	1300			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal (ND=DL)	Sediment < RM 13	380	380	100	1.21	51500	1500			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal (ND=DL)	Sediment ≥ RM 4	333	333	100	0.982	51500	1500			ng/kg
PCDDs/PCDFs	Total TEQ-Mammal (ND=DL)	Sediment, sitewide	428	428	100	0.982	51500	1300			ng/kg
PCDDs/PCDFs	Total HpCDD	Sediment, mudflats (all)	136	136	100	11.6	6840	1100			ng/kg
PCDDs/PCDFs	Total HpCDD	Sediment < RM 13	380	377	99.2	11.6	6840	1100	9.08	15.4	ng/kg
PCDDs/PCDFs	Total HpCDD	Sediment ≥ RM 4	333	331	99.4	11.6	6840	1000	9.08	11.7	ng/kg
PCDDs/PCDFs	Total HpCDD	Sediment, sitewide	428	425	99.3	11.6	6840	1000	9.08	15.4	ng/kg
PCDDs/PCDFs	Total HxCDD	Sediment, mudflats (all)	136	135	99.3	1.92	2160	240	1.58	1.58	ng/kg
PCDDs/PCDFs	Total HxCDD	Sediment < RM 13	380	378	99.5	1.03	2160	240	0.814	1.58	ng/kg
PCDDs/PCDFs	Total HxCDD	Sediment ≥ RM 4	333	331	99.4	1.03	2160	210	0.814	1.58	ng/kg
PCDDs/PCDFs	Total HxCDD	Sediment, sitewide	428	426	99.5	1.03	2160	220	0.814	1.58	ng/kg
PCDDs/PCDFs	Total PeCDD	Sediment, mudflats (all)	136	132	97.1	2.65	1190	96	0.109	2.26	ng/kg
PCDDs/PCDFs	Total PeCDD	Sediment < RM 13	380	367	96.6	0.118	2340	96	0.0943	2.26	ng/kg
PCDDs/PCDFs	Total PeCDD	Sediment ≥ RM 4	333	319	95.8	0.118	2340	91	0.0957	2.26	ng/kg
PCDDs/PCDFs	Total PeCDD	Sediment, sitewide	428	413	96.5	0.118	2340	87	0.0943	2.26	ng/kg
PCDDs/PCDFs	Total TCDD	Sediment, mudflats (all)	136	136	100	0.557	37900	1400			ng/kg
PCDDs/PCDFs	Total TCDD	Sediment < RM 13	380	378	99.5	0.557	52100	1500	0.0807	0.0902	ng/kg
PCDDs/PCDFs	Total TCDD	Sediment ≥ RM 4	333	332	99.7	0.557	52100	1600	0.0807	0.0807	ng/kg
PCDDs/PCDFs	Total TCDD	Sediment, sitewide	428	426	99.5	0.557	52100	1400	0.0807	0.0902	ng/kg
PCDDs/PCDFs	Total HpCDF	Sediment, mudflats (all)	136	136	100	1.94	5040	880			ng/kg
PCDDs/PCDFs	Total HpCDF	Sediment < RM 13	380	378	99.5	1.94	9070	920	3.1	3.72	ng/kg
PCDDs/PCDFs	Total HpCDF	Sediment ≥ RM 4	333	332	99.7	1.94	8580	750	3.72	3.72	ng/kg
PCDDs/PCDFs	Total HpCDF	Sediment, sitewide	428	426	99.5	1.94	9070	830	3.1	3.72	ng/kg
PCDDs/PCDFs	Total HxCDF	Sediment, mudflats (all)	136	136	100	1.04	4060	560			ng/kg
PCDDs/PCDFs	Total HxCDF	Sediment < RM 13	380	379	99.7	0.484	6310	590	2.25	2.25	ng/kg
PCDDs/PCDFs	Total HxCDF	Sediment ≥ RM 4	333	333	100	0.484	6310	500			ng/kg

Sediment summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCDDs/PCDFs	Total HxCDF	Sediment, sitewide	428	427	99.8	0.484	6310	530	2.25	2.25	ng/kg
PCDDs/PCDFs	Total PeCDF	Sediment, mudflats (all)	136	136	100	0.466	7860	720			ng/kg
PCDDs/PCDFs	Total PeCDF	Sediment < RM 13	380	379	99.7	0.466	12600	760	3.15	3.15	ng/kg
PCDDs/PCDFs	Total PeCDF	Sediment ≥ RM 4	333	332	99.7	0.466	12600	710	3.15	3.15	ng/kg
PCDDs/PCDFs	Total PeCDF	Sediment, sitewide	428	427	99.8	0.466	12600	690	3.15	3.15	ng/kg
PCDDs/PCDFs	Total TCDF	Sediment, mudflats (all)	136	136	100	0.36	11500	980			ng/kg
PCDDs/PCDFs	Total TCDF	Sediment < RM 13	380	377	99.2	0.36	24600	1100	0.118	7.53	ng/kg
PCDDs/PCDFs	Total TCDF	Sediment ≥ RM 4	333	331	99.4	0.36	24600	1100	0.118	4.48	ng/kg
PCDDs/PCDFs	Total TCDF	Sediment, sitewide	428	425	99.3	0.36	24600	1000	0.118	7.53	ng/kg
OC Pesticides	2,4'-DDD	Sediment, mudflats (all)	136	131	96.3	0.0513	416	14	0.0409	2.2	ug/kg
OC Pesticides	2,4'-DDD	Sediment < RM 13	379	374	98.7	0.051	416	18	0.0409	0.18	ug/kg
OC Pesticides	2,4'-DDD	Sediment ≥ RM 4	332	327	98.5	0.0513	320	14	0.0409	2.2	ug/kg
OC Pesticides	2,4'-DDD	Sediment, sitewide	427	421	98.6	0.051	416	16	0.0409	2.2	ug/kg
OC Pesticides	2,4'-DDE	Sediment, mudflats (all)	136	117	86	0.066	211	11	0.0323	1.5	ug/kg
OC Pesticides	2,4'-DDE	Sediment < RM 13	379	362	95.5	0.016	640	11	0.013	1.5	ug/kg
OC Pesticides	2,4'-DDE	Sediment ≥ RM 4	332	307	92.5	0.012	640	11	0.0323	2.1	ug/kg
OC Pesticides	2,4'-DDE	Sediment, sitewide	427	400	93.7	0.012	640	9.8	0.013	2.1	ug/kg
OC Pesticides	2,4'-DDT	Sediment, mudflats (all)	136	109	80.1	0.0512	65	2.6	0.0367	4.3	ug/kg
OC Pesticides	2,4'-DDT	Sediment < RM 13	379	314	82.8	0.024	65	2.7	0.0024	2.8	ug/kg
OC Pesticides	2,4'-DDT	Sediment ≥ RM 4	332	264	79.5	0.024	40	2.4	0.0024	4.3	ug/kg
OC Pesticides	2,4'-DDT	Sediment, sitewide	427	351	82.2	0.024	65	2.6	0.0024	4.3	ug/kg
OC Pesticides	4,4'-DDD	Sediment, mudflats (all)	136	133	97.8	0.176	617	36	0.0442	5.3	ug/kg
OC Pesticides	4,4'-DDD	Sediment < RM 13	379	376	99.2	0.176	870	46	0.0442	0.358	ug/kg
OC Pesticides	4,4'-DDD	Sediment ≥ RM 4	332	328	98.8	0.176	870	41	0.0442	5.3	ug/kg
OC Pesticides	4,4'-DDD	Sediment, sitewide	427	423	99.1	0.176	870	42	0.0442	5.3	ug/kg
OC Pesticides	4,4'-DDE	Sediment, mudflats (all)	136	132	97.1	0.36	771	52	0.138	2.1	ug/kg
OC Pesticides	4,4'-DDE	Sediment < RM 13	379	376	99.2	0.12	1600	57	0.138	0.296	ug/kg
OC Pesticides	4,4'-DDE	Sediment ≥ RM 4	332	328	98.8	0.12	1600	55	0.138	2.1	ug/kg
OC Pesticides	4,4'-DDE	Sediment, sitewide	427	422	98.8	0.12	1600	53	0.138	2.1	ug/kg
OC Pesticides	4,4'-DDT	Sediment, mudflats (all)	136	126	92.6	0.315	1100	30	0.0504	4.7	ug/kg
OC Pesticides	4,4'-DDT	Sediment < RM 13	379	365	96.3	0.026	1100	20	0.0282	2.5	ug/kg
OC Pesticides	4,4'-DDT	Sediment ≥ RM 4	332	316	95.2	0.026	1100	19	0.0282	4.7	ug/kg
OC Pesticides	4,4'-DDT	Sediment, sitewide	427	408	95.6	0.026	1100	20	0.0282	4.7	ug/kg
OC Pesticides	Aldrin	Sediment, mudflats (all)	136	102	75	0.013	5.91	0.91	0.00947	41	ug/kg
OC Pesticides	Aldrin	Sediment < RM 13	379	307	81	0.012	24	1.2	0.0038	41	ug/kg
OC Pesticides	Aldrin	Sediment ≥ RM 4	332	285	85.8	0.0063	24	1.3	0.0038	11	ug/kg
OC Pesticides	Aldrin	Sediment, sitewide	427	350	82	0.0063	24	1.2	0.0038	41	ug/kg
OC Pesticides	alpha-BHC	Sediment, mudflats (all)	136	76	55.9	0.0124	7.57	0.27	0.0082	0.55	ug/kg
OC Pesticides	alpha-BHC	Sediment < RM 13	379	231	60.9	0.0087	7.57	0.22	0.0018	0.68	ug/kg
OC Pesticides	alpha-BHC	Sediment ≥ RM 4	332	179	53.9	0.0087	7.57	0.24	0.0018	0.68	ug/kg
OC Pesticides	alpha-BHC	Sediment, sitewide	427	251	58.8	0.0087	7.57	0.21	0.0018	0.68	ug/kg
OC Pesticides	alpha-Chlordane	Sediment, mudflats (all)	136	134	98.5	0.137	78.6	17	2	6.7	ug/kg
OC Pesticides	alpha-Chlordane	Sediment < RM 13	379	378	99.7	0.042	220	21	6.7	6.7	ug/kg

Sediment summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
OC Pesticides	alpha-Chlordane	Sediment ≥ RM 4	332	331	99.7	0.137	220	19	2	2	ug/kg
OC Pesticides	alpha-Chlordane	Sediment, sitewide	427	425	99.5	0.042	220	19	2	6.7	ug/kg
OC Pesticides	beta-BHC	Sediment, mudflats (all)	136	80	58.8	0.0176	5.87	0.27	0.0117	0.57	ug/kg
OC Pesticides	beta-BHC	Sediment < RM 13	379	268	70.7	0.0077	12	0.34	0.0061	0.7	ug/kg
OC Pesticides	beta-BHC	Sediment ≥ RM 4	332	213	64.2	0.0077	12	0.35	0.0026	0.7	ug/kg
OC Pesticides	beta-BHC	Sediment, sitewide	427	289	67.7	0.0077	12	0.32	0.0026	0.7	ug/kg
OC Pesticides	cis-Nonachlor	Sediment, mudflats (all)	136	127	93.4	0.033	23.3	5.1	0.0228	7.8	ug/kg
OC Pesticides	cis-Nonachlor	Sediment < RM 13	379	368	97.1	0.033	67	5.9	0.015	16	ug/kg
OC Pesticides	cis-Nonachlor	Sediment ≥ RM 4	332	317	95.5	0.033	67	5.6	0.0228	16	ug/kg
OC Pesticides	cis-Nonachlor	Sediment, sitewide	427	409	95.8	0.033	67	5.6	0.015	16	ug/kg
OC Pesticides	delta-BHC	Sediment, mudflats (all)	136	50	36.8	0.0072	3.62	0.19	0.006	0.68	ug/kg
OC Pesticides	delta-BHC	Sediment < RM 13	379	144	38	0.0057	3.62	0.16	0.00097	0.85	ug/kg
OC Pesticides	delta-BHC	Sediment ≥ RM 4	332	111	33.4	0.0098	3.62	0.18	0.00097	0.85	ug/kg
OC Pesticides	delta-BHC	Sediment, sitewide	427	157	36.8	0.0057	3.62	0.16	0.00097	0.85	ug/kg
OC Pesticides	Dieldrin	Sediment, mudflats (all)	136	133	97.8	0.093	24.4	4	0.0164	1.4	ug/kg
OC Pesticides	Dieldrin	Sediment < RM 13	379	372	98.2	0.015	152	6.2	0.0164	1.3	ug/kg
OC Pesticides	Dieldrin	Sediment ≥ RM 4	332	324	97.6	0.093	152	6.2	0.0164	1.4	ug/kg
OC Pesticides	Dieldrin	Sediment, sitewide	427	419	98.1	0.015	152	5.9	0.0164	1.4	ug/kg
OC Pesticides	Endosulfan I	Sediment, mudflats (all)	136	2	1.5	0.13	0.33	0.23	0.011	2.3	ug/kg
OC Pesticides	Endosulfan I	Sediment < RM 13	379	5	1.3	0.064	0.47	0.23	0.011	2.6	ug/kg
OC Pesticides	Endosulfan I	Sediment ≥ RM 4	332	6	1.8	0.064	0.47	0.25	0.0057	2.6	ug/kg
OC Pesticides	Endosulfan I	Sediment, sitewide	427	6	1.4	0.064	0.47	0.25	0.0057	2.6	ug/kg
OC Pesticides	Endosulfan II	Sediment, mudflats (all)	136	48	35.3	0.11	4.4	0.92	0.037	77	ug/kg
OC Pesticides	Endosulfan II	Sediment < RM 13	379	167	44.1	0.059	18	1.2	0.031	27	ug/kg
OC Pesticides	Endosulfan II	Sediment ≥ RM 4	332	143	43.1	0.059	18	1.2	0.031	77	ug/kg
OC Pesticides	Endosulfan II	Sediment, sitewide	427	188	44	0.059	18	1.1	0.031	77	ug/kg
OC Pesticides	Endosulfan sulfate	Sediment, mudflats (all)	136	58	42.6	0.018	0.76	0.17	0.0039	0.91	ug/kg
OC Pesticides	Endosulfan sulfate	Sediment < RM 13	379	206	54.4	0.015	4.9	0.26	0.0039	1.2	ug/kg
OC Pesticides	Endosulfan sulfate	Sediment ≥ RM 4	332	181	54.5	0.011	4.9	0.26	0.00481	1.2	ug/kg
OC Pesticides	Endosulfan sulfate	Sediment, sitewide	427	229	53.6	0.011	4.9	0.25	0.0039	1.2	ug/kg
OC Pesticides	Endrin	Sediment, mudflats (all)	136	5	3.7	0.06	4.1	1.1	0.0027	16	ug/kg
OC Pesticides	Endrin	Sediment < RM 13	376	13	3.5	0.06	2.6	0.61	0.0072	19	ug/kg
OC Pesticides	Endrin	Sediment ≥ RM 4	329	12	3.6	0.0885	4.1	1	0.0027	19	ug/kg
OC Pesticides	Endrin	Sediment, sitewide	424	15	3.5	0.06	4.1	0.85	0.0027	19	ug/kg
OC Pesticides	Endrin aldehyde	Sediment, mudflats (all)	136	4	2.9	0.012	1	0.37	0.0066	5.5	ug/kg
OC Pesticides	Endrin aldehyde	Sediment < RM 13	379	15	4	0.014	1	0.33	0.0048	5.5	ug/kg
OC Pesticides	Endrin aldehyde	Sediment ≥ RM 4	332	21	6.3	0.012	1	0.3	0.0016	5.5	ug/kg
OC Pesticides	Endrin aldehyde	Sediment, sitewide	427	22	5.2	0.012	1	0.29	0.0016	5.5	ug/kg
OC Pesticides	Endrin ketone	Sediment, mudflats (all)	136	25	18.4	0.021	0.52	0.14	0.0052	3.5	ug/kg
OC Pesticides	Endrin ketone	Sediment < RM 13	379	82	21.6	0.0056	1.46	0.15	0.0019	3.5	ug/kg
OC Pesticides	Endrin ketone	Sediment ≥ RM 4	332	66	19.9	0.0056	0.52	0.14	0.0019	3.5	ug/kg
OC Pesticides	Endrin ketone	Sediment, sitewide	427	88	20.6	0.0056	1.46	0.16	0.0019	3.5	ug/kg
OC Pesticides	gamma-BHC (Lindane)	Sediment, mudflats (all)	136	51	37.5	0.0193	9.41	0.3	0.0115	0.87	ug/kg

Sediment summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
OC Pesticides	gamma-BHC (Lindane)	Sediment < RM 13	379	141	37.2	0.014	9.41	0.26	0.00248	0.87	ug/kg
OC Pesticides	gamma-BHC (Lindane)	Sediment ≥ RM 4	332	117	35.2	0.0159	9.41	0.28	0.00248	0.87	ug/kg
OC Pesticides	gamma-BHC (Lindane)	Sediment, sitewide	427	153	35.8	0.014	9.41	0.24	0.00248	0.87	ug/kg
OC Pesticides	gamma-Chlordane	Sediment, mudflats (all)	136	135	99.3	0.0597	68.3	17	4	4	ug/kg
OC Pesticides	gamma-Chlordane	Sediment < RM 13	379	378	99.7	0.0597	290	21	0.052	0.052	ug/kg
OC Pesticides	gamma-Chlordane	Sediment ≥ RM 4	332	331	99.7	0.0597	290	20	4	4	ug/kg
OC Pesticides	gamma-Chlordane	Sediment, sitewide	427	425	99.5	0.0597	290	20	0.052	4	ug/kg
OC Pesticides	Heptachlor	Sediment, mudflats (all)	136	102	75	0.007	1.6	0.15	0.00381	0.42	ug/kg
OC Pesticides	Heptachlor	Sediment < RM 13	379	289	76.3	0.007	7.87	0.22	0.002	0.42	ug/kg
OC Pesticides	Heptachlor	Sediment ≥ RM 4	332	248	74.7	0.0095	7.87	0.24	0.002	0.42	ug/kg
OC Pesticides	Heptachlor	Sediment, sitewide	427	323	75.6	0.007	7.87	0.22	0.002	0.42	ug/kg
OC Pesticides	Heptachlor epoxide	Sediment, mudflats (all)	136	119	87.5	0.025	4.8	0.79	0.00821	1.5	ug/kg
OC Pesticides	Heptachlor epoxide	Sediment < RM 13	379	354	93.4	0.0242	9	0.98	0.0021	1.5	ug/kg
OC Pesticides	Heptachlor epoxide	Sediment ≥ RM 4	332	307	92.5	0.0242	9	0.95	0.00821	1.4	ug/kg
OC Pesticides	Heptachlor epoxide	Sediment, sitewide	427	399	93.4	0.0242	9	0.94	0.0021	1.5	ug/kg
OC Pesticides	Hexachlorobenzene	Sediment, mudflats (all)	136	122	89.7	0.174	140	8.5	0.0452	3.3	ug/kg
OC Pesticides	Hexachlorobenzene	Sediment < RM 13	380	339	89.2	0.052	181	8.8	0.0094	170	ug/kg
OC Pesticides	Hexachlorobenzene	Sediment ≥ RM 4	333	285	85.6	0.051	180	7	0.0094	170	ug/kg
OC Pesticides	Hexachlorobenzene	Sediment, sitewide	428	380	88.8	0.051	181	7.9	0.0094	170	ug/kg
OC Pesticides	Methoxychlor	Sediment, mudflats (all)	136	51	37.5	0.0711	160	21	0.038	70	ug/kg
OC Pesticides	Methoxychlor	Sediment < RM 13	379	104	27.4	0.0711	160	14	0.0017	29	ug/kg
OC Pesticides	Methoxychlor	Sediment ≥ RM 4	332	98	29.5	0.0711	160	12	0.0017	70	ug/kg
OC Pesticides	Methoxychlor	Sediment, sitewide	427	121	28.3	0.0711	160	13	0.0017	70	ug/kg
OC Pesticides	Oxychlordane	Sediment, mudflats (all)	136	108	79.4	0.0141	8.5	0.38	0.0038	0.6	ug/kg
OC Pesticides	Oxychlordane	Sediment < RM 13	379	324	85.5	0.0061	8.5	0.38	0.0038	0.6	ug/kg
OC Pesticides	Oxychlordane	Sediment ≥ RM 4	332	289	87	0.0061	8.5	0.39	0.00446	0.6	ug/kg
OC Pesticides	Oxychlordane	Sediment, sitewide	427	371	86.9	0.0061	8.5	0.37	0.0038	0.6	ug/kg
OC Pesticides	Total 2,4' and 4,4' DDD	Sediment, mudflats (all)	136	133	97.8	0.227	1030	50	0.0442	5.3	ug/kg
OC Pesticides	Total 2,4' and 4,4' DDD	Sediment < RM 13	379	377	99.5	0.073	1200	64	0.0442	0.0538	ug/kg
OC Pesticides	Total 2,4' and 4,4' DDD	Sediment ≥ RM 4	332	329	99.1	0.073	1200	55	0.0442	5.3	ug/kg
OC Pesticides	Total 2,4' and 4,4' DDD	Sediment, sitewide	427	424	99.3	0.073	1200	58	0.0442	5.3	ug/kg
OC Pesticides	Total 2,4' and 4,4' DDD (ND=0.5DL)	Sediment, mudflats (all)	136	133	97.8	0.227	1030	50	0.0442	5.3	ug/kg
OC Pesticides	Total 2,4' and 4,4' DDD (ND=0.5DL)	Sediment < RM 13	379	377	99.5	0.227	1200	64	0.0442	0.0538	ug/kg
OC Pesticides	Total 2,4' and 4,4' DDD (ND=0.5DL)	Sediment ≥ RM 4	332	329	99.1	0.227	1200	55	0.0442	5.3	ug/kg
OC Pesticides	Total 2,4' and 4,4' DDD (ND=0.5DL)	Sediment, sitewide	427	424	99.3	0.227	1200	58	0.0442	5.3	ug/kg
OC Pesticides	Total 2,4' and 4,4' DDD (ND=DL)	Sediment, mudflats (all)	136	133	97.8	0.227	1030	50	0.0442	5.3	ug/kg
OC Pesticides	Total 2,4' and 4,4' DDD (ND=DL)	Sediment < RM 13	379	377	99.5	0.227	1200	64	0.0442	0.0538	ug/kg
OC Pesticides	Total 2,4' and 4,4' DDD (ND=DL)	Sediment ≥ RM 4	332	329	99.1	0.227	1200	55	0.0442	5.3	ug/kg
OC Pesticides	Total 2,4' and 4,4' DDD (ND=DL)	Sediment, sitewide	427	424	99.3	0.227	1200	58	0.0442	5.3	ug/kg
OC Pesticides	Total 2,4' and 4,4' DDE	Sediment, mudflats (all)	136	132	97.1	0.36	982	62	0.138	2.1	ug/kg
OC Pesticides	Total 2,4' and 4,4' DDE	Sediment < RM 13	379	376	99.2	0.14	2200	68	0.138	0.296	ug/kg
OC Pesticides	Total 2,4' and 4,4' DDE	Sediment ≥ RM 4	332	328	98.8	0.14	2200	65	0.138	2.1	ug/kg
OC Pesticides	Total 2,4' and 4,4' DDE	Sediment, sitewide	427	422	98.8	0.14	2200	62	0.138	2.1	ug/kg

Sediment summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
OC Pesticides	Total 2,4' and 4,4' DDE (ND=0.5DL)	Sediment, mudflats (all)	136	132	97.1	0.388	982	62	0.138	2.1	ug/kg
OC Pesticides	Total 2,4' and 4,4' DDE (ND=0.5DL)	Sediment < RM 13	379	376	99.2	0.14	2200	68	0.138	0.296	ug/kg
OC Pesticides	Total 2,4' and 4,4' DDE (ND=0.5DL)	Sediment ≥ RM 4	332	328	98.8	0.14	2200	65	0.138	2.1	ug/kg
OC Pesticides	Total 2,4' and 4,4' DDE (ND=0.5DL)	Sediment, sitewide	427	422	98.8	0.14	2200	62	0.138	2.1	ug/kg
OC Pesticides	Total 2,4' and 4,4' DDE (ND=DL)	Sediment, mudflats (all)	136	132	97.1	0.416	982	62	0.138	2.1	ug/kg
OC Pesticides	Total 2,4' and 4,4' DDE (ND=DL)	Sediment < RM 13	379	376	99.2	0.14	2200	68	0.138	0.296	ug/kg
OC Pesticides	Total 2,4' and 4,4' DDE (ND=DL)	Sediment ≥ RM 4	332	328	98.8	0.14	2200	65	0.138	2.1	ug/kg
OC Pesticides	Total 2,4' and 4,4' DDE (ND=DL)	Sediment, sitewide	427	422	98.8	0.14	2200	62	0.138	2.1	ug/kg
OC Pesticides	Total 2,4' and 4,4' DDT	Sediment, mudflats (all)	136	126	92.6	0.315	1100	32	0.0504	4.7	ug/kg
OC Pesticides	Total 2,4' and 4,4' DDT	Sediment < RM 13	379	366	96.6	0.026	1100	23	0.0282	2.5	ug/kg
OC Pesticides	Total 2,4' and 4,4' DDT	Sediment ≥ RM 4	332	317	95.5	0.026	1100	21	0.0282	4.7	ug/kg
OC Pesticides	Total 2,4' and 4,4' DDT	Sediment, sitewide	427	409	95.8	0.026	1100	22	0.0282	4.7	ug/kg
OC Pesticides	Total 2,4' and 4,4' DDT (ND=0.5DL)	Sediment, mudflats (all)	136	126	92.6	0.333	1100	32	0.0504	4.7	ug/kg
OC Pesticides	Total 2,4' and 4,4' DDT (ND=0.5DL)	Sediment < RM 13	379	366	96.6	0.028	1100	23	0.0282	2.5	ug/kg
OC Pesticides	Total 2,4' and 4,4' DDT (ND=0.5DL)	Sediment ≥ RM 4	332	317	95.5	0.028	1100	21	0.0282	4.7	ug/kg
OC Pesticides	Total 2,4' and 4,4' DDT (ND=0.5DL)	Sediment, sitewide	427	409	95.8	0.028	1100	22	0.0282	4.7	ug/kg
OC Pesticides	Total 2,4' and 4,4' DDT (ND=DL)	Sediment, mudflats (all)	136	126	92.6	0.352	1100	32	0.0504	4.7	ug/kg
OC Pesticides	Total 2,4' and 4,4' DDT (ND=DL)	Sediment < RM 13	379	366	96.6	0.029	1100	23	0.0282	2.5	ug/kg
OC Pesticides	Total 2,4' and 4,4' DDT (ND=DL)	Sediment ≥ RM 4	332	317	95.5	0.029	1100	21	0.0282	4.7	ug/kg
OC Pesticides	Total 2,4' and 4,4' DDT (ND=DL)	Sediment, sitewide	427	409	95.8	0.029	1100	22	0.0282	4.7	ug/kg
OC Pesticides	Total 4,4' DDT	Sediment, mudflats (all)	136	133	97.8	0.925	1290	120	0.138	5.3	ug/kg
OC Pesticides	Total 4,4' DDT	Sediment < RM 13	379	377	99.5	0.317	2000	120	0.138	0.153	ug/kg
OC Pesticides	Total 4,4' DDT	Sediment ≥ RM 4	332	329	99.1	0.439	2000	110	0.138	5.3	ug/kg
OC Pesticides	Total 4,4' DDT	Sediment, sitewide	427	424	99.3	0.317	2000	110	0.138	5.3	ug/kg
OC Pesticides	Total 4,4' DDT (ND=0.5DL)	Sediment, mudflats (all)	136	133	97.8	0.925	1290	120	0.138	5.3	ug/kg
OC Pesticides	Total 4,4' DDT (ND=0.5DL)	Sediment < RM 13	379	377	99.5	0.44	2000	120	0.138	0.153	ug/kg
OC Pesticides	Total 4,4' DDT (ND=0.5DL)	Sediment ≥ RM 4	332	329	99.1	0.44	2000	110	0.138	5.3	ug/kg
OC Pesticides	Total 4,4' DDT (ND=0.5DL)	Sediment, sitewide	427	424	99.3	0.44	2000	110	0.138	5.3	ug/kg
OC Pesticides	Total 4,4' DDT (ND=DL)	Sediment, mudflats (all)	136	133	97.8	0.925	1290	120	0.138	5.3	ug/kg
OC Pesticides	Total 4,4' DDT (ND=DL)	Sediment < RM 13	379	377	99.5	0.44	2000	120	0.138	0.153	ug/kg
OC Pesticides	Total 4,4' DDT (ND=DL)	Sediment ≥ RM 4	332	329	99.1	0.44	2000	110	0.138	5.3	ug/kg
OC Pesticides	Total 4,4' DDT (ND=DL)	Sediment, sitewide	427	424	99.3	0.44	2000	110	0.138	5.3	ug/kg
OC Pesticides	Total Chlordane	Sediment, mudflats (all)	136	136	100	0.326	210	51			ug/kg
OC Pesticides	Total Chlordane	Sediment < RM 13	379	379	100	0.042	760	62			ug/kg
OC Pesticides	Total Chlordane	Sediment ≥ RM 4	332	332	100	0.306	760	58			ug/kg
OC Pesticides	Total Chlordane	Sediment, sitewide	427	427	100	0.042	760	58			ug/kg
OC Pesticides	Total Chlordane (ND=0.5DL)	Sediment, mudflats (all)	136	136	100	0.326	210	51			ug/kg
OC Pesticides	Total Chlordane (ND=0.5DL)	Sediment < RM 13	379	379	100	0.1	760	62			ug/kg
OC Pesticides	Total Chlordane (ND=0.5DL)	Sediment ≥ RM 4	332	332	100	0.326	760	58			ug/kg
OC Pesticides	Total Chlordane (ND=0.5DL)	Sediment, sitewide	427	427	100	0.1	760	58			ug/kg
OC Pesticides	Total Chlordane (ND=DL)	Sediment, mudflats (all)	136	136	100	0.326	210	52			ug/kg
OC Pesticides	Total Chlordane (ND=DL)	Sediment < RM 13	379	379	100	0.16	760	62			ug/kg
OC Pesticides	Total Chlordane (ND=DL)	Sediment ≥ RM 4	332	332	100	0.326	760	58			ug/kg

Sediment summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
OC Pesticides	Total Chlordane (ND=DL)	Sediment, sitewide	427	427	100	0.16	760	59			ug/kg
OC Pesticides	Total DDx	Sediment, mudflats (all)	136	133	97.8	1.03	1620	140	0.138	5.3	ug/kg
OC Pesticides	Total DDx	Sediment < RM 13	379	377	99.5	0.317	2800	150	0.138	0.153	ug/kg
OC Pesticides	Total DDx	Sediment ≥ RM 4	332	329	99.1	0.55	2800	140	0.138	5.3	ug/kg
OC Pesticides	Total DDx	Sediment, sitewide	427	424	99.3	0.317	2800	140	0.138	5.3	ug/kg
OC Pesticides	Total DDx (ND=0.5DL)	Sediment, mudflats (all)	136	133	97.8	1.06	1620	140	0.138	5.3	ug/kg
OC Pesticides	Total DDx (ND=0.5DL)	Sediment < RM 13	379	377	99.5	0.55	2800	150	0.138	0.153	ug/kg
OC Pesticides	Total DDx (ND=0.5DL)	Sediment ≥ RM 4	332	329	99.1	0.55	2800	140	0.138	5.3	ug/kg
OC Pesticides	Total DDx (ND=0.5DL)	Sediment, sitewide	427	424	99.3	0.55	2800	140	0.138	5.3	ug/kg
OC Pesticides	Total DDx (ND=DL)	Sediment, mudflats (all)	136	133	97.8	1.08	1620	140	0.138	5.3	ug/kg
OC Pesticides	Total DDx (ND=DL)	Sediment < RM 13	379	377	99.5	0.56	2800	150	0.138	0.153	ug/kg
OC Pesticides	Total DDx (ND=DL)	Sediment ≥ RM 4	332	329	99.1	0.56	2800	140	0.138	5.3	ug/kg
OC Pesticides	Total DDx (ND=DL)	Sediment, sitewide	427	424	99.3	0.56	2800	140	0.138	5.3	ug/kg
OC Pesticides	Total Endosulfan	Sediment, mudflats (all)	136	73	53.7	0.0201	5	0.74	0.037	77	ug/kg
OC Pesticides	Total Endosulfan	Sediment < RM 13	379	240	63.3	0.016	22	1	0.031	8.4	ug/kg
OC Pesticides	Total Endosulfan	Sediment ≥ RM 4	332	213	64.2	0.016	22	1	0.031	77	ug/kg
OC Pesticides	Total Endosulfan	Sediment, sitewide	427	269	63	0.016	22	1	0.031	77	ug/kg
OC Pesticides	Total Endosulfan (ND=0.5DL)	Sediment, mudflats (all)	136	73	53.7	0.057	5.1	1	0.037	77	ug/kg
OC Pesticides	Total Endosulfan (ND=0.5DL)	Sediment < RM 13	379	240	63.3	0.057	23	1.5	0.031	8.4	ug/kg
OC Pesticides	Total Endosulfan (ND=0.5DL)	Sediment ≥ RM 4	332	213	64.2	0.057	23	1.4	0.031	77	ug/kg
OC Pesticides	Total Endosulfan (ND=0.5DL)	Sediment, sitewide	427	269	63	0.057	23	1.4	0.031	77	ug/kg
OC Pesticides	Total Endosulfan (ND=DL)	Sediment, mudflats (all)	136	73	53.7	0.09	5.2	1.3	0.037	77	ug/kg
OC Pesticides	Total Endosulfan (ND=DL)	Sediment < RM 13	379	240	63.3	0.09	33	1.9	0.031	8.4	ug/kg
OC Pesticides	Total Endosulfan (ND=DL)	Sediment ≥ RM 4	332	213	64.2	0.09	33	1.9	0.031	77	ug/kg
OC Pesticides	Total Endosulfan (ND=DL)	Sediment, sitewide	427	269	63	0.09	33	1.8	0.031	77	ug/kg
OC Pesticides	trans-Nonachlor	Sediment, mudflats (all)	136	136	100	0.078	46.1	12			ug/kg
OC Pesticides	trans-Nonachlor	Sediment < RM 13	379	377	99.5	0.078	180	14	0.043	0.0673	ug/kg
OC Pesticides	trans-Nonachlor	Sediment ≥ RM 4	332	331	99.7	0.078	180	13	0.0673	0.0673	ug/kg
OC Pesticides	trans-Nonachlor	Sediment, sitewide	427	425	99.5	0.078	180	13	0.043	0.0673	ug/kg
Herbicides	2,4,5-T	Sediment, mudflats (all)	80	0	0				0.012	1.9	mg/kg
Herbicides	2,4,5-T	Sediment < RM 13	217	1	0.5	0.00201	0.00201		0.011	1.9	mg/kg
Herbicides	2,4,5-T	Sediment ≥ RM 4	194	1	0.5	0.00201	0.00201		0.011	1.9	mg/kg
Herbicides	2,4,5-T	Sediment, sitewide	256	1	0.4	0.00201	0.00201		0.011	1.9	mg/kg
Herbicides	2,4,5-TP (Silvex)	Sediment, mudflats (all)	80	1	1.2	1.1	1.1		0.012	1.1	mg/kg
Herbicides	2,4,5-TP (Silvex)	Sediment < RM 13	217	3	1.4	0.0039	0.77	0.44	0.011	1.1	mg/kg
Herbicides	2,4,5-TP (Silvex)	Sediment ≥ RM 4	194	3	1.5	0.0039	1.1	0.62	0.011	1.1	mg/kg
Herbicides	2,4,5-TP (Silvex)	Sediment, sitewide	256	4	1.6	0.0039	1.1	0.61	0.011	1.1	mg/kg
Herbicides	2,4-D	Sediment, mudflats (all)	80	2	2.5	0.017	0.039	0.028	0.048	1.9	mg/kg
Herbicides	2,4-D	Sediment < RM 13	217	2	0.9	0.017	0.039	0.028	0.045	1.9	mg/kg
Herbicides	2,4-D	Sediment ≥ RM 4	194	2	1	0.017	0.039	0.028	0.045	1.9	mg/kg
Herbicides	2,4-D	Sediment, sitewide	256	2	0.8	0.017	0.039	0.028	0.045	1.9	mg/kg
Herbicides	2,4-DB	Sediment, mudflats (all)	80	0	0				0.048	1.9	mg/kg
Herbicides	2,4-DB	Sediment < RM 13	216	3	1.4	0.024	0.12	0.059	0.045	1.9	mg/kg

Sediment summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
Herbicides	2,4-DB	Sediment ≥ RM 4	193	3	1.6	0.024	0.12	0.059	0.045	1.9	mg/kg
Herbicides	2,4-DB	Sediment, sitewide	255	3	1.2	0.024	0.12	0.059	0.045	1.9	mg/kg
VOCs	1,2,3-Trichlorobenzene	Sediment, mudflats (all)	72	1	1.4	2.6	2.6		1.3	28	ug/kg
VOCs	1,2,3-Trichlorobenzene	Sediment < RM 13	160	5	3.1	1.1	30	7.4	0.8	570	ug/kg
VOCs	1,2,3-Trichlorobenzene	Sediment ≥ RM 4	135	1	0.7	30	30		0.8	570	ug/kg
VOCs	1,2,3-Trichlorobenzene	Sediment, sitewide	184	5	2.7	1.1	30	7.4	0.8	570	ug/kg
VOCs	1,2,4-Trichlorobenzene	Sediment, mudflats (all)	73	13	17.8	0.27	14	4.1	1.3	670	ug/kg
VOCs	1,2,4-Trichlorobenzene	Sediment < RM 13	161	35	21.7	0.15	14	4.3	0.8	670	ug/kg
VOCs	1,2,4-Trichlorobenzene	Sediment ≥ RM 4	136	4	2.9	0.15	13	4.6	0.8	670	ug/kg
VOCs	1,2,4-Trichlorobenzene	Sediment, sitewide	185	35	18.9	0.15	14	4.3	0.8	670	ug/kg
VOCs	1,2-Dichlorobenzene	Sediment, mudflats (all)	72	14	19.4	0.33	7.4	2.5	1.3	17	ug/kg
VOCs	1,2-Dichlorobenzene	Sediment < RM 13	161	44	27.3	0.23	7.4	2.6	0.8	150	ug/kg
VOCs	1,2-Dichlorobenzene	Sediment ≥ RM 4	136	15	11	0.33	7.4	2.5	0.8	150	ug/kg
VOCs	1,2-Dichlorobenzene	Sediment, sitewide	185	45	24.3	0.23	7.4	2.6	0.8	150	ug/kg
VOCs	1,3-Dichlorobenzene	Sediment, mudflats (all)	72	10	13.9	0.23	2.3	0.88	1.3	17	ug/kg
VOCs	1,3-Dichlorobenzene	Sediment < RM 13	160	28	17.5	0.12	2.3	1	0.8	150	ug/kg
VOCs	1,3-Dichlorobenzene	Sediment ≥ RM 4	135	8	5.9	0.12	1	0.41	0.8	150	ug/kg
VOCs	1,3-Dichlorobenzene	Sediment, sitewide	184	28	15.2	0.12	2.3	1	0.8	150	ug/kg
VOCs	1,4-Dichlorobenzene	Sediment, mudflats (all)	72	32	44.4	0.12	10	3.8	1.3	17	ug/kg
VOCs	1,4-Dichlorobenzene	Sediment < RM 13	161	77	47.8	0.12	76	4.7	0.8	50	ug/kg
VOCs	1,4-Dichlorobenzene	Sediment ≥ RM 4	136	38	27.9	0.12	76	5.2	0.8	50	ug/kg
VOCs	1,4-Dichlorobenzene	Sediment, sitewide	185	79	42.7	0.12	76	4.6	0.8	50	ug/kg
VOCs	1,4-Dioxane	Sediment, mudflats (all)	82	0	0				168	9560	ug/kg
VOCs	1,4-Dioxane	Sediment < RM 13	273	1	0.4	664	664		126	11900	ug/kg
VOCs	1,4-Dioxane	Sediment ≥ RM 4	236	0	0				126	11900	ug/kg
VOCs	1,4-Dioxane	Sediment, sitewide	298	1	0.3	664	664		126	11900	ug/kg
VOCs	2-Butanone	Sediment, mudflats (all)	58	39	67.2	11	140	52	5	27	ug/kg
VOCs	2-Butanone	Sediment < RM 13	103	53	51.5	3.5	140	49	4.1	2000	ug/kg
VOCs	2-Butanone	Sediment ≥ RM 4	93	44	47.3	5	140	40	4.1	2000	ug/kg
VOCs	2-Butanone	Sediment, sitewide	116	62	53.4	3.5	140	47	4.1	2000	ug/kg
VOCs	4-Methyl-2-pentanone	Sediment, mudflats (all)	72	4	5.6	2.7	4.4	3.5	5	78	ug/kg
VOCs	4-Methyl-2-pentanone	Sediment < RM 13	159	9	5.7	1.4	9.8	4.1	4.1	2000	ug/kg
VOCs	4-Methyl-2-pentanone	Sediment ≥ RM 4	134	1	0.7	1.4	1.4		4.1	2000	ug/kg
VOCs	4-Methyl-2-pentanone	Sediment, sitewide	183	9	4.9	1.4	9.8	4.1	4.1	2000	ug/kg
VOCs	Acetone	Sediment, mudflats (all)	72	47	65.3	10	1000	270	6	78	ug/kg
VOCs	Acetone	Sediment < RM 13	160	58	36.2	14	1000	260	4.2	2000	ug/kg
VOCs	Acetone	Sediment ≥ RM 4	134	50	37.3	10	1000	200	4.2	2000	ug/kg
VOCs	Acetone	Sediment, sitewide	183	69	37.7	10	1000	240	4.2	2000	ug/kg
VOCs	Benzene	Sediment, mudflats (all)	72	3	4.2	0.26	0.56	0.39	1.3	17	ug/kg
VOCs	Benzene	Sediment < RM 13	161	7	4.3	0.067	0.56	0.27	0.8	150	ug/kg
VOCs	Benzene	Sediment ≥ RM 4	136	6	4.4	0.067	0.34	0.22	0.8	150	ug/kg
VOCs	Benzene	Sediment, sitewide	185	7	3.8	0.067	0.56	0.27	0.8	150	ug/kg
VOCs	Carbon disulfide	Sediment, mudflats (all)	72	48	66.7	0.13	21	5.1	1.3	17	ug/kg

Sediment summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
VOCs	Carbon disulfide	Sediment < RM 13	161	93	57.8	0.12	21	3.8	0.8	150	ug/kg
VOCs	Carbon disulfide	Sediment ≥ RM 4	136	53	39	0.12	14	3	0.8	150	ug/kg
VOCs	Carbon disulfide	Sediment, sitewide	185	97	52.4	0.12	21	3.7	0.8	150	ug/kg
VOCs	Chlorobenzene	Sediment, mudflats (all)	72	8	11.1	0.11	6	2.6	1.3	17	ug/kg
VOCs	Chlorobenzene	Sediment < RM 13	161	23	14.3	0.11	6	1.4	0.8	150	ug/kg
VOCs	Chlorobenzene	Sediment ≥ RM 4	136	9	6.6	0.11	6	2.2	0.8	150	ug/kg
VOCs	Chlorobenzene	Sediment, sitewide	185	23	12.4	0.11	6	1.4	0.8	150	ug/kg
VOCs	Chloroform	Sediment, mudflats (all)	72	1	1.4	0.14	0.14		1.3	17	ug/kg
VOCs	Chloroform	Sediment < RM 13	161	1	0.6	0.14	0.14		0.8	150	ug/kg
VOCs	Chloroform	Sediment ≥ RM 4	136	1	0.7	0.14	0.14		0.8	150	ug/kg
VOCs	Chloroform	Sediment, sitewide	185	1	0.5	0.14	0.14		0.8	150	ug/kg
VOCs	Chloromethane	Sediment, mudflats (all)	72	4	5.6	0.53	0.88	0.65	1.3	17	ug/kg
VOCs	Chloromethane	Sediment < RM 13	161	5	3.1	0.53	9.9	2.5	0.8	150	ug/kg
VOCs	Chloromethane	Sediment ≥ RM 4	136	5	3.7	0.53	9.9	2.5	0.8	150	ug/kg
VOCs	Chloromethane	Sediment, sitewide	185	5	2.7	0.53	9.9	2.5	0.8	150	ug/kg
VOCs	cis-1,2-Dichloroethylene	Sediment, mudflats (all)	72	6	8.3	0.99	3	1.6	1.3	17	ug/kg
VOCs	cis-1,2-Dichloroethylene	Sediment < RM 13	161	32	19.9	0.24	50	2.9	0.96	150	ug/kg
VOCs	cis-1,2-Dichloroethylene	Sediment ≥ RM 4	136	23	16.9	0.27	50	3.7	0.89	150	ug/kg
VOCs	cis-1,2-Dichloroethylene	Sediment, sitewide	185	33	17.8	0.24	50	2.8	0.89	150	ug/kg
VOCs	Cyclohexane	Sediment, mudflats (all)	72	1	1.4	4.4	4.4		1.3	17	ug/kg
VOCs	Cyclohexane	Sediment < RM 13	161	1	0.6	4.4	4.4		0.8	290	ug/kg
VOCs	Cyclohexane	Sediment ≥ RM 4	136	1	0.7	4.4	4.4		0.8	290	ug/kg
VOCs	Cyclohexane	Sediment, sitewide	185	1	0.5	4.4	4.4		0.8	290	ug/kg
VOCs	Ethylbenzene	Sediment, mudflats (all)	72	3	4.2	0.48	2.2	1.1	1.3	17	ug/kg
VOCs	Ethylbenzene	Sediment < RM 13	161	9	5.6	0.16	3	0.68	0.8	150	ug/kg
VOCs	Ethylbenzene	Sediment ≥ RM 4	136	4	2.9	0.23	2.2	0.87	0.8	150	ug/kg
VOCs	Ethylbenzene	Sediment, sitewide	185	10	5.4	0.16	3	0.83	0.8	150	ug/kg
VOCs	Isopropylbenzene	Sediment, mudflats (all)	72	3	4.2	0.52	4.3	1.8	2	67	ug/kg
VOCs	Isopropylbenzene	Sediment < RM 13	161	13	8.1	0.31	4.3	1	2	570	ug/kg
VOCs	Isopropylbenzene	Sediment ≥ RM 4	136	5	3.7	0.31	4.3	1.7	2	570	ug/kg
VOCs	Isopropylbenzene	Sediment, sitewide	185	13	7	0.31	4.3	1	2	570	ug/kg
VOCs	m, p-Xylene	Sediment, mudflats (all)	72	6	8.3	0.3	7.6	2.1	1.3	33	ug/kg
VOCs	m, p-Xylene	Sediment < RM 13	161	29	18	0.11	34	2	0.8	84	ug/kg
VOCs	m, p-Xylene	Sediment ≥ RM 4	136	24	17.6	0.11	34	2.2	0.8	84	ug/kg
VOCs	m, p-Xylene	Sediment, sitewide	185	30	16.2	0.11	34	2.2	0.8	84	ug/kg
VOCs	Methyl acetate	Sediment, mudflats (all)	73	33	45.2	1.4	4100	140	1.4	12	ug/kg
VOCs	Methyl acetate	Sediment < RM 13	162	40	24.7	0.92	4800	310	0.8	12	ug/kg
VOCs	Methyl acetate	Sediment ≥ RM 4	137	44	32.1	0.92	4800	280	0.8	11	ug/kg
VOCs	Methyl acetate	Sediment, sitewide	186	53	28.5	0.92	4800	240	0.8	12	ug/kg
VOCs	Methyl tert-butyl ether (MTBE)	Sediment, mudflats (all)	72	11	15.3	0.17	2.6	0.68	1.6	17	ug/kg
VOCs	Methyl tert-butyl ether (MTBE)	Sediment < RM 13	161	37	23	0.19	50	2.3	0.88	150	ug/kg
VOCs	Methyl tert-butyl ether (MTBE)	Sediment ≥ RM 4	136	19	14	0.12	50	3.6	0.88	150	ug/kg
VOCs	Methyl tert-butyl ether (MTBE)	Sediment, sitewide	185	41	22.2	0.12	50	2.1	0.88	150	ug/kg

Sediment summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
VOCs	Methylcyclohexane	Sediment, mudflats (all)	72	3	4.2	0.95	7.4	3.2	1.3	17	ug/kg
VOCs	Methylcyclohexane	Sediment < RM 13	161	7	4.3	0.51	7.4	2.4	0.8	290	ug/kg
VOCs	Methylcyclohexane	Sediment ≥ RM 4	136	7	5.1	0.51	7.4	2.3	0.8	290	ug/kg
VOCs	Methylcyclohexane	Sediment, sitewide	185	8	4.3	0.51	7.4	2.3	0.8	290	ug/kg
VOCs	Methylene chloride	Sediment, mudflats (all)	73	0	0				5	670	ug/kg
VOCs	Methylene chloride	Sediment < RM 13	162	1	0.6	2.2	2.2		4.1	670	ug/kg
VOCs	Methylene chloride	Sediment ≥ RM 4	137	3	2.2	0.36	4	2.2	4.1	670	ug/kg
VOCs	Methylene chloride	Sediment, sitewide	186	3	1.6	0.36	4	2.2	4.1	670	ug/kg
VOCs	o-Xylene	Sediment, mudflats (all)	72	4	5.6	0.17	3.7	1.7	1.3	17	ug/kg
VOCs	o-Xylene	Sediment < RM 13	161	9	5.6	0.11	3.7	1.2	0.8	150	ug/kg
VOCs	o-Xylene	Sediment ≥ RM 4	136	9	6.6	0.11	3.7	1.1	0.8	150	ug/kg
VOCs	o-Xylene	Sediment, sitewide	185	10	5.4	0.11	3.7	1.3	0.8	150	ug/kg
VOCs	Styrene	Sediment, mudflats (all)	72	2	2.8	0.37	0.39	0.38	1.3	17	ug/kg
VOCs	Styrene	Sediment < RM 13	161	1	0.6	0.39	0.39		0.8	150	ug/kg
VOCs	Styrene	Sediment ≥ RM 4	136	1	0.7	0.37	0.37		0.8	150	ug/kg
VOCs	Styrene	Sediment, sitewide	185	2	1.1	0.37	0.39	0.38	0.8	150	ug/kg
VOCs	Tetrachloroethylene	Sediment, mudflats (all)	72	15	20.8	0.34	7	3.1	1.4	17	ug/kg
VOCs	Tetrachloroethylene	Sediment < RM 13	161	54	33.5	0.24	12	2.8	0.8	150	ug/kg
VOCs	Tetrachloroethylene	Sediment ≥ RM 4	136	40	29.4	0.24	12	3	0.8	150	ug/kg
VOCs	Tetrachloroethylene	Sediment, sitewide	185	59	31.9	0.24	12	2.7	0.8	150	ug/kg
VOCs	Toluene	Sediment, mudflats (all)	73	4	5.5	2	6	3.8	1.3	170	ug/kg
VOCs	Toluene	Sediment < RM 13	162	11	6.8	2	15	7.4	0.8	170	ug/kg
VOCs	Toluene	Sediment ≥ RM 4	137	7	5.1	4	15	9	0.8	170	ug/kg
VOCs	Toluene	Sediment, sitewide	186	11	5.9	2	15	7.4	0.8	170	ug/kg
VOCs	Trichloroethene	Sediment, mudflats (all)	72	7	9.7	0.3	5	2.3	1.4	17	ug/kg
VOCs	Trichloroethene	Sediment < RM 13	161	37	23	0.31	6	2	0.97	150	ug/kg
VOCs	Trichloroethene	Sediment ≥ RM 4	136	28	20.6	0.3	6	2.2	0.89	150	ug/kg
VOCs	Trichloroethene	Sediment, sitewide	185	39	21.1	0.3	6	1.9	0.89	150	ug/kg
TPH-A	2,6,10,14-Tetramethylhexadecane	Sediment, mudflats (all)	54	23	42.6	0.4	5	0.95	0.4	4.3	mg/kg
TPH-A	2,6,10,14-Tetramethylhexadecane	Sediment < RM 13	106	64	60.4	0.1	5.3	0.98	0.4	4.3	mg/kg
TPH-A	2,6,10,14-Tetramethylhexadecane	Sediment ≥ RM 4	96	61	63.5	0.3	5.3	0.97	0.4	4.3	mg/kg
TPH-A	2,6,10,14-Tetramethylhexadecane	Sediment, sitewide	129	74	57.4	0.1	5.3	0.92	0.4	4.3	mg/kg
TPH-A	2,6,10,14-Tetramethylpentadecane	Sediment, mudflats (all)	54	23	42.6	0.2	8.7	1.2	0.4	4.3	mg/kg
TPH-A	2,6,10,14-Tetramethylpentadecane	Sediment < RM 13	106	69	65.1	0.2	8.7	1.2	0.4	4.3	mg/kg
TPH-A	2,6,10,14-Tetramethylpentadecane	Sediment ≥ RM 4	96	65	67.7	0.2	8.7	1.2	0.4	4.3	mg/kg
TPH-A	2,6,10,14-Tetramethylpentadecane	Sediment, sitewide	129	79	61.2	0.2	8.7	1.1	0.4	4.3	mg/kg
TPH-A	2,6,10-Trimethyldodecane	Sediment, mudflats (all)	54	4	7.4	0.3	3.3	1.2	0.4	4.3	mg/kg
TPH-A	2,6,10-Trimethyldodecane	Sediment < RM 13	106	15	14.2	0.3	3.3	1.2	0.1	4.3	mg/kg
TPH-A	2,6,10-Trimethyldodecane	Sediment ≥ RM 4	96	13	13.5	0.3	3.3	1.3	0.4	4.3	mg/kg
TPH-A	2,6,10-Trimethyldodecane	Sediment, sitewide	129	15	11.6	0.3	3.3	1.2	0.1	4.3	mg/kg
TPH-A	2,6,10-Trimethyltridecane	Sediment, mudflats (all)	54	11	20.4	0.22	4.2	0.82	0.4	4.3	mg/kg
TPH-A	2,6,10-Trimethyltridecane	Sediment < RM 13	106	25	23.6	0.33	4.2	1.1	0.1	4.3	mg/kg
TPH-A	2,6,10-Trimethyltridecane	Sediment ≥ RM 4	96	23	24	0.22	4.2	1.1	0.4	4.3	mg/kg

Sediment summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
TPH-A	2,6,10-Trimethyltridecane	Sediment, sitewide	129	28	21.7	0.22	4.2	1	0.1	4.3	mg/kg
TPH-A	Dodecane	Sediment, mudflats (all)	54	1	1.9	0.5	0.5		0.4	4.3	mg/kg
TPH-A	Dodecane	Sediment < RM 13	106	2	1.9	0.5	0.5	0.5	0.1	4.3	mg/kg
TPH-A	Dodecane	Sediment ≥ RM 4	96	2	2.1	0.5	0.5	0.5	0.4	4.3	mg/kg
TPH-A	Dodecane	Sediment, sitewide	129	2	1.6	0.5	0.5	0.5	0.1	4.3	mg/kg
TPH-A	Dotriacontane	Sediment, mudflats (all)	54	54	100	0.29	6.4	2.7			mg/kg
TPH-A	Dotriacontane	Sediment < RM 13	106	105	99.1	0.4	6.4	3	0.4	0.4	mg/kg
TPH-A	Dotriacontane	Sediment ≥ RM 4	96	95	99	0.29	6.4	2.6	0.4	0.4	mg/kg
TPH-A	Dotriacontane	Sediment, sitewide	129	128	99.2	0.29	6.4	2.6	0.4	0.4	mg/kg
TPH-A	Eicosane	Sediment, mudflats (all)	54	25	46.3	0.2	2	0.93	0.4	4.3	mg/kg
TPH-A	Eicosane	Sediment < RM 13	106	67	63.2	0.2	2	0.88	0.4	4.3	mg/kg
TPH-A	Eicosane	Sediment ≥ RM 4	96	63	65.6	0.2	2	0.89	0.4	4.3	mg/kg
TPH-A	Eicosane	Sediment, sitewide	129	81	62.8	0.2	2	0.83	0.4	4.3	mg/kg
TPH-A	Hentriacontane	Sediment, mudflats (all)	54	54	100	0.3	42	6.4			mg/kg
TPH-A	Hentriacontane	Sediment < RM 13	106	105	99.1	0.3	25	6	0.4	0.4	mg/kg
TPH-A	Hentriacontane	Sediment ≥ RM 4	96	95	99	0.3	42	5.5	0.4	0.4	mg/kg
TPH-A	Hentriacontane	Sediment, sitewide	129	128	99.2	0.3	42	5.6	0.4	0.4	mg/kg
TPH-A	Heptacosane	Sediment, mudflats (all)	54	54	100	0.2	32	5.2			mg/kg
TPH-A	Heptacosane	Sediment < RM 13	106	105	99.1	0.2	20	5.2	0.4	0.4	mg/kg
TPH-A	Heptacosane	Sediment ≥ RM 4	96	95	99	0.2	32	4.7	0.4	0.4	mg/kg
TPH-A	Heptacosane	Sediment, sitewide	129	128	99.2	0.2	32	4.8	0.4	0.4	mg/kg
TPH-A	Hexatricontane	Sediment, mudflats (all)	54	19	35.2	0.3	2	0.82	0.4	4.3	mg/kg
TPH-A	Hexatricontane	Sediment < RM 13	106	53	50	0.4	1.4	0.76	0.1	4.3	mg/kg
TPH-A	Hexatricontane	Sediment ≥ RM 4	96	51	53.1	0.2	2	0.75	0.4	4.3	mg/kg
TPH-A	Hexatricontane	Sediment, sitewide	129	60	46.5	0.2	2	0.74	0.1	4.3	mg/kg
TPH-A	n-Decane	Sediment, mudflats (all)	54	2	3.7	0.3	1	0.65	0.4	4.3	mg/kg
TPH-A	n-Decane	Sediment < RM 13	106	4	3.8	0.3	1	0.53	0.1	4.3	mg/kg
TPH-A	n-Decane	Sediment ≥ RM 4	96	4	4.2	0.3	1	0.53	0.4	4.3	mg/kg
TPH-A	n-Decane	Sediment, sitewide	129	4	3.1	0.3	1	0.53	0.1	4.3	mg/kg
TPH-A	n-Docosane	Sediment, mudflats (all)	54	5	9.3	0.3	1.1	0.56	0.4	4.3	mg/kg
TPH-A	n-Docosane	Sediment < RM 13	106	14	13.2	0.1	2.6	0.61	0.4	4.3	mg/kg
TPH-A	n-Docosane	Sediment ≥ RM 4	96	14	14.6	0.3	2.6	0.64	0.4	4.3	mg/kg
TPH-A	n-Docosane	Sediment, sitewide	129	16	12.4	0.1	2.6	0.59	0.4	4.3	mg/kg
TPH-A	n-Henicosane	Sediment, mudflats (all)	54	19	35.2	0.3	2	0.76	0.4	4.3	mg/kg
TPH-A	n-Henicosane	Sediment < RM 13	106	61	57.5	0.2	2	0.72	0.4	4.3	mg/kg
TPH-A	n-Henicosane	Sediment ≥ RM 4	96	51	53.1	0.3	1.8	0.7	0.4	4.3	mg/kg
TPH-A	n-Henicosane	Sediment, sitewide	129	66	51.2	0.2	2	0.69	0.4	4.3	mg/kg
TPH-A	n-Heptadecane	Sediment, mudflats (all)	54	10	18.5	0.4	0.9	0.66	0.4	4.3	mg/kg
TPH-A	n-Heptadecane	Sediment < RM 13	106	34	32.1	0.2	1	0.59	0.4	4.3	mg/kg
TPH-A	n-Heptadecane	Sediment ≥ RM 4	96	28	29.2	0.3	1	0.63	0.4	4.3	mg/kg
TPH-A	n-Heptadecane	Sediment, sitewide	129	34	26.4	0.2	1	0.59	0.4	4.3	mg/kg
TPH-A	n-Heptatriacontane	Sediment, mudflats (all)	54	12	22.2	0.3	1	0.67	0.4	4.3	mg/kg
TPH-A	n-Heptatriacontane	Sediment < RM 13	106	32	30.2	0.3	2.3	0.73	0.1	4.3	mg/kg

Sediment summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
TPH-A	n-Heptatriacontane	Sediment ≥ RM 4	96	34	35.4	0.3	2.3	0.73	0.4	4.3	mg/kg
TPH-A	n-Heptatriacontane	Sediment, sitewide	129	34	26.4	0.3	2.3	0.73	0.1	4.3	mg/kg
TPH-A	n-Hexacosane	Sediment, mudflats (all)	54	27	50	0.3	8	1.2	0.4	4.3	mg/kg
TPH-A	n-Hexacosane	Sediment < RM 13	106	74	69.8	0.3	8	1.2	0.4	4.3	mg/kg
TPH-A	n-Hexacosane	Sediment ≥ RM 4	96	62	64.6	0.3	3	0.99	0.4	4.3	mg/kg
TPH-A	n-Hexacosane	Sediment, sitewide	129	83	64.3	0.3	8	1.1	0.4	4.3	mg/kg
TPH-A	n-Hexadecane	Sediment, mudflats (all)	54	12	22.2	0.5	1.3	0.82	0.4	4.3	mg/kg
TPH-A	n-Hexadecane	Sediment < RM 13	106	33	31.1	0.1	1.7	0.72	0.4	4.3	mg/kg
TPH-A	n-Hexadecane	Sediment ≥ RM 4	96	39	40.6	0.2	3.2	0.73	0.4	4.3	mg/kg
TPH-A	n-Hexadecane	Sediment, sitewide	129	43	33.3	0.1	3.2	0.71	0.4	4.3	mg/kg
TPH-A	n-Nonadecane	Sediment, mudflats (all)	54	5	9.3	0.4	0.8	0.58	0.4	4.3	mg/kg
TPH-A	n-Nonadecane	Sediment < RM 13	106	14	13.2	0.1	1.4	0.53	0.4	4.3	mg/kg
TPH-A	n-Nonadecane	Sediment ≥ RM 4	96	15	15.6	0.2	1.4	0.52	0.4	4.3	mg/kg
TPH-A	n-Nonadecane	Sediment, sitewide	129	16	12.4	0.1	1.4	0.49	0.4	4.3	mg/kg
TPH-A	n-Octacosane	Sediment, mudflats (all)	54	37	68.5	0.26	11	1.5	0.4	2.1	mg/kg
TPH-A	n-Octacosane	Sediment < RM 13	106	84	79.2	0.3	11	1.2	0.4	2.1	mg/kg
TPH-A	n-Octacosane	Sediment ≥ RM 4	96	74	77.1	0.25	11	1.2	0.4	1.3	mg/kg
TPH-A	n-Octacosane	Sediment, sitewide	129	97	75.2	0.25	11	1.1	0.4	2.1	mg/kg
TPH-A	n-Octadecane	Sediment, mudflats (all)	54	5	9.3	0.3	2.1	1.1	0.4	4.3	mg/kg
TPH-A	n-Octadecane	Sediment < RM 13	106	9	8.5	0.1	1.5	0.64	0.4	4.3	mg/kg
TPH-A	n-Octadecane	Sediment ≥ RM 4	96	8	8.3	0.3	2.1	0.88	0.4	4.3	mg/kg
TPH-A	n-Octadecane	Sediment, sitewide	129	10	7.8	0.1	2.1	0.79	0.4	4.3	mg/kg
TPH-A	Nonacosane	Sediment, mudflats (all)	54	54	100	0.25	50	7.3			mg/kg
TPH-A	Nonacosane	Sediment < RM 13	106	105	99.1	0.25	34	6.9	0.4	0.4	mg/kg
TPH-A	Nonacosane	Sediment ≥ RM 4	96	95	99	0.25	50	6.5	0.4	0.4	mg/kg
TPH-A	Nonacosane	Sediment, sitewide	129	128	99.2	0.25	50	6.6	0.4	0.4	mg/kg
TPH-A	Nonatriacontane	Sediment, mudflats (all)	54	11	20.4	0.3	1	0.68	0.4	4.3	mg/kg
TPH-A	Nonatriacontane	Sediment < RM 13	106	38	35.8	0.06	1.4	0.63	0.1	4.3	mg/kg
TPH-A	Nonatriacontane	Sediment ≥ RM 4	96	42	43.8	0.06	1.4	0.62	0.4	4.3	mg/kg
TPH-A	Nonatriacontane	Sediment, sitewide	129	43	33.3	0.06	1.4	0.61	0.1	4.3	mg/kg
TPH-A	Norpristane	Sediment, mudflats (all)	54	8	14.8	0.22	4	0.98	0.4	4.3	mg/kg
TPH-A	Norpristane	Sediment < RM 13	106	24	22.6	0.07	4	1.1	0.4	4.3	mg/kg
TPH-A	Norpristane	Sediment ≥ RM 4	96	23	24	0.22	4	1	0.4	4.3	mg/kg
TPH-A	Norpristane	Sediment, sitewide	129	27	20.9	0.07	4	1	0.4	4.3	mg/kg
TPH-A	n-Pentacosane	Sediment, mudflats (all)	54	44	81.5	0.5	14	3.1	0.4	1.9	mg/kg
TPH-A	n-Pentacosane	Sediment < RM 13	106	87	82.1	0.4	14	2.7	0.4	2	mg/kg
TPH-A	n-Pentacosane	Sediment ≥ RM 4	96	82	85.4	0.4	18	2.8	0.4	1.9	mg/kg
TPH-A	n-Pentacosane	Sediment, sitewide	129	107	82.9	0.4	18	2.7	0.4	2	mg/kg
TPH-A	n-Pentadecane	Sediment, mudflats (all)	54	16	29.6	0.33	1.6	0.75	0.4	4.3	mg/kg
TPH-A	n-Pentadecane	Sediment < RM 13	106	43	40.6	0.08	17	1.1	0.4	4.3	mg/kg
TPH-A	n-Pentadecane	Sediment ≥ RM 4	96	43	44.8	0.2	17	1	0.4	4.3	mg/kg
TPH-A	n-Pentadecane	Sediment, sitewide	129	53	41.1	0.08	17	0.97	0.4	4.3	mg/kg
TPH-A	n-Tetracosane	Sediment, mudflats (all)	54	17	31.5	0.3	5.2	0.98	0.4	4.3	mg/kg

Sediment summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
TPH-A	n-Tetracosane	Sediment < RM 13	106	39	36.8	0.3	5.2	0.76	0.4	4.3	mg/kg
TPH-A	n-Tetracosane	Sediment ≥ RM 4	96	46	47.9	0.2	5.2	0.7	0.4	4.3	mg/kg
TPH-A	n-Tetracosane	Sediment, sitewide	129	51	39.5	0.2	5.2	0.69	0.4	4.3	mg/kg
TPH-A	n-Tetradecane	Sediment, mudflats (all)	54	3	5.6	0.4	1.1	0.7	0.4	4.3	mg/kg
TPH-A	n-Tetradecane	Sediment < RM 13	106	9	8.5	0.4	1.1	0.6	0.1	4.3	mg/kg
TPH-A	n-Tetradecane	Sediment ≥ RM 4	96	8	8.3	0.4	1.1	0.61	0.4	4.3	mg/kg
TPH-A	n-Tetradecane	Sediment, sitewide	129	9	7	0.4	1.1	0.6	0.1	4.3	mg/kg
TPH-A	n-Triacontane	Sediment, mudflats (all)	54	45	83.3	0.2	4	1.3	0.4	4.3	mg/kg
TPH-A	n-Triacontane	Sediment < RM 13	106	95	89.6	0.2	4	1.3	0.4	4.3	mg/kg
TPH-A	n-Triacontane	Sediment ≥ RM 4	96	87	90.6	0.2	4	1.2	0.4	4.3	mg/kg
TPH-A	n-Triacontane	Sediment, sitewide	129	116	89.9	0.2	4	1.2	0.4	4.3	mg/kg
TPH-A	n-Tricosane	Sediment, mudflats (all)	54	45	83.3	0.3	5.3	1.2	0.4	4.3	mg/kg
TPH-A	n-Tricosane	Sediment < RM 13	106	95	89.6	0.3	5.3	1.2	0.4	4.3	mg/kg
TPH-A	n-Tricosane	Sediment ≥ RM 4	96	87	90.6	0.3	5.3	1.2	0.4	4.3	mg/kg
TPH-A	n-Tricosane	Sediment, sitewide	129	116	89.9	0.3	5.3	1.2	0.4	4.3	mg/kg
TPH-A	Octatriacontane	Sediment, mudflats (all)	54	17	31.5	0.3	1	0.61	0.4	4.3	mg/kg
TPH-A	Octatriacontane	Sediment < RM 13	106	51	48.1	0.2	1	0.6	0.1	4.3	mg/kg
TPH-A	Octatriacontane	Sediment ≥ RM 4	96	49	51	0.2	1	0.59	0.4	4.3	mg/kg
TPH-A	Octatriacontane	Sediment, sitewide	129	57	44.2	0.2	1	0.59	0.1	4.3	mg/kg
TPH-A	Pentatriacontane	Sediment, mudflats (all)	54	35	64.8	0.4	4.9	1.3	0.4	4.3	mg/kg
TPH-A	Pentatriacontane	Sediment < RM 13	106	71	67	0.3	4.9	1.1	0.4	4.3	mg/kg
TPH-A	Pentatriacontane	Sediment ≥ RM 4	96	68	70.8	0.3	4.9	1	0.4	4.3	mg/kg
TPH-A	Pentatriacontane	Sediment, sitewide	129	82	63.6	0.3	4.9	1	0.4	4.3	mg/kg
TPH-A	Tetracontane	Sediment, mudflats (all)	54	12	22.2	0.3	1.2	0.67	0.4	4.3	mg/kg
TPH-A	Tetracontane	Sediment < RM 13	106	37	34.9	0.3	1.2	0.63	0.1	4.3	mg/kg
TPH-A	Tetracontane	Sediment ≥ RM 4	96	41	42.7	0.2	1.2	0.6	0.4	4.3	mg/kg
TPH-A	Tetracontane	Sediment, sitewide	129	43	33.3	0.2	1.2	0.6	0.1	4.3	mg/kg
TPH-A	Tetratriacontane	Sediment, mudflats (all)	54	52	96.3	0.3	12	2.6	0.4	0.6	mg/kg
TPH-A	Tetratriacontane	Sediment < RM 13	106	100	94.3	0.2	7	2.6	0.4	0.9	mg/kg
TPH-A	Tetratriacontane	Sediment ≥ RM 4	96	88	91.7	0.2	12	2.5	0.4	0.9	mg/kg
TPH-A	Tetratriacontane	Sediment, sitewide	129	121	93.8	0.2	12	2.5	0.4	0.9	mg/kg
TPH-A	Tridecane	Sediment, mudflats (all)	54	1	1.9	0.5	0.5		0.4	4.3	mg/kg
TPH-A	Tridecane	Sediment < RM 13	106	3	2.8	0.06	0.6	0.39	0.4	4.3	mg/kg
TPH-A	Tridecane	Sediment ≥ RM 4	96	1	1	0.5	0.5		0.4	4.3	mg/kg
TPH-A	Tridecane	Sediment, sitewide	129	3	2.3	0.06	0.6	0.39	0.4	4.3	mg/kg
TPH-A	Tritriacontane	Sediment, mudflats (all)	54	51	94.4	0.5	12	2.8	0.4	0.6	mg/kg
TPH-A	Tritriacontane	Sediment < RM 13	106	102	96.2	0.2	6.2	2.4	0.4	0.6	mg/kg
TPH-A	Tritriacontane	Sediment ≥ RM 4	96	92	95.8	0.2	12	2.2	0.4	0.6	mg/kg
TPH-A	Tritriacontane	Sediment, sitewide	129	125	96.9	0.2	12	2.2	0.4	0.6	mg/kg
TPH-A	Total petroleum hydrocarbons (C9-C44)	Sediment, mudflats (all)	54	54	100	470	6000	2600			mg/kg
TPH-A	Total petroleum hydrocarbons (C9-C44)	Sediment < RM 13	106	106	100	260	6100	2800			mg/kg
TPH-A	Total petroleum hydrocarbons (C9-C44)	Sediment ≥ RM 4	96	96	100	350	6100	2400			mg/kg
TPH-A	Total petroleum hydrocarbons (C9-C44)	Sediment, sitewide	129	129	100	260	6100	2400			mg/kg

Sediment summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
TPH-A	Total saturated hydrocarbons	Sediment, mudflats (all)	54	54	100	1.7	190	38			mg/kg
TPH-A	Undecane	Sediment, mudflats (all)	54	1	1.9	1.6	1.6		0.4	4.3	mg/kg
TPH-A	Total saturated hydrocarbons	Sediment < RM 13	106	106	100	0.53	130	39			mg/kg
TPH-A	Undecane	Sediment < RM 13	106	5	4.7	0.8	1.6	1.2	0.1	4.3	mg/kg
TPH-A	Total saturated hydrocarbons	Sediment ≥ RM 4	96	96	100	0.53	190	37			mg/kg
TPH-A	Undecane	Sediment ≥ RM 4	96	3	3.1	1	1.6	1.4	0.4	4.3	mg/kg
TPH-A	Total saturated hydrocarbons	Sediment, sitewide	129	129	100	0.53	190	36			mg/kg
TPH-A	Undecane	Sediment, sitewide	129	5	3.9	0.8	1.6	1.2	0.1	4.3	mg/kg
TPH-E	Total petroleum hydrocarbons (Extractable)	Sediment, mudflats (all)	136	136	100	41	18000	2200			mg/kg
TPH-E	Total petroleum hydrocarbons (Extractable)	Sediment < RM 13	379	377	99.5	37.7	18000	2300	27	300	mg/kg
TPH-E	Total petroleum hydrocarbons (Extractable)	Sediment ≥ RM 4	332	329	99.1	37.7	18000	2100	27	300	mg/kg
TPH-E	Total petroleum hydrocarbons (Extractable)	Sediment, sitewide	427	424	99.3	37.7	18000	2200	27	300	mg/kg
TPH-P	Total petroleum hydrocarbons (Purgeable)	Sediment, mudflats (all)	57	1	1.8	3	3		2.4	200	mg/kg
TPH-P	Total petroleum hydrocarbons (Purgeable)	Sediment < RM 13	113	1	0.9	3	3		2	200	mg/kg
TPH-P	Total petroleum hydrocarbons (Purgeable)	Sediment ≥ RM 4	99	2	2	3	3	3	2	200	mg/kg
TPH-P	Total petroleum hydrocarbons (Purgeable)	Sediment, sitewide	136	2	1.5	3	3	3	2	200	mg/kg
Wet chemistry	Acid volatile sulfide (AVS)	Sediment, mudflats (all)	101	100	99	0.05	143	8.1	0.021	0.021	umol/g
Wet chemistry	Acid volatile sulfide (AVS)	Sediment < RM 13	258	250	96.9	0.007	144	7.4	0.017	0.025	umol/g
Wet chemistry	Acid volatile sulfide (AVS)	Sediment ≥ RM 4	223	215	96.4	0.007	144	4.4	0.017	0.025	umol/g
Wet chemistry	Acid volatile sulfide (AVS)	Sediment, sitewide	291	283	97.3	0.007	144	6.7	0.017	0.025	umol/g
Wet chemistry	Ammonia	Sediment, mudflats (all)	101	101	100	0.81	379	60			mg/kg
Wet chemistry	Ammonia	Sediment < RM 13	256	246	96.1	0.61	511	65	0.54	0.73	mg/kg
Wet chemistry	Ammonia	Sediment ≥ RM 4	222	212	95.5	0.61	511	67	0.54	0.73	mg/kg
Wet chemistry	Ammonia	Sediment, sitewide	290	280	96.6	0.61	511	59	0.54	0.73	mg/kg
Wet chemistry	Cyanide	Sediment, mudflats (all)	95	67	70.5	0.09	19	1	0.21	0.57	mg/kg
Wet chemistry	Cyanide	Sediment < RM 13	272	178	65.4	0.06	19	0.92	0.067	1.05	mg/kg
Wet chemistry	Cyanide	Sediment ≥ RM 4	232	144	62.1	0.06	19	0.89	0.067	1.05	mg/kg
Wet chemistry	Cyanide	Sediment, sitewide	297	189	63.6	0.06	19	0.9	0.067	1.05	mg/kg
Wet chemistry	Nitrogen, Kjeldahl	Sediment, mudflats (all)	99	94	94.9	550	6700	3000	150	1100	mg/kg
Wet chemistry	Nitrogen, Kjeldahl	Sediment < RM 13	252	243	96.4	92	45000	3200	230	2500	mg/kg
Wet chemistry	Nitrogen, Kjeldahl	Sediment ≥ RM 4	216	195	90.3	92	45000	3000	150	2500	mg/kg
Wet chemistry	Nitrogen, Kjeldahl	Sediment, sitewide	284	263	92.6	92	45000	3100	150	2500	mg/kg
Wet chemistry	Phosphorus	Sediment, mudflats (all)	101	101	100	158	17000	2600			mg/kg
Wet chemistry	Phosphorus	Sediment < RM 13	257	257	100	58	17000	2900			mg/kg
Wet chemistry	Phosphorus	Sediment ≥ RM 4	223	223	100	58	17000	3100			mg/kg
Wet chemistry	Phosphorus	Sediment, sitewide	291	291	100	58	17000	2700			mg/kg
Wet chemistry	Total sulfide	Sediment, mudflats (all)	118	118	100	1.7	4600	610			mg/kg
Wet chemistry	Total sulfide	Sediment < RM 13	345	340	98.6	0.24	4600	560	0.54	0.65	mg/kg
Wet chemistry	Total sulfide	Sediment ≥ RM 4	296	290	98	0.24	4370	310	0.54	0.7	mg/kg
Wet chemistry	Total sulfide	Sediment, sitewide	388	382	98.5	0.24	4600	500	0.54	0.7	mg/kg
Conventionals	Percent moisture	Sediment, mudflats (all)	227	227	100	13.3	250.2	55			%
Conventionals	Percent moisture	Sediment < RM 13	660	660	100	7.3	257.5	56			%
Conventionals	Percent moisture	Sediment ≥ RM 4	543	543	100	7.3	257.5	52			%

Sediment summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
Conventionals	Percent moisture	Sediment, sitewide	728	728	100	7.3	257.5	54			%
Conventionals	Total organic carbon	Sediment, mudflats (all)	136	136	100	0.144	10.1	4.1			%
Conventionals	Total organic carbon	Sediment < RM 13	379	379	100	0.144	24.2	4.7			%
Conventionals	Total organic carbon	Sediment ≥ RM 4	332	332	100	0.144	24.2	4.5			%
Conventionals	Total organic carbon	Sediment, sitewide	427	427	100	0.144	24.2	4.6			%
Conventionals	Percent solids	Sediment, mudflats (all)	154	154	100	28.8	85.6	48.4			%
Conventionals	Percent solids	Sediment < RM 13	501	501	100	17.85	92.7	48.7			%
Conventionals	Percent solids	Sediment ≥ RM 4	403	403	100	20.14	92.7	54.3			%
Conventionals	Percent solids	Sediment, sitewide	552	552	100	17.85	92.7	50.7			%
Conventionals	pH	Sediment, mudflats (all)	3	3	100	6.44	7.5	7.11			pH
Conventionals	pH	Sediment < RM 13	5	5	100	7.34	7.78	7.52			pH
Conventionals	pH	Sediment ≥ RM 4	2	2	100	6.44	7.78	7.11			pH
Conventionals	pH	Sediment, sitewide	6	6	100	6.44	7.78	7.34			pH
Grain size	Total Fines	Sediment, mudflats (all)	120	120	100	2	97.5	52			%
Grain size	Total Fines	Sediment < RM 13	309	309	100	0.2	97.5	50			%
Grain size	Total Fines	Sediment ≥ RM 4	256	256	100	0.2	97.5	37			%
Grain size	Total Fines	Sediment, sitewide	350	350	100	0.2	97.5	46			%
Grain size	Total Sand	Sediment, mudflats (all)	54	54	100	2.5	96.6	45.1			%
Grain size	Total Sand	Sediment < RM 13	106	106	100	2.5	96	44			%
Grain size	Total Sand	Sediment ≥ RM 4	96	96	100	2.5	96.6	58.1			%
Grain size	Total Sand	Sediment, sitewide	129	129	100	2.5	96.6	51			%
Grain size	Total Gravel	Sediment, mudflats (all)	33	33	100	0.05	36.1	6.4			%
Grain size	Total Gravel	Sediment < RM 13	61	61	100	0.05	37.9	4.75			%
Grain size	Total Gravel	Sediment ≥ RM 4	64	64	100	0.05	36.1	6.2			%
Grain size	Total Gravel	Sediment, sitewide	80	80	100	0.05	37.9	5.84			%

Overview of surface water summary groups

		Sample Counts by Group	
		SLERA	
Sample Group	Group Description	Water screen	Diet screen
Sitewide surface water (< RM 13)	all study area samples below RM 13	320	
Sitewide surface water (≥ RM 4)	all study area samples at or above RM 4	165	

Surface water summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
Metals	Antimony (dissolved)	Surface water, < RM 13	200	71	35.5	0.151	0.89	0.31	1	1	ug/l
Metals	Antimony (dissolved)	Surface water, ≥ RM 4	98	68	69.4	0.151	0.89	0.3	1	1	ug/l
Metals	Antimony (total)	Surface water, < RM 13	200	92	46	0.157	1.84	0.5	1	1	ug/l
Metals	Antimony (total)	Surface water, ≥ RM 4	98	74	75.5	0.157	1.44	0.41	1	1	ug/l
Metals	Arsenic (dissolved)	Surface water, < RM 13	200	192	96	0.4	1.93	1	0.5	0.5	ug/l
Metals	Arsenic (dissolved)	Surface water, ≥ RM 4	98	90	91.8	0.4	1.93	0.93	0.5	0.5	ug/l
Metals	Arsenic (total)	Surface water, < RM 13	200	196	98	0.52	3.02	1.3	0.5	0.5	ug/l
Metals	Arsenic (total)	Surface water, ≥ RM 4	98	94	95.9	0.6	3.02	1.2	0.5	0.5	ug/l
Metals	Beryllium (dissolved)	Surface water, < RM 13	200	33	16.5	0.0008	0.0381	0.0082	0.02	0.02	ug/l
Metals	Beryllium (dissolved)	Surface water, ≥ RM 4	98	14	14.3	0.0021	0.0381	0.012	0.02	0.02	ug/l
Metals	Beryllium (total)	Surface water, < RM 13	200	96	48	0.006	0.277	0.034	0.02	0.02	ug/l
Metals	Beryllium (total)	Surface water, ≥ RM 4	98	59	60.2	0.006	0.133	0.037	0.02	0.02	ug/l
Metals	Cadmium (dissolved)	Surface water, < RM 13	320	272	85	0.004	0.149	0.046	0.02	0.02	ug/l
Metals	Cadmium (dissolved)	Surface water, ≥ RM 4	154	113	73.4	0.004	0.149	0.038	0.02	0.02	ug/l
Metals	Cadmium (total)	Surface water, < RM 13	320	319	99.7	0.018	0.939	0.12	0.02	0.02	ug/l
Metals	Cadmium (total)	Surface water, ≥ RM 4	154	153	99.4	0.018	0.897	0.15	0.02	0.02	ug/l
Metals	Chromium (dissolved)	Surface water, < RM 13	200	194	97	0.18	5.46	0.83	0.2	0.2	ug/l
Metals	Chromium (dissolved)	Surface water, ≥ RM 4	98	98	100	0.18	5.46	1.1			ug/l
Metals	Chromium (total)	Surface water, < RM 13	200	198	99	0.4	27.4	3.3	0.2	0.2	ug/l
Metals	Chromium (total)	Surface water, ≥ RM 4	98	96	98	0.4	27.4	4.2	0.2	0.2	ug/l
Metals	Cobalt (dissolved)	Surface water, < RM 13	200	200	100	0.059	0.425	0.18			ug/l
Metals	Cobalt (dissolved)	Surface water, ≥ RM 4	98	98	100	0.088	0.425	0.2			ug/l
Metals	Cobalt (total)	Surface water, < RM 13	200	200	100	0.121	2.27	0.392			ug/l
Metals	Cobalt (total)	Surface water, ≥ RM 4	98	98	100	0.136	2.27	0.496			ug/l
Metals	Copper (dissolved)	Surface water, < RM 13	320	320	100	1.11	9.26	2.51			ug/l
Metals	Copper (dissolved)	Surface water, ≥ RM 4	154	154	100	1.36	9.26	2.94			ug/l
Metals	Copper (total)	Surface water, < RM 13	320	320	100	1.38	43.7	6.75			ug/l
Metals	Copper (total)	Surface water, ≥ RM 4	154	154	100	1.68	41.7	8.69			ug/l
Metals	Lead (dissolved)	Surface water, < RM 13	320	320	100	0.07	9.97	0.85			ug/l
Metals	Lead (dissolved)	Surface water, ≥ RM 4	154	154	100	0.098	9.97	1.2			ug/l
Metals	Lead (total)	Surface water, < RM 13	320	320	100	0.07	61.2	6.8			ug/l
Metals	Lead (total)	Surface water, ≥ RM 4	154	154	100	0.104	48.7	9.28			ug/l
Metals	Mercury (dissolved)	Surface water, < RM 13	320	319	99.7	0.26	91.5	6.4	0.4	0.4	ng/l
Metals	Mercury (dissolved)	Surface water, ≥ RM 4	154	154	100	0.29	91.5	8.1			ng/l
Metals	Mercury (total)	Surface water, < RM 13	320	320	100	1.01	995	71			ng/l
Metals	Mercury (total)	Surface water, ≥ RM 4	154	154	100	3.09	407	86			ng/l
Metals	Methyl mercury (dissolved)	Surface water, < RM 13	200	152	76	0.021	0.389	0.058	0.048	0.055	ng/l
Metals	Methyl mercury (dissolved)	Surface water, ≥ RM 4	98	90	91.8	0.022	0.389	0.071	0.05	0.055	ng/l
Metals	Methyl mercury (total)	Surface water, < RM 13	200	200	100	0.026	2.21	0.24			ng/l
Metals	Methyl mercury (total)	Surface water, ≥ RM 4	98	98	100	0.063	2.21	0.32			ng/l

Surface water summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
Metals	Nickel (dissolved)	Surface water, < RM 13	200	200	100	0.75	2.6	1.4			ug/l
Metals	Nickel (dissolved)	Surface water, ≥ RM 4	98	98	100	0.87	2.6	1.3			ug/l
Metals	Nickel (total)	Surface water, < RM 13	200	200	100	0.92	7.9	2			ug/l
Metals	Nickel (total)	Surface water, ≥ RM 4	98	98	100	1.01	7.9	2.21			ug/l
Metals	Potassium (total)	Surface water, < RM 13	200	200	100	1750	262000	93000			ug/l
Metals	Potassium (total)	Surface water, ≥ RM 4	98	98	100	1750	193000	26000			ug/l
Metals	Selenium (dissolved)	Surface water, < RM 13	200	56	28	0.2	3.2	0.67	1	1	ug/l
Metals	Selenium (dissolved)	Surface water, ≥ RM 4	98	48	49	0.2	3.2	0.66	1	1	ug/l
Metals	Selenium (total)	Surface water, < RM 13	200	64	32	0.2	3.5	0.62	1	1	ug/l
Metals	Selenium (total)	Surface water, ≥ RM 4	98	44	44.9	0.2	3.5	0.72	1	1	ug/l
Metals	Silver (dissolved)	Surface water, < RM 13	200	119	59.5	0.004	0.119	0.019	0.02	0.02	ug/l
Metals	Silver (dissolved)	Surface water, ≥ RM 4	98	48	49	0.004	0.119	0.032	0.02	0.02	ug/l
Metals	Silver (total)	Surface water, < RM 13	200	196	98	0.012	0.448	0.072	0.02	0.02	ug/l
Metals	Silver (total)	Surface water, ≥ RM 4	98	94	95.9	0.022	0.448	0.089	0.02	0.02	ug/l
Metals	Thallium (dissolved)	Surface water, < RM 13	200	40	20	0.002	0.025	0.0061	0.02	0.02	ug/l
Metals	Thallium (dissolved)	Surface water, ≥ RM 4	98	9	9.2	0.002	0.025	0.0088	0.02	0.02	ug/l
Metals	Thallium (total)	Surface water, < RM 13	200	55	27.5	0.002	0.066	0.014	0.02	0.02	ug/l
Metals	Thallium (total)	Surface water, ≥ RM 4	98	23	23.5	0.002	0.066	0.02	0.02	0.02	ug/l
Metals	Vanadium (dissolved)	Surface water, < RM 13	200	190	95	0.43	5.8	2.6	2	2	ug/l
Metals	Vanadium (dissolved)	Surface water, ≥ RM 4	98	97	99	0.43	5.6	2	2	2	ug/l
Metals	Vanadium (total)	Surface water, < RM 13	200	194	97	0.73	9.2	3.5	2	2	ug/l
Metals	Vanadium (total)	Surface water, ≥ RM 4	98	97	99	0.73	7.6	3	2	2	ug/l
Metals	Zinc (dissolved)	Surface water, < RM 13	200	200	100	1.54	18.5	7.1			ug/l
Metals	Zinc (dissolved)	Surface water, ≥ RM 4	98	98	100	2.1	18.5	6.8			ug/l
Metals	Zinc (total)	Surface water, < RM 13	200	200	100	3.03	106	17			ug/l
Metals	Zinc (total)	Surface water, ≥ RM 4	98	98	100	3.03	106	22			ug/l
Butyltin	Monobutyltin	Surface water, < RM 13	200	2	1	0.045	0.061	0.053	0.05	0.05	ug/l
Butyltin	Monobutyltin	Surface water, ≥ RM 4	98	2	2	0.045	0.061	0.053	0.05	0.05	ug/l
Butyltin	Dibutyltin	Surface water, < RM 13	200	5	2.5	0.011	0.015	0.012	0.05	0.05	ug/l
Butyltin	Dibutyltin	Surface water, ≥ RM 4	98	3	3.1	0.011	0.015	0.013	0.05	0.05	ug/l
Butyltin	Tributyltin	Surface water, < RM 13	200	2	1	0.013	0.026	0.02	0.05	0.05	ug/l
Butyltin	Tributyltin	Surface water, ≥ RM 4	98	1	1	0.026	0.026		0.05	0.05	ug/l
PAHs	1-Methylnaphthalene	Surface water, < RM 13	200	170	85	4.1	114	14.1	10	10	ng/l
PAHs	1-Methylnaphthalene	Surface water, ≥ RM 4	98	96	98	6	114	16.8	10	10	ng/l
PAHs	1-Methylphenanthrene	Surface water, < RM 13	200	195	97.5	0.738	38.6	8.97	10	10	ng/l
PAHs	1-Methylphenanthrene	Surface water, ≥ RM 4	98	98	100	1.78	31.1	11.6			ng/l
PAHs	2,3,5-Trimethylnaphthalene	Surface water, < RM 13	200	168	84	1.6	40.1	4.62	10	10	ng/l
PAHs	2,3,5-Trimethylnaphthalene	Surface water, ≥ RM 4	98	92	93.9	1.86	40.1	5.29	10	10	ng/l
PAHs	2,6-Dimethylnaphthalene	Surface water, < RM 13	200	174	87	2.27	85.4	8.57	10	10.1	ng/l
PAHs	2,6-Dimethylnaphthalene	Surface water, ≥ RM 4	98	94	95.9	2.27	85.4	10.7	10	10	ng/l
PAHs	2-Methylnaphthalene	Surface water, < RM 13	200	144	72	8.31	160	20.4	20	20	ng/l
PAHs	2-Methylnaphthalene	Surface water, ≥ RM 4	98	89	90.8	8.44	160	23.4	20	20	ng/l
PAHs	Acenaphthene	Surface water, < RM 13	200	200	100	3.93	61.7	23.8			ng/l

Surface water summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PAHs	Acenaphthene	Surface water, ≥ RM 4	98	98	100	8.03	61.7	22.6			ng/l
PAHs	Acenaphthylene	Surface water, < RM 13	200	195	97.5	0.955	32.8	5.3	10	10	ng/l
PAHs	Acenaphthylene	Surface water, ≥ RM 4	98	97	99	1.09	20.4	6.15	10	10	ng/l
PAHs	Anthracene	Surface water, < RM 13	200	190	95	1.81	140	13.6	10	10	ng/l
PAHs	Anthracene	Surface water, ≥ RM 4	98	98	100	2.41	120	15.6			ng/l
PAHs	Benzo(a)anthracene	Surface water, < RM 13	200	193	96.5	3.76	316	37.6	10	11.3	ng/l
PAHs	Benzo(a)anthracene	Surface water, ≥ RM 4	98	98	100	6.65	316	49.9			ng/l
PAHs	Benzo(a)pyrene	Surface water, < RM 13	200	181	90.5	7.14	560	61.9	10	29.2	ng/l
PAHs	Benzo(a)pyrene	Surface water, ≥ RM 4	98	96	98	9.67	560	82	15.4	23.1	ng/l
PAHs	Benzo(b)fluoranthene	Surface water, < RM 13	200	189	94.5	8.48	721	82.6	10	30.8	ng/l
PAHs	Benzo(b)fluoranthene	Surface water, ≥ RM 4	98	98	100	14.1	721	113			ng/l
PAHs	Benzo(e)pyrene	Surface water, < RM 13	200	187	93.5	5.68	401	48.4	10	17.4	ng/l
PAHs	Benzo(e)pyrene	Surface water, ≥ RM 4	98	98	100	8.56	401	65.1			ng/l
PAHs	Benzo(g,h,i)perylene	Surface water, < RM 13	200	187	93.5	4.96	414	52.2	10	10	ng/l
PAHs	Benzo(g,h,i)perylene	Surface water, ≥ RM 4	98	98	100	8.02	414	71			ng/l
PAHs	Benzo(k)fluoranthene	Surface water, < RM 13	200	184	92	3.86	375	37.6	10	20.3	ng/l
PAHs	Benzo(k)fluoranthene	Surface water, ≥ RM 4	98	95	96.9	5.15	375	52.5	10	20.3	ng/l
PAHs	Chrysene	Surface water, < RM 13	200	199	99.5	5.53	556	71.8	10	10	ng/l
PAHs	Chrysene	Surface water, ≥ RM 4	98	98	100	13.3	556	102			ng/l
PAHs	Dibenzo(a,h)anthracene	Surface water, < RM 13	200	167	83.5	1.03	95.8	11.9	10	10	ng/l
PAHs	Dibenzo(a,h)anthracene	Surface water, ≥ RM 4	98	94	95.9	1.35	95.8	15.3	10	10	ng/l
PAHs	Dibenzothiophene	Surface water, < RM 13	200	189	94.5	0.693	15.4	4.28	10	10	ng/l
PAHs	Dibenzothiophene	Surface water, ≥ RM 4	98	98	100	1.21	15.4	5.39			ng/l
PAHs	Fluoranthene	Surface water, < RM 13	200	200	100	14.9	583	109			ng/l
PAHs	Fluoranthene	Surface water, ≥ RM 4	98	98	100	25.5	583	145			ng/l
PAHs	Fluorene	Surface water, < RM 13	200	130	65	3.87	31.8	13.9	10	10	ng/l
PAHs	Fluorene	Surface water, ≥ RM 4	98	79	80.6	7.39	31.8	14.8	10	10	ng/l
PAHs	Indeno(1,2,3-cd)pyrene	Surface water, < RM 13	200	184	92	4.1	346	42.4	10	14	ng/l
PAHs	Indeno(1,2,3-cd)pyrene	Surface water, ≥ RM 4	98	98	100	6.88	346	56.7			ng/l
PAHs	Naphthalene	Surface water, < RM 13	200	149	74.5	16.1	93.9	38.6	50	68.4	ng/l
PAHs	Naphthalene	Surface water, ≥ RM 4	98	88	89.8	16.1	93.9	41.2	50	59.1	ng/l
PAHs	Perylene	Surface water, < RM 13	200	185	92.5	2.25	160	19.3	10	12.6	ng/l
PAHs	Perylene	Surface water, ≥ RM 4	98	96	98	2.25	160	24.6	10	11.8	ng/l
PAHs	Phenanthrene	Surface water, < RM 13	200	188	94	11.1	222	52.4	20	20	ng/l
PAHs	Phenanthrene	Surface water, ≥ RM 4	98	98	100	13.2	222	70.7			ng/l
PAHs	Pyrene	Surface water, < RM 13	200	200	100	19.2	587	112			ng/l
PAHs	Pyrene	Surface water, ≥ RM 4	98	98	100	23.2	587	146			ng/l
PAHs	Total benzofluoranthenes	Surface water, < RM 13	200	189	94.5	12.5	1100	119	10	30.8	ng/l
PAHs	Total benzofluoranthenes	Surface water, ≥ RM 4	98	98	100	20.3	1100	164			ng/l
PAHs	Total benzofluoranthenes (ND=0.5DL)	Surface water, < RM 13	200	189	94.5	12.5	1100	120	10	30.8	ng/l
PAHs	Total benzofluoranthenes (ND=0.5DL)	Surface water, ≥ RM 4	98	98	100	20.3	1100	164			ng/l
PAHs	Total benzofluoranthenes (ND=DL)	Surface water, < RM 13	200	189	94.5	12.5	1100	120	10	30.8	ng/l
PAHs	Total benzofluoranthenes (ND=DL)	Surface water, ≥ RM 4	98	98	100	20.3	1100	164			ng/l

Surface water summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PAHs	Total carcinogenic PAHs	Surface water, < RM 13	200	199	99.5	0.0144	798	82.1	10	10	ng/l
PAHs	Total carcinogenic PAHs	Surface water, ≥ RM 4	98	98	100	5.15	798	117			ng/l
PAHs	Total carcinogenic PAHs (ND=0.5DL)	Surface water, < RM 13	200	199	99.5	7.87	798	83.7	11.6	11.6	ng/l
PAHs	Total carcinogenic PAHs (ND=0.5DL)	Surface water, ≥ RM 4	98	98	100	14.2	798	118			ng/l
PAHs	Total carcinogenic PAHs (ND=DL)	Surface water, < RM 13	200	199	99.5	11.7	798	85.3	23.1	23.1	ng/l
PAHs	Total carcinogenic PAHs (ND=DL)	Surface water, ≥ RM 4	98	98	100	14.2	798	118			ng/l
PAHs	Total HPAHs	Surface water, < RM 13	200	200	100	45.9	4550	595			ng/l
PAHs	Total HPAHs	Surface water, ≥ RM 4	98	98	100	117	4550	829			ng/l
PAHs	Total HPAHs (ND=0.5DL)	Surface water, < RM 13	200	200	100	85.9	4550	599			ng/l
PAHs	Total HPAHs (ND=0.5DL)	Surface water, ≥ RM 4	98	98	100	117	4550	829			ng/l
PAHs	Total HPAHs (ND=DL)	Surface water, < RM 13	200	200	100	105	4550	602			ng/l
PAHs	Total HPAHs (ND=DL)	Surface water, ≥ RM 4	98	98	100	117	4550	830			ng/l
PAHs	Total LPAHs	Surface water, < RM 13	200	200	100	5.93	420	129			ng/l
PAHs	Total LPAHs	Surface water, ≥ RM 4	98	98	100	46.4	420	164			ng/l
PAHs	Total LPAHs (ND=0.5DL)	Surface water, < RM 13	200	200	100	46.1	420	138			ng/l
PAHs	Total LPAHs (ND=0.5DL)	Surface water, ≥ RM 4	98	98	100	51.4	420	167			ng/l
PAHs	Total LPAHs (ND=DL)	Surface water, < RM 13	200	200	100	51.1	420	147			ng/l
PAHs	Total LPAHs (ND=DL)	Surface water, ≥ RM 4	98	98	100	56.4	420	171			ng/l
PAHs	Total PAHs	Surface water, < RM 13	200	200	100	55.7	4970	720			ng/l
PAHs	Total PAHs	Surface water, ≥ RM 4	98	98	100	166	4970	990			ng/l
PAHs	Total PAHs (ND=0.5DL)	Surface water, < RM 13	200	200	100	138	4970	737			ng/l
PAHs	Total PAHs (ND=0.5DL)	Surface water, ≥ RM 4	98	98	100	172	4970	997			ng/l
PAHs	Total PAHs (ND=DL)	Surface water, < RM 13	200	200	100	177	4970	749			ng/l
PAHs	Total PAHs (ND=DL)	Surface water, ≥ RM 4	98	98	100	177	4970	1000			ng/l
Alk PAHs	C1-Benzanthracene/chrysenes	Surface water, < RM 13	200	179	89.5	10	360	50.5	10	10	ng/l
Alk PAHs	C1-Benzanthracene/chrysenes	Surface water, ≥ RM 4	98	93	94.9	13.7	360	65.2	10	10	ng/l
Alk PAHs	C1-Dibenzothiophenes	Surface water, < RM 13	200	24	12	10.1	20.4	13.1	10	10	ng/l
Alk PAHs	C1-Dibenzothiophenes	Surface water, ≥ RM 4	98	18	18.4	10.3	17.5	12.5	10	10	ng/l
Alk PAHs	C1-Fluorenes	Surface water, < RM 13	200	79	39.5	10	33.5	13.5	10	10	ng/l
Alk PAHs	C1-Fluorenes	Surface water, ≥ RM 4	98	50	51	10.1	33.5	13.9	10	10	ng/l
Alk PAHs	C1-Phenanthrene/anthracenes	Surface water, < RM 13	200	164	82	10.1	117	31.8	10	10	ng/l
Alk PAHs	C1-Phenanthrene/anthracenes	Surface water, ≥ RM 4	98	93	94.9	12	93.4	37.2	10	10	ng/l
Alk PAHs	C1-Pyrene/fluoranthenes	Surface water, < RM 13	200	199	99.5	10.2	287	55.7	10	10	ng/l
Alk PAHs	C1-Pyrene/fluoranthenes	Surface water, ≥ RM 4	98	97	99	10.2	287	70.1	10	10	ng/l
Alk PAHs	C2-Benzanthracene/chrysenes	Surface water, < RM 13	200	125	62.5	10	162	30.6	10	10	ng/l
Alk PAHs	C2-Benzanthracene/chrysenes	Surface water, ≥ RM 4	98	83	84.7	10	162	33.5	10	10	ng/l
Alk PAHs	C2-Dibenzothiophenes	Surface water, < RM 13	200	57	28.5	10	36.8	15.4	10	10	ng/l
Alk PAHs	C2-Dibenzothiophenes	Surface water, ≥ RM 4	98	44	44.9	10.2	23.6	14.7	10	10	ng/l
Alk PAHs	C2-Fluorenes	Surface water, < RM 13	200	112	56	10.2	39.6	15.3	10	10	ng/l
Alk PAHs	C2-Fluorenes	Surface water, ≥ RM 4	98	68	69.4	10.2	39.6	15.8	10	10	ng/l
Alk PAHs	C2-Naphthalenes	Surface water, < RM 13	200	148	74	10.1	203	24.6	10	10	ng/l
Alk PAHs	C2-Naphthalenes	Surface water, ≥ RM 4	98	90	91.8	10.4	203	28	10	10	ng/l
Alk PAHs	C2-Phenanthrene/anthracenes	Surface water, < RM 13	200	173	86.5	10.1	133	30.2	10	10	ng/l

Surface water summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
Alk PAHs	C2-Phenanthrene/anthracenes	Surface water, ≥ RM 4	98	93	94.9	10.9	86.2	35	10	10	ng/l
Alk PAHs	C3-Benzanthracene/chrysenes	Surface water, < RM 13	200	54	27	10.1	62.3	21.1	10	10	ng/l
Alk PAHs	C3-Benzanthracene/chrysenes	Surface water, ≥ RM 4	98	44	44.9	10.1	62.3	20.5	10	10	ng/l
Alk PAHs	C3-Dibenzothiophenes	Surface water, < RM 13	200	60	30	10	39.3	16.2	10	10	ng/l
Alk PAHs	C3-Dibenzothiophenes	Surface water, ≥ RM 4	98	47	48	10	39	15.5	10	10	ng/l
Alk PAHs	C3-Fluorenes	Surface water, < RM 13	200	77	38.5	10	38.1	14.4	10	10	ng/l
Alk PAHs	C3-Fluorenes	Surface water, ≥ RM 4	98	52	53.1	10	24.6	14.5	10	10	ng/l
Alk PAHs	C3-Naphthalenes	Surface water, < RM 13	200	142	71	10.1	104	18.6	10	10	ng/l
Alk PAHs	C3-Naphthalenes	Surface water, ≥ RM 4	98	85	86.7	10.1	104	20	10	10	ng/l
Alk PAHs	C3-Phenanthrene/anthracenes	Surface water, < RM 13	200	144	72	10.2	96.7	23.2	10	10	ng/l
Alk PAHs	C3-Phenanthrene/anthracenes	Surface water, ≥ RM 4	98	87	88.8	10.3	58.2	25.1	10	10	ng/l
Alk PAHs	C4-Benzanthracene/chrysenes	Surface water, < RM 13	200	23	11.5	10.4	32.9	16.8	10	10	ng/l
Alk PAHs	C4-Benzanthracene/chrysenes	Surface water, ≥ RM 4	98	17	17.3	10.4	32.9	17.2	10	10	ng/l
Alk PAHs	C4-Dibenzothiophenes	Surface water, < RM 13	200	29	14.5	10.1	68	15.4	10	10	ng/l
Alk PAHs	C4-Dibenzothiophenes	Surface water, ≥ RM 4	98	21	21.4	10.1	68	15.8	10	10	ng/l
Alk PAHs	C4-Naphthalenes	Surface water, < RM 13	200	137	68.5	10	67	16.7	10	10	ng/l
Alk PAHs	C4-Naphthalenes	Surface water, ≥ RM 4	98	77	78.6	10.3	67	17.7	10	10	ng/l
Alk PAHs	C4-Phenanthrene/anthracenes	Surface water, < RM 13	200	67	33.5	10.3	41.2	17.3	10	10	ng/l
Alk PAHs	C4-Phenanthrene/anthracenes	Surface water, ≥ RM 4	98	51	52	10.3	34.1	16.8	10	10	ng/l
SVOCs	1,1'-Biphenyl	Surface water, < RM 13	167	3	1.8	0.053	0.092	0.066	0.94	1.1	ug/l
SVOCs	1,1'-Biphenyl	Surface water, ≥ RM 4	90	1	1.1	0.092	0.092		0.94	1.1	ug/l
SVOCs	2,4-Dimethylphenol	Surface water, < RM 13	167	3	1.8	0.13	0.2	0.17	0.94	1.1	ug/l
SVOCs	2,4-Dimethylphenol	Surface water, ≥ RM 4	90	3	3.3	0.13	0.2	0.17	0.94	1.1	ug/l
SVOCs	2,4-Dinitrotoluene	Surface water, < RM 13	167	1	0.6	0.71	0.71		0.94	1.1	ug/l
SVOCs	2,4-Dinitrotoluene	Surface water, ≥ RM 4	90	0	0				0.94	1.1	ug/l
SVOCs	2,6-Dinitrotoluene	Surface water, < RM 13	167	1	0.6	0.092	0.092		0.94	1.1	ug/l
SVOCs	2,6-Dinitrotoluene	Surface water, ≥ RM 4	90	0	0				0.94	1.1	ug/l
SVOCs	2-Methylphenol	Surface water, < RM 13	167	2	1.2	0.1	0.15	0.13	0.94	1.1	ug/l
SVOCs	2-Methylphenol	Surface water, ≥ RM 4	90	2	2.2	0.1	0.15	0.13	0.94	1.1	ug/l
SVOCs	4-Bromophenyl-phenylether	Surface water, < RM 13	167	1	0.6	0.56	0.56		0.94	1.1	ug/l
SVOCs	4-Bromophenyl-phenylether	Surface water, ≥ RM 4	90	0	0				0.94	1.1	ug/l
SVOCs	4-Chloroaniline	Surface water, < RM 13	167	1	0.6	0.11	0.11		0.94	1.1	ug/l
SVOCs	4-Chloroaniline	Surface water, ≥ RM 4	90	0	0				0.94	1.1	ug/l
SVOCs	4-Methylphenol	Surface water, < RM 13	167	4	2.4	0.1	0.2	0.14	0.94	1.1	ug/l
SVOCs	4-Methylphenol	Surface water, ≥ RM 4	90	3	3.3	0.1	0.2	0.14	0.94	1.1	ug/l
SVOCs	Acetophenone	Surface water, < RM 13	167	1	0.6	0.1	0.1		0.94	1.1	ug/l
SVOCs	Acetophenone	Surface water, ≥ RM 4	90	0	0				0.94	1.1	ug/l
SVOCs	Benzaldehyde	Surface water, < RM 13	184	26	14.1	0.52	0.89	0.64	0.94	1.1	ug/l
SVOCs	Benzaldehyde	Surface water, ≥ RM 4	92	8	8.7	0.52	0.89	0.64	0.94	1.1	ug/l
SVOCs	Bis-(2-chloroethoxy)methane	Surface water, < RM 13	167	1	0.6	0.13	0.13		0.94	1.1	ug/l
SVOCs	Bis-(2-chloroethoxy)methane	Surface water, ≥ RM 4	90	0	0				0.94	1.1	ug/l
SVOCs	Bis-(2-chloroethyl)ether	Surface water, < RM 13	167	1	0.6	0.032	0.032		0.19	0.22	ug/l
SVOCs	Bis-(2-chloroethyl)ether	Surface water, ≥ RM 4	90	0	0				0.19	0.22	ug/l

Surface water summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
SVOCs	Bis-(2-ethylhexyl)phthalate	Surface water, < RM 13	167	18	10.8	1.2	6	2.5	1.9	2.9	ug/l
SVOCs	Bis-(2-ethylhexyl)phthalate	Surface water, ≥ RM 4	90	14	15.6	1.2	6	2.4	1.9	2.3	ug/l
SVOCs	Butylbenzylphthalate	Surface water, < RM 13	168	48	28.6	0.14	25	0.84	0.94	1.1	ug/l
SVOCs	Butylbenzylphthalate	Surface water, ≥ RM 4	91	26	28.6	0.14	25	1.2	0.94	1.1	ug/l
SVOCs	Caprolactam	Surface water, < RM 13	167	4	2.4	1.7	2.7	2	4.7	5.4	ug/l
SVOCs	Caprolactam	Surface water, ≥ RM 4	90	2	2.2	1.8	2.7	2.3	4.7	5.4	ug/l
SVOCs	Carbazole	Surface water, < RM 13	167	14	8.4	0.016	0.039	0.027	0.19	0.22	ug/l
SVOCs	Carbazole	Surface water, ≥ RM 4	90	10	11.1	0.017	0.039	0.029	0.19	0.22	ug/l
SVOCs	Dibenzofuran	Surface water, < RM 13	167	3	1.8	0.061	0.14	0.091	0.94	1.1	ug/l
SVOCs	Dibenzofuran	Surface water, ≥ RM 4	90	2	2.2	0.071	0.14	0.11	0.94	1.1	ug/l
SVOCs	Diethylphthalate	Surface water, < RM 13	169	25	14.8	0.14	0.6	0.22	0.94	1.1	ug/l
SVOCs	Diethylphthalate	Surface water, ≥ RM 4	90	10	11.1	0.15	0.6	0.28	0.94	1.1	ug/l
SVOCs	Di-n-butylphthalate	Surface water, < RM 13	167	10	6	0.12	0.38	0.19	0.94	1.1	ug/l
SVOCs	Di-n-butylphthalate	Surface water, ≥ RM 4	90	6	6.7	0.12	0.16	0.14	0.94	1.1	ug/l
SVOCs	n-Nitroso-di-n-propylamine	Surface water, < RM 13	167	1	0.6	2.8	2.8		0.19	0.22	ug/l
SVOCs	n-Nitroso-di-n-propylamine	Surface water, ≥ RM 4	90	0	0				0.19	0.22	ug/l
SVOCs	n-Nitrosodiphenylamine	Surface water, < RM 13	167	1	0.6	0.14	0.14		0.94	1.1	ug/l
SVOCs	n-Nitrosodiphenylamine	Surface water, ≥ RM 4	90	0	0				0.94	1.1	ug/l
PCB Congeners	PCB-1	Surface water, < RM 13	320	296	92.5	0.00424	0.107	0.0266	0.00503	0.0295	ng/l
PCB Congeners	PCB-1	Surface water, ≥ RM 4	154	150	97.4	0.00424	0.107	0.0259	0.00624	0.0088	ng/l
PCB Congeners	PCB-2	Surface water, < RM 13	320	83	25.9	0.00082	0.0128	0.00387	0.000234	0.00987	ng/l
PCB Congeners	PCB-2	Surface water, ≥ RM 4	154	41	26.6	0.00082	0.0128	0.00405	0.000234	0.00987	ng/l
PCB Congeners	PCB-3	Surface water, < RM 13	320	171	53.4	0.00127	0.0322	0.00796	0.000349	0.0142	ng/l
PCB Congeners	PCB-3	Surface water, ≥ RM 4	154	92	59.7	0.00127	0.0322	0.00801	0.000349	0.0134	ng/l
PCB Congeners	PCB-4	Surface water, < RM 13	320	304	95	0.0472	0.507	0.212	0.0389	0.131	ng/l
PCB Congeners	PCB-4	Surface water, ≥ RM 4	154	154	100	0.0472	0.496	0.204			ng/l
PCB Congeners	PCB-5	Surface water, < RM 13	320	119	37.2	0.000626	0.00498	0.0021	0.000758	0.00891	ng/l
PCB Congeners	PCB-5	Surface water, ≥ RM 4	154	61	39.6	0.000626	0.00493	0.00204	0.000758	0.00891	ng/l
PCB Congeners	PCB-6	Surface water, < RM 13	320	296	92.5	0.00666	0.147	0.0412	0.00437	0.021	ng/l
PCB Congeners	PCB-6	Surface water, ≥ RM 4	154	154	100	0.00666	0.147	0.0427			ng/l
PCB Congeners	PCB-7	Surface water, < RM 13	320	129	40.3	0.00141	0.0192	0.00568	0.000956	0.0151	ng/l
PCB Congeners	PCB-7	Surface water, ≥ RM 4	154	60	39	0.00212	0.0148	0.00608	0.000956	0.0151	ng/l
PCB Congeners	PCB-8	Surface water, < RM 13	320	314	98.1	0.0209	0.453	0.115	0.013	0.108	ng/l
PCB Congeners	PCB-8	Surface water, ≥ RM 4	154	152	98.7	0.0209	0.453	0.121	0.0317	0.108	ng/l
PCB Congeners	PCB-9	Surface water, < RM 13	320	198	61.9	0.00141	0.0249	0.00951	0.00126	0.0147	ng/l
PCB Congeners	PCB-9	Surface water, ≥ RM 4	154	108	70.1	0.00299	0.0249	0.00956	0.00141	0.0107	ng/l
PCB Congeners	PCB-10	Surface water, < RM 13	320	296	92.5	0.003	0.0539	0.0197	0.00213	0.0126	ng/l
PCB Congeners	PCB-10	Surface water, ≥ RM 4	154	141	91.6	0.003	0.0528	0.016	0.0048	0.0122	ng/l
PCB Congeners	PCB-11	Surface water, < RM 13	320	207	64.7	0.051	0.452	0.126	0.0184	0.187	ng/l
PCB Congeners	PCB-11	Surface water, ≥ RM 4	154	100	64.9	0.064	0.452	0.137	0.0271	0.187	ng/l
PCB Congeners	PCB-12	Surface water, < RM 13	320	295	92.2	0.00295	0.126	0.0308	0.00194	0.0215	ng/l
PCB Congeners	PCB-12	Surface water, ≥ RM 4	154	140	90.9	0.00295	0.126	0.0329	0.00413	0.0215	ng/l
PCB Congeners	PCB-14	Surface water, < RM 13	320	44	13.8	0.000573	0.00364	0.00143	0.000412	0.00432	ng/l

Surface water summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-14	Surface water, ≥ RM 4	154	20	13	0.000573	0.00245	0.00138	0.00066	0.00407	ng/l
PCB Congeners	PCB-15	Surface water, < RM 13	320	318	99.4	0.0163	0.775	0.149	0.0137	0.0156	ng/l
PCB Congeners	PCB-15	Surface water, ≥ RM 4	154	154	100	0.0163	0.775	0.156			ng/l
PCB Congeners	PCB-16	Surface water, < RM 13	320	317	99.1	0.0252	0.658	0.181	0.0113	0.0353	ng/l
PCB Congeners	PCB-16	Surface water, ≥ RM 4	154	154	100	0.0252	0.658	0.199			ng/l
PCB Congeners	PCB-17	Surface water, < RM 13	320	318	99.4	0.0362	1.01	0.256	0.0175	0.0212	ng/l
PCB Congeners	PCB-17	Surface water, ≥ RM 4	154	154	100	0.0362	1.01	0.277			ng/l
PCB Congeners	PCB-18	Surface water, < RM 13	320	318	99.4	0.0693	2.19	0.5	0.0363	0.0379	ng/l
PCB Congeners	PCB-18	Surface water, ≥ RM 4	154	154	100	0.0693	2.19	0.545			ng/l
PCB Congeners	PCB-19	Surface water, < RM 13	320	310	96.9	0.0185	0.373	0.11	0.0121	0.0443	ng/l
PCB Congeners	PCB-19	Surface water, ≥ RM 4	154	154	100	0.0185	0.373	0.112			ng/l
PCB Congeners	PCB-20	Surface water, < RM 13	320	318	99.4	0.0749	5.74	0.783	0.0514	0.0581	ng/l
PCB Congeners	PCB-20	Surface water, ≥ RM 4	154	154	100	0.0749	5.74	0.894			ng/l
PCB Congeners	PCB-21	Surface water, < RM 13	320	319	99.7	0.0121	1.27	0.181	0.0148	0.0148	ng/l
PCB Congeners	PCB-21	Surface water, ≥ RM 4	154	154	100	0.0208	1.27	0.221			ng/l
PCB Congeners	PCB-22	Surface water, < RM 13	320	316	98.8	0.0193	1.39	0.185	0.0136	0.0419	ng/l
PCB Congeners	PCB-22	Surface water, ≥ RM 4	154	154	100	0.0193	1.39	0.217			ng/l
PCB Congeners	PCB-23	Surface water, < RM 13	320	29	9.1	0.00063	0.00271	0.00153	0.000336	0.00225	ng/l
PCB Congeners	PCB-23	Surface water, ≥ RM 4	154	19	12.3	0.00063	0.00271	0.0016	0.000353	0.00225	ng/l
PCB Congeners	PCB-24	Surface water, < RM 13	320	305	95.3	0.00105	0.038	0.00851	0.00101	0.00257	ng/l
PCB Congeners	PCB-24	Surface water, ≥ RM 4	154	150	97.4	0.00105	0.038	0.0098	0.0016	0.00251	ng/l
PCB Congeners	PCB-25	Surface water, < RM 13	320	318	99.4	0.0071	0.561	0.0918	0.00539	0.00608	ng/l
PCB Congeners	PCB-25	Surface water, ≥ RM 4	154	154	100	0.0071	0.561	0.102			ng/l
PCB Congeners	PCB-26	Surface water, < RM 13	320	318	99.4	0.0138	0.853	0.14	0.00889	0.00943	ng/l
PCB Congeners	PCB-26	Surface water, ≥ RM 4	154	154	100	0.0138	0.853	0.153			ng/l
PCB Congeners	PCB-27	Surface water, < RM 13	320	318	99.4	0.00694	0.255	0.063	0.00379	0.00509	ng/l
PCB Congeners	PCB-27	Surface water, ≥ RM 4	154	154	100	0.00694	0.255	0.0646			ng/l
PCB Congeners	PCB-31	Surface water, < RM 13	320	318	99.4	0.055	3.79	0.592	0.0396	0.0423	ng/l
PCB Congeners	PCB-31	Surface water, ≥ RM 4	154	154	100	0.055	3.79	0.664			ng/l
PCB Congeners	PCB-32	Surface water, < RM 13	320	317	99.1	0.0337	0.977	0.21	0.0191	0.0605	ng/l
PCB Congeners	PCB-32	Surface water, ≥ RM 4	154	154	100	0.0337	0.977	0.228			ng/l
PCB Congeners	PCB-34	Surface water, < RM 13	320	287	89.7	0.000677	0.0304	0.00467	0.000385	0.00172	ng/l
PCB Congeners	PCB-34	Surface water, ≥ RM 4	154	133	86.4	0.000677	0.0304	0.00549	0.000385	0.00172	ng/l
PCB Congeners	PCB-35	Surface water, < RM 13	320	316	98.8	0.000952	0.108	0.0145	0.000463	0.00148	ng/l
PCB Congeners	PCB-35	Surface water, ≥ RM 4	154	153	99.4	0.00163	0.108	0.0173	0.000463	0.000463	ng/l
PCB Congeners	PCB-36	Surface water, < RM 13	320	128	40	0.000305	0.0067	0.00142	0.000371	0.0022	ng/l
PCB Congeners	PCB-36	Surface water, ≥ RM 4	154	64	41.6	0.000305	0.00414	0.00143	0.000371	0.0022	ng/l
PCB Congeners	PCB-37	Surface water, < RM 13	320	318	99.4	0.0124	1.2	0.153	0.0104	0.0107	ng/l
PCB Congeners	PCB-37	Surface water, ≥ RM 4	154	154	100	0.0124	1.2	0.182			ng/l
PCB Congeners	PCB-38	Surface water, < RM 13	320	65	20.3	0.000494	0.00649	0.00177	0.000346	0.00232	ng/l
PCB Congeners	PCB-38	Surface water, ≥ RM 4	154	38	24.7	0.00077	0.00649	0.00198	0.000392	0.00232	ng/l
PCB Congeners	PCB-39	Surface water, < RM 13	320	285	89.1	0.000582	0.0342	0.00479	0.000359	0.00161	ng/l
PCB Congeners	PCB-39	Surface water, ≥ RM 4	154	133	86.4	0.000753	0.0342	0.00576	0.000359	0.00161	ng/l

Surface water summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-40	Surface water, < RM 13	320	317	99.1	0.0455	4.91	0.437	0.00113	0.0303	ng/l
PCB Congeners	PCB-40	Surface water, ≥ RM 4	154	153	99.4	0.0455	4.91	0.516	0.00113	0.00113	ng/l
PCB Congeners	PCB-42	Surface water, < RM 13	320	318	99.4	0.0229	2.42	0.208	0.012	0.0137	ng/l
PCB Congeners	PCB-42	Surface water, ≥ RM 4	154	154	100	0.0229	2.42	0.246			ng/l
PCB Congeners	PCB-43	Surface water, < RM 13	320	318	99.4	0.00219	0.323	0.0274	0.000917	0.000941	ng/l
PCB Congeners	PCB-43	Surface water, ≥ RM 4	154	154	100	0.00219	0.323	0.0321			ng/l
PCB Congeners	PCB-44	Surface water, < RM 13	320	317	99.1	0.0917	11.2	0.992	0.0569	0.147	ng/l
PCB Congeners	PCB-44	Surface water, ≥ RM 4	154	154	100	0.0917	11.2	1.16			ng/l
PCB Congeners	PCB-45	Surface water, < RM 13	320	318	99.4	0.0264	4.17	0.331	0.0137	0.0165	ng/l
PCB Congeners	PCB-45	Surface water, ≥ RM 4	154	154	100	0.0264	3.61	0.373			ng/l
PCB Congeners	PCB-46	Surface water, < RM 13	320	315	98.4	0.00621	0.65	0.0589	0.00286	0.0118	ng/l
PCB Congeners	PCB-46	Surface water, ≥ RM 4	154	154	100	0.00621	0.65	0.0674			ng/l
PCB Congeners	PCB-48	Surface water, < RM 13	320	318	99.4	0.014	1.54	0.135	0.00639	0.00859	ng/l
PCB Congeners	PCB-48	Surface water, ≥ RM 4	154	154	100	0.014	1.54	0.162			ng/l
PCB Congeners	PCB-49	Surface water, < RM 13	320	318	99.4	0.0562	6.64	0.579	0.0331	0.0384	ng/l
PCB Congeners	PCB-49	Surface water, ≥ RM 4	154	154	100	0.0562	6.64	0.673			ng/l
PCB Congeners	PCB-50	Surface water, < RM 13	320	318	99.4	0.0213	1.99	0.192	0.00899	0.0109	ng/l
PCB Congeners	PCB-50	Surface water, ≥ RM 4	154	154	100	0.0213	1.99	0.213			ng/l
PCB Congeners	PCB-52	Surface water, < RM 13	320	317	99.1	0.105	10.6	0.897	0.0623	0.167	ng/l
PCB Congeners	PCB-52	Surface water, ≥ RM 4	154	154	100	0.105	10.6	1.06			ng/l
PCB Congeners	PCB-54	Surface water, < RM 13	320	292	91.2	0.00318	0.432	0.0316	0.00114	0.00372	ng/l
PCB Congeners	PCB-54	Surface water, ≥ RM 4	154	137	89	0.00449	0.131	0.0341	0.00114	0.00372	ng/l
PCB Congeners	PCB-55	Surface water, < RM 13	320	313	97.8	0.000494	0.123	0.014	0.000627	0.0014	ng/l
PCB Congeners	PCB-55	Surface water, ≥ RM 4	154	149	96.8	0.00203	0.123	0.0172	0.000627	0.0014	ng/l
PCB Congeners	PCB-56	Surface water, < RM 13	320	318	99.4	0.022	2.78	0.264	0.0152	0.0173	ng/l
PCB Congeners	PCB-56	Surface water, ≥ RM 4	154	154	100	0.022	2.78	0.324			ng/l
PCB Congeners	PCB-57	Surface water, < RM 13	320	257	80.3	0.000914	0.0371	0.0045	0.000597	0.00252	ng/l
PCB Congeners	PCB-57	Surface water, ≥ RM 4	154	121	78.6	0.00119	0.0371	0.00557	0.000597	0.00252	ng/l
PCB Congeners	PCB-58	Surface water, < RM 13	320	255	79.7	0.000431	0.087	0.00355	0.000502	0.00248	ng/l
PCB Congeners	PCB-58	Surface water, ≥ RM 4	154	125	81.2	0.000431	0.087	0.00438	0.000594	0.00233	ng/l
PCB Congeners	PCB-59	Surface water, < RM 13	320	317	99.1	0.00829	0.868	0.0738	0.00353	0.0132	ng/l
PCB Congeners	PCB-59	Surface water, ≥ RM 4	154	154	100	0.00829	0.868	0.0871			ng/l
PCB Congeners	PCB-60	Surface water, < RM 13	320	318	99.4	0.00911	1.03	0.1	0.00605	0.00743	ng/l
PCB Congeners	PCB-60	Surface water, ≥ RM 4	154	154	100	0.00911	1.03	0.125			ng/l
PCB Congeners	PCB-61	Surface water, < RM 13	320	318	99.4	0.0847	10.8	0.994	0.0614	0.0659	ng/l
PCB Congeners	PCB-61	Surface water, ≥ RM 4	154	154	100	0.0847	10.8	1.23			ng/l
PCB Congeners	PCB-63	Surface water, < RM 13	320	319	99.7	0.00133	0.269	0.0244	0.000689	0.000689	ng/l
PCB Congeners	PCB-63	Surface water, ≥ RM 4	154	154	100	0.00179	0.269	0.0299			ng/l
PCB Congeners	PCB-64	Surface water, < RM 13	320	315	98.4	0.0343	3.54	0.299	0.000763	0.0593	ng/l
PCB Congeners	PCB-64	Surface water, ≥ RM 4	154	153	99.4	0.0343	3.54	0.362	0.000763	0.000763	ng/l
PCB Congeners	PCB-66	Surface water, < RM 13	320	318	99.4	0.0505	6.41	0.598	0.0367	0.0392	ng/l
PCB Congeners	PCB-66	Surface water, ≥ RM 4	154	154	100	0.0505	6.41	0.73			ng/l
PCB Congeners	PCB-67	Surface water, < RM 13	320	318	99.4	0.00154	0.223	0.0208	0.000651	0.000668	ng/l

Surface water summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-67	Surface water, ≥ RM 4	154	154	100	0.00154	0.223	0.0256			ng/l
PCB Congeners	PCB-68	Surface water, < RM 13	320	250	78.1	0.00107	0.0898	0.00879	0.000541	0.0197	ng/l
PCB Congeners	PCB-68	Surface water, ≥ RM 4	154	114	74	0.00107	0.0898	0.0105	0.000541	0.0197	ng/l
PCB Congeners	PCB-72	Surface water, < RM 13	320	305	95.3	0.00098	0.0886	0.00912	0.000581	0.00185	ng/l
PCB Congeners	PCB-72	Surface water, ≥ RM 4	154	143	92.9	0.00098	0.0886	0.0107	0.000581	0.00178	ng/l
PCB Congeners	PCB-77	Surface water, < RM 13	320	318	99.4	0.0038	0.629	0.0603	0.00275	0.00301	ng/l
PCB Congeners	PCB-77	Surface water, ≥ RM 4	154	154	100	0.0038	0.629	0.0763			ng/l
PCB Congeners	PCB-78	Surface water, < RM 13	320	7	2.2	0.001	0.00319	0.00197	0.000464	0.00306	ng/l
PCB Congeners	PCB-78	Surface water, ≥ RM 4	154	6	3.9	0.001	0.00319	0.00209	0.000464	0.00306	ng/l
PCB Congeners	PCB-79	Surface water, < RM 13	320	290	90.6	0.000717	0.0609	0.00668	0.000541	0.00224	ng/l
PCB Congeners	PCB-79	Surface water, ≥ RM 4	154	146	94.8	0.000717	0.0609	0.00834	0.000541	0.00224	ng/l
PCB Congeners	PCB-81	Surface water, < RM 13	320	179	55.9	0.000625	0.0165	0.00262	0.000466	0.00236	ng/l
PCB Congeners	PCB-81	Surface water, ≥ RM 4	154	101	65.6	0.000715	0.0165	0.00305	0.000557	0.00236	ng/l
PCB Congeners	PCB-82	Surface water, < RM 13	320	315	98.4	0.00698	0.49	0.0853	0.00545	0.0172	ng/l
PCB Congeners	PCB-82	Surface water, ≥ RM 4	154	154	100	0.00698	0.49	0.11			ng/l
PCB Congeners	PCB-83	Surface water, < RM 13	320	317	99.1	0.0274	2.63	0.436	0.0324	0.0791	ng/l
PCB Congeners	PCB-83	Surface water, ≥ RM 4	154	154	100	0.0274	2.59	0.543			ng/l
PCB Congeners	PCB-84	Surface water, < RM 13	320	316	98.8	0.0145	1.2	0.179	0.00204	0.0116	ng/l
PCB Congeners	PCB-84	Surface water, ≥ RM 4	154	154	100	0.0145	1.2	0.226			ng/l
PCB Congeners	PCB-85	Surface water, < RM 13	320	315	98.4	0.00839	0.651	0.118	0.00751	0.0247	ng/l
PCB Congeners	PCB-85	Surface water, ≥ RM 4	154	154	100	0.00839	0.651	0.151			ng/l
PCB Congeners	PCB-86	Surface water, < RM 13	320	316	98.8	0.0325	2.39	0.424	0.0317	0.0721	ng/l
PCB Congeners	PCB-86	Surface water, ≥ RM 4	154	154	100	0.0325	2.39	0.545			ng/l
PCB Congeners	PCB-88	Surface water, < RM 13	320	316	98.8	0.00835	0.789	0.121	0.00182	0.00683	ng/l
PCB Congeners	PCB-88	Surface water, ≥ RM 4	154	154	100	0.00835	0.789	0.148			ng/l
PCB Congeners	PCB-89	Surface water, < RM 13	320	239	74.7	0.00207	0.0577	0.0123	0.000847	0.00328	ng/l
PCB Congeners	PCB-89	Surface water, ≥ RM 4	154	125	81.2	0.00333	0.0577	0.015	0.000847	0.00295	ng/l
PCB Congeners	PCB-90	Surface water, < RM 13	320	316	98.8	0.0509	4.22	0.675	0.0576	0.132	ng/l
PCB Congeners	PCB-90	Surface water, ≥ RM 4	154	154	100	0.0509	4.22	0.862			ng/l
PCB Congeners	PCB-92	Surface water, < RM 13	320	318	99.4	0.00794	0.829	0.121	0.00858	0.00878	ng/l
PCB Congeners	PCB-92	Surface water, ≥ RM 4	154	154	100	0.00794	0.738	0.154			ng/l
PCB Congeners	PCB-93	Surface water, < RM 13	320	315	98.4	0.00165	0.769	0.0491	0.000752	0.00144	ng/l
PCB Congeners	PCB-93	Surface water, ≥ RM 4	154	152	98.7	0.00165	0.423	0.0567	0.000752	0.00144	ng/l
PCB Congeners	PCB-94	Surface water, < RM 13	320	261	81.6	0.00174	0.53	0.018	0.000846	0.00301	ng/l
PCB Congeners	PCB-94	Surface water, ≥ RM 4	154	129	83.8	0.00276	0.0978	0.0199	0.000846	0.00294	ng/l
PCB Congeners	PCB-95	Surface water, < RM 13	320	317	99.1	0.0488	3.78	0.535	0.0459	0.0994	ng/l
PCB Congeners	PCB-95	Surface water, ≥ RM 4	154	154	100	0.0488	3.78	0.678			ng/l
PCB Congeners	PCB-96	Surface water, < RM 13	320	281	87.8	0.00164	0.193	0.0118	0.000633	0.00218	ng/l
PCB Congeners	PCB-96	Surface water, ≥ RM 4	154	136	88.3	0.00177	0.0826	0.0138	0.000633	0.00178	ng/l
PCB Congeners	PCB-98	Surface water, < RM 13	320	317	99.1	0.00188	1.17	0.0481	0.000729	0.00108	ng/l
PCB Congeners	PCB-98	Surface water, ≥ RM 4	154	153	99.4	0.00188	0.32	0.0555	0.000729	0.000729	ng/l
PCB Congeners	PCB-103	Surface water, < RM 13	320	298	93.1	0.00225	0.426	0.0219	0.000742	0.00258	ng/l
PCB Congeners	PCB-103	Surface water, ≥ RM 4	154	141	91.6	0.00225	0.133	0.0258	0.000742	0.00258	ng/l

Surface water summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-104	Surface water, < RM 13	320	198	61.9	0.00111	0.11	0.00844	0.000564	0.00236	ng/l
PCB Congeners	PCB-104	Surface water, ≥ RM 4	154	104	67.5	0.00199	0.0475	0.0093	0.000564	0.00226	ng/l
PCB Congeners	PCB-105	Surface water, < RM 13	320	315	98.4	0.0168	2.11	0.232	0.0177	0.0473	ng/l
PCB Congeners	PCB-105	Surface water, ≥ RM 4	154	154	100	0.0168	2.11	0.308			ng/l
PCB Congeners	PCB-106	Surface water, < RM 13	320	5	1.6	0.000518	0.00173	0.00124	0.000391	0.00257	ng/l
PCB Congeners	PCB-106	Surface water, ≥ RM 4	154	3	1.9	0.00122	0.00173	0.00151	0.000391	0.00257	ng/l
PCB Congeners	PCB-107	Surface water, < RM 13	320	320	100	0.00302	0.424	0.0446			ng/l
PCB Congeners	PCB-107	Surface water, ≥ RM 4	154	154	100	0.00331	0.424	0.0589			ng/l
PCB Congeners	PCB-108	Surface water, < RM 13	320	315	98.4	0.0014	0.211	0.0222	0.00146	0.00927	ng/l
PCB Congeners	PCB-108	Surface water, ≥ RM 4	154	154	100	0.0014	0.211	0.0299			ng/l
PCB Congeners	PCB-110	Surface water, < RM 13	320	316	98.8	0.0595	4.07	0.747	0.066	0.156	ng/l
PCB Congeners	PCB-110	Surface water, ≥ RM 4	154	154	100	0.0595	4.07	0.971			ng/l
PCB Congeners	PCB-111	Surface water, < RM 13	320	64	20	0.000497	0.00701	0.00224	0.00053	0.00266	ng/l
PCB Congeners	PCB-111	Surface water, ≥ RM 4	154	40	26	0.000497	0.00701	0.00244	0.00053	0.00266	ng/l
PCB Congeners	PCB-112	Surface water, < RM 13	320	1	0.3	0.00345	0.00345		0.000454	0.00289	ng/l
PCB Congeners	PCB-112	Surface water, ≥ RM 4	154	1	0.6	0.00345	0.00345		0.000454	0.00289	ng/l
PCB Congeners	PCB-114	Surface water, < RM 13	320	309	96.6	0.00116	0.145	0.0142	0.000484	0.00595	ng/l
PCB Congeners	PCB-114	Surface water, ≥ RM 4	154	151	98.1	0.00116	0.145	0.0191	0.000484	0.000694	ng/l
PCB Congeners	PCB-118	Surface water, < RM 13	320	314	98.1	0.0414	5.51	0.575	0.0511	0.142	ng/l
PCB Congeners	PCB-118	Surface water, ≥ RM 4	154	154	100	0.0414	5.51	0.761			ng/l
PCB Congeners	PCB-120	Surface water, < RM 13	320	139	43.4	0.000796	0.0202	0.00467	0.000545	0.00228	ng/l
PCB Congeners	PCB-120	Surface water, ≥ RM 4	154	82	53.2	0.000796	0.0188	0.0052	0.000545	0.00219	ng/l
PCB Congeners	PCB-121	Surface water, < RM 13	320	9	2.8	0.00169	0.00581	0.00401	0.000434	0.00276	ng/l
PCB Congeners	PCB-121	Surface water, ≥ RM 4	154	7	4.5	0.00208	0.00581	0.00438	0.000434	0.00276	ng/l
PCB Congeners	PCB-122	Surface water, < RM 13	320	294	91.9	0.00132	0.101	0.0106	0.00057	0.00387	ng/l
PCB Congeners	PCB-122	Surface water, ≥ RM 4	154	147	95.5	0.00132	0.101	0.0137	0.000572	0.00242	ng/l
PCB Congeners	PCB-123	Surface water, < RM 13	320	302	94.4	0.000791	0.119	0.0115	0.000502	0.00777	ng/l
PCB Congeners	PCB-123	Surface water, ≥ RM 4	154	150	97.4	0.000791	0.119	0.015	0.000502	0.00777	ng/l
PCB Congeners	PCB-126	Surface water, < RM 13	320	195	60.9	0.000486	0.0557	0.00359	0.000436	0.0111	ng/l
PCB Congeners	PCB-126	Surface water, ≥ RM 4	154	106	68.8	0.000787	0.0557	0.00489	0.000563	0.0111	ng/l
PCB Congeners	PCB-127	Surface water, < RM 13	320	40	12.5	0.00082	0.0106	0.00266	0.000419	0.00533	ng/l
PCB Congeners	PCB-127	Surface water, ≥ RM 4	154	30	19.5	0.00082	0.0106	0.00277	0.00052	0.00533	ng/l
PCB Congeners	PCB-128	Surface water, < RM 13	320	315	98.4	0.00965	1.02	0.107	0.00731	0.0202	ng/l
PCB Congeners	PCB-128	Surface water, ≥ RM 4	154	154	100	0.00965	1.02	0.145			ng/l
PCB Congeners	PCB-129	Surface water, < RM 13	320	313	97.8	0.0785	8.32	0.803	0.0672	0.18	ng/l
PCB Congeners	PCB-129	Surface water, ≥ RM 4	154	154	100	0.0785	8.32	1.07			ng/l
PCB Congeners	PCB-130	Surface water, < RM 13	320	315	98.4	0.00326	0.44	0.0447	0.00202	0.00706	ng/l
PCB Congeners	PCB-130	Surface water, ≥ RM 4	154	154	100	0.00326	0.44	0.0599			ng/l
PCB Congeners	PCB-131	Surface water, < RM 13	320	243	75.9	0.00113	0.11	0.0114	0.000948	0.00605	ng/l
PCB Congeners	PCB-131	Surface water, ≥ RM 4	154	133	86.4	0.00239	0.11	0.0145	0.00118	0.00605	ng/l
PCB Congeners	PCB-132	Surface water, < RM 13	320	316	98.8	0.0274	2.68	0.249	0.0145	0.0332	ng/l
PCB Congeners	PCB-132	Surface water, ≥ RM 4	154	154	100	0.0274	2.68	0.334			ng/l
PCB Congeners	PCB-133	Surface water, < RM 13	320	290	90.6	0.00144	0.253	0.0156	0.00108	0.00493	ng/l

Surface water summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-133	Surface water, ≥ RM 4	154	140	90.9	0.00175	0.154	0.02	0.00108	0.00493	ng/l
PCB Congeners	PCB-134	Surface water, < RM 13	320	319	99.7	0.00201	0.524	0.0456	0.0013	0.0013	ng/l
PCB Congeners	PCB-134	Surface water, ≥ RM 4	154	154	100	0.00252	0.524	0.0611			ng/l
PCB Congeners	PCB-135	Surface water, < RM 13	320	316	98.8	0.0149	1.92	0.248	0.0151	0.0327	ng/l
PCB Congeners	PCB-135	Surface water, ≥ RM 4	154	154	100	0.0149	1.92	0.321			ng/l
PCB Congeners	PCB-136	Surface water, < RM 13	320	318	99.4	0.00546	0.651	0.0862	0.00341	0.00495	ng/l
PCB Congeners	PCB-136	Surface water, ≥ RM 4	154	154	100	0.00546	0.651	0.112			ng/l
PCB Congeners	PCB-137	Surface water, < RM 13	320	319	99.7	0.00231	0.325	0.0309	0.00314	0.00314	ng/l
PCB Congeners	PCB-137	Surface water, ≥ RM 4	154	154	100	0.00279	0.325	0.0428			ng/l
PCB Congeners	PCB-139	Surface water, < RM 13	320	293	91.6	0.00151	0.158	0.0156	0.000941	0.00401	ng/l
PCB Congeners	PCB-139	Surface water, ≥ RM 4	154	149	96.8	0.00151	0.158	0.0199	0.00106	0.00373	ng/l
PCB Congeners	PCB-141	Surface water, < RM 13	320	315	98.4	0.0125	1.5	0.143	0.00947	0.0232	ng/l
PCB Congeners	PCB-141	Surface water, ≥ RM 4	154	154	100	0.0125	1.5	0.193			ng/l
PCB Congeners	PCB-144	Surface water, < RM 13	320	312	97.5	0.00166	0.215	0.0286	0.00102	0.00255	ng/l
PCB Congeners	PCB-144	Surface water, ≥ RM 4	154	152	98.7	0.00166	0.215	0.0388	0.00102	0.00127	ng/l
PCB Congeners	PCB-145	Surface water, < RM 13	320	1	0.3	0.0029	0.0029		0.000514	0.00536	ng/l
PCB Congeners	PCB-145	Surface water, ≥ RM 4	154	1	0.6	0.0029	0.0029		0.000514	0.00536	ng/l
PCB Congeners	PCB-146	Surface water, < RM 13	320	317	99.1	0.00983	1.6	0.126	0.00736	0.0169	ng/l
PCB Congeners	PCB-146	Surface water, ≥ RM 4	154	154	100	0.00983	1.3	0.161			ng/l
PCB Congeners	PCB-147	Surface water, < RM 13	320	316	98.8	0.0649	7.89	0.69	0.039	0.0961	ng/l
PCB Congeners	PCB-147	Surface water, ≥ RM 4	154	154	100	0.0649	7.89	0.885			ng/l
PCB Congeners	PCB-148	Surface water, < RM 13	320	51	15.9	0.00182	0.0759	0.00838	0.000921	0.00384	ng/l
PCB Congeners	PCB-148	Surface water, ≥ RM 4	154	36	23.4	0.00182	0.0207	0.00766	0.000972	0.00384	ng/l
PCB Congeners	PCB-150	Surface water, < RM 13	320	107	33.4	0.0014	0.0976	0.00646	0.000642	0.00268	ng/l
PCB Congeners	PCB-150	Surface water, ≥ RM 4	154	62	40.3	0.0014	0.0277	0.00639	0.000678	0.00268	ng/l
PCB Congeners	PCB-152	Surface water, < RM 13	320	71	22.2	0.00101	0.168	0.00729	0.000655	0.00257	ng/l
PCB Congeners	PCB-152	Surface water, ≥ RM 4	154	46	29.9	0.00101	0.0192	0.00569	0.000691	0.00257	ng/l
PCB Congeners	PCB-153	Surface water, < RM 13	320	313	97.8	0.0609	7.39	0.707	0.0557	0.155	ng/l
PCB Congeners	PCB-153	Surface water, ≥ RM 4	154	154	100	0.0609	7.39	0.915			ng/l
PCB Congeners	PCB-154	Surface water, < RM 13	320	306	95.6	0.00112	0.485	0.0192	0.000896	0.00226	ng/l
PCB Congeners	PCB-154	Surface water, ≥ RM 4	154	147	95.5	0.00112	0.148	0.0221	0.000896	0.00207	ng/l
PCB Congeners	PCB-155	Surface water, < RM 13	320	210	65.6	0.00171	0.0615	0.0083	0.000624	0.00237	ng/l
PCB Congeners	PCB-155	Surface water, ≥ RM 4	154	112	72.7	0.00182	0.0615	0.00989	0.000659	0.00221	ng/l
PCB Congeners	PCB-156	Surface water, < RM 13	320	304	95	0.00421	0.672	0.0751	0.00647	0.0229	ng/l
PCB Congeners	PCB-156	Surface water, ≥ RM 4	154	154	100	0.00421	0.672	0.1			ng/l
PCB Congeners	PCB-158	Surface water, < RM 13	320	315	98.4	0.0056	0.729	0.073	0.00431	0.0113	ng/l
PCB Congeners	PCB-158	Surface water, ≥ RM 4	154	154	100	0.0056	0.729	0.0992			ng/l
PCB Congeners	PCB-159	Surface water, < RM 13	320	237	74.1	0.00111	0.0661	0.0085	0.000641	0.00517	ng/l
PCB Congeners	PCB-159	Surface water, ≥ RM 4	154	128	83.1	0.0013	0.0661	0.0106	0.000753	0.00426	ng/l
PCB Congeners	PCB-162	Surface water, < RM 13	320	211	65.9	0.00137	0.054	0.00615	0.000599	0.00765	ng/l
PCB Congeners	PCB-162	Surface water, ≥ RM 4	154	116	75.3	0.00148	0.054	0.00722	0.000744	0.00765	ng/l
PCB Congeners	PCB-164	Surface water, < RM 13	320	316	98.8	0.00462	0.524	0.0527	0.00277	0.00602	ng/l
PCB Congeners	PCB-164	Surface water, ≥ RM 4	154	154	100	0.00462	0.524	0.0707			ng/l

Surface water summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-165	Surface water, < RM 13	320	9	2.8	0.00181	0.00442	0.00281	0.00056	0.00614	ng/l
PCB Congeners	PCB-165	Surface water, ≥ RM 4	154	6	3.9	0.00181	0.00323	0.0026	0.00056	0.00614	ng/l
PCB Congeners	PCB-167	Surface water, < RM 13	320	319	99.7	0.00159	0.224	0.0245	0.00231	0.00231	ng/l
PCB Congeners	PCB-167	Surface water, ≥ RM 4	154	153	99.4	0.00205	0.224	0.034	0.00231	0.00231	ng/l
PCB Congeners	PCB-169	Surface water, < RM 13	320	97	30.3	0.000416	0.18	0.00776	0.000443	0.0119	ng/l
PCB Congeners	PCB-169	Surface water, ≥ RM 4	154	67	43.5	0.000416	0.18	0.00952	0.000542	0.0119	ng/l
PCB Congeners	PCB-170	Surface water, < RM 13	320	310	96.9	0.0137	1.71	0.188	0.0122	0.0467	ng/l
PCB Congeners	PCB-170	Surface water, ≥ RM 4	154	154	100	0.0137	1.71	0.246			ng/l
PCB Congeners	PCB-171	Surface water, < RM 13	320	313	97.8	0.00549	0.467	0.0547	0.000843	0.0106	ng/l
PCB Congeners	PCB-171	Surface water, ≥ RM 4	154	152	98.7	0.00605	0.467	0.0728	0.000843	0.000885	ng/l
PCB Congeners	PCB-172	Surface water, < RM 13	320	314	98.1	0.00119	0.291	0.0308	0.000877	0.00225	ng/l
PCB Congeners	PCB-172	Surface water, ≥ RM 4	154	153	99.4	0.00207	0.291	0.0413	0.000877	0.000877	ng/l
PCB Congeners	PCB-174	Surface water, < RM 13	320	317	99.1	0.0109	1.89	0.192	0.0115	0.0216	ng/l
PCB Congeners	PCB-174	Surface water, ≥ RM 4	154	154	100	0.0109	1.79	0.254			ng/l
PCB Congeners	PCB-175	Surface water, < RM 13	320	222	69.4	0.000651	0.065	0.00926	0.000621	0.00286	ng/l
PCB Congeners	PCB-175	Surface water, ≥ RM 4	154	121	78.6	0.00253	0.0611	0.0112	0.000706	0.00258	ng/l
PCB Congeners	PCB-176	Surface water, < RM 13	320	317	99.1	0.00123	0.262	0.0245	0.000673	0.00177	ng/l
PCB Congeners	PCB-176	Surface water, ≥ RM 4	154	154	100	0.00123	0.239	0.0321			ng/l
PCB Congeners	PCB-177	Surface water, < RM 13	320	318	99.4	0.00588	1.11	0.11	0.00669	0.00777	ng/l
PCB Congeners	PCB-177	Surface water, ≥ RM 4	154	154	100	0.00588	0.948	0.144			ng/l
PCB Congeners	PCB-178	Surface water, < RM 13	320	318	99.4	0.00213	0.609	0.045	0.000852	0.000955	ng/l
PCB Congeners	PCB-178	Surface water, ≥ RM 4	154	153	99.4	0.00335	0.415	0.0583	0.000852	0.000852	ng/l
PCB Congeners	PCB-179	Surface water, < RM 13	320	317	99.1	0.00574	1.12	0.0947	0.00451	0.0105	ng/l
PCB Congeners	PCB-179	Surface water, ≥ RM 4	154	154	100	0.00574	0.855	0.121			ng/l
PCB Congeners	PCB-180	Surface water, < RM 13	320	312	97.5	0.023	3.99	0.422	0.0317	0.11	ng/l
PCB Congeners	PCB-180	Surface water, ≥ RM 4	154	154	100	0.023	3.92	0.554			ng/l
PCB Congeners	PCB-181	Surface water, < RM 13	320	54	16.9	0.00147	0.0255	0.0049	0.00062	0.00498	ng/l
PCB Congeners	PCB-181	Surface water, ≥ RM 4	154	41	26.6	0.00147	0.0108	0.00487	0.000706	0.00498	ng/l
PCB Congeners	PCB-182	Surface water, < RM 13	320	82	25.6	0.0008	0.0597	0.00476	0.000603	0.00295	ng/l
PCB Congeners	PCB-182	Surface water, ≥ RM 4	154	51	33.1	0.000943	0.0184	0.00463	0.000686	0.00295	ng/l
PCB Congeners	PCB-183	Surface water, < RM 13	320	320	100	0.00625	1.31	0.138			ng/l
PCB Congeners	PCB-183	Surface water, ≥ RM 4	154	154	100	0.00744	1.26	0.182			ng/l
PCB Congeners	PCB-184	Surface water, < RM 13	320	31	9.7	0.00122	0.013	0.00452	0.000387	0.0025	ng/l
PCB Congeners	PCB-184	Surface water, ≥ RM 4	154	22	14.3	0.00122	0.013	0.00486	0.000387	0.0025	ng/l
PCB Congeners	PCB-187	Surface water, < RM 13	320	318	99.4	0.0163	3.32	0.271	0.0156	0.0171	ng/l
PCB Congeners	PCB-187	Surface water, ≥ RM 4	154	154	100	0.0163	2.51	0.349			ng/l
PCB Congeners	PCB-188	Surface water, < RM 13	320	26	8.1	0.000893	0.0157	0.00365	0.000441	0.00205	ng/l
PCB Congeners	PCB-188	Surface water, ≥ RM 4	154	18	11.7	0.00099	0.00647	0.00351	0.000473	0.00205	ng/l
PCB Congeners	PCB-189	Surface water, < RM 13	320	210	65.6	0.00051	0.075	0.00845	0.000286	0.0151	ng/l
PCB Congeners	PCB-189	Surface water, ≥ RM 4	154	113	73.4	0.000733	0.075	0.0109	0.000513	0.0151	ng/l
PCB Congeners	PCB-190	Surface water, < RM 13	320	314	98.1	0.00145	0.278	0.0323	0.000661	0.0125	ng/l
PCB Congeners	PCB-190	Surface water, ≥ RM 4	154	153	99.4	0.00174	0.278	0.0434	0.000661	0.000661	ng/l
PCB Congeners	PCB-191	Surface water, < RM 13	320	232	72.5	0.000753	0.0753	0.00959	0.000531	0.00885	ng/l

Surface water summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB-191	Surface water, ≥ RM 4	154	127	82.5	0.0011	0.0676	0.012	0.000537	0.00676	ng/l
PCB Congeners	PCB-194	Surface water, < RM 13	320	307	95.9	0.00566	1.35	0.121	0.00732	0.049	ng/l
PCB Congeners	PCB-194	Surface water, ≥ RM 4	154	154	100	0.00566	1.16	0.158			ng/l
PCB Congeners	PCB-195	Surface water, < RM 13	320	317	99.1	0.00212	0.626	0.0448	0.00101	0.00243	ng/l
PCB Congeners	PCB-195	Surface water, ≥ RM 4	154	153	99.4	0.00265	0.448	0.0595	0.00101	0.00101	ng/l
PCB Congeners	PCB-196	Surface water, < RM 13	320	319	99.7	0.0024	0.612	0.0525	0.00174	0.00174	ng/l
PCB Congeners	PCB-196	Surface water, ≥ RM 4	154	154	100	0.0024	0.393	0.0706			ng/l
PCB Congeners	PCB-197	Surface water, < RM 13	320	198	61.9	0.000757	0.0586	0.00565	0.000424	0.00266	ng/l
PCB Congeners	PCB-197	Surface water, ≥ RM 4	154	116	75.3	0.00118	0.034	0.0065	0.000574	0.00197	ng/l
PCB Congeners	PCB-198	Surface water, < RM 13	320	311	97.2	0.00686	1.4	0.138	0.00869	0.0283	ng/l
PCB Congeners	PCB-198	Surface water, ≥ RM 4	154	154	100	0.00686	1.14	0.18			ng/l
PCB Congeners	PCB-200	Surface water, < RM 13	320	288	90	0.000892	0.17	0.0141	0.000512	0.00172	ng/l
PCB Congeners	PCB-200	Surface water, ≥ RM 4	154	146	94.8	0.00135	0.116	0.0183	0.000563	0.00132	ng/l
PCB Congeners	PCB-201	Surface water, < RM 13	320	307	95.9	0.00103	0.185	0.0159	0.000541	0.00473	ng/l
PCB Congeners	PCB-201	Surface water, ≥ RM 4	154	149	96.8	0.00103	0.128	0.0209	0.000544	0.00141	ng/l
PCB Congeners	PCB-202	Surface water, < RM 13	320	319	99.7	0.00157	0.295	0.0344	0.00138	0.00138	ng/l
PCB Congeners	PCB-202	Surface water, ≥ RM 4	154	154	100	0.00167	0.275	0.0455			ng/l
PCB Congeners	PCB-203	Surface water, < RM 13	320	316	98.8	0.00535	0.784	0.0813	0.0046	0.0103	ng/l
PCB Congeners	PCB-203	Surface water, ≥ RM 4	154	154	100	0.00535	0.674	0.109			ng/l
PCB Congeners	PCB-205	Surface water, < RM 13	320	189	59.1	0.000629	0.0729	0.00791	0.000319	0.0206	ng/l
PCB Congeners	PCB-205	Surface water, ≥ RM 4	154	99	64.3	0.00162	0.0589	0.0101	0.000538	0.0206	ng/l
PCB Congeners	PCB-206	Surface water, < RM 13	320	308	96.2	0.00841	0.814	0.0977	0.00703	0.0421	ng/l
PCB Congeners	PCB-206	Surface water, ≥ RM 4	154	154	100	0.00841	0.814	0.128			ng/l
PCB Congeners	PCB-207	Surface water, < RM 13	320	260	81.2	0.00125	0.0811	0.0109	0.000528	0.00882	ng/l
PCB Congeners	PCB-207	Surface water, ≥ RM 4	154	135	87.7	0.00165	0.0811	0.0141	0.000723	0.00726	ng/l
PCB Congeners	PCB-208	Surface water, < RM 13	320	317	99.1	0.00193	0.357	0.034	0.0016	0.00247	ng/l
PCB Congeners	PCB-208	Surface water, ≥ RM 4	154	154	100	0.00284	0.305	0.0452			ng/l
PCB Congeners	Decachlorobiphenyl	Surface water, < RM 13	320	298	93.1	0.00477	0.809	0.086	0.00284	0.0703	ng/l
PCB Congeners	Decachlorobiphenyl	Surface water, ≥ RM 4	154	152	98.7	0.00477	0.809	0.113	0.0365	0.0434	ng/l
PCB Congeners	Total PCB Congeners	Surface water, < RM 13	320	320	100	0.0485	183	20.8			ng/l
PCB Congeners	Total PCB Congeners	Surface water, ≥ RM 4	154	154	100	1.96	183	25.8			ng/l
PCB Congeners	Total PCB Congeners (ND=0.5DL)	Surface water, < RM 13	320	320	100	0.792	183	20.8			ng/l
PCB Congeners	Total PCB Congeners (ND=0.5DL)	Surface water, ≥ RM 4	154	154	100	2.01	183	25.8			ng/l
PCB Congeners	Total PCB Congeners (ND=DL)	Surface water, < RM 13	320	320	100	1.54	184	20.9			ng/l
PCB Congeners	Total PCB Congeners (ND=DL)	Surface water, ≥ RM 4	154	154	100	2.06	184	25.9			ng/l
PCB Congeners	PCB TEQ-Bird	Surface water, < RM 13	320	320	100	3.56E-08	0.0333	0.0034			ng/l
PCB Congeners	PCB TEQ-Bird	Surface water, ≥ RM 4	154	154	100	0.000193	0.0333	0.0044			ng/l
PCB Congeners	PCB TEQ-Bird (ND=0.5DL)	Surface water, < RM 13	320	320	100	0.000143	0.0333	0.00346			ng/l
PCB Congeners	PCB TEQ-Bird (ND=0.5DL)	Surface water, ≥ RM 4	154	154	100	0.000254	0.0333	0.00446			ng/l
PCB Congeners	PCB TEQ-Bird (ND=DL)	Surface water, < RM 13	320	320	100	0.000285	0.0333	0.00351			ng/l
PCB Congeners	PCB TEQ-Bird (ND=DL)	Surface water, ≥ RM 4	154	154	100	0.000316	0.0333	0.00451			ng/l
PCB Congeners	PCB TEQ-Fish	Surface water, < RM 13	320	320	100	1.39E-08	0.000335	0.0000223			ng/l
PCB Congeners	PCB TEQ-Fish	Surface water, ≥ RM 4	154	154	100	0.00000072	0.000335	0.0000319			ng/l

Surface water summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCB Congeners	PCB TEQ-Fish (ND=0.5DL)	Surface water, < RM 13	320	320	100	0.0000023	0.000335	0.0000241			ng/l
PCB Congeners	PCB TEQ-Fish (ND=0.5DL)	Surface water, ≥ RM 4	154	154	100	0.00000253	0.000335	0.0000335			ng/l
PCB Congeners	PCB TEQ-Fish (ND=DL)	Surface water, < RM 13	320	320	100	0.00000435	0.000335	0.0000258			ng/l
PCB Congeners	PCB TEQ-Fish (ND=DL)	Surface water, ≥ RM 4	154	154	100	0.00000435	0.000335	0.0000352			ng/l
PCB Congeners	PCB TEQ-Mammal	Surface water, < RM 13	320	320	100	8.31E-08	0.0085	0.00032			ng/l
PCB Congeners	PCB TEQ-Mammal	Surface water, ≥ RM 4	154	154	100	0.00000242	0.0085	0.0005			ng/l
PCB Congeners	PCB TEQ-Mammal (ND=0.5DL)	Surface water, < RM 13	320	320	100	0.0000383	0.0085	0.000367			ng/l
PCB Congeners	PCB TEQ-Mammal (ND=0.5DL)	Surface water, ≥ RM 4	154	154	100	0.000044	0.0085	0.000548			ng/l
PCB Congeners	PCB TEQ-Mammal (ND=DL)	Surface water, < RM 13	320	320	100	0.0000695	0.0085	0.000415			ng/l
PCB Congeners	PCB TEQ-Mammal (ND=DL)	Surface water, ≥ RM 4	154	154	100	0.0000825	0.0085	0.000596			ng/l
PCB Congeners	Monochlorobiphenyl	Surface water, < RM 13	320	281	87.8	0.00506	0.148	0.0381	0.00503	0.0441	ng/l
PCB Congeners	Monochlorobiphenyl	Surface water, ≥ RM 4	154	142	92.2	0.00506	0.148	0.0373	0.01	0.0362	ng/l
PCB Congeners	Dichlorobiphenyl	Surface water, < RM 13	320	320	100	0.0926	2.52	0.676			ng/l
PCB Congeners	Dichlorobiphenyl	Surface water, ≥ RM 4	154	154	100	0.135	2.52	0.701			ng/l
PCB Congeners	Trichlorobiphenyl	Surface water, < RM 13	320	320	100	0.243	20.5	3.45			ng/l
PCB Congeners	Trichlorobiphenyl	Surface water, ≥ RM 4	154	154	100	0.406	20.5	3.9			ng/l
PCB Congeners	Tetrachlorobiphenyl	Surface water, < RM 13	320	320	100	0.367	70.8	6.32			ng/l
PCB Congeners	Tetrachlorobiphenyl	Surface water, ≥ RM 4	154	154	100	0.616	70.8	7.56			ng/l
PCB Congeners	Pentachlorobiphenyl	Surface water, < RM 13	320	320	100	0.33	30.8	4.46			ng/l
PCB Congeners	Pentachlorobiphenyl	Surface water, ≥ RM 4	154	154	100	0.33	30.8	5.78			ng/l
PCB Congeners	Hexachlorobiphenyl	Surface water, < RM 13	320	320	100	0.246	37.3	3.56			ng/l
PCB Congeners	Hexachlorobiphenyl	Surface water, ≥ RM 4	154	154	100	0.319	37.3	4.75			ng/l
PCB Congeners	Heptachlorobiphenyl	Surface water, < RM 13	320	320	100	0.0869	16.5	1.6			ng/l
PCB Congeners	Heptachlorobiphenyl	Surface water, ≥ RM 4	154	154	100	0.0869	14.9	2.13			ng/l
PCB Congeners	Octachlorobiphenyl	Surface water, < RM 13	320	320	100	0.0234	5.56	0.499			ng/l
PCB Congeners	Octachlorobiphenyl	Surface water, ≥ RM 4	154	154	100	0.0234	4.42	0.673			ng/l
PCB Congeners	Nonachlorobiphenyl	Surface water, < RM 13	320	316	98.8	0.00896	1.2	0.139	0.0256	0.0317	ng/l
PCB Congeners	Nonachlorobiphenyl	Surface water, ≥ RM 4	154	154	100	0.0117	1.2	0.185			ng/l
PCDDs/PCDFs	1,2,3,4,6,7,8-HpCDD	Surface water, < RM 13	320	282	88.1	0.000802	0.197	0.0196	0.0011	0.0202	ng/l
PCDDs/PCDFs	1,2,3,4,6,7,8-HpCDD	Surface water, ≥ RM 4	154	142	92.2	0.000876	0.197	0.0274	0.00215	0.0129	ng/l
PCDDs/PCDFs	1,2,3,4,7,8-HxCDD	Surface water, < RM 13	320	27	8.4	0.000198	0.00251	0.00101	0.000272	0.025	ng/l
PCDDs/PCDFs	1,2,3,4,7,8-HxCDD	Surface water, ≥ RM 4	154	19	12.3	0.000216	0.00251	0.00114	0.000413	0.025	ng/l
PCDDs/PCDFs	1,2,3,6,7,8-HxCDD	Surface water, < RM 13	320	119	37.2	0.000256	0.00748	0.00176	0.000432	0.005	ng/l
PCDDs/PCDFs	1,2,3,6,7,8-HxCDD	Surface water, ≥ RM 4	154	72	46.8	0.000389	0.00748	0.00206	0.000432	0.005	ng/l
PCDDs/PCDFs	1,2,3,7,8,9-HxCDD	Surface water, < RM 13	320	103	32.2	0.000411	0.00799	0.0017	0.000569	0.025	ng/l
PCDDs/PCDFs	1,2,3,7,8,9-HxCDD	Surface water, ≥ RM 4	154	60	39	0.000533	0.00799	0.00205	0.000706	0.025	ng/l
PCDDs/PCDFs	1,2,3,7,8-PeCDD	Surface water, < RM 13	320	16	5	0.000498	0.00356	0.00113	0.000305	0.025	ng/l
PCDDs/PCDFs	1,2,3,7,8-PeCDD	Surface water, ≥ RM 4	154	13	8.4	0.000498	0.00356	0.00118	0.000305	0.025	ng/l
PCDDs/PCDFs	2,3,7,8-TCDD	Surface water, < RM 13	320	273	85.3	0.000617	1.87	0.0215	0.000623	0.00521	ng/l
PCDDs/PCDFs	2,3,7,8-TCDD	Surface water, ≥ RM 4	154	139	90.3	0.000996	1.87	0.0375	0.000623	0.00521	ng/l
PCDDs/PCDFs	OCDD	Surface water, < RM 13	320	308	96.2	0.00635	2.48	0.209	0.00492	0.0423	ng/l
PCDDs/PCDFs	OCDD	Surface water, ≥ RM 4	154	150	97.4	0.00946	2.48	0.299	0.0125	0.0272	ng/l
PCDDs/PCDFs	1,2,3,4,6,7,8-HpCDF	Surface water, < RM 13	320	286	89.4	0.000804	0.336	0.0189	0.000704	0.024	ng/l

Surface water summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCDDs/PCDFs	1,2,3,4,6,7,8-HpCDF	Surface water, ≥ RM 4	154	137	89	0.000804	0.336	0.0235	0.00119	0.024	ng/l
PCDDs/PCDFs	1,2,3,4,7,8,9-HpCDF	Surface water, < RM 13	320	74	23.1	0.000471	0.0137	0.00209	0.000254	0.025	ng/l
PCDDs/PCDFs	1,2,3,4,7,8,9-HpCDF	Surface water, ≥ RM 4	154	43	27.9	0.000611	0.0137	0.00234	0.000377	0.025	ng/l
PCDDs/PCDFs	1,2,3,4,7,8-HxCDF	Surface water, < RM 13	320	245	76.6	0.000446	0.0901	0.00439	0.000253	0.00737	ng/l
PCDDs/PCDFs	1,2,3,4,7,8-HxCDF	Surface water, ≥ RM 4	154	120	77.9	0.000446	0.0901	0.00509	0.000253	0.0072	ng/l
PCDDs/PCDFs	1,2,3,6,7,8-HxCDF	Surface water, < RM 13	320	157	49.1	0.000204	0.0135	0.00164	0.000229	0.00603	ng/l
PCDDs/PCDFs	1,2,3,6,7,8-HxCDF	Surface water, ≥ RM 4	154	71	46.1	0.000204	0.0135	0.00211	0.000229	0.00603	ng/l
PCDDs/PCDFs	1,2,3,7,8,9-HxCDF	Surface water, < RM 13	320	4	1.2	0.000838	0.00127	0.00107	0.000238	0.025	ng/l
PCDDs/PCDFs	1,2,3,7,8,9-HxCDF	Surface water, ≥ RM 4	154	1	0.6	0.000838	0.000838		0.000331	0.025	ng/l
PCDDs/PCDFs	1,2,3,7,8-PeCDF	Surface water, < RM 13	320	52	16.2	0.000134	0.00262	0.0011	0.000242	0.025	ng/l
PCDDs/PCDFs	1,2,3,7,8-PeCDF	Surface water, ≥ RM 4	154	28	18.2	0.000366	0.00262	0.0012	0.000297	0.025	ng/l
PCDDs/PCDFs	2,3,4,6,7,8-HxCDF	Surface water, < RM 13	320	141	44.1	0.000214	0.00676	0.00141	0.000204	0.00544	ng/l
PCDDs/PCDFs	2,3,4,6,7,8-HxCDF	Surface water, ≥ RM 4	154	72	46.8	0.000345	0.00676	0.00168	0.000404	0.00544	ng/l
PCDDs/PCDFs	2,3,4,7,8-PeCDF	Surface water, < RM 13	320	123	38.4	0.000323	0.00739	0.0017	0.000256	0.025	ng/l
PCDDs/PCDFs	2,3,4,7,8-PeCDF	Surface water, ≥ RM 4	154	56	36.4	0.000323	0.00739	0.002	0.000323	0.025	ng/l
PCDDs/PCDFs	2,3,7,8-TCDF	Surface water, < RM 13	320	118	36.9	0.000227	0.00545	0.00125	0.000324	0.00338	ng/l
PCDDs/PCDFs	2,3,7,8-TCDF	Surface water, ≥ RM 4	154	62	40.3	0.000356	0.00545	0.00147	0.000338	0.00338	ng/l
PCDDs/PCDFs	OCDF	Surface water, < RM 13	320	263	82.2	0.0024	0.82	0.0363	0.00113	0.0535	ng/l
PCDDs/PCDFs	OCDF	Surface water, ≥ RM 4	154	130	84.4	0.00265	0.82	0.047	0.00139	0.0296	ng/l
PCDDs/PCDFs	PCDD TEQ-Bird	Surface water, < RM 13	320	316	98.8	6.35E-07	1.87	0.0187	0.00117	0.00227	ng/l
PCDDs/PCDFs	PCDD TEQ-Bird	Surface water, ≥ RM 4	154	154	100	9.46E-07	1.87	0.0341			ng/l
PCDDs/PCDFs	PCDD TEQ-Bird (ND=0.5DL)	Surface water, < RM 13	320	316	98.8	0.00066	1.88	0.0196	0.00118	0.00191	ng/l
PCDDs/PCDFs	PCDD TEQ-Bird (ND=0.5DL)	Surface water, ≥ RM 4	154	154	100	0.00066	1.88	0.0349			ng/l
PCDDs/PCDFs	PCDD TEQ-Bird (ND=DL)	Surface water, < RM 13	320	316	98.8	0.00124	1.88	0.0204	0.00236	0.00382	ng/l
PCDDs/PCDFs	PCDD TEQ-Bird (ND=DL)	Surface water, ≥ RM 4	154	154	100	0.00124	1.88	0.0357			ng/l
PCDDs/PCDFs	PCDD TEQ-Fish	Surface water, < RM 13	320	316	98.8	6.35E-07	1.87	0.0187	0.00117	0.00227	ng/l
PCDDs/PCDFs	PCDD TEQ-Fish	Surface water, ≥ RM 4	154	154	100	9.46E-07	1.87	0.034			ng/l
PCDDs/PCDFs	PCDD TEQ-Fish (ND=0.5DL)	Surface water, < RM 13	320	316	98.8	0.00069	1.88	0.0198	0.00148	0.00239	ng/l
PCDDs/PCDFs	PCDD TEQ-Fish (ND=0.5DL)	Surface water, ≥ RM 4	154	154	100	0.00069	1.88	0.0351			ng/l
PCDDs/PCDFs	PCDD TEQ-Fish (ND=DL)	Surface water, < RM 13	320	316	98.8	0.00137	1.89	0.0209	0.00296	0.00478	ng/l
PCDDs/PCDFs	PCDD TEQ-Fish (ND=DL)	Surface water, ≥ RM 4	154	154	100	0.00137	1.89	0.0362			ng/l
PCDDs/PCDFs	PCDD TEQ-Mammal	Surface water, < RM 13	320	316	98.8	0.00000191	1.87	0.019	0.00117	0.00227	ng/l
PCDDs/PCDFs	PCDD TEQ-Mammal	Surface water, ≥ RM 4	154	154	100	0.00000284	1.87	0.0344			ng/l
PCDDs/PCDFs	PCDD TEQ-Mammal (ND=0.5DL)	Surface water, < RM 13	320	316	98.8	0.000733	1.88	0.0199	0.00133	0.00213	ng/l
PCDDs/PCDFs	PCDD TEQ-Mammal (ND=0.5DL)	Surface water, ≥ RM 4	154	154	100	0.000733	1.88	0.0353			ng/l
PCDDs/PCDFs	PCDD TEQ-Mammal (ND=DL)	Surface water, < RM 13	320	316	98.8	0.00137	1.88	0.0208	0.00266	0.00426	ng/l
PCDDs/PCDFs	PCDD TEQ-Mammal (ND=DL)	Surface water, ≥ RM 4	154	154	100	0.00137	1.88	0.0362			ng/l
PCDDs/PCDFs	PCDF TEQ-Bird	Surface water, < RM 13	320	304	95	4.99E-07	0.023	0.00187	0.000874	0.00229	ng/l
PCDDs/PCDFs	PCDF TEQ-Bird	Surface water, ≥ RM 4	154	149	96.8	0.0000005	0.023	0.00219	0.000874	0.00161	ng/l
PCDDs/PCDFs	PCDF TEQ-Bird (ND=0.5DL)	Surface water, < RM 13	320	304	95	0.000589	0.0231	0.00275	0.00104	0.00274	ng/l
PCDDs/PCDFs	PCDF TEQ-Bird (ND=0.5DL)	Surface water, ≥ RM 4	154	149	96.8	0.000589	0.0231	0.00322	0.00113	0.00192	ng/l
PCDDs/PCDFs	PCDF TEQ-Bird (ND=DL)	Surface water, < RM 13	320	304	95	0.000963	0.0347	0.00363	0.00208	0.00548	ng/l
PCDDs/PCDFs	PCDF TEQ-Bird (ND=DL)	Surface water, ≥ RM 4	154	149	96.8	0.0011	0.0347	0.00425	0.00227	0.00383	ng/l

Surface water summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCDDs/PCDFs	PCDF TEQ-Fish	Surface water, < RM 13	320	304	95	4.99E-07	0.0183	0.00106	0.000348	0.00106	ng/l
PCDDs/PCDFs	PCDF TEQ-Fish	Surface water, ≥ RM 4	154	149	96.8	0.0000005	0.0183	0.00123	0.000437	0.00079	ng/l
PCDDs/PCDFs	PCDF TEQ-Fish (ND=0.5DL)	Surface water, < RM 13	320	304	95	0.000224	0.0183	0.00145	0.000389	0.00112	ng/l
PCDDs/PCDFs	PCDF TEQ-Fish (ND=0.5DL)	Surface water, ≥ RM 4	154	149	96.8	0.000224	0.0183	0.00169	0.000534	0.000852	ng/l
PCDDs/PCDFs	PCDF TEQ-Fish (ND=DL)	Surface water, < RM 13	320	304	95	0.00037	0.0189	0.00184	0.000778	0.00224	ng/l
PCDDs/PCDFs	PCDF TEQ-Fish (ND=DL)	Surface water, ≥ RM 4	154	149	96.8	0.00037	0.0189	0.00216	0.00107	0.0017	ng/l
PCDDs/PCDFs	PCDF TEQ-Mammal	Surface water, < RM 13	320	304	95	0.0000015	0.017	0.000954	0.000209	0.000636	ng/l
PCDDs/PCDFs	PCDF TEQ-Mammal	Surface water, ≥ RM 4	154	149	96.8	0.0000015	0.017	0.00112	0.000262	0.000474	ng/l
PCDDs/PCDFs	PCDF TEQ-Mammal (ND=0.5DL)	Surface water, < RM 13	320	304	95	0.000205	0.017	0.00126	0.000337	0.000968	ng/l
PCDDs/PCDFs	PCDF TEQ-Mammal (ND=0.5DL)	Surface water, ≥ RM 4	154	149	96.8	0.000205	0.017	0.00147	0.000457	0.000708	ng/l
PCDDs/PCDFs	PCDF TEQ-Mammal (ND=DL)	Surface water, < RM 13	320	304	95	0.000329	0.0171	0.00157	0.000674	0.00194	ng/l
PCDDs/PCDFs	PCDF TEQ-Mammal (ND=DL)	Surface water, ≥ RM 4	154	149	96.8	0.000329	0.0171	0.00183	0.000914	0.00142	ng/l
PCDDs/PCDFs	Dioxin TEQ-Bird	Surface water, < RM 13	320	316	98.8	6.35E-07	1.88	0.0205	0.00117	0.00227	ng/l
PCDDs/PCDFs	Dioxin TEQ-Bird	Surface water, ≥ RM 4	154	154	100	9.46E-07	1.88	0.0362			ng/l
PCDDs/PCDFs	Dioxin TEQ-Bird (ND=0.5DL)	Surface water, < RM 13	320	316	98.8	0.00125	1.89	0.0223	0.00244	0.00405	ng/l
PCDDs/PCDFs	Dioxin TEQ-Bird (ND=0.5DL)	Surface water, ≥ RM 4	154	154	100	0.00125	1.89	0.038			ng/l
PCDDs/PCDFs	Dioxin TEQ-Bird (ND=DL)	Surface water, < RM 13	320	316	98.8	0.00234	1.91	0.0241	0.00488	0.00811	ng/l
PCDDs/PCDFs	Dioxin TEQ-Bird (ND=DL)	Surface water, ≥ RM 4	154	154	100	0.00234	1.91	0.0399			ng/l
PCDDs/PCDFs	Dioxin TEQ-Fish	Surface water, < RM 13	320	316	98.8	6.35E-07	1.88	0.0198	0.00117	0.00227	ng/l
PCDDs/PCDFs	Dioxin TEQ-Fish	Surface water, ≥ RM 4	154	154	100	9.46E-07	1.88	0.0353			ng/l
PCDDs/PCDFs	Dioxin TEQ-Fish (ND=0.5DL)	Surface water, < RM 13	320	316	98.8	0.000915	1.89	0.0212	0.00202	0.00342	ng/l
PCDDs/PCDFs	Dioxin TEQ-Fish (ND=0.5DL)	Surface water, ≥ RM 4	154	154	100	0.000915	1.89	0.0368			ng/l
PCDDs/PCDFs	Dioxin TEQ-Fish (ND=DL)	Surface water, < RM 13	320	316	98.8	0.00174	1.9	0.0227	0.00403	0.00683	ng/l
PCDDs/PCDFs	Dioxin TEQ-Fish (ND=DL)	Surface water, ≥ RM 4	154	154	100	0.00174	1.9	0.0383			ng/l
PCDDs/PCDFs	Dioxin TEQ-Mammal	Surface water, < RM 13	320	316	98.8	0.00000191	1.88	0.0199	0.00117	0.00227	ng/l
PCDDs/PCDFs	Dioxin TEQ-Mammal	Surface water, ≥ RM 4	154	154	100	0.00000284	1.88	0.0356			ng/l
PCDDs/PCDFs	Dioxin TEQ-Mammal (ND=0.5DL)	Surface water, < RM 13	320	316	98.8	0.000937	1.88	0.0212	0.00183	0.00296	ng/l
PCDDs/PCDFs	Dioxin TEQ-Mammal (ND=0.5DL)	Surface water, ≥ RM 4	154	154	100	0.000937	1.88	0.0368			ng/l
PCDDs/PCDFs	Dioxin TEQ-Mammal (ND=DL)	Surface water, < RM 13	320	316	98.8	0.0017	1.89	0.0224	0.00366	0.00592	ng/l
PCDDs/PCDFs	Dioxin TEQ-Mammal (ND=DL)	Surface water, ≥ RM 4	154	154	100	0.0017	1.89	0.038			ng/l
PCDDs/PCDFs	Total TEQ-Bird	Surface water, < RM 13	320	320	100	0.0000421	1.91	0.0237			ng/l
PCDDs/PCDFs	Total TEQ-Bird	Surface water, ≥ RM 4	154	154	100	0.000205	1.91	0.0406			ng/l
PCDDs/PCDFs	Total TEQ-Bird (ND=0.5DL)	Surface water, < RM 13	320	320	100	0.00215	1.93	0.0255			ng/l
PCDDs/PCDFs	Total TEQ-Bird (ND=0.5DL)	Surface water, ≥ RM 4	154	154	100	0.00215	1.93	0.0426			ng/l
PCDDs/PCDFs	Total TEQ-Bird (ND=DL)	Surface water, < RM 13	320	320	100	0.0039	1.94	0.0274			ng/l
PCDDs/PCDFs	Total TEQ-Bird (ND=DL)	Surface water, ≥ RM 4	154	154	100	0.004	1.94	0.0444			ng/l
PCDDs/PCDFs	Total TEQ-Fish	Surface water, < RM 13	320	320	100	0.00000117	1.88	0.0196			ng/l
PCDDs/PCDFs	Total TEQ-Fish	Surface water, ≥ RM 4	154	154	100	0.0000045	1.88	0.0353			ng/l
PCDDs/PCDFs	Total TEQ-Fish (ND=0.5DL)	Surface water, < RM 13	320	320	100	0.000929	1.89	0.021			ng/l
PCDDs/PCDFs	Total TEQ-Fish (ND=0.5DL)	Surface water, ≥ RM 4	154	154	100	0.000929	1.89	0.0368			ng/l
PCDDs/PCDFs	Total TEQ-Fish (ND=DL)	Surface water, < RM 13	320	320	100	0.00176	1.9	0.0225			ng/l
PCDDs/PCDFs	Total TEQ-Fish (ND=DL)	Surface water, ≥ RM 4	154	154	100	0.00176	1.9	0.0383			ng/l
PCDDs/PCDFs	Total TEQ-Mammal	Surface water, < RM 13	320	320	100	0.00000129	1.88	0.02			ng/l

Surface water summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
PCDDs/PCDFs	Total TEQ-Mammal	Surface water, ≥ RM 4	154	154	100	0.0000142	1.88	0.036			ng/l
PCDDs/PCDFs	Total TEQ-Mammal (ND=0.5DL)	Surface water, < RM 13	320	320	100	0.00118	1.89	0.0213			ng/l
PCDDs/PCDFs	Total TEQ-Mammal (ND=0.5DL)	Surface water, ≥ RM 4	154	154	100	0.00118	1.89	0.0373			ng/l
PCDDs/PCDFs	Total TEQ-Mammal (ND=DL)	Surface water, < RM 13	320	320	100	0.00217	1.89	0.0226			ng/l
PCDDs/PCDFs	Total TEQ-Mammal (ND=DL)	Surface water, ≥ RM 4	154	154	100	0.00217	1.89	0.0386			ng/l
PCDDs/PCDFs	Total HpCDD	Surface water, < RM 13	320	289	90.3	0.00139	0.525	0.0436	0.00235	0.0308	ng/l
PCDDs/PCDFs	Total HpCDD	Surface water, ≥ RM 4	154	142	92.2	0.00271	0.525	0.0618	0.00314	0.0267	ng/l
PCDDs/PCDFs	Total HxCDD	Surface water, < RM 13	320	182	56.9	0.000483	0.106	0.011	0.000568	0.0176	ng/l
PCDDs/PCDFs	Total HxCDD	Surface water, ≥ RM 4	154	95	61.7	0.000483	0.106	0.0142	0.00074	0.0176	ng/l
PCDDs/PCDFs	Total PeCDD	Surface water, < RM 13	320	56	17.5	0.000499	0.0334	0.00451	0.000351	0.00507	ng/l
PCDDs/PCDFs	Total PeCDD	Surface water, ≥ RM 4	154	38	24.7	0.000646	0.0334	0.00487	0.000496	0.00507	ng/l
PCDDs/PCDFs	Total TCDD	Surface water, < RM 13	320	182	56.9	0.001	1.91	0.0368	0.000767	0.0109	ng/l
PCDDs/PCDFs	Total TCDD	Surface water, ≥ RM 4	154	94	61	0.00161	1.91	0.0614	0.000767	0.0109	ng/l
PCDDs/PCDFs	Total HpCDF	Surface water, < RM 13	320	290	90.6	0.00115	0.401	0.0283	0.000802	0.0352	ng/l
PCDDs/PCDFs	Total HpCDF	Surface water, ≥ RM 4	154	139	90.3	0.00147	0.401	0.0372	0.00131	0.0352	ng/l
PCDDs/PCDFs	Total HxCDF	Surface water, < RM 13	320	264	82.5	0.000517	0.186	0.0165	0.000453	0.0279	ng/l
PCDDs/PCDFs	Total HxCDF	Surface water, ≥ RM 4	154	127	82.5	0.000607	0.186	0.0216	0.000498	0.0279	ng/l
PCDDs/PCDFs	Total PeCDF	Surface water, < RM 13	320	223	69.7	0.000449	0.126	0.0153	0.000265	0.01	ng/l
PCDDs/PCDFs	Total PeCDF	Surface water, ≥ RM 4	154	116	75.3	0.000495	0.126	0.0192	0.000265	0.01	ng/l
PCDDs/PCDFs	Total TCDF	Surface water, < RM 13	320	220	68.8	0.000503	0.116	0.0159	0.000543	0.0111	ng/l
PCDDs/PCDFs	Total TCDF	Surface water, ≥ RM 4	154	104	67.5	0.000542	0.116	0.0208	0.000562	0.0111	ng/l
OC Pesticides	2,4'-DDD	Surface water, < RM 13	200	190	95	0.059	2.37	0.38	0.0404	0.4	ng/l
OC Pesticides	2,4'-DDD	Surface water, ≥ RM 4	98	97	99	0.059	2.37	0.47	0.4	0.4	ng/l
OC Pesticides	2,4'-DDE	Surface water, < RM 13	200	135	67.5	0.049	1.21	0.2	0.028	0.41	ng/l
OC Pesticides	2,4'-DDE	Surface water, ≥ RM 4	98	71	72.4	0.049	1.21	0.24	0.0359	0.41	ng/l
OC Pesticides	2,4'-DDT	Surface water, < RM 13	200	92	46	0.0253	4.78	0.19	0.0105	0.41	ng/l
OC Pesticides	2,4'-DDT	Surface water, ≥ RM 4	98	64	65.3	0.047	4.78	0.23	0.0105	0.41	ng/l
OC Pesticides	4,4'-DDD	Surface water, < RM 13	200	197	98.5	0.15	6.8	0.98	0.0728	1.9	ng/l
OC Pesticides	4,4'-DDD	Surface water, ≥ RM 4	98	97	99	0.15	6.8	1.3	1.9	1.9	ng/l
OC Pesticides	4,4'-DDE	Surface water, < RM 13	200	184	92	0.22	8.26	1.1	0.0686	0.4	ng/l
OC Pesticides	4,4'-DDE	Surface water, ≥ RM 4	98	93	94.9	0.29	8.26	1.5	0.101	0.4	ng/l
OC Pesticides	4,4'-DDT	Surface water, < RM 13	200	148	74	0.0509	3.82	0.45	0.0182	1.9	ng/l
OC Pesticides	4,4'-DDT	Surface water, ≥ RM 4	98	87	88.8	0.0619	3.82	0.61	0.0328	1.9	ng/l
OC Pesticides	Aldrin	Surface water, < RM 13	200	62	31	0.0087	0.469	0.059	0.00489	0.41	ng/l
OC Pesticides	Aldrin	Surface water, ≥ RM 4	98	46	46.9	0.0142	0.469	0.066	0.00525	0.41	ng/l
OC Pesticides	alpha-BHC	Surface water, < RM 13	200	190	95	0.0201	0.314	0.079	0.0065	0.087	ng/l
OC Pesticides	alpha-BHC	Surface water, ≥ RM 4	98	90	91.8	0.0201	0.144	0.054	0.0065	0.087	ng/l
OC Pesticides	alpha-Chlordane	Surface water, < RM 13	200	193	96.5	0.088	5.78	0.99	0.11	0.269	ng/l
OC Pesticides	alpha-Chlordane	Surface water, ≥ RM 4	98	98	100	0.349	5.78	1.4			ng/l
OC Pesticides	beta-BHC	Surface water, < RM 13	200	160	80	0.023	0.248	0.088	0.0247	0.4	ng/l
OC Pesticides	beta-BHC	Surface water, ≥ RM 4	98	70	71.4	0.023	0.182	0.067	0.0529	0.4	ng/l
OC Pesticides	cis-Nonachlor	Surface water, < RM 13	200	182	91	0.027	1.55	0.25	0.016	0.39	ng/l
OC Pesticides	cis-Nonachlor	Surface water, ≥ RM 4	98	97	99	0.0641	1.55	0.35	0.0315	0.0315	ng/l

Surface water summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
OC Pesticides	delta-BHC	Surface water, < RM 13	200	18	9	0.00853	0.081	0.034	0.00783	0.42	ng/l
OC Pesticides	delta-BHC	Surface water, ≥ RM 4	98	9	9.2	0.0139	0.081	0.0448	0.00783	0.42	ng/l
OC Pesticides	Dieldrin	Surface water, < RM 13	200	179	89.5	0.16	3.18	1.1	0.112	0.63	ng/l
OC Pesticides	Dieldrin	Surface water, ≥ RM 4	98	98	100	0.412	3.18	1.4			ng/l
OC Pesticides	Endosulfan I	Surface water, < RM 13	200	15	7.5	0.068	0.174	0.106	0.0263	0.524	ng/l
OC Pesticides	Endosulfan I	Surface water, ≥ RM 4	98	9	9.2	0.0863	0.143	0.109	0.0288	0.42	ng/l
OC Pesticides	Endosulfan II	Surface water, < RM 13	200	38	19	0.0783	0.429	0.19	0.0443	0.41	ng/l
OC Pesticides	Endosulfan II	Surface water, ≥ RM 4	98	31	31.6	0.086	0.429	0.2	0.0443	0.41	ng/l
OC Pesticides	Endosulfan sulfate	Surface water, < RM 13	200	151	75.5	0.022	0.363	0.11	0.00891	0.213	ng/l
OC Pesticides	Endosulfan sulfate	Surface water, ≥ RM 4	98	84	85.7	0.04	0.363	0.14	0.053	0.213	ng/l
OC Pesticides	Endrin	Surface water, < RM 13	200	22	11	0.0335	0.176	0.075	0.0119	0.42	ng/l
OC Pesticides	Endrin	Surface water, ≥ RM 4	98	16	16.3	0.035	0.176	0.082	0.0138	0.42	ng/l
OC Pesticides	Endrin aldehyde	Surface water, < RM 13	200	3	1.5	0.0492	0.089	0.0714	0.0165	0.42	ng/l
OC Pesticides	Endrin aldehyde	Surface water, ≥ RM 4	98	2	2	0.076	0.089	0.0825	0.0165	0.42	ng/l
OC Pesticides	Endrin ketone	Surface water, < RM 13	200	131	65.5	0.03	0.427	0.11	0.0138	0.41	ng/l
OC Pesticides	Endrin ketone	Surface water, ≥ RM 4	98	89	90.8	0.03	0.315	0.11	0.035	0.41	ng/l
OC Pesticides	gamma-BHC (Lindane)	Surface water, < RM 13	200	191	95.5	0.036	0.32	0.094	0.0189	0.39	ng/l
OC Pesticides	gamma-BHC (Lindane)	Surface water, ≥ RM 4	98	95	96.9	0.043	0.32	0.11	0.16	0.39	ng/l
OC Pesticides	gamma-Chlordane	Surface water, < RM 13	200	196	98	0.078	4.91	0.8	0.0191	0.191	ng/l
OC Pesticides	gamma-Chlordane	Surface water, ≥ RM 4	98	98	100	0.27	4.91	1.2			ng/l
OC Pesticides	Heptachlor	Surface water, < RM 13	200	81	40.5	0.0052	0.24	0.041	0.00286	0.4	ng/l
OC Pesticides	Heptachlor	Surface water, ≥ RM 4	98	53	54.1	0.00525	0.106	0.046	0.0029	0.038	ng/l
OC Pesticides	Heptachlor epoxide	Surface water, < RM 13	200	191	95.5	0.044	1.61	0.57	0.0953	0.169	ng/l
OC Pesticides	Heptachlor epoxide	Surface water, ≥ RM 4	98	98	100	0.201	1.61	0.81			ng/l
OC Pesticides	Hexachlorobenzene	Surface water, < RM 13	200	46	23	0.0836	2.57	0.403	0.0485	1.1	ng/l
OC Pesticides	Hexachlorobenzene	Surface water, ≥ RM 4	98	20	20.4	0.119	1.74	0.441	0.0638	1	ng/l
OC Pesticides	Methoxychlor	Surface water, < RM 13	200	39	19.5	0.0209	0.16	0.061	0.00642	1.9	ng/l
OC Pesticides	Methoxychlor	Surface water, ≥ RM 4	98	24	24.5	0.0312	0.16	0.064	0.00684	1.9	ng/l
OC Pesticides	Oxychlordane	Surface water, < RM 13	200	128	64	0.01	0.293	0.07	0.00725	0.41	ng/l
OC Pesticides	Oxychlordane	Surface water, ≥ RM 4	98	87	88.8	0.0136	0.293	0.088	0.00903	0.4	ng/l
OC Pesticides	Total 2,4' and 4,4' DDD	Surface water, < RM 13	200	198	99	0.12	9.17	1.33	0.0728	0.0802	ng/l
OC Pesticides	Total 2,4' and 4,4' DDD	Surface water, ≥ RM 4	98	98	100	0.12	9.17	1.72			ng/l
OC Pesticides	Total 2,4' and 4,4' DDD (ND=0.5DL)	Surface water, < RM 13	200	198	99	0.229	9.17	1.34	0.0728	0.0802	ng/l
OC Pesticides	Total 2,4' and 4,4' DDD (ND=0.5DL)	Surface water, ≥ RM 4	98	98	100	0.229	9.17	1.73			ng/l
OC Pesticides	Total 2,4' and 4,4' DDD (ND=DL)	Surface water, < RM 13	200	198	99	0.229	9.17	1.35	0.0728	0.0802	ng/l
OC Pesticides	Total 2,4' and 4,4' DDD (ND=DL)	Surface water, ≥ RM 4	98	98	100	0.229	9.17	1.74			ng/l
OC Pesticides	Total 2,4' and 4,4' DDE	Surface water, < RM 13	200	186	93	0.139	9.47	1.27	0.0686	0.4	ng/l
OC Pesticides	Total 2,4' and 4,4' DDE	Surface water, ≥ RM 4	98	94	95.9	0.139	9.47	1.68	0.101	0.4	ng/l
OC Pesticides	Total 2,4' and 4,4' DDE (ND=0.5DL)	Surface water, < RM 13	200	186	93	0.216	9.47	1.3	0.0686	0.4	ng/l
OC Pesticides	Total 2,4' and 4,4' DDE (ND=0.5DL)	Surface water, ≥ RM 4	98	94	95.9	0.216	9.47	1.71	0.101	0.4	ng/l
OC Pesticides	Total 2,4' and 4,4' DDE (ND=DL)	Surface water, < RM 13	200	186	93	0.279	9.47	1.32	0.0686	0.4	ng/l
OC Pesticides	Total 2,4' and 4,4' DDE (ND=DL)	Surface water, ≥ RM 4	98	94	95.9	0.292	9.47	1.73	0.101	0.4	ng/l
OC Pesticides	Total 2,4' and 4,4' DDT	Surface water, < RM 13	200	149	74.5	0.0509	8.6	0.561	0.0182	0.41	ng/l

Surface water summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
OC Pesticides	Total 2,4' and 4,4' DDT	Surface water, ≥ RM 4	98	88	89.8	0.055	8.6	0.767	0.0328	0.41	ng/l
OC Pesticides	Total 2,4' and 4,4' DDT (ND=0.5DL)	Surface water, < RM 13	200	149	74.5	0.0598	8.6	0.598	0.0182	0.41	ng/l
OC Pesticides	Total 2,4' and 4,4' DDT (ND=0.5DL)	Surface water, ≥ RM 4	98	88	89.8	0.0706	8.6	0.796	0.0328	0.41	ng/l
OC Pesticides	Total 2,4' and 4,4' DDT (ND=DL)	Surface water, < RM 13	200	149	74.5	0.0686	8.6	0.635	0.0182	0.41	ng/l
OC Pesticides	Total 2,4' and 4,4' DDT (ND=DL)	Surface water, ≥ RM 4	98	88	89.8	0.0793	8.6	0.825	0.0328	0.41	ng/l
OC Pesticides	Total 4,4' DDT	Surface water, < RM 13	200	199	99.5	0.204	17.1	2.35	0.123	0.123	ng/l
OC Pesticides	Total 4,4' DDT	Surface water, ≥ RM 4	98	98	100	0.26	17.1	3.24			ng/l
OC Pesticides	Total 4,4' DDT (ND=0.5DL)	Surface water, < RM 13	200	199	99.5	0.291	17.1	2.38	0.123	0.123	ng/l
OC Pesticides	Total 4,4' DDT (ND=0.5DL)	Surface water, ≥ RM 4	98	98	100	0.42	17.1	3.27			ng/l
OC Pesticides	Total 4,4' DDT (ND=DL)	Surface water, < RM 13	200	199	99.5	0.377	17.1	2.41	0.123	0.123	ng/l
OC Pesticides	Total 4,4' DDT (ND=DL)	Surface water, ≥ RM 4	98	98	100	0.524	17.1	3.29			ng/l
OC Pesticides	Total Chlordane	Surface water, < RM 13	200	200	100	0.0967	15.9	2.52			ng/l
OC Pesticides	Total Chlordane	Surface water, ≥ RM 4	98	98	100	0.875	15.9	3.85			ng/l
OC Pesticides	Total Chlordane (ND=0.5DL)	Surface water, < RM 13	200	200	100	0.237	15.9	2.55			ng/l
OC Pesticides	Total Chlordane (ND=0.5DL)	Surface water, ≥ RM 4	98	98	100	0.875	15.9	3.85			ng/l
OC Pesticides	Total Chlordane (ND=DL)	Surface water, < RM 13	200	200	100	0.365	15.9	2.59			ng/l
OC Pesticides	Total Chlordane (ND=DL)	Surface water, ≥ RM 4	98	98	100	0.875	15.9	3.85			ng/l
OC Pesticides	Total DDx	Surface water, < RM 13	200	199	99.5	0.216	21.1	2.93	0.123	0.123	ng/l
OC Pesticides	Total DDx	Surface water, ≥ RM 4	98	98	100	0.26	21.1	4.02			ng/l
OC Pesticides	Total DDx (ND=0.5DL)	Surface water, < RM 13	200	199	99.5	0.388	21.1	3.03	0.123	0.123	ng/l
OC Pesticides	Total DDx (ND=0.5DL)	Surface water, ≥ RM 4	98	98	100	0.626	21.1	4.1			ng/l
OC Pesticides	Total DDx (ND=DL)	Surface water, < RM 13	200	199	99.5	0.559	21.1	3.12	0.123	0.123	ng/l
OC Pesticides	Total DDx (ND=DL)	Surface water, ≥ RM 4	98	98	100	0.808	21.1	4.18			ng/l
OC Pesticides	Total Endosulfan	Surface water, < RM 13	200	152	76	0.022	0.857	0.166	0.0604	0.524	ng/l
OC Pesticides	Total Endosulfan	Surface water, ≥ RM 4	98	85	86.7	0.04	0.857	0.224	0.164	0.4	ng/l
OC Pesticides	Total Endosulfan (ND=0.5DL)	Surface water, < RM 13	200	152	76	0.0787	0.857	0.372	0.0604	0.524	ng/l
OC Pesticides	Total Endosulfan (ND=0.5DL)	Surface water, ≥ RM 4	98	85	86.7	0.1	0.857	0.395	0.164	0.4	ng/l
OC Pesticides	Total Endosulfan (ND=DL)	Surface water, < RM 13	200	152	76	0.13	0.92	0.577	0.0604	0.524	ng/l
OC Pesticides	Total Endosulfan (ND=DL)	Surface water, ≥ RM 4	98	85	86.7	0.152	0.92	0.567	0.164	0.4	ng/l
OC Pesticides	trans-Nonachlor	Surface water, < RM 13	200	199	99.5	0.038	3.34	0.51	0.029	0.029	ng/l
OC Pesticides	trans-Nonachlor	Surface water, ≥ RM 4	98	98	100	0.1	3.34	0.78			ng/l
VOCs	1,1,1-Trichloroethane	Surface water, < RM 13	200	2	1	0.1	0.13	0.12	0.5	0.5	ug/l
VOCs	1,1,1-Trichloroethane	Surface water, ≥ RM 4	98	2	2	0.1	0.13	0.12	0.5	0.5	ug/l
VOCs	1,1-Dichloroethane	Surface water, < RM 13	200	1	0.5	0.1	0.1		0.5	0.5	ug/l
VOCs	1,1-Dichloroethane	Surface water, ≥ RM 4	98	1	1	0.1	0.1		0.5	0.5	ug/l
VOCs	1,2,4-Trichlorobenzene	Surface water, < RM 13	200	10	5	0.1	0.18	0.13	2	2	ug/l
VOCs	1,2,4-Trichlorobenzene	Surface water, ≥ RM 4	98	0	0				2	2	ug/l
VOCs	1,2-Dichlorobenzene	Surface water, < RM 13	200	8	4	0.12	0.22	0.17	0.5	0.5	ug/l
VOCs	1,2-Dichlorobenzene	Surface water, ≥ RM 4	98	8	8.2	0.12	0.22	0.17	0.5	0.5	ug/l
VOCs	1,4-Dichlorobenzene	Surface water, < RM 13	200	4	2	0.12	0.14	0.13	0.5	0.5	ug/l
VOCs	1,4-Dichlorobenzene	Surface water, ≥ RM 4	98	0	0				0.5	0.5	ug/l
VOCs	1,4-Dioxane	Surface water, < RM 13	168	4	2.4	0.16	0.42	0.31	1.9	2.2	ug/l
VOCs	1,4-Dioxane	Surface water, ≥ RM 4	91	2	2.2	0.23	0.42	0.33	1.9	2.2	ug/l

Surface water summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
VOCs	Acetone	Surface water, < RM 13	200	13	6.5	3	4	3.6	20	20	ug/l
VOCs	Acetone	Surface water, ≥ RM 4	98	11	11.2	3	4	3.6	20	20	ug/l
VOCs	Benzene	Surface water, < RM 13	200	5	2.5	0.07	0.08	0.074	0.5	0.5	ug/l
VOCs	Benzene	Surface water, ≥ RM 4	98	2	2	0.07	0.08	0.075	0.5	0.5	ug/l
VOCs	Bromodichloromethane	Surface water, < RM 13	200	27	13.5	0.1	0.2	0.13	0.5	0.5	ug/l
VOCs	Bromodichloromethane	Surface water, ≥ RM 4	98	21	21.4	0.1	0.2	0.13	0.5	0.5	ug/l
VOCs	Carbon disulfide	Surface water, < RM 13	200	2	1	0.07	0.07	0.07	0.5	0.5	ug/l
VOCs	Carbon disulfide	Surface water, ≥ RM 4	98	2	2	0.07	0.07	0.07	0.5	0.5	ug/l
VOCs	Chlorobenzene	Surface water, < RM 13	200	53	26.5	0.11	0.65	0.24	0.5	0.5	ug/l
VOCs	Chlorobenzene	Surface water, ≥ RM 4	98	21	21.4	0.11	0.65	0.26	0.5	0.5	ug/l
VOCs	Chloroform	Surface water, < RM 13	200	90	45	0.08	0.39	0.19	0.5	0.5	ug/l
VOCs	Chloroform	Surface water, ≥ RM 4	98	41	41.8	0.08	0.33	0.22	0.5	0.5	ug/l
VOCs	Chloromethane	Surface water, < RM 13	200	47	23.5	0.07	0.15	0.093	0.07	0.5	ug/l
VOCs	Chloromethane	Surface water, ≥ RM 4	98	6	6.1	0.07	0.11	0.085	0.09	0.5	ug/l
VOCs	cis-1,2-Dichloroethylene	Surface water, < RM 13	200	195	97.5	0.07	0.6	0.23	0.5	0.5	ug/l
VOCs	cis-1,2-Dichloroethylene	Surface water, ≥ RM 4	98	97	99	0.08	0.6	0.29	0.5	0.5	ug/l
VOCs	Ethylbenzene	Surface water, < RM 13	200	17	8.5	0.05	0.1	0.071	0.5	0.5	ug/l
VOCs	Ethylbenzene	Surface water, ≥ RM 4	98	13	13.3	0.05	0.1	0.076	0.5	0.5	ug/l
VOCs	Isopropylbenzene	Surface water, < RM 13	200	18	9	0.06	0.08	0.07	2	2	ug/l
VOCs	Isopropylbenzene	Surface water, ≥ RM 4	98	18	18.4	0.06	0.08	0.07	2	2	ug/l
VOCs	m, p-Xylene	Surface water, < RM 13	200	43	21.5	0.12	0.39	0.19	0.5	0.5	ug/l
VOCs	m, p-Xylene	Surface water, ≥ RM 4	98	33	33.7	0.12	0.39	0.21	0.5	0.5	ug/l
VOCs	o-Xylene	Surface water, < RM 13	200	2	1	0.08	0.09	0.085	0.5	0.5	ug/l
VOCs	o-Xylene	Surface water, ≥ RM 4	98	2	2	0.08	0.09	0.085	0.5	0.5	ug/l
VOCs	Tetrachloroethylene	Surface water, < RM 13	200	167	83.5	0.1	0.55	0.23	0.5	0.5	ug/l
VOCs	Tetrachloroethylene	Surface water, ≥ RM 4	98	86	87.8	0.1	0.55	0.26	0.5	0.5	ug/l
VOCs	Toluene	Surface water, < RM 13	200	2	1	0.21	0.24	0.23	0.5	0.5	ug/l
VOCs	Toluene	Surface water, ≥ RM 4	98	2	2	0.21	0.24	0.23	0.5	0.5	ug/l
VOCs	Trichloroethene	Surface water, < RM 13	200	162	81	0.1	0.6	0.24	0.5	0.5	ug/l
VOCs	Trichloroethene	Surface water, ≥ RM 4	98	85	86.7	0.1	0.55	0.26	0.5	0.5	ug/l
VOCs	Vinyl chloride	Surface water, < RM 13	200	4	2	0.08	0.11	0.1	0.5	0.5	ug/l
VOCs	Vinyl chloride	Surface water, ≥ RM 4	98	4	4.1	0.08	0.11	0.1	0.5	0.5	ug/l
Wet chemistry	Cyanide	Surface water, < RM 13	200	11	5.5	0.003	0.031	0.009	0.01	0.01	mg/l
Wet chemistry	Cyanide	Surface water, ≥ RM 4	98	10	10.2	0.003	0.014	0.0068	0.01	0.01	mg/l
Conventionals	Total organic carbon	Surface water, < RM 13	320	320	100	0.25	9.2	3.4			mg/l
Conventionals	Total organic carbon	Surface water, ≥ RM 4	154	154	100	0.86	6.43	4			mg/l
Conventionals	Dissolved organic carbon	Surface water, < RM 13	320	319	99.7	0.41	7.09	3.3	0.5	0.5	mg/l
Conventionals	Dissolved organic carbon	Surface water, ≥ RM 4	154	154	100	0.77	7.09	3.9			mg/l
Conventionals	Particulate organic carbon	Surface water, < RM 13	320	273	85.3	0.2	11.3	2.7	1.3	1.3	mg/l
Conventionals	Particulate organic carbon	Surface water, ≥ RM 4	154	140	90.9	0.9	11.3	3.5	1.3	1.3	mg/l
Conventionals	Total dissolved solids	Surface water, < RM 13	320	320	100	138	27700	7800			mg/l
Conventionals	Total dissolved solids	Surface water, ≥ RM 4	154	154	100	138	17900	2200			mg/l
Conventionals	Total suspended solids	Surface water, < RM 13	320	320	100	2.7	221	31			mg/l

Surface water summary stats by EPC group - all COIs

Parameter Group	Parameter	Sample Group Desc	N	# of Detects	Detection Freq (%)	Min Detect	Max Detect	Mean Detect	Min DL	Max DL	Units
Conventionals	Total suspended solids	Surface water, ≥ RM 4	154	154	100	2.7	173	39			mg/l
Water quality param	Alkalinity (total, as CaCO3)	Surface water, < RM 13	320	320	100	45.4	142	88			mg/l
Water quality param	Alkalinity (total, as CaCO3)	Surface water, ≥ RM 4	154	154	100	45.4	141	79			mg/l
Water quality param	Ammonia	Surface water, < RM 13	200	195	97.5	0.02	0.689	0.26	0.05	0.05	mg/l
Water quality param	Ammonia	Surface water, ≥ RM 4	98	93	94.9	0.02	0.605	0.14	0.05	0.05	mg/l
Water quality param	Chloride (as Cl)	Surface water, < RM 13	320	320	100	41.2	13400	4200			mg/l
Water quality param	Chloride (as Cl)	Surface water, ≥ RM 4	154	154	100	41.2	9720	1100			mg/l
Water quality param	Hardness (as CaCO3)	Surface water, < RM 13	200	200	100	1.1	4030	1500			mg/l
Water quality param	Hardness (as CaCO3)	Surface water, ≥ RM 4	98	98	100	1.1	3510	490			mg/l
Water quality param	Nitrogen, Kjeldahl	Surface water, < RM 13	200	196	98	0.71	3.5	1.6	1.7	2.2	mg/l
Water quality param	Nitrogen, Kjeldahl	Surface water, ≥ RM 4	98	96	98	0.71	2.58	1.4	2.2	2.2	mg/l
Water quality param	Phosphorus	Surface water, < RM 13	200	200	100	0.083	0.721	0.25			mg/l
Water quality param	Phosphorus	Surface water, ≥ RM 4	98	98	100	0.086	0.721	0.29			mg/l
Water quality param	Salinity	Surface water, < RM 13	305	305	100	0.13	24.9	8.5			ppt
Water quality param	Salinity	Surface water, ≥ RM 4	141	141	100	0.13	20	2.5			ppt
Water quality param	Sulfate	Surface water, < RM 13	320	320	100	7.2	1790	560			mg/l
Water quality param	Sulfate	Surface water, ≥ RM 4	154	154	100	7.2	1360	140			mg/l
Water quality param	Total sulfide	Surface water, < RM 13	320	34	10.6	0.4	1	0.5	2	2	mg/l
Water quality param	Total sulfide	Surface water, ≥ RM 4	154	24	15.6	0.4	1	0.51	2	2	mg/l
Biological	Chlorophyll-a	Surface water, < RM 13	320	320	100	0.7	121	11			mg/m3
Biological	Chlorophyll-a	Surface water, ≥ RM 4	154	154	100	1.56	121	15			mg/m3

Overview of tissue summary groups

Sample Group	Group description	Sample Counts by Summary Group		
		SLERA		
		Tissue screen	Tissue/ diet screen	Diet screen
American eel	American eel samples	21		
Blue crab	blue crab samples		24	
Brown bullhead	brown bullhead samples	6		
Carp	carp samples	12		
Channel catfish	channel catfish samples	11		
Fish (≤ 11 cm)	fish ≤ 11 cm include the following species: gizzard shad, silver shiner, spottail shiner, white perch, and mummichog			23
Fish (≤ 13 cm)	fish ≤ 13 cm include the following species: gizzard shad, mixed forage fish, mummichog, silver shiner, spottail shiner, and white perch			26
Fish (≤ 18 cm)	fish ≤ 13 cm include the following species: gizzard shad, mixed forage fish, mummichog, pumpkinseed, silver shiner, spottail shiner, and white perch			41
Fish (≤ 20 cm)	fish ≤ 20 cm include the following species: brown bullhead, gizzard shad, mixed forage fish, mummichog , pumpkinseed, silver shiner, smallmouth bass, spottail shiner, and white perch			43
Fish (all)	fish (all) includes the following species: American eel, brown bullhead, carp, channel catfish, gizzard shad, largemouth bass, mixed forage fish, mummichog, northern pike, pumpkinseed, silver shiner, smallmouth bass, spottail shiner, white catfish, white perch, and white sucker			131
Largemouth bass	largemouth bass samples	3		
Mummichog	mummichog samples	18		
Mussel (estuarine)	eastern elliptio mussel samples (Day 0 control samples excluded)	3		
Mussel (freshwater)	ribbed mussel samples (Day 0 control samples excluded)	5		
Northern pike	northern pike sample	1		
Other forage fish (no mummichog)	all small forage fish other than mummichog (white perch from small forage event excluded)	10		
Smallmouth bass	smallmouth bass samples	3		
White catfish	white catfish samples	19		
White perch	white perch samples (includes 2 white perch composite samples from small forage fish sampling).	22		
White sucker	white sucker samples	5		
Worms (all)	freshwater (Lumbriculus variegatus) and estuarine (Nereis virens) worm samples			19
Worms (estuarine sp.)	estuarine (Nereis virens) worm samples	5		
Worms (freshwater sp.)	freshwater (Lumbriculus variegatus) worm samples	14		

Table A2-1. SLERA results for benthic invertebrates and freshwater sediment

			Freshwater sediment screen											
			Max Detect RM 4 - RM 17.4				Freshwater TSV (dry-weight)				Freshwater TSV (OC)			
Parameter Group	Parameter	Selected as COPEC?	Max Detect	units	Max Detect (OC-norm)	units (OC-norm)	TSV	TSV units	Max Detect Exceeds TSV?	Max HQ	TSV	TSV units	Max Detect Exceeds TSV?	Max HQ
Metals	Antimony	Yes	11.8	mg/kg	-	-	2	mg/kg	Yes	5.9	-	-	-	-
Metals	Arsenic	Yes	68.6	mg/kg	-	-	5.9	mg/kg	Yes	12	-	-	-	-
Metals	Cadmium	Yes	46.6	mg/kg	-	-	0.583	mg/kg	Yes	80	-	-	-	-
Metals	Chromium	Yes	1580	mg/kg	-	-	26	mg/kg	Yes	61	-	-	-	-
Metals	Cobalt	No	25.6	mg/kg	-	-	50	mg/kg	No	0.51	-	-	-	-
Metals	Copper	Yes	787	mg/kg	-	-	16	mg/kg	Yes	49	-	-	-	-
Metals	Lead	Yes	2050	mg/kg	-	-	31	mg/kg	Yes	66	-	-	-	-
Metals	Mercury	Yes	24300	ug/kg	-	-	150	ug/kg	Yes	160	-	-	-	-
Metals	Methyl mercury	Yes	23	ug/kg	-	-	0.01	ug/kg	Yes	2300	-	-	-	-
Metals	Nickel	Yes	200	mg/kg	-	-	16	mg/kg	Yes	13	-	-	-	-
Metals	Selenium	No	3.3	mg/kg	-	-	11	mg/kg	No	0.3	-	-	-	-
Metals	Silver	Yes	20.4	mg/kg	-	-	0.5	mg/kg	Yes	41	-	-	-	-
Metals	Zinc	Yes	2000	mg/kg	-	-	98	mg/kg	Yes	20	-	-	-	-
Butyltin	Tributyltin	Yes	270	ug/kg	-	-	47	ug/kg	Yes	5.7	-	-	-	-
PAHs	2-Methylnaphthalene	Yes	145000	ug/kg	-	-	20.2	ug/kg	Yes	7200	-	-	-	-
PAHs	Acenaphthene	Yes	142000	ug/kg	1510	mg/kg OC	6.71	ug/kg	Yes	21000	491	mg/kg OC	Yes	3.1
PAHs	Acenaphthylene	Yes	7870	ug/kg	480	mg/kg OC	5.87	ug/kg	Yes	1300	452	mg/kg OC	Yes	1.1
PAHs	Anthracene	Yes	60800	ug/kg	1350	mg/kg OC	10	ug/kg	Yes	6100	370	mg/kg OC	Yes	3.6
PAHs	Benzo(a)anthracene	Yes	40100	ug/kg	2100	mg/kg OC	15.72	ug/kg	Yes	2600	841	mg/kg OC	Yes	2.5
PAHs	Benzo(a)pyrene	Yes	41000	ug/kg	2200	mg/kg OC	31.9	ug/kg	Yes	1300	964	mg/kg OC	Yes	2.3
PAHs	Benzo(b/j)fluoranthene	Yes	54800	ug/kg	2400	mg/kg OC	10400	ug/kg	Yes	5.3	979	mg/kg OC	Yes	2.5
PAHs	Benzo(e)pyrene	Yes	25600	ug/kg	1600	mg/kg OC	19340	ug/kg	Yes	1.3	967	mg/kg OC	Yes	1.7
PAHs	Benzo(g,h,i)perylene	Yes	22500	ug/kg	1200	mg/kg OC	170	ug/kg	Yes	130	320	mg/kg OC	Yes	3.8
PAHs	Benzo(k)fluoranthene	Yes	24000	ug/kg	1200	mg/kg OC	27.2	ug/kg	Yes	880	980	mg/kg OC	Yes	1.2
PAHs	Chrysene	Yes	53100	ug/kg	2730	mg/kg OC	26.83	ug/kg	Yes	2000	460	mg/kg OC	Yes	5.9
PAHs	Dibenzo(a,h)anthracene	Yes	3040	ug/kg	300	mg/kg OC	6.22	ug/kg	Yes	490	130	mg/kg OC	Yes	2.3
PAHs	Fluoranthene	Yes	163000	ug/kg	6490	mg/kg OC	31.46	ug/kg	Yes	5200	708	mg/kg OC	Yes	9.2
PAHs	Fluorene	Yes	66400	ug/kg	706	mg/kg OC	10	ug/kg	Yes	6600	160	mg/kg OC	Yes	4.4
PAHs	Indeno(1,2,3-cd)pyrene	Yes	18500	ug/kg	1400	mg/kg OC	17.32	ug/kg	Yes	1100	320	mg/kg OC	Yes	4.4
PAHs	Naphthalene	Yes	252000	ug/kg	2680	mg/kg OC	14.65	ug/kg	Yes	17000	385	mg/kg OC	Yes	7
PAHs	Perylene	No	7730	ug/kg	510	mg/kg OC	19340	ug/kg	No	0.4	967	mg/kg OC	No	0.53
PAHs	Phenanthrene	Yes	220000	ug/kg	5140	mg/kg OC	18.73	ug/kg	Yes	12000	597	mg/kg OC	Yes	8.6
PAHs	Pyrene	Yes	123000	ug/kg	4900	mg/kg OC	44.27	ug/kg	Yes	2800	698	mg/kg OC	Yes	7
PAHs	Total HPAHs	Yes	510000	ug/kg	-	-	193	ug/kg	Yes	2600	-	-	-	-
PAHs	Total LPAHs	Yes	749000	ug/kg	-	-	76.42	ug/kg	Yes	9800	-	-	-	-
PAHs	Total PAHs	Yes	1E+06	ug/kg	27100	mg/kg OC	264.1	ug/kg	Yes	4100	10000	mg/kg OC	Yes	2.7
SVOCs	2,4-Dinitrotoluene	Yes	1070	ug/kg	-	-	14.4	ug/kg	Yes	74	-	-	-	-
SVOCs	2,6-Dinitrotoluene	Yes	1100	ug/kg	-	-	39.8	ug/kg	Yes	28	-	-	-	-
SVOCs	4-Methylphenol	Yes	1600	ug/kg	-	-	260	ug/kg	Yes	6.2	-	-	-	-
SVOCs	Bis-(2-ethylhexyl)phthalate	Yes	287000	ug/kg	-	-	100	ug/kg	Yes	2900	-	-	-	-
SVOCs	Butylbenzylphthalate	Yes	25000	ug/kg	-	-	100	ug/kg	Yes	250	-	-	-	-
SVOCs	Dibenzofuran	Yes	9970	ug/kg	-	-	200	ug/kg	Yes	50	-	-	-	-
SVOCs	Diethylphthalate	No	25000	ug/kg	-	-	295	ug/kg	No	85	-	-	-	-
SVOCs	Dimethylphthalate	No	165	ug/kg	-	-	1000	ug/kg	No	0.17	-	-	-	-
SVOCs	Di-n-butylphthalate	Yes	830	ug/kg	-	-	110	ug/kg	Yes	7.5	-	-	-	-
SVOCs	Di-n-octylphthalate	Yes	45100	ug/kg	-	-	39	ug/kg	Yes	1200	-	-	-	-
SVOCs	Isophorone	Yes	458	ug/kg	-	-	432	ug/kg	Yes	1.1	-	-	-	-
SVOCs	Pentachlorophenol	No	nd	ug/kg	-	-	10	ug/kg	No	-	-	-	-	-
SVOCs	Phenol	Yes	520	ug/kg	-	-	48	ug/kg	Yes	11	-	-	-	-
PCB Aroclors	Aroclor-1254	Yes	4800	ug/kg	250	mg/kg OC	60	ug/kg	Yes	80	34	mg/kg OC	Yes	7.4
PCB Aroclors	Aroclor-1260	Yes	1200	ug/kg	63	mg/kg OC	5	ug/kg	Yes	240	24	mg/kg OC	Yes	2.6
PCB Congeners	Total PCB Congeners	Yes	28600	ug/kg	1500	mg/kg OC	0.3	ug/kg	Yes	95000	530	mg/kg OC	Yes	2.8
PCDDs/PCDFs	2,3,7,8-TCDD	Yes	51100	ng/kg	-	-	0.12	ng/kg	Yes	430000	-	-	-	-
PCDDs/PCDFs	Total TEQ-Fish	Yes	51400	ng/kg	-	-	0.85	ng/kg	Yes	60000	-	-	-	-
OC Pesticides	4,4'-DDD	Yes	870	ug/kg	39	mg/kg OC	2	ug/kg	Yes	440	6	mg/kg OC	Yes	6.5
OC Pesticides	4,4'-DDE	Yes	1600	ug/kg	30	mg/kg OC	1.42	ug/kg	Yes	1100	19	mg/kg OC	Yes	1.6
OC Pesticides	4,4'-DDT	Yes	1100	ug/kg	-	-	1	ug/kg	Yes	1100	-	-	-	-
OC Pesticides	Aldrin	Yes	24	ug/kg	0.52	mg/kg OC	0.06	ug/kg	Yes	400	8	mg/kg OC	No	0.065
OC Pesticides	alpha-BHC	Yes	7.57	ug/kg	0.18	mg/kg OC	3	ug/kg	Yes	2.5	10	mg/kg OC	No	0.018
OC Pesticides	alpha-Chlordane	Yes	220	ug/kg	-	-	0.03	ug/kg	Yes	7300	-	-	-	-
OC Pesticides	beta-BHC	Yes	12	ug/kg	0.2	mg/kg OC	5	ug/kg	Yes	2.4	21	mg/kg OC	No	0.0095
OC Pesticides	delta-BHC	No	3.62	ug/kg	-	-	10	ug/kg	No	0.36	-	-	-	-
OC Pesticides	Dieldrin	Yes	152	ug/kg	7.4	mg/kg OC	0.02	ug/kg	Yes	7600	91	mg/kg OC	No	0.081
OC Pesticides	Endosulfan I	Yes	0.47	ug/kg	-	-	0.01	ug/kg	Yes	47	-	-	-	-
OC Pesticides	Endosulfan II	Yes	18	ug/kg	-	-	0.01	ug/kg	Yes	1800	-	-	-	-
OC Pesticides	Endosulfan sulfate	No	4.9	ug/kg	-	-	34.6	ug/kg	No	0.14	-	-	-	-
OC Pesticides	Endrin	Yes	4.1	ug/kg	0.13	mg/kg OC	0.02	ug/kg	Yes	210	130	mg/kg OC	No	0.001
OC Pesticides	Endrin aldehyde	No	1	ug/kg	-	-	480	ug/kg	No	0.0021	-	-	-	-
OC Pesticides	gamma-BHC (Lindane)	Yes	9.41	ug/kg	0.173	mg/kg OC	0.05	ug/kg	Yes	190	1	mg/kg OC	No	0.17
OC Pesticides	gamma-Chlordane	Yes	290	ug/kg	-	-	0.03	ug/kg	Yes	9700	-	-	-	-
OC Pesticides	Heptachlor	Yes	7.87	ug/kg	-	-	0.3	ug/kg	Yes	26	-	-	-	-
OC Pesticides	Heptachlor epoxide	Yes	9	ug/kg	0.87	mg/kg OC	0.0002	ug/kg	Yes	45000	5	mg/kg OC	No	0.17
OC Pesticides	Hexachlorobenzene	Yes	180	ug/kg	2.1	mg/kg OC	1.4	ug/kg	Yes	130	24	mg/kg OC	No	0.088
OC Pesticides	Methoxychlor	Yes	160	ug/kg	-	-	13.6	ug/kg	Yes	12	-	-	-	-
OC Pesticides	Total 2,4' and 4,4' DDD	Yes	1200	ug/kg	-	-	3.54	ug/kg	Yes	340	-	-	-	-
OC Pesticides	Total 2,4' and 4,4' DDE	Yes	2200	ug/kg	-	-	1.42	ug/kg	Yes	1500	-	-	-	-
OC Pesticides	Total 2,4' and 4,4' DDT	Yes	1100	ug/kg	35	mg/kg OC	1.19	ug/kg	Yes	920	71	mg/kg OC	No	0.49
OC Pesticides	Total Chlordane	Yes	760	ug/kg	41	mg/kg OC	0.03	ug/kg	Yes	25000	6	mg/kg OC	Yes	6.8
OC Pesticides	Total DDx	Yes	2800	ug/kg	84	mg/kg OC	3	ug/kg	Yes	930	12	mg/kg OC	Yes	7
Herbicides	2,4,5-TP (Silvex)	Yes	1.1	mg/kg	-	-	0.675	mg/kg	Yes	1.6	-	-	-	-
Herbicides	2,4-D	No	0.039	mg/kg	-	-	1.273	mg/kg	No	0.031	-	-	-	-
VOCs	1,2,3-Trichlorobenzene	Yes	30	ug/kg	-	-	11	ug/kg	Yes	2.7	-	-	-	-
VOCs	1,2,4-Trichlorobenzene	Yes	13	ug/kg	-	-	11	ug/kg	Yes	1.2	-	-	-	-
VOCs	1,2-Dichlorobenzene	No	7.4	ug/kg	-	-	30	ug/kg	No	0.25	-	-	-	-
VOCs	1,3-Dichlorobenzene	No	1	ug/kg	-	-	30	ug/kg	No	0.033	-	-	-	-
VOCs	1,4-Dichlorobenzene	Yes	76	ug/kg	-	-	30	ug/kg	Yes	2.5	-	-	-	-
VOCs	1,4-Dioxane	No		ug/kg	-	-	119	ug/kg	No		-	-	-	-
VOCs	2-Butanone	No	140	ug/kg	-	-	35000	ug/kg	No	0.004	-	-	-	-
VOCs	Acetone	Yes	1000	ug/kg	-	-	9.9	ug/kg	Yes	100	-	-	-	-

Table A2-1. SLERA results for benthic invertebrates and freshwater sediment

			Freshwater sediment screen											
			Max Detect RM 4 - RM 17.4				Freshwater TSV (dry-weight)				Freshwater TSV (OC)			
Parameter Group	Parameter	Selected as COPEC?	Max Detect	units	Max Detect (OC-norm)	units (OC-norm)	TSV	TSV units	Max Detect Exceeds TSV?	Max HQ	TSV	TSV units	Max Detect Exceeds TSV?	Max HQ
VOCs	Benzene	No	0.34	ug/kg	-	-	10	ug/kg	No	0.034	-	-	-	-
VOCs	Carbon disulfide	No	14	ug/kg	-	-	23.9	ug/kg	No	0.59	-	-	-	-
VOCs	Chlorobenzene	No	6	ug/kg	-	-	200	ug/kg	No	0.03	-	-	-	-
VOCs	Chloroform	No	0.14	ug/kg	-	-	20	ug/kg	No	0.007	-	-	-	-
VOCs	Cyclohexane	No	4.4	ug/kg	-	-	100	ug/kg	No	0.044	-	-	-	-
VOCs	Ethylbenzene	No	2.2	ug/kg	-	-	30	ug/kg	No	0.073	-	-	-	-
VOCs	Isopropylbenzene	No	4.3	ug/kg	-	-	210	ug/kg	No	0.02	-	-	-	-
VOCs	m, p-Xylene	No	34	ug/kg	-	-	130	ug/kg	No	0.26	-	-	-	-
VOCs	Methyl tert-butyl ether (MTE	No	50	ug/kg	-	-	100000	ug/kg	No	0.0005	-	-	-	-
VOCs	Methylene chloride	No	4	ug/kg	-	-	18	ug/kg	No	0.22	-	-	-	-
VOCs	o-Xylene	No	3.7	ug/kg	-	-	89	ug/kg	No	0.042	-	-	-	-
VOCs	Styrene	No	0.37	ug/kg	-	-	200	ug/kg	No	0.0019	-	-	-	-
VOCs	Tetrachloroethylene	No	12	ug/kg	-	-	990	ug/kg	No	0.012	-	-	-	-
VOCs	Toluene	Yes	15	ug/kg	-	-	10	ug/kg	Yes	1.5	-	-	-	-
VOCs	Trichloroethene	No	6	ug/kg	-	-	7.8	ug/kg	No	0.77	-	-	-	-
Other	Cyanide	Yes	19	mg/kg	-	-	0.0001	mg/kg	Yes	190000	-	-	-	-

Table A2-2. SLERA results for benthic invertebrates and estuarine sediment

			Estuarine sediment screen											
			Max Detect RM 0 to RM 13				Estuarine TSV (dry-weight)				Estuarine TSV (OC)			
Parameter Group	Parameter	Selected as COPEC?	Max Detect	units	Max Detect (OC-norm)	units (OC-norm)	TSV	TSV units	Max Detect Exceeds TSV?	Max HQ	TSV	TSV units	Max Detect Exceeds TSV?	Max HQ
Metals	Antimony	Yes	11.8	mg/kg	-	-	0.63	mg/kg	Yes	19	-	-	-	-
Metals	Arsenic	Yes	118	mg/kg	-	-	6	mg/kg	Yes	20	-	-	-	-
Metals	Cadmium	Yes	46.6	mg/kg	-	-	0.38	mg/kg	Yes	120	-	-	-	-
Metals	Chromium	Yes	1580	mg/kg	-	-	26	mg/kg	Yes	61	-	-	-	-
Metals	Cobalt	Yes	25.6	mg/kg	-	-	10	mg/kg	Yes	2.6	-	-	-	-
Metals	Copper	Yes	930	mg/kg	-	-	16	mg/kg	Yes	58	-	-	-	-
Metals	Lead	Yes	2050	mg/kg	-	-	30	mg/kg	Yes	68	-	-	-	-
Metals	Mercury	Yes	24300	ug/kg	-	-	130	ug/kg	Yes	190	-	-	-	-
Metals	Methyl mercury	Yes	23	ug/kg	-	-	0.01	ug/kg	Yes	2300	-	-	-	-
Metals	Nickel	Yes	200	mg/kg	-	-	15	mg/kg	Yes	13	-	-	-	-
Metals	Selenium	Yes	5.2	mg/kg	-	-	1	mg/kg	Yes	5.2	-	-	-	-
Metals	Silver	Yes	20.4	mg/kg	-	-	0.23	mg/kg	Yes	89	-	-	-	-
Metals	Vanadium	Yes	110	mg/kg	-	-	57	mg/kg	Yes	1.9	-	-	-	-
Metals	Zinc	Yes	2000	mg/kg	-	-	94	mg/kg	Yes	21	-	-	-	-
PAHs	1-Methylnaphthalene	Yes	198000	ug/kg	-	-	21	ug/kg	Yes	9400	-	-	-	-
PAHs	1-Methylphenanthrene	Yes	44500	ug/kg	-	-	18	ug/kg	Yes	2500	-	-	-	-
PAHs	2,6-Dimethylnaphthalene	Yes	54900	ug/kg	-	-	25	ug/kg	Yes	2200	-	-	-	-
PAHs	2-Methylnaphthalene	Yes	145000	ug/kg	1540	mg/kg OC	20.2	ug/kg	Yes	7200	38	mg/kg OC	Yes	41
PAHs	Acenaphthene	Yes	142000	ug/kg	1510	mg/kg OC	6.71	ug/kg	Yes	21000	16	mg/kg OC	Yes	94
PAHs	Acenaphthylene	Yes	7870	ug/kg	400	mg/kg OC	5.87	ug/kg	Yes	1300	66	mg/kg OC	Yes	6.1
PAHs	Anthracene	Yes	60800	ug/kg	1350	mg/kg OC	34	ug/kg	Yes	1800	220	mg/kg OC	Yes	6.1
PAHs	Benzo(a)anthracene	Yes	41000	ug/kg	2100	mg/kg OC	25	ug/kg	Yes	1600	110	mg/kg OC	Yes	19
PAHs	Benzo(a)pyrene	Yes	41000	ug/kg	2200	mg/kg OC	52	ug/kg	Yes	790	99	mg/kg OC	Yes	22
PAHs	Benzo(b/j)fluoranthene	Yes	54800	ug/kg	2400	mg/kg OC	130	ug/kg	Yes	420	979	mg/kg OC	Yes	2.5
PAHs	Benzo(e)pyrene	Yes	25600	ug/kg	1400	mg/kg OC	19340	ug/kg	Yes	1.3	967	mg/kg OC	Yes	1.4
PAHs	Benzo(g,h,i)perylene	Yes	22500	ug/kg	1100	mg/kg OC	67	ug/kg	Yes	340	31	mg/kg OC	Yes	35
PAHs	Benzo(k)fluoranthene	Yes	24000	ug/kg	1200	mg/kg OC	70	ug/kg	Yes	340	980	mg/kg OC	Yes	1.2
PAHs	Chrysene	Yes	53100	ug/kg	2730	mg/kg OC	82	ug/kg	Yes	650	110	mg/kg OC	Yes	25
PAHs	Dibenzo(a,h)anthracene	Yes	4700	ug/kg	280	mg/kg OC	6.22	ug/kg	Yes	760	12	mg/kg OC	Yes	23
PAHs	Fluoranthene	Yes	163000	ug/kg	6490	mg/kg OC	113	ug/kg	Yes	1400	160	mg/kg OC	Yes	41
PAHs	Fluorene	Yes	66400	ug/kg	706	mg/kg OC	19	ug/kg	Yes	3500	23	mg/kg OC	Yes	31
PAHs	Indeno(1,2,3-cd)pyrene	Yes	18500	ug/kg	1200	mg/kg OC	31	ug/kg	Yes	600	34	mg/kg OC	Yes	35
PAHs	Naphthalene	Yes	252000	ug/kg	2680	mg/kg OC	30	ug/kg	Yes	8400	99	mg/kg OC	Yes	27
PAHs	Perylene	Yes	10100	ug/kg	510	mg/kg OC	453	ug/kg	Yes	22	967	mg/kg OC	No	0.53
PAHs	Phenanthrene	Yes	220000	ug/kg	5140	mg/kg OC	68	ug/kg	Yes	3200	100	mg/kg OC	Yes	51
PAHs	Pyrene	Yes	123000	ug/kg	4900	mg/kg OC	125	ug/kg	Yes	980	698	mg/kg OC	Yes	7
PAHs	Total benzofluoranthenes	Yes	76900	ug/kg	3600	mg/kg OC	-	-	-	-	230	mg/kg OC	Yes	16
PAHs	Total HPAHs	Yes	510000	ug/kg	20300	mg/kg OC	655	ug/kg	Yes	780	960	mg/kg OC	Yes	21
PAHs	Total LPAHs	Yes	749000	ug/kg	7970	mg/kg OC	312	ug/kg	Yes	2400	370	mg/kg OC	Yes	22
PAHs	Total PAHs	Yes	1E+06	ug/kg	27100	mg/kg OC	1000	ug/kg	Yes	1100	#####	mg/kg OC	Yes	2.7
SVOCs	2,4-Dinitrotoluene	Yes	1070	ug/kg	-	-	14.4	ug/kg	Yes	74	-	-	-	-
SVOCs	2,6-Dinitrotoluene	No	nd	ug/kg	-	-	39.8	ug/kg	-	-	-	-	-	-
SVOCs	4-Methylphenol	Yes	1600	ug/kg	-	-	670	ug/kg	Yes	2.4	-	-	-	-
SVOCs	Bis-(2-ethylhexyl)phthalate	Yes	287000	ug/kg	4630	mg/kg OC	100	ug/kg	Yes	2900	47	mg/kg OC	Yes	99
SVOCs	Butylbenzylphthalate	Yes	25000	ug/kg	413	mg/kg OC	63	ug/kg	Yes	400	4.9	mg/kg OC	Yes	84
SVOCs	Dibenzofuran	Yes	9970	ug/kg	170	mg/kg OC	110	ug/kg	Yes	91	15	mg/kg OC	Yes	11
SVOCs	Diethylphthalate	Yes	300	ug/kg	6	mg/kg OC	6	ug/kg	Yes	50	61	mg/kg OC	No	0.098
SVOCs	Dimethylphthalate	Yes	165	ug/kg	6.52	mg/kg OC	6	ug/kg	Yes	28	53	mg/kg OC	No	0.12
SVOCs	Di-n-butylphthalate	Yes	830	ug/kg	49	mg/kg OC	58	ug/kg	Yes	14	220	mg/kg OC	No	0.22
SVOCs	Di-n-octylphthalate	Yes	45100	ug/kg	502	mg/kg OC	61	ug/kg	Yes	740	58	mg/kg OC	Yes	8.7
SVOCs	Isophorone	Yes	24500	ug/kg	-	-	432	ug/kg	Yes	57	-	-	-	-
SVOCs	n-Nitrosodiphenylamine	Yes	2180	ug/kg	-	-	28	ug/kg	Yes	78	-	-	-	-
SVOCs	Pentachlorophenol	Yes	370	ug/kg	-	-	10	ug/kg	Yes	37	-	-	-	-
SVOCs	Phenol	Yes	860	ug/kg	-	-	49.1	ug/kg	Yes	18	-	-	-	-
PCB Aroclors	Aroclor-1254	Yes	4800	ug/kg	250	mg/kg OC	60	ug/kg	Yes	80	34	mg/kg OC	Yes	7.4
PCB Aroclors	Aroclor-1260	Yes	1400	ug/kg	63	mg/kg OC	5	ug/kg	Yes	280	24	mg/kg OC	Yes	2.6
PCB Congeners	Total PCB Congeners	Yes	28600	ug/kg	1400	mg/kg OC	0.3	ug/kg	Yes	95000	12	mg/kg OC	Yes	120
PCDDs/PCDFs	2,3,7,8-TCDD	Yes	51100	ng/kg	-	-	0.12	ng/kg	Yes	430000	-	-	-	-
PCDDs/PCDFs	Total TEQ-Fish	Yes	51400	ng/kg	-	-	0.85	ng/kg	Yes	60000	-	-	-	-
OC Pesticides	4,4'-DDD	Yes	870	ug/kg	39	mg/kg OC	1.22	ug/kg	Yes	710	6	mg/kg OC	Yes	6.5
OC Pesticides	4,4'-DDE	Yes	1600	ug/kg	20	mg/kg OC	2	ug/kg	Yes	800	19	mg/kg OC	Yes	1.1
OC Pesticides	4,4'-DDT	Yes	1100	ug/kg	-	-	1	ug/kg	Yes	1100				
OC Pesticides	Aldrin	Yes	24	ug/kg	0.37	mg/kg OC	0.06	ug/kg	Yes	400	8	mg/kg OC	No	0.046
OC Pesticides	alpha-BHC	Yes	7.57	ug/kg	0.18	mg/kg OC	3	ug/kg	Yes	2.5	10	mg/kg OC	No	0.018
OC Pesticides	alpha-Chlordane	Yes	220	ug/kg	-	-	0.03	ug/kg	Yes	7300	-	-	-	-
OC Pesticides	beta-BHC	Yes	12	ug/kg	0.2	mg/kg OC	5	ug/kg	Yes	2.4	21	mg/kg OC	No	0.01
OC Pesticides	delta-BHC	No	3.62	ug/kg	-	-	10	ug/kg	No	0.36	-	-	-	-
OC Pesticides	Dieldrin	Yes	152	ug/kg	4.1	mg/kg OC	0.02	ug/kg	Yes	7600	91	mg/kg OC	No	0.045
OC Pesticides	Endosulfan I	Yes	0.47	ug/kg	-	-	0.01	ug/kg	Yes	47	-	-	-	-
OC Pesticides	Endosulfan II	Yes	18	ug/kg	-	-	0.01	ug/kg	Yes	1800	-	-	-	-
OC Pesticides	Endosulfan sulfate	No	4.9	ug/kg	-	-	34.6	ug/kg	No	0.14	-	-	-	-
OC Pesticides	Endrin	Yes	2.6	ug/kg	0.13	mg/kg OC	0.02	ug/kg	Yes	130	130	mg/kg OC	No	0.001
OC Pesticides	Endrin aldehyde	No	1	ug/kg	-	-	480	ug/kg	No	0.0021	-	-	-	-
OC Pesticides	gamma-BHC (Lindane)	Yes	9.41	ug/kg	0.173	mg/kg OC	0.05	ug/kg	Yes	190	1	mg/kg OC	No	0.17
OC Pesticides	gamma-Chlordane	Yes	290	ug/kg	-	-	0.03	ug/kg	Yes	9700	-	-	-	-
OC Pesticides	Heptachlor	Yes	7.87	ug/kg	-	-	0.3	ug/kg	Yes	26	-	-	-	-
OC Pesticides	Heptachlor epoxide	Yes	9	ug/kg	0.87	mg/kg OC	2E-04	ug/kg	Yes	45000	5	mg/kg OC	No	0.17
OC Pesticides	Hexachlorobenzene	Yes	181	ug/kg	2.1	mg/kg OC	1.4	ug/kg	Yes	130	0.38	mg/kg OC	Yes	5.5
OC Pesticides	Methoxychlor	Yes	160	ug/kg	-	-	13.6	ug/kg	Yes	12	-	-	-	-
OC Pesticides	Total 2,4' and 4,4' DDD	Yes	1200	ug/kg	-	-	1.22	ug/kg	Yes	980	-	-	-	-
OC Pesticides	Total 2,4' and 4,4' DDE	Yes	2200	ug/kg	-	-	2.07	ug/kg	Yes	1100	-	-	-	-
OC Pesticides	Total 2,4' and 4,4' DDT	Yes	1100	ug/kg	27	mg/kg OC	1.19	ug/kg	Yes	920	71	mg/kg OC	No	0.38
OC Pesticides	Total Chlordane	Yes	760	ug/kg	41	mg/kg OC	0.03	ug/kg	Yes	25000	6	mg/kg OC	Yes	6.8
OC Pesticides	Total DDx	Yes	2800	ug/kg	84	mg/kg OC	1.58	ug/kg	Yes	1800	12	mg/kg OC	Yes	7
Herbicides	2,4,5-TP (Silvex)	Yes	0.77	mg/kg	-	-	0.675	mg/kg	Yes	1.1	-	-	-	-
Herbicides	2,4-D	No	0.039	mg/kg	-	-	1.273	mg/kg	No	0.031	-	-	-	-
VOCs	1,2,3-Trichlorobenzene	Yes	30	ug/kg	-	-	11	ug/kg	Yes	2.7	-	-	-	-
VOCs	1,2,4-Trichlorobenzene	Yes	14	ug/kg	0.5	mg/kg OC	4.8	ug/kg	Yes	2.9	0.81	mg/kg OC	No	0.62
VOCs	1,2-Dichlorobenzene	No	7.4	ug/kg	0.12	mg/kg OC	13	ug/kg	No	0.57	2.3	mg/kg OC	No	0.052

Table A2-2. SLERA results for benthic invertebrates and estuarine sediment

			Estuarine sediment screen											
			Max Detect RM 0 to RM 13				Estuarine TSV (dry-weight)				Estuarine TSV (OC)			
Parameter Group	Parameter	Selected as COPEC?	Max Detect	units	Max Detect (OC-norm)	units (OC-norm)	TSV	TSV units	Max Detect Exceeds TSV?	Max HQ	TSV	TSV units	Max Detect Exceeds TSV?	Max HQ
VOCs	1,3-Dichlorobenzene	No	2.3	ug/kg	-	-	30	ug/kg	No	0.077	-	-	-	-
VOCs	1,4-Dichlorobenzene	Yes	76	ug/kg	0.94	mg/kg OC	30	ug/kg	Yes	2.5	3.1	mg/kg OC	No	0.3
VOCs	1,4-Dioxane	Yes	664	ug/kg	-	-	119	ug/kg	Yes	5.6	-	-	-	-
VOCs	2-Butanone	No	140	ug/kg	-	-	35000	ug/kg	No	0.004	-	-	-	-
VOCs	Acetone	Yes	1000	ug/kg	-	-	9.9	ug/kg	Yes	100	-	-	-	-
VOCs	Benzene	No	0.56	ug/kg	-	-	10	ug/kg	No	0.056	-	-	-	-
VOCs	Carbon disulfide	No	21	ug/kg	-	-	23.9	ug/kg	No	0.88	-	-	-	-
VOCs	Chlorobenzene	No	6	ug/kg	-	-	291	ug/kg	No	0.021	-	-	-	-
VOCs	Chloroform	No	0.14	ug/kg	-	-	20	ug/kg	No	0.007	-	-	-	-
VOCs	Cyclohexane	No	4.4	ug/kg	-	-	100	ug/kg	No	0.044	-	-	-	-
VOCs	Ethylbenzene	No	3	ug/kg	-	-	4	ug/kg	No	0.75	-	-	-	-
VOCs	m, p-Xylene	Yes	34	ug/kg	-	-	4	ug/kg	Yes	8.5	-	-	-	-
VOCs	Methyl tert-butyl ether (MTE	No	50	ug/kg	-	-	1E+05	ug/kg	No	0.0005	-	-	-	-
VOCs	Methylene chloride	No	2.2	ug/kg	-	-	18	ug/kg	No	0.12	-	-	-	-
VOCs	o-Xylene	No	3.7	ug/kg	-	-	4	ug/kg	No	0.93	-	-	-	-
VOCs	Styrene	No	0.39	ug/kg	-	-	200	ug/kg	No	0.002	-	-	-	-
VOCs	Tetrachloroethylene	No	12	ug/kg	-	-	990	ug/kg	No	0.012	-	-	-	-
VOCs	Toluene	Yes	15	ug/kg	-	-	10	ug/kg	Yes	1.5	-	-	-	-
VOCs	Trichloroethene	No	6	ug/kg	-	-	7.8	ug/kg	No	0.77	-	-	-	-
Other	Cyanide	Yes	19	mg/kg	-	-	1E-04	mg/kg	Yes	190000	-	-	-	-

Table A2-3. SLERA results for aquatic plants and sediment

			Aquatic Plant Screen				
COI Group	COI	Selected as COPEC?	Max Detect RM 0 to RM	TSV	TSV unit	Max Detect Exceeds TSV?	Max HQ
Metals	Antimony	Yes	11.8	5	mg/kg	Yes	2.4
Metals	Arsenic	Yes	118	18	mg/kg	Yes	6.6
Metals	Beryllium	No	1.22	10	mg/kg	No	0.12
Metals	Cadmium	Yes	46.6	32	mg/kg	Yes	1.5
Metals	Chromium	Yes	1580	1	mg/kg	Yes	1,600
Metals	Cobalt	Yes	25.6	13	mg/kg	Yes	2.0
Metals	Copper	Yes	930	70	mg/kg	Yes	13
Metals	Lead	Yes	2050	120	mg/kg	Yes	17
Metals	Mercury	Yes	24300	300	ug/kg	Yes	81
Metals	Nickel	Yes	200	38	mg/kg	Yes	5.3
Metals	Selenium	Yes	5.2	0.52	mg/kg	Yes	10
Metals	Silver	No	20.4	560	mg/kg	No	0.036
Metals	Thallium	No	0.997	1	mg/kg	No	1.0
Metals	Vanadium	Yes	110	2	mg/kg	Yes	55
Metals	Zinc	Yes	2000	160	mg/kg	Yes	13
PAHs	Acenaphthene	Yes	142000	25000	ug/kg	Yes	5.7
PCB Congeners	Total PCB Congeners	No	28600	40000	ug/kg	No	0.72
VOCs	Toluene	No	15	2E+05	ug/kg	No	0.000075

Table A2-4. SLERA results for aquatic organisms and freshwater surface water

COI Group	COI	Selected as COPEC?	Freshwater screen				
			Max Detect ≥RM 4	TSV	units	Max Detect Exceeds TSV?	Max HQ
Metals	Antimony (total)	No	1.44	30	ug/L	No	0.048
Metals	Arsenic (total)	No	3.02	5	ug/L	No	0.60
Metals	Beryllium (total)	No	0.133	0.66	ug/L	No	0.20
Metals	Cadmium (total)	**Yes**	0.897	0.72	ug/L	**Yes**	**1.2**
Metals	Chromium (total)	**Yes**	27.4	11	ug/L	**Yes**	**2.5**
Metals	Cobalt (total)	No	2.27	23	ug/L	No	0.10
Metals	Copper (total)	**Yes**	41.7	2	ug/L	**Yes**	**21**
Metals	Lead (total)	**Yes**	48.7	2.5	ug/L	**Yes**	**19**
Metals	Mercury (total)	**Yes**	407	26	ng/L	**Yes**	**16**
Metals	Methyl mercury (total)	No	2.21	2.8	ng/L	No	0.79
Metals	Nickel (total)	No	7.9	52	ug/L	No	0.15
Metals	Selenium (total)	**Yes**	3.5	3.1	ug/L	**Yes**	**1.1**
Metals	Silver (total)	**Yes**	0.448	0.12	ug/L	**Yes**	**3.7**
Metals	Thallium (total)	No	0.066	0.8	ug/L	No	0.083
Metals	Vanadium (total)	No	7.6	12	ug/L	No	0.63
Metals	Zinc (total)	**Yes**	106	30	ug/L	**Yes**	**3.5**
Butyltin	Tributyltin	No	0.026	0.072	ug/L	No	0.36
PAHs	1-Methylnaphthalene	No	114	2100	ng/L	No	0.054
PAHs	2-Methylnaphthalene	No	160	330000	ng/L	No	0.00048
PAHs	Acenaphthene	No	61.7	5800	ng/L	No	0.011
PAHs	Acenaphthylene	No	20.4	4840000	ng/L	No	0.0000042
PAHs	Anthracene	**Yes**	120	12	ng/L	**Yes**	**10**
PAHs	Benzo(a)anthracene	**Yes**	316	18	ng/L	**Yes**	**18**
PAHs	Benzo(a)pyrene	**Yes**	560	14	ng/L	**Yes**	**40**
PAHs	Benzo(b)fluoranthene	No	721	9070	ng/L	No	0.079
PAHs	Benzo(g,h,i)perylene	No	414	7640	ng/L	No	0.054
PAHs	Fluoranthene	**Yes**	583	40	ng/L	**Yes**	**15**
PAHs	Fluorene	No	31.8	3000	ng/L	No	0.011
PAHs	Indeno(1,2,3-cd)pyrene	No	346	4310	ng/L	No	0.080
PAHs	Naphthalene	No	93.9	1100	ng/L	No	0.085
PAHs	Phenanthrene	No	222	400	ng/L	No	0.56
PAHs	Pyrene	**Yes**	587	25	ng/L	**Yes**	**23**
SVOCs	1,1'-Biphenyl	No	0.092	14	ug/L	No	0.0066
SVOCs	2,4-Dimethylphenol	No	0.2	100	ug/L	No	0.0020
SVOCs	2,4-Dinitrotoluene	No	nd	44	ug/L	No	na
SVOCs	2-Methylphenol	No	0.15	13	ug/L	No	0.012
SVOCs	4-Bromophenyl-phenylethe	No	nd	1.5	ug/L	No	na
SVOCs	Bis-(2-chloroethyl)ether	No	nd	1900	ug/L	No	na
SVOCs	Bis-(2-ethylhexyl)phthalate	**Yes**	6	0.3	ug/L	**Yes**	**20**
SVOCs	Butylbenzylphthalate	**Yes**	25	19	ug/L	**Yes**	**1.3**
SVOCs	Dibenzofuran	No	0.14	3.7	ug/L	No	0.038
SVOCs	Diethylphthalate	No	0.6	110	ug/L	No	0.0055
SVOCs	Di-n-butylphthalate	No	0.16	9.7	ug/L	No	0.016

Table A2-4. SLERA results for aquatic organisms and freshwater surface water

COI Group	COI	Selected as COPEC?	Freshwater screen				
			Max Detect ≥RM 4	TSV	units	Max Detect Exceeds TSV?	Max HQ
SVOCs	n-Nitrosodiphenylamine	No	nd	210	ug/L	No	na
PCB Congener	Total PCB Congeners	**Yes**	183	14	ng/L	**Yes**	**13**
PCB Congener	PCB TEQ-Fish	**Yes**	0.000335	0.000003	ng/L	**Yes**	**110**
PCDDs/PCDFs	2,3,7,8-TCDD	**Yes**	1.87	0.000003	ng/L	**Yes**	**620,000**
PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	**Yes**	1.88	0.000003	ng/L	**Yes**	**630,000**
PCDDs/PCDFs	Total TEQ-Fish	**Yes**	1.88	0.000003	ng/L	**Yes**	**630,000**
OC Pesticides	2,4'-DDD	No	2.37	11	ng/L	No	0.22
OC Pesticides	2,4'-DDT	No	4.78	13	ng/L	No	0.37
OC Pesticides	4,4'-DDD	No	6.8	11	ng/L	No	0.62
OC Pesticides	4,4'-DDE	**Yes**	8.26	4.51E-06	ng/L	**Yes**	**1,800,000**
OC Pesticides	4,4'-DDT	**Yes**	3.82	1	ng/L	**Yes**	**3.8**
OC Pesticides	Aldrin	No	0.469	17	ng/L	No	0.028
OC Pesticides	alpha-BHC	No	0.144	2200	ng/L	No	0.000065
OC Pesticides	beta-BHC	No	0.182	495	ng/L	No	0.00037
OC Pesticides	delta-BHC	No	0.081	2200	ng/L	No	0.000037
OC Pesticides	Dieldrin	No	3.18	56	ng/L	No	0.057
OC Pesticides	Endosulfan I	No	0.143	3	ng/L	No	0.048
OC Pesticides	Endosulfan II	No	0.429	3	ng/L	No	0.14
OC Pesticides	Endosulfan sulfate	No	0.363	51	ng/L	No	0.0071
OC Pesticides	Endrin	No	0.176	36	ng/L	No	0.0049
OC Pesticides	Endrin aldehyde	No	0.089	150	ng/L	No	0.00059
OC Pesticides	gamma-BHC (Lindane)	No	0.32	10	ng/L	No	0.032
OC Pesticides	Heptachlor	No	0.106	3.8	ng/L	No	0.028
OC Pesticides	Heptachlor epoxide	No	1.61	3.8	ng/L	No	0.42
OC Pesticides	Hexachlorobenzene	**Yes**	1.74	0.3	ng/L	**Yes**	**5.8**
OC Pesticides	Methoxychlor	No	0.16	19	ng/L	No	0.0084
OC Pesticides	Total Chlordane	**Yes**	15.9	4.3	ng/L	**Yes**	**3.7**
OC Pesticides	Total DDx	**Yes**	21.1	1	ng/L	**Yes**	**21**
VOCs	1,1,1-Trichloroethane	No	0.13	11	ug/L	No	0.012
VOCs	1,1-Dichloroethane	No	0.1	47	ug/L	No	0.0021
VOCs	1,2,4-Trichlorobenzene	No	nd	24	ug/L	No	na
VOCs	1,2-Dichlorobenzene	No	0.22	0.7	ug/L	No	0.31
VOCs	1,4-Dichlorobenzene	No	nd	9.4	ug/L	No	na
VOCs	Acetone	No	4	1500	ug/L	No	0.0027
VOCs	Benzene	No	0.08	114	ug/L	No	0.00070
VOCs	Carbon disulfide	No	0.07	0.92	ug/L	No	0.076
VOCs	Chlorobenzene	No	0.65	1.3	ug/L	No	0.50
VOCs	Chloroform	No	0.33	1.8	ug/L	No	0.18
VOCs	Ethylbenzene	No	0.1	7.3	ug/L	No	0.014
VOCs	m, p-Xylene	No	0.39	13	ug/L	No	0.030
VOCs	o-Xylene	No	0.09	13	ug/L	No	0.0069
VOCs	Tetrachloroethylene	No	0.55	45	ug/L	No	0.012
VOCs	Toluene	No	0.24	2	ug/L	No	0.12
VOCs	Trichloroethene	No	0.55	21	ug/L	No	0.026
VOCs	Vinyl chloride	No	0.11	930	ug/L	No	0.00012
Other	Cyanide	**Yes**	0.014	0.005	mg/L	**Yes**	**2.8**

Table A2-5. SLERA results for aquatic organisms and estuarine surface water

COI Group	COI	Selected as COPEC?	Estuarine screen				
			Max Detect < RM 13	TSV	units	Max Detect Exceeds SL?	Max HQ
Metals	Antimony (total)	No	1.84	30	ug/L	No	0.061
Metals	Arsenic (total)	No	3.02	12.5	ug/L	No	0.24
Metals	Beryllium (total)	No	0.277	0.66	ug/L	No	0.42
Metals	Cadmium (total)	No	0.939	7.9	ug/L	No	0.12
Metals	Chromium (total)	No	27.4	50	ug/L	No	0.55
Metals	Cobalt (total)	No	2.27	23	ug/L	No	0.099
Metals	Copper (total)	**Yes**	43.7	3.1	ug/L	**Yes**	**14**
Metals	Lead (total)	**Yes**	61.2	8.1	ug/L	**Yes**	**7.6**
Metals	Mercury (total)	**Yes**	995	16	ng/L	**Yes**	**62**
Metals	Methyl mercury (total)	No	2.21	2.8	ng/L	No	0.79
Metals	Nickel (total)	No	7.9	8.2	ug/L	No	0.96
Metals	Selenium (total)	No	3.5	71	ug/L	No	0.049
Metals	Silver (total)	**Yes**	0.448	0.12	ug/L	**Yes**	**3.7**
Metals	Thallium (total)	No	0.066	0.8	ug/L	No	0.083
Metals	Vanadium (total)	No	9.2	12	ug/L	No	0.77
Metals	Zinc (total)	**Yes**	106	81	ug/L	**Yes**	**1.3**
Butyltin	Tributyltin	**Yes**	0.026	0.0074	ug/L	**Yes**	**3.5**
PAHs	1-Methylnaphthalene	No	114	2100	ng/L	No	0.054
PAHs	2-Methylnaphthalene	No	160	330000	ng/L	No	0.00048
PAHs	Acenaphthene	No	61.7	5800	ng/L	No	0.011
PAHs	Acenaphthylene	No	32.8	4840000	ng/L	No	0.0000068
PAHs	Anthracene	**Yes**	140	12	ng/L	**Yes**	**12**
PAHs	Benzo(a)anthracene	**Yes**	316	18	ng/L	**Yes**	**18**
PAHs	Benzo(a)pyrene	**Yes**	560	14	ng/L	**Yes**	**40**
PAHs	Benzo(b)fluoranthene	No	721	9070	ng/L	No	0.079
PAHs	Benzo(g,h,i)perylene	No	414	7640	ng/L	No	0.054
PAHs	Fluoranthene	**Yes**	583	40	ng/L	**Yes**	**15**
PAHs	Fluorene	No	31.8	3000	ng/L	No	0.011
PAHs	Indeno(1,2,3-cd)pyrene	No	346	4310	ng/L	No	0.080
PAHs	Naphthalene	No	93.9	1400	ng/L	No	0.067
PAHs	Phenanthrene	No	222	400	ng/L	No	0.56
PAHs	Pyrene	**Yes**	587	25	ng/L	**Yes**	**23**
SVOCs	1,1'-Biphenyl	No	0.092	14	ug/L	No	0.0066
SVOCs	2,4-Dimethylphenol	No	0.2	100	ug/L	No	0.0020
SVOCs	2,4-Dinitrotoluene	No	0.71	44	ug/L	No	0.016
SVOCs	2-Methylphenol	No	0.15	13	ug/L	No	0.012
SVOCs	4-Bromophenyl-phenylether	No	0.56	1.5	ug/L	No	0.37
SVOCs	Bis-(2-chloroethyl)ether	No	0.032	1900	ug/L	No	0.000017
SVOCs	Bis-(2-ethylhexyl)phthalate	**Yes**	6	0.3	ug/L	**Yes**	**20**
SVOCs	Butylbenzylphthalate	**Yes**	25	19	ug/L	**Yes**	**1.3**
SVOCs	Dibenzofuran	No	0.14	3.7	ug/L	No	0.038
SVOCs	Diethylphthalate	No	0.6	110	ug/L	No	0.0055
SVOCs	Di-n-butylphthalate	No	0.38	9.7	ug/L	No	0.039

Table A2-5. SLERA results for aquatic organisms and estuarine surface water

COI Group	COI	Selected as COPEC?	Estuarine screen				
			Max Detect < RM 13	TSV	units	Max Detect Exceeds SL?	Max HQ
SVOCs	n-Nitrosodiphenylamine	No	0.14	210	ug/L	No	0.00067
PCB Congener	Total PCB Congeners	**Yes**	183	30	ng/L	**Yes**	**6.1**
PCB Congener	PCB TEQ-Fish	**Yes**	0.000335	0.000003	ng/L	**Yes**	**110**
PCDDs/PCDFs	2,3,7,8-TCDD	**Yes**	1.87	0.000003	ng/L	**Yes**	**620,000**
PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	**Yes**	1.88	0.000003	ng/L	**Yes**	**630,000**
PCDDs/PCDFs	Total TEQ-Fish	**Yes**	1.88	0.000003	ng/L	**Yes**	**630,000**
OC Pesticides	2,4'-DDD	No	2.37	11	ng/L	No	0.22
OC Pesticides	2,4'-DDT	No	4.78	13	ng/L	No	0.37
OC Pesticides	4,4'-DDD	No	6.8	11	ng/L	No	0.62
OC Pesticides	4,4'-DDE	**Yes**	8.26	0.00000451	ng/L	**Yes**	**1,800,000**
OC Pesticides	4,4'-DDT	**Yes**	3.82	1	ng/L	**Yes**	**3.8**
OC Pesticides	Aldrin	No	0.469	1300	ng/L	No	0.00036
OC Pesticides	alpha-BHC	No	0.314	2200	ng/L	No	0.00014
OC Pesticides	beta-BHC	No	0.248	495	ng/L	No	0.00050
OC Pesticides	delta-BHC	No	0.081	2200	ng/L	No	0.000037
OC Pesticides	Dieldrin	**Yes**	3.18	1.9	ng/L	**Yes**	**1.7**
OC Pesticides	Endosulfan I	No	0.174	2	ng/L	No	0.087
OC Pesticides	Endosulfan II	No	0.429	2	ng/L	No	0.21
OC Pesticides	Endosulfan sulfate	No	0.363	51	ng/L	No	0.0071
OC Pesticides	Endrin	No	0.176	2.3	ng/L	No	0.077
OC Pesticides	Endrin aldehyde	No	0.089	150	ng/L	No	0.00059
OC Pesticides	gamma-BHC (Lindane)	No	0.32	160	ng/L	No	0.0020
OC Pesticides	Heptachlor	No	0.24	3.6	ng/L	No	0.067
OC Pesticides	Heptachlor epoxide	No	1.61	3.6	ng/L	No	0.45
OC Pesticides	Hexachlorobenzene	**Yes**	2.57	0.3	ng/L	**Yes**	**8.6**
OC Pesticides	Methoxychlor	No	0.16	19	ng/L	No	0.0084
OC Pesticides	Total Chlordane	**Yes**	15.9	4	ng/L	**Yes**	**4.0**
OC Pesticides	Total DDx	**Yes**	21.1	1	ng/L	**Yes**	**21**
VOCs	1,1,1-Trichloroethane	No	0.13	11	ug/L	No	0.012
VOCs	1,1-Dichloroethane	No	0.1	47	ug/L	No	0.0021
VOCs	1,2,4-Trichlorobenzene	No	0.18	5.4	ug/L	No	0.033
VOCs	1,2-Dichlorobenzene	No	0.22	42	ug/L	No	0.0052
VOCs	1,4-Dichlorobenzene	No	0.14	9.4	ug/L	No	0.015
VOCs	Acetone	No	4	1500	ug/L	No	0.0027
VOCs	Benzene	No	0.08	110	ug/L	No	0.00073
VOCs	Carbon disulfide	No	0.07	0.92	ug/L	No	0.076
VOCs	Chlorobenzene	No	0.65	25	ug/L	No	0.026
VOCs	Chloroform	No	0.39	1.8	ug/L	No	0.22
VOCs	Ethylbenzene	No	0.1	25	ug/L	No	0.0040
VOCs	m, p-Xylene	No	0.39	13	ug/L	No	0.030
VOCs	o-Xylene	No	0.09	13	ug/L	No	0.0069
VOCs	Tetrachloroethylene	No	0.55	45	ug/L	No	0.012
VOCs	Toluene	No	0.24	215	ug/L	No	0.0011
VOCs	Trichloroethene	No	0.6	21	ug/L	No	0.029
VOCs	Vinyl chloride	No	0.11	930	ug/L	No	0.00012
Other	Cyanide	**Yes**	0.031	0.001	mg/L	**Yes**	**31**

Table A2-6. SLERA results for amphibians and surface water

			Amphibian screen				
COI Group	COI	as COPEC?	Max Detect RM ≥4	TSV	units	Max Detect Exceeds TSV?	Max HQ
Metals	Antimony (total)	No	1.44	30	ug/L	No	0.048
Metals	Arsenic (total)	No	3.02	4	ug/L	No	0.76
Metals	Beryllium (total)	No	0.133	315	ug/L	No	0.00042
Metals	Cadmium (total)	No	0.897	5	ug/L	No	0.18
Metals	Chromium (total)	**Yes**	27.4	3	ug/L	**Yes**	**9.1**
Metals	Cobalt (total)	No	2.27	5	ug/L	No	0.45
Metals	Copper (total)	**Yes**	41.7	25	ug/L	**Yes**	**1.7**
Metals	Lead (total)	**Yes**	48.7	4	ug/L	**Yes**	**12**
Metals	Mercury (total)	**Yes**	407	16	ng/L	**Yes**	**25**
Metals	Nickel (total)	**Yes**	7.9	5	ug/L	**Yes**	**1.6**
Metals	Selenium (total)	No	3.5	9	ug/L	No	0.39
Metals	Silver (total)	**Yes**	0.448	0.41	ug/L	**Yes**	**1.1**
Metals	Thallium (total)	No	0.066	11	ug/L	No	0.0060
Metals	Vanadium (total)	No	7.6	25	ug/L	No	0.30
Metals	Zinc (total)	**Yes**	106	1	ug/L	**Yes**	**110**
Butyltin	Tributyltin	No	0.026	3	ug/L	No	0.0087
PAHs	Benzo(a)pyrene	No	560	870000	ng/L	No	0.00064
PAHs	Fluoranthene	No	583	5200	ng/L	No	0.11
PAHs	Naphthalene	No	93.9	210000	ng/L	No	0.00045
SVOCs	2-Methylphenol	No	0.15	3800	ug/L	No	0.000039
SVOCs	4-Chloroaniline	No	nd	10000	ug/L	No	na
SVOCs	Di-n-butylphthalate	No	0.16	100	ug/L	No	0.0016
PCB Congeners	Total PCB Congeners	No	183	855	ng/L	No	0.21
OC Pesticides	4,4'-DDD	No	6.8	14000	ng/L	No	0.00049
OC Pesticides	4,4'-DDT	No	3.82	2500	ng/L	No	0.0015
OC Pesticides	Aldrin	No	0.469	6800	ng/L	No	0.000069
OC Pesticides	Dieldrin	No	3.18	120	ng/L	No	0.027
OC Pesticides	Endosulfan I	No	0.143	550	ng/L	No	0.00026
OC Pesticides	Endosulfan II	No	0.429	550	ng/L	No	0.00078
OC Pesticides	Endrin	No	0.176	21	ng/L	No	0.0084
OC Pesticides	gamma-BHC (Lindane	No	0.32	500000	ng/L	No	#########
OC Pesticides	Heptachlor	No	0.106	4000	ng/L	No	0.000027
OC Pesticides	Hexachlorobenzene	No	1.74	320000	ng/L	No	0.0000054
OC Pesticides	Methoxychlor	No	0.16	10000	ng/L	No	0.000016
VOCs	Acetone	No	4	2000000	ug/L	No	2.0E-06
VOCs	Benzene	No	0.08	366	ug/L	No	0.00022
VOCs	Carbon disulfide	No	0.07	15000000	ug/L	No	4.7E-09
VOCs	Chlorobenzene	No	0.65	120	ug/L	No	0.0054
VOCs	Chloroform	No	0.33	416	ug/L	No	0.00079
VOCs	m, p-Xylene	No	0.39	4100	ug/L	No	0.00010
VOCs	o-Xylene	No	0.09	4100	ug/L	No	0.000022
VOCs	Tetrachloroethylene	No	0.55	780	ug/L	No	0.00071
VOCs	Toluene	No	0.24	39	ug/L	No	0.0062
VOCs	Trichloroethene	**Yes**	0.55	0.23	ug/L	**Yes**	**2.4**

Table A2-7. SLERA results for benthic invertebrate tissue

COI Group	COI	LOAEL	NOAEL	Units	Selected as COPEC for at least one	Blue crab					*Nereis virens* (estuarine worm)				
						Max Detect	LOAEL		NOAEL		Max Detect	LOAEL		NOAEL	
							Max Detect Exceeds TSV?	Max HQ	Max Detect Exceeds TSV?	Max HQ		Max Detect Exceeds TSV?	Max HQ	Max Detect Exceeds TSV?	Max HQ
Metals	Arsenic	0.249	0.0249	mg/kg	Yes	1.9	Yes	7.6	Yes	76	1.8	Yes	7.2	Yes	72
Metals	Cadmium	0.16	0.11	mg/kg	Yes	0.18	Yes	1.1	Yes	1.6	0.026	No	0.16	No	0.24
Metals	Chromium	1.44	0.144	mg/kg	Yes	3.1	Yes	2.2	Yes	22	7.7	Yes	5.3	Yes	53
Metals	Cobalt	1.061	0.1061	mg/kg	Yes	0.095	No	0.090	No	0.90	0.27	No	0.25	Yes	2.5
Metals	Copper	12	5	mg/kg	Yes	30.6	Yes	2.6	Yes	6.1	1.6	No	0.13	No	0.32
Metals	Lead	2.6	0.52	mg/kg	Yes	0.66	No	0.25	Yes	1.3	0.22	No	0.085	No	0.42
Metals	Mercury	95	48	ug/kg	Yes	190	Yes	2.0	Yes	4.0	25	No	0.26	No	0.52
Metals	Methyl mercury	95	48	ug/kg	Yes	170	Yes	1.8	Yes	3.5	3.4	No	0.036	No	0.071
Metals	Nickel	1.2	0.12	mg/kg	Yes	1.9	Yes	1.6	Yes	16	4.9	Yes	4.1	Yes	41
Metals	Selenium	0.51	0.05	mg/kg	Yes	1.1	Yes	2.2	Yes	22	0.35	No	0.69	Yes	7.0
Metals	Silver	0.019	0.0019	mg/kg	Yes	0.78	Yes	41	Yes	410	0.027	Yes	1.4	Yes	14
Metals	Thallium	12.06	1.2	mg/kg	No	0.0045	No	0.00037	No	0.00375	0.001	No	0.000083	No	0.00083
Metals	Vanadium	na	0.8	mg/kg	Yes	0.14	-	-	No	0.18	0.08	-	-	No	0.10
Metals	Zinc	1.3	0.13	mg/kg	Yes	41.1	Yes	32	Yes	320	19.5	Yes	15	Yes	150
Butyltin	Tributyltin	540	220	ug/kg	No	3.8	No	0.0070	No	0.017	0.71	No	0.0013	No	0.0032
PAHs	Total HPAHs	660	66	ug/kg	Yes	350	No	0.53	Yes	5.3	140	No	0.21	Yes	2.1
PAHs	Total LPAHs	780	78	ug/kg	Yes	270	No	0.35	Yes	3.5	12	No	0.015	No	0.15
SVOCs	Bis-(2-ethylhexyl)phthalate	na	153000	ug/kg	No	nd	-	-	-	-	nd	-	-	-	-
PCB Cong	Total PCB Congeners	17	6.4	ug/kg	Yes	580	Yes	34	Yes	91	130	Yes	7.6	Yes	20
PCB Cong	PCB TEQ-Fish[a]	1.3	0.15	ng/kg	Yes	1.1	No	0.85	Yes	7.3	0.14	No	0.11	No	0.93
PCDDs/P	2,3,7,8-TCDD	1.3	0.15	ng/kg	Yes	86	Yes	66	Yes	570	19	Yes	15	Yes	130
PCDDs/P	PCDD/PCDF TEQ-Fish[a]	1.3	0.15	ng/kg	Yes	93	Yes	72	Yes	620	20	Yes	15	Yes	130
PCDDs/P	Total TEQ-Fish[a]	1.3	0.15	ng/kg	Yes	93	Yes	72	Yes	620	20	Yes	15	Yes	130
OC Pestic	Aldrin	na	1700	ug/kg	No	0.075	-	-	No	4.4E-05	nd	-	-	-	-
OC Pestic	Dieldrin	8	1.6	ug/kg	Yes	9.1	Yes	1.1	Yes	5.7	2	No	0.25	Yes	1.3
OC Pestic	Endosulfan I	207	80	ug/kg	No	nd	-	-	-	-	nd	-	-	-	-
OC Pestic	Endosulfan II	207	80	ug/kg	No	nd	-	-	-	-	nd	-	-	-	-
OC Pestic	Endrin	70	31	ug/kg	No	0.74	No	0.011	No	0.024	nd	-	-	-	-
OC Pestic	gamma-BHC (Lindane)	15	1.5	ug/kg	No	0.084	No	0.0056	No	0.056	nd	-	-	-	-
OC Pestic	Heptachlor	33	10	ug/kg	No	0.038	No	0.0012	No	0.0038	nd	-	-	-	-
OC Pestic	Heptachlor epoxide	140	10	ug/kg	Yes	14	No	0.10	Yes	1.4	0.23	No	0.0016	No	0.023
OC Pestic	Hexachlorobenzene	15800	10600	ug/kg	No	3.2	No	0.00020	No	0.00030	0.84	No	0.000053	No	7.9E-05
OC Pestic	Methoxychlor	340	34	ug/kg	No	nd	-	-	-	-	nd	-	-	-	-
OC Pestic	Total Chlordane	1700	710	ug/kg	No	61	No	0.036	No	0.086	6.6	No	0.0039	No	0.0093
OC Pestic	Total DDx	130	60	ug/kg	Yes	100	No	0.77	Yes	1.7	3.6	No	0.028	No	0.060

nd - no detected concentrations

[a] TEFs needed to derive TEQs are available for only fish, birds, and mammals (Van den Berg et al. 1998); however, the fish TEFs were used to derive TEQs for comparison to TSV
benthic invertebrates.There is high uncertainty in evaluating TEQs for benthic invertebrates because there is limited evidence for ligand activation of the AH (dioxin) cellular rec
these organisms; as such, they are not susceptible to the dioxin-like effects reported for vertebrates (e.g., fish) (Van den Berg et al. 1998).

Lumbriculus variegatus (freshwater worm)					Mussel (estuarine [ribbed])					Mussel (freshwater [Eastern elliptio])				
	LOAEL		NOAEL			LOAEL		NOAEL			LOAEL		NOAEL	
Max Detect	Max Detect Exceeds TSV?	Max HQ	Max Detect Exceeds TSV?	Max HQ	Max Detect	Max Detect Exceeds TSV?	Max HQ	Max Detect Exceeds TSV?	Max HQ	Max Detect	Max Detect Exceeds TSV?	Max HQ	Max Detect Exceeds TSV?	Max HQ
1.2	**Yes**	**4.8**	**Yes**	**48**	1.1	**Yes**	**4.4**	**Yes**	**44**	0.37	**Yes**	**1.5**	**Yes**	**15**
0.2	**Yes**	**1.3**	**Yes**	**1.8**	0.025	No	0.16	No	0.23	0.068	No	0.43	No	0.62
61	**Yes**	**42**	**Yes**	**420**	15.9	**Yes**	**11**	**Yes**	**110**	10.8	**Yes**	**7.5**	**Yes**	**75**
1.8	**Yes**	**1.7**	**Yes**	**17**	0.097	No	0.091	No	0.91	0.16	No	0.15	**Yes**	**1.5**
11.9	No	0.99	**Yes**	**2.4**	0.98	No	0.082	No	0.20	1.2	No	0.10	No	0.24
12.4	**Yes**	**4.8**	**Yes**	**24**	0.17	No	0.065	No	0.33	0.28	No	0.11	No	0.54
150	**Yes**	**1.6**	**Yes**	**3.1**	19	No	0.20	No	0.40	35	No	0.37	No	0.73
1.4	No	0.015	No	0.029	4.7	No	0.049	No	0.098	25	No	0.26	No	0.52
36.2	**Yes**	**30**	**Yes**	**300**	6.1	**Yes**	**5.1**	**Yes**	**51**	7.8	**Yes**	**6.5**	**Yes**	**65**
0.77	**Yes**	**1.5**	**Yes**	**15**	0.19	No	0.37	**Yes**	**3.8**	0.22	No	0.43	**Yes**	**4.4**
0.042	**Yes**	**2.2**	**Yes**	**22**	0.025	**Yes**	**1.3**	**Yes**	**13**	0.006	No	0.32	**Yes**	**3.2**
0.006	No	0.0005	No	0.005	nd	-	-	-	-	0.006	No	0.00050	No	0.0050
1.3	-	-	**Yes**	**1.6**	0.25	-	-	No	0.31	5.8	-	-	**Yes**	**7.3**
45.2	**Yes**	**35**	**Yes**	**350**	6.4	**Yes**	**4.9**	**Yes**	**49**	17.3	**Yes**	**13**	**Yes**	**130**
1.4	No	0.0026	No	0.0064	0.9	No	0.0017	No	0.0041	0.45	No	0.00083	No	0.0020
4900	**Yes**	**7.4**	**Yes**	**74**	**230**	No	0.35	**Yes**	**3.5**	220	No	0.33	**Yes**	**3.3**
940	**Yes**	**1.2**	**Yes**	**12**	140	No	0.18	**Yes**	**1.8**	17	No	0.022	No	0.22
790	-	-	No	0.0052	nd	-	-	-	-	1600	-	-	No	0.010
530	**Yes**	**31**	**Yes**	**83**	18	No	**1.1**	**Yes**	**2.8**	30	**Yes**	**1.8**	**Yes**	**4.7**
0.44	No	0.34	**Yes**	**2.9**	0.013	No	0.010	No	0.087	0.027	No	0.021	No	0.18
140	**Yes**	**110**	**Yes**	**930**	1.2	No	0.92	**Yes**	**8.0**	3.6	**Yes**	**2.8**	**Yes**	**24**
140	**Yes**	**110**	**Yes**	**930**	**1.4**	**Yes**	**1.1**	**Yes**	**9.3**	3.8	**Yes**	**2.9**	**Yes**	**25**
140	**Yes**	**110**	**Yes**	**930**	**1.4**	**Yes**	**1.1**	**Yes**	**9.3**	3.8	**Yes**	**2.9**	**Yes**	**25**
0.39	-	-	No	0.0002	0.033	-	-	No	2E-05	0.07	-	-	No	0.000041
2.6	No	0.33	**Yes**	**1.6**	1.8	No	0.23	**Yes**	**1.1**	3	No	0.38	**Yes**	**1.9**
nd	-	-	-	-	nd	-	-	-	-	nd	-	-	-	-
nd	-	-	-	-	nd	-	-	-	-	nd	-	-	-	-
nd	-	-	-	-	nd	-	-	-	-	nd	-	-	-	-
nd	-	-	-	-	nd	-	-	-	-	nd	-	-	-	-
0.084	No	0.0025	No	0.0084	nd	-	-	-	-	0.06	No	0.0018	No	0.0060
0.64	No	0.0046	No	0.064	0.43	No	0.0031	No	0.043	1.3	No	0.0093	No	0.13
2.1	No	0.00013	No	0.00020	nd	-	-	-	-	0.24	No	0.000015	No	0.000023
5.7	No	0.017	No	0.17	nd	-	-	-	-	nd	-	-	-	-
40	No	0.024	No	0.056	8.3	No	0.0049	No	0.012	14	No	0.0082	No	0.020
33	No	0.25	No	0.55	6.9	No	0.053	No	0.12	5.9	No	0.045	No	0.098

/s for
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Table A2-8. SLERA results for fish tissue

COI Group	COI	LOAEL	NOAEL	Units	Selected as COPEC for at least one receptor?	American Eel					Brown Bullhead			
							LOAEL		NOAEL			LOAEL		N
						Max Detect	Max Detect Exceeds TSV?	Max HQ	Max Detect Exceeds TSV?	Max HQ	Max Detect	Max Detect Exceeds TSV?	Max HQ	Max Detect Exceeds TSV?
Metals	Arsenic	0.4	0.04	mg/kg	Yes	0.61	Yes	1.5	Yes	15	0.19	No	0.48	Yes
Metals	Cadmium	0.0254	0.00254	mg/kg	Yes	0.27	Yes	11	Yes	110	0.031	Yes	1.2	Yes
Metals	Chromium	1.28	0.128	mg/kg	Yes	4.5	Yes	3.5	Yes	35	0.94	No	0.73	Yes
Metals	Copper	1.5	0.32	mg/kg	Yes	7.8	Yes	5.2	Yes	24	0.94	No	0.63	Yes
Metals	Lead	4	0.4	mg/kg	Yes	1.4	No	0.35	Yes	3.5	0.83	No	0.21	Yes
Metals	Mercury	260	52	ug/kg	Yes	390	Yes	1.5	Yes	7.5	140	No	0.54	Yes
Metals	Methyl mercury	260	52	ug/kg	Yes	470	Yes	1.8	Yes	9.0	120	No	0.46	Yes
Metals	Selenium	2.1	1.1	mg/kg	Yes	1.2	No	0.57	Yes	1.1	0.9	No	0.43	No
Metals	Silver	0.24	0.13	mg/kg	Yes	0.062	No	0.26	No	0.48	nd	-	-	-
Metals	Zinc	23	19	mg/kg	Yes	42.2	Yes	1.8	Yes	2.2	41.4	Yes	1.8	Yes
Butyltin	Dibutyltin	na	5500	ug/kg	No	0.79	-	-	No	0.00014	1.5	-	-	No
Butyltin	Tributyltin	2390	239	ug/kg	No	4.5	No	0.0019	No	0.019	2.7	No	0.0011	No
PAHs	Total HPAHs	2100	210	ug/kg	Yes	49	No	0.023	No	0.23	110	No	0.052	No
PAHs	Total LPAHs	2600	260	ug/kg	Yes	170	No	0.065	No	0.65	260	No	0.10	Yes
PCB Con	Total PCB Congeners	530	170	ug/kg	Yes	5700	Yes	11	Yes	34	1700	Yes	3.2	Yes
PCB Con	PCB TEQ-Fish	1.8	0.89	ng/kg	Yes	2.3	Yes	1.3	Yes	2.6	1.6	No	0.89	Yes
PCDDs/P	2,3,7,8-TCDD	1.8	0.89	ng/kg	Yes	47	Yes	26	Yes	53	190	Yes	110	Yes
PCDDs/P	PCDD/PCDF TEQ-Fish	1.8	0.89	ng/kg	Yes	48	Yes	27	Yes	54	200	Yes	110	Yes
PCDDs/P	Total TEQ-Fish	1.8	0.89	ng/kg	Yes	50	Yes	28	Yes	56	200	Yes	110	Yes
OC Pesti	Dieldrin	40	8	ug/kg	Yes	110	Yes	2.8	Yes	14	34	No	0.85	Yes
OC Pesti	Endosulfan I	31	3.1	ug/kg	Yes	0.59	No	0.019	No	0.19	1.1	No	0.035	No
OC Pesti	Endosulfan II	31	3.1	ug/kg	No	0.56	No	0.018	No	0.18	nd	-	-	-
OC Pesti	Endrin	240	24	ug/kg	No	0.63	No	0.0026	No	0.026	nd	-	-	-
OC Pesti	gamma-BHC (Lindane)	79000	7900	ug/kg	No	0.74	No	9.4E-06	No	0.000094	0.28	No	0.0000035	No
OC Pesti	Heptachlor	10400	1040	ug/kg	No	0.13	No	0.000013	No	0.00013	0.066	No	6.30E-06	No
OC Pesti	Heptachlor epoxide	800	80	ug/kg	No	31	No	0.039	No	0.39	13	No	0.016	No
OC Pesti	Hexachlorobenzene	na	468000	ug/kg	No	16	-	-	No	0.000034	7.2	-	-	No
OC Pesti	Methoxychlor	300	50	ug/kg	No	nd	-	-	-	-	nd	-	-	-
OC Pesti	Total Chlordane	16600	1660	ug/kg	No	290	No	0.017	No	0.17	220	No	0.013	No
OC Pesti	Total DDx	390	78	ug/kg	Yes	470	Yes	1.2	Yes	6.0	200	No	0.51	Yes

nd - no detected concentrations

Table A2-8. SLERA results for fish tissue

COI Group	COI	LOAEL	NOAEL	Units	Selected as COPEC for at least one receptor?	OAEL Max HQ	Carp Max Detect	LOAEL Max Detect Exceeds TSV?	LOAEL Max HQ	NOAEL Max Detect Exceeds TSV?	NOAEL Max HQ
Metals	Arsenic	0.4	0.04	mg/kg	**Yes**	**4.8**	0.21	No	0.53	**Yes**	**5.3**
Metals	Cadmium	0.0254	0.00254	mg/kg	**Yes**	**12**	0.054	**Yes**	**2.1**	**Yes**	**21**
Metals	Chromium	1.28	0.128	mg/kg	**Yes**	**7.3**	6.6	**Yes**	**5.2**	**Yes**	**52**
Metals	Copper	1.5	0.32	mg/kg	**Yes**	**2.9**	1.6	**Yes**	**1.1**	**Yes**	**5.0**
Metals	Lead	4	0.4	mg/kg	**Yes**	**2.1**	0.96	No	0.24	**Yes**	**2.4**
Metals	Mercury	260	52	ug/kg	**Yes**	**2.7**	110	No	0.42	**Yes**	**2.1**
Metals	Methyl mercury	260	52	ug/kg	**Yes**	**2.3**	90	No	0.35	**Yes**	**1.7**
Metals	Selenium	2.1	1.1	mg/kg	**Yes**	0.82	0.98	No	0.47	No	0.89
Metals	Silver	0.24	0.13	mg/kg	**Yes**	-	0.015	No	0.063	No	0.12
Metals	Zinc	23	19	mg/kg	**Yes**	**2.2**	104	**Yes**	**4.5**	**Yes**	**5.5**
Butyltin	Dibutyltin	na	5500	ug/kg	No	0.00027	0.62	-	-	No	0.00011
Butyltin	Tributyltin	2390	239	ug/kg	No	0.011	3.1	No	0.0013	No	0.013
PAHs	Total HPAHs	2100	210	ug/kg	**Yes**	0.52	120	No	0.057	No	0.57
PAHs	Total LPAHs	2600	260	ug/kg	**Yes**	**1.0**	250	No	0.096	No	0.96
PCB Con	Total PCB Congeners	530	170	ug/kg	**Yes**	**10**	7900	**Yes**	**15**	**Yes**	**46**
PCB Con	PCB TEQ-Fish	1.8	0.89	ng/kg	**Yes**	**1.8**	6.5	**Yes**	**3.6**	**Yes**	**7.3**
PCDDs/P	2,3,7,8-TCDD	1.8	0.89	ng/kg	**Yes**	**210**	1400	**Yes**	**780**	**Yes**	**1,600**
PCDDs/P	PCDD/PCDF TEQ-Fish	1.8	0.89	ng/kg	**Yes**	**220**	1400	**Yes**	**780**	**Yes**	**1,600**
PCDDs/P	Total TEQ-Fish	1.8	0.89	ng/kg	**Yes**	**220**	1400	**Yes**	**780**	**Yes**	**1,600**
OC Pesti	Dieldrin	40	8	ug/kg	**Yes**	**4.3**	72	**Yes**	**1.8**	**Yes**	**9.0**
OC Pesti	Endosulfan I	31	3.1	ug/kg	**Yes**	0.35	4	No	0.13	**Yes**	**1.3**
OC Pesti	Endosulfan II	31	3.1	ug/kg	No	-	2.7	No	0.087	No	0.87
OC Pesti	Endrin	240	24	ug/kg	No	-	0.23	No	0.00096	No	0.0096
OC Pesti	gamma-BHC (Lindane)	79000	7900	ug/kg	No	0.000035	0.76	No	0.0000096	No	0.000096
OC Pesti	Heptachlor	10400	1040	ug/kg	No	0.000063	0.33	No	0.000032	No	0.00032
OC Pesti	Heptachlor epoxide	800	80	ug/kg	No	0.16	27	No	0.034	No	0.34
OC Pesti	Hexachlorobenzene	na	468000	ug/kg	No	0.000015	20	-	-	No	0.000043
OC Pesti	Methoxychlor	300	50	ug/kg	No	-	nd	-	-	-	-
OC Pesti	Total Chlordane	16600	1660	ug/kg	No	0.13	560	No	0.034	No	0.34
OC Pesti	Total DDx	390	78	ug/kg	**Yes**	**2.6**	1100	**Yes**	**2.8**	**Yes**	**14**

nd - no detected concentrations

Table A2-8. SLERA results for fish tissue

COI Group	COI	LOAEL	NOAEL	Units	Selected as COPEC for at least one receptor?	Channel Catfish					Largemouth Bass			
							LOAEL		NOAEL			LOAEL		N
						Max Detect	Max Detect Exceeds TSV?	Max HQ	Max Detect Exceeds TSV?	Max HQ	Max Detect	Max Detect Exceeds TSV?	Max HQ	Max Detect Exceeds TSV?
Metals	Arsenic	0.4	0.04	mg/kg	Yes	0.076	No	0.19	Yes	1.9	nd	-	-	-
Metals	Cadmium	0.0254	0.00254	mg/kg	Yes	0.017	No	0.67	Yes	6.7	0.037	Yes	1.5	Yes
Metals	Chromium	1.28	0.128	mg/kg	Yes	0.76	No	0.59	Yes	5.9	0.23	No	0.18	Yes
Metals	Copper	1.5	0.32	mg/kg	Yes	2.3	Yes	1.5	Yes	7.2	0.58	No	0.39	Yes
Metals	Lead	4	0.4	mg/kg	Yes	0.37	No	0.093	No	0.93	0.12	No	0.030	No
Metals	Mercury	260	52	ug/kg	Yes	230	No	0.88	Yes	4.4	680	Yes	2.6	Yes
Metals	Methyl mercury	260	52	ug/kg	Yes	230	No	0.88	Yes	4.4	520	Yes	2.0	Yes
Metals	Selenium	2.1	1.1	mg/kg	Yes	0.34	No	0.16	No	0.31	0.59	No	0.28	No
Metals	Silver	0.24	0.13	mg/kg	Yes	0.014	No	0.058	No	0.11	nd	-	-	-
Metals	Zinc	23	19	mg/kg	Yes	22	No	0.96	Yes	1.2	16	No	0.70	No
Butyltin	Dibutyltin	na	5500	ug/kg	No	0.23	-	-	No	0.000042	0.42	-	-	No
Butyltin	Tributyltin	2390	239	ug/kg	No	1.1	No	0.00046	No	0.0046	2.1	No	0.00088	No
PAHs	Total HPAHs	2100	210	ug/kg	Yes	96	No	0.046	No	0.46	9.4	No	0.0045	No
PAHs	Total LPAHs	2600	260	ug/kg	Yes	130	No	0.050	No	0.50	61	No	0.023	No
PCB Cong	Total PCB Congeners	530	170	ug/kg	Yes	2700	Yes	5.1	Yes	16	7900	Yes	15	Yes
PCB Cong	PCB TEQ-Fish	1.8	0.89	ng/kg	Yes	2.7	Yes	1.5	Yes	3.0	16	Yes	8.9	Yes
PCDDs/P	2,3,7,8-TCDD	1.8	0.89	ng/kg	Yes	160	Yes	89	Yes	180	180	Yes	100	Yes
PCDDs/P	PCDD/PCDF TEQ-Fish	1.8	0.89	ng/kg	Yes	170	Yes	94	Yes	190	180	Yes	100	Yes
PCDDs/P	Total TEQ-Fish	1.8	0.89	ng/kg	Yes	170	Yes	94	Yes	190	180	Yes	100	Yes
OC Pestic	Dieldrin	40	8	ug/kg	Yes	70	Yes	1.8	Yes	8.8	40	No	1.000	Yes
OC Pestic	Endosulfan I	31	3.1	ug/kg	Yes	2	No	0.065	No	0.65	nd	-	-	-
OC Pestic	Endosulfan II	31	3.1	ug/kg	No	0.89	No	0.029	No	0.29	nd	-	-	-
OC Pestic	Endrin	240	24	ug/kg	No	0.71	No	0.003	No	0.03	nd	-	-	-
OC Pestic	gamma-BHC (Lindane)	79000	7900	ug/kg	No	0.84	No	0.000011	No	0.00011	nd	-	-	-
OC Pestic	Heptachlor	10400	1040	ug/kg	No	0.28	No	0.000027	No	0.00027	0.4	No	3.8E-05	No
OC Pestic	Heptachlor epoxide	800	80	ug/kg	No	30	No	0.038	No	0.38	16	No	0.020	No
OC Pestic	Hexachlorobenzene	na	468000	ug/kg	No	29	-	-	No	0.000062	2.3	-	-	No
OC Pestic	Methoxychlor	300	50	ug/kg	No	nd	-	-	-	-	nd	-	-	-
OC Pestic	Total Chlordane	16600	1660	ug/kg	No	350	No	0.021	No	0.21	220	No	0.013	No
OC Pestic	Total DDx	390	78	ug/kg	Yes	490	Yes	1.3	Yes	6.3	160	No	0.41	Yes

nd - no detected concentrations

Table A2-8. SLERA results for fish tissue

COI Group	COI	LOAEL	NOAEL	Units	Selected as COPEC for at least one receptor?	NOAEL Max HQ	Mummichog Max Detect	Mummichog LOAEL Max Detect Exceeds TSV?	Mummichog LOAEL Max HQ	Mummichog NOAEL Max Detect Exceeds TSV?	Mummichog NOAEL Max HQ	Northern Pi Max Detect	Northern Pi LOAEL Max Detect Exceeds TSV?	Northern Pi LOAEL Max HQ
Metals	Arsenic	0.4	0.04	mg/kg	**Yes**	-	0.51	**Yes**	**1.3**	**Yes**	**13**	0.12	No	0.30
Metals	Cadmium	0.0254	0.00254	mg/kg	**Yes**	**15**	0.073	**Yes**	**2.9**	**Yes**	**29**	0.0035	No	0.14
Metals	Chromium	1.28	0.128	mg/kg	**Yes**	**1.8**	23.2	**Yes**	**18**	**Yes**	**180**	1.1	No	0.86
Metals	Copper	1.5	0.32	mg/kg	**Yes**	**1.8**	4.3	**Yes**	**2.9**	**Yes**	**13**	0.57	No	0.38
Metals	Lead	4	0.4	mg/kg	**Yes**	0.30	3.9	No	0.98	**Yes**	**9.8**	0.033	No	0.0083
Metals	Mercury	260	52	ug/kg	**Yes**	**13**	71	No	0.27	**Yes**	**1.4**	220	No	0.85
Metals	Methyl mercury	260	52	ug/kg	**Yes**	**10**	69	No	0.27	**Yes**	**1.3**	180	No	0.69
Metals	Selenium	2.1	1.1	mg/kg	**Yes**	0.54	0.89	No	0.42	No	0.81	0.55	No	0.26
Metals	Silver	0.24	0.13	mg/kg	**Yes**	-	0.06	No	0.25	No	0.46	nd	-	-
Metals	Zinc	23	19	mg/kg	**Yes**	0.84	51.6	**Yes**	**2.2**	**Yes**	**2.7**	34	**Yes**	**1.5**
Butyltin	Dibutyltin	na	5500	ug/kg	No	0.000076	42	-	-	No	0.0076	0.53	-	-
Butyltin	Tributyltin	2390	239	ug/kg	No	0.0088	63	No	0.026	No	0.26	1.4	No	0.0006
PAHs	Total HPAHs	2100	210	ug/kg	**Yes**	0.045	540	No	0.26	**Yes**	**2.6**	42	No	0.020
PAHs	Total LPAHs	2600	260	ug/kg	**Yes**	0.23	130	No	0.050	No	0.50	260	No	0.10
PCB Con	Total PCB Congeners	530	170	ug/kg	**Yes**	**46**	930	**Yes**	**1.8**	**Yes**	**5.5**	2000	**Yes**	**3.8**
PCB Con	PCB TEQ-Fish	1.8	0.89	ng/kg	**Yes**	**18**	0.89	No	0.49	**Yes**	**1.0**	2.3	**Yes**	**1.3**
PCDDs/P	2,3,7,8-TCDD	1.8	0.89	ng/kg	**Yes**	**200**	100	**Yes**	**56**	**Yes**	**110**	95	**Yes**	**53**
PCDDs/P	PCDD/PCDF TEQ-Fish	1.8	0.89	ng/kg	**Yes**	**200**	100	**Yes**	**56**	**Yes**	**110**	100	**Yes**	**56**
PCDDs/P	Total TEQ-Fish	1.8	0.89	ng/kg	**Yes**	**200**	100	**Yes**	**56**	**Yes**	**110**	110	**Yes**	**61**
OC Pesti	Dieldrin	40	8	ug/kg	**Yes**	**5.0**	28	No	0.70	**Yes**	**3.5**	43	**Yes**	**1.1**
OC Pesti	Endosulfan I	31	3.1	ug/kg	**Yes**	-	nd	-	-	-	-	nd	-	-
OC Pesti	Endosulfan II	31	3.1	ug/kg	No	-	nd	-	-	-	-	nd	-	-
OC Pesti	Endrin	240	24	ug/kg	No	-	nd	-	-	-	-	nd	-	-
OC Pesti	gamma-BHC (Lindane)	79000	7900	ug/kg	No	-	0.069	No	0.00000087	No	9E-06	nd	-	-
OC Pesti	Heptachlor	10400	1040	ug/kg	No	0.00038	nd	-	-	-	-	0.15	No	1E-05
OC Pesti	Heptachlor epoxide	800	80	ug/kg	No	0.20	8.7	No	0.011	No	0.11	14	No	0.018
OC Pesti	Hexachlorobenzene	na	468000	ug/kg	No	0.0000049	0.36	-	-	No	8E-07	3.1	-	-
OC Pesti	Methoxychlor	300	50	ug/kg	No	-	nd	-	-	-	-	nd	-	-
OC Pesti	Total Chlordane	16600	1660	ug/kg	No	0.13	87	No	0.0052	No	0.052	180	No	0.011
OC Pesti	Total DDx	390	78	ug/kg	**Yes**	**2.1**	100	No	0.26	**Yes**	**1.3**	280	No	0.72

nd - no detected concentrations

Table A2-8. SLERA results for fish tissue

COI Group	COI	LOAEL	NOAEL	Units	Selected as COPEC for at least one receptor?	ke NOAEL Max Detect Exceeds TSV?	ke NOAEL Max HQ	Other Forage Fish Max Detect	Other Forage Fish LOAEL Max Detect Exceeds TSV?	Other Forage Fish LOAEL Max HQ	Other Forage Fish NOAEL Max Detect Exceeds TSV?	Other Forage Fish NOAEL Max HQ
Metals	Arsenic	0.4	0.04	mg/kg	**Yes**	**Yes**	**3.0**	0.52	**Yes**	**1.3**	**Yes**	**13**
Metals	Cadmium	0.0254	0.00254	mg/kg	**Yes**	**Yes**	**1.4**	0.099	**Yes**	**3.9**	**Yes**	**39**
Metals	Chromium	1.28	0.128	mg/kg	**Yes**	**Yes**	**8.6**	125	**Yes**	**98**	**Yes**	**980**
Metals	Copper	1.5	0.32	mg/kg	**Yes**	**Yes**	**1.8**	5.4	**Yes**	**3.6**	**Yes**	**17**
Metals	Lead	4	0.4	mg/kg	**Yes**	No	0.083	4.9	**Yes**	**1.2**	**Yes**	**12**
Metals	Mercury	260	52	ug/kg	**Yes**	**Yes**	**4.2**	150	No	0.58	**Yes**	**2.9**
Metals	Methyl mercury	260	52	ug/kg	**Yes**	**Yes**	**3.5**	150	No	0.58	**Yes**	**2.9**
Metals	Selenium	2.1	1.1	mg/kg	**Yes**	No	0.50	0.93	No	0.44	No	0.85
Metals	Silver	0.24	0.13	mg/kg	**Yes**	-	-	0.074	No	0.31	**No**	**0.57**
Metals	Zinc	23	19	mg/kg	**Yes**	**Yes**	**1.8**	48	**Yes**	**2.1**	**Yes**	**2.5**
Butyltin	Dibutyltin	na	5500	ug/kg	No	No	1E-04	1.7	-	-	No	0.0003
Butyltin	Tributyltin	2390	239	ug/kg	No	No	0.0059	3.6	No	0.0015	No	0.015
PAHs	Total HPAHs	2100	210	ug/kg	**Yes**	No	0.20	1000	No	0.48	**Yes**	**4.8**
PAHs	Total LPAHs	2600	260	ug/kg	**Yes**	**Yes**	**1.0**	370	No	0.14	**Yes**	**1.4**
PCB Con	Total PCB Congeners	530	170	ug/kg	**Yes**	**Yes**	**12**	870	**Yes**	**1.6**	**Yes**	**5.1**
PCB Con	PCB TEQ-Fish	1.8	0.89	ng/kg	**Yes**	**Yes**	**2.6**	0.9	No	0.50	**Yes**	**1.0**
PCDDs/P	2,3,7,8-TCDD	1.8	0.89	ng/kg	**Yes**	**Yes**	**110**	93	**Yes**	**52**	**Yes**	**100**
PCDDs/P	PCDD/PCDF TEQ-Fish	1.8	0.89	ng/kg	**Yes**	**Yes**	**110**	96	**Yes**	**53**	**Yes**	**110**
PCDDs/P	Total TEQ-Fish	1.8	0.89	ng/kg	**Yes**	**Yes**	**120**	97	**Yes**	**54**	**Yes**	**110**
OC Pesti	Dieldrin	40	8	ug/kg	**Yes**	**Yes**	**5.4**	22	No	0.55	**Yes**	**2.8**
OC Pesti	Endosulfan I	31	3.1	ug/kg	**Yes**	-	-	nd	-	-	-	-
OC Pesti	Endosulfan II	31	3.1	ug/kg	No	-	-	nd	-	-	-	-
OC Pesti	Endrin	240	24	ug/kg	No	-	-	0.14	No	0.0006	No	0.0058
OC Pesti	gamma-BHC (Lindane)	79000	7900	ug/kg	No	-	-	0.078	No	1E-06	No	1E-05
OC Pesti	Heptachlor	10400	1040	ug/kg	No	No	0.0001	0.099	No	######	No	1E-04
OC Pesti	Heptachlor epoxide	800	80	ug/kg	No	No	0.18	6.8	No	0.0085	No	0.085
OC Pesti	Hexachlorobenzene	na	468000	ug/kg	No	No	7E-06	8.3	-	-	No	2E-05
OC Pesti	Methoxychlor	300	50	ug/kg	No	-	-	nd	-	-	-	-
OC Pesti	Total Chlordane	16600	1660	ug/kg	No	No	0.11	120	No	0.0072	No	0.072
OC Pesti	Total DDx	390	78	ug/kg	**Yes**	**Yes**	**3.6**	140	No	0.36	**Yes**	**1.8**

nd - no detected concentrations

Table A2-8. SLERA results for fish tissue

COI Group	COI	LOAEL	NOAEL	Units	Selected as COPEC for at least one receptor?	Smallmouth Bass					White Catfish					
							LOAEL		NOAEL			LOAEL		NOAEL		
						Max Detect	Max Detect Exceeds TSV?	Max HQ	Max Detect Exceeds TSV?	Max HQ	Max Detect	Max Detect Exceeds TSV?	Max HQ	Max Detect Exceeds TSV?	Max HQ	Max Detect
Metals	Arsenic	0.4	0.04	mg/kg	**Yes**	0.25	No	0.63	**Yes**	**6.3**	0.19	No	0.48	**Yes**	**4.8**	0.35
Metals	Cadmium	0.0254	0.00254	mg/kg	**Yes**	0.0089	No	0.35	**Yes**	**3.5**	0.027	**Yes**	**1.1**	**Yes**	**11**	0.031
Metals	Chromium	1.28	0.128	mg/kg	**Yes**	0.51	No	0.4	**Yes**	**4.0**	1.6	**Yes**	**1.3**	**Yes**	**13**	9.8
Metals	Copper	1.5	0.32	mg/kg	**Yes**	0.8	No	0.53	**Yes**	**2.5**	0.83	No	0.55	**Yes**	**2.6**	50.9
Metals	Lead	4	0.4	mg/kg	**Yes**	0.098	No	0.025	No	0.25	2.2	No	0.55	**Yes**	**5.5**	0.96
Metals	Mercury	260	52	ug/kg	**Yes**	300	**Yes**	**1.2**	**Yes**	**5.8**	630	**Yes**	**2.4**	**Yes**	**12**	530
Metals	Methyl mercury	260	52	ug/kg	**Yes**	220	No	0.85	**Yes**	**4.2**	530	**Yes**	**2.0**	**Yes**	**10**	330
Metals	Selenium	2.1	1.1	mg/kg	**Yes**	0.69	No	0.33	No	0.63	0.68	No	0.32	No	0.62	3
Metals	Silver	0.24	0.13	mg/kg	**Yes**	nd	-	-	-	-	0.0066	No	0.028	**No**	**0.051**	0.64
Metals	Zinc	23	19	mg/kg	**Yes**	18.4	No	0.8	No	0.97	19	No	0.83	**Yes**	**1.0**	30.8
Butyltin	Dibutyltin	na	5500	ug/kg	No	0.42	-	-	No	8E-05	2.7	-	-	No	0.0005	0.68
Butyltin	Tributyltin	2390	239	ug/kg	No	1.3	No	0.0005	No	0.0054	4.2	No	0.0018	No	0.018	16
PAHs	Total HPAHs	2100	210	ug/kg	**Yes**	390	No	0.19	**Yes**	**1.9**	310	No	0.15	**Yes**	**1.5**	340
PAHs	Total LPAHs	2600	260	ug/kg	**Yes**	67	No	0.026	No	0.26	470	No	0.18	**Yes**	**1.8**	300
PCB Cong	Total PCB Congeners	530	170	ug/kg	**Yes**	1400	**Yes**	**2.6**	**Yes**	**8.2**	7300	**Yes**	**14**	**Yes**	**43**	5100
PCB Cong	PCB TEQ-Fish	1.8	0.89	ng/kg	**Yes**	1.4	No	0.78	**Yes**	**1.6**	7.4	**Yes**	**4.1**	**Yes**	**8.3**	3.4
PCDDs/P	2,3,7,8-TCDD	1.8	0.89	ng/kg	**Yes**	76	**Yes**	**42**	**Yes**	**85**	410	**Yes**	**230**	**Yes**	**460**	250
PCDDs/P	PCDD/PCDF TEQ-Fish	1.8	0.89	ng/kg	**Yes**	76	**Yes**	**42**	**Yes**	**85**	430	**Yes**	**240**	**Yes**	**480**	260
PCDDs/P	Total TEQ-Fish	1.8	0.89	ng/kg	**Yes**	82	**Yes**	**46**	**Yes**	**92**	430	**Yes**	**240**	**Yes**	**480**	270
OC Pestic	Dieldrin	40	8	ug/kg	**Yes**	20	No	0.50	**Yes**	**2.5**	48	**Yes**	**1.2**	**Yes**	**6.0**	47
OC Pestic	Endosulfan I	31	3.1	ug/kg	**Yes**	nd	-	-	-	-	nd	-	-	-	-	0.22
OC Pestic	Endosulfan II	31	3.1	ug/kg	No	nd	-	-	-	-	2.5	No	0.081	No	0.81	nd
OC Pestic	Endrin	240	24	ug/kg	No	nd	-	-	-	-	0.14	No	0.0006	No	0.0058	0.23
OC Pestic	gamma-BHC (Lindane)	79000	7900	ug/kg	No	nd	-	-	-	-	0.23	No	3E-06	No	3E-05	0.24
OC Pestic	Heptachlor	10400	1040	ug/kg	No	0.13	No	9E-05	No	0.0009	0.13	No	1E-05	No	0.0001	0.17
OC Pestic	Heptachlor epoxide	800	80	ug/kg	No	7.6	No	0.0095	No	0.095	19	No	0.024	No	0.24	18
OC Pestic	Hexachlorobenzene	na	468000	ug/kg	No	2.6	-	-	No	6E-06	15	-	-	No	3E-05	11
OC Pestic	Methoxychlor	300	50	ug/kg	No	nd	-	-	-	-	nd	-	-	-	-	0.55
OC Pestic	Total Chlordane	16600	1660	ug/kg	No	120	No	0.0072	No	0.072	470	No	0.028	No	0.28	480
OC Pestic	Total DDx	390	78	ug/kg	**Yes**	230	No	0.59	**Yes**	**2.9**	870	**Yes**	**2.2**	**Yes**	**11**	490

nd - no detected concentrations

Table A2-8. SLERA results for fish tissue

COI Group	COI	LOAEL	NOAEL	Units	Selected as COPEC for at least one receptor?	White Perch				White Sucker				
						LOAEL		NOAEL			LOAEL		NOAEL	
						Max Detect Exceeds TSV?	Max HQ	Max Detect Exceeds TSV?	Max HQ	Max Detect	Max Detect Exceeds TSV?	Max HQ	Max Detect Exceeds TSV?	Max HQ
Metals	Arsenic	0.4	0.04	mg/kg	**Yes**	No	0.88	**Yes**	**8.8**	0.11	No	0.28	**Yes**	**2.8**
Metals	Cadmium	0.0254	0.00254	mg/kg	**Yes**	**Yes**	**1.2**	**Yes**	**12**	0.013	No	0.51	**Yes**	**5.1**
Metals	Chromium	1.28	0.128	mg/kg	**Yes**	**Yes**	**7.7**	**Yes**	**77**	2	**Yes**	**1.6**	**Yes**	**16**
Metals	Copper	1.5	0.32	mg/kg	**Yes**	**Yes**	**34**	**Yes**	**160**	1.1	No	0.73	**Yes**	**3.4**
Metals	Lead	4	0.4	mg/kg	**Yes**	No	0.24	**Yes**	**2.4**	0.3	No	0.075	No	0.75
Metals	Mercury	260	52	ug/kg	**Yes**	**Yes**	**2.0**	**Yes**	**10**	140	No	0.54	**Yes**	**2.7**
Metals	Methyl mercury	260	52	ug/kg	**Yes**	**Yes**	**1.3**	**Yes**	**6.3**	130	No	0.50	**Yes**	**2.5**
Metals	Selenium	2.1	1.1	mg/kg	**Yes**	**Yes**	**1.4**	**Yes**	**2.7**	0.46	No	0.22	No	0.42
Metals	Silver	0.24	0.13	mg/kg	**Yes**	**Yes**	**2.7**	**Yes**	**4.9**	0.005	No	0.021	No	0.038
Metals	Zinc	23	19	mg/kg	**Yes**	**Yes**	**1.3**	**Yes**	**1.6**	21	No	0.91	**Yes**	**1.1**
Butyltin	Dibutyltin	na	5500	ug/kg	No	-	-	No	0.0001	0.54	-	-	No	0.000098
Butyltin	Tributyltin	2390	239	ug/kg	No	No	0.0067	No	0.067	2.6	No	0.0011	No	0.011
PAHs	Total HPAHs	2100	210	ug/kg	**Yes**	No	0.16	**Yes**	**1.6**	48	No	0.023	No	0.23
PAHs	Total LPAHs	2600	260	ug/kg	**Yes**	No	0.12	**Yes**	**1.2**	49	No	0.019	No	0.19
PCB Con	Total PCB Congeners	530	170	ug/kg	**Yes**	**Yes**	**9.6**	**Yes**	**30**	2900	**Yes**	**5.5**	**Yes**	**17**
PCB Con	PCB TEQ-Fish	1.8	0.89	ng/kg	**Yes**	**Yes**	**1.9**	**Yes**	**3.8**	3.2	**Yes**	**1.8**	**Yes**	**3.6**
PCDDs/P	2,3,7,8-TCDD	1.8	0.89	ng/kg	**Yes**	**Yes**	**140**	**Yes**	**280**	130	**Yes**	**72**	**Yes**	**150**
PCDDs/P	PCDD/PCDF TEQ-Fish	1.8	0.89	ng/kg	**Yes**	**Yes**	**140**	**Yes**	**290**	130	**Yes**	**72**	**Yes**	**150**
PCDDs/P	Total TEQ-Fish	1.8	0.89	ng/kg	**Yes**	**Yes**	**150**	**Yes**	**300**	130	**Yes**	**72**	**Yes**	**150**
OC Pesti	Dieldrin	40	8	ug/kg	**Yes**	**Yes**	**1.2**	**Yes**	**5.9**	25	No	0.63	**Yes**	**3.1**
OC Pesti	Endosulfan I	31	3.1	ug/kg	**Yes**	No	0.0071	No	0.071	0.45	No	0.015	No	0.15
OC Pesti	Endosulfan II	31	3.1	ug/kg	No	-	-	-	-	nd	-	-	-	-
OC Pesti	Endrin	240	24	ug/kg	No	No	0.001	No	0.0096	nd	-	-	-	-
OC Pesti	gamma-BHC (Lindane)	79000	7900	ug/kg	No	No	3E-06	No	3E-05	0.13	No	1.6E-06	No	0.000016
OC Pesti	Heptachlor	10400	1040	ug/kg	No	No	2E-05	No	0.0002	0.23	No	0.000022	No	0.00022
OC Pesti	Heptachlor epoxide	800	80	ug/kg	No	No	0.023	No	0.23	10	No	0.013	No	0.13
OC Pesti	Hexachlorobenzene	na	468000	ug/kg	No	-	-	No	2E-05	4.6	-	-	No	9.8E-06
OC Pesti	Methoxychlor	300	50	ug/kg	No	No	0.0018	No	0.011	nd	-	-	-	-
OC Pesti	Total Chlordane	16600	1660	ug/kg	No	No	0.029	No	0.29	150	No	0.0090	No	0.090
OC Pesti	Total DDx	390	78	ug/kg	**Yes**	**Yes**	**1.3**	**Yes**	**6.3**	150	No	0.38	**Yes**	**1.9**

nd - no detected concentrations

Table A2-9. SLERA results for fish egg tissue

COI Group	COI	TSV			Selected as COPEC?	Mummichog				Max HQ	
						Max $C_{adult, ww}$		Max $C_{egg, ww}$			
		NOAEL	LOAEL	Units		C_{adult}	Unit	C_{egg}	Unit	NOAEL HQ	LOAEL HQ
Mummichog											
Metals	Mercury	6.0	60	ug/kg ww	**Yes**	71	ug/kg ww	71	ug/kg ww	**12**	**1.2**
Metals	Methyl mercury	6.0	60	ug/kg ww	**Yes**	69	ug/kg ww	69	ug/kg ww	**12**	**1.2**
PCBs	Total PCB Congeners	25.8	258	ug/kg ww	**Yes**	930	ug/kg ww	930	ug/kg ww	**36**	**3.6**
PCBs	PCB TEQ-Fish	7.2	86	ng/kg ww	No	0.89	ng/kg ww	1	ng/kg ww	0.12	0.010
PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	7.2	86	ng/kg ww	**Yes**	100	ng/kg ww	100	ng/kg ww	**14**	**1.2**
PCDDs/PCDFs	Total TEQ-Fish	7.2	86	ng/kg ww	**Yes**	100	ng/kg ww	100	ng/kg ww	**14**	**1.2**
OC Pesticides	Total DDx	160.0	850	ug/kg ww	No	100	ug/kg ww	100.0	ug/kg ww	0.63	0.12

[a] For screening, a conservative assumption was made that adult tissue concentrations were equal to egg tissue concentrations.

Table A2-10. SLERA results for bird egg tissue

COI Group	COI	TSV			Selected as COPEC?	C_{prey}				Max BMF		Max HQ	
		NOAEL	LOAEL	Units		Crab C_{prey}	Fish C_{prey}	Max Cprey	Units (ww)	BMF	Max C_{egg}	NOAEL HQ	LOAEL HQ
Belted Kingfisher													
Metals	Mercury	74	740	ug/kg ww	**Yes**	190	180	190	ug/kg	2.5	475	**6.4**	0.64
Metals	Methyl mercury	74	740	ug/kg ww	**Yes**	170	190	190	ug/kg	2.5	475	**6.4**	0.64
PCBs	Total PCB Congeners	700	1300	ug/kg ww	**Yes**	580	5100	5100	ug/kg	79	402900	**580**	**310**
PCBs	PCB TEQ-Bird	5.9	150	ng/kg ww	**Yes**	110	310	310	ng/kg	21	6510	**1100**	**43**
PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	5.9	150	ng/kg ww	**Yes**	100	250	250	ng/kg	21	5250	**890**	**35**
PCDDs/PCDFs	Total TEQ-Bird	5.9	150	ng/kg ww	**Yes**	200	560	560	ng/kg	21	11760	**2000**	**78**
OC Pesticides	Total DDx	500	3000	ug/kg ww	**Yes**	100	340	340	ug/kg	108	36720	**73**	**12**
OC Pesticides	Dieldrin	200	8100	ug/kg ww	**Yes**	9	47	47	ug/kg	7	329	**1.6**	0.041
Great Blue Heron													
Metals	Mercury	74	740	ug/kg ww	**Yes**	190	680	680	ug/kg	2.5	1700	**23**	**2.3**
Metals	Methyl mercury	74	740	ug/kg ww	**Yes**	170	530	530	ug/kg	2.5	1325	**18**	**1.8**
PCBs	Total PCB Congeners	700	1300	ug/kg ww	**Yes**	580	7900	7900	ug/kg	79	624100	**890**	**480**
PCBs	PCB TEQ-Bird	5.9	150	ng/kg ww	**Yes**	110	540	540	ng/kg	21	11340	**1900**	**76**
PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	5.9	150	ng/kg ww	**Yes**	100	1400	1400	ng/kg	21	29400	**5000**	**200**
PCDDs/PCDFs	Total TEQ-Bird	5.9	150	ng/kg ww	**Yes**	200	1700	1700	ng/kg	21	35700	**6100**	**240**
OC Pesticides	Total DDx	500	3000	ug/kg ww	**Yes**	100	1100	1100	ug/kg	108	118800	**240**	**40**
OC Pesticides	Dieldrin	200	8100	ug/kg ww	**Yes**	9	110	110	ug/kg	7	770	**3.9**	0.095

Table A2-11. SLERA results for fish diet

COI Group	COI	TRV NOAEL	TRV LOAEL	Units	Selected as COPEC?	Sediment Max C_{sed}	Units (dw)	SIR (kg dw/day)	C_{sed}	Units (dw)	Prey (100% Maximum Tissu Worm C_{prey}	Crab C_{prey}	Fish C_{prey}	Max C_{prey}
Mummichog														
Metals	Arsenic	0.035	0.35	mg/kg bw/day	No	118	mg/kg	0.0000037	0.0004	mg/day	1.8			1.8
Metals	Cadmium	0.001	0.01	mg/kg bw/day	Yes	46.6	mg/kg	0.0000037	0.0002	mg/day	0.2			0.2
Metals	Chromium	0.19	-	mg/kg bw/day	Yes	1580	mg/kg	0.0000037	0.0058	mg/day	61			61
Metals	Cobalt	0.013	0.13	mg/kg bw/day	Yes	25.6	mg/kg	0.0000037	9E-05	mg/day	1.8			1.8
Metals	Copper	1.0	2.0	mg/kg bw/day	Yes	930	mg/kg	0.0000037	0.0034	mg/day	11.9			11.9
Metals	Lead	134	-	mg/kg bw/day	No	2050	mg/kg	0.0000037	0.0076	mg/day	12.4			12.4
Metals	Mercury	5.0	12.5	ug/kg bw/day	Yes	24300	ug/kg	0.0000037	0.0899	ug/day	150			150
Metals	Methyl mercury	5.0	12.5	ug/kg bw/day	Yes	23	ug/kg	0.0000037	9E-05	ug/day	3.4			3.4
Metals	Nickel	0.013	0.13	mg/kg bw/day	Yes	200	mg/kg	0.0000037	0.0007	mg/day	36.2			36.2
Metals	Selenium	0.106	0.19	mg/kg bw/day	No	5.2	mg/kg	0.0000037	2E-05	mg/day	0.77			0.77
Metals	Silver	70	-	mg/kg bw/day	No	20.4	mg/kg	0.0000037	8E-05	mg/day	0.042			0.042
Metals	Vanadium	0.019	0.19	mg/kg bw/day	Yes	110	mg/kg	0.0000037	0.0004	mg/day	1.3			1.3
Metals	Zinc	19	38	mg/kg bw/day	No	2000	mg/kg	0.0000037	0.0074	mg/day	45.2			45.2
Butyltins	Tributyltin	1.200	12	ug/kg bw/day	No	270	ug/kg	0.0000037	0.001	ug/day	1.4			1.4
PAHs	Benzo(a)pyrene	30	40	ug/kg bw/day	Yes	41000	ug/kg	0.0000037	0.1517	ug/day	440			440
PAHs	Total PAHs	6200	18000	ug/kg bw/day	No	1E+06	ug/kg	0.0000037	4.033	ug/day	5900			5900
PCBs	Total PCB Congener:	5.0	50	ug/kg bw/day	Yes	28600	ug/kg	0.0000037	0.1058	ug/day	530			530
PCBs	PCB TEQ-Fish	0.0027	0.027	ng/kg bw/day	Yes	33.1	ng/kg	0.0000037	0.0001	ng/day	0.44			0.44
PCDDs/PCI	PCDD/PCDF TEQ-Fisl	0.0027	0.027	ng/kg bw/day	Yes	51400	ng/kg	0.0000037	0.1902	ng/day	140			140
PCDDs/PCI	Total TEQ-Fish	0.0027	0.027	ng/kg bw/day	Yes	51400	ng/kg	0.0000037	0.1902	ng/day	140			140
OC Pesticic	Dieldrin	8.1	-	ug/kg bw/day	No	152	ug/kg	0.0000037	0.0006	ng/day	2.6			2.6
OC Pesticic	Endosulfan I	7500	-	ug/kg bw/day	No	0.47	ug/kg	0.0000037	2E-06	ng/day	1.7			1.7
OC Pesticic	Endrin	43	145	ug/kg bw/day	No	4.1	ug/kg	0.0000037	2E-05	ug/day	0.55			0.55
OC Pesticic	Total DDx	14.3	143	ug/kg bw/day	No	2800	ug/kg	0.0000037	0.0104	ug/day	33			33
White perch														
Metals	Arsenic	0.035	0.35	mg/kg bw/day	No	118	mg/kg	0.000041	0.0048	mg/day	1.8	1.9	0.51	1.9
Metals	Cadmium	0.001	0.01	mg/kg bw/day	Yes	46.6	mg/kg	0.000041	0.0019	mg/day	0.2	0.18	0.073	0.2
Metals	Chromium	0.19	-	mg/kg bw/day	Yes	1580	mg/kg	0.000041	0.0648	mg/day	61	3.1	23.2	61
Metals	Cobalt	0.013	0.13	mg/kg bw/day	Yes	25.6	mg/kg	0.000041	0.001	mg/day	1.8	0.095	0.35	1.8
Metals	Copper	1.0	2.0	mg/kg bw/day	Yes	930	mg/kg	0.000041	0.0381	mg/day	11.9	30.6	4.3	30.6
Metals	Lead	134	-	mg/kg bw/day	No	2050	mg/kg	0.000041	0.0841	mg/day	12.4	0.66	3.9	12.4
Metals	Mercury	5.0	12.5	ug/kg bw/day	Yes	24300	ug/kg	0.000041	0.9963	ug/day	150	190	71	190
Metals	Methyl mercury	5.0	12.5	ug/kg bw/day	Yes	23	ug/kg	0.000041	0.0009	ug/day	3.4	170	69	170
Metals	Nickel	0.013	0.13	mg/kg bw/day	Yes	200	mg/kg	0.000041	0.0082	mg/day	36.2	1.9	15.8	36.2
Metals	Selenium	0.106	0.19	mg/kg bw/day	No	5.2	mg/kg	0.000041	0.0002	mg/day	0.77	1.1	0.89	1.1
Metals	Silver	70	-	mg/kg bw/day	No	20.4	mg/kg	0.000041	0.0008	mg/day	0.042	0.78	0.06	0.78
Metals	Vanadium	0.019	0.19	mg/kg bw/day	Yes	110	mg/kg	0.000041	0.0045	mg/day	1.3	0.14	1.3	1.3
Metals	Zinc	19	38	mg/kg bw/day	No	2000	mg/kg	0.000041	0.082	mg/day	45.2	41.1	51.6	51.6
Butyltins	Tributyltin	1.200	12	ug/kg bw/day	Yes	270	ug/kg	0.000041	0.0111	ug/day	1.4	3.8	63	63
PAHs	Benzo(a)pyrene	30	40	ug/kg bw/day	Yes	41000	ug/kg	0.000041	1.681	ug/day	440	40	63	440
PAHs	Total PAHs	6200	18000	ug/kg bw/day	No	1E+06	ug/kg	0.000041	44.69	ug/day	5900	420	1100	5900
PCBs	Total PCB Congener:	5.0	50	ug/kg bw/day	Yes	28600	ug/kg	0.000041	1.1726	ug/day	530	580	930	930
PCBs	PCB TEQ-Fish	0.0027	0.027	ng/kg bw/day	Yes	33.1	ng/kg	0.000041	0.0014	ng/day	0.44	1.1	0.89	1.1
PCDDs/PCI	PCDD/PCDF TEQ-Fisl	0.0027	0.027	ng/kg bw/day	Yes	51400	ng/kg	0.000041	2.1074	ng/day	140	93	100	140
PCDDs/PCI	Total TEQ-Fish	0.0027	0.027	ng/kg bw/day	Yes	51400	ng/kg	0.000041	2.1074	ng/day	140	93	100	140
OC Pesticic	Dieldrin	8.1	-	ug/kg bw/day	No	152	ug/kg	0.000041	0.0062	ng/day	2.6	9.1	28	28
OC Pesticic	Endosulfan I	7500	-	ug/kg bw/day	No	0.47	ug/kg	0.000041	2E-05	ng/day	1.7	7.7	1.3	7.7
OC Pesticic	Endrin	43	145	ug/kg bw/day	No	4.1	ug/kg	0.000041	0.0002	ug/day	0.55	0.74	0.69	0.74
OC Pesticic	Total DDx	14.3	143	ug/kg bw/day	No	2800	ug/kg	0.000041	0.1148	ug/day	33	100	100	100
Channel catfish														
Metals	Arsenic	0.035	0.35	mg/kg bw/day	No	118	mg/kg	0.00073	0.0861	mg/day	1.8	1.9	0.51	1.9
Metals	Cadmium	0.001	0.01	mg/kg bw/day	Yes	46.6	mg/kg	0.00073	0.034	mg/day	0.2	0.18	0.099	0.2
Metals	Chromium	0.19	-	mg/kg bw/day	Yes	1580	mg/kg	0.00073	1.1534	mg/day	61	3.1	31.7	61
Metals	Cobalt	0.013	0.13	mg/kg bw/day	Yes	25.6	mg/kg	0.00073	0.0187	mg/day	1.8	0.095	0.42	1.8
Metals	Copper	1.0	2.0	mg/kg bw/day	Yes	930	mg/kg	0.00073	0.6789	mg/day	11.9	30.6	5.4	30.6
Metals	Lead	134	-	mg/kg bw/day	No	2050	mg/kg	0.00073	1.4965	mg/day	12.4	0.66	4.9	12.4
Metals	Mercury	5.0	12.5	ug/kg bw/day	Yes	24300	ug/kg	0.00073	17.739	ug/day	150	190	83	190
Metals	Methyl mercury	5.0	12.5	ug/kg bw/day	Yes	23	ug/kg	0.00073	0.0168	ug/day	3.4	170	69	170
Metals	Nickel	0.013	0.13	mg/kg bw/day	Yes	200	mg/kg	0.00073	0.146	mg/day	36.2	1.9	22.1	36.2
Metals	Selenium	0.106	0.19	mg/kg bw/day	No	5.2	mg/kg	0.00073	0.0038	mg/day	0.77	1.1	0.89	1.1
Metals	Silver	70	-	mg/kg bw/day	No	20.4	mg/kg	0.00073	0.0149	mg/day	0.042	0.78	0.074	0.78
Metals	Vanadium	0.019	0.19	mg/kg bw/day	Yes	110	mg/kg	0.00073	0.0803	mg/day	1.3	0.14	1.3	1.3
Metals	Zinc	19	38	mg/kg bw/day	No	2000	mg/kg	0.00073	1.46	mg/day	45.2	41.1	51.6	51.6
Butyltins	Tributyltin	1.200	12	ug/kg bw/day	Yes	270	ug/kg	0.00073	0.1971	ug/day	1.4	3.8	63	63
PAHs	Benzo(a)pyrene	30	40	ug/kg bw/day	Yes	41000	ug/kg	0.00073	29.93	ug/day	440	40	98	440
PAHs	Total PAHs	6200	18000	ug/kg bw/day	No	1E+06	ug/kg	0.00073	795.7	ug/day	5900	420	1200	5900
PCBs	Total PCB Congener:	5.0	50	ug/kg bw/day	Yes	28600	ug/kg	0.00073	20.878	ug/day	530	580	930	930
PCBs	PCB TEQ-Fish	0.0027	0.027	ng/kg bw/day	Yes	33.1	ng/kg	0.00073	0.0242	ng/day	0.44	1.1	0.89	1.1
PCDDs/PCI	PCDD/PCDF TEQ-Fisl	0.0027	0.027	ng/kg bw/day	Yes	51400	ng/kg	0.00073	37.522	ng/day	140	93	100	140
PCDDs/PCI	Total TEQ-Fish	0.0027	0.027	ng/kg bw/day	Yes	51400	ng/kg	0.00073	37.522	ng/day	140	93	100	140
OC Pesticic	Dieldrin	8.1	-	ug/kg bw/day	No	152	ug/kg	0.00073	0.111	ng/day	2.6	9.1	28	28
OC Pesticic	Endosulfan I	7500	-	ug/kg bw/day	No	0.47	ug/kg	0.00073	0.0003	ng/day	1.7	7.7	1.5	7.7
OC Pesticic	Endrin	43	145	ug/kg bw/day	No	4.1	ug/kg	0.00073	0.003	ug/day	0.55	0.74	0.69	0.74
OC Pesticic	Total DDx	14.3	143	ug/kg bw/day	No	2800	ug/kg	0.00073	2.044	ug/day	33	100	100	100
Largemouth bass														
Metals	Arsenic	0.035	0.35	mg/kg bw/day	No	118	mg/kg	0.000011	0.0013	mg/day	1.8	1.9	0.51	1.9
Metals	Cadmium	0.001	0.01	mg/kg bw/day	Yes	46.6	mg/kg	0.000011	0.0005	mg/day	0.2	0.18	0.099	0.2
Metals	Chromium	0.19	-	mg/kg bw/day	Yes	1580	mg/kg	0.000011	0.0174	mg/day	61	3.1	31.7	61
Metals	Cobalt	0.013	0.13	mg/kg bw/day	Yes	25.6	mg/kg	0.000011	0.0003	mg/day	1.8	0.095	0.42	1.8
Metals	Copper	1.0	2.0	mg/kg bw/day	Yes	930	mg/kg	0.000011	0.0102	mg/day	11.9	30.6	5.4	30.6
Metals	Lead	134	-	mg/kg bw/day	No	2050	mg/kg	0.000011	0.0226	mg/day	12.4	0.66	4.9	12.4
Metals	Mercury	5.0	12.5	ug/kg bw/day	Yes	24300	ug/kg	0.000011	0.2673	ug/day	150	190	83	190
Metals	Methyl mercury	5.0	12.5	ug/kg bw/day	Yes	23	ug/kg	0.000011	0.0003	ug/day	3.4	170	69	170
Metals	Nickel	0.013	0.13	mg/kg bw/day	Yes	200	mg/kg	0.000011	0.0022	mg/day	36.2	1.9	22.1	36.2
Metals	Selenium	0.106	0.19	mg/kg bw/day	No	5.2	mg/kg	0.000011	6E-05	mg/day	0.77	1.1	0.89	1.1
Metals	Silver	70	-	mg/kg bw/day	No	20.4	mg/kg	0.000011	0.0002	mg/day	0.042	0.78	0.074	0.78
Metals	Vanadium	0.019	0.19	mg/kg bw/day	Yes	110	mg/kg	0.000011	0.0012	mg/day	1.3	0.14	1.3	1.3

Table A2-11. SLERA results for fish diet

Metals	Zinc	19	38	mg/kg bw/day	No	2000	mg/kg	0.000011	0.022	mg/day	45.2	41.1	51.6	51.6
Butyltins	Tributyltin	1.200	12	ug/kg bw/day	Yes	270	ug/kg	0.000011	0.003	ug/day	1.4	3.8	63	63
PAHs	Benzo(a)pyrene	30	40	ug/kg bw/day	Yes	41000	ug/kg	0.000011	0.451	ug/day	440	40	98	440
PAHs	Total PAHs	6200	18000	ug/kg bw/day	No	1E+06	ug/kg	0.000011	11.99	ug/day	5900	420	1200	5900
PCBs	Total PCB Congener:	5.0	50	ug/kg bw/day	Yes	28600	ug/kg	0.000011	0.3146	ug/day	530	580	930	930
PCBs	PCB TEQ-Fish	0.0027	0.027	ng/kg bw/day	Yes	33.1	ng/kg	0.000011	0.0004	ng/day	0.44	1.1	0.89	1.1
PCDDs/PCI	PCDD/PCDF TEQ-Fisl	0.0027	0.027	ng/kg bw/day	Yes	51400	ng/kg	0.000011	0.5654	ng/day	140	93	100	140
PCDDs/PCI	Total TEQ-Fish	0.0027	0.027	ng/kg bw/day	Yes	51400	ng/kg	0.000011	0.5654	ng/day	140	93	100	140
OC Pesticic	Dieldrin	8.1	-	ug/kg bw/day	No	152	ug/kg	0.000011	0.0017	ng/day	2.6	9.1	28	28
OC Pesticic	Endosulfan I	7500	-	ug/kg bw/day	No	0.47	ug/kg	0.000011	5E-06	ng/day	1.7	7.7	1.5	7.7
OC Pesticic	Endrin	43	145	ug/kg bw/day	No	4.1	ug/kg	0.000011	5E-05	ug/day	0.55	0.74	0.69	0.74
OC Pesticic	Total DDx	14.3	143	ug/kg bw/day	No	2800	ug/kg	0.000011	0.0308	ug/day	33	100	100	100
American eel - Small (< 50 cm)														
Metals	Arsenic	0.035	0.35	mg/kg bw/day	No	118	mg/kg	0.000025	0.003	mg/day	1.8	1.9	0.51	1.9
Metals	Cadmium	0.001	0.01	mg/kg bw/day	Yes	46.6	mg/kg	0.000025	0.0012	mg/day	0.2	0.18	0.099	0.2
Metals	Chromium	0.19	-	mg/kg bw/day	Yes	1580	mg/kg	0.000025	0.0395	mg/day	61	3.1	31.7	61
Metals	Cobalt	0.013	0.13	mg/kg bw/day	Yes	25.6	mg/kg	0.000025	0.0006	mg/day	1.8	0.095	0.42	1.8
Metals	Copper	1.0	2.0	mg/kg bw/day	Yes	930	mg/kg	0.000025	0.0233	mg/day	11.9	30.6	5.4	30.6
Metals	Lead	134	-	mg/kg bw/day	No	2050	mg/kg	0.000025	0.0513	mg/day	12.4	0.66	4.9	12.4
Metals	Mercury	5.0	12.5	ug/kg bw/day	Yes	24300	ug/kg	0.000025	0.6075	ug/day	150	190	83	190
Metals	Methyl mercury	5.0	12.5	ug/kg bw/day	Yes	23	ug/kg	0.000025	0.0006	ug/day	3.4	170	69	170
Metals	Nickel	0.013	0.13	mg/kg bw/day	Yes	200	mg/kg	0.000025	0.005	mg/day	36.2	1.9	22.1	36.2
Metals	Selenium	0.106	0.19	mg/kg bw/day	No	5.2	mg/kg	0.000025	0.0001	mg/day	0.77	1.1	0.89	1.1
Metals	Silver	70	-	mg/kg bw/day	No	20.4	mg/kg	0.000025	0.0005	mg/day	0.042	0.78	0.074	0.78
Metals	Vanadium	0.019	0.19	mg/kg bw/day	Yes	110	mg/kg	0.000025	0.0028	mg/day	1.3	0.14	1.3	1.3
Metals	Zinc	19	38	mg/kg bw/day	No	2000	mg/kg	0.000025	0.05	mg/day	45.2	41.1	51.6	51.6
Butyltins	Tributyltin	1.200	12	ug/kg bw/day	Yes	270	ug/kg	0.000025	0.0068	ug/day	1.4	3.8	63	63
PAHs	Benzo(a)pyrene	30	40	ug/kg bw/day	Yes	41000	ug/kg	0.000025	1.025	ug/day	440	40	98	440
PAHs	Total PAHs	6200	18000	ug/kg bw/day	No	1E+06	ug/kg	0.000025	27.25	ug/day	5900	420	1200	5900
PCBs	Total PCB Congener:	5.0	50	ug/kg bw/day	Yes	28600	ug/kg	0.000025	0.715	ug/day	530	580	930	930
PCBs	PCB TEQ-Fish	0.0027	0.027	ng/kg bw/day	Yes	33.1	ng/kg	0.000025	0.0008	ng/day	0.44	1.1	0.89	1.1
PCDDs/PCI	PCDD/PCDF TEQ-Fisl	0.0027	0.027	ng/kg bw/day	Yes	51400	ng/kg	0.000025	1.285	ng/day	140	93	100	140
PCDDs/PCI	Total TEQ-Fish	0.0027	0.027	ng/kg bw/day	Yes	51400	ng/kg	0.000025	1.285	ng/day	140	93	100	140
OC Pesticic	Dieldrin	8.1	-	ug/kg bw/day	No	152	ug/kg	0.000025	0.0038	ng/day	2.6	9.1	28	28
OC Pesticic	Endosulfan I	7500	-	ug/kg bw/day	No	0.47	ug/kg	0.000025	1E-05	ng/day	1.7	7.7	1.5	7.7
OC Pesticic	Endrin	43	145	ug/kg bw/day	No	4.1	ug/kg	0.000025	0.0001	ug/day	0.55	0.74	0.69	0.74
OC Pesticic	Total DDx	14.3	143	ug/kg bw/day	No	2800	ug/kg	0.000025	0.07	ug/day	33	100	100	100
American eel - Large (> 50 cm)														
Metals	Arsenic	0.035	0.35	mg/kg bw/day	No	118	mg/kg	0.00024	0.0283	mg/day	1.8	1.9	0.52	1.9
Metals	Cadmium	0.001	0.01	mg/kg bw/day	Yes	46.6	mg/kg	0.00024	0.0112	mg/day	0.2	0.18	0.099	0.2
Metals	Chromium	0.19	-	mg/kg bw/day	Yes	1580	mg/kg	0.00024	0.3792	mg/day	61	3.1	125	125
Metals	Cobalt	0.013	0.13	mg/kg bw/day	Yes	25.6	mg/kg	0.00024	0.0061	mg/day	1.8	0.095	1.1	1.8
Metals	Copper	1.0	2.0	mg/kg bw/day	Yes	930	mg/kg	0.00024	0.2232	mg/day	11.9	30.6	14.7	30.6
Metals	Lead	134	-	mg/kg bw/day	No	2050	mg/kg	0.00024	0.492	mg/day	12.4	0.66	4.9	12.4
Metals	Mercury	5.0	12.5	ug/kg bw/day	Yes	24300	ug/kg	0.00024	5.832	ug/day	150	190	180	190
Metals	Methyl mercury	5.0	12.5	ug/kg bw/day	Yes	23	ug/kg	0.00024	0.0055	ug/day	3.4	170	190	190
Metals	Nickel	0.013	0.13	mg/kg bw/day	Yes	200	mg/kg	0.00024	0.048	mg/day	36.2	1.9	89.1	89.1
Metals	Selenium	0.106	0.19	mg/kg bw/day	No	5.2	mg/kg	0.00024	0.0012	mg/day	0.77	1.1	1.6	1.6
Metals	Silver	70	-	mg/kg bw/day	No	20.4	mg/kg	0.00024	0.0049	mg/day	0.042	0.78	0.19	0.78
Metals	Vanadium	0.019	0.19	mg/kg bw/day	Yes	110	mg/kg	0.00024	0.0264	mg/day	1.3	0.14	1.3	1.3
Metals	Zinc	19	38	mg/kg bw/day	No	2000	mg/kg	0.00024	0.48	mg/day	45.2	41.1	51.6	51.6
Butyltins	Tributyltin	1.200	12	ug/kg bw/day	Yes	270	ug/kg	0.00024	0.0648	ug/day	1.4	3.8	63	63
PAHs	Benzo(a)pyrene	30	40	ug/kg bw/day	Yes	41000	ug/kg	0.00024	9.84	ug/day	440	40	98	440
PAHs	Total PAHs	6200	18000	ug/kg bw/day	No	1E+06	ug/kg	0.00024	261.6	ug/day	5900	420	1200	5900
PCBs	Total PCB Congener:	5.0	50	ug/kg bw/day	Yes	28600	ug/kg	0.00024	6.864	ug/day	530	580	5100	5100
PCBs	PCB TEQ-Fish	0.0027	0.027	ng/kg bw/day	Yes	33.1	ng/kg	0.00024	0.0079	ng/day	0.44	1.1	3.1	3.1
PCDDs/PCI	PCDD/PCDF TEQ-Fisl	0.0027	0.027	ng/kg bw/day	Yes	51400	ng/kg	0.00024	12.336	ng/day	140	93	240	240
PCDDs/PCI	Total TEQ-Fish	0.0027	0.027	ng/kg bw/day	Yes	51400	ng/kg	0.00024	12.336	ng/day	140	93	240	240
OC Pesticic	Dieldrin	8.1	-	ug/kg bw/day	No	152	ug/kg	0.00024	0.0365	ng/day	2.6	9.1	47	47
OC Pesticic	Endosulfan I	7500	-	ug/kg bw/day	No	0.47	ug/kg	0.00024	0.0001	ng/day	1.7	7.7	3.2	7.7
OC Pesticic	Endrin	43	145	ug/kg bw/day	No	4.1	ug/kg	0.00024	0.001	ug/day	0.55	0.74	0.23	0.74
OC Pesticic	Total DDx	14.3	143	ug/kg bw/day	Yes	2800	ug/kg	0.00024	0.672	ug/day	33	100	340	340
Common carp														
Metals	Arsenic	0.035	0.35	mg/kg bw/day	No	118	mg/kg	0.0033	0.3894	mg/day	1.8	1.9	0.51	1.9
Metals	Cadmium	0.001	0.01	mg/kg bw/day	Yes	46.6	mg/kg	0.0033	0.1538	mg/day	0.2	0.18	0.073	0.2
Metals	Chromium	0.19	-	mg/kg bw/day	Yes	1580	mg/kg	0.0033	5.214	mg/day	61	3.1	23.2	61
Metals	Cobalt	0.013	0.13	mg/kg bw/day	No	25.6	mg/kg	0.0033	0.0845	mg/day	1.8	0.095	0.35	1.8
Metals	Copper	1.0	2.0	mg/kg bw/day	Yes	930	mg/kg	0.0033	3.069	mg/day	11.9	30.6	4.3	30.6
Metals	Lead	134	-	mg/kg bw/day	No	2050	mg/kg	0.0033	6.765	mg/day	12.4	0.66	3.9	12.4
Metals	Mercury	5.0	12.5	ug/kg bw/day	Yes	24300	ug/kg	0.0033	80.19	ug/day	150	190	71	190
Metals	Methyl mercury	5.0	12.5	ug/kg bw/day	Yes	23	ug/kg	0.0033	0.0759	ug/day	3.4	170	69	170
Metals	Nickel	0.013	0.13	mg/kg bw/day	Yes	200	mg/kg	0.0033	0.66	mg/day	36.2	1.9	15.8	36.2
Metals	Selenium	0.106	0.19	mg/kg bw/day	No	5.2	mg/kg	0.0033	0.0172	mg/day	0.77	1.1	0.89	1.1
Metals	Silver	70	-	mg/kg bw/day	No	20.4	mg/kg	0.0033	0.0673	mg/day	0.042	0.78	0.06	0.78
Metals	Vanadium	0.019	0.19	mg/kg bw/day	Yes	110	mg/kg	0.0033	0.363	mg/day	1.3	0.14	1.3	1.3
Metals	Zinc	19	38	mg/kg bw/day	No	2000	mg/kg	0.0033	6.6	mg/day	45.2	41.1	51.6	51.6
Butyltins	Tributyltin	1.200	12	ug/kg bw/day	Yes	270	ug/kg	0.0033	0.891	ug/day	1.4	3.8	63	63
PAHs	Benzo(a)pyrene	30	40	ug/kg bw/day	Yes	41000	ug/kg	0.0033	135.3	ug/day	440	40	63	440
PAHs	Total PAHs	6200	18000	ug/kg bw/day	No	1E+06	ug/kg	0.0033	3597	ug/day	5900	420	1100	5900
PCBs	Total PCB Congener:	5.0	50	ug/kg bw/day	Yes	28600	ug/kg	0.0033	94.38	ug/day	530	580	930	930
PCBs	PCB TEQ-Fish	0.0027	0.027	ng/kg bw/day	Yes	33.1	ng/kg	0.0033	0.1092	ng/day	0.44	1.1	0.89	1.1
PCDDs/PCI	PCDD/PCDF TEQ-Fisl	0.0027	0.027	ng/kg bw/day	Yes	51400	ng/kg	0.0033	169.62	ng/day	140	93	100	140
PCDDs/PCI	Total TEQ-Fish	0.0027	0.027	ng/kg bw/day	Yes	51400	ng/kg	0.0033	169.62	ng/day	140	93	100	140
OC Pesticic	Dieldrin	8.1	-	ug/kg bw/day	No	152	ug/kg	0.0033	0.5016	ng/day	2.6	9.1	28	28
OC Pesticic	Endosulfan I	7500	-	ug/kg bw/day	No	0.47	ug/kg	0.0033	0.0016	ng/day	1.7	7.7	1.3	7.7
OC Pesticic	Endrin	43	145	ug/kg bw/day	No	4.1	ug/kg	0.0033	0.0135	ug/day	0.55	0.74	0.69	0.74
OC Pesticic	Total DDx	14.3	143	ug/kg bw/day	No	2800	ug/kg	0.0033	9.24	ug/day	33	100	100	100
White sucker														
Metals	Arsenic	0.035	0.35	mg/kg bw/day	No	118	mg/kg	0.00077	0.0909	mg/day	1.8	1.9		1.9
Metals	Cadmium	0.001	0.01	mg/kg bw/day	Yes	46.6	mg/kg	0.00077	0.0359	mg/day	0.2	0.18		0.2
Metals	Chromium	0.19	-	mg/kg bw/day	Yes	1580	mg/kg	0.00077	1.2166	mg/day	61	3.1		61
Metals	Cobalt	0.013	0.13	mg/kg bw/day	Yes	25.6	mg/kg	0.00077	0.0197	mg/day	1.8	0.095		1.8
Metals	Copper	1.0	2.0	mg/kg bw/day	Yes	930	mg/kg	0.00077	0.7161	mg/day	11.9	30.6		30.6
Metals	Lead	134	-	mg/kg bw/day	No	2050	mg/kg	0.00077	1.5785	mg/day	12.4	0.66		12.4
Metals	Mercury	5.0	12.5	ug/kg bw/day	Yes	24300	ug/kg	0.00077	18.711	ug/day	150	190		190

Table A2-11. SLERA results for fish diet

Metals	Methyl mercury	5.0	12.5	ug/kg bw/day	Yes	23	ug/kg	0.00077	0.0177	ug/day	3.4	170		170
Metals	Nickel	0.013	0.13	mg/kg bw/day	Yes	200	mg/kg	0.00077	0.154	mg/day	36.2	1.9		36.2
Metals	Selenium	0.106	0.19	mg/kg bw/day	No	5.2	mg/kg	0.00077	0.004	mg/day	0.77	1.1		1.1
Metals	Silver	70	-	mg/kg bw/day	No	20.4	mg/kg	0.00077	0.0157	mg/day	0.042	0.78		0.78
Metals	Vanadium	0.019	0.19	mg/kg bw/day	Yes	110	mg/kg	0.00077	0.0847	mg/day	1.3	0.14		1.3
Metals	Zinc	19	38	mg/kg bw/day	No	2000	mg/kg	0.00077	1.54	mg/day	45.2	41.1		45.2
Butyltins	Tributyltin	1.200	12	ug/kg bw/day	No	270	ug/kg	0.00077	0.2079	ug/day	1.4	3.8		3.8
PAHs	Benzo(a)pyrene	30	40	ug/kg bw/day	Yes	41000	ug/kg	0.00077	31.57	ug/day	440	40		440
PAHs	Total PAHs	6200	18000	ug/kg bw/day	No	1E+06	ug/kg	0.00077	839.3	ug/day	5900	420		5900
PCBs	Total PCB Congener:	5.0	50	ug/kg bw/day	Yes	28600	ug/kg	0.00077	22.022	ug/day	530	580		580
PCBs	PCB TEQ-Fish	0.0027	0.027	ng/kg bw/day	Yes	33.1	ng/kg	0.00077	0.0255	ng/day	0.44	1.1		1.1
PCDDs/PCI	PCDD/PCDF TEQ-Fisl	0.0027	0.027	ng/kg bw/day	Yes	51400	ng/kg	0.00077	39.578	ng/day	140	93		140
PCDDs/PCI	Total TEQ-Fish	0.0027	0.027	ng/kg bw/day	Yes	51400	ng/kg	0.00077	39.578	ng/day	140	93		140
OC Pesticic	Dieldrin	8.1	-	ug/kg bw/day	No	152	ug/kg	0.00077	0.117	ng/day	2.6	9.1		9.1
OC Pesticic	Endosulfan I	7500	-	ug/kg bw/day	No	0.47	ug/kg	0.00077	0.0004	ng/day	1.7	7.7		7.7
OC Pesticic	Endrin	43	145	ug/kg bw/day	No	4.1	ug/kg	0.00077	0.0032	ug/day	0.55	0.74		0.74
OC Pesticic	Total DDx	14.3	143	ug/kg bw/day	No	2800	ug/kg	0.00077	2.156	ug/day	33	100		100
White catfish														
Metals	Arsenic	0.035	0.35	mg/kg bw/day	No	118	mg/kg	0.00074	0.0873	mg/day	1.8	1.9	0.51	1.9
Metals	Cadmium	0.001	0.01	mg/kg bw/day	Yes	46.6	mg/kg	0.00074	0.0345	mg/day	0.2	0.18	0.099	0.2
Metals	Chromium	0.19	-	mg/kg bw/day	Yes	1580	mg/kg	0.00074	1.1692	mg/day	61	3.1	31.7	61
Metals	Cobalt	0.013	0.13	mg/kg bw/day	Yes	25.6	mg/kg	0.00074	0.0189	mg/day	1.8	0.095	0.42	1.8
Metals	Copper	1.0	2.0	mg/kg bw/day	Yes	930	mg/kg	0.00074	0.6882	mg/day	11.9	30.6	5.4	30.6
Metals	Lead	134	-	mg/kg bw/day	No	2050	mg/kg	0.00074	1.517	mg/day	12.4	0.66	4.9	12.4
Metals	Mercury	5.0	12.5	ug/kg bw/day	Yes	24300	ug/kg	0.00074	17.982	ug/day	150	190	83	190
Metals	Methyl mercury	5.0	12.5	ug/kg bw/day	Yes	23	ug/kg	0.00074	0.017	ug/day	3.4	170	69	170
Metals	Nickel	0.013	0.13	mg/kg bw/day	Yes	200	mg/kg	0.00074	0.148	mg/day	36.2	1.9	22.1	36.2
Metals	Selenium	0.106	0.19	mg/kg bw/day	No	5.2	mg/kg	0.00074	0.0038	mg/day	0.77	1.1	0.89	1.1
Metals	Silver	70	-	mg/kg bw/day	No	20.4	mg/kg	0.00074	0.0151	mg/day	0.042	0.78	0.074	0.78
Metals	Vanadium	0.019	0.19	mg/kg bw/day	Yes	110	mg/kg	0.00074	0.0814	mg/day	1.3	0.14	1.3	1.3
Metals	Zinc	19	38	mg/kg bw/day	No	2000	mg/kg	0.00074	1.48	mg/day	45.2	41.1	51.6	51.6
Butyltins	Tributyltin	1.200	12	ug/kg bw/day	Yes	270	ug/kg	0.00074	0.1998	ug/day	1.4	3.8	63	63
PAHs	Benzo(a)pyrene	30	40	ug/kg bw/day	Yes	41000	ug/kg	0.00074	30.34	ug/day	440	40	98	440
PAHs	Total PAHs	6200	18000	ug/kg bw/day	No	1E+06	ug/kg	0.00074	806.6	ug/day	5900	420	1200	5900
PCBs	Total PCB Congener:	5.0	50	ug/kg bw/day	Yes	28600	ug/kg	0.00074	21.164	ug/day	530	580	930	930
PCBs	PCB TEQ-Fish	0.0027	0.027	ng/kg bw/day	Yes	33.1	ng/kg	0.00074	0.0245	ng/day	0.44	1.1	0.89	1.1
PCDDs/PCI	PCDD/PCDF TEQ-Fisl	0.0027	0.027	ng/kg bw/day	Yes	51400	ng/kg	0.00074	38.036	ng/day	140	93	100	140
PCDDs/PCI	Total TEQ-Fish	0.0027	0.027	ng/kg bw/day	Yes	51400	ng/kg	0.00074	38.036	ng/day	140	93	100	140
OC Pesticic	Dieldrin	8.1	-	ug/kg bw/day	No	152	ug/kg	0.00074	0.1125	ng/day	2.6	9.1	28	28
OC Pesticic	Endosulfan I	7500	-	ug/kg bw/day	No	0.47	ug/kg	0.00074	0.0003	ng/day	1.7	7.7	1.5	7.7
OC Pesticic	Endrin	43	145	ug/kg bw/day	No	4.1	ug/kg	0.00074	0.003	ug/day	0.55	0.74	0.69	0.74
OC Pesticic	Total DDx	14.3	143	ug/kg bw/day	No	2800	ug/kg	0.00074	2.072	ug/day	33	100	100	100
Smallmouth bass														
Metals	Arsenic	0.035	0.35	mg/kg bw/day	No	118	mg/kg	0.000018	0.0021	mg/day	1.8		0.51	1.8
Metals	Cadmium	0.001	0.01	mg/kg bw/day	Yes	46.6	mg/kg	0.000018	0.0008	mg/day	0.2		0.099	0.2
Metals	Chromium	0.19	-	mg/kg bw/day	Yes	1580	mg/kg	0.000018	0.0284	mg/day	61		31.7	61
Metals	Cobalt	0.013	0.13	mg/kg bw/day	Yes	25.6	mg/kg	0.000018	0.0005	mg/day	1.8		0.42	1.8
Metals	Copper	1.0	2.0	mg/kg bw/day	No	930	mg/kg	0.000018	0.0167	mg/day	11.9		5.4	11.9
Metals	Lead	134	-	mg/kg bw/day	No	2050	mg/kg	0.000018	0.0369	mg/day	12.4		4.9	12.4
Metals	Mercury	5.0	12.5	ug/kg bw/day	Yes	24300	ug/kg	0.000018	0.4374	ug/day	150		83	150
Metals	Methyl mercury	5.0	12.5	ug/kg bw/day	Yes	23	ug/kg	0.000018	0.0004	ug/day	3.4		69	69
Metals	Nickel	0.013	0.13	mg/kg bw/day	Yes	200	mg/kg	0.000018	0.0036	mg/day	36.2		22.1	36.2
Metals	Selenium	0.106	0.19	mg/kg bw/day	No	5.2	mg/kg	0.000018	9E-05	mg/day	0.77		0.89	0.89
Metals	Silver	70	-	mg/kg bw/day	No	20.4	mg/kg	0.000018	0.0004	mg/day	0.042		0.074	0.074
Metals	Vanadium	0.019	0.19	mg/kg bw/day	Yes	110	mg/kg	0.000018	0.002	mg/day	1.3		1.3	1.3
Metals	Zinc	19	38	mg/kg bw/day	No	2000	mg/kg	0.000018	0.036	mg/day	45.2		51.6	51.6
Butyltins	Tributyltin	1.200	12	ug/kg bw/day	Yes	270	ug/kg	0.000018	0.0049	ug/day	1.4		63	63
PAHs	Benzo(a)pyrene	30	40	ug/kg bw/day	Yes	41000	ug/kg	0.000018	0.738	ug/day	440		98	440
PAHs	Total PAHs	6200	18000	ug/kg bw/day	No	1E+06	ug/kg	0.000018	19.62	ug/day	5900		1200	5900
PCBs	Total PCB Congener:	5.0	50	ug/kg bw/day	Yes	28600	ug/kg	0.000018	0.5148	ug/day	530		930	930
PCBs	PCB TEQ-Fish	0.0027	0.027	ng/kg bw/day	Yes	33.1	ng/kg	0.000018	0.0006	ng/day	0.44		0.89	0.89
PCDDs/PCI	PCDD/PCDF TEQ-Fisl	0.0027	0.027	ng/kg bw/day	Yes	51400	ng/kg	0.000018	0.9252	ng/day	140		100	140
PCDDs/PCI	Total TEQ-Fish	0.0027	0.027	ng/kg bw/day	Yes	51400	ng/kg	0.000018	0.9252	ng/day	140		100	140
OC Pesticic	Dieldrin	8.1	-	ug/kg bw/day	No	152	ug/kg	0.000018	0.0027	ng/day	2.6		28	28
OC Pesticic	Endosulfan I	7500	-	ug/kg bw/day	No	0.47	ug/kg	0.000018	8E-06	ng/day	1.7		1.5	1.7
OC Pesticic	Endrin	43	145	ug/kg bw/day	No	4.1	ug/kg	0.000018	7E-05	ug/day	0.55		0.69	0.69
OC Pesticic	Total DDx	14.3	143	ug/kg bw/day	No	2800	ug/kg	0.000018	0.0504	ug/day	33		100	100
Northern pike														
Metals	Arsenic	0.035	0.35	mg/kg bw/day	No	118	mg/kg	0.00023	0.0271	mg/day		1.9	0.52	1.9
Metals	Cadmium	0.001	0.01	mg/kg bw/day	Yes	46.6	mg/kg	0.00023	0.0107	mg/day		0.18	0.099	0.18
Metals	Chromium	0.19	-	mg/kg bw/day	Yes	1580	mg/kg	0.00023	0.3634	mg/day		3.1	125	125
Metals	Cobalt	0.013	0.13	mg/kg bw/day	No	25.6	mg/kg	0.00023	0.0059	mg/day		0.095	1.1	1.1
Metals	Copper	1.0	2.0	mg/kg bw/day	Yes	930	mg/kg	0.00023	0.2139	mg/day		30.6	14.7	30.6
Metals	Lead	134	-	mg/kg bw/day	No	2050	mg/kg	0.00023	0.4715	mg/day		0.66	4.9	4.9
Metals	Mercury	5.0	12.5	ug/kg bw/day	Yes	24300	ug/kg	0.00023	5.589	ug/day		190	180	190
Metals	Methyl mercury	5.0	12.5	ug/kg bw/day	Yes	23	ug/kg	0.00023	0.0053	ug/day		170	190	190
Metals	Nickel	0.013	0.13	mg/kg bw/day	Yes	200	mg/kg	0.00023	0.046	mg/day		1.9	89.1	89.1
Metals	Selenium	0.106	0.19	mg/kg bw/day	No	5.2	mg/kg	0.00023	0.0012	mg/day		1.1	1.6	1.6
Metals	Silver	70	-	mg/kg bw/day	No	20.4	mg/kg	0.00023	0.0047	mg/day		0.78	0.19	0.78
Metals	Vanadium	0.019	0.19	mg/kg bw/day	Yes	110	mg/kg	0.00023	0.0253	mg/day		0.14	1.3	1.3
Metals	Zinc	19	38	mg/kg bw/day	No	2000	mg/kg	0.00023	0.46	mg/day		41.1	51.6	51.6
Butyltins	Tributyltin	1.200	12	ug/kg bw/day	Yes	270	ug/kg	0.00023	0.0621	ug/day		3.8	63	63
PAHs	Benzo(a)pyrene	30	40	ug/kg bw/day	No	41000	ug/kg	0.00023	9.43	ug/day		40	98	98
PAHs	Total PAHs	6200	18000	ug/kg bw/day	No	1E+06	ug/kg	0.00023	250.7	ug/day		420	1200	1200
PCBs	Total PCB Congener:	5.0	50	ug/kg bw/day	Yes	28600	ug/kg	0.00023	6.578	ug/day		580	5100	5100
PCBs	PCB TEQ-Fish	0.0027	0.027	ng/kg bw/day	Yes	33.1	ng/kg	0.00023	0.0076	ng/day		1.1	3.1	3.1
PCDDs/PCI	PCDD/PCDF TEQ-Fisl	0.0027	0.027	ng/kg bw/day	Yes	51400	ng/kg	0.00023	11.822	ng/day		93	240	240
PCDDs/PCI	Total TEQ-Fish	0.0027	0.027	ng/kg bw/day	Yes	51400	ng/kg	0.00023	11.822	ng/day		93	240	240
OC Pesticic	Dieldrin	8.1	-	ug/kg bw/day	No	152	ug/kg	0.00023	0.035	ng/day		9.1	47	47
OC Pesticic	Endosulfan I	7500	-	ug/kg bw/day	No	0.47	ug/kg	0.00023	0.0001	ng/day		7.7	3.2	7.7
OC Pesticic	Endrin	43	145	ug/kg bw/day	No	4.1	ug/kg	0.00023	0.0009	ug/day		0.74	0.23	0.74
OC Pesticic	Total DDx	14.3	143	ug/kg bw/day	No	2800	ug/kg	0.00023	0.644	ug/day		100	340	340

e Concentration), site-wide				Body Weight		IRdiet		Max HQ	
Units (ww)	FIR (kg ww/day	C_{prey}	Units (ww)	BW (kg)	SUF	Final Dose	Units	NOAEL HQ	LOAEL HQ
mg/kg	0.0002	0.0003	mg/day	0.0032	1	0.243	mg/kg bw/day	0.61	0.41
mg/kg	0.0002	4E-05	mg/day	0.0032	1	0.066	mg/kg bw/day	**66**	**6.6**
mg/kg	0.0002	0.0116	mg/day	0.0032	1	5.449	mg/kg bw/day	**29**	NC
mg/kg	0.0002	0.0003	mg/day	0.0032	1	0.136	mg/kg bw/day	0.97	0.097
mg/kg	0.0002	0.0023	mg/day	0.0032	1	1.782	mg/kg bw/day	**1.8**	0.89
mg/kg	0.0002	0.0024	mg/day	0.0032	1	3.107	mg/kg bw/day	0.023	NC
ug/kg	0.0002	0.0285	ug/day	0.0032	1	37.003	ug/kg bw/day	**250**	**25**
ug/kg	0.0002	0.0006	ug/day	0.0032	1	0.228	ug/kg bw/day	**1.5**	0.15
mg/kg	0.0002	0.0069	mg/day	0.0032	1	2.381	mg/kg bw/day	**17**	**1.7**
mg/kg	0.0002	0.0001	mg/day	0.0032	1	0.052	mg/kg bw/day	0.49	0.27
mg/kg	0.0002	8E-06	mg/day	0.0032	1	0.026	mg/kg bw/day	0.00037	NC
mg/kg	0.0002	0.0002	mg/day	0.0032	1	0.204	mg/kg bw/day	**11**	**1.1**
mg/kg	0.0002	0.0086	mg/day	0.0032	1	4.996	mg/kg bw/day	0.26	0.13
ug/kg	0.0002	0.0003	ug/day	0.0032	1	0.395	ug/kg bw/day	0.33	0.033
ug/kg	0.0002	0.0836	ug/day	0.0032	1	73.531	ug/kg bw/day	**2.5**	**1.8**
ug/kg	0.0002	1.121	ug/day	0.0032	1	1610.6	ug/kg bw/day	0.26	0.089
ug/kg	0.0002	0.1007	ug/day	0.0032	1	64.538	ug/kg bw/day	**13**	**1.3**
ng/kg	0.0002	8E-05	ng/day	0.0032	1	0.064	ng/kg bw/day	**24**	**2.4**
ng/kg	0.0002	0.0266	ng/day	0.0032	1	67.744	ng/kg bw/day	**25000**	**2500**
ng/kg	0.0002	0.0266	ng/day	0.0032	1	67.744	ng/kg bw/day	**25000**	**2500**
ug/kg	0.0002	0.0005	ng/day	0.0032	1	0.330	ug/kg bw/day	0.036	NC
ug/kg	0.0002	0.0003	ng/day	0.0032	1	0.101	ug/kg bw/day	0.0092	NC
ug/kg	0.0002	0.0001	ug/day	0.0032	1	0.037	ug/kg bw/day	0.00087	0.00026
ug/kg	0.0002	0.0063	ug/day	0.0032	1	5.197	ug/kg bw/day	0.36	0.036
mg/kg	0.0041	0.0078	mg/day	0.057	1	0.2215	mg/kg bw/day	0.55	0.37
mg/kg	0.0041	0.0008	mg/day	0.057	1	0.0479	mg/kg bw/day	**48**	**4.8**
mg/kg	0.0041	0.2501	mg/day	0.057	1	5.5242	mg/kg bw/day	**29**	NC
mg/kg	0.0041	0.0074	mg/day	0.057	1	0.1479	mg/kg bw/day	**1.1**	0.11
mg/kg	0.0041	0.1255	mg/day	0.057	1	2.87	mg/kg bw/day	**2.9**	**1.4**
mg/kg	0.0041	0.0508	mg/day	0.057	1	2.3665	mg/kg bw/day	0.018	NC
ug/kg	0.0041	0.779	ug/day	0.057	1	31.146	ug/kg bw/day	**210**	**21**
ug/kg	0.0041	0.697	ug/day	0.057	1	12.245	ug/kg bw/day	**82**	**8.2**
mg/kg	0.0041	0.1484	mg/day	0.057	1	2.7477	mg/kg bw/day	**20**	**2.0**
mg/kg	0.0041	0.0045	mg/day	0.057	1	0.0829	mg/kg bw/day	0.78	0.43
mg/kg	0.0041	0.0032	mg/day	0.057	1	0.0708	mg/kg bw/day	0.0010	NC
mg/kg	0.0041	0.0053	mg/day	0.057	1	0.1726	mg/kg bw/day	**9.1**	0.91
mg/kg	0.0041	0.2116	mg/day	0.057	1	5.1502	mg/kg bw/day	0.27	0.14
ug/kg	0.0041	0.2583	ug/day	0.057	1	4.7258	ug/kg bw/day	**3.9**	0.39
ug/kg	0.0041	1.804	ug/day	0.057	1	61.14	ug/kg bw/day	**2.0**	**1.5**
ug/kg	0.0041	24.19	ug/day	0.057	1	1208.4	ug/kg bw/day	0.19	0.067
ug/kg	0.0041	3.813	ug/day	0.057	1	87.467	ug/kg bw/day	**17**	**1.7**
ng/kg	0.0041	0.0045	ng/day	0.057	1	0.1029	ng/kg bw/day	**38**	**3.8**
ng/kg	0.0041	0.574	ng/day	0.057	1	47.042	ng/kg bw/day	**17000**	**1700**
ng/kg	0.0041	0.574	ng/day	0.057	1	47.042	ng/kg bw/day	**17000**	**1700**
ug/kg	0.0041	0.1148	ng/day	0.057	1	2.1234	ug/kg bw/day	0.23	NC
ug/kg	0.0041	0.0316	ng/day	0.057	1	0.5542	ug/kg bw/day	0.050	NC
ug/kg	0.0041	0.003	ug/day	0.057	1	0.0562	ug/kg bw/day	0.0013	0.00039
ug/kg	0.0041	0.41	ug/day	0.057	1	9.207	ug/kg bw/day	0.64	0.064
mg/kg	0.036	0.0684	mg/day	0.74	1	0.2088	mg/kg bw/day	0.52	0.35
mg/kg	0.036	0.0072	mg/day	0.74	1	0.0557	mg/kg bw/day	**56**	**5.6**
mg/kg	0.036	2.196	mg/day	0.74	1	4.5262	mg/kg bw/day	**24**	NC
mg/kg	0.036	0.0648	mg/day	0.74	1	0.1128	mg/kg bw/day	0.81	0.081
mg/kg	0.036	1.1016	mg/day	0.74	1	2.4061	mg/kg bw/day	**2.4**	**1.2**
mg/kg	0.036	0.4464	mg/day	0.74	1	2.6255	mg/kg bw/day	0.020	NC
ug/kg	0.036	6.84	ug/day	0.74	1	33.215	ug/kg bw/day	**220**	**22**
ug/kg	0.036	6.12	ug/day	0.74	1	8.293	ug/kg bw/day	**55**	**5.5**
mg/kg	0.036	1.3032	mg/day	0.74	1	1.9584	mg/kg bw/day	**14**	**1.4**
mg/kg	0.036	0.0396	mg/day	0.74	1	0.0586	mg/kg bw/day	0.55	0.31
mg/kg	0.036	0.0281	mg/day	0.74	1	0.0581	mg/kg bw/day	0.00083	NC
mg/kg	0.036	0.0468	mg/day	0.74	1	0.1718	mg/kg bw/day	**9.0**	0.90
mg/kg	0.036	1.8576	mg/day	0.74	1	4.4832	mg/kg bw/day	0.24	0.12
ug/kg	0.036	2.268	ug/day	0.74	1	3.3312	ug/kg bw/day	**2.8**	0.28
ug/kg	0.036	15.84	ug/day	0.74	1	61.851	ug/kg bw/day	**2.1**	**1.5**
ug/kg	0.036	212.4	ug/day	0.74	1	1362.3	ug/kg bw/day	0.22	0.076
ug/kg	0.036	33.48	ug/day	0.74	1	73.457	ug/kg bw/day	**15**	**1.5**
ng/kg	0.036	0.0396	ng/day	0.74	1	0.0862	ng/kg bw/day	**32**	**3.2**
ng/kg	0.036	5.04	ng/day	0.74	1	57.516	ng/kg bw/day	**21000**	**2100**
ng/kg	0.036	5.04	ng/day	0.74	1	57.516	ng/kg bw/day	**21000**	**2100**
ug/kg	0.036	1.008	ng/day	0.74	1	1.5121	ug/kg bw/day	0.17	NC
ug/kg	0.036	0.2772	ng/day	0.74	1	0.3751	ug/kg bw/day	0.034	NC
ug/kg	0.036	0.0266	ug/day	0.74	1	0.04	ug/kg bw/day	0.00093	0.00028
ug/kg	0.036	3.6	ug/day	0.74	1	7.627	ug/kg bw/day	0.53	0.053
mg/kg	0.0054	0.0103	mg/day	0.078	1	0.1482	mg/kg bw/day	0.37	0.25
mg/kg	0.0054	0.0011	mg/day	0.078	1	0.0204	mg/kg bw/day	**20**	**2.0**
mg/kg	0.0054	0.3294	mg/day	0.078	1	4.4459	mg/kg bw/day	**23**	NC
mg/kg	0.0054	0.0097	mg/day	0.078	1	0.1282	mg/kg bw/day	0.92	0.092
mg/kg	0.0054	0.1652	mg/day	0.078	1	2.2496	mg/kg bw/day	**2.2**	**1.1**
mg/kg	0.0054	0.067	mg/day	0.078	1	1.1476	mg/kg bw/day	0.0086	NC
ug/kg	0.0054	1.026	ug/day	0.078	1	16.581	ug/kg bw/day	**110**	**11**
ug/kg	0.0054	0.918	ug/day	0.078	1	11.772	ug/kg bw/day	**78**	**7.8**
mg/kg	0.0054	0.1955	mg/day	0.078	1	2.5344	mg/kg bw/day	**18**	**1.8**
mg/kg	0.0054	0.0059	mg/day	0.078	1	0.0769	mg/kg bw/day	0.73	0.40
mg/kg	0.0054	0.0042	mg/day	0.078	1	0.0569	mg/kg bw/day	0.00081	NC
mg/kg	0.0054	0.007	mg/day	0.078	1	0.1055	mg/kg bw/day	**5.6**	0.56

mg/kg	0.0054	0.2786	mg/day	0.078	1	3.8544	mg/kg bw/day	0.20	0.10
ug/kg	0.0054	0.3402	ug/day	0.078	1	4.3996	ug/kg bw/day	**3.7**	0.37
ug/kg	0.0054	2.376	ug/day	0.078	1	36.244	ug/kg bw/day	**1.2**	0.91
ug/kg	0.0054	31.86	ug/day	0.078	1	562.18	ug/kg bw/day	0.091	0.031
ug/kg	0.0054	5.022	ug/day	0.078	1	68.418	ug/kg bw/day	**14**	**1.4**
ng/kg	0.0054	0.0059	ng/day	0.078	1	0.0808	ng/kg bw/day	**30**	**3.0**
ng/kg	0.0054	0.756	ng/day	0.078	1	16.941	ng/kg bw/day	**6300**	**630**
ng/kg	0.0054	0.756	ng/day	0.078	1	16.941	ng/kg bw/day	**6300**	**630**
ug/kg	0.0054	0.1512	ng/day	0.078	1	1.9599	ug/kg bw/day	0.22	NC
ug/kg	0.0054	0.0416	ng/day	0.078	1	0.5331	ug/kg bw/day	0.048	NC
ug/kg	0.0054	0.004	ug/day	0.078	1	0.0518	ug/kg bw/day	0.0012	0.00036
ug/kg	0.0054	0.54	ug/day	0.078	1	7.3179	ug/kg bw/day	0.51	0.051
mg/kg	0.0025	0.0048	mg/day	0.032	1	0.2406	mg/kg bw/day	0.60	0.40
mg/kg	0.0025	0.0005	mg/day	0.032	1	0.052	mg/kg bw/day	**52**	**5.2**
mg/kg	0.0025	0.1525	mg/day	0.032	1	6	mg/kg bw/day	**32**	NC
mg/kg	0.0025	0.0045	mg/day	0.032	1	0.1606	mg/kg bw/day	**1.1**	0.11
mg/kg	0.0025	0.0765	mg/day	0.032	1	3.1172	mg/kg bw/day	**3.1**	**1.6**
mg/kg	0.0025	0.031	mg/day	0.032	1	2.5703	mg/kg bw/day	0.019	NC
ug/kg	0.0025	0.475	ug/day	0.032	1	33.828	ug/kg bw/day	**230**	**23**
ug/kg	0.0025	0.425	ug/day	0.032	1	13.299	ug/kg bw/day	**89**	**8.9**
mg/kg	0.0025	0.0905	mg/day	0.032	1	2.9844	mg/kg bw/day	**21**	**2.1**
mg/kg	0.0025	0.0028	mg/day	0.032	1	0.09	mg/kg bw/day	0.85	0.47
mg/kg	0.0025	0.002	mg/day	0.032	1	0.0769	mg/kg bw/day	0.0011	NC
mg/kg	0.0025	0.0033	mg/day	0.032	1	0.1875	mg/kg bw/day	**9.9**	0.99
mg/kg	0.0025	0.129	mg/day	0.032	1	5.5938	mg/kg bw/day	0.29	0.15
ug/kg	0.0025	0.1575	ug/day	0.032	1	5.1328	ug/kg bw/day	**4.3**	0.43
ug/kg	0.0025	1.1	ug/day	0.032	1	66.406	ug/kg bw/day	**2.2**	**1.7**
ug/kg	0.0025	14.75	ug/day	0.032	1	1312.5	ug/kg bw/day	0.21	0.073
ug/kg	0.0025	2.325	ug/day	0.032	1	95	ug/kg bw/day	**19**	**1.9**
ng/kg	0.0025	0.0028	ng/day	0.032	1	0.1118	ng/kg bw/day	**41**	**4.1**
ng/kg	0.0025	0.35	ng/day	0.032	1	51.094	ng/kg bw/day	**19000**	**1900**
ng/kg	0.0025	0.35	ng/day	0.032	1	51.094	ng/kg bw/day	**19000**	**1900**
ug/kg	0.0025	0.07	ng/day	0.032	1	2.3063	ug/kg bw/day	0.25	NC
ug/kg	0.0025	0.0193	ng/day	0.032	1	0.6019	ug/kg bw/day	0.055	NC
ug/kg	0.0025	0.0019	ug/day	0.032	1	0.061	ug/kg bw/day	0.0014	0.00042
ug/kg	0.0025	0.25	ug/day	0.032	1	10	ug/kg bw/day	0.70	0.070
mg/kg	0.024	0.0456	mg/day	0.45	1	0.1643	mg/kg bw/day	0.41	0.27
mg/kg	0.024	0.0048	mg/day	0.45	1	0.0355	mg/kg bw/day	**36**	**3.6**
mg/kg	0.024	3	mg/day	0.45	1	7.5093	mg/kg bw/day	**40**	NC
mg/kg	0.024	0.0432	mg/day	0.45	1	0.1097	mg/kg bw/day	0.78	0.078
mg/kg	0.024	0.7344	mg/day	0.45	1	2.128	mg/kg bw/day	**2.1**	**1.1**
mg/kg	0.024	0.2976	mg/day	0.45	1	1.7547	mg/kg bw/day	0.013	NC
ug/kg	0.024	4.56	ug/day	0.45	1	23.093	ug/kg bw/day	**150**	**15**
ug/kg	0.024	4.56	ug/day	0.45	1	10.146	ug/kg bw/day	**68**	**6.8**
mg/kg	0.024	2.1384	mg/day	0.45	1	4.8587	mg/kg bw/day	**35**	**3.5**
mg/kg	0.024	0.0384	mg/day	0.45	1	0.0881	mg/kg bw/day	0.83	0.46
mg/kg	0.024	0.0187	mg/day	0.45	1	0.0525	mg/kg bw/day	0.00075	NC
mg/kg	0.024	0.0312	mg/day	0.45	1	0.128	mg/kg bw/day	**6.7**	0.67
mg/kg	0.024	1.2384	mg/day	0.45	1	3.8187	mg/kg bw/day	0.20	0.10
ug/kg	0.024	1.512	ug/day	0.45	1	3.504	ug/kg bw/day	**2.9**	0.29
ug/kg	0.024	10.56	ug/day	0.45	1	45.333	ug/kg bw/day	**1.5**	**1.1**
ug/kg	0.024	141.6	ug/day	0.45	1	896	ug/kg bw/day	0.14	0.050
ug/kg	0.024	122.4	ug/day	0.45	1	287.25	ug/kg bw/day	**57**	**5.7**
ng/kg	0.024	0.0744	ng/day	0.45	1	0.183	ng/kg bw/day	**68**	**6.8**
ng/kg	0.024	5.76	ng/day	0.45	1	40.213	ng/kg bw/day	**15000**	**1500**
ng/kg	0.024	5.76	ng/day	0.45	1	40.213	ng/kg bw/day	**15000**	**1500**
ug/kg	0.024	1.128	ng/day	0.45	1	2.5877	ug/kg bw/day	0.28	NC
ug/kg	0.024	0.1848	ng/day	0.45	1	0.4109	ug/kg bw/day	0.037	NC
ug/kg	0.024	0.0178	ug/day	0.45	1	0.0417	ug/kg bw/day	0.00097	0.00029
ug/kg	0.024	8.16	ug/day	0.45	1	19.627	ug/kg bw/day	**1.4**	0.14
mg/kg	0.11	0.209	mg/day	2.7	1	0.2216	mg/kg bw/day	0.55	0.37
mg/kg	0.11	0.022	mg/day	2.7	1	0.0651	mg/kg bw/day	**65**	**6.5**
mg/kg	0.11	6.71	mg/day	2.7	1	4.4163	mg/kg bw/day	**23**	NC
mg/kg	0.11	0.198	mg/day	2.7	1	0.1046	mg/kg bw/day	0.75	0.075
mg/kg	0.11	3.366	mg/day	2.7	1	2.3833	mg/kg bw/day	**2.4**	**1.2**
mg/kg	0.11	1.364	mg/day	2.7	1	3.0107	mg/kg bw/day	0.022	NC
ug/kg	0.11	20.9	ug/day	2.7	1	37.441	ug/kg bw/day	**250**	**25**
ug/kg	0.11	18.7	ug/day	2.7	1	6.954	ug/kg bw/day	**46**	**4.6**
mg/kg	0.11	3.982	mg/day	2.7	1	1.7193	mg/kg bw/day	**12**	**1.2**
mg/kg	0.11	0.121	mg/day	2.7	1	0.0512	mg/kg bw/day	0.48	0.27
mg/kg	0.11	0.0858	mg/day	2.7	1	0.0567	mg/kg bw/day	0.00081	NC
mg/kg	0.11	0.143	mg/day	2.7	1	0.1874	mg/kg bw/day	**9.9**	0.99
mg/kg	0.11	5.676	mg/day	2.7	1	4.5467	mg/kg bw/day	0.24	0.12
ug/kg	0.11	6.93	ug/day	2.7	1	2.8967	ug/kg bw/day	**2.4**	0.24
ug/kg	0.11	48.4	ug/day	2.7	1	68.037	ug/kg bw/day	**2.3**	**1.7**
ug/kg	0.11	649	ug/day	2.7	1	1572.6	ug/kg bw/day	0.25	0.087
ug/kg	0.11	102.3	ug/day	2.7	1	72.844	ug/kg bw/day	**15**	**1.5**
ng/kg	0.11	0.121	ng/day	2.7	1	0.0853	ng/kg bw/day	**32**	**3.2**
ng/kg	0.11	15.4	ng/day	2.7	1	68.526	ng/kg bw/day	**25000**	**2500**
ng/kg	0.11	15.4	ng/day	2.7	1	68.526	ng/kg bw/day	**25000**	**2500**
ug/kg	0.11	3.08	ng/day	2.7	1	1.3265	ug/kg bw/day	0.15	NC
ug/kg	0.11	0.847	ng/day	2.7	1	0.3143	ug/kg bw/day	0.029	NC
ug/kg	0.11	0.0814	ug/day	2.7	1	0.0352	ug/kg bw/day	0.00082	0.00024
ug/kg	0.11	11	ug/day	2.7	1	7.4963	ug/kg bw/day	0.52	0.052
mg/kg	0.039	0.0741	mg/day	0.79	1	0.2088	mg/kg bw/day	0.52	0.35
mg/kg	0.039	0.0078	mg/day	0.79	1	0.0553	mg/kg bw/day	**55**	**5.5**
mg/kg	0.039	2.379	mg/day	0.79	1	4.5514	mg/kg bw/day	**24**	NC
mg/kg	0.039	0.0702	mg/day	0.79	1	0.1138	mg/kg bw/day	0.81	0.081
mg/kg	0.039	1.1934	mg/day	0.79	1	2.4171	mg/kg bw/day	**2.4**	**1.2**
mg/kg	0.039	0.4836	mg/day	0.79	1	2.6103	mg/kg bw/day	0.019	NC
ug/kg	0.039	7.41	ug/day	0.79	1	33.065	ug/kg bw/day	**220**	**22**

ug/kg	0.039	6.63	ug/day	0.79	1	8.4148	ug/kg bw/day	**56**	**5.6**
mg/kg	0.039	1.4118	mg/day	0.79	1	1.982	mg/kg bw/day	**14**	**1.4**
mg/kg	0.039	0.0429	mg/day	0.79	1	0.0594	mg/kg bw/day	0.56	0.31
mg/kg	0.039	0.0304	mg/day	0.79	1	0.0584	mg/kg bw/day	0.00083	NC
mg/kg	0.039	0.0507	mg/day	0.79	1	0.1714	mg/kg bw/day	**9.0**	0.90
mg/kg	0.039	1.7628	mg/day	0.79	1	4.1808	mg/kg bw/day	0.22	0.11
ug/kg	0.039	0.1482	ug/day	0.79	1	0.4508	ug/kg bw/day	0.38	0.038
ug/kg	0.039	17.16	ug/day	0.79	1	61.684	ug/kg bw/day	**2.1**	**1.5**
ug/kg	0.039	230.1	ug/day	0.79	1	1353.7	ug/kg bw/day	0.22	0.075
ug/kg	0.039	22.62	ug/day	0.79	1	56.509	ug/kg bw/day	**11**	**1.1**
ng/kg	0.039	0.0429	ng/day	0.79	1	0.0866	ng/kg bw/day	**32**	**3.2**
ng/kg	0.039	5.46	ng/day	0.79	1	57.01	ng/kg bw/day	**21000**	**2100**
ng/kg	0.039	5.46	ng/day	0.79	1	57.01	ng/kg bw/day	**21000**	**2100**
ug/kg	0.039	0.3549	ng/day	0.79	1	0.5974	ug/kg bw/day	0.066	NC
ug/kg	0.039	0.3003	ng/day	0.79	1	0.3806	ug/kg bw/day	0.035	NC
ug/kg	0.039	0.0289	ug/day	0.79	1	0.0405	ug/kg bw/day	0.00094	0.00028
ug/kg	0.039	3.9	ug/day	0.79	1	7.6658	ug/kg bw/day	0.54	0.054
mg/kg	0.037	0.0703	mg/day	0.75	1	0.2102	mg/kg bw/day	0.53	0.35
mg/kg	0.037	0.0074	mg/day	0.75	1	0.0558	mg/kg bw/day	**56**	**5.6**
mg/kg	0.037	2.257	mg/day	0.75	1	4.5683	mg/kg bw/day	**24**	NC
mg/kg	0.037	0.0666	mg/day	0.75	1	0.1141	mg/kg bw/day	0.81	0.081
mg/kg	0.037	1.1322	mg/day	0.75	1	2.4272	mg/kg bw/day	**2.4**	**1.2**
mg/kg	0.037	0.4588	mg/day	0.75	1	2.6344	mg/kg bw/day	0.020	NC
ug/kg	0.037	7.03	ug/day	0.75	1	33.349	ug/kg bw/day	**220**	**22**
ug/kg	0.037	6.29	ug/day	0.75	1	8.4094	ug/kg bw/day	**56**	**5.6**
mg/kg	0.037	1.3394	mg/day	0.75	1	1.9832	mg/kg bw/day	**14**	**1.4**
mg/kg	0.037	0.0407	mg/day	0.75	1	0.0594	mg/kg bw/day	0.56	0.31
mg/kg	0.037	0.0289	mg/day	0.75	1	0.0586	mg/kg bw/day	0.00084	NC
mg/kg	0.037	0.0481	mg/day	0.75	1	0.1727	mg/kg bw/day	**9.1**	0.91
mg/kg	0.037	1.9092	mg/day	0.75	1	4.5189	mg/kg bw/day	0.24	0.12
ug/kg	0.037	2.331	ug/day	0.75	1	3.3744	ug/kg bw/day	**2.8**	0.28
ug/kg	0.037	16.28	ug/day	0.75	1	62.16	ug/kg bw/day	**2.1**	**1.6**
ug/kg	0.037	218.3	ug/day	0.75	1	1366.5	ug/kg bw/day	0.22	0.076
ug/kg	0.037	34.41	ug/day	0.75	1	74.099	ug/kg bw/day	**15**	**1.5**
ng/kg	0.037	0.0407	ng/day	0.75	1	0.0869	ng/kg bw/day	**32**	**3.2**
ng/kg	0.037	5.18	ng/day	0.75	1	57.621	ng/kg bw/day	**21000**	**2100**
ng/kg	0.037	5.18	ng/day	0.75	1	57.621	ng/kg bw/day	**21000**	**2100**
ug/kg	0.037	1.036	ng/day	0.75	1	1.5313	ug/kg bw/day	0.17	NC
ug/kg	0.037	0.2849	ng/day	0.75	1	0.3803	ug/kg bw/day	0.035	NC
ug/kg	0.037	0.0274	ug/day	0.75	1	0.0406	ug/kg bw/day	0.00094	0.00028
ug/kg	0.037	3.7	ug/day	0.75	1	7.696	ug/kg bw/day	0.54	0.054
mg/kg	0.0089	0.016	mg/day	0.14	1	0.1296	mg/kg bw/day	0.32	0.22
mg/kg	0.0089	0.0018	mg/day	0.14	1	0.0187	mg/kg bw/day	**19**	**1.9**
mg/kg	0.0089	0.5429	mg/day	0.14	1	4.081	mg/kg bw/day	**21**	NC
mg/kg	0.0089	0.016	mg/day	0.14	1	0.1177	mg/kg bw/day	0.84	0.084
mg/kg	0.0089	0.1059	mg/day	0.14	1	0.8761	mg/kg bw/day	0.88	0.44
mg/kg	0.0089	0.1104	mg/day	0.14	1	1.0519	mg/kg bw/day	0.0078	NC
ug/kg	0.0089	1.335	ug/day	0.14	1	12.66	ug/kg bw/day	**84**	**8.4**
ug/kg	0.0089	0.6141	ug/day	0.14	1	4.3894	ug/kg bw/day	**29**	**2.9**
mg/kg	0.0089	0.3222	mg/day	0.14	1	2.327	mg/kg bw/day	**17**	**1.7**
mg/kg	0.0089	0.0079	mg/day	0.14	1	0.0572	mg/kg bw/day	0.54	0.30
mg/kg	0.0089	0.0007	mg/day	0.14	1	0.0073	mg/kg bw/day	0.00010	NC
mg/kg	0.0089	0.0116	mg/day	0.14	1	0.0968	mg/kg bw/day	**5.1**	0.51
mg/kg	0.0089	0.4592	mg/day	0.14	1	3.5374	mg/kg bw/day	0.19	0.093
ug/kg	0.0089	0.5607	ug/day	0.14	1	4.0397	ug/kg bw/day	**3.4**	0.34
ug/kg	0.0089	3.916	ug/day	0.14	1	33.243	ug/kg bw/day	**1.1**	0.83
ug/kg	0.0089	52.51	ug/day	0.14	1	515.21	ug/kg bw/day	0.083	0.029
ug/kg	0.0089	8.277	ug/day	0.14	1	62.799	ug/kg bw/day	**13**	**1.3**
ng/kg	0.0089	0.0079	ng/day	0.14	1	0.0608	ng/kg bw/day	**23**	**2.3**
ng/kg	0.0089	1.246	ng/day	0.14	1	15.509	ng/kg bw/day	**5700**	**570**
ng/kg	0.0089	1.246	ng/day	0.14	1	15.509	ng/kg bw/day	**5700**	**570**
ug/kg	0.0089	0.2492	ng/day	0.14	1	1.7995	ug/kg bw/day	0.20	NC
ug/kg	0.0089	0.0151	ng/day	0.14	1	0.1081	ug/kg bw/day	0.0098	NC
ug/kg	0.0089	0.0061	ug/day	0.14	1	0.0444	ug/kg bw/day	0.0010	0.00031
ug/kg	0.0089	0.89	ug/day	0.14	1	6.7171	ug/kg bw/day	0.47	0.047
mg/kg	0.11	0.209	mg/day	2.8	1	0.0843	mg/kg bw/day	0.21	0.14
mg/kg	0.11	0.0198	mg/day	2.8	1	0.0109	mg/kg bw/day	**11**	**1.1**
mg/kg	0.11	13.75	mg/day	2.8	1	5.0405	mg/kg bw/day	**27**	NC
mg/kg	0.11	0.121	mg/day	2.8	1	0.0453	mg/kg bw/day	0.32	0.032
mg/kg	0.11	3.366	mg/day	2.8	1	1.2785	mg/kg bw/day	**1.3**	0.64
mg/kg	0.11	0.539	mg/day	2.8	1	0.3609	mg/kg bw/day	0.0027	NC
ug/kg	0.11	20.9	mg/day	2.8	1	9.4604	ug/kg bw/day	**63**	**6.3**
ug/kg	0.11	20.9	ug/day	2.8	1	7.4662	ug/kg bw/day	**50**	**5.0**
mg/kg	0.11	9.801	ug/day	2.8	1	3.5168	mg/kg bw/day	**25**	**2.5**
mg/kg	0.11	0.176	mg/day	2.8	1	0.0633	mg/kg bw/day	0.60	0.33
mg/kg	0.11	0.0858	mg/day	2.8	1	0.0323	mg/kg bw/day	0.00046	NC
mg/kg	0.11	0.143	mg/day	2.8	1	0.0601	mg/kg bw/day	**3.2**	0.32
mg/kg	0.11	5.676	mg/day	2.8	1	2.1914	mg/kg bw/day	0.12	0.058
ug/kg	0.11	6.93	mg/day	2.8	1	2.4972	ug/kg bw/day	**2.1**	0.21
ug/kg	0.11	10.78	ug/day	2.8	1	7.2179	ug/kg bw/day	0.24	0.18
ug/kg	0.11	132	ug/day	2.8	1	136.68	ug/kg bw/day	0.022	0.0076
ug/kg	0.11	561	ug/day	2.8	1	202.71	ug/kg bw/day	**41**	**4.1**
ng/kg	0.11	0.341	ug/day	2.8	1	0.1245	ng/kg bw/day	**46**	**4.6**
ng/kg	0.11	26.4	ng/day	2.8	1	13.651	ng/kg bw/day	**5100**	**510**
ng/kg	0.11	26.4	ng/day	2.8	1	13.651	ng/kg bw/day	**5100**	**510**
ug/kg	0.11	5.17	ng/day	2.8	1	1.8589	ug/kg bw/day	0.20	NC
ug/kg	0.11	0.847	ng/day	2.8	1	0.3025	ug/kg bw/day	0.028	NC
ug/kg	0.11	0.0814	ng/day	2.8	1	0.0294	ug/kg bw/day	0.00068	0.00020
ug/kg	0.11	37.4	ug/day	2.8	1	13.587	ug/kg bw/day	0.95	0.095

Spcies	Fish Size evaluated
Belted Kingfisher	≤ 18 cm
Great Blue Heron	All LPRSA fish
Mink	All LPRSA fish
River Otter	All LPRSA fish

Table A2-12. SLERA results for wildlife diet

		TSV				Sediment					Surface Water, RM 4 to RM 17.4 only				
COI Group	COI	NOAEL	LOAEL	Units	Selected as COPEC?	Max C_{sed}	Units (dw)	SIR (kg dw/day)	C_{sed}	Units (dw)	Max C_{SW}	Units	WIR (L/day)	C_{SW}	Units (ww)
Spotted Sandpiper															
Metals	Arsenic	5.5	22	mg/kg bw/day	No	37.4	mg/kg	0.0018	0.067	mg/day	0.003	mg/l	0.0061	2E-05	mg/day
Metals	Cadmium	0.08	10.4	mg/kg bw/day	Yes	34.7	mg/kg	0.0018	0.062	mg/day	0.0009	mg/l	0.0061	5E-06	mg/day
Metals	Chromium	1	5	mg/kg bw/day	Yes	1180	mg/kg	0.0018	2.124	mg/day	0.0274	mg/l	0.0061	2E-04	mg/day
Metals	Cobalt	2.31	23.1	mg/kg bw/day	No	16.5	mg/kg	0.0018	0.03	mg/day	0.0023	mg/l	0.0061	1E-05	mg/day
Metals	Copper	2.3	4.7	mg/kg bw/day	Yes	706	mg/kg	0.0018	1.271	mg/day	0.0417	mg/l	0.0061	3E-04	mg/day
Metals	Lead	0.19	1.9	mg/kg bw/day	Yes	2050	mg/kg	0.0018	3.69	mg/day	0.0487	mg/l	0.0061	3E-04	mg/day
Metals	Mercury	13	26	ug/kg bw/day	Yes	21500	ug/kg	0.0018	38.7	ug/day	0.407	ug/l	0.0061	0.002	ug/day
Metals	Methyl mercury	13	26	ug/kg bw/day	No	23	ug/kg	0.0018	0.041	ug/day	0.0022	ug/l	0.0061	1E-05	ug/day
Metals	Nickel	1.38	56.3	mg/kg bw/day	Yes	130	mg/kg	0.0018	0.234	mg/day	0.0079	mg/l	0.0061	5E-05	mg/day
Metals	Selenium	0.23	0.93	mg/kg bw/day	Yes	3.2	mg/kg	0.0018	0.006	mg/day	0.0035	mg/l	0.0061	2E-05	mg/day
Metals	Thallium	2.4	24	mg/kg bw/day	No	0.52	mg/kg	0.0018	9E-04	mg/day	7E-05	mg/l	0.0061	4E-07	mg/day
Metals	Vanadium	1.2	2.3	mg/kg bw/day	Yes	110	mg/kg	0.0018	0.198	mg/day	0.0076	mg/l	0.0061	5E-05	mg/day
Metals	Zinc	17.2	172	mg/kg bw/day	Yes	1710	mg/kg	0.0018	3.078	mg/day	0.106	mg/l	0.0061	6E-04	mg/day
Butyltins	Tributyltin	730	45900	ug/kg bw/day	No	180	ug/kg	0.0018	0.324	ug/day	0.026	ug/l	0.0061	2E-04	ug/day
PAHs	Total HPAHs	48	480	ug/kg bw/day	Yes	1E+05	ug/kg	0.0018	205.2	ug/day	4.55	ug/l	0.0061	0.028	ug/day
PAHs	Total LPAHs	670	6700	ug/kg bw/day	Yes	55000	ug/kg	0.0018	99	ug/day	0.42	ug/l	0.0061	0.003	ug/day
PCBs	Total PCB Congeners	400	500	ug/kg bw/day	Yes	16900	ug/kg	0.0018	30.42	ug/day	0.183	ug/l	0.0061	0.001	ug/day
PCBs	PCB TEQ-Bird	2.8	28	ng/kg bw/day	Yes	5480	ng/kg	0.0018	9.864	ng/day	0.0333	ng/l	0.0061	2E-04	ng/day
PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	2.8	28	ng/kg bw/day	Yes	35000	ng/kg	0.0018	63	ng/day	1.88	ng/l	0.0061	0.011	ng/day
PCDDs/PCDFs	Total TEQ-Bird	2.8	28	ng/kg bw/day	Yes	37000	ng/kg	0.0018	66.6	ng/day	1.91	ng/l	0.0061	0.012	ng/day
SVOCs	Bis-(2-ethylhexyl)phth	68000	-	ug/kg bw/day	No	3E+05	ug/kg	0.0018	516.6	ug/day	6	ug/l	0.0061	0.037	ug/day
OC Pesticides	Aldrin	4	40	ug/kg bw/day	No	5.91	ug/kg	0.0018	0.011	ug/day	0.0005	ug/l	0.0061	3E-06	ug/day
OC Pesticides	Dieldrin	54	180	ug/kg bw/day	No	24.4	ug/kg	0.0018	0.044	ug/day	0.0032	ug/l	0.0061	2E-05	ug/day
OC Pesticides	Endosulfan I	10000	-	ug/kg bw/day	No	0.33	ug/kg	0.0018	6E-04	ug/day	0.0001	ug/l	0.0061	9E-07	ug/day
OC Pesticides	Endosulfan II	10000	-	ug/kg bw/day	No	4.4	ug/kg	0.0018	0.008	ug/day	0.0004	ug/l	0.0061	3E-06	ug/day
OC Pesticides	Endrin	70	200	ug/kg bw/day	No	4.1	ug/kg	0.0018	0.007	ug/day	0.0002	ug/l	0.0061	1E-06	ug/day
OC Pesticides	gamma-BHC (Lindane)	1600	3600	ug/kg bw/day	No	9.41	ug/kg	0.0018	0.017	ug/day	0.0003	ug/l	0.0061	2E-06	ug/day
OC Pesticides	Heptachlor	500	5000	ug/kg bw/day	No	1.6	ug/kg	0.0018	0.003	ug/day	0.0001	ug/l	0.0061	6E-07	ug/day
OC Pesticides	Hexachlorobenzene	1100	5000	ug/kg bw/day	No	140	ug/kg	0.0018	0.252	ug/day	0.0017	ug/l	0.0061	1E-05	ug/day
OC Pesticides	Methoxychlor	34600	346000	ug/kg bw/day	No	160	ug/kg	0.0018	0.288	ug/day	0.0002	ug/l	0.0061	1E-06	ug/day
OC Pesticides	Total chlordane	2000	20000	ug/kg bw/day	No	210	ug/kg	0.0018	0.378	ug/day	0.0159	ug/l	0.0061	1E-04	ug/day
OC Pesticides	Total DDx	0.9	27	ug/kg bw/day	Yes	1620	ug/kg	0.0018	2.916	ug/day	0.0211	ug/l	0.0061	1E-04	ug/day
Belted kingfisher															
Metals	Arsenic	5.5	22	mg/kg bw/day	No	118	mg/kg	0.00013	0.015	mg/day	0.003	mg/l	0.015	5E-05	mg/day
Metals	Cadmium	0.08	10.4	mg/kg bw/day	Yes	46.6	mg/kg	0.00013	0.006	mg/day	0.0009	mg/l	0.015	1E-05	mg/day
Metals	Chromium	1	5	mg/kg bw/day	Yes	1580	mg/kg	0.00013	0.205	mg/day	0.0274	mg/l	0.015	4E-04	mg/day
Metals	Cobalt	2.31	23.1	mg/kg bw/day	No	25.6	mg/kg	0.00013	0.003	mg/day	0.0023	mg/l	0.015	3E-05	mg/day
Metals	Copper	2.3	4.7	mg/kg bw/day	Yes	930	mg/kg	0.00013	0.121	mg/day	0.0417	mg/l	0.015	6E-04	mg/day
Metals	Lead	0.19	1.9	mg/kg bw/day	Yes	2050	mg/kg	0.00013	0.267	mg/day	0.0487	mg/l	0.015	7E-04	mg/day
Metals	Mercury	13	26	ug/kg bw/day	Yes	24300	ug/kg	0.00013	3.159	ug/day	0.407	ug/l	0.015	0.006	ug/day
Metals	Methyl mercury	13	26	ug/kg bw/day	Yes	23	ug/kg	0.00013	0.003	ug/day	0.0022	ug/l	0.015	3E-05	ug/day
Metals	Nickel	1.38	56.3	mg/kg bw/day	Yes	200	mg/kg	0.00013	0.026	mg/day	0.0079	mg/l	0.015	1E-04	mg/day
Metals	Selenium	0.23	0.93	mg/kg bw/day	Yes	5.2	mg/kg	0.00013	7E-04	mg/day	0.0035	mg/l	0.015	5E-05	mg/day
Metals	Thallium	2.4	24	mg/kg bw/day	No	0.997	mg/kg	0.00013	1E-04	mg/day	7E-05	mg/l	0.015	1E-06	mg/day
Metals	Vanadium	1.2	2.3	mg/kg bw/day	No	110	mg/kg	0.00013	0.014	mg/day	0.0076	mg/l	0.015	1E-04	mg/day
Metals	Zinc	17.2	172	mg/kg bw/day	Yes	2000	mg/kg	0.00013	0.26	mg/day	0.106	mg/l	0.015	0.002	mg/day
Butyltins	Tributyltin	730	45900	ug/kg bw/day	No	270	ug/kg	0.00013	0.035	ug/day	0.026	ug/l	0.015	4E-04	ug/day
PAHs	Total HPAHs	48	480	ug/kg bw/day	Yes	5E+05	ug/kg	0.00013	66.3	ug/day	4.55	ug/l	0.015	0.068	ug/day
PAHs	Total LPAHs	670	6700	ug/kg bw/day	Yes	7E+05	ug/kg	0.00013	97.37	ug/day	0.42	ug/l	0.015	0.006	ug/day
PCBs	Total PCB Congeners	400	500	ug/kg bw/day	Yes	28600	ug/kg	0.00013	3.718	ug/day	0.183	ug/l	0.015	0.003	ug/day
PCBs	PCB TEQ-Bird	2.8	28	ng/kg bw/day	Yes	7930	ng/kg	0.00013	1.031	ng/day	0.0333	ng/l	0.015	5E-04	ng/day
PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	2.8	28	ng/kg bw/day	Yes	51600	ng/kg	0.00013	6.708	ng/day	1.88	ng/l	0.015	0.028	ng/day
PCDDs/PCDFs	Total TEQ-Bird	2.8	28	ng/kg bw/day	Yes	55500	ng/kg	0.00013	7.215	ng/day	1.91	ng/l	0.015	0.029	ng/day
SVOCs	Bis-(2-ethylhexyl)phth	68000	-	ug/kg bw/day	No	3E+05	ug/kg	0.00013	37.31	ug/day	6	ug/l	0.015	0.09	ug/day
OC Pesticides	Aldrin	4	40	ug/kg bw/day	No	24	ug/kg	0.00013	0.003	ug/day	0.0005	ug/l	0.015	7E-06	ug/day
OC Pesticides	Dieldrin	54	180	ug/kg bw/day	No	152	ug/kg	0.00013	0.02	ug/day	0.0032	ug/l	0.015	5E-05	ug/day
OC Pesticides	Endosulfan I	10000	-	ug/kg bw/day	No	0.47	ug/kg	0.00013	6E-05	ug/day	0.0001	ug/l	0.015	2E-06	ug/day
OC Pesticides	Endosulfan II	10000	-	ug/kg bw/day	No	18	ug/kg	0.00013	0.002	ug/day	0.0004	ug/l	0.015	6E-06	ug/day
OC Pesticides	Endrin	70	200	ug/kg bw/day	No	4.1	ug/kg	0.00013	5E-04	ug/day	0.0002	ug/l	0.015	3E-06	ug/day
OC Pesticides	gamma-BHC (Lindane)	1600	3600	ug/kg bw/day	No	9.41	ug/kg	0.00013	0.001	ug/day	0.0003	ug/l	0.015	5E-06	ug/day
OC Pesticides	Heptachlor	500	5000	ug/kg bw/day	No	7.87	ug/kg	0.00013	0.001	ug/day	0.0001	ug/l	0.015	2E-06	ug/day
OC Pesticides	Hexachlorobenzene	1100	5000	ug/kg bw/day	No	181	ug/kg	0.00013	0.024	ug/day	0.0017	ug/l	0.015	3E-05	ug/day
OC Pesticides	Methoxychlor	34600	346000	ug/kg bw/day	No	160	ug/kg	0.00013	0.021	ug/day	0.0002	ug/l	0.015	2E-06	ug/day
OC Pesticides	Total chlordane	2000	20000	ug/kg bw/day	No	760	ug/kg	0.00013	0.099	ug/day	0.0159	ug/l	0.015	2E-04	ug/day
OC Pesticides	Total DDx	0.9	27	ug/kg bw/day	Yes	2800	ug/kg	0.00013	0.364	ug/day	0.0211	ug/l	0.015	3E-04	ug/day
Great Blue Heron															
Metals	Arsenic	5.5	22	mg/kg bw/day	No	37.4	mg/kg	0.00078	0.029	mg/day	0.003	mg/l	0.1	3E-04	mg/day
Metals	Cadmium	0.08	10.4	mg/kg bw/day	No	34.7	mg/kg	0.00078	0.027	mg/day	0.0009	mg/l	0.1	9E-05	mg/day
Metals	Chromium	1	5	mg/kg bw/day	Yes	1180	mg/kg	0.00078	0.92	mg/day	0.0274	mg/l	0.1	0.003	mg/day
Metals	Cobalt	2.31	23.1	mg/kg bw/day	No	16.5	mg/kg	0.00078	0.013	mg/day	0.0023	mg/l	0.1	2E-04	mg/day
Metals	Copper	2.3	4.7	mg/kg bw/day	Yes	706	mg/kg	0.00078	0.551	mg/day	0.0417	mg/l	0.1	0.004	mg/day
Metals	Lead	0.19	1.9	mg/kg bw/day	Yes	2050	mg/kg	0.00078	1.599	mg/day	0.0487	mg/l	0.1	0.005	mg/day
Metals	Mercury	13	26	ug/kg bw/day	Yes	21500	ug/kg	0.00078	16.77	ug/day	0.407	ug/l	0.1	0.041	ug/day
Metals	Methyl mercury	13	26	ug/kg bw/day	Yes	23	ug/kg	0.00078	0.018	ug/day	0.0022	ug/l	0.1	2E-04	ug/day
Metals	Nickel	1.38	56.3	mg/kg bw/day	Yes	130	mg/kg	0.00078	0.101	mg/day	0.0079	mg/l	0.1	8E-04	mg/day
Metals	Selenium	0.23	0.93	mg/kg bw/day	Yes	3.2	mg/kg	0.00078	0.002	mg/day	0.0035	mg/l	0.1	4E-04	mg/day
Metals	Thallium	2.4	24	mg/kg bw/day	No	0.52	mg/kg	0.00078	4E-04	mg/day	7E-05	mg/l	0.1	7E-06	mg/day
Metals	Vanadium	1.2	2.3	mg/kg bw/day	No	110	mg/kg	0.00078	0.086	mg/day	0.0076	mg/l	0.1	8E-04	mg/day
Metals	Zinc	17.2	172	mg/kg bw/day	Yes	1710	mg/kg	0.00078	1.334	mg/day	0.106	mg/l	0.1	0.011	mg/day
Butyltins	Tributyltin	730	45900	ug/kg bw/day	No	180	ug/kg	0.00078	0.14	ug/day	0.026	ug/l	0.1	0.003	ug/day
PAHs	Total HPAHs	48	480	ug/kg bw/day	Yes	1E+05	ug/kg	0.00078	88.92	ug/day	4.55	ug/l	0.1	0.455	ug/day
PAHs	Total LPAHs	670	6700	ug/kg bw/day	No	55000	ug/kg	0.00078	42.9	ug/day	0.42	ug/l	0.1	0.042	ug/day
PCBs	Total PCB Congeners	400	500	ug/kg bw/day	Yes	16900	ug/kg	0.00078	13.18	ug/day	0.183	ug/l	0.1	0.018	ug/day

Great Blue Heron	All LPRSA fish
Mink	All LPRSA fish
River Otter	All LPRSA fish

Table A2-12. SLERA results for wildlife diet

COI Group	COI	TSV NOAEL	TSV LOAEL	TSV Units	Selected as COPEC?	Sediment Max C_{sed}	Sediment Units (dw)	Sediment SIR (kg dw/day)	Sediment C_{sed}	Sediment Units (dw)	Surface Water, RM 4 to RM 17.4 only Max C_{SW}	Surface Water Units	Surface Water WIR (L/day)	Surface Water C_{SW}	Surface Water Units (ww)
PCBs	PCB TEQ-Bird	2.8	28	ng/kg bw/day	Yes	5480	ng/kg	0.00078	4.274	ng/day	0.0333	ng/l	0.1	0.003	ng/day
PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	2.8	28	ng/kg bw/day	Yes	35000	ng/kg	0.00078	27.3	ng/day	1.88	ng/l	0.1	0.188	ng/day
PCDDs/PCDFs	Total TEQ-Bird	2.8	28	ng/kg bw/day	Yes	37000	ng/kg	0.00078	28.86	ng/day	1.91	ng/l	0.1	0.191	ng/day
SVOCs	Bis-(2-ethylhexyl)phth	68000	-	ug/kg bw/day	No	3E+05	ug/kg	0.00078	223.9	ug/day	6	ug/l	0.1	0.6	ug/day
OC Pesticides	Aldrin	4	40	ug/kg bw/day	No	5.91	ug/kg	0.00078	0.005	ug/day	0.0005	ug/l	0.1	5E-05	ug/day
OC Pesticides	Dieldrin	54	180	ug/kg bw/day	No	24.4	ug/kg	0.00078	0.019	ug/day	0.0032	ug/l	0.1	3E-04	ug/day
OC Pesticides	Endosulfan I	10000	-	ug/kg bw/day	No	0.33	ug/kg	0.00078	3E-04	ug/day	0.0001	ug/l	0.1	1E-05	ug/day
OC Pesticides	Endosulfan II	10000	-	ug/kg bw/day	No	4.4	ug/kg	0.00078	0.003	ug/day	0.0004	ug/l	0.1	4E-05	ug/day
OC Pesticides	Endrin	70	200	ug/kg bw/day	No	4.1	ug/kg	0.00078	0.003	ug/day	0.0002	ug/l	0.1	2E-05	ug/day
OC Pesticides	gamma-BHC (Lindane)	1600	3600	ug/kg bw/day	No	9.41	ug/kg	0.00078	0.007	ug/day	0.0003	ug/l	0.1	3E-05	ug/day
OC Pesticides	Heptachlor	500	5000	ug/kg bw/day	No	1.6	ug/kg	0.00078	0.001	ug/day	0.0001	ug/l	0.1	1E-05	ug/day
OC Pesticides	Hexachlorobenzene	1100	5000	ug/kg bw/day	No	140	ug/kg	0.00078	0.109	ug/day	0.0017	ug/l	0.1	2E-04	ug/day
OC Pesticides	Methoxychlor	34600	346000	ug/kg bw/day	No	160	ug/kg	0.00078	0.125	ug/day	0.0002	ug/l	0.1	2E-05	ug/day
OC Pesticides	Total chlordane	2000	20000	ug/kg bw/day	No	210	ug/kg	0.00078	0.164	ug/day	0.0159	ug/l	0.1	0.002	ug/day
OC Pesticides	Total DDx	0.9	27	ug/kg bw/day	Yes	1620	ug/kg	0.00078	1.264	ug/day	0.0211	ug/l	0.1	0.002	ug/day
Mink															
Metals	Antimony	1489	-	mg/kg bw/day	No	11.8	mg/kg	0.0023	0.027	mg/day	0.0014	mg/l	0.058	8E-05	mg/day
Metals	Arsenic	0.32	4.7	mg/kg bw/day	Yes	118	mg/kg	0.0023	0.271	mg/day	0.003	mg/l	0.058	2E-04	mg/day
Metals	Cadmium	0.06	2.64	mg/kg bw/day	Yes	46.6	mg/kg	0.0023	0.107	mg/day	0.0009	mg/l	0.058	5E-05	mg/day
Metals	Chromium	1466	-	mg/kg bw/day	No	1580	mg/kg	0.0023	3.634	mg/day	0.0274	mg/l	0.058	0.002	mg/day
Metals	Cobalt	1.2	20	mg/kg bw/day	No	25.6	mg/kg	0.0023	0.059	mg/day	0.0023	mg/l	0.058	1E-04	mg/day
Metals	Copper	3.4	6.8	mg/kg bw/day	Yes	930	mg/kg	0.0023	2.139	mg/day	0.0417	mg/l	0.058	0.002	mg/day
Metals	Lead	0.71	7	mg/kg bw/day	Yes	2050	mg/kg	0.0023	4.715	mg/day	0.0487	mg/l	0.058	0.003	mg/day
Metals	Mercury	16	27	ug/kg bw/day	Yes	24300	ug/kg	0.0023	55.89	mg/day	0.407	ug/l	0.058	0.024	ug/day
Metals	Methyl mercury	16	27	ug/kg bw/day	Yes	23	ug/kg	0.0023	0.053	mg/day	0.0022	ug/l	0.058	1E-04	ug/day
Metals	Nickel	0.133	31.6	mg/kg bw/day	Yes	200	mg/kg	0.0023	0.46	mg/day	0.0079	mg/l	0.058	5E-04	mg/day
Metals	Selenium	0.05	1.21	mg/kg bw/day	Yes	5.2	mg/kg	0.0023	0.012	mg/day	0.0035	mg/l	0.058	2E-04	mg/day
Metals	Thallium	0.74	-	mg/kg bw/day	No	0.997	mg/kg	0.0023	0.002	mg/day	7E-05	mg/l	0.058	4E-06	mg/day
Metals	Vanadium	0.27	2.7	mg/kg bw/day	Yes	110	mg/kg	0.0023	0.253	mg/day	0.0076	mg/l	0.058	4E-04	mg/day
Metals	Zinc	9.6	411	mg/kg bw/day	Yes	2000	mg/kg	0.0023	4.6	mg/day	0.106	mg/l	0.058	0.006	mg/day
Butyltins	Tributyltin	250	15000	ug/kg bw/day	No	270	ug/kg	0.0023	0.621	ug/day	0.026	ug/l	0.058	0.002	ug/day
PAHs	Total HPAHs	620	3100	ug/kg bw/day	Yes	5E+05	ug/kg	0.0023	1173	ug/day	4.55	ug/l	0.058	0.264	ug/day
PAHs	Total LPAHs	50000	150000	ug/kg bw/day	No	7E+05	ug/kg	0.0023	1723	ug/day	0.42	ug/l	0.058	0.024	ug/day
PCBs	Total PCB Congeners	69	82	ug/kg bw/day	Yes	28600	ug/kg	0.0023	65.78	ug/day	0.183	ug/l	0.058	0.011	ug/day
PCBs	PCB TEQ-Mammal	0.08	2.2	ng/kg bw/day	Yes	266	ng/kg	0.0023	0.612	ng/day	0.0085	ng/l	0.058	5E-04	ng/day
PCDDs/PCDFs	PCDD/PCDF TEQ-Mam	0.08	2.2	ng/kg bw/day	Yes	51400	ng/kg	0.0023	118.2	ng/day	1.88	ng/l	0.058	0.109	ng/day
PCDDs/PCDFs	Total TEQ-Mammal	0.08	2.2	ng/kg bw/day	Yes	51500	ng/kg	0.0023	118.5	ng/day	1.88	ng/l	0.058	0.109	ng/day
SVOCs	4-Methylphenol	124800	1248000	ug/kg bw/day	No	1600	ug/kg	0.0023	3.68	ug/day	0.2	ug/l	0.058	0.012	ug/day
SVOCs	Benzaldehyde	125000	1250000	ug/kg bw/day	No	2400	ug/kg	0.0023	5.52	ug/day	0.89	ug/l	0.058	0.052	ug/day
SVOCs	Bis-(2-ethylhexyl)phth	44000	91000	ug/kg bw/day	No	3E+05	ug/kg	0.0023	660.1	ug/day	6	ug/l	0.058	0.348	ug/day
OC Pesticides	Aldrin	100	1000	ug/kg bw/day	No	24	ug/kg	0.0023	0.055	ug/day	0.0005	ug/l	0.058	3E-05	ug/day
OC Pesticides	beta-BHC	5700	31000	ug/kg bw/day	No	12	ug/kg	0.0023	0.028	ug/day	0.0002	ug/l	0.058	1E-05	ug/day
OC Pesticides	Dieldrin	15	30	ug/kg bw/day	Yes	152	ug/kg	0.0023	0.35	ug/day	0.0032	ug/l	0.058	2E-04	ug/day
OC Pesticides	Endosulfan I	840	2500	ug/kg bw/day	No	0.47	ug/kg	0.0023	0.001	ug/day	0.0001	ug/l	0.058	8E-06	ug/day
OC Pesticides	Endosulfan II	840	2500	ug/kg bw/day	No	18	ug/kg	0.0023	0.041	ug/day	0.0004	ug/l	0.058	2E-05	ug/day
OC Pesticides	Endrin	92	920	ug/kg bw/day	No	4.1	ug/kg	0.0023	0.009	ug/day	0.0002	ug/l	0.058	1E-05	ug/day
OC Pesticides	gamma-BHC (Lindane)	50	3750	ug/kg bw/day	No	9.41	ug/kg	0.0023	0.022	ug/day	0.0003	ug/l	0.058	2E-05	ug/day
OC Pesticides	Heptachlor	130	6800	ug/kg bw/day	No	7.87	ug/kg	0.0023	0.018	ug/day	0.0001	ug/l	0.058	6E-06	ug/day
OC Pesticides	Hexachlorobenzene	13	130	ug/kg bw/day	No	181	ug/kg	0.0023	0.416	ug/day	0.0017	ug/l	0.058	1E-04	ug/day
OC Pesticides	Methoxychlor	2500	50000	ug/kg bw/day	No	160	ug/kg	0.0023	0.368	ug/day	0.0002	ug/l	0.058	9E-06	ug/day
OC Pesticides	Total chlordane	180	920	ug/kg bw/day	No	760	ug/kg	0.0023	1.748	ug/day	0.0159	ug/l	0.058	9E-04	ug/day
OC Pesticides	Total DDx	800	4000	ug/kg bw/day	No	2800	ug/kg	0.0023	6.44	ug/day	0.0211	ug/l	0.058	0.001	ug/day
OC Pesticides	trans-Nonachlor	2500	25000	ug/kg bw/day	No	180	ug/kg	0.0023	0.414	ug/day	0.0033	ug/l	0.058	2E-04	ug/day
River Otter															
Metals	Antimony	1489	-	mg/kg bw/day	No	11.8	mg/kg	0.0033	0.039	mg/day	0.0014	mg/l	0.4	6E-04	mg/day
Metals	Arsenic	0.32	4.7	mg/kg bw/day	Yes	118	mg/kg	0.0033	0.389	mg/day	0.003	mg/l	0.4	0.001	mg/day
Metals	Cadmium	0.06	2.64	mg/kg bw/day	Yes	46.6	mg/kg	0.0033	0.154	mg/day	0.0009	mg/l	0.4	4E-04	mg/day
Metals	Chromium	1466	-	mg/kg bw/day	No	1580	mg/kg	0.0033	5.214	mg/day	0.0274	mg/l	0.4	0.011	mg/day
Metals	Cobalt	1.2	20	mg/kg bw/day	No	25.6	mg/kg	0.0033	0.084	mg/day	0.0023	mg/l	0.4	9E-04	mg/day
Metals	Copper	3.4	6.8	mg/kg bw/day	Yes	930	mg/kg	0.0033	3.069	mg/day	0.0417	mg/l	0.4	0.017	mg/day
Metals	Lead	0.71	7	mg/kg bw/day	Yes	2050	mg/kg	0.0033	6.765	mg/day	0.0487	mg/l	0.4	0.019	mg/day
Metals	Mercury	16	27	ug/kg bw/day	Yes	24300	ug/kg	0.0033	80.19	mg/day	0.407	ug/l	0.4	0.163	ug/day
Metals	Methyl mercury	16	27	ug/kg bw/day	Yes	23	ug/kg	0.0033	0.076	mg/day	0.0022	ug/l	0.4	9E-04	ug/day
Metals	Nickel	0.133	31.6	mg/kg bw/day	Yes	200	mg/kg	0.0033	0.66	mg/day	0.0079	mg/l	0.4	0.003	mg/day
Metals	Selenium	0.05	1.21	mg/kg bw/day	Yes	5.2	mg/kg	0.0033	0.017	mg/day	0.0035	mg/l	0.4	0.001	mg/day
Metals	Thallium	0.74	-	mg/kg bw/day	No	0.997	mg/kg	0.0033	0.003	mg/day	7E-05	mg/l	0.4	3E-05	mg/day
Metals	Vanadium	0.27	2.7	mg/kg bw/day	Yes	110	mg/kg	0.0033	0.363	mg/day	0.0076	mg/l	0.4	0.003	mg/day
Metals	Zinc	9.6	411	mg/kg bw/day	Yes	2000	mg/kg	0.0033	6.6	mg/day	0.106	mg/l	0.4	0.042	mg/day
Butyltins	Tributyltin	250	15000	ug/kg bw/day	No	270	ug/kg	0.0033	0.891	ug/day	0.026	ug/l	0.4	0.01	ug/day
PAHs	Total HPAHs	620	3100	ug/kg bw/day	No	5E+05	ug/kg	0.0033	1683	ug/day	4.55	ug/l	0.4	1.82	ug/day
PAHs	Total LPAHs	50000	150000	ug/kg bw/day	No	7E+05	ug/kg	0.0033	2472	ug/day	0.42	ug/l	0.4	0.168	ug/day
PCBs	Total PCB Congeners	69	82	ug/kg bw/day	Yes	28600	ug/kg	0.0033	94.38	ug/day	0.183	ug/l	0.4	0.073	ug/day
PCBs	PCB TEQ-Mammal	0.08	2.2	ng/kg bw/day	Yes	266	ng/kg	0.0033	0.878	ng/day	0.0085	ng/l	0.4	0.003	ng/day
PCDDs/PCDFs	PCDD/PCDF TEQ-Mam	0.08	2.2	ng/kg bw/day	Yes	51400	ng/kg	0.0033	169.6	ng/day	1.88	ng/l	0.4	0.752	ng/day
PCDDs/PCDFs	Total TEQ-Mammal	0.08	2.2	ng/kg bw/day	Yes	51500	ng/kg	0.0033	170	ng/day	1.88	ng/l	0.4	0.752	ng/day
SVOCs	4-Methylphenol	124800	1248000	ug/kg bw/day	No	1600	ug/kg	0.0033	5.28	ug/day	0.2	ug/l	0.4	0.08	ug/day
SVOCs	Benzaldehyde	125000	1250000	ug/kg bw/day	No	2400	ug/kg	0.0033	7.92	ug/day	0.89	ug/l	0.4	0.356	ug/day
SVOCs	Bis-(2-ethylhexyl)phth	44000	91000	ug/kg bw/day	No	3E+05	ug/kg	0.0033	947.1	ug/day	6	ug/l	0.4	2.4	ug/day
OC Pesticides	Aldrin	100	1000	ug/kg bw/day	No	24	ug/kg	0.0033	0.079	ug/day	0.0005	ug/l	0.4	2E-04	ug/day
OC Pesticides	beta-BHC	5700	31000	ug/kg bw/day	No	12	ug/kg	0.0033	0.04	ug/day	0.0002	ug/l	0.4	7E-05	ug/day
OC Pesticides	Dieldrin	15	30	ug/kg bw/day	Yes	152	ug/kg	0.0033	0.502	ug/day	0.0032	ug/l	0.4	0.001	ug/day
OC Pesticides	Endosulfan I	840	2500	ug/kg bw/day	No	0.47	ug/kg	0.0033	0.002	ug/day	0.0001	ug/l	0.4	6E-05	ug/day
OC Pesticides	Endosulfan II	840	2500	ug/kg bw/day	No	18	ug/kg	0.0033	0.059	ug/day	0.0004	ug/l	0.4	2E-04	ug/day
OC Pesticides	Endrin	92	920	ug/kg bw/day	No	4.1	ug/kg	0.0033	0.014	ug/day	0.0002	ug/l	0.4	7E-05	ug/day
OC Pesticides	gamma-BHC (Lindane)	50	3750	ug/kg bw/day	No	9.41	ug/kg	0.0033	0.031	ug/day	0.0003	ug/l	0.4	1E-04	ug/day
OC Pesticides	Heptachlor	130	6800	ug/kg bw/day	No	7.87	ug/kg	0.0033	0.026	ug/day	0.0001	ug/l	0.4	4E-05	ug/day
OC Pesticides	Hexachlorobenzene	13	130	ug/kg bw/day	No	181	ug/kg	0.0033	0.597	ug/day	0.0017	ug/l	0.4	7E-04	ug/day
OC Pesticides	Methoxychlor	2500	50000	ug/kg bw/day	No	160	ug/kg	0.0033	0.528	ug/day	0.0002	ug/l	0.4	6E-05	ug/day

Great Blue Heron	All LPRSA fish
Mink	All LPRSA fish
River Otter	All LPRSA fish

Table A2-12. SLERA results for wildlife diet

		TSV				Sediment					Surface Water, RM 4 to RM 17.4 only				
COI Group	COI	NOAEL	LOAEL	Units	Selected as COPEC?	Max C_{sed}	Units (dw)	SIR (kg dw/day)	C_{sed}	Units (dw)	Max C_{SW}	Units	WIR (L/day)	C_{SW}	Units (ww)
OC Pesticides	Total chlordane	180	920	ug/kg bw/day	No	760	ug/kg	0.0033	2.508	ug/day	0.0159	ug/l	0.4	0.006	ug/day
OC Pesticides	Total DDx	800	4000	ug/kg bw/day	No	2800	ug/kg	0.0033	9.24	ug/day	0.0211	ug/l	0.4	0.008	ug/day
OC Pesticides	trans-Nonachlor	2500	25000	ug/kg bw/day	No	180	ug/kg	0.0033	0.594	ug/day	0.0033	ug/l	0.4	0.001	ug/day

Prey (100% Maximum Tissue Concentration), site-wide								Body Weight		IR_{diet}		Max HQ	
Worm C_{prey}	Crab C_{prey}	Fish C_{prey}	Max C_{prey}	Units (ww)	FIR (kg ww/day)	C_{prey}	Units (ww)	BW (kg)	SUF	Final Dose	Units	NOAEL HQ	LOAEL HQ
1.8			1.8	mg/kg	0.022	0.04	mg/day	0.034	1	3.145	mg/kg bw/day	0.57	0.14
0.2			0.2	mg/kg	0.022	0.004	mg/day	0.034	1	1.967	mg/kg bw/day	**25**	0.19
61			61	mg/kg	0.022	1.342	mg/day	0.034	1	101.9	mg/kg bw/day	**100**	**20**
1.8			1.8	mg/kg	0.022	0.04	mg/day	0.034	1	2.039	mg/kg bw/day	0.88	0.088
11.9			11.9	mg/kg	0.022	0.262	mg/day	0.034	1	45.08	mg/kg bw/day	**20**	**9.6**
12.4			12.4	mg/kg	0.022	0.273	mg/day	0.034	1	116.6	mg/kg bw/day	**610**	**61**
150			150	ug/kg	0.022	3.3	ug/day	0.034	1	1235	ug/kg bw/day	**95**	**48**
3.4			3.4	ug/kg	0.022	0.075	ug/day	0.034	1	3.418	ug/kg bw/day	0.26	0.13
36.2			36.2	mg/kg	0.022	0.796	mg/day	0.034	1	30.31	mg/kg bw/day	**22**	0.54
0.77			0.77	mg/kg	0.022	0.017	mg/day	0.034	1	0.668	mg/kg bw/day	**2.9**	0.72
0.006			0.01	mg/kg	0.022	1E-04	mg/day	0.034	1	0.031	mg/kg bw/day	0.013	0.0013
1.3			1.3	mg/kg	0.022	0.029	mg/day	0.034	1	6.666	mg/kg bw/day	**5.6**	**2.9**
45.2			45.2	mg/kg	0.022	0.994	mg/day	0.034	1	119.8	mg/kg bw/day	**7.0**	0.70
1.4			1.4	ug/kg	0.022	0.031	ug/day	0.034	1	10.44	ug/kg bw/day	0.014	0.00023
4900			4900	ug/kg	0.022	107.8	ug/day	0.034	1	9207	ug/kg bw/day	**190**	**19**
940			940	ug/kg	0.022	20.68	ug/day	0.034	1	3520	ug/kg bw/day	**5.3**	0.53
530			530	ug/kg	0.022	11.66	ug/day	0.034	1	1238	ug/kg bw/day	**3.1**	**2.5**
90			90	ng/kg	0.022	1.98	ng/day	0.034	1	348.4	ug/kg bw/day	**120**	**12**
150			150	ng/kg	0.022	3.3	ng/day	0.034	1	1950	ng/kg bw/day	**700**	**70**
240			240	ng/kg	0.022	5.28	ng/day	0.034	1	2114	ng/kg bw/day	**760**	**76**
790			790	ug/kg	0.022	17.38	ug/day	0.034	1	15706	ug/kg bw/day	0.23	NC
0.39			0.39	ug/kg	0.022	0.009	ug/day	0.034	1	0.565	ug/kg bw/day	0.14	0.014
2.6			2.6	ug/kg	0.022	0.057	ug/day	0.034	1	2.975	ug/kg bw/day	0.055	0.017
1.7			1.7	ug/kg	0.022	0.037	ug/day	0.034	1	1.117	ug/kg bw/day	0.00011	NC
3.9			3.9	ug/kg	0.022	0.086	ug/day	0.034	1	2.757	ug/kg bw/day	0.00028	NC
0.55			0.55	ug/kg	0.022	0.012	ug/day	0.034	1	0.573	ug/kg bw/day	0.0082	0.0029
0.32			0.32	ug/kg	0.022	0.007	ug/day	0.034	1	0.705	ug/kg bw/day	0.00044	0.00020
0.084			0.08	ug/kg	0.022	0.002	ug/day	0.034	1	0.139	ug/kg bw/day	0.00028	0.000028
2.1			2.1	ug/kg	0.022	0.046	ug/day	0.034	1	8.771	ug/kg bw/day	0.0080	0.0018
5.7			5.7	ug/kg	0.022	0.125	ug/day	0.034	1	12.16	ug/kg bw/day	0.00035	0.000035
40			40	ug/kg	0.022	0.88	ug/day	0.034	1	37	ug/kg bw/day	0.019	0.0019
33			33	ug/kg	0.022	0.726	ug/day	0.034	1	107.1	ug/kg bw/day	**120**	**4.0**
	1.9	0.52	1.9	mg/kg	0.063	0.12	mg/day	0.125	1	1.081	mg/kg bw/day	0.20	0.049
	0.18	0.099	0.18	mg/kg	0.063	0.011	mg/day	0.125	1	0.139	mg/kg bw/day	**1.7**	0.013
	3.1	125	125	mg/kg	0.063	7.875	mg/day	0.125	1	64.65	mg/kg bw/day	**65**	**13**
	0.095	1.1	1.1	mg/kg	0.063	0.069	mg/day	0.125	1	0.581	mg/kg bw/day	0.25	0.025
	30.6	14.7	30.6	mg/kg	0.063	1.928	mg/day	0.125	1	16.39	mg/kg bw/day	**7.1**	**3.5**
	0.66	4.9	4.9	mg/kg	0.063	0.309	mg/day	0.125	1	4.607	mg/kg bw/day	**24**	**2.4**
	190	180	190	ug/kg	0.063	11.97	ug/day	0.125	1	121.1	ug/kg bw/day	**9.3**	**4.7**
	170	190	190	ug/kg	0.063	11.97	ug/day	0.125	1	95.78	ug/kg bw/day	**7.4**	**3.7**
	1.9	89.1	89.1	mg/kg	0.063	5.613	mg/day	0.125	1	45.12	mg/kg bw/day	**33**	0.80
	1.1	1.3	1.3	mg/kg	0.063	0.082	mg/day	0.125	1	0.661	mg/kg bw/day	**2.9**	0.71
	0.005	0.007	0.01	mg/kg	0.063	4E-04	mg/day	0.125	1	0.005	mg/kg bw/day	0.0019	0.00019
	0.14	1.3	1.3	mg/kg	0.063	0.082	mg/day	0.125	1	0.771	mg/kg bw/day	0.64	0.34
	41.1	51.6	51.6	mg/kg	0.063	3.251	mg/day	0.125	1	28.1	mg/kg bw/day	**1.6**	0.16
	3.8	63	63	ug/kg	0.063	3.969	ug/day	0.125	1	32.04	ug/kg bw/day	0.044	0.00070
	350	1000	1000	ug/kg	0.063	63	ug/day	0.125	1	1035	ug/kg bw/day	**22**	**2.2**
	270	370	370	ug/kg	0.063	23.31	ug/day	0.125	1	965.5	ug/kg bw/day	**1.4**	0.14
	580	5100	5100	ug/kg	0.063	321.3	ug/day	0.125	1	2600	ug/kg bw/day	**6.5**	**5.2**
	110	310	310	ng/kg	0.063	19.53	ng/day	0.125	1	164.5	ug/kg bw/day	**59**	**5.9**
	100	250	250	ng/kg	0.063	15.75	ng/day	0.125	1	179.9	ng/kg bw/day	**64**	**6.4**
	200	560	560	ng/kg	0.063	35.28	ng/day	0.125	1	340.2	ng/kg bw/day	**120**	**12**
	2000	8000	8000	ug/kg	0.063	504	ug/day	0.125	1	4331	ug/kg bw/day	0.064	NC
	0.075	0.27	0.27	ug/kg	0.063	0.017	ug/day	0.125	1	0.161	ug/kg bw/day	0.040	0.0040
	9.1	47	47	ug/kg	0.063	2.961	ug/day	0.125	1	23.85	ug/kg bw/day	0.44	0.13
	7.7	3.2	7.7	ug/kg	0.063	0.485	ug/day	0.125	1	3.881	ug/kg bw/day	0.00039	NC
	13	3.1	13	ug/kg	0.063	0.819	ug/day	0.125	1	6.571	ug/kg bw/day	0.00066	NC
	0.74	0.23	0.74	ug/kg	0.063	0.047	ug/day	0.125	1	0.377	ug/kg bw/day	0.0054	0.0019
	0.084	0.18	0.18	ug/kg	0.063	0.011	ug/day	0.125	1	0.101	ug/kg bw/day	0.000063	0.000028
	0.038	0.17	0.17	ug/kg	0.063	0.011	ug/day	0.125	1	0.094	ug/kg bw/day	0.00019	0.000019
	3.2	8.3	8.3	ug/kg	0.063	0.523	ug/day	0.125	1	4.372	ug/kg bw/day	0.0040	0.00087
	1.9	1	1.9	ug/kg	0.063	0.12	ug/day	0.125	1	1.124	ug/kg bw/day	0.000032	0.0000032
	61	220	220	ug/kg	0.063	13.86	ug/day	0.125	1	111.7	ug/kg bw/day	0.056	0.0056
	100	340	340	ug/kg	0.063	21.42	ug/day	0.125	1	174.3	ug/kg bw/day	**190**	**6.5**
	1.9	0.61	1.9	mg/kg	0.39	0.741	mg/day	2.2	1	0.35	mg/kg bw/day	0.064	0.016
	0.18	0.27	0.27	mg/kg	0.39	0.105	mg/day	2.2	1	0.06	mg/kg bw/day	0.75	0.0058
	3.1	125	125	mg/kg	0.39	48.75	mg/day	2.2	1	22.58	mg/kg bw/day	**23**	**4.5**
	0.095	1.1	1.1	mg/kg	0.39	0.429	mg/day	2.2	1	0.201	mg/kg bw/day	0.087	0.0087
	30.6	50.9	50.9	mg/kg	0.39	19.85	mg/day	2.2	1	9.275	mg/kg bw/day	**4.0**	**2.0**
	0.66	4.9	4.9	mg/kg	0.39	1.911	mg/day	2.2	1	1.598	mg/kg bw/day	**8.4**	0.84
	190	680	680	ug/kg	0.39	265.2	ug/day	2.2	1	128.2	ug/kg bw/day	**9.9**	**4.9**
	170	530	530	ug/kg	0.39	206.7	ug/day	2.2	1	93.96	ug/kg bw/day	**7.2**	**3.6**
	1.9	89.1	89.1	mg/kg	0.39	34.75	mg/day	2.2	1	15.84	mg/kg bw/day	**11**	0.28
	1.1	3	3	mg/kg	0.39	1.17	mg/day	2.2	1	0.533	mg/kg bw/day	**2.3**	0.57
	0.005	0.024	0.02	mg/kg	0.39	0.009	mg/day	2.2	1	0.004	mg/kg bw/day	0.0019	0.00019
	0.14	1.3	1.3	mg/kg	0.39	0.507	mg/day	2.2	1	0.27	mg/kg bw/day	0.22	0.12
	41.1	104	104	mg/kg	0.39	40.56	mg/day	2.2	1	19.05	mg/kg bw/day	**1.1**	0.11
	3.8	63	63	ug/kg	0.39	24.57	ug/day	2.2	1	11.23	ug/kg bw/day	0.015	0.00024
	350	1000	1000	ug/kg	0.39	390	ug/day	2.2	1	217.9	ug/kg bw/day	**4.5**	0.45
	270	470	470	ug/kg	0.39	183.3	ug/day	2.2	1	102.8	ug/kg bw/day	0.15	0.015
	580	7900	7900	ug/kg	0.39	3081	ug/day	2.2	1	1406	ug/kg bw/day	**3.5**	**2.8**

Prey (100% Maximum Tissue Concentration), site-wide								Body Weight		IR_{diet}		Max HQ	
Worm C_{prey}	Crab C_{prey}	Fish C_{prey}	Max C_{prey}	Units (ww)	FIR (kg ww/day)	C_{prey}	Units (ww)	BW (kg)	SUF	Final Dose	Units	NOAEL HQ	LOAEL HQ
	110	540	540	ng/kg	0.39	210.6	ng/day	2.2	1	97.67	ug/kg bw/day	**35**	**3.5**
	100	1400	1400	ng/kg	0.39	546	ng/day	2.2	1	260.7	ng/kg bw/day	**93**	**9.3**
	200	1700	1700	ng/kg	0.39	663	ng/day	2.2	1	314.6	ng/kg bw/day	**110**	**11**
	2000	8000	8000	ug/kg	0.39	3120	ug/day	2.2	1	1520	ug/kg bw/day	0.022	NC
	0.075	0.49	0.49	ug/kg	0.39	0.191	ug/day	2.2	1	0.089	ug/kg bw/day	0.022	0.0022
	9.1	110	110	ug/kg	0.39	42.9	ug/day	2.2	1	19.51	ug/kg bw/day	0.36	0.11
	7.7	4	7.7	ug/kg	0.39	3.003	ug/day	2.2	1	1.365	ug/kg bw/day	0.00014	NC
	13	2.7	13	ug/kg	0.39	5.07	ug/day	2.2	1	2.306	ug/kg bw/day	0.00023	NC
	0.74	0.71	0.74	ug/kg	0.39	0.289	ug/day	2.2	1	0.133	ug/kg bw/day	0.0019	0.00066
	0.084	0.84	0.84	ug/kg	0.39	0.328	ug/day	2.2	1	0.152	ug/kg bw/day	0.000095	0.000042
	0.038	0.4	0.4	ug/kg	0.39	0.156	ug/day	2.2	1	0.071	ug/kg bw/day	0.00014	0.000014
	3.2	29	29	ug/kg	0.39	11.31	ug/day	2.2	1	5.191	ug/kg bw/day	0.0047	0.0010
	1.9	0.55	1.9	ug/kg	0.39	0.741	ug/day	2.2	1	0.394	ug/kg bw/day	0.000011	0.0000011
	61	560	560	ug/kg	0.39	218.4	ug/day	2.2	1	99.35	ug/kg bw/day	0.050	0.0050
	100	1100	1100	ug/kg	0.39	429	ug/day	2.2	1	195.6	ug/kg bw/day	**220**	**7.2**
	0.047	0.072	0.07	mg/kg	0.12	0.009	mg/day	0.55	1	0.065	mg/kg bw/day	0.000044	NC
	1.9	0.61	1.9	mg/kg	0.12	0.228	mg/day	0.55	1	0.908	mg/kg bw/day	**2.8**	0.19
	0.18	0.27	0.27	mg/kg	0.12	0.032	mg/day	0.55	1	0.254	mg/kg bw/day	**4.2**	0.096
	3.1	125	125	mg/kg	0.12	15	mg/day	0.55	1	33.88	mg/kg bw/day	0.023	NC
	0.095	1.1	1.1	mg/kg	0.12	0.132	mg/day	0.55	1	0.347	mg/kg bw/day	0.29	0.017
	30.6	50.9	50.9	mg/kg	0.12	6.108	mg/day	0.55	1	15	mg/kg bw/day	**4.4**	**2.2**
	0.66	4.9	4.9	mg/kg	0.12	0.588	mg/day	0.55	1	9.647	mg/kg bw/day	**14**	**1.4**
	190	680	680	ug/kg	0.12	81.6	ug/day	0.55	1	250	ug/kg bw/day	**16**	**9.3**
	170	530	530	ug/kg	0.12	63.6	ug/day	0.55	1	115.7	ug/kg bw/day	**7.2**	**4.3**
	1.9	89.1	89.1	mg/kg	0.12	10.69	mg/day	0.55	1	20.28	mg/kg bw/day	**150**	0.64
	1.1	3	3	mg/kg	0.12	0.36	mg/day	0.55	1	0.677	mg/kg bw/day	**14**	0.56
	0.005	0.024	0.02	mg/kg	0.12	0.003	mg/day	0.55	1	0.009	mg/kg bw/day	0.013	NC
	0.14	1.3	1.3	mg/kg	0.12	0.156	mg/day	0.55	1	0.744	mg/kg bw/day	**2.8**	0.28
	41.1	104	104	mg/kg	0.12	12.48	mg/day	0.55	1	31.07	mg/kg bw/day	**3.2**	0.076
	3.8	63	63	ug/kg	0.12	7.56	ug/day	0.55	1	14.88	ug/kg bw/day	0.060	0.00099
	350	1000	1000	ug/kg	0.12	120	ug/day	0.55	1	2351	ug/kg bw/day	**3.8**	0.76
	270	470	470	ug/kg	0.12	56.4	ug/day	0.55	1	3235	ug/kg bw/day	0.065	0.022
	580	7900	7900	ug/kg	0.12	948	ug/day	0.55	1	1843	ug/kg bw/day	**27**	**22**
	12	240	240	ng/kg	0.12	28.8	ng/day	0.55	1	53.48	ng/kg bw/day	**670**	**24**
	93	1400	1400	ng/kg	0.12	168	ng/day	0.55	1	520.6	ng/kg bw/day	**6500**	**240**
	100	1500	1500	ng/kg	0.12	180	ng/day	0.55	1	542.8	ng/kg bw/day	**6800**	**250**
	2000	8000	8000	ug/kg	0.12	960	ug/day	0.55	1	1752	ug/kg bw/day	0.014	0.0014
	0	9000	9000	ug/kg	0.12	1080	ug/day	0.55	1	1974	ug/kg bw/day	0.016	0.0016
	2000	8000	8000	ug/kg	0.12	960	ug/day	0.55	1	2946	ug/kg bw/day	0.067	0.032
	0.075	0.49	0.49	ug/kg	0.12	0.059	ug/day	0.55	1	0.207	ug/kg bw/day	0.0021	0.00021
	0.26	0.82	0.82	ug/kg	0.12	0.098	ug/day	0.55	1	0.229	ug/kg bw/day	0.000040	0.0000074
	9.1	110	110	ug/kg	0.12	13.2	ug/day	0.55	1	24.64	ug/kg bw/day	**1.6**	0.82
	7.7	4	7.7	ug/kg	0.12	0.924	ug/day	0.55	1	1.682	ug/kg bw/day	0.0020	0.00067
	13	2.7	13	ug/kg	0.12	1.56	ug/day	0.55	1	2.912	ug/kg bw/day	0.0035	0.0012
	0.74	0.71	0.74	ug/kg	0.12	0.089	ug/day	0.55	1	0.179	ug/kg bw/day	0.0019	0.00019
	0.084	0.84	0.84	ug/kg	0.12	0.101	ug/day	0.55	1	0.223	ug/kg bw/day	0.0045	0.000059
	0.038	0.4	0.4	ug/kg	0.12	0.048	ug/day	0.55	1	0.12	ug/kg bw/day	0.00092	0.000018
	3.2	29	29	ug/kg	0.12	3.48	ug/day	0.55	1	7.084	ug/kg bw/day	0.54	0.054
	1.9	0.55	1.9	ug/kg	0.12	0.228	ug/day	0.55	1	1.084	ug/kg bw/day	0.00043	0.000022
	61	560	560	ug/kg	0.12	67.2	ug/day	0.55	1	125.4	ug/kg bw/day	0.70	0.14
	100	1100	1100	ug/kg	0.12	132	ug/day	0.55	1	251.7	ug/kg bw/day	0.31	0.063
	6	130	130	ug/kg	0.12	15.6	ug/day	0.55	1	29.12	ug/kg bw/day	0.012	0.0012
	0.047	0.072	0.07	mg/kg	0.83	0.06	mg/day	4.74	1	0.021	mg/kg bw/day	0.000014	NC
	1.9	0.61	1.9	mg/kg	0.83	1.577	mg/day	4.74	1	0.415	mg/kg bw/day	**1.3**	0.088
	0.18	0.27	0.27	mg/kg	0.83	0.224	mg/day	4.74	1	0.08	mg/kg bw/day	**1.3**	0.030
	3.1	125	125	mg/kg	0.83	103.8	mg/day	4.74	1	22.99	mg/kg bw/day	0.016	NC
	0.095	1.1	1.1	mg/kg	0.83	0.913	mg/day	4.74	1	0.211	mg/kg bw/day	0.18	0.011
	30.6	50.9	50.9	mg/kg	0.83	42.25	mg/day	4.74	1	9.564	mg/kg bw/day	**2.8**	**1.4**
	0.66	4.9	4.9	mg/kg	0.83	4.067	mg/day	4.74	1	2.289	mg/kg bw/day	**3.2**	0.33
	190	680	680	ug/kg	0.83	564.4	ug/day	4.74	1	136	ug/kg bw/day	**8.5**	**5.0**
	170	530	530	ug/kg	0.83	439.9	ug/day	4.74	1	92.82	ug/kg bw/day	**5.8**	**3.4**
	1.9	89.1	89.1	mg/kg	0.83	73.95	mg/day	4.74	1	15.74	mg/kg bw/day	**120**	0.50
	1.1	3	3	mg/kg	0.83	2.49	mg/day	4.74	1	0.529	mg/kg bw/day	**11**	0.44
	0.005	0.024	0.02	mg/kg	0.83	0.02	mg/day	4.74	1	0.005	mg/kg bw/day	0.0066	NC
	0.14	1.3	1.3	mg/kg	0.83	1.079	mg/day	4.74	1	0.305	mg/kg bw/day	**1.1**	0.11
	41.1	104	104	mg/kg	0.83	86.32	mg/day	4.74	1	19.61	mg/kg bw/day	**2.0**	0.048
	3.8	63	63	ug/kg	0.83	52.29	ug/day	4.74	1	11.22	ug/kg bw/day	0.045	0.00075
	350	1000	1000	ug/kg	0.83	830	ug/day	4.74	1	530.6	ug/kg bw/day	0.86	0.17
	270	470	470	ug/kg	0.83	390.1	ug/day	4.74	1	603.8	ug/kg bw/day	0.012	0.0040
	580	7900	7900	ug/kg	0.83	6557	ug/day	4.74	1	1403	ug/kg bw/day	**20**	**17**
	12	240	240	ng/kg	0.83	199.2	ng/day	4.74	1	42.21	ng/kg bw/day	**530**	**19**
	93	1400	1400	ng/kg	0.83	1162	ng/day	4.74	1	281.1	ng/kg bw/day	**3500**	**130**
	100	1500	1500	ng/kg	0.83	1245	ng/day	4.74	1	298.7	ng/kg bw/day	**3700**	**140**
	2000	8000	8000	ug/kg	0.83	6640	ug/day	4.74	1	1402	ug/kg bw/day	0.011	0.0011
	0	9000	9000	ug/kg	0.83	7470	ug/day	4.74	1	1578	ug/kg bw/day	0.013	0.0013
	2000	8000	8000	ug/kg	0.83	6640	ug/day	4.74	1	1601	ug/kg bw/day	0.036	0.018
	0.075	0.49	0.49	ug/kg	0.83	0.407	ug/day	4.74	1	0.103	ug/kg bw/day	0.0010	0.00010
	0.26	0.82	0.82	ug/kg	0.83	0.681	ug/day	4.74	1	0.152	ug/kg bw/day	0.000027	0.0000049
	9.1	110	110	ug/kg	0.83	91.3	ug/day	4.74	1	19.37	ug/kg bw/day	**1.3**	0.65
	7.7	4	7.7	ug/kg	0.83	6.391	ug/day	4.74	1	1.349	ug/kg bw/day	0.0016	0.00054
	13	2.7	13	ug/kg	0.83	10.79	ug/day	4.74	1	2.289	ug/kg bw/day	0.0027	0.00092
	0.74	0.71	0.74	ug/kg	0.83	0.614	ug/day	4.74	1	0.132	ug/kg bw/day	0.0014	0.00014
	0.084	0.84	0.84	ug/kg	0.83	0.697	ug/day	4.74	1	0.154	ug/kg bw/day	0.0031	0.000041
	0.038	0.4	0.4	ug/kg	0.83	0.332	ug/day	4.74	1	0.076	ug/kg bw/day	0.00058	0.000011
	3.2	29	29	ug/kg	0.83	24.07	ug/day	4.74	1	5.204	ug/kg bw/day	0.40	0.040
	1.9	0.55	1.9	ug/kg	0.83	1.577	ug/day	4.74	1	0.444	ug/kg bw/day	0.00018	0.0000089

Prey (100% Maximum Tissue Concentration), site-wide								Body Weight		IR_{diet}		Max HQ	
Worm C_{prey}	Crab C_{prey}	Fish C_{prey}	Max C_{prey}	Units (ww)	FIR (kg ww/day)	C_{prey}	Units (ww)	BW (kg)	SUF	Final Dose	Units	NOAEL HQ	LOAEL HQ
	61	560	560	ug/kg	0.83	464.8	ug/day	4.74	1	98.59	ug/kg bw/day	0.55	0.11
	100	1100	1100	ug/kg	0.83	913	ug/day	4.74	1	194.6	ug/kg bw/day	0.24	0.049
	6	130	130	ug/kg	0.83	107.9	ug/day	4.74	1	22.89	ug/kg bw/day	0.0092	0.00092

Table 1. TSVs for invertebrate whole-body tissue

Chemical Group	Chemical	Chemical Form	NOAEL mg/kg ww	LOAEL mg/kg ww	Source	Endpoint	Endpoint effect	Test Species	Species (Scientific Name)	Marine / Freshwater	Exposure mode	Exposure duration	Notes	Rationale for selection
Metals	Mercury	methyl mercury		0.095	Ray and Tripp 1976	survival		grass shrimp	*Palaemonetes vulgaris*	Marine	water	24 hours	no negative control included in the study	not recommended: uncontrolled study
Metals	**Mercury**		**0.048**	**0.095**	**Hook and Fisher 2002**	**reproduction**	**reduction in egg production**	**copepod**	***Acartia tonsa***	**Marine**	**Diet**	**4 hours**	**copepods were fed metal contaminated food for 4 hours and then monitored for a week; endpoint is reduction in egg production per individual per day; NOAEL concentration estimated from a graph (no effect in tissue concentrations up to 1.2 nmol/g dw); effects were observed for 1 wk following 4 hr exposure; LOAEL calculated based on reported tissue concentration of 2.37 nmol/g dw as the concentration where 50% depression in egg production was reported**	**Selected TRVs: Lowest LOAEL and NOAEL that meet acceptability criteria**
Metals	Mercury		0.23		Canli and Furness 1995	survival		adult Norway lobster	*Nephrops norvegicus*	Marine	diet	50 days	measured in tail muscle; no mortality; exposure concentration in diet = 164 mg/kg ww	not recommended: not a whole body tissue concentration
Metals	Mercury		0.34		Canli and Furness 1995	survival		adult Norway lobster	*Nephrops norvegicus*	Marine	water	30 days	measured in tail muscle; no mortality; exposure concentration in water = 10 ug/L	not recommended: not a whole body tissue concentration
Metals	Mercury	mercuric chloride		0.5	Reddy et al. 1997	Reproduction	ovarian maturation	red swamp crayfish	*Procambarus clarkii*	Freshwater	single injection	21 days	ovarian maturation was significantly reduced at LOAEL; LOAEL is injected dose (whole body tissues were not measured); reduced ovarian maturation may cause a reduction in egg laying	not recommended: not a direct measure of growth, survival, or reproduction
Metals	Mercury		0.77		Canli and Furness 1995	survival		adult Norway lobster	*Nephrops norvegicus*	Marine	diet	50 days	measured in gills; no mortality; exposure concentration in diet = 164 mg/kg ww	not recommended: not a whole body tissue concentration
Metals	Mercury	mercuric chloride	0.99		Canli and Furness 1995	survival		adult Norway lobster	*Nephrops norvegicus*	Marine	diet	50 days	measured in hepatopancreas; no mortality; exposure concentration in diet = 164 mg/kg ww	not recommended: not a whole body tissue concentration
Metals	Mercury	mercuric chloride		1	Bianchini and Gilles 1996	survival		adult male shore crab	*Eriocheir sinensis Carcinus maenas Cancer pagurus*	Freshwater and marine	water	32 hours	concentration in hepatopancreas is lowest of three crab species tested (*Carcinus maenas, Eriocheir sinensis,* and *Cancer pagurus*); ; exposure concentration in water = 1 mg/L	
Metals	Mercury	mercuric chloride	1.43		Canli and Furness 1995	survival		adult Norway lobster	*Nephrops norvegicus*	Marine	water	30 days	measured in hepatopancreas; no mortality; exposure concentration in water = 10 ug/L	not recommended: not a whole body tissue concentration
Metals	Mercury	methyl mercuric chloride		1.64	Biesinger et al. 1982	Reproduction	reduced no. young produced	Waterflea	*Daphnia magna*	Freshwater	Water	21 days	significant reduction in average number of young at LOAEL compared to control; converted to ww based on 10% moisture in organisms (reported in study)	
Metals	Mercury	mercuric chloride	2.33		Biesinger et al. 1982	mortality		Waterflea	*Daphnia magna*	Freshwater	Water	21 days	survival at NOAEL was 92% (100% survival in control); 0% survival observed at highest water exposure concentration, but no tissue residues reported; converted to ww based on 10% moisture in organisms (reported in study)	
Metals	Mercury	mercuric chloride	1.53	2.33	Biesinger et al. 1982	Reproduction	reduced no. young produced	Waterflea	*Daphnia magna*	Freshwater	Water	21 days	significant reduction in average number of young at LOAEL compared to control; converted to ww based on 10% moisture in organisms (reported in study)	
Metals	Mercury	mercuric nitrate	3.4		Tessier et al. 1996	mortality, growth	0% mortality; body weight	Eastern elliptio	*Elliptio complanata*	Brackish	Water	60 days	field collected snails from St. Lawrence River estuary; whole-body concentration estimated from graph; no mortality or significant weight loss reported (undefined whether lact of effects was related to diet or exposure)	
Metals	Mercury	mercuric nitrate	6		Tessier et al. 1996	mortality, growth	0% mortality; body weight	Banded mystery snail	*Viviparus georgianus*	Brackish	Water	60 days	field collected snails from St. Lawrence River estuary; whole-body concentration estimated from graph; no mortality or significant weight loss reported (undefined whether lact of effects was related to diet or exposure)	
Metals	Mercury	mercuric nitrate		8	Thain 1984	growth, reproduction	dry flesh body weight, 35% reduction in number of young produced	Slipper limpet	*Crepidula fornicata*	marine	water	16 weeks	at LOAEL- 25% reduction in dry flesh weight for male, 65% decrease in females; field-collected limpets; growth effects observed at all doses (0.25, 0.42, 1.0 µg/L at 8,16,22 mg/kg ww); no effect observed on live weight and shell length up to 16 mg/kg ww, but effects seen at 22 mg/kg dw; 35% reduction in number of young produced.	not recommended: NOAEL based on field-collected organisms
Metals	Mercury	mercuric nitrate		12	Dillon 1977	mortality	30% mortality	Marsh clam	*Rangia cuneata*	Marine	Water	7 days	LOAEL is concentration in dead clams (non-pre-exposed) where 30% mortality was observed - estimated from figure; field-collected from San Antoin Bay Austwell, TX; control not reported; poor relationship between chemistry and effects	not recommended: NOAEL based on field-collected organisms
Metals	Mercury	methyl mercuric chloride	7.57	18.38	Biesinger et al. 1982	mortality	35% mortality	Waterflea	*Daphnia magna*	Freshwater	Water	21 days	survival at LOAEL and NOAEL were 65% and 95%, respectively (90% survival in control); converted to ww based on 10% moisture in organisms (reported in study)	
Metals	Mercury	phenylmercuric acetate		23	Kopfler 1974	mortality	majority died after 19 days exposure	Eastern oyster	*Crassostrea virginia*	Marine	water	19 days	whole oyster concentration	
metals	Mercury		46.5		Canli and Furness 1995	survival		adult Norway lobster	*Nephrops norvegicus*	Marine	water	30 days	measured in gills; no mortality; exposure concentration in water = 10 ug/L	not recommended: not a whole body tissue concentration
metals	Mercury		NC	NC	Allah et al. 2003	Growth		snail	*Biomphalaria glabrata*	Freshwater	Water	8 weeks	High mortality in the control and the study is therefore not recommended; NOAEL for growth was reported at 137 mg/kg ww.	not recommended: high mortality in control
Metals	Selenium			<0.2	Alaimo et al. 1994	growth	reduced body weight	Midge	*Chironomus decorus*	Freshwater	Water and diet	14 days	40% decrease in body weight; different source waters spiked with selenium	not recommended: LOAEL is based on detection limit
Metals	**Selenium**		**<0.05**	**0.51**	**Malchow et al. 1995**	**growth**	**reduced body weight**	**Midge**	***Chironomus decorus***	**Freshwater**	**Diet**	**96 hours**	**Significant decrease in body weight (15%) compared to control after feeding on algae cultured in selenate**	**Selected TRVs: lowest LOAEL and NOAEL TRVs that meet acceptability criteria**

Table 1. TSVs for invertebrate whole-body tissue

Chemical Group	Chemical	Chemical Form	NOAEL mg/kg ww	LOAEL mg/kg ww	Source	Endpoint	Endpoint effect	Test Species	Species (Scientific Name)	Marine / Freshwater	Exposure mode	Exposure duration	Notes	Rationale for selection
Butyltins	Tributyltin			0.02	Horiguchi et al. 1997	Development	Induction of imposex	rock shell	*Thais clavigera*	marine	water	3 months	LOER based on secondary source (methods cannot be reviewed) and level of imposex not reported	not recommended: imposex not preferred endpoint
Butyltins	Tributyltin			0.03	Gibbs et al. 1987	Reproduction	impaired reproduction and development	Atlantic dogwinkle	*Nucella lapillus*					not recommended: imposex not preferred endpoint
Butyltins	Tributyltin			0.07	Gibbs et al. 1991	Reproduction	imposex	Atlantic dogwinkle	*Nucella lapillus*	marine	water	12 weeks	Effect not linked to imposex and no control used	not recommended: imposex not preferred endpoint
Butyltins	Tributyltin			0.03	Ruiz et al. 1998	Reproduction	imposex	Atlantic dogwinkle	*Nucella lapillus*	marine	field exposure	field exposure	organisms field collected from NW Spain coast; LOAEL based on lowest tissue concentration associated with a VDSI of 4 (at LOAEL VDSI = 4.3 and 28% sterilized females)	not recommended: imposex not preferred endpoint and organisms were field-exposed
Butyltins	Tributyltin			0.034	Barreiro et al. 2001	Reproduction	imposex	Dogwelk (field collected)	*Nassarius reticulatus*	Marine	Sediment	field exposed	organisms field collected from various sites with maritime activity in NW Spain; LOAEL is a tissue concentration associated with 6% infertilization (in VDS stage 5 and 6) and a RPS index of 17.4; the next lowest tissue concentration of 0.096 mg/kg ww (as Sn in TBT) caused 100% infertilization; tissue concentration was reported as 0.014 mg/kg ww as Sn.	not recommended: imposex not preferred endpoint and organisms were field-exposed
Butyltins	Tributyltin			0.04	Bryan et al. 1987	Reproduction	imposex	Atlantic dogwinkle	*Nucella lapillus*	marine	field exposed	1 month (field exposed)	field collected organisms with controls that were untreated; LOAEL based on 22.5% of females at Stage 4; at 0.78 mg/kg ww, 100% females at Stage 4 or 5	not recommended: imposex not preferred endpoint
Butyltins	Tributyltin			0.045	Stroben et al. 1992	Reproduction	imposex	netted dogwhelk	*Hinia reticulata*	marine	field exposure and water exposure in lab	field collected and 5 months in lab	RPS was 42-48% at 3 to 5 months exposure to 50 ng/; tissue concentrations range from 225 to 355 ppb dw = 0.045 to 0.071 mg/kg ww	not recommended: imposex not preferred endpoint
Butyltins	Tributyltin	Tributyltin chloride	0.12		Rice et al. 1989	growth	body weight and molting frequency	Blue crab (juvenile)	*Callinectes sapidus*	Marine	Diet	16 days	crabs fed grass shrimp exposed to with TBT in water; no effect on feeding rate	
Butyltins	Tributyltin			0.12	Gibbs et al. 1988	Reproduction	imposex	Atlantic dogwinkle	*Nucella lapillus*	marine	water	2 years	LOAEL based female tissue concentration where 1/3 of the females were sterile (Stage 5 or 6) at 24 months; 100% sterilization at 0.28 mg/kg ww	not recommended: imposex not preferred endpoint
Butyltins	Tributyltin			0.12	Bryan et al. 1989	Reproduction	100% imposex	mud snail	*Ilyanassa obsoleta*	marine	field study	field study		not recommended: imposex not preferred endpoint and organisms were field-exposed
Butyltins	Tributyltin		0.06	0.14	Oehlmann et al. 1998	Reproduction	imposex	Periwinkle	*Littorina littorea*	Marine			LOAEL is 40% sterilization due to intersex; tissue concentrations were reported as 0.0248 and 0.059 mg/kg ww as Sn.	not recommended: imposex not preferred endpoint
Butyltins	Tributyltin			0.22	Oehlmann et al. 1996	Reproduction	imposex	snail	*Ocinebrina aciculata*	Marine			Sterilization due to imposex; tissue concentration reported as 0.09 mg/kg ww as Sn.	not recommended: imposex not preferred endpoint
Butyltins	Tributyltin			0.23	Stroben et al. 1992	Reproduction	imposex	Atlantic dogwinkle	*Nucella lapillus*	marine	field exposure and water exposure in lab	field collected and 6 months in lab	RPS is 40% after 6 months exposure to 100 ng/l.	not recommended: imposex not preferred endpoint
Butyltins	Tributyltin			0.278	Bryan et al. 1987	Reproduction	imposex	Dogwelk (field collected)	*Nucella lapillus*	Marine	field-exposed	1 month (field exposed)	LOAEL is based on field collected snails with 13.3% sterile females (VDS 5); RPS index = 55.4%	not recommended: imposex not preferred endpoint and organisms were field-exposed
Butyltins	Tributyltin		0.09	0.28	Gibbs et al. 1988	Reproduction	imposex	Dogwelk	*Nucella lapillus*	Marine	Water	2 years	LOAEL is 100% sterilization due to imposex; the NOAEL was measured in field collected snails with RPS of 4.2% and VDS of 3.2. The tissue concentrations were reported as 0.038 and 0.114 mg/kg ww as Sn. Approximately 1/3 of the females were sterile with tissue concentrations ranging between 0.029 and 0.05 mg/kg as Sn.	not recommended: imposex not preferred endpoint and organisms were field-exposed
Butyltins	Tributyltin	Tributyltin chloride		0.28	Bartlett et al. 2004	Reproduction	reduced no. live offspring (EC50)	Amphipod	*Hyalella azteca*	Freshwater	Sediment	10 weeks (2 generations)	LOAEL is estimated from measured tissue concentrations (EC50) where reproductive effect was "expected" to be statistically significant (a 50% decrease). The tissue concentration was reported as 0.116 mg/kg ww as Sn. HIGH UNCERTAINTY- no actual significant effects for growth or reproduction were observed; the variability in the data did not allow for the development of a threshold concentration for these effects; the survival effects concentrations were estimated from a mortality model and do not represent concentrations at which significantly greater mortality occurred	not recommended: no significant effects on growth or reproduction were observed (see notes)
Butyltins	Tributyltin		0.14	0.29	Bauer et al. 1997	Reproduction	imposex	Periwinkle (field collected)	*Littorina littorea*	Marine	field-exposed	field collected snails	organisms collected from German coastline in areas associated with shipping activities; LOAEL is tissue concentration associated with 60% sterilization due to imposex (intersex index [ISI] = 2.0); NOAEL is tissue concentration associated with 25% sterilization or less due to imposex (ISI] = 1.0); NOAEL and LOAEL converted from Sn to TBT using a ratio of 0.41 (ratio reported in the study); in laboratory tissues ISI < 1.0 with tissue concentrations up to 0.98 mg/kg ww	not recommended: imposex not preferred endpoint and organisms were field-exposed
Butyltins	Tributyltin			0.29	Girard et al. 2000	Mortality	reduced cell proliferation, protein synthesis, delayed effect on survival	sea urchin	Paracentrotus lividus	marine	water	4-6 hours	LOER based on egg residue	not recommended: LOAEL based on egg tissue concentration

Table 1. TSVs for invertebrate whole-body tissue

Chemical Group	Chemical	Chemical Form	NOAEL mg/kg ww	LOAEL mg/kg ww	Source	Endpoint	Endpoint effect	Test Species	Species (Scientific Name)	Marine / Freshwater	Exposure mode	Exposure duration	Notes	Rationale for selection
Butyltins	Tributyltin			0.33	Santos et al. 2005	Reproduction	50% imposex	Atlantic dogwinkle	*Nucella lapillus*	marine	water	3 months	Level of imposex not at threshold to cause impairment to reproduction	not recommended: imposex not preferred endpoint
Butyltins	Tributyltin	Tributyltin chloride		0.37	Bartlett et al. 2004	mortality	25% mortality	Amphipod	*Hyalella azteca*	Freshwater	Sediment	10 weeks (2 generations)	LOAEL is estimated from measured tissue concentrations for LC25 for both F0 and F1 generations; LC50 = 0.446 mg/kg ww as Sn. The tissue concentration was reported as 0.153 mg/kg ww as Sn. HIGH UNCERTAINTY- no actual significant effects for growth or reproduction were observed; the variability in the data did not allow for the development of a threshold concentration for these effects; the survival effects concentrations were estimated from a mortality model and do not represent concentrations at which significantly greater mortality occurred	not recommended: no significant effects on growth or reproduction were observed (see notes)
Butyltins	Tributyltin			0.51	Bailey and Davies 1991	Reproduction	sterilzation (imposex)	Dogwelk	*Nucella lapillus*	Marine			Sterilization due to imposex. Tissue concentration reported as 0.21 mg/kg ww as Sn.	not recommended: imposex not preferred endpoint
Butyltins	**Tributyltin**	**tributyltin chloride**	**0.22**	**0.54**	**Meador and Rice 2001**	**growth**	**reduction in weight**	**polychaete**	***Armandia brevis***	**marine**	**sediment**	**42 days**	**10.2% reduction (significant reduction) in animal weight compared to controls; ww calculated from dw using 23% solids from dry:wet ratios presented in the paper**	**Selected TRVs: lowest LOAEL that meets TRV acceptability criteria; highest NOAEL below selected LOAEL that meets acceptability criteria**
Butyltins	Tributyltin	tributyltin chloride		0.60	Guolan and Yong 1995	Growth	reduction in shell length, width, and body weight	mussel	Mytilus edulis	marine	water	60 days	Tissue concentrations presented only in gill plus viscera or muscle plus mantle (not whole body); LOAEL based on Figure 2 and Table 1 in Meador et al. 2002	not recommended: not a whole body tissue concentration
Butyltins	Tributyltin	Tributyltin oxide		0.70	Bryan et al. 1987	Reproduction	imposex	Dogwelk	*Nucella lapillus*	Marine	Water	12 months	LOAEL is based laboratory experiment; 12.5% of the females were sterile (VDS 5) and RPS index = 63.3%; RPS index was 10% in dogwhleks with TBT tissue concentration of 0.028 mg/kg ww	not recommended: imposex not preferred endpoint
Butyltins	Tributyltin		0.17	0.75-1.95	Davies et al. 1988	growth	condition index	Pacific oyster	*Crassostrea gigas*	Marine	Water (field exposure)	5 month	Reduced condition index relative to control stations (tissue weight as a percent of total weight)	
Butyltins	Tributyltin		0.39	0.78	Schulte-Oehlmann et al. 1995	Reproduction	imposex	Snail	*Marisa cornuarietis*	Freshwater	Water	3 months	Imposex induced but imposex did not result in sterility (VDS<Stage 5); not acceptable effect endpoint	not recommended: imposex not preferred endpoint
Butyltins	Tributyltin			0.88	Schulte-Oehlmann et al. 1995	Reproduction	imposex	ramshorn snail	*Marisa cornuarietis*	freshwater	water	3 months	Level of imposex not at threshold to cause impairment to reproduction	not recommended: imposex not preferred endpoint
Butyltins	Tributyltin		0.79	1.09	Widdows and Page 1993	growth	reduced growth	Blue mussel	*Mytilus edulis*	Marine	Water	96 hours	LOAEL is based on a tissue concentration with reduced growth (experiment I). NOAEL is the highest tissue concentration below the LOAEL with no growth effects (experiment II).	
Butyltins	Tributyltin		0.5	1.2	Salazar and Salazar 1998	growth	reduction in shell length and tissue wet weight	Blue mussel (juvenile)	*Mytilus edulis*	Marine	Water (field exposed)	84 days (field exposure)	Some uncertainty - based on *in situ* field tests of caged mussels with other contaminants present in the field exposure, including: copper, cadmium, zinc, lead, and chromium; LOAEL based on growth reduction and is reported as the apparent effects threshold; however, derivation of LOAEL is unclear because study reports that the relationship between tissue concentrations and growth effects was not strong for various reasons (e.g., does-response was unclear); study also reports probable effect threshold as 1.5 mg/kg ww and the predicted effects thresholds as 0.8 mg/kg ww; but is unclear how thresholds were derived; NOAEL is reported no effects level in study	not recommended: organisms were field-exposed
Butyltins	Tributyltin		0.60	1.3	Moore et al. 1991	growth, reproduction	reduced growth, reduced reproductive success (number of eggs per pair)	Polychaete	*Neanthes arenaceodentata*	Marine	Water	10 wks	LOAEL had 32% reduction in growth compared with control and a reproductive success of 52% compared to 90% in the controls; reproductive success was defined as number of pairs successfully depositing all eggs within their tube; 20% solids assumed	
Butyltins	Tributyltin			1.3	Waldock and Thain 1983	growth	Growth	Pacific oyster	*Crassostrea gigas*	marine	water and sediment	56 days	reduction in body weight gain, length gain, and condition index compared to control; 53% less increase in wet weight after 56 days exposure	
Butyltins	Tributyltin			1.8	Page et al. 1998	Mortality	significant reduction in scope of growth	mussel	*Mytilus edulis*	marine	water	36 hours	Concentration as TBTCl converted to TBT; 20% solids assumed to convert from dry weight to wet weight	
Butyltins	Tributyltin	Tributyltin chloride		1.82	Bartlett et al. 2004	growth	reduced biomass production (EC25)	Amphipod	*Hyalella azteca*	Freshwater	Sediment	10 weeks (2 generations)	LOAEL is estimated from measured tissue concentrations for EC25 for F0 generation; however, study notes that the observed effect on biomass production was actually an effect on survival and that no negative effect on individual growth was observed; EC50 = 0.872 mg/kg ww as Sn. The tissue concentration was reported as 0.746 mg/kg ww as Sn. HIGH UNCERTAINTY- no actual significant effects for growth or reproduction were observed; the variability in the data did not allow for the development of a threshold concentration for these effects; the survival effects concentrations were estimated from a mortality model and do not represent concentrations at which significantly greater mortality occurred	not recommended: no significant effects on growth or reproduction were observed (see notes)
Butyltins	Tributyltin	not specified		2.9	Kure and Depledge 1994	growth	decrease in condition index	soft shell clam	*Mya arenaria*	marine	water	28 days	condition index ~ 77% of control; dw converted to ww assuming 20% solids	
Butyltins	Tributyltin			3.0	Meador et al. 2002	growth	growth impairment	benthic invertebrates	*not specified*	Marine			LOAEL is approximation of whole-body tissue concentration at which growth inhibition in various benthic invertebrate species is observed according to various studies; value is protective of prey species of juvenile salmonids	

Table 1. TSVs for invertebrate whole-body tissue

Chemical Group	Chemical	Chemical Form	NOAEL mg/kg ww	LOAEL mg/kg ww	Source	Endpoint	Endpoint effect	Test Species	Species (Scientific Name)	Marine / Freshwater	Exposure mode	Exposure duration	Notes	Rationale for selection
Butyltins	Tributyltin		1.3	3.4	Moore et al. 1991	mortality		Polychaete	*Neanthes arenaceodentata*	Marine	Water	10 wks	LOAEL had 56% reduction in survival compared with control; 20% solids assumed	
Butyltins	Tributyltin			4.8	Langston and Burt 1991	mortality	100% mortality	Clam	*Scrobicularia plana*	Marine	Sediment	40 days	LOAEL is tissue concentration at 2 weeks in experimental group where all clams died in less than 14 days exposed to 10 mg/kg TBT in sediment; in a separate experiment where clams were exposed to 10 mg/kg TBT in sediment, tissue concentrations ranged from 12.5 to 15 mg/kg ww; tissue concentrations converted from TBT-Sn to TBT by multiplying Sn concentrations by 2.5 (as reported in study)	
Butyltins	Tributyltin			6.4	Borgmann et al. 1996	mortality	LC50	Amphipod (juvenile)	*Hyalella azteca*	Freshwater	Water	4 weeks	LOAEL is the calculated body concentrations calculated at LC50 after 4 weeks	
Butyltins	Tributyltin			7.2	Meador et al. 1997	Mortality	LD50	amphipod	*Eohaustorius washingtonianus*	marine	sediment	41 days	LD50 is the tissue concentration at LC50 in sediment; control mortality was high (32% and 15% at 41 and 9 days, respectively); study reports that LD50 was corrected (increased) by adding control mortality to offset non-toxicant mortality; LC50 for 9 day exposure was 9.84 mg/kg ww; ww calculated from dw using 21% solids from dry:wet ratios presented in paper	
butyltins	Tributyltin	tributyltin chloride		9.0	Meador 1997	survival	LR50	amphipod	*Eohaustorius washingtonianus*	marine	water	10 days	LR50 is tissue concentration at LC50 in water; ww calculated from dw using 21% solids from dry:wet ratios presented in paper	
Butyltins	Tributyltin			9.4	Meador 1997	Mortality	LC50	polychaete	*Armandia brevis*	marine	water	10 days	LR50 is tissue concentration at LC50 in water; ww calculated from dw using 23% solids from dry:wet ratios presented in Meador et al. 1997	
butyltins	Tributyltin	tributyltin chloride		12	Meador 1993	survival	LD50	amphipod	*Eohaustorius estuarius*	marine	water	10 days	means from two experiments (59 mg/kg dw) as presented in Meador (1997) (this paper show results from each experiment only on Figure 3); ww concentration estimated using 20% solids based on dry:wet ratio presented in paper	
Butyltins	Tributyltin	tributyltin chloride	12.6		Becker van Slooten and Tarradellas 1994	mortality, growth	shell length; survival	Zebra mussel	*Dreissenia polymorpha*	Freshwater	Water	35 days	no effect on growth rate (shell length) or survival; 20% solids assumed to convert from dw to ww	
Butyltins	Tributyltin	tributyltin chloride		15	Meador 1997	Mortality	LR50	amphipod	*Rhepoxynius abronius*	marine	water	10 days	LR50 is tissue concentration at LC50 in water; ww calculated from dw using 27% solids from dry:wet ratios presented in paper	
Butyltins	Tributyltin	tributyltin chloride		16	Meador 1993	Mortality	LD50	amphipod	*Rhepoxynius abronius*	marine	water	4 days	means from three experiments (59 mg/kg dw) as presented in Meador (1997) (this paper show results from each experiment only on Figure 3); ww concentration estimated using 27% solids based on dry:wet ratio presented in paper	
Butyltins	Tributyltin	tributyltin chloride		19	Meador et al. 1997	Mortality	LD50	amphipod	*Rhepoxynius abronius*	marine	sediment	10 days	LD50 is the tissue concentration at LC50 in sediment; control mortality was 5% at 10 days; ww calculated from dw using 27% solids from dry:wet ratios presented in paper	
Butyltins	Tributyltin	tributyltin chloride		21	Meador et al. 1997	Mortality	LD50	polychaete	*Armandia brevis*	marine	sediment	10 days	LD50 is the tissue concentration at LC50 in sediment; control mortality was high (25% at 10 days); study reports that LD50 was corrected (increased) by adding control mortality to offset non-toxicant mortality; ww calculated from dw using 23% solids from dry:wet ratios presented in paper	
Butyltins	Tributyltin			23.2	Borgmann et al. 1996	mortality	LC50	Amphipod (adults)	*Hyalella azteca*	Freshwater	Water	1 week	LOAEL is the calculated body concentrations calculated at LC50 after 1 week	
PAHs	2-Methylnaphthalene			1.79	Pawlisz and Peters 1993	Survival		Waterflea	*Daphnia magna*	Freshwater	Water	48 hours	control data not reported; some uncertainty - LOAEL based on concentrations in unaffected organisms exposed to estimated LC50 concentrations (concentrations measured in unaffected, immobilized, and dead organisms)	not recommended: no whole body tissue concentrations associated with adverse effect not reported and control data not reported
PAHs	**Acenaphthylene**		**<0.50**		**Roper et al. 1997**	**Survival**		**Zebra mussel**	***Dreissenia polymorpha***	**Freshwater**	**water and sediment**	**34 days**	**tissue concentrations were not detected (concentration is <0.50 mg/kg ww); mussels exposed to field collected sediment from Times Beach Confined Disposal Facility in Lake Erie; background concentrations unknown in field-collected mussels; No effect mortality based on observation of condition of mussels at end of study**	**Selected TRV: only NOAEL that meets acceptability criteria**
PAHs	**Acenapthene**		**0.25**		**Roper et al. 1997**	**Survival**		**Zebra mussel**	***Dreissenia polymorpha***	**Freshwater**	**water and sediment**	**34 days**	**mussels exposed to field collected sediment from Times Beach Confined Disposal Facility in Lake Erie; background concentrations unknown in field-collected mussels; No effect mortality based on observation of condition of mussels at end of study; NOAEL is concentration at reference location**	**Selected TRV: only NOAEL that meets acceptability criteria**
PAHs	Anthracene	98% pure		0.38	Weinstein and Polk 2001	Survival	LD50	Mussel	*Utterbackia imbecillis*	Freshwater	Water	24 hours	LOAEL is lowest tissue concentration measured at 16 hours in a 24 hour exposure with UV light. Without UV light the LD50 was > 0.89 mg/kg ww (≤7.5% mortality observed at this tissue residue)	not recommended: see notes
PAHs	**Anthracene**		**0.25**		**Roper et al. 1997**	**Survival**		**Zebra mussel**	***Dreissenia polymorpha***	**Freshwater**	**water and sediment**	**34 days**	**mussels exposed to field collected sediment from Times Beach Confined Disposal Facility in Lake Erie; background concentrations unknown in field-collected mussels; No effect mortality based on observation of condition of mussels at end of study; NOAEL is concentration at reference location**	**Selected TRV: only NOAEL that meets acceptability criteria**

Table 1. TSVs for invertebrate whole-body tissue

Chemical Group	Chemical	Chemical Form	NOAEL mg/kg ww	LOAEL mg/kg ww	Source	Endpoint	Endpoint effect	Test Species	Species (Scientific Name)	Marine / Freshwater	Exposure mode	Exposure duration	Notes	Rationale for selection
PAHs	**Benzo(a)anthracene**		**0.6**		**Roper et al. 1997**	**Survival**		**Zebra mussel**	***Dreissenia polymorpha***	**Freshwater**	**water and sediment**	**34 days**	**mussels exposed to field collected sediment from Times Beach Confined Disposal Facility in Lake Erie; background concentrations unknown in field-collected mussels; No effect mortality based on observation of condition of mussels at end of study; NOAEL is average over 4 in-situ sites**	**Selected TRV: only NOAEL that meets acceptability criteria**
PAHs	Benzo(a)anthracene		NC		Trucco et al. 1983	Survival		Waterflea	*Daphnia pulex*	Freshwater	Water	24 hours	Highly uncertain TRV so not calculated; reported 96 hr LC50 at 10 ug/L and bioaccumulation experiment reported BCF in organisms exposed to 3-5 ug/L resulting in tissue concentration of 4.7 mg/kg ww	not recommended: see notes
PAHs	Benzo(a)pyrene		0.003		Anderson et al. 1981	Survival		Quahog	*Mercenaria mercenaria*	Marine	Water	18 wks	assumed ww concentrations; not a toxicity test - the study focused on clearing of bacteria injected into the hemolymph but no increase in mortality or morbidity observed when compared to control	not recommended: see notes
PAHs	Benzo(a)pyrene		0.20		Roper et al. 1997	Survival		Zebra mussel	*Dreissenia polymorpha*	Freshwater	water and sediment	34 days	mussels exposed to field collected sediment from Times Beach Confined Disposal Facility in Lake Erie; background concentrations unknown in field-collected mussels; No effect mortality based on observation of condition of mussels at end of study; NOAEL is average over 4 in-situ sites	
PAHs	Benzo(a)pyrene			0.302	Eertman et al. 1995	Reproduction	abnormal gametogenesis	Blue mussel	*Mytilus edulis*	Marine	Water	4 weeks	abnormal gametogenesis- reproductive success "may" be negatively affected (no statistics presented); LOAEL is lowest concentration with effects after 4 wks to 0.5 µg/L- data not presented	not recommended: not a direct measure of growth, survival, or reproduction
PAHs	Benzo(a)pyrene		1.25		Borchert et al. 1997	Survival		Clam	*Sphaerium corneum*	Freshwater	Sediment	5 days	not a toxicity test (accumulation test w/ no toxicity reported); NOAEL estimated from figure	
PAHs	Benzo(a)pyrene		1.9		Borchert et al. 1997	Survival		Midge	*Chironomus riparius*	Freshwater	Sediment	5 days	not a toxicity test (accumulation test w/ no toxicity reported); NOAEL estimated from figure	
PAHs	Benzo(a)pyrene			6.0	Choy et al 2007	reproduction	Reduction in number of larvae, reduced larval growth, reduction in spat attached	Oysters	*Crassostrea gigas*	Marine	Food	28 days	Concentration measured in digestive gland after 28 days exposure. Effects were reported at lower exposure concentration but concentration in digestive gland not reported.	not recommended: not a whole body tissue concentration
PAHs	**Benzo(a)pyrene**			**23.2**	**Rice et al. 2000**	**Growth**	**Reduced growth rate**	**Polychaete**	***Armandia brevis***	**Marine**	**Sediment**	**28 days**	**27% decrease in growth rate compared to reference sediment - not statistically evaluated (feeding experiment for fish); assumed 80% moisture; polychaeates exposed to clean sediment supplemented with benzo(a)pyrene**	**Selected TRV: only LOAEL that meets acceptability criteria; no NOAEL available from study**
PAHs	Benzo(a)pyrene		295		Fay et al. 2000	Survival		Amphipod	***Ampelisca abdita***	**Marine**	Sediment	10 days	No significant mortality in any of the exposure concentrations	
PAHs	Benzo(a)pyrene		NC		Trucco et al. 1983	Survival		Waterflea	*Daphnia pulex*	Freshwater	Water	24 hours	Highly uncertain TRV so not calculated; reported 96 hr LC50 at 5 ug/L and bioaccumulation experiment reported BCF in organisms exposed to 1.5-3 ug/L resulting in tissue concentration of 6.2 mg/kg ww	not recommended: see notes
PAHs	**Benzo(b)flourantthene**		**0.37**		**Roper et al. 1997**	**Survival**		**Zebra mussel**	***Dreissenia polymorpha***	**Freshwater**	**water and sediment**	**34 days**	**mussels exposed to field collected sediment from Times Beach Confined Disposal Facility in Lake Erie; background concentrations unknown in field-collected mussels; No effect mortality based on observation of condition of mussels at end of study; NOAEL is average over 4 in-situ sites**	**Selected TRV: only NOAEL that meets acceptability criteria**
PAHs	Benzo(e)pyrene			NC	Lampi et al. 2005	Survival	EC50	Waterflea	*Daphnia magna*	Freshwater	Water	48 hours	no LOAEL for tissue concentration can be calculated because tissue concentration at the EC50 was not reported (only the water concentration that caused mortality to 50% of test animals was reported; study considered toxicity of benzo(e)pyrene under 2 different photoradiation types; under visible light + UVA, EC50 was calculated as 5.66 nM and under simulated solar radiation (SSR), EC50 was 1.29 nM; [molecular weight of benzo(e)pyrene is 252.3g/mol]	not recommended: no whole body tissue concentrations not reported
PAHs	Benzo(e)pyrene			NC	Newsted et al. 1987	Survival	EC50	Waterflea	*Daphnia magna*	Freshwater	Water	varies	endpoint effect is not relevant - study looked at time estimated to achieve toxicity of 50% immobilized organisms; tissue concentrations not reported	not recommended: see notes
PAHs	**Benzo(g,h,i)perylene**		**0.25**		**Roper et al. 1997**	**Survival**		**Zebra mussel**	***Dreissenia polymorpha***	**Freshwater**	**water and sediment**	**34 days**	**mussels exposed to field collected sediment from Times Beach Confined Disposal Facility in Lake Erie; background concentrations unknown in field-collected mussels; No effect mortality based on observation of condition of mussels at end of study; NOAEL is concentration at reference location**	**Selected TRV: only NOAEL that meets acceptability criteria**
PAHs	**Benzo(k)fluorantthene**		**0.23**		**Roper et al. 1997**	**Survival**		**Zebra mussel**	***Dreissenia polymorpha***	**Freshwater**	**water and sediment**	**34 days**	**mussels exposed to field collected sediment from Times Beach Confined Disposal Facility in Lake Erie; background concentrations unknown in field-collected mussels; No effect mortality based on observation of condition of mussels at end of study; NOAEL is average over 4 in-situ sites**	**Selected TRV: only NOAEL that meets acceptability criteria**
PAHs	**Chrysene**		**0.98**		**Roper et al. 1997**	**Survival**		**Zebra mussel**	***Dreissenia polymorpha***	**Freshwater**	**water and sediment**	**34 days**	**mussels exposed to field collected sediment from Times Beach Confined Disposal Facility in Lake Erie; background concentrations unknown in field-collected mussels; No effect mortality based on observation of condition of mussels at end of study; NOAEL is average over 4 in-situ sites**	**Selected TRV: only NOAEL that meets acceptability criteria**

Table 1. TSVs for invertebrate whole-body tissue

Chemical Group	Chemical	Chemical Form	NOAEL mg/kg ww	LOAEL mg/kg ww	Source	Endpoint	Endpoint effect	Test Species	Species (Scientific Name)	Marine / Freshwater	Exposure mode	Exposure duration	Notes	Rationale for selection
PAHs	**Dibenzo(a,h)anthracene**		**<0.50**		**Roper et al. 1997**	**Survival**		**Zebra mussel**	***Dreissenia polymorpha***	**Freshwater**	**water and sediment**	**34 days**	**tissue concentrations were not detected (concentration is <0.50 mg/kg ww); mussels exposed to field collected sediment from Times Beach Confined Disposal Facility in Lake Erie; background concentrations unknown in field-collected mussels; No effect mortality based on observation of condition of mussels at end of study**	**Selected TRV: only NOAEL that meets acceptability criteria**
PAHs	**Dibenzothiophene**			**280**	**Eastmond et al. 1984**	**Survival**	**LC50**	**Waterflea**	***Daphnia magna***	**Freshwater**	**Water**	**48 hours**	**LOAEL calculated by multiplying the reported LC50 (0.466 mg/L) by the predicted peak BCF (600); mortality determined by response to probing at end of 48 hr exposure static lab test; mostly a bioaccumulation study**	**Selected TRV: only LOAEL available that meets acceptability criteria (no NOAEL available)**
PAHs	Fluoranthene			0.222	Eertman et al. 1995	Reproduction	abnormal gametogenesis	Blue mussel	*Mytilus edulis*	Marine	Water	4 weeks	abnormal gametogenesis- reproductive success "may" be negatively affected (no statistics presented); LOEC is lowest concentration with effects after 4 wks to 0.5 µg/L- data not presented	not recommended: not a direct measure of growth, survival, or reproduction
PAHs	Fluoranthene		1.23		Roper et al. 1997	Survival		Zebra mussel	*Dreissenia polymorpha*	Freshwater	water and sediment	34 days	mussels exposed to field collected sediment from Times Beach Confined Disposal Facility in Lake Erie; background concentrations unknown in field-collected mussels; No effect mortality based on observation of condition of mussels at end of study; NOAEL is average over 4 in-situ sites	
PAHs	Fluoranthene			2.8 - 277	Wilcoxen et al. 2003	Survival	LR50	Amphipod	*Hyalella azteca*	Freshwater	Water	10 days	LR50s derived under different light sources (UV enhanced, fluorescent, and gold with 2.83, 40.5, and 164-277 mg/kg ww, respectively); *purpose of study was to examine the phototoxicity of sediment-associated PAHs; study notes that UV reduces LR50 (phototoxicity from UV)*	not recommended: see notes
PAHs	Fluoranthene		9.81		Bell et al. 2004	Survival		Mayfly (adult)	*Chironomus tentans*	Freshwater	Sediment	72 hours	No treatment-related mortality associated with no UV exposure (sediment concentration = 204 uk/g dw); mortality was observed where UV exposure occurred; the median time to emergence was delayed for 11 (male) and 13 days (females) in the highest sediment concentration with no UV exposure	not recommended: see notes
PAHs	Fluoranthene		10	20	Ankley et al. 1995	Survival		Oligochaete	*Lumbriculus variegatus*	Freshwater	Water and UV light	96 hours + 48 hours UV	No mortality was observed after 96 hours water exposure; however, after 48 hours of high UV light exposure, high mortality occurred; NOAEL and LOAEL estimated from graph	not recommended: see notes
PAHs	**Fluoranthene**		**8.1**	**22.2**	**Schuler et al 2007**	**Growth and reproduction**	**Reduced length and reduced number of offspring**	**Amphipod**	***Hyalella azteca***	**Freshwater**	**Water**	**28 days**	**LOEC had significantly less offspring and males were significantly shorter**	**Selected TRV: lowest LOAEL that meets acceptability criteria; highest NOAEL below selected LOAEL that meets acceptability criteria**
PAHs	Fluoranthene			34.4	Schuler et al. 2004	Survival	LR50	Midge	*Chironomus tentans*	Freshwater	Water	10 days	calculated from mean lethal residue in dead organisms from each exposure concentration. No significant difference in tissue residue concentrations between dead and live organisms.	
PAHs	Fluoranthene		28.3	42.5	Schuler et al 2007	Growth	Reduced weight	Midge	*Chironomus tentans*	Freshwater	Water	10 days	LOE is reported as reduction in growth - two other endpoints (emergence and pupation had effects at lower body burdens).	
PAHs	Fluoranthene			65, 193	Wilcoxen et al. 2003	Survival	LR50	Amphipod	*Hyalella azteca*	Freshwater	Sediment	10 days	LR50s derived under different light sources (UV enhanced and fluorescent with 65 and 193 mg/kg ww, respectively); *purpose of study was to examine the phototoxicity of sediment-associated PAHs*	not recommended: see notes
PAHs	Fluoranthene		0.030	70.8	Driscoll et al. 1997	Survival		Amphipod	*Diporeia sp.*	Freshwater	Sediment	31 days	Poor control - At LOAEL, 28% survival at day 30; at NOAEL and control, 67% and 68% mortality, respectively; tissue concentrations estimated from figure	not recommended: see notes
PAHs	Fluoranthene		72.8		Bell et al. 2004	Survival		Midge (juvenile)	*Chironomus tentans*	Freshwater	Sediment	72 hours	No treatment-related mortality in larvae associated with no UV exposure (sediment concentration = 204 ug/g dw). However, high mortality rate after taking the larvae out of the sediment and 1 hr exposure to UV light (100% mortality at 72.8 mg/kg at significant mortality at 33.5 and 53.6 mg/kg ww).	not recommended: see notes
PAHs	Fluoranthene		40.5	121	Lotufo 1998	Reproduction	reduced number of offspring	Copepod	*Schizopera knabeni*	Marine	Sediment	10 days	significant decrease in number of offspring at LOAEL	
PAHs	Fluoranthene			162	Schuler et al. 2004	Survival	LR50	Amphipod	*Hyalella azteca*	Freshwater	Water	28 days	calculated from mean lethal residue in dead organisms from each exposure concentration. No significant difference in tissue residue concentrations between dead and live organisms	
PAHs	Fluoranthene		50.6	182	Driscoll et al. 1997	Survival		Amphipod	*Hyalella azteca*	Freshwater	Sediment	31 days	mortality was significant different from control at 74% survival	
PAHs	Fluoranthene		204 - 223		Landrum et al. 2002	Growth, reproduction	biomass and no. of worms	Oligochaete	*Lumbriculus variegatus*	Freshwater	Sediment	28 days	No significant changes in reproduction (number of worms) and growth (biomass) compared to control. The 204 mg/kg was calculated from Table 1 whereas the 223 mg/kg was reported in the text.	
PAHs	Fluoranthene			222	Driscoll and Landrum 1997	Survival	50% mortality	Amphipod	*Hyalella azteca*	Freshwater	Water	30 days	LOAEL associated with LC50 calculated at 16 days	
PAHs	Fluoranthene		250		Ankley et al. 1995	Survival		Oligochaete	*Lumbriculus variegatus*	Freshwater	Water	96 hours	No mortality was observed after 96 hours water exposure; NOAEL estimated from graph	
PAHs	Fluoranthene		121	263	Lotufo 1998	Survival	55% mortality	Copepod	*Coullana sp.*	Marine	Sediment	10 days	at LOAEL and NOAEL, survival was approximately 45% and 75%, respectively (control survival = approximately 90%); at LOAEL, mortality is statically significant; LR50 = 243 mg/kg ww	
PAHs	Fluoranthene		121	263	Lotufo 1998	Reproduction	reduced number of offspring	Copepod	*Coullana sp.*	Marine	Sediment	10 days	significant decrease in number of offspring at LOAEL	

Table 1. TSVs for invertebrate whole-body tissue

Chemical Group	Chemical	Chemical Form	NOAEL mg/kg ww	LOAEL mg/kg ww	Source	Endpoint	Endpoint effect	Test Species	Species (Scientific Name)	Marine / Freshwater	Exposure mode	Exposure duration	Notes	Rationale for selection
PAHs	Fluoranthene		627		Landrum et al. 2002	Growth, reproduction	biomass and no. of worms	Oligochaete	*Lumbriculus variegatus*	Freshwater	Sediment	10 days	No significant changes in reproduction (number of worms) and growth (biomass) compared to control. Concentration calculated from Table 1.	
PAHs	Fluoranthene			742	Schuler et al. 2004	Survival	LR50	Amphipod	*Diporeia sp.*	Freshwater	Water	28 days	calculated from mean lethal residue in dead organisms from each exposure concentration. No significant difference in tissue residue concentrations between dead and live organisms.	
PAHs	Fluoranthene		587	789	Lotufo 1998	Survival	95% mortality	Copepod	*Schizopera knabeni*	Marine	Sediment	10 days	at LOAEL and NOAEL, survival was approximately 5% and 90%, respectively (control survival = approx 100%); LR50 = 546 mg/kg ww	
PAHs	Fluoranthene		1193		Driscoll and Landrum 1997	Survival		Amphipod	*Diporeia sp.*	Freshwater	Water	30 days	NOAEL reported as associated with 10% mortality compared with control.	
PAHs	Fluorene		0.25		Roper et al. 1997	Survival		Zebra mussel	*Dreissenia polymorpha*	Freshwater	water and sediment	34 days	mussels exposed to field collected sediment from Times Beach Confined Disposal Facility in Lake Erie; background concentrations unknown in field-collected mussels; No effect mortality based on observation of condition of mussels at end of study; NOAEL is concentration at reference location	
PAHs	**Fluorene**			**111**	**Lee et al. 2002**	**Survival**	**LR50**	**Amphipod**	***Hyalella azteca***	**Freshwater**	**Water**	**10 days**	**LR50 is calculated 10d LR50**	**Selected TRV: lowest LOAEL that meets acceptability criteria; no NOAEL available from study**
PAHs	Fluorene			2,040	Landrum et al. 2003	Survival	LR50	Amphipod	*Dipoeria sp.*	Freshwater	water	28 days	LR50 calculated using toxicokinetics.	
PAHs	**Indeno(1,2,3-c,d)pyrene**		**0.06**		**Roper et al. 1997**	**Survival**		**Zebra mussel**	***Dreissenia polymorpha***	**Freshwater**	**water and sediment**	**34 days**	**mussels exposed to field collected sediment from Times Beach Confined Disposal Facility in Lake Erie; background concentrations unknown in field-collected mussels; No effect mortality based on observation of condition of mussels at end of study; NOAEL is average over 4 in-situ sites**	**Selected TRV: only NOAEL that meets acceptability criteria**
PAHs	Naphthalene			0.05	Sanborn and Malins(1977	Survival		Spot shrimp		marine	water (8-12 ppb)	24 hours	LOAEL estimated from Fig. 1. Bovine serum albumin was added to the seawater without telling why	not recommended: see notes
PAHs	Naphthalene		<0.50		Roper et al. 1997	Survival		Zebra mussel	*Dreissenia polymorpha*	Freshwater	water and sediment	34 days	tissue concentrations were not detected (concentration is <0.50 mg/kg ww); mussels exposed to field collected sediment from Times Beach Confined Disposal Facility in Lake Erie; background concentrations unknown in field-collected mussels; No effect mortality based on observation of condition of mussels at end of study	
PAHs	Naphthalene			350	Landrum et al. 2003	Behavior	Immobility (failure to swim on prodding)	Amphipod	*Dipoeria sp.*	Freshwater	water	10 days	Concentration is median effect residue (ER50) calculated using toxicokinetics.	not recommended: not a direct measure of growth, survival, or reproduction
PAHs	**Naphthalene**			**640**	**Landrum et al. 2003**	**Survival**	**LR50**	**Amphipod**	***Dipoeria sp.***	**Freshwater**	**water**	**10 days**	**LR50 calculated using toxicokinetics; 28-day LR50 (740 mg/kg ww) estimated using BCF and water concentration**	**Selected TRV: only LOAEL that meets acceptability criteria; no NOAEL available from study**
PAHs	Naphthalene		NC		Trucco et al. 1983	Survival		Waterflea	*Daphnia pulex*	Freshwater	Water	24 hours	Highly uncertain TRV so not calculated; reported 96 hr LC50 at 1,000 ug/L and bioaccumulation experiment reported BCF in organisms exposed to 2-3 ug/L resulting in tissue concentration of 1.9 mg/kg ww	not recommended: see notes
PAHs	Perylene			NC	Newsted et al. 1987	Survival	EC50	Waterflea	*Daphnia magna*	Freshwater	Water	varies	endpoint effect is not relevant - study looked at time estimated to achieve toxicity of 50% immobilized organisms; tissue concentrations not reported	not recommended: see notes
PAHs	Phenanthrene		0.25		Roper et al. 1997	Survival		Zebra mussel	*Dreissenia polymorpha*	Freshwater	water and sediment	34 days	mussels exposed to field collected sediment from Times Beach Confined Disposal Facility in Lake Erie; background concentrations unknown in field-collected mussels; No effect mortality based on observation of condition of mussels at end of study; NOAEL is average over 4 in-situ sites	
PAHs	Phenanthrene			0.78	Emery and Dillon 1996	Growth, reproduction	reduced growth and fecundity	Polychaete	*Nereis arenaceodentata*	Marine	Combined	8 weeks	35% decrease in growth and fecundity relative to carrier control (acetone), but not diff. from seawater control; results are unclear (no differences from seawater control)	not recommended: see notes
PAHs	Phenanthrene			164	Lee et al. 2002	Survival	LR50	Amphipod	*Hyalella azteca*	Freshwater	Water	8.3 days	LR50 is calculated 10d LR50	Selected TRV: lowest LOAEL that meets acceptability criteria; no NOAEL available from study
PAHs	Phenanthrene			300	Landrum et al. 2003	Behavior	Immobility (failure to swim on prodding)	Amphipod	*Dipoeria sp.*	Freshwater	water	10 days	Concentration is median effect residue (ER50) calculated using toxicokinetics. Included based on the assumption that if the organism cannot move they are as good as dead.	not recommended: not a direct measure of growth, survival, or reproduction
PAHs	**Phenanthrene**			**1,400**	**Landrum et al. 2003**	**Survival**	**LR50**	**Amphipod**	***Dipoeria sp.***	**Freshwater**	**water**	**28 days**	**LR50 calculated using toxicokinetics.**	
PAHs	Phenanthrene		1,033		Landrum et al. 1994	Survival		Amphipod	*Dipoeria sp.*	Freshwater	sediment	32 days	12% mortality at NOAEL; (control mortality not available); study noted that lack of mortality "reflects the failure of the Diporeia to accumulation and maintain toxic body burdens of phenanthrene"	not recommended: uncontrolled study
PAHs	Phenanthrene		NC		Trucco et al. 1983	Survival		Waterflea	*Daphnia pulex*	Freshwater	Water	24 hours	Highly uncertain TRV so not calculated; reported 96 hr LC50 at 100 ug/L and bioaccumulation experiment reported BCF in organisms exposed to 6 ug/L resulting in tissue concentration of 7.0 mg/kg ww	not recommended: see notes

Table 1. TSVs for invertebrate whole-body tissue

Chemical Group	Chemical	Chemical Form	NOAEL mg/kg ww	LOAEL mg/kg ww	Source	Endpoint	Endpoint effect	Test Species	Species (Scientific Name)	Marine / Freshwater	Exposure mode	Exposure duration	Notes	Rationale for selection
PAHs	Pyrene		1.08		Roper et al. 1997	Survival		Zebra mussel	*Dreissenia polymorpha*	Freshwater	water and sediment	34 days	mussels exposed to field collected sediment from Times Beach Confined Disposal Facility in Lake Erie; background concentrations unknown in field-collected mussels; No effect mortality based on observation of condition of mussels at end of study; NOAEL is average over 4 in-situ sites	
PAHs	Pyrene	98% pure		1.27	Weinstein and Polk 2001	Survival	LD50	Mussel	*Utterbackia imbecillis*	Freshwater	Water	24 hours	LOAEL is lowest tissue concentration measured at 24 hours in a 24 hour exposure with UV light. Without UV light the LD50 was > 9.42 mg/kg ww (≤7.5% mortality observed at this tissue residue)	not recommended: see notes
PAHs	Pyrene			336	Lee et al. 2002	Survival	LR50	Amphipod	*Hyalella azteca*	Freshwater	Water	10 days	LR50 is calculated 10d LR50	Selected TRV: lowest LOAEL that meets acceptability criteria; no NOAEL available from study
PAHs	Pyrene		380	465	Kukkonen and Landrum 1994	Survival	17% mortality	Oligochaete	*Lumbriculus variegatus*	Freshwater	Combined	7 days	17% mortality @ LOAEL and 7% at NOAEL; EC50 for avoidance was between LOAEL and NOAEL exposure concentrations; the highest body burden was measured at day 4; at day 7 similar tissue concentrations in the two exposure concentrations.	
PAHs	Pyrene			710	Landrum et al. 2003	Behavior	Immobility (failure to swim on prodding)	Amphipod	*Dipoeria sp.*	Freshwater	water	10 days	Concentration is median effect residue (ER50) calculated using toxicokinetics. Included based on the assumption that if the organism cannot move they are as good as dead.	not recommended: not a direct measure of growth, survival, or reproduction
PAHs	**Pyrene**		**730**	**770**	**Landrum et al. 1994**	**Survival**	**25% mortality**	**Amphipod**	***Dipoeria sp.***	**Freshwater**	**sediment**	**28 days**	**Concentrations read from graph; LOAEL and NOAEL associated with 25% & 5% mortality, respectively; ave LR50 calculated from 2 experiments = 1,588 mg/kg ww**	
PAHs	Pyrene		890		Millward et al. 2001	Survival, growth	body weight	Oligochaete	*Limnodrilus hoffmeisteri*	Freshwater	Sediment	10 days	No mortality was observed during the experiment and worm wet weight increased significantly in all treatments.	
PAHs	Pyrene			1,200	Landrum et al. 2003	Survival	LR50	Amphipod	*Dipoeria sp.*	Freshwater	water	28 days	LR50 calculated using toxicokinetics.	
PAHs	Total PAHs	PAH mixture	6.58 (5.6-10.4)		Roper et al. 1997	Survival		Zebra mussel	*Dreissenia polymorpha*	Freshwater	water and sediment	34 days	mussels exposed to field collected sediment from Times Beach Confined Disposal Facility in Lake Erie; background concentrations unknown in field-collected mussels; No effect mortality based on observation of condition of mussels at end of study; NOAEL is average over 4 in-situ sites; PAHs exposed to were the following: Total PAHs (fluoranthene, pyrene, chrysene, benzo(a)anthracene, phenanthrene, anthracene, naphthalene, acenaphthylene, acenaphthene, flourene, benzo(a)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, ideno(1,2,3-c,d)pyrene, dibenzo(a,h)anthracene and benzo(g,h,i)perylene).	
PAHs	**Total PAHs**	**PAH mixture**		**612.9**	**Landrum et al. 1991**	**Survival**	**38% mortality**	**Amphipod**	***Diporeia sp.***	**Freshwater**	**Sediment**	**26 days**	**LOAEL is the tissue concentration for a mixture of PAHs causing 38% mortality at day 19; the PAH mixture included: anthracene, fluorene, fluoranthene, chrysene, benzo(a)pyrene, benzo(e)pyrene, and benzo(b)fluoranthene, sediments were also spiked with perylene and benzo(g,h,i)perykene, but these PAHs were not detected in tissue**	**Selected TRV: only LOAEL available that meets acceptability criteria; no NOAEL available from study**
PAHs	Total PAHs	PAH mixture	802		Landrum et al. 1992	Survival	≤10% mortality	Amphipod	*Diporeia sp.*	Freshwater	Sediment	28 days	Low mortality (0-10%) observed in three 28-day experiments using different aged amphipods (3-d, 60-d, and 150-d olds); NOAEL is highest PAH concentration measured over the three experiments - day 12 of the experiment using 3-day old amphipods; the PAH mixture included: anthracene, fluorene, fluoranthene, chrysene, benzo(a)pyrene, benzo(e)pyrene, perylene, benzo(ghi)perylene, and benzo(b)fluoranthene	
SVOCs	Bis(2-ethylhexyl) phthalate		0.138		Mayer and Sanders 1973	mortality		Scud	*Gammerus pseudolimnaeus*	Freshwater	water	96 hours	some uncertainty - 96 hour LC50 is >10,000 ug/L; NOAEL is tissue concentration measured at 72 hrs with exposure to 0.1 ug/L, therefore, NOAEL may be much higher (at 14 days following exposure to 0.1 ug/L, tissue concentration was 0.360 mg/kg ww)	
SVOCs	Bis(2-ethylhexyl) phthalate		0.23		Sanders et al. 1973	mortality		Mayfly	*Hexagenia bilineata*	Freshwater	water	7 days	study is a bioaccumulation study with no mortality noted (assumed 0% mortality)	not recommended: bioaccumulation study
SVOCs	Bis(2-ethylhexyl) phthalate		0.93		Sanders et al. 1973	mortality		Midge	*Chironomus plumosus*	Freshwater	water	7 days	study is a bioaccumulation study with no mortality noted (assumed 0% mortality)	not recommended: bioaccumulation study
SVOCs	Bis(2-ethylhexyl) phthalate		1.6		Sanders et al. 1973	mortality		Waterflea	*Daphnia magna*	Freshwater	water	7 days	study is a bioaccumulation study with no mortality noted (assumed 0% mortality)	not recommended: bioaccumulation study
SVOCs	Bis(2-ethylhexyl) phthalate			3.12	Sanders et al. 1973	Reproduction	60-62% inhibition in reproduction	water flea	*Daphnia magna*	freshwater	water	21 days	exposure and effects data not based on same duration; tissue concentration was measured after 7 days and effects observed after 14-21 days	not recommended: exposure and effects data not based on same duration
SVOCs	Bis(2-ethylhexyl) phthalate		15.6		Sanders et al. 1973	mortality		Sowbug	*Asellus brevicaudus*	Freshwater	water	21 days	study is a bioaccumulation study with no mortality noted (assumed 0% mortality)	not recommended: bioaccumulation study
SVOCs	Bis(2-ethylhexyl) phthalate		17.0		Sanders et al. 1973	mortality		Scud	*Gammarus pseudolimnaeus*	Freshwater	water	21 days	study is a bioaccumulation study with no mortality noted (assumed 0% mortality); NOAEL is highest tissue calculated from a BCF over the 21 day exposure (highest concentration at 14 days)	not recommended: bioaccumulation study

Table 1. TSVs for invertebrate whole-body tissue

Chemical Group	Chemical	Chemical Form	NOAEL mg/kg ww	LOAEL mg/kg ww	Source	Endpoint	Endpoint effect	Test Species	Species (Scientific Name)	Marine / Freshwater	Exposure mode	Exposure duration	Notes	Rationale for selection
SVOCs	Bis(2-ethylhexyl) phthalate	1,2-di-2-ethylhexyl phthalate (DEHP)	18		Hobson et al. 1984	Survival		Penaied shrimp		Marine	diet	14 days	no mortality at the highest exposure concentration. assumed ww concentration	
SVOCs	Bis(2-ethylhexyl) phthalate		26.77		Brown and Thompson 1982	mortality, reproductio n	no. of surviving offspring and parents	Waterflea	*Daphnia magna*	Freshwater	water	21 days	no significant reduction in number of surviving offspring or parents after water exposure for 21 days	
SVOCs	**Bis(2-ethylhexyl) phthalate**		**152.7**		**Brown and Thompson 1982**	**mortality**		**Blue mussel**	***Mytilus edulis***	**Marine**	**water**	**28 days**	**paper reports only 1 mortality over the experiment duration and "no evidence of adverse effects"; NOAEL is highest individual mussel tissue concentration- average concentration across all mussel at highest exposure concentration was 122.5 mg/kg ww**	
SVOCs	Bis(2-ethylhexyl) phthalate		1,998		Thuren and Woin 1991	mortality		Scud	*Gammerus pulex*	Freshwater	water	10 days	no mortality at the highest exposure concentration; decreased locomotor activity observed with residues of 1,998 mg/kg ww, but not in organisms exposed to 100 ug/L with residues of 87 mg/kg ww	Selected TRV: highest NOAEL that meets acceptability criteria (no LOAEL)
SVOCs	Bis(2-ethylhexyl) phthalate			14.7	Woin and Larsson 1987	Behavior	reduction in ability to capture prey	dragonfly	Aeshna sp.	freshwater	ne	ne	Behavior endpoint not directly related to growth, survival, or reproduction	not recommended: endpoint not a direct measure of growth, survival, or reproduction
SVOCs	Bis(2-ethylhexyl) phthalate			14.7	Woin and Larsson 1987	Behavior	reduction in ability to capture prey	crayfish	Pacifastacus leniusculus	freshwater	ne	9 weeks	Behavior endpoint not directly related to growth, survival, or reproduction	not recommended: endpoint not a direct measure of growth, survival, or reproduction
SVOCs	Bis(2-ethylhexyl) phthalate		NC		Streufert et al. 1980	Reproducti on	emergence, egg production, and egg hatchability	Midge (larvae)	*Chironomus plumosus*	Freshwater	water	reproductive period and larvae development	Highly uncertain TRV so not calculated; emergence, egg production, and egg hatchability were not affected at the highest water exposure concentration (0.36 mg/L) over larvae developmental and reproductive period; tissue concentration experiment conducted separate from chronic reproductive study where midge were exposed to 0.2 ug/L for only 4 days where NOAEL = 0.089 mg/kg ww	not recommended: see notes
Dioxons/ furans	**2,3,7,8,-TCDD**	**2,3,7,8,-TCDD**		**0.003**	**Ashley et al. 1996**	**mortality**	**25% mortality**	**Crayfish**	***Pacifastacus leniusculus***	**Freshwater**	**Single injection**	**single dose + 45 days**	**25% mortality (1 of 4) after 45 days; LOAEL not measured tissue conc (estimated based on dose)**	**Selected TRVs: only LOAEL that meets acceptability criteria**
Dioxons/ furans	2,3,7,8,-TCDD	2,3,7,8,-TCDD	0.56		Isensee and Jones 1975	mortality		Snail	*Physa sp.*	Freshwater	Water and ingestion	33 days	NOAEL is the highest mean tissue concentration observed; not a toxicity test (system accumulation/ distribution study with no mortalities reported)	
Dioxons/ furans	2,3,7,8,-TCDD	2,3,7,8,-TCDD	0.767		Isensee 1978	mortality, reproductio n		Snail	*Physa sp.*	Freshwater		3-32 days	NOAEL is the highest mean tissue concentration observed; not a toxicity test (system accumulation/ distribution study with no mortalities reported)	
Dioxons/ furans	2,3,7,8,-TCDD	2,3,7,8,-TCDD	1.125		Isensee 1978	mortality, reproductio n		Waterflea	*Daphnia magna*	Freshwater		3-32 days	NOAEL is the highest mean tissue concentration observed in snails; not a toxicity test (system accumulation/ distribution study w/ no mortalities reported)	
Dioxons/ furans	2,3,7,8,-TCDD	2,3,7,8,-TCDD	2.08		Isensee and Jones 1975	mortality		Waterflea	*Daphnia magna*	Freshwater	Water and ingestion	33 days	NOAEL is the highest mean tissue concentration observed in snails; not a toxicity test (system accumulation/ distribution study w/ no mortalities reported)	
PCBs	Total PCBs		0.9		Peterson et al. 1994	mortality		Asiatic clam	*Corbicula fulminae*	Freshwater	Water	4 weeks	not a toxicity test (bioaccumulation study w/ no mortality observed); Field study: Clams collected from reference streams were caged and placed in streams receiving industrial discharges. NOAEL quoted is the highest mean concentration of PCBs (ug/g ww) among all study sites.	not recommended: bioaccumulation and field study
PCBs	Total PCBs	Aroclor 1016		1.1	Hansen et al. 1974	mortality	33% mortality	Grass Shrimp	*Palaemonetes pugio*	Marine	Water	96 hours	33% mortality at LOAEL; 8% mortality in control	Selected TRV: Lowest LOAEL that meets acceptability criteria
PCBs	Total PCBs	Aroclor 1254	1.22		Sanders and Chandler 1972	mortality		Crayfish	*Orconectes nais*	Freshwater	Combined	21 days	NOAEL based on dose given for 21 days in biomagnification study; based on magnification factor and water concentration with no effects data; NOAEL concentration reported in study = 6.1 mg/kg dw	not recommended: whole body tissue concentration estimated using BCF
PCBs	Total PCBs	Clophen A50	1.3		Sodergren and Svensson 1973	mortality, growth		Mayfly	*Ephemera danica*	Freshwater	Water	9 days	Not a toxicity test (accumulation test w/ no mortality observed); No food provided, so growth not really assessed (no change in weights over experiment); NOAEL is calculated concentration at steady-state (range of residues is 0.70 to 1.5 mg/kg ww from Day 2 to 10 of exposure)	not recommended: bioaccumulation study
PCBs	Total PCBs		1.75		Boese et al. 1995	mortality, growth		Bent nose clam	*Macoma nasuta*	Marine	Sediment	119 days	Not a toxicity test (accumulation test w/ no mortality observed); NOAEL is average concentration in clams from day 42-119 in clams exposed to bulk sediment (residues in fine and medium sand were lower); stomach contents purged before tissue analysis; 4.1% mortality reported across all doses and controls- no obvious difference in mortality among doses. No significant weight change was observed during the experiment.	not recommended: bioaccumulation study
PCBs	Total PCBs	Aroclor 1254	1.3	3.9	Duke et al. 1970	mortality	100% mortality	Pink shrimp	*Penaeus duorarum*	Marine	Water	48 hours	100% mortality at LOAEL; 0% mortality at NOAEL; no control was reported	
PCBs	Total PCBs	Aroclor 1254		6	Sanders and Chandler 1972	growth	failure of pupae to metamorphosize into adults	mosquito	*Culex tarsalis*	freshwater	water	7 days	LOAEL calculated from 7d biomagnification factor (20,000) and water conc (1.5 ppb)	not recommended: whole body tissue concentration estimated using BCF
PCBs	Total PCBs	Aroclor 1268		11.6	Kwon and Fisher 2006 (unpub)	Mortality	LR50	cladoceran	*Daphnia magna*	freshwater	not specified	4 days	LOAEL based on live animal residues; reference is conference poster (2006)	
PCBs	Total PCBs	Aroclor 1254		16	Duke et al. 1970	mortality	72% mortality	Pink shrimp	*Penaeus duorarum*	Marine	Water	20 days	72% mortality in the only dose group (5 ug/l). LOAEL is average concentration in dead shrimp, concentration higher in surviving shrimp (33 mg/kg)	

Table 1. TSVs for invertebrate whole-body tissue

Chemical Group	Chemical	Chemical Form	NOAEL mg/kg ww	LOAEL mg/kg ww	Source	Endpoint	Endpoint effect	Test Species	Species (Scientific Name)	Marine / Freshwater	Exposure mode	Exposure duration	Notes	Rationale for selection
PCBs	Total PCBs	Aroclor 1254	23		Duke et al. 1970	mortality		Blue crab	*Callinectes sapidus*	Marine	Water	20 days	equal mortality in control and dose group (5 ug/l)	
PCBs	Total PCBs	Aroclor 1254	18	27	Nimmo et al. 1974	mortality	45% mortality	Grass Shrimp	*Palaemonetes pugio*	Marine	Water	16 days	45% mortality in test group significantly higher than 25% mortality in control group; high mortality in control	
PCBs	Total PCBs	Aroclor 1242	28.9		Borgmann et al. 1990	mortality		Amphipod	*Hyalella azteca*	Freshwater	Water	11 weeks	similar survival as in control after 11 wks exposed to 30 ug/L	
PCBs	**Total PCBs**	**Aroclor 1016**		**31.9**	**Neff and Giam 1977**	**Mortality**	**≥50% mortality**	**horseshoe crab**	***Limulus polyphemus***	**marine**	**water**	**96 days**	**LOAEL based on surviving crab residues; control mortality = 1%**	
PCBs	Total PCBs	Aroclor 1016	4	32	Hansen et al. 1974	growth	shell growth rate	American oyster	*Crassostrea virginica*	Marine	Water	96 hours	38% reduction in shell growth @ LOAEL (tissue residue of 32 ug/g when oyster was exposed to 7.2 ug/L in water); 0% reduction in control; 93% reduction when exposed to 58 ug/L in water where tissue residues was measured at 95 ug/g ww. NOAEL is based off a 10% effect (10% reduction in shell growth) which was encountered when tissue residues measured 4.0 ug/g ww (exposed to 0.6 ug/L water).	
PCBs	Total PCBs	Aroclor 1254	8.1	33	Duke et al. 1970	growth	shell growth rate	Oysters	*Crassostrea virginica*	Marine	Water	24 weeks	41% decrease ingrowths @ LOAEL; 19% decrease in growth @ NOAEL 100% decrease in growth (cessation) at whole-body tissue concentration not reported; unknown if study was controlled; no control data reported	
PCBs	Total PCBs	Aroclor 1254		33	Duke et al. 1970	Mortality	72% mortality	pink shrimp	*Penaeus duorarum*	marine	water	20 days	LOER based on live shrimp residues in the only dose group (5 ug/l) (tissue residue in dead shrimps = 16 mg/kg ww); 48hr LOAEL with 100% mortality = 4.2 mg/kg ww	
PCBs	Total PCBs	Aroclor 1254		35.8	Rice et al. 2000	growth	Reduced growth rate	Polychaete	*Armandia brevis*	Marine	Sediment	28 days	28% decrease in growth rate compared to reference sediment - not statistically evaluated (feeding experiment for fish); assumed 80% moisture	
PCBs	Total PCBs	Aroclor 1016	3.8	42	Hansen et al. 1974	mortality	43% mortality	Brown shrimp	*Penaeus aztecus*	Marine	Water	96 hours	43% mortality at LOAEL; 8% mortality at NOAEL; 0% mortality in control	
PCBs	Total PCBs	Aroclor 1242		76	Nebeker and Puglisi 1974	reproduction	no. young per adult	Amphipod	*Gammarus pseudolimnaeus*	Freshwater	Water	60 days	38% decrease in #young/adult when compared to control	
PCBs	Total PCBs	Aroclor 1242		89	Kwon and Fisher 2006 unpub	Mortality	LR50	midge	*Chironomus riparius*	freshwater	not specified	4 days	LOAEL based on live animal residues; reference is conference poster (2006)	
PCBs	Total PCBs	Aroclor 1254	101	119	Lowe et al. 1972	growth	height and body weight after 6 wks	Oysters	*Crassostrea virginica*	Marine	Water	24 weeks	significant decrease in growth at LOAEL (measured @8 wks; at 24 wks whole-body concentration was 425 mg/kg); LOAEL exposure - oysters were exposed to 5 ppb prior to experiment, then to 1 ppb during experiment; NOAEL is average whole-body concentration over 25 wks; background concentration = 17 mg/kg; no effect on mortality	
PCBs	Total PCBs	PCB mixture		200	Fowler et al. 1978	Mortality	lethal body burden	polychaete	*Nereis diversicolor*	ne	ne	ne	Effects data not presented in study	
PCBs	Total PCBs	Aroclor 1248	127	552	Nebeker and Puglisi 1974	Reproduction	no. young per adult	Amphipod	*Gammarus pseudolimnaeus*	Freshwater	Water	60 days	40% decrease in # young/adult when compared to control	
PCBs	Total PCBs		NC	NC	Lester and McIntosh 1994	NR		Opossum shrimp	*Mysis relicta*	Marine	sediment	24 days	no reported effects; not a toxicity test (accumulation test with no mortality observed); exposed to Lake Ontario sediment	not recommended: see notes
PCBs	PCB congeners	PCB 1		64.7	Fisher et al. 1999	Growth, Reproduction	reduced biomass and reproduction	oligochaete	*Lumbriculus variegatus*	freshwater	diet	35 days	Exposure to single PCB congener; exposed by ingestion of algae cells coated with PCB	not recommended: individual PCB congener study; total PCB TRVs recommended for screening
PCBs	PCB congeners	PCB 15	63.1	119	Fisher et al. 1999	Growth, reproduction	reduced biomass & total no. of individuals present	Oligochaete	*Lumbriculus variegatus*	Freshwater	Diet	35 days	Exposure to single PCB congener; exposed by ingestion of algae cells coated with PCB	not recommended: individual PCB congener study; total PCB TRVs recommended for screening
PCBs	PCB congeners	PCB 15		415	Hwang et al. 2004	Reproduction	increased male development time to 2nd instar stage	midge	*Chironomus riparius*	ne	ne	ne	Exposure to single PCB congener	not recommended: individual PCB congener study; total PCB TRVs recommended for screening
PCBs	PCB congeners	PCB 47		5.4	Wang et al. 1998	Growth	decreased growth and larval survival	brine shrimp	*Artemia salina*	ne	ne	ne	Exposure to single PCB congener	not recommended: individual PCB congener study; total PCB TRVs recommended for screening
PCBs	PCB congeners	PCB 47	49.3	113	Fisher et al. 1999	Growth, reproduction	reduced biomass & total no. of individuals present	Oligochaete	*Lumbriculus variegatus*	Freshwater	Diet	35 days	Exposure to single PCB congener; exposed by ingestion of algae cells coated with PCB	not recommended: individual PCB congener study; total PCB TRVs recommended for screening
PCBs	PCB congeners	PCB 47		166	Fay et al. 2000	Survival	LR50	Amphipod	*Ampelisca abdita*	Marine	Sediment	10 days	Exposure to single PCB congener; LR50 value was estimated based on a linear regression.	not recommended: individual PCB congener study; total PCB TRVs recommended for screening
PCBs	PCB congeners	PCB 52	4.0		Dillon et al. 1990	Survival, growth, reproduction		Waterflea	*Daphnia magna*	Freshwater	Water	21 days	No sig. difference in survival and reproduction. No sig. difference in biomass at 0.38 mg/kg ww but sig. increased in biomass at 4.0 mg/kg ww. Concentrations read from graphs.	not recommended: individual PCB congener study; total PCB TRVs recommended for screening
PCBs	PCB congeners	PCB 52	53.9		Borgmann et al. 1990	Survival		Amphipod	*Hyalella azteca*	Freshwater	Water	10 weeks	second generation animals exposed to 30 ug/L for 6 wks. Similar survival as in control.	not recommended: individual PCB congener study; total PCB TRVs recommended for screening

Table 1. TSVs for invertebrate whole-body tissue

Chemical Group	Chemical	Chemical Form	NOAEL mg/kg ww	LOAEL mg/kg ww	Source	Endpoint	Endpoint effect	Test Species	Species (Scientific Name)	Marine / Freshwater	Exposure mode	Exposure duration	Notes	Rationale for selection
PCBs	PCB congeners	PCB 77	1.3	11.4	Dillon et al. 1990	growth	Sig reduction in biomass	Waterflea	*Daphnia magna*	Freshwater	Water	21 days	Sig. increase in biomass at 1.3 mg/kg ww and sig. decrease in biomass at 11.4 mg/kg ww. Concentrations read from graphs.	not recommended: individual PCB congener study; total PCB TRVs recommended for screening
PCBs	PCB congeners	PCB 77	11.4		Dillon et al. 1990	Survival, reproduction		Waterflea	*Daphnia magna*	Freshwater	Water	21 days	No sig. difference in survival and reproduction. Concentrations read from graphs.	not recommended: individual PCB congener study; total PCB TRVs recommended for screening
PCBs	PCB congeners	PCB 77	141		Borgmann et al. 1990	Survival, growth, reproduction		Amphipod	*Hyalella azteca*	Freshwater	Water	10 weeks	Similar survival, growth, and reproduction as in control after 10 wks exposure	not recommended: individual PCB congener study; total PCB TRVs recommended for screening
PCBs	PCB congeners	PCB 101		0.6	Dillon et al. 1990	growth	Sig reduction in biomass	Waterflea	*Daphnia magna*	Freshwater	Water	21 days	No lower tissue concentration was measured for a NOAEL. Concentrations read from graphs; growth effects minor and varied among individual congeners, so effects for combined congeners unknown	not recommended: individual PCB congener study; total PCB TRVs recommended for screening
PCBs	PCB congeners	PCB 101	11.6		Dillon et al. 1990	Survival, reproduction		Waterflea	*Daphnia magna*	Freshwater	Water	21 days	No sig. difference in survival. No sig. difference in reproduction at 0.6 mg/kg ww but a sig. increase in reproduction at 11.6 mg/kg ww. Concentrations read from graphs.	not recommended: individual PCB congener study; total PCB TRVs recommended for screening
PCBs	PCB congeners	PCB 118	26.0		Dillon et al. 1990	Survival, growth, reproduction		Waterflea	*Daphnia magna*	Freshwater	Water	21 days	No sig. difference in survival and reproduction. No sig. difference in biomass at 0.80 mg/kg ww and a sig. increased in biomass at 26.0 mg/kg ww. Concentrations read from graphs.	not recommended: individual PCB congener study; total PCB TRVs recommended for screening
PCBs	PCB congeners	PCB 138	19.0		Dillon et al. 1990	Survival, growth, reproduction		Waterflea	*Daphnia magna*	Freshwater	Water	21 days	No sig. difference in survival and biomass. No sig. difference in reproduction at 1.8 mg/kg ww and a sig. increased in reproduction at 19.0 mg/kg ww. Concentrations read from graphs.	not recommended: individual PCB congener study; total PCB TRVs recommended for screening
PCBs	PCB congeners	PCB 153	14.0		Dillon et al. 1990	Survival, growth, reproduction		Waterflea	*Daphnia magna*	Freshwater	Water	21 days	No sig. difference in survival and biomass. No sig. difference in reproduction at 1.3 mg/kg ww and a sig. increased in reproduction at 14.0 mg/kg ww. Concentrations read from graphs.	not recommended: individual PCB congener study; total PCB TRVs recommended for screening
PCBs	PCB congeners	PCB 153	65	126	Fisher et al. 1999	Growth, reproduction	reduced biomass & total no. of individuals present	Oligochaete	*Lumbriculus variegatus*	Freshwater	Diet	35 days	Exposure to single PCB congener; exposed by ingestion of algae cells coated with PCB	not recommended: individual PCB congener study; total PCB TRVs recommended for screening
PCBs	PCB congeners	PCB 180	24.0		Dillon et al. 1990	Survival, growth, reproduction		Waterflea	*Daphnia magna*	Freshwater	Water	21 days	No sig. difference in survival and biomass. No sig. difference in reproduction at 2.8 mg/kg ww and a sig. increased in reproduction at 24.0 mg/kg ww. Concentrations read from graphs.	not recommended: individual PCB congener study; total PCB TRVs recommended for screening
Pesticides	Aldrin		0.096		Johnson et al. 1971	mortality		Midge	*Chironomus sp.*	Freshwater	Water	72 hours	Survival ≥ 90% of control	
Pesticides	Aldrin		0.13		Johnson et al. 1971	mortality		Mayfly	*Hexagenia bilineata*	Freshwater	Water	72 hours	Survival ≥ 90% of control	
Pesticides	Aldrin		0.48		Johnson et al. 1971	mortality		Waterflea	*Daphnia magna*	Freshwater	Water	72 hours	Survival ≥ 90% of control	
Pesticides	**Aldrin**		**1.7**		**Kawatski and Schmulbach 1971**	**mortality**		**Ostracod**	***Chlamydotheca arcuata***	**Freshwater**	**Water**	**64 weeks**	**NOAEL is maximum aldrin concentration measured in ostracods after 64 weeks and no mortality or reproduction effects apparent; study cites unpublished acute data where < 1 ppm was lethal (48-96 hrs)**	
Pesticides	Aldrin	98.5% pure	3.68		Estenik and Collins 1979	Survival		Midge (larvae)	*Chironomus riparius*	Freshwater	Water	2 hours	NOAEL is based on organisms exposed to aldrin and piperonyl butoxide (PBO) which blocks the conversion of aldrin to dieldrin and no effects were noted; when organisms were exposed to aldrin without PBO, 50-75% of the organisms died after 2 hours exposure (aldrin and dieldrin residues were 2.14 and 2.94 mg/kg ww, respectively)	not recommended: see notes
Pesticides	**Chlordane**	**99.9% tech grade**	**0.71**	**1.7**	**Parrish et al. 1976**	**mortality**		**Pink shrimp**	***Penaeus duorarum***	**Marine**	**Water**	**96 hours**	**10% mortality at NOAEL 55% mortality at LOAEL (two replicates no statistics on mortality); 5% mortality in shrimp with residues of 0.49 mg/kg ww**	**Selected TRVs: lowest LOAEL and NOAEL TRVs that meet acceptability criteria**
Pesticides	Chlordane	99.9% tech grade	4.8	9.1	Parrish et al. 1976	mortality	45% mortality	Grass shrimp	*Penaeus pugio*	Marine	Water	96 hours	0% mortality at NOAEL; 45% mortality at LOAEL (two reps no stats on mortality)	
Pesticides	Chlordane	technical	11	27	Parrish et al. 1976	mortality		Eastern oyster		Marine	Water	96 hours	LOAEL- 41% mortality; NOAEL- 8% mortality; 0% mortality in control group	

Table 1. TSVs for invertebrate whole-body tissue

Chemical Group	Chemical	Chemical Form	NOAEL mg/kg ww	LOAEL mg/kg ww	Source	Endpoint	Endpoint effect	Test Species	Species (Scientific Name)	Marine / Freshwater	Exposure mode	Exposure duration	Notes	Rationale for selection
Pesticides	Total DDx	"Total DDTs"	0.016 - 0.021	0.027	Binelli et al. 2001	Reproduction	oocyte degeneration (histopathological)	Zebra mussel	*Dreissenia polymorpha*	freshwater	n/a (field exposed; possibly water and/or sediment)	field exposed	highly uncertain field study; LOAEL is average concentration in mussles where significant oocyte degeneration was observed in June 1997 (compared to reference site; reference site = outside of the Bay where a DDT-manufacturing plant had historical discharged effluent into a river that discharges to Bay) (calculated from 134.1 ng/g DDT dry weight or 0.1341 mg/kg dry weight, converted to a wet weight of 0.027 mg/kg by dividing by 5); NOAEL is based on range of concentrations reported in the reference site (80 ng/g DDT dry weight, equal to 0.016 mg/kg ww) and in July 1997 from the contaminated site (106.9 ng/g DDT dry weight, equal to 0.021 mg/kg DDT ww) where oocyte degeneration was not significantly higher; low numbers of mature oocytes, smaller ovaries, and spawning behavior changes were also observed in the range reported for the LOAEL.	not recommended: field-exposed organisms
Pesticides	Total DDx (DDT)	p,p-DDT	0.047		Johnson et al. 1971	mortality		Crayfish	*Orconectes nais*	Freshwater	Water	72 hours	not a toxicity test (bioaccumulation test w/ no increase in mortality in 3 days); survival > 90% of control; only 1 organism per sample; NOAEL is the body residue at end of 3 days (since no mortality observed) (0.233 ng/mg dry weight); assumed 80% moisture	not recommended: bioaccumulation study
Pesticides	**Total DDx**	**DDE, DDD, and DDT**	**0.06**	**0.13**	**Nimmo et al. 1970**	**mortality**		**Pink shrimp**	***Penaeus duorarum***	**Marine**	**Water**	**56 days**	**One control and one treatment group; control mortality = 17% and treatment group mortality = 30%; NOAEL is residues in shrimp that survived after 56 days, LOAEL is residues in shrimp that died during this exposure period, includes DDE, DDD, and DDT; uncertainty associated with high mortality in control**	**Selected TRVs: lowest LOAEL and NOAEL that meet acceptability criteria**
Pesticides	Total DDx (DDT)	p,p-DDT	0.10		Johnson et al. 1971	mortality		Crayfish	*Palaemonetes kadiakensis*	Freshwater	Water	72 hours	not a toxicity test (bioaccumulation test w/ no increase in mortality in 3 days); survival > 90% of control; only 1 organism per sample. NOAEL is the body residue at end of 3 days (since no mortality observed) (0.503 ng/mg dry weight) divided by 5 to convert to wet weight (equals 0.10 ng/mg).	not recommended: bioaccumulation study
Pesticides	Total DDx	Total DDTs	0.026	0.2	Leffler 1975	Metabolic rate	"pronounced elevation of metabolic rate"	Blue crab (juvenile)	*Callinectes sapidus*	Marine	Diet	5 weeks	dosed with 4,4'-DDT, but total DDT metabolites measured in residues; mortality reported as "chlorinated hydrocarbon poisoning;" crabs collected from estuarine Cedar Key, Florida; metabolic rate measured – not relevant endpoint	not recommended: endpoint not a direct measure of growth, survival, or reproduction
Pesticides	Total DDx (DDT)	p,p-DDT	0.34		Johnson et al. 1971	mortality		Amphipod	*Gammerus fasciatus*	Freshwater	Water	72 hours	Not a toxicity test (bioaccumulation test w/ no increase in mortality in 3 days); survival > 90% of control;	not recommended: bioaccumulation study
Pesticides	Total DDx (DDT)	p,p-DDT	0.34		Johnson et al. 1971	mortality		Mayfly	*Hexagenia bilineata*	Freshwater	Water	72 hours	Not a toxicity test (bioaccumulation test w/ no increase in mortality in 3 days); survival > 90% of control	not recommended: bioaccumulation study
Pesticides	Total DDx (DDT)	p,p-DDT	0.44		Johnson et al. 1971	mortality		Midge	*Chironomus sp.*	Freshwater	Water	72 hours	Not a toxicity test (bioaccumulation test w/ no increase in mortality in 3 days); survival > 90% of control;	not recommended: bioaccumulation study
Pesticides	Total DDx	DDT equivalents	na	0.91	Lotufo et al. 2001b	Mortality	40% survival	Amphipod	*Diporeia* spp. (amphipod)	Freshwater	Sediment	28 days	NOAEL and LOAEL based on DDT equivalents (total DDTs); LOAEL calculated as the lowest DDT sediment concentration (8.3 nmol DDT equivalents /g dw) that caused a % survival in specimens to be significantly different (lower) than the control multiplied by the Day-28 BSAF (0.31) and using the molecular weight of DDT (354 g); however, based on other experiment, tissue residue concentrations are not responsive with mortality effects (no effect observed in tissue residues as high as 14 mg/kg ww); LR50s calculated in paper (16.8 - 18.5 nmol/g ww) range from 5.9 - 6.6 mg/kg ww	not recommended: tissue concentrations not dose-responsive
Pesticides	Total DDx	"DDT"		1.36	Mulsow et al. 2002	Behavior, Growth	reduced feeding rate and body weight	Polychaete	Heteromastus filiformis		sediment	64 days	organisms exposed to DDT; body weight reduced to 66% of control; tissue measured for DDT only; however, initial body weights were not measured, so it is uncertain whether controls grew faster or the DDT-exposed worms at the higher treatments lost weight due to reduced feeding. The paper refers to another paper (Mulsow 1995 - BSAF0027) where they state " the sum of both extractable and non-extractable DDT was used as total DDT concentration"	not recommended: see notes
Pesticides	Total DDx	DDT equivalents		1.8	Lotufo et al. 2001b	mortality	LR50	Amphipod	*Hyalella azteca*	Freshwater	Sediment	28 days	NOAEL and LOAEL based on DDT equivalents (total DDTs); LR50s calculated in paper (5.2 - 8.1 nmol/g ww) range from 1.8 - 2.9 mg/kg ww molecular weight of DDT = 354 g); assumed the day-28 BSAF in Table 2 is in units of g OC/ g lipid	
Pesticides	Total DDx (DDT)	p,p-DDT	1.83		Johnson et al. 1971	mortality		Waterflea	*Daphnia magna*	Freshwater	Water	72 hours	Not a toxicity test (bioaccumulation test w/ no increase in mortality in 3 days); survival > 90% of control	not recommended: bioaccumulation study
Pesticides	Total DDx (DDT)	p,p-DDT (>98% pure)	1.5	2.1	Lotufo et al. 2000a	mortality	LR50	Amphipod	*Hyalella azteca*	Freshwater	Water	10 days	NOAEL was estimated from water concentration (0.064 ug/L) and BCF (23,980) where survival (86%) was not significantly different from control; LOAEL listed is reported LR50 (not corrected for biotransformation products); Survival significantly reduced (36% survival) at LOAEL of 4.8 mg/kg ww (estimated from 0.122 ug/L water concentration of DDT with a BCF of 39703); however LOAEL listed is the LR50 estimated in the paper which is based on actual data (LR50 is 0.71 mg/kg ww when corrected for biotransformation products)	

Table 1. TSVs for invertebrate whole-body tissue

Chemical Group	Chemical	Chemical Form	NOAEL mg/kg ww	LOAEL mg/kg ww	Source	Endpoint	Endpoint effect	Test Species	Species (Scientific Name)	Marine / Freshwater	Exposure mode	Exposure duration	Notes	Rationale for selection
Pesticides	Total DDx	DDT equivalents	0.61	2.2	Lotufo et al. 2001b	mortality	49% survival	Amphipod	*Hyalella azteca*	Freshwater	Sediment	28 days	NOAEL and LOAEL based on DDT equivalents (total DDTs); LOAEL calculated as the lowest DDT sediment concentration (nmol DDT equivalents /g dry weight) that caused a % survival in specimens to be significantly different (lower) than the control; LOAEL calculated as the exposure concentration (3.0 nmol/g) multiplied by the Day-28 BSAF (2.08) and using molecular weight of DDT (354 g); NOAEL calculated as the highest DDT sediment concentration in second experiment (1.6 nmol DDT equivalents /g dry weight) whereby % survival in specimens was not significantly different (lower) than the control, multiplied by the Day-28 BSAF (1.07); a NOAEL of 1.1 mg/kg ww [or 5.6 nmol/g dw in sediment times BSAF of 0.57] could be derived from the first experiment); LR50s calculated in paper (5.2 - 8.1 nmol/g ww) range from 1.8 - 2.9 mg/kg ww; assumed the day-28 BSAF in Table 2 is in units of g OC/ g lipid and the OC: lipid ratio of 1 assumed	
Pesticides	Total DDx	DDT equivalents		2.7	Lotufo et al. 2001a	mortality	LR50	Amphipod	*Leptocheirus plumulosus*	Marine	Sediment	28 days	LR50 based on DDT equivalents (total DDTs); organisms exposed to p,p'-DDT; LOAEL based on DDT equivalents (total DDTs)	
Pesticides	Total DDx	total DDT (p,p-DDT + p,p-DDE + p,p-DDD)	3.1		Sodergren and Svensson 1973	mortality, growth		Mayfly	*Ephemera danica*	Freshwater	Water	9 days	not a toxicity test (accumulation test w/ no mortality observed); No food provided, so growth not really assessed (no change in weights over experiment); NOAEL is calculated concentration at steady-state (range of residues is 0.61 to 6.3 mg/kg ww from Day 2 to 10 of exposure)	not recommended: bioaccumulation study
Pesticides	Total DDx	DDT equivalents	1.85	3.74	Lotufo et al. 2001a	Reproduction	reduced no. neonates per female	Amphipod	*Leptocheirus plumulosus*	Marine	Sediment	28 days	NOAEL and LOAEL based on DDT equivalents (total DDTs)	
Pesticides	Total DDx (DDT)	p,p-DDT (>98% pure)		5.0	Lotufo et al. 2000a	narcosis	ER50 based on narcotization	Amphipod	*Diporeia sp.*	Freshwater	water	28 days	narcosis is a highly uncertain endpoint; no statistical evaluation of narcosis (residue that induced narcosis did not seem to be tested against a control). Organisms exposed to p,p'-DDT; LOAEL listed is based on ER50 calculated in 28-day study based on narcosis (mean effect tissue residue for 28-day ER50 for DDT was 0.014 umol/g ww)); 28-day LR50 = 15.6 mg/kg ww (much higher than the ER50); Transformation products were not determined for the ER50 but at an exposure concentration less than the ER50 the fractions were determined after 28 days: DDT = 95.7%, DDD = 4.0% and polar metabolites = 0.03%.	not recommended: endpoint not a direct measure of growth, survival, or reproduction
Pesticides	Total DDx (DDD)	98% DDD	7.5		Ingersoll et al. 2005	mortality	Abundance of colonization	Oligochaete	*not specified*	Freshwater	Sediment	12 weeks	Abundance of oligochaetes was not significantly reduced relative to the control	not recommended: endpoint not a direct measure of growth, survival, or reproduction
Pesticides	Total DDx (DDD)	p,p-DDD >98%	3	15	Lotufo et al. 2000a	mortality	LR50	Amphipod	*Hyalella azteca*	Freshwater	Water	10 days	NOAEL was estimated from water concentration (0.178 ug/L) and BCF (16,720) where survival (91%) was not significantly different from control; no BCF at concentration where reduced survival was significant (at 0.692 ug/L DDD water concentration, for 61% survival). (Table 1 in report; NO information estimated from graphs); No specific DDD forms noted in study.	not recommended: whole body concentration estimated using BCF
Pesticides	Total DDx (DDT)	p,p-DDT >98%		15.6	Lotufo et al. 2000a	mortality	LR50	Amphipod	*Diporeia sp.*	Freshwater	water	28 days	high uncertainty; not a reliable source of information. The DDT tissue residue based on LR50 (15.6 mg/kg ww) is lower than NOAEL (NOAEL = 48 mg/kg ww) calculated from water concentration (0.221 ug/L) and the BCF (217,333) where mortality was not significantly affected (survival = 80%); no specific DDT forms noted in study.	not recommended: whole body concentration estimated using BCF
Pesticides	Total DDx (DDT)	p,p-DDT (98% pure)	26.6	35.5	Lotufo et al. 2000b	growth	reduced biomass	Polychaete (juvenile)	*Neanthes arenaceodentata*	Marine	Diet	28 days	LOAEL significant reduction in growth compared to control where 5 worms exposed per test chamber (370 worms/m2); in worms exposed via sediment only, NOAEL and LOAEL = 35.5 & 70.9 mg/kg ww, respectively, and in worms exposed via sediment and food, NOAEL and LOAEL = 39 and 60.3 mg/kg ww, respectively	
Pesticides	Total DDx (DDD)	p,p-DDD >98%		37.4	Lotufo et al. 2000a	mortality	ER50 based on narcotization	Amphipod	*Diporeia sp.*	Freshwater	Sediment	10 days	calculated EC50 reported in study	not recommended: endpoint not a direct measure of growth, survival, or reproduction
Pesticides	Total DDx (DDE)	p,p-DDE		43.0	Rice et al. 2000	growth	Reduced growth rate	Polychaete	*Armandia brevis*	Marine	Sediment	28 days	40% decrease in growth rate compared to reference sediment - not statistically evaluated (feeding experiment for fish); assumed 80% moisture	
Pesticides	Total DDx (DDT)	p,p-DDT (98% pure)	74.4		Lotufo et al. 2000b	mortality		Polychaete (juvenile)	*Neanthes arenaceodentata*	Marine	Sediment	28 days	no significant effects on survival where 5 worms exposed per test chamber (370 worms/m2)	
Pesticides	Total DDx (DDD)	p,p-DDD >98%		84.2	Lotufo et al. 2000a	mortality	LR50	Amphipod	*Diporeia sp.*	Freshwater	Water	28 days	High uncertainty in LOAEL listed in study based on the LR50 - the tissue concentration does not correlate with the effect. The study-calculated LR50 (84.2 mg/kg, 50% survival) is lower than a LOAEL based on the listed water concentration (0.944 ug/L) and BCF (436,000) [LOAEL would be 412 mg/kg ww) where significant mortality was observed (survival = 83%). Study suggests higher mortality with a lower concentration, so is not a reliable source; No specific DDD forms noted in study. No NOAEL because mortality (significantly different from control) was observed at lowest water concentrations of DDD.	not recommended: whole body concentration estimated using BCF

Table 1. TSVs for invertebrate whole-body tissue

Chemical Group	Chemical	Chemical Form	NOAEL mg/kg ww	LOAEL mg/kg ww	Source	Endpoint	Endpoint effect	Test Species	Species (Scientific Name)	Marine / Freshwater	Exposure mode	Exposure duration	Notes	Rationale for selection
Pesticides	Total DDx (DDE)	p,p'-DDE		105	Landrum et al. 2005	mortality	MLR50	Amphipod	*Hyalella azteca*	Freshwater	Water	approx 10 days	calculated as the mean lethal residue value using dead organisms corresponding to the median lethal time (using live organisms MLR50 = 140 mg/kg ww); LR50 (117 mg/kg ww) was calculated at a fixed time (10 days) across exposure concentrations.	
Pesticides	Total DDx (DDE)	p,p-DDE >98%	49	124	Lotufo et al. 2000a	mortality	LR50	Amphipod	*Hyalella azteca*	Freshwater	Water	10 days	NOAEL was estimated from water concentration (1.117 ug/L) and BCF (44,154) where survival (94%) was not significantly different from control; no BCF at concentration where reduced survival was significant (at 2.258 ug/L DDE water concentration, for 85% survival). (Table 1 in report; NO information estimated from graphs). No specific DDE forms noted in study.	
Pesticides	Total DDx	"DDT"		128	Crosby and Tucker 1971	mortality	immobility (narcosis)	Waterflea	Daphnia magna (cladoceran)	Freshwater	water	26 hours	organisms exposed to p,p'-DDT and tissue measured for DDT only; LOAEL based on <4% dead and 64% immobile	not recommended: endpoint not a direct measure of growth, survival, or reproduction
Pesticides	Total DDx (DDT)	p,p-DDT (98% pure)	142		Lotufo et al. 2000b	mortality, growth	reduced biomass	Polychaete (juvenile)	*Neanthes arenaceodentata*	Marine	Sediment	28 days	no significant effects on survival or growth in a low density experiment where 1 worm exposed per test chamber (74 worms/m2); NOAEL is average individual tissue concentration at highest exposure concentration	
Pesticides	Total DDx (DDE)	DDE	79	178	Fisher et al. 1999	growth, reproduction	reduced biomass & total no. of individuals present	Oligochaete	*Lumbriculus variegatus*	Freshwater	Diet	35 days	exposed by ingestion of algae cells coated with PCB	not recommended: endpoint not a direct measure of growth, survival, or reproduction
Pesticides	Total DDx (DDE)	p,p-DDE >98%	6,209		Lotufo et al. 2000a	mortality		Amphipod	*Diporeia sp.*	Freshwater	Sediment	28 days	no significant mortality (survival ranged from 81 to 93%) observed in any of the exposure concentrations; NOAEL estimated from highest water concentration and BCF	not recommended: whole body concentration estimated using BCF
Pesticides	Total DDx	"DDT"	128	266	Crosby and Tucker 1971	mortality	12% mortality	Waterflea	*Daphnia magna*	Freshwater	Water	26 hours	NOAEL had <4% mortality, but 64% immobile; LOAEL had 12% mortality and 86% immobile; the concentration above LOAEL had 44% mortality and >99% immobile.	
Pesticides	Total DDx (DDE)	p,p'-DDE	NC	NC	Derr and Zabik 1972	Reproduction	Onset of development	Midge	*Chironomus tentans*	Freshwater	Water	30 days	no data to support qualitative observations of changes in development time for midges	not recommended: see notes
Pesticides	Dieldrin		2.6		Kawatski and Schmulbach 1971	mortality		Ostracod	*Chlamydotheca arcuata*	Freshwater	Water	64 weeks	NOAEL is maximum dieldrin concentration measured in juvenile ostracod after 64 weeks and no mortality or reproduction effects apparent; study cites unpublished acute data where <1 ppm was lethal (48-96 hrs)	
Pesticides	Dieldrin	99% pure		4.78	Estenik and Collins 1979	mortality	"toxic symptoms" observed	Midge (larvae)	*Chironomus riparius*	Freshwater	Water	2 hours	at LOAEL, all organisms were moribund or dead after 2 hours of exposure.	
Pesticides	Dieldrin	92% pure (techniucal grade dieldrin)	13.85	20	Parrish et al. 1973	growth	shell growth	American oyster	*Crassostrea virginica*	Marine	Water	96 hours	NOAEL and LOAEL are tisssue residues of surviving organisms; reduced growth at NOAEL and LOAEL were 0% and 24%, respectively	
Pesticides	**Dieldrin**	**92% pure (techniucal grade dieldrin)**	**<0.01**	**0.08**	**Parrish et al. 1973**	**mortality**		**pink shrimp**	***Penaeus duorarum***	**Marine**	**Water**	**96 hours**	**NOAEL and LOAEL are tisssue residues of surviving organisms; at NOAEL and LOAEL, mortality were 0% and 25%, respectively; tissue concentrations were not detected in NOAEL group**	**Selected TRV: lowest LOAEL that meets acceptability criteria; no NOAEL available from study**
Pesticides	Dieldrin	92% pure (techniucal grade dieldrin)		2.1	Parrish et al. 1973	mortality		grass shrimp	*Palaemonetes pugio*	Marine	Water	96 hours	LOAEL is tisssue residue of surviving organisms; at LOAEL, mortality was 20%, unbounded NOAEL	
Pesticides	Endosulfan			<0.01	Schimmel et al. 1977b	mortality		Pink shrimp	*Penaeus duorarum*	Marine	Combined	96 hours	20% mortality (control = 0%), but tissue concentrations below detection limits	not recommended: LOAEL based on detection limit
Pesticides	**Endosulfan**		**0.08**	**0.207**	**Schimmel et al. 1977b**	**mortality**		**Grass Shrimp**	***Palaemonetes pugio***	**Marine**	**Water**	**96 hours**	**sum of endosulfan I, II, and sulfate detected in tissue; NOAEL- 10% mort; LOAEL -35% mort; 0% mortality in shrimp with residues of 0.065 mg/kg ww**	**Selected TRVs: lowest LOAEL and NOAEL TRVs that meet acceptability criteria**
Pesticides	Endosulfan	Technical endosulfan (tissue residue is total endosulfan)	124		Pennington et al. 2004	mortality		Oysters	*Crassostrea virginica*	marine	Water	96 hours	no significant effects on oyster mortalities compared to control; NOAEL is highest total endosulfan concentration; alpha-endosulfan, beta-endosulfan, and endosulfan sulfate concentrations were 78, 28, and 12 mg/kg ww, respectively	
Pesticides	Endrin	Technical grade endrin		0.025	Schimmel et al. 1975	mortality		Pink shrimp	*Penaeus duorarum*	Marine	Water	96 hr	LOAEL is whole body residue after exposure in live organisms; 5% mortality where residues were reported as "trace" but no concentration reported; at LOAEL - 30% mortality; control mortality was 0%; no statistics reported	Selected TRVs: lowest LOAEL that meets acceptability criteria; no NOAEL available from study
Pesticides	Endrin			0.048	Tyler-Schroeder 1979	Reproduction	delayted onset and duration of spawning	Grass Shrimp	*Palaemonetes vulgaris*	Marine	Water	up to 4.5 months	tissue concentration derived from average bioconcentration factor in live shrimp at end of exposure (1,600) and water concentration (at LOEC = 0.03 ug/L); onset and duration of spawning significantly delayed and lengthened at all concentrations	not recommended: LOAEL whole body concentration estimated using BCF
Pesticides	**Endrin**		**0.031**	**0.07**	**Anderson and DeFoe 1980**	**mortality**	**50% mortality**	**Stonefly**	***Pteronarcys dorsata***	**Freshwater**	**Water**	**28 days**	**50% mortality in LOAEL group; NOAEL is based on the reported BCF (typo in Table 2 states that tissue concentration is 0.31 mg/kg ww but that is higher than the LOAEL).**	

Table 1. TSVs for invertebrate whole-body tissue

Chemical Group	Chemical	Chemical Form	NOAEL mg/kg ww	LOAEL mg/kg ww	Source	Endpoint	Endpoint effect	Test Species	Species (Scientific Name)	Marine / Freshwater	Exposure mode	Exposure duration	Notes	Rationale for selection
Pesticides	Endrin		0.048	0.08	Tyler-Schroeder 1979	growth	body weight	Grass Shrimp (juvenile)	*Palaemonetes vulgaris*	Marine	Water	2 generations	tissue concentration derived from average bioconcentration factor in live shrimp at end of exposure (1,600) and water concentration (at NOAEL = 0.03 ug/L, at LOAEL = 0.05 ug/L); parental and offspring (juvenile) exposure; depressed growth (26-94% less than final weight of control).	not recommended: whole body concentration estimated using BCF
Pesticides	Endrin		0.08	0.176	Tyler-Schroeder 1979	mortality		Grass Shrimp	*Palaemonetes vulgaris*	Marine	Water	up to 4.5 months	tissue concentration derived from average bioconcentration factor in live shrimp at end of exposure (1,600) and water concentration (at NOAEL = 0.05 ug/L, at LOAEL = 0.11 ug/L); LOAEL-40% adult survival; NOAEL - 65% survival (control - 65-67% survival) at 48 mg/kg 41% survival - no clear dose-response	not recommended: whole body concentration estimated using BCF
Pesticides	Endrin	Technical grade endrin	0.07	0.19	Schimmel et al. 1975	mortality		Grass Shrimp	*Palaemonetes pugio*	Marine	Water	96 hr	LOAEL is whole body residue after exposure in live organisms; at 0% mortality residues were 0.02 mg/kg ww, at 5% mortality, residues were 0.07 mg/kg ww, at 25% mortality, residues were 0.19 mg/kg ww; control mortality was 0%; no statistics reported	
Pesticides	Endrin	Technical grade endrin	1.4	5.8	Schimmel et al. 1975	growth	shell growth	American oyster	*Crassostrea virginica*	Marine	Water	96 hr	LOAEL is whole body residue after exposure in live organisms; at NOAEL- 13% reduction in shell growth rate compared to control; at LOAEL- 40% reduction in shell growth compared to control; no statistics reported.	
Pesticides	Endrin			11.9	Keilty et al. 1988a	growth	body weight	Oligochaete	*Limnodrilus hoffmeisteri*	Freshwater	Sediment	41-55 days	LOAEL based on mixed species (experiment 3) significant reduced weight; residues calculated from sediment concentration and BCFs	not recommended: whole body concentration estimated using BCF
Pesticides	Endrin		7.3	15.8	Keilty et al. 1988b	growth	body weight	Oligochaete	*Stylodrilus heringianus*	Freshwater	Sediment	54 days	High uncertainty in the LOAEL and NOAEL- only a range of BCFs (34-67) reported in paper over all concentrations; the LOAEL and NOAEL are the lowest BCF (34) and highest BCF (67), respectively, multiplied by sediment concentration; at LOAEL, body weight was approximately 80% of control	not recommended: whole body concentration estimated using BCF
Pesticides	Endrin		0.26	16.4	Mason and Rowe 1976	mortality		Eastern oyster		Marine	Water	7 days	LOAEL- average tissue concentration of oysters at death (n=51)- 90% mortality at 168 hrs exposed to 50 µg/L endrin ("terminal concentration"- live oysters at 168 hrs- 153mg/kg); NOAEL- "terminal concentration" of live oysters at 168 hrs; no mortality in group exposed to 0.1 µg/L; field-collected oysters	
Pesticides	Endrin		0.03	42.6	Keilty et al. 1988a	growth	body weight	Oligochaete	*Stylodrilus heringianus*	Freshwater	Sediment	41-55 days	LOAEL based on mixed species (experiment 3) significant reduced weight; residues calculated from sediment concentration and BCFs	not recommended: whole body concentration estimated using BCF
Pesticides	Endrin		23.1	47.6	Keilty et al. 1988a	mortality	44% mortality	Oligochaete	*Limnodrilus hoffmeisteri*	Freshwater	Sediment	41-55 days	at LOAEL and NOAEL - 44% and 0% mortality, respectively, for single species; LOAEL and NOAEL for mixed species would be 47.7 mg/kg (44% mortality) and 38.9 mg/kg (12% mortality), respectively; residues calculated from sediment concentration and BCFs	not recommended: whole body concentration estimated using BCF
Pesticides	Endrin			119	Keilty et al. 1988a	mortality	42% mortality	Oligochaete	*Stylodrilus heringianus*	Freshwater	Sediment	41-55 days	LOAEL based on single species 42% mortality (experiment 3); NOAEL based on mixed species is 161 mg/kg ww; residues calculated from sediment concentration and BCFs	not recommended: whole body concentration estimated using BCF
Pesticides	**Heptachlor**	**Technical grade (65%) and analytical grade (99.8%)**	**0.01**	**0.033**	**Schimmel et al. 1976**	**mortality**	**82% mortality**	**Pink shrimp**	***Penaeus duorarum***	**Marine**	**Water**	**96 hours**	**82% mortality in LOAEL; 5% mortality in NOAEL**	**Selected TRVs: lowest LOAEL and NOAEL TRVs that meet acceptability criteria**
Pesticides	Heptachlor	Technical grade (65%)	0.2	0.97	Schimmel et al. 1976	mortality	70% mortality	Grass Shrimp	*Palaemonetes vulgaris*	Marine	Water	96 hours	70% mortality in LOAEL; 13% mortality in NOAEL	
Pesticides	**Heptachlor epoxide**	**Analytical grade (99%)**	**<0.01**	**0.14**	**Schimmel et al. 1976**	**mortality**	**30% mortality**	**American oyster**	***Crassostrea virginica***	**Marine**	**Water**	**96 hours**	**13% mortality (control) and LOAEL=30% mortality; NOAEL whole-body tissue concentration based on detection limit; exposure was to technical heptachlor**	**Selected TRVs: lowest LOAEL and NOAEL that meet acceptability criteria**
Pesticides	Heptachlor epoxide	Analytical grade (99%)	0.054	0.18	Schimmel et al. 1976	mortality	80% mortality	Pink shrimp	*Penaeus duorarum*	Marine	Water	96 hours	82% at LOAEL; 5% mortality at NOAEL	
Pesticides	Heptachlor epoxide	Analytical grade (99%)	0.55	2.5	Schimmel et al. 1976	mortality	70% mortality	Grass Shrimp	*Palaemonetes vulgaris*	Marine	Water	96 hours	70% at LOAEL; 13% mortality at NOAEL	
Pesticides	Hexachlorobenzene	99% purity		0.063	Baturo et al. 1995, Baturo and Lagadic 1996	growth	shell growth rate	Snail	*Lymnaea palustris*	Freshwater	Combined	12 weeks	significant decrease in shell growth rate exposed to HCB for 12 weeks (only in snails not previously exposed to HCB); LOAEL is tissue concentration at 3 weeks (although effect was measured at 12 weeks)	not recommended: effect not measured at same time as tissue
Pesticides	Hexachlorobenzene		0.12		Boese et al. 1995	mortality, growth		Bent nose clam	*Macoma nasuta*	Marine	Sediment	119 days	not a toxicity test (accumulation test w/ no mortality observed); NOAEL is average concentration in clams from day 42-119 in clams exposed to bulk sediment (residues in fine and medium sand were lower); stomach contents purged before tissue analysis; 4.1% mortality reported across all doses and controls- no obvious difference in mortality among doses; no significant weight change was observed during the experiment	not recommended: bioaccumulation study
Pesticides	Hexachlorobenzene		0.131		Anderson et al. 1981	mortality		Quahog	*Mercenaria mercenaria*	Marine	Water	18 wks	assumed ww concentrations; not a toxicity test - the study focused on clearing of bacteria injected into the hemolymph but no increase in mortality or morbidity observed when compared to control	not recommended: bioaccumulation study
Pesticides	Hexachlorobenzene	99% purity	0.784		Baturo et al. 1995, Baturo and Lagadic 1996	mortality, reproduction	no. eggs per egg mass and no. egg masses	Snail	*Lymnaea palustris*	Freshwater	Combined	12 weeks	no significant difference in mortality or eggs per egg-mass between exposed and control organisms after 12 weeks exposure (egg production actually significantly increased); NOAEL is highest concentration measured over first 3 weeks of exposure	

Table 1. TSVs for invertebrate whole-body tissue

Chemical Group	Chemical	Chemical Form	NOAEL mg/kg ww	LOAEL mg/kg ww	Source	Endpoint	Endpoint effect	Test Species	Species (Scientific Name)	Marine / Freshwater	Exposure mode	Exposure duration	Notes	Rationale for selection
Pesticides	**Hexachlorobenzene**		**10.6**	**15.8**	**Nebeker et al 1989**	**mortality**	**60% survival**	**amphipod**	***Gammerus acustris***	**Freshwater**	**Water**	**28 days**	**60% survival in highest concentration (79 ug/g - also consistent with BCF x HCB water conc) compared to 80 in NOEC concentration and 90 in control; no indication of statistical evaluation on the significant of the survival rates in control vs. test, but state that no effects were seen; LOAEL listed is based off 60 survival/40% mortality (79 ug/g dw divided by 5, to get 15.8 mg/kg ww); NOAEL listed is based off 80 survival/20% mortality (53 ug/g dw divided by 5, to get 10.6 mg/kg ww); no statistical analysis**	**Selected TRVs: lowest LOAEL that meets acceptability criteria and highest NOAEL below selected LOAEL that meets acceptability criteria**
Pesticides	Hexachlorobenzene		34.4		Nebeker et al 1989	mortality, reproduction	adult mortality and number of offspring	amphipod	*Hyalella azteca*	Freshwater	Water	30 days	better survival in highest exposure than in control, high variability in number of offspring.	
Pesticides	Hexachlorobenzene		44.6		Nebeker et al 1989	growth	weight	Oligochaete	*Lumbriculus variegatus*	Freshwater	Sediment and water	49 days	Higher mean individual worm weight at test termination	
Pesticides	**Lindane (gamma-hexachlorocyclohexane)**			**0.015**	**Fisher 1985**	**mortality**	**50% mortality**	**Midge**	***Chironomus riparius***	**Freshwater**	**Water**	**24 hours**	**LOAEL is tissue concentration at 24 hrs where an LC50 was measured @ pH=6; Two other pH values were reported with LOAELs of 0.009 mg/kg ww (pH = 4) and 0.014 mg/kg ww (pH = 8)**	**Selected TRVs: lowest LOAEL that meets TRV acceptability criteria**
Pesticides	Lindane (gamma-hexachlorocyclohexane)			0.02	Schimmel et al. 1977a	mortality	>50% mortality	Pink shrimp	*Penaeus duorarum*	Marine	Water	96 hours	some uncertainty - poor relationship between water and tissue concentrations; LC50 is 0.17 ug/L and LOAEL is tissue residue at 0.62 ug/L (no tissue residue at LC50); LC50 multiplied by the average BCF across all concentrations = 0.014 mg/kg ww (similar LOAEL estimate)	
Pesticides	Lindane (gamma-hexachlorocyclohexane)			0.14	Schimmel et al. 1977a	mortality	>50% mortality	Grass Shrimp	*Palaemonetes pugio*	Marine	Water	96 hours	some uncertainty - poor relationship between water and tissue concentrations; LC50 is 4.44 ug/L and LOAEL is tissue residue at 5.5 ug/L (no tissue residue at LC50); LC50 multiplied by the average BCF across all concentrations is 0.28 mg/kg ww	
Pesticides	Methoxychlor	technical grade	0.15		Armstrong et al. 1976	mortality		Dungeness crab (juvenile)	*Cancer magister*	Marine	Water	18 days	high uncertainty - NOAEL is based on tissue residues at 0.04 µg/L after 18 days exposure; survival was unaffected (90%) at 0.04 µg/L after 20 days; however, at 30 days, survival was reduced to about 65% and it is unknown what the tissue residue would be at 30 days where survival was affected	
Pesticides	Methoxychlor	99%		0.23	Bookhout et al. 1976	mortality		Mud crab	*Rhithropanopeus harrisii*	Marine	Water	20 days (mean duration)	study states that all concentrations > 1.0 ppb gave significant first stage larval mortality; 2.5 ppb was the first concentration above 1.0 ppb (and 72 to 86% survival was observed); LOAEL is lowest measured tissue concentration out of 4	Selected TRVs: lowest LOAEL that meets acceptability criteria; no NOAEL available from study
Pesticides	**Methoxychlor**	**99%**		**0.34**	**Bookhout et al. 1976**	**mortality**		**Blue crab**	***Callinectes sapidus***	**Marine**	**Water**	**63 days (mean duration)**	**study states that at concentrations > 1.0 ppb, larval mortality was nearly complete after third stage; 1.3 ppb was the first concentration above 1.0 ppb; LOAEL is lowest measured tissue concentration out of 3**	
Pesticides	Methoxychlor	technical grade		0.57	Armstrong et al. 1976	mortality	20% mortality after molting	Dungeness crab (adult)	*Cancer magister*	Marine	Water	15 days	actual LOAEL for survival is likely slightly lower; LOAEL is tissue concentration at 7.5 µg/L where 80% of crabs died after molting; however, effect on survival was measured at a lower water exposure (at 4.0 µg/L where survival was ~70% at 20 days), but no tissue concentrations reported at this water concentration	

Shaded rows indicate studies and TRVs that are not recommended becauase TRVs do not meet acceptability criteria

Table 2. TSVs for fish whole-body tissue

Chemical Group	Chemical	Chemical Form	Source	NOAEL (WB)	LOAEL (WB)	Units (ww)	Endpoint	Test Species	Lifestage	Exposure Mode	Exposure Duration	Endpoint Effect	Notes	Rationale
Metals	Mercury	mercuric chloride	Kudo and Mortimer 1979	0.2		mg/kg	mortality	Guppy	male adult	sediment and water	20 days		only no-effect level reported	
Metals	Mercury		Webber and Haines 2003	0.23		mg/kg	Mortality	Golden shiner		food	90 days	predator avoidance	Field-collected fish (but from a manmade cement lined pond). Predator avoidance was reduced at this NOAEL; growth accompanied by reduced feeding was reduced at NOAEL but not dose-responsive, no effect on growth was observed in fish fed 959 ng/g ww where WB = 0.518 ug/g ww)	not recommended: field-collected organisms
Metals	Mercury	methylmercury	Friedmann et al. 1996		0.254	mg/kg	growth	Walleye	juvenile	food	6 months	male growth	fish fed 1.0 mg/kg mercury in diet consisting of catfish fillets injected with methylmercury 3X per week; LOEC is WB concentration minus viscera; no significant effect on mortality observed; no replication, elevated control mortality (28%), growth effect not dose-responsive (increased growth and body weight in fish fed 0.1 mg/kg mercury in diet)	not recommended: not a whole body concentration
Metals	**Mercury**	**methylmercuric chloride**	**Matta et al. 2001**	**0.2**	**0.47**	**mg/kg**	**mortality**	**Mummichog**	**adult**	**water**	**42 days**	**male survival**	**wild male fish; increased male mortality in exposed parent fish; male survival statistically different (reduced survival) from control when fish exposed to 0.5 ug/g; male residue at that exposure was 0.47 ug/g (see Table 1); male survival not significantly impacted when fish exposed at 0.2 ug/g; male residue at that exposure was 0.20 ug/g; note at NOAEL (0.2 ug/g ww) qualitative observations in fish behavior were reported: "males treated with Hg seemed to be more aggressive than control males…male fish exposed to mercury were darker in color and exhibited either very aggressive behavior (chasing and biting other fish) or very submissive behavior (hiding behind filters or air lines and remaining very still)"; these observed behaviors of Hg treated fish are not representative as an adverse effect and were qualitative.**	**Selected TRV: Lowest LOAEL and NOAEL that meet acceptability criteria**
Metals	Mercury	methylmercury	Webber and Haines 2003	0.23	0.536	mg/kg	behavior	Golden shiner		dietary	90 days	Shoaling behavior	Growth was not dose-responsive. LOEL based on shoal height and time to return to pre-exposure activity level. Authors indicate that the effects at high but not the low dose were ecologically significant. Field collected fish (but from a manmade cement lined pond). Predator avoidance was reduced at this NOEC; growth accompanied by reduced feeding was reduced at NOEC but not dose-responsive, no effect on growth was observed in fish fed 959 ng/g ww where WB = 0.518 ug/g ww)	not recommended: not direct measure of growth, survival, or reproduction
Metals	Mercury	methylmercury	Hammerschmidt et al. 2002		0.56	mg/kg	reproduction	Fathead minnow	juvenile and adult	food	multi-generation	46% spawning success	spawning success was 75% in control; no statistics; LOAEL is average male residue in carcass; average female residue in carcass = 3.4 mg/kg dw (0.68 ug/g ww); LOAEL was converted to ww assuming 80% moisture in whole fish	
Metals	Mercury		Kania and O'Hara 1974		0.67	mg/kg	decreased ability to avoid predation	Mosquitofish		water	60 hours		Clear predation effect. Fish marked and counted after predator introduced.	not recommended: not direct measure of growth, survival, or reproduction
Metals	Mercury	Methylmercury	Sandheinrich and miller 2006		0.714	mg/kg	reproduction	fathead minnow	juvenile through adult	diet	>21 days	reduced spawning success	Sept 20, 2010 e-mail to ML from authors confirmed that wet weight concentration was erroneously reported as dry weight concentration. Considered a chronic study because a critical life-stage was assessed (reproductive). Study is carcass with some blood removed.	not recommended: not a whole body concentration
Metals	Mercury	methylmercuric chloride	Drevnick and Sandheinrich (2003)		0.864	mg/kg		Fathead minnow	juvenile (90d) through adult	diet	~210 days	reduced spawning success	Fed 5% BW/d; Concentration in carcass. Some blood and gonad tissue was removed from carcass.	not recommended: not a whole body concentration
Metals	Mercury	mercuric chloride	Snarski and Olson 1982	0.8	1.31	mg/kg	growth	Fathead minnow	3 mos	food	60 days			
Metals	Mercury	methylmercuric chloride	Phillips and Buhler 1978	2.28		mg/kg	growth	Rainbow trout	fingerling	water	24 days		only no-effect level reported	
Metals	Mercury	methylmercury	1.53	2.7	3.4	mg/kg	reproduction	Brook trout	embryo – adult	water	756 days	reduced number of viable eggs produced	residue measured in parental fish at 39 weeks; NOAEL is recommended no effect level presented in study (for abnormalities and multigenerational mortalities); NOAEL based on the data for no effect on the number of viable eggs produced was 1.1 ug/g ww	
Metals	Mercury		Kim et al. 1977		3.72	mg/kg	mortality	creek chub		water	48 hours	30% mortality		
Metals	Mercury	mercuric chloride	Snarski and Olson 1982	2.75	4.18	mg/kg	mortality	Fathead minnow	3 month old	water	60 days			
Metals	Mercury	mercuric chloride	Heisinger et al. 1979		4.4	mg/kg	mortality	Goldfish (Carassius auratus)	4.5-6.5 cm	water	4 days	LC50	study looked at interactive effects of Hg and Se; increased mortality in Hg-only treatment; LC50 calculated from water concentration of Hg (LC50 is 0.35 mg/L, approximated by log-probability program); in Table 2, a Hg treatment of 0.32mg/L in water generated a mean whole body tissue concentration in fish of 22.16 ug/g dry weight; this was selected as the LOAEL; dw value converted to ww assuming 20% solids (22.16 ug/g or mg/kg was multiplied by 5, to give 4.4 mg/kg wet weight) . Concentration converted from dry weight to wet weight assuming 80% moisture in whole fish. Hg-treated fish did not survive above 35 ug/g dry weight.	
Metals	Mercury	mercuric chloride	Snarski and Olson 1982	2.84	4.47	mg/kg	reproduction	Fathead minnow	larvae-adult	water	287 days			
Metals	Mercury	methyl-mercury	Lock 1975	5		mg/kg	growth, mortality	Rainbow trout	juvenile	water	84 days		only no-effect level reported	

Table 2. TSVs for fish whole-body tissue

Chemical Group	Chemical	Chemical Form	Source	NOAEL (WB)	LOAEL (WB)	Units (ww)	Endpoint	Test Species	Lifestage	Exposure Mode	Exposure Duration	Endpoint Effect	Notes	Rationale
Metals	Mercury	mercuric chloride	Skak and Baatrup 1993		5	mg/kg	behavior	Brown trout		water	5 days	Hg deposition in utricular macula (inner ear)	study states that Hg deposits in inner ear could affect inner ear function and cause disequilibrium and abnormal swimming pattern; however, these effects were not explicitly reported in the study on the experimental fish; LOAEL of 11.4 mg/kg ww in fish tissue based on gastric gavage exposure	not recommended: not direct measure of growth, survival, or reproduction
Metals	Mercury	methylmercuric chloride	Phillips and Buhler 1978	5.67		mg/kg	growth	Rainbow trout	fingerling	water	24 days		only no-effect level reported	
Metals	Mercury	methylmercuric chloride	Cember et al. 1978		6.5	mg/kg	mortality	Bluegill	juvenile	water	12.5 days		No control was used in study;	not recommended: uncontrolled study
Metals	Mercury	methylmercuric chloride	Phillips and Buhler 1978	8.63		mg/kg	growth	Rainbow trout	fingerling	water	24 days		brook trout = 9.4 (NOAEL); only no-effect level reported	
Metals	Mercury		McKim et al. 1976	9.4		mg/kg	growth, mortality	Brook trout	39 wks old	water	756 days	reduced juvenile weight	residues measured in parental fish at 39 weeks; only no-effect level reported	
Metals	Mercury	methylmercury	Rodgers and Beamish 1982		10	mg/kg	growth	Rainbow trout	fingerling	diet	84 days	reduced growth and final body weight (after 84 days)	reduced growth associated with feeding; approximated from graph (and text); at 14 days of treatment Hg concentrations in WB tissues were lower (approx. 5 ug/g ww); however, effects were observed (and significant) over the 84 days of exposure	
Metals	Mercury	methylmercury	Olson et al. 1975	10.9		mg/kg	growth, mortality	Fathead minnow	larvae-adult	water	336 days		only no-effect level reported	
Metals	Mercury	methylmercuric chloride	Matta et al. 2001	1.1	11	mg/kg	reproduction	Mummichog		food	42 days	F1 fertilization success	residue measured in parental fish for impacted (statistically different from control) F1 fertilization success; at NOAEL, no effect reported at 1 ug/g in parental fish, the actual tissue residues were 1.1 ug/g for female and 1.0 ug/g for male, therefore for NOAEL select highest (1.1 ug/g); at LOAEL, fertilization success in F1 impacted at 11 ug/g, the actual parent tissue residues were 12 ug/g in females and 11 ug/g in males, therefore for LOAEL select lowest (11 ug/g).; no effect level (not significantly different) 11-12 mg/kg (range of male and female parent tissues) based on the following reproductive parameters: F1 hatchability, F1 larval survival, F1 fecundity, F2 hatch success, F2 larval survival	
Metals	Mercury	methylmercuric chloride	Niimi and Kissoon 1994		11.2	mg/kg	mortality	Rainbow trout		water	12-33 days	survival		
Metals	Mercury	methylmercuric (II) chloride	Stefansson et al. 2013		12	mg/kg	mortality, growth	inland silverside	juvenile	diet	70 days			
Metals	Mercury	methylmercuric (II) chloride	Stefansson et al. 2013		12	mg/kg	mortality, growth	minnow, sheepshead	juvenile	diet	70 days			
Metals	Mercury	methylmercuric chloride	Matta et al. 2001	12		mg/kg	female mortality	Mummichog		food	42 days	female survival	no-effect level reported for female parental fish survival at highest dose of Hg in study (11 ug/g) which resulted in a female tissue residue of 12 ug/g	
Metals	Mercury	methylmercuric chloride	Niimi and Lowe-Jinde 1984	12		mg/kg	growth, mortality	Rainbow trout	sub-adult	water	75 days	body weight	only no-effect level reported	
Metals	Mercury		Rodgers and Beamish 1982	29		mg/kg	mortality	Rainbow trout	fingerling		84 days		only no-effect level reported	
Metals	Selenium	selenite and selenomethionine	Lorentzen et al. 1994	0.116 - 0.412		mg/kg	growth, mortality	Atlantic salmon		food	8 wks	bw gain, survival	NOEC is range of Se WB concentrations derived from study assuming 80% moisture in organism	
Metals	Selenium	inorganic Se	Hodson et al. 1980	0.36		mg/kg		Rainbow trout	fry	water	44 weeks		Tissue Se was only measured at highest exposure level, which showed negligible effects, and water-only exposure to inorganic Se not environmentally relevant, as discussed in DeForest and Adams (in press); converted NOAEL (1.8 mg/kg dw) to ww based on 80% moisture	not recommended: exposure based on water-only to inorganic Se
Metals	Selenium	biologically incorporated selenium (organoselenium)	Bertram and Brooks 1986	0.44		mg/kg	growth	fathead minnow	juvenile	diet	11 weeks	growth	converted NOAEL (2.2 mg/kg dw) to ww based on 80% moisture	
Metals	Selenium		Hamilton et al. 1990		0.66	mg/kg		Chinook salmon	juvenile				Juvenile fish were fed Se-amended mosquitofish collected from areas with potential contamination from other chemicals, as discussed in DeForest and Adams (in press); converted LOAEL (3.3 mg/kg dw) to ww based on 80% moisture	not recommended: LOAEL based on fish fed field-exposed prey
Metals	Selenium	inorganic Se	Hunn et al. 1987	0.52	0.86	mg/kg	mortality	Rainbow trout	fry	water	90 days	53% survival	Water-only exposure to inorganic Se not environmentally relevant, as discussed in DeForest and Adams (in press); converted NOAEL and LOAEL (2.6 and 4.3 mg/kg dw) to ww based on 80% moisture	not recommended: exposure based on water-only to inorganic Se
Metals	Selenium	inorganic Se	Cleveland et al. 1993	0.76	1	mg/kg	mortality	Bluegill sunfish	juvenile	water	60 days	mortality	Water-only exposure to inorganic Se not environmentally relevant, as discussed in DeForest and Adams (in press); converted NOAEL and LOAEL (3.8 and 5 mg/kg dw) to ww based on 80% moisture	not recommended: exposure based on water-only to inorganic Se

Table 2. TSVs for fish whole-body tissue

Chemical Group	Chemical	Chemical Form	Source	NOAEL (WB)	LOAEL (WB)	Units (ww)	Endpoint	Test Species	Lifestage	Exposure Mode	Exposure Duration	Endpoint Effect	Notes	Rationale
Metals	Selenium		Hamilton et al. 2005c		1.1 - 1.2	mg/kg	mortality	Razorback sucker	larvae			mortality	Identified widely different Se threshold than Beyers and Sodergren 2002 and the toxicity response was not clearly related to either the Se exposure concentrations or the internal tissue Se concentrations, as discussed in DeForest and Adams (in press); converted LOAEL range (5.4 to 6.1 mg/kg dw) to ww based on 80% moisture	not recommended: tissue concentrations were not dose-responsive
Metals	Selenium		Lemly 1993		1.17	mg/kg	mortality	bluegill	juvenile	diet		winter stress syndrome	LOAEL at 4 degrees celcius; converted LOAEL (5.85 mg/kg dw) to ww based on 80% moisture; effect is based on mortality during cold conditions	not recommended: endpoint not direct measure of growth, survival, or reproduction related to fish in LPRSA
Metals	Selenium	selenium	Ogle and Knight 1989	1.5		mg/kg	reproduction	Fathead minnow	embryos/larvae	maternal transfer	135 days	reproduction	parental diet spiked with 25 percent seleno-L-methionine, 25 percent selenate, and 50 percent selenite; no adverse effects on reproduction; growth effect observed not biologically meaningful as per DeForest and Adams (in press); converted NOAEL (7.5 mg/kg dw) to ww based on 80% moisture; lack of effect on reproduction may involve reduced selenium bioaccumulation relative to other fish groups (i.e., fathead minnows may be less sensitive)	
Metals	Selenium		McIntyre et al. 2008		1.91	mg/kg	EC10 of mortality	bluegill	juvenile	diet		winter stress syndrome	LOAEL at 4 degrees celcius.; LOAEL at 9 degrees celcius = 13.29 mg/kg dw; converted NOAEL (9.56 mg/kg dw) to ww based on 80% moisture; effect is based on mortality during cold conditions	not recommended: endpoint not direct measure of growth, survival, or reproduction related to fish in LPRSA
Metals	**Selenium**	**seleno-DL-methionine**	**Hamilton et al. 1990**	**1.1**	**2.1**	**mg/kg**	**growth**	**chinook salmon**	**juvenile**	**diet**	**90 days**	**growth**	**LOAEL based on growth through 60 days. High rate of mortality in control fish after days 60-90. EC10 calculated as 6.4 mg/kg dw in DeForest and Adams (in press); dry weight converted to ww assuming 80% moisture content.**	**Selected TRVs: Lowest LOAEL that meets and highest NOAEL below LOAEL that meet acceptability criteria and that are also based on exposure to organic dietary Se**
Metals	Selenium	selenomethionine	Hardy et al. 2010	2.27		mg/kg	reproduction	cutthroat trout	larvae	maternal transfer fm dietary exposure	124 weeks	larval deformities/ mortality	egg concentration NOAEL = 0.01604 mg/kg dw; converted NOAEL (11.37 mg/kg dw) to ww based on 80% moisture	
Metals	Selenium	selenium	Staub et al. 2004	2.37		mg/kg	reproduction	Eastern mosquitofish	embryos/larvae	maternal transfer		brood size/offspring viability	Field exposed fish, whole body NOAEL is >11.85 µg/g dry wt; converted to ww based on 80% moisture	
Metals	Selenium		Hamilton et al. 1986	1.92	2.6	mg/kg		Chinook salmon	parr				Parr were fed Se-amended mosquitofish collected from areas with potential contamination from other chemicals, as discussed in DeForest and Adams (in press); converted NOAEL and LOAEL (9.6 and 13 mg/kg dw) to ww based on 80% moisture	not recommended: LOAEL based on fish fed field-exposed prey
Metals	Selenium	inorganic/organic selenium	Lemly 1982	3.1		mg/kg	mortality	largemouth bass	juvenile	aqueous	120 days		no effect on fish exposed to 10 µg/L; max tissue residue over 120 days (at 120 days)	
Metals	Selenium	seleno-DL-methionine; selenate; selenite	Coyle et al. (1993)	1.4	3.2	mg/kg	reproduction	bluegill	larvae	maternal transfer to eggs from aqueous and dietary exposure	140 days	larval mortality	egg concentration NOAEL and LOAEL are 0.0225 and 0.0413 mg/kg dw, respectively; converted NOAEL and LOAEL (7 and 16 mg/kg dw) to ww based on 80% moisture	
Metals	Selenium	selenium	Saiki et al. 2004	3.5		mg/kg	reproduction	Western mosquitofish	fry	maternal transfer		fry mortality and deformities	Field exposed fish, whole body NOAEL is >17.5 µg/g dry wt; converted to ww based on 80% moisture	
Metals	Selenium	selenite and biologically incorporated selenium	Hermanutz et al. 1996	1.1	5.45	mg/kg	reproduction	bluegill	fry	maternal transferto eggs from dietary and aqueous exposure		larval deformities	Adult exposure in stream mesocosm. EC10 calculated as 7.7 µg/kg dw in DeForest and Adams (in press)	
Metals	Selenium	seleno-L-methionine	Tashjian et al. 2006	2.94	4.5	mg/kg	growth	white sturgeon	juvenile	diet	8 weeks	growth	EC10 calculated as 15 mg/kg dw in DeForest and Adams (in press); converted NOAEL and LOAEL (14.7 and 22.5 mg/kg dw) to ww based on 80% moisture	

Table 2. TSVs for fish whole-body tissue

Chemical Group	Chemical	Chemical Form	Source	NOAEL (WB)	LOAEL (WB)	Units (ww)	Endpoint	Test Species	Lifestage	Exposure Mode	Exposure Duration	Endpoint Effect	Notes	Rationale
Metals	Selenium	Sodium Selenite	Hermanutz et al. 1992		4.6	mg/kg	mortality, growth, and reproduction	bluegills	adult	aqueous and food	365 days	depressed growth, mortality, progeny survival	LOEC- significant mortality and depressed growth in fish exposed to 10 µg/L; residues after 365 days. At 10 and 30 µg/L (4.6 mg/kg ww) there were significant effects on reproduction (embryo hatch, larval survival, lordosis, edema, internal hemorrhage)	
Metals	Selenium	seleno-DL-methionine	Hamilton et al. 1990	2.52	4.64	mg/kg	fingerling mortality following seawater challenge	chinook salmon	juvenile	diet	120 days	mortality	EC10 calculated as 4.3 mg/kg dw in DeForest and Adams (in press); converted NOAEL and LOAEL (12.6 and 23.2 mg/kg dw) to ww based on 80% moisture	
Metals	Selenium	selenite	Lemly 1982	4.8		mg/kg	mortality	bluegill	juvenile	aqueous	120 days		no effect on fish exposed to 10 µg/L; max tissue residue over 120 days (at 90 days) (4.7 at 120 days)	
Metals	Selenium	selenate; selenite and biologically incorporated selenium	Beyers and Sodergren 2002	8.4		mg/kg	mortality	Razorback sucker	larvae	water and diet	28 days	mortality	Identified widely different Se threshold than Hamilton et al. 2005, as discussed in DeForest and Adams (in press); converted NOAEL (42 mg/kg dw) to ww based on 80% moisture	not recommended: see notes
Metals	Selenium	biologically incorporated selenium	Bennett et al. 1986		8.6	mg/kg	growth	fathead minnow	juvenile	diet	7 to 8 days	growth	converted LOAEL (43 mg/kg dw) to ww based on 80% moisture	
Metals	Selenium	selenate and biologically incorporated selenium	Dobbs et al. 1996		9.5 to 15.2	mg/kg	growth	fathead minnow	juvenile	water and diet	25 days	growth	converted LOAEL range (47.5 to 76 mg/kg dw) to ww based on 80% moisture	
Metals	Selenium	biologically incorporated selenium (field-exposure)	McDonald et al. 2010		9.8	mg/kg	morphology	trout, dolly varden	larvae	food and water; maternal transfer	field-exposed			
Metals	Selenium	selenite	Sato et al. 1980	NC	NC	mg/kg	mortality	Carp	young	water	approx 7 wks	reduced survival	tissue concentrations are not responsive with toxicity; higher NOAEL (6.0 mg/kg ww) than LOAEL (1.5 - 5.0 mg/kg ww)	not recommended: tissue concentrations were not dose-responsive
Metals	Selenium		Hamilton et al. 2002	NC	NC	mg/kg	mortality	razorback sucker	larvae	diet and water			study treated fish with field collected water and food; Se concentrations in WB tissue did not seems dose-responsive in tissue	not recommended: tissue concentrations were not dose-responsive
Metals	Selenium		GEI Consultants 2008	NC	NC	mg/kg	reproduction	Fathead minnow	larvae	reproduction		larval malformations	An effect level could not be estimated due to high variation in the endpoint showing the greatest response to Se (graduated severity index of larval malformations), as discussed in DeForest and Adams (in press).	not recommended: see notes
Metals	Selenium	inorganic Se	Hamilton and Wiedmeyer 1990	NC	NC	mg/kg		Chinook salmon					Fish were exposed to a mixture of elevated elements and water-only exposure to inorganic Se not environmentally relevant, as discussed in DeForest and Adams (in press).	not recommended: exposure based on water-only to inorganic Se
Metals	Selenium	selenium	Bryson et al. 1984, 1985a, 1985b	NC	NC	mg/kg	reproduction	bluegill	embryos/larvae	maternal transfer		larval development	fish collected from Se contaminated site, only ovary concentrations reported.	not recommended: not whole body concentration
Metals	Selenium	selenium	Gillespie and Baumann 1986	NC	NC	mg/kg	reproduction	bluegill	larvae	maternal transfer		larval deformities	fish collected from Se contaminated site, only ovary concentrations reported.	not recommended: not whole body concentration
Metals	Selenium	selenium	Holm et al. 2005	NC	NC	mg/kg	reproduction	brook trout	larvae	maternal transfer		reproduction	Field exposed fish, egg data reported.	not recommended: not whole body concentration
Metals	Selenium	selenium	Formation Environmental 2009	NC	NC	mg/kg	reproduction	Brown trout	larvae	maternal transfer		larval deformities/ alevin mortality	Field exposed fish, egg data reported.	not recommended: not whole body concentration
Metals	Selenium	selenium	Kennedy et al. 2000	NC	NC	mg/kg	reproduction	cutthroat trout	larvae	maternal transfer		larval deformities/ mortality	Field exposed fish, egg data reported.	not recommended: not whole body concentration
Metals	Selenium	selenium	Rudolph et al. 2008	NC	NC	mg/kg	reproduction	cutthroat trout	larvae	maternal transfer		larval deformities/ alevin mortality	Field exposed fish, egg data reported.	not recommended: not whole body concentration
Metals	Selenium	selenium	Golder Associates 2009	NC	NC	mg/kg	reproduction	Dolly Varden	larvae	maternal transfer		larval deformities	Field exposed fish, egg data reported.	not recommended: not whole body concentration

Table 2. TSVs for fish whole-body tissue

Chemical Group	Chemical	Chemical Form	Source	NOAEL (WB)	LOAEL (WB)	Units (ww)	Endpoint	Test Species	Lifestage	Exposure Mode	Exposure Duration	Endpoint Effect	Notes	Rationale
Metals	Selenium	selenium	Schultz and Hermanutz 1990	NC	NC	mg/kg	reproduction	Fathead minnow	larvae	maternal transfer		larval edema/lordosis	Adult exposure in stream mesocosm. Ovary data reported.	not recommended: not whole body concentration
Metals	Selenium	selenium	CP&L 1997	NC	NC	mg/kg	reproduction	Largemouth bass	larvae	maternal transfer		larval mortality	Ovary data reported.	not recommended: not whole body concentration
Metals	Selenium	selenium	Muscatello et al. 2006	NC	NC	mg/kg	reproduction	Northern pike	larvae	maternal transfer		larval deformities	Field exposed fish, egg data reported.	not recommended: not whole body concentration
Metals	Selenium	selenium	Holm et al. 2005	NC	NC	mg/kg	reproduction	Rainbow trout	larvae	maternal transfer		larval deformities	Field exposed fish, egg data reported.	not recommended: not whole body concentration
Metals	Selenium	selenium	Hamilton et al. 2005a, b	NC	NC	mg/kg	reproduction	Razorback sucker	larvae	maternal transfer		larval deformities	Field exposed fish, egg data reported.	not recommended: not whole body concentration
Metals	Selenium	selenium	de Rosemond et al. 2005	NC	NC	mg/kg	reproduction	White sucker	larvae	maternal transfer		larval deformities	Field exposed fish, egg data reported.	not recommended: not whole body concentration
Metals	Selenium	selenium	Cleveland et al. 1993	NC	NC	mg/kg	mortality	bluegill	juvenile	diet		mortality	a NOAEL and LOAEL could not be identified because the concentration-response data were anomalous.	not recommended: tissue concentrations were not dose-responsive
Metals	Selenium	selenium	Vidal et al. 2005	NC	NC	mg/kg	reproduction	rainbow trout	juvenile	diet		larval deformities	a NOAEL and LOAEL could not be identified because the concentration-response data were anomalous.	not recommended: tissue concentrations were not dose-responsive
Metals	Selenium	selenium	Doroshov et al. 1992	NC	NC	mg/kg	reproduction	bluegill	larvae	maternal transfer		larval deformities	only egg and ovary LOEALs/NOAELs reported; 10 percent edema observed in progeny associated with egg Se concentrations ranging from 22.06-30.20 µg/g dry wt. (geometric mean of 25.81 µg/g dry wt.), contradicts reported LOAEL/NOAEL of 8.3 and 19.5 µg/g dry wt, respectively as discussed in DeForest and Adams (2010).	not recommended: not whole body concentration
Butyltins	**Dibutyltin**	**di-n-butyltindichloride**	**Wester et al. 1990**	**5.5**		**mg/kg**	**growth, mortal**	**guppy**	**juvenile (4-6 wk old)**	**water**	**4 weeks**	**growth, mortalit**	**toxicity data are reported for medaka and residue data for guppy. However, from the methods section, it is apparent that adverse effects were monitored for and from the discussion it is apparent that no adverse effects were observed in the guppy. This is consistent with no adverse effects observed at the same exposure level in a separate trial discussed in this paper reported in Wester and Canton 1987.**	**Selected TRVs: only NOAEL that meets acceptability criteria**
Butyltins	Tributyltin	tributyltin oxide	Shimasaki et al. 2003		0.018	mg/kg	growth, sex reversal	Japanese flounder	larvae	diet	approx 65 days	reduced body weight and length (35% reduction in weight and 12% reduction in length), increased sex reversal to male	unreliable study; LOAEL is not true whole body concentration; all test fish were genetically XX fish (i.e., female) by breeding two genetically XX parents but one parent phenotypically male and functional; growth effect significant at 100 days and was recovered after 300 days past hatching (growth not significantly affected at 300 days; however, organisms were only exposed until day 100); survival not significantly affected, however, high mortality in all groups including control (control survival = 42%; LOAEL survival = 57%). LOAEL is whole body minus intestines, livers, kidneys, and gall bladders; Salmonid data show that TBT accumulates several fold higher in these organs than in the remaining carcass (Martin et al. 1989; Davies and McKie 1987).	not recommended: problematic study methods; see notes
Butyltins	Tributyltin	tributyltin oxide	Triebskorn et al. (1994)		0.27	mg/kg	growth	rainbow trout	juvenile	water	21 days	reduced body weight	LOAEL is whole body minus head (head and body concentrations presented both had similar TBTO concentrations of 350 and 270 µg/kg, respectively); WB minus head tissue concentration was not significantly different from the control group, although growth was significantly less than the control at this exposure dose (5 µg/L); TBTO measured as tin. Dry weight converted to ww assuming 20% solids.	not recommended: not whole body concentration
Butyltins	Tributyltin	Tributyltin cation (Bu_3Sn^+)	Martin et al. (1989)		0.57	mg/kg	mortality	rainbow trout	juvenile	water	96 hours	96 hr LC50	not a measured tissue concentration; LC50 multiplied by mean BCF reported in the same paper for older fish	not recommended: WB concentration estimated using BCF
Butyltins	Tributyltin	TBTO	Wester et al. 1990	0.7		mg/kg	growth, mortality	guppy	juvenile (4-6 wk old)	water	4 weeks	growth, mortality	toxicity data reported for medaka and tissue residue data is reported for guppy	not recommended: see notes
Butyltins	**Tributyltin**	**tributyltin oxide**	**Nirmala et al. (1999)**		**2.39**	**mg/kg**	**reproduction**	**Japanese medaka**	**diet**	**diet**	**3 weeks**	**reduced hatching, swim-up, and embryonic success**	**LOAEL is concentration in adult female fish; effects were observed in offspring; effects observed after 2 weeks of exposure and adult whole body tissues measured at 3 weeks**	**Selected TRV: only LOAEL that meets acceptability criteria**
Butyltins	Tributyltin	TBTO	Shimizu and Kimura (1987)		2.47	mg/kg	growth	goby	juvenile	water	12 weeks	body weight	Study is reported in Japanese, abstract and tables in English; reduction in GSI of male fish at 1.85 mg/kg; no effect on growth.	not recommended: see notes
Butyltins	Tributyltin	TBT chloride	Tas et al. (1996)		5.96	mg/kg	mortality	goby	juvenile	water	up to 14 days	lethal body burden	time to death was from 2 minutes to 14 days at different concentrations data from Tas 1993 also included. LBB increased with exposure concentration.	not recommended: see notes

Table 2. TSVs for fish whole-body tissue

Chemical Group	Chemical	Chemical Form	Source	NOAEL (WB)	LOAEL (WB)	Units (ww)	Endpoint	Test Species	Lifestage	Exposure Mode	Exposure Duration	Endpoint Effect	Notes	Rationale
SVOCs	Bis (2-ethylhexyl) phthalate		Tarr et al. 1990	0.18 - 1.03		mg/kg	metabolic clearance rate	Rainbow trout	2.9 - 441 g	water	48 - 96 hrs	effect on metabolic clearance rates	endpoint is not a direct measure of growth, survival, or reproduction; no mortality reported in this study.	not recommended: endpoint not direct measure of growth, survival, or reproduction
SVOCs	**Bis (2-ethylhexyl) phthalate**		**Mehrle and Mayer 1976**	**0.39**		**mg/kg**	**reproduction (sac-fry mortality)**	**Rainbow trout - sac fry**			**10 day prior to hatch and effects measured 24 days post hatch**	**20% mortality at LOEC; 13% mortality at NOEC (not statistically different mortality than control); 6% mortality in control**	**swim-up fry tissue residues calculated from bioconcentration factor and water concentrations reported in paper (tissue conc=[BCF x water conc]/1000), where BCF = 78 (as reported in study) and no-effect water concentrations was 5 ug/L; mortality observed in group exposed to 14 ug/L; however, mortality was not correlated with tissue residues so no tissue residue LOAEL identified**	**Selected TRV: only NOAEL that meets acceptability criteria**
SVOCs	Bis (2-ethylhexyl) phthalate		Wofford et al. 1981	1.0 - 6.75		mg/kg	mortality	Sheepshead minnows		water	24 hrs	survival	NOAEL is based on assumed 100% survival; NOAEL is based on the assumption that no mortality was observed because none was reported	not recommended: bioaccumulation study
Dioxins/ furans	TEQ-fish	2,3,7,8-TCDD	van der Weiden et al 1990	0.33	1.6	pg/g	mortality, growth	rainbow trout	juevenile	IP injection		reduced survival and growth	Focus of study on more sensitive endpoints (EROD, histology), estimated dose based on heaviest fish weight to get most conservative estimate; based on injection of 2,3,7,8-TCDD dissolved in peanut oil	not recommended: injection study
Dioxins/ furans	TEQ-fish	2,3,7,8-TCDD	Giesy et al. 2002		12	pg/g	survival	Rainbow trout	adult	diet	approx 300 days	reduced survival	LOAEL of 0.44 pg/g ww in fillet tissue measured at day 200 converted to concentration at approximately day 300 when mortality was observed based on recommendation from the author (Giesy 2006- pers comm) using a fillet-to-whole body conversion factor of 28	not recommended: whole body tissue concentration not measured
Dioxins/ furans	TEQ-fish	TEQ	Weston (2004) (Housatonic ERA Vols 1-2)		38	pg/g	survival, growth	largemouth bass	adult	field exposed from Housatonic River	field-exposed	female growth, & biochemical effects (in adults); offspring growth and developmental effects	LOAEL is based on the reported effect threshold which represents the lowest concentration measured in non-reference locations from the Housatonic ERA Phase I fish study; adult largemouth bass (pre- and post-spawners) collected from the Housatonic River study area and were assessed for biochemical, histological, and morphological characteristics (results compared to those for fish from the reference location); lab-reared offspring from the adults were monitored for survival, growth, development and biochemical effects; observed effects in adults (elevated EROD levels; reduced estrogen levels; reduced growth in females, etc.) and observed effects in offspring of field-collected fish (reduced survival; developmental delays; reduced growth; and increase in deformities); field study reference site - Threemile Pond	not recommended: LOAEL based on field collected fish
Dioxins/ furans	TEQ-fish	TEQ	Weston (2004) (Housatonic ERA Vols 1-2)		50	pg/g	survival	largemouth bass, medaka and rainbow trout	adult	field exposed from Housatonic River	field-exposed	pathology and mortality combined	LOAEL is effect threshold developed from eggs injected with Housatonic river chemical extract extrapolated to a whole body adult concentration using a conversion factor of 0.5 (Housatonic ERA Phase II fish studies); conversion factor based on site-specific and literature information	not recommended: LOAEL based on field extract exposed fish and extrapolated adult concentration
Dioxins/ furans	**TEQ-fish**	**2,3,7,8-TCDD**	**Fisk et al. 1997**	**46**	**85**	**pg/g**	**growth**	**Lake Whitefish**	**juvenile**	**food**	**30 days**	**body weight**	**exposed for 30 days and effect measured for 180 days post-exposure; unclear when residues measured; assumed WB residues (with liver conc); 29% mortality in control**	**Selected TRVs: Lowest LOAEL and NOAEL that meet acceptability criteria**
Dioxins/ furans	TEQ-fish	2,3,7,8-TCDD	Fisk et al. 1997	72	150	pg/g	growth	Rainbow trout	juvenile	food	30 days	body weight	exposed for 30 days and effect measured for 180 days post-exposure; unclear when residues measured; assumed WB residues (with liver conc)	
Dioxins/ furans	TEQ-fish	2,3,7,8-TCDD	Branson et al. 1985		780	pg/g	growth	Rainbow trout	10-15cm	water	2 and 6 hr	body weight	no statistics; LOAEL presented is based on tissue residues measured 28d after end of exposure, LOAEL is misleading; higher LOAEL should be used (max WB for dose, WB at end of exp, etc); tissue burdens assoc with same dose but measured earlier in exp were higher	
Dioxins/ furans	TEQ-fish	2,3,7,8-TCDD	Mehrle et al. 1988		980	pg/g	mortality	Rainbow trout	fry	water	~28 days		LOAEL is based on tissue residue measured at the end of the exposure period	
Dioxins/ furans	TEQ-fish	2,3,7,8-TCDD	Mehrle et al. 1988		990	pg/g	growth	Rainbow trout	fry	water	~28 days			
Dioxins/ furans	TEQ-fish	2,3,7,8-TCDD	Tietge et al. 1998	1,486		pg/g	survival, growth, gonadal development, egg production	Brook trout	adult	food	182 days		NOAEL is initial concentration in female fish exposed to 1,200 pg TCDD/g-food; Giesy et al. (2002) report adverse effects in rainbow trout at similar exposure levels after 250 days of exposure	
Dioxins/ furans	TEQ-fish	2,3,7,8-TCDD	Miller et al. 1979	125	2,170	pg/g	growth, mortality	Coho salmon	juvenile	water	96 hr		body burdens measured after 114 days in clean water following exposure, thus not conservative	
Dioxins/ furans	TEQ-fish	2,3,7,8-TCDD	Schmieder et al. 1995		2,410	pg/g	growth	Medaka	juvenile	water	12 days	body weight	no statistics; growth increased 74% vs. 94% in control	
Dioxins/ furans	TEQ-fish	2,3,7,8-TCDD	Heiden et al. 2005		12,440	pg/g	reproduction	zebrafish	juvenile	food	20 days			

Table 2. TSVs for fish whole-body tissue

Chemical Group	Chemical	Chemical Form	Source	NOAEL (WB)	LOAEL (WB)	Units (ww)	Endpoint	Test Species	Lifestage	Exposure Mode	Exposure Duration	Endpoint Effect	Notes	Rationale
Dioxins/ furans	TEQ-fish	2,3,7,8-TCDD	Adams et al. 1986		69,000	pg/g	mortality	Fathead minnow	juvenile	water	28 day		no statistics—100% mort; LOAEL is average concentration in dead fish	
Dioxins/ furans	TEQ-fish	2,3,7,8-TCDD	Hawkes and Norris 1977	1,570	1,380,000	pg/g	growth, mortality	Rainbow trout	young	food	105 days	body weight		
PCBs	Total PCBs	Aroclor 1254	Folmar et al. 1982		0.15	mg/kg	mortality	Coho salmon	yearlings	injection	single inj + 6 wks	reduction in ability to adapt to seawater (6% mortality)	mortality was significant; LOAEL is injected dose (WB residues not reported); injection of fish occurred prior to smoltification	not recommended: LOAEL is injected concentration
PCBs	**Total PCBs**	**Aroclor 1260**	**Hugla and Thome 1999**		**0.52 - 2.64**	**mg/kg**	**reproduction**	**Barbel**	**adult**	**dietary**	**50 days**	**reduced fecundity (0.52); failure to spawn (2.6)**	**LOAEL determined assuming 80% moisture in organism, LOAEL of 0.52 is concentration following exposure; effects observed at lowest dose, therefore is an unbounded LOAEL; EROD induction also observed at LOAEL**	**Selected TRV: Lowest LOAEL range that meets acceptability criteria**
PCBs	Total PCBs	Aroclor 1254	Powell et al. 2003	0.98		mg/kg	growth, survival	Chinook salmon	juvenile	diet	4 wks		whole body burdens ranged from 0.74 to 0.98 over the 13-day period following treatment; only no-effect level reported; no effect on growth, survival, or survival following immunological challenge	
PCBs	Total PCBs	Aroclor 1254	Berlin et al. 1981		1.53	mg/kg	mortality	Brook trout	fry	water and diet	176 days	fry mortality	field-collected eggs from Lake Michigan with starting egg residues of 7.6 µg/g PCBs and 4.7 µg/g DDE; mortality is estimated	not recommended: based on field-collected organisms
PCBs	Total PCBs	PCB mixture	Mac and Seelye 1981	1.8		mg/kg	growth	Lake trout	fry	water and diet	approx 52 days	increase in growth and length	at the NOEC, a significant increase in growth was observed and was not shown to be an adverse effect; NOEC was derived from study assuming 80% moisture in organism. Field collected fish.	not recommended: based on field collected eggs from a contaminated site
PCBs	Total PCBs	Aroclor 1242, 1254, or 1260	van Wezel et al. 1995		1.86 - 749	mg/kg	mortality	Fathead minnow	6 mos	water	up to 300 hrs	lethal body burden	lethal body burden of fish that died in less than 20 hours was 1.8 to 30 ug/g ww; lethal body burden of fish that died at 100 to 300 hrs was 120 to 749 ug/g ww; 50% variability in lethal body burdens was observed and was related to lipid content; lethal body burden was dependent on time of death; study was uncontrolled; low sample size; no critical body burden was identified in study	not recommended: see notes
PCBs	Total PCBs	mixture of PCB congeners: PCB 77, 126, 118, 105, 167, 156, 159, 189)	Black et al. 1998	0.76	3.8	mg/kg	mortality, reproduction	mummichog	spawning females	IP injection	50 days (during spawning)	female mortality, egg production, food consumption	LOAEL and NOAEL are injected concentrations; WB tissue concentration was not measured; effects observed at NOAEL (0.76 ug/g ww) on growth, gonadotropin levels, and altered spawning cycle were not statistically significant or statistically evaluated	not recommended: LOAEL is injected concentration
PCBs	Total PCBs	Aroclor 1254	Lieb et al. 1974	8		mg/kg	growth, mortality	Rainbow trout	14 wks	food	32 wks		only no-effect level reported	
PCBs	Total PCBs	Aroclor 1254	Hansen et al. 1974a	1.9	9.3	mg/kg	reproduction	Sheepshead minnow	adult	water	28 days	decreased fry survival	increase in fecundity; reduced fry survival; LOAEL based on adult female residues	
PCBs	Total PCBs	Aroclor 1254	Hansen et al. 1971		14	mg/kg	mortality	Pinfish		water	14 to 35 days		inclusion is conservative because subsequent longer term study with Aroclor 1016 was conducted by the same lab with order of magnitude higher LOAEL	
PCBs	Total PCBs	Aroclor 1242	Hansen et al. 1976		14.3	mg/kg	growth	Channel catfish	fingerling	diet	20 wks	reduced weight gain (60% of controls)	LOEC is WB concentration minus stomach and contents; exposure was via feeding	not recommended: not a whole body concentration
PCBs	Total PCBs	Aroclor 1268	Matta et al. 2001	15		mg/kg	reproduction	Mummichog	adult	food	~6 wks	fertilization and hatching success, larval survival	two generations of progeny observed; only no-effect level reported	
PCBs	Total PCBs	Aroclor 1254	Duke et al. 1970	17		mg/kg	mortality	Pinfish	juvenile	water	48 hours		only no-effect level reported. Field collected fish.	not recommended: based on field-collected organisms
PCBs	Total PCBs	Clophen A50	Bengtsson 1980		25	mg/kg	reproduction	minnow (Phoxinus phoxinus)	juvenile	diet	40 days	reduction in time to hatch, fry death	Studied for 300 days post exposure.	
PCBs	Total PCBs	Aroclor 1260	Mayer et al. 1977	32		mg/kg	growth, mortality	Channel catfish	fingerling	food	193 days		only no-effect level reported	
PCBs	Total PCBs	Total PCBs	Weston (2004) (Housatonic ERA Vols 1-2)		45	mg/kg	survival, growth, reproduction	largemouth bass	adult	field exposed from Housatonic River	field-exposed	female growth, & biochemical effects (in adults); offspring growth and developmental effects	LOAEL is based on the reported effect threshold which represents the lowest concentration measured in non-reference locations from the Housatonic ERA Phase I fish study; adult largemouth bass (pre- and post-spawners) collected from the Housatonic River study area and were assessed for biochemical, histological, and morphological characteristics (results compared to those for fish from the reference location); lab-reared offspring from the adults were monitored for survival, growth, development and biochemical effects; observed effects in adults (elevated EROD levels; reduced estrogen levels; reduced growth in females, etc.) and observed effects in offspring of field-collected fish (reduced survival; developmental delays; reduced growth; and increase in deformities); field study reference site - Threemile Pond	not recommended: LOAEL based on field collected fish
PCBs	Total PCBs	Aroclor 1254	Hansen et al. 1971	27	46	mg/kg	mortality	Spot		water	20 days		mortality did not appear directly related to body burden; bb increased with exposure duration; NOAEL (catfish)= 32	

Table 2. TSVs for fish whole-body tissue

Chemical Group	Chemical	Chemical Form	Source	NOAEL (WB)	LOAEL (WB)	Units (ww)	Endpoint	Test Species	Lifestage	Exposure Mode	Exposure Duration	Endpoint Effect	Notes	Rationale
PCBs	Total PCBs	Aroclor 1260	DeFoe et al. 1978		50	mg/kg	growth	Fathead minnow	larvae	water	30 days	33% reduction in weight, 30% reduction in standing crop	reduced weight of second generation at 30 day. Tissue burden read from graph.	
PCBs	Total PCBs	Aroclor 1254	Powell et al. 2003	60		mg/kg	mortality	Chinook salmon	juvenile	oral gavage	96 hrs		only no-effect level reported	
PCBs	Total PCBs	Total PCBs	Weston (2004) (Housatonic ERA Vols 1-2)		66	mg/kg	survival	largemouth bass, medaka and rainbow trout	adult	field exposed from Housatonic River	field-exposed	pathology and mortality combined	LOAEL is effect threshold developed from eggs injected with Housatonic river chemical extract extrapolated to a whole body adult concentration using a conversion factor of 0.5 (Housatonic ERA Phase II fish studies); conversion factor based on site-specific and literature information	not recommended: LOAEL based on field extract exposed fish and extrapolated adult concentration
PCBs	Total PCBs	Aroclor 1254	Mauck et al. 1978	31	71	mg/kg	growth	Brook trout	fry-exposure to eggs	water	10 days prior to hatch and 118 days after hatch	reduced growth	residue measured at 118 days; growth effect reported at 48 days but disappeared at 118 days	
PCBs	Total PCBs	Aroclor 1016	Hansen et al. 1974b		106	mg/kg	mortality, behavior	Pinfish		water	42 days	Survival	significant reduction in survival (50% mortality relative to 6% in control); loss of equilibrium; erratic swimming behavior also observed at LOAEL.	
PCBs	Total PCBs	Aroclor 1016	Hansen et al. 1975	110		mg/kg	reproduction	Sheepshead minnow	adult	water	4 weeks	fertilization and hatching success, larval survival	intermittent-flow toxicity test; no effect: fertilization success, survival of embryos to hatching, or survival of fry; only no-effect level reported; NOAEL is adult tissue concentration (LOAEL tissue not reported)	
PCBs	Total PCBs	Aroclor 1254:1260 mixture	Mayer et al. 1985	120		mg/kg	mortality	Rainbow trout	young	water	90 days		mortality observed; not significantly different; dose was 1:2 ratio of Aroclor 1254:1260; only no-effect level reported	
PCBs	Total PCBs	1:2 ratio of Aroclor 1254:1260	Mayer et al. 1985	70	120	mg/kg	growth	Rainbow trout	young	water	90 days			
PCBs	Total PCBs	Aroclor 1254	Mauck et al. 1978	71	125	mg/kg	mortality	Brook trout	fry-exposure to eggs	water	10 days prior to hatch and 118 days after hatch	fry survival	reduced fry survival; 21 to 100% mortality; tissue residue measured at 118 days; Median hatching time and egg hatchability were not affected; larval growth was initially reduced, but not by the end of the test	
PCBs	Total PCBs	Aroclor 1254	Nebeker et al. 1974		196 (male)	mg/kg	reproduction	Fathead minnow		water	8 months	reduced spawning	LOAEL is the mean male concentration, the mean female concentration associated with this reproductive endpoint was 429 mg/kg; average LOAEL over all males and females is 343 mg/kg	
PCBs	Total PCBs	Aroclor 1016	Hansen et al. 1975	57	200	mg/kg	mortality	Sheepshead minnow	fry	water	4 weeks	fry survival	NOAEL and LOAEL are fry tissue concentrations	
PCBs	Total PCBs	Clophen A50	Hattula and Karlog 1972		250	mg/kg	mortality	Goldfish		water	5-21 days		LOEC is lethal body burden	
PCBs	Total PCBs	Aroclor 1254	Mayer et al. 1977		645	mg/kg	mortality	Coho salmon	fingerling		~260 days	100% mortality	all fish died within 265 days of dose; no statistics, no control	
PCBs	PCB congeners	PCB 133:197 mixture	Opperhuizen and Schrap 1988		190	mg/kg	mortality	guppy			65 days	increased mortality	increased mortality, loss of equilibrium, color change	not recommended: individual congener study
PCBs	PCB congeners	PCB 126	Kim and Cooper 1998		NC	mg/kg	mortality, growth	Japanese medaka	1 mo. old larvae	aqueous	96 hr	reduced body weight, 23.5% mortality	LOEC based on PCB 126 was 0.072 ug/g; at LOEC, effects were observed over 4 wks following exposure but residues were measured after 96 hr exposure; jaw deformities and fin erosions were also observed; control mortality was 0%	not recommended: individual congener study
PCBs	PCB congeners	PCB 153	Broyles and Novek 1979		NC	mg/kg	mortality	Chinook salmon	sac-fry	water	15 days		LOEC based on PCB 153 was 3.6 to 3.8 ug/g; LOEC is range of WB concentrations reported in fish from day 2-4 where mortality was 24 - 28% (WB residues were not reported after day 4 in Chinook)	not recommended: individual congener study
PCBs	PCB congeners	PCB 153	Broyles and Novek 1979		NC	mg/kg	mortality	Lake trout	sac-fry	water	15 days		LOEC based on PCB 153 was 9.2 ug/g; LOEC is WB concentration reported in fish from day 6-9 where mortality was 51-87%; LOEC is sac-fry tissue concentration; WB concentrations were reported un until day 64 (WB concentration = 2.1 ug/g ww) where 100% mortality was observed; however, exposure lasted only 15 days and residues reported at day 64 reflect some elimination of PCBs in WB tissue after exposure and not necessarily lethal burden concentrations	not recommended: individual congener study
PCBs	PCB congeners	sum of three PCB congeners	Gruger et al. 1975		NC	mg/kg	growth	Coho salmon	parr (between fry and smolt)	diet	165 days	reduced growth	LOEC based on sum of three PCB congeners was 3.48 ug/g; LOEC is WB concentration at 108 days; change in growth was observed after 165 days; LOEC is roughly equivalent to when effect was observed	not recommended: individual congener study
Pesticides	Chlordane	cis-chlordane	Feroz and Khan 1979		1.36	mg/kg	mortality	Goldfish		water	24 hr	survival 3/9 fish died	uncontrolled study; no clear residue burden and response to mortality effects; LOEC is based on residues in carcasses of 3 dead fish; surviving fish tissue residues were 2.9 ug/g ww (at 10 days after exposure) and 2.1 ug/g (at 25 days after exposure)	not recommended: uncontrolled study

Table 2. TSVs for fish whole-body tissue

Chemical Group	Chemical	Chemical Form	Source	NOAEL (WB)	LOAEL (WB)	Units (ww)	Endpoint	Test Species	Lifestage	Exposure Mode	Exposure Duration	Endpoint Effect	Notes	Rationale
Pesticides	Chlordane	alpha- chlordane and gamma-chlordane	Moore et al. 1977	0.19 - 0.71		mg/kg	mortality	Goldfish		water and diet	96 hr	survival	uncontrolled study; NOEC is based on assumed 100% survival; NOEC is based on the assumption that no mortality was observed because none was reported	
Pesticides	**Chlordane**	**tech chlordane**	**Parrish et al. 1976**		**16.6**	**mg/kg**	**mortality**	**Pinfish**	**fry/ juvenile**	**water**	**96 hr**	**30% mort**	**96-hr exposure; tissue residues in surviving fish exposed to 5.4 µg/L aqueous chlordane; seawater**	**Selected TRV: lowest LOAEL that meets acceptability criteria; no NOAEL available from study below selected LOAEL**
Pesticides	Chlordane	tech chlordane	Parrish et al. 1976	87		mg/kg	mortality	Sheepshead Minnow	fry/juvenile	water	28 day	3.7% mort	28-day embryo/fry exposure; tissue residues in surviving fish exposed to 7.1 µg/L; tissue residues not reported in fish exposed to higher aqueous concentrations (100% mortality); seawater	
Pesticides	Chlordane	tech chlordane	Parrish et al. 1976		281	mg/kg	mortality	Sheepshead Minnow	fry/juvenile	water	96 hr	25% mort	96-hr exposure; tissue residues in surviving fish exposed to 15 µg/L; seawater; tissue residue concentration at lowest water treated concentration (unbounded)	
Pesticides	Total DDx	o,p'-DDE	Milston et al. 2003		0.02	mg/kg	immune system response	chinook salmon	fry	water (egg immersion)	1 - 2 hrs	humoral response immunosuppression	LOEC calculated using % lipid (3.8%) reported in study; only one exposure dose used (10 ug/g 2,4'-DDE); unbounded LOEC, effect is not a direct measure of growth, survival, or reproduction; median body weight (growth) was signif reduced at first sampling, however growth effect was not significant at second sampling; at this same WB concentration there was no effect on mortality, time to hatch, or gonadal development; LOEC is fry residue 1 month after 1st feeding	not recommended: endpoint not a direct measure of growth, survival, or reproduction
Pesticides	Total DDx	DDT mixture	Courtney and Reed 1971	0.025		mg/kg	mortality	Golden shiner		food	6-15 days	survival	Converted from dry weight to wet weight using factor given in paper	
Pesticides	Total DDx	p,p'-DDE	Berlin et al. 1981		0.29	mg/kg	mortality	Brook trout	fry	water and diet	176 days	fry mortality (34.4%)	field-collected eggs from Lake Michigan with starting egg residues of 7.6 µg/g PCBs and 4.7 µg/g DDE; mortality is estimated; other DDT metabolites were not measured	not recommended: based on field-collected organisms
Pesticides	Total DDx	"DDT" including DDE and DDD	Butler et al. 1969		0.55	mg/kg	mortality	pinfish	4.8 g	diet	15 days	44% mortality at 10 days	4% mortality in control; residues were much higher in live fish (LOAEL is residue of dead fish); at 7 days live fish WB residue = 2.7 ug/g ww; residues were 0.64 ug/g ww where morality was 10% (at 14 days); poorly reported study; no clear dose-response of tissues with mortality across the experiments presented in the paper	not recommended: tissue concentrations were not dose-responsive
Pesticides	Total DDx	total DDT	Hilton et al. 1983	1.07		mg/kg	growth, mortality	rainbow trout	juvenile	diet (field collected)		final body weight, survival	no effect on growth, survival, or abnormal behavior was observed at the NOAEL; significant increase in serum T4 levels was reported at this highest exposure dose group (not an adverse effect); converted from dry weight to wet weight assuming 80% moisture in organism; other detected chemicals in the tissue included: PCBs, mirex, dieldrin, heptachlor epoxide; field collected diet from Great Lakes	not recommended: based on fish exposed to field-collected prey
Pesticides	Total DDx	total DDT	Hopkins et al. 1969	0.15	1.27	mg/kg	mortality	Rainbow trout	fry	field (maternal transfer and water)		early life-stage mortality	field-collected eggs from sites in New Zealand with DDT contamination and sites with no agricultural contamination (reference site); cumulative fry and egg survival at LOAEL and NOAEL were 67.8% and 89-97%, respectively; uncontrolled field experiment, not recommended; control eggs from pristine site vs. eggs from agriculturally impacted site; DDT concentration of diet not reported	not recommended: based on field-collected organisms
Pesticides	Total DDx	sum of DDT, DDE, and TDE (DDD)	Davy et al. 1972		1.49 - 1.84	mg/kg	behavior	Goldfish	146 - 221g	water	4 days	locomotor activity reduced	unbounded LOEC (only one test concentration); observed effect is not directly related to growth, survival, or reproduction (not necessarily an adverse effect); locomotor activity was statistically evaluated; range of measured DDT, DDE, and TDE in WB tissue were 0.9-1.11, 0.54-0.62, 0.051-0.11 ug/g ww, respectively)	not recommended: endpoint not a direct measure of growth, survival, or reproduction
Pesticides	**Total DDx**	**DDT mixture**	**Allison et al. 1964**	**1.8**	**1.8**	**mg/kg**	**mortality**	**cutthroat trout**	**21 months**	**water**	**612 days (mortality observed at 111 days)**	**survival**	**LOAEL is tissue concentration at 111 days (3.7 months) in fish exposed to 0.1 mg/kg DDT in water where mortality was significant after "4 months" (approximately 120d), note that tissue concentrations at this dose increased to 3.0 mg/kg at the next sampling (166d, 5.5 months) so the actual tissue concentration associated with the LOAEL is likely somewhat higher than 1.8 mg/kg; NOAEL is highest tissue concentration (at 466 days) in fish exposed to 0.03 mg/kg DDT in water where significant mortality was not observed over entire exposure duration of 612 days**	**Selected TRVs: Lowest LOAEL that meets acceptability criteria and highest NOAEL as close to selected LOAEL**
Pesticides	Total DDx	sum of detected DDT and its metabolites (DDD and DDE)	Macek and Korn 1970	1.92		mg/kg	mortality	Brook trout	juvenile	diet	120 days		no effect level reported	
Pesticides	Total DDx		Allison et al. 1963	1.2	2.0	mg/kg	mortality	cutthroat trout	yearlings	water	20 months (mortality observed at 4 months)	mortality	LOAEL is tissue concentration at 56 days (1.9 months) in fish exposed to 1.0 mg/kg DDT in water where mortality was significant after "4 months" (approximately 120d), note that tissue concentrations at this dose increased to 4.3 mg/kg at the next sampling (166d, 5.5 months) so the actual tissue concentration associated with the LOAEL is likely somewhat higher than 2.0 mg/kg; NOAEL is highest tissue concentration (at 391days) in fish exposed to 0.01 mg/kg DDT in water where significant mortality was not observed over entire exposure duration of 20 months	
Pesticides	Total DDx	sum of DDD, DDE, and DDT	Macek 1968a		2.8 - 3.0	mg/kg	reproduction	Brook trout	sex mat yearlings	food	156 days	offspring (sac-fry and embryo) mortality	LOAEL is range of parental tissue residues; residues in offspring (fry) ranged from 2.62 to 3.09 ug/g ww	

Table 2. TSVs for fish whole-body tissue

Chemical Group	Chemical	Chemical Form	Source	NOAEL (WB)	LOAEL (WB)	Units (ww)	Endpoint	Test Species	Lifestage	Exposure Mode	Exposure Duration	Endpoint Effect	Notes	Rationale
Pesticides	Total DDx	sum of DDE and DDD detected in tissue	Buhler et al. 1969	0.62	3.65	mg/kg	mortality	Chinook salmon	0.61g	food	40 day		tissue concentration at 4 and 7 days; growth increase attributed to size -selective mortality	
Pesticides	Total DDx	"total DDT"	Gakstatter and Weiss 1967		4.2	mg/kg	behavior	Bluegill	5.7-8.6 g	water	5 hrs (32 day recovery)	equilibrium loss and convulsions	LOEC estimated from figure, residue at start day of recovery time; WB concentration excludes brain tissue (accounting for <2% of total body insecticide count)	not recommended: endpoint not a direct measure of growth, survival, or reproduction
Pesticides	Total DDx	sum of detected DDT and its metabolites (DDD and DDE)	Macek et al. 1970	4.67		mg/kg	growth, mortality	Rainbow trout	15 g	food	140 days	survival, growth	radio tracer study; no effect level reported	
Pesticides	Total DDx	"total DDT"	Gakstatter and Weiss 1967		5.1	mg/kg	behavior	Goldfish	5.2-5.6 g	water	6 hrs (32 day recovery)	equilibrium loss and convulsions	residue at start day of recovery time; WB concentration excludes brain tissue (accounting for <2% of total body insecticide count)	not recommended: endpoint not a direct measure of growth, survival, or reproduction
Pesticides	Total DDx	total DDT	Crawford and Guarino 1976		5.2	mg/kg	mortality	Killifish		water	24 hrs	25% mortality at 24 hrs	LOAEL is the weighted sum of residues in 10 different tissues of fish exposed to 0.1 ppm DDT for two 24hr DDT doses at 24 hrs after exposures; at 8 days after exposures, weighted sum of residues was 3.9 ug/g ww, however, mortality started occurring at 24 hrs after exposure at reported LOAEL; in fish exposed to one 24 hour exposure, weighted sum of residues was 2.04 ug/g ww, where 9% mortality was observed (however, this mortality effect is not substantial to warrant a LOAEL and control mortality was not reported/measured) NOTE: the WB concentrations were calculated as the sum of (concentration i-1 X reported % of total residue i-1 + concentration i-2 X reported % of total residue i-2...+ concentration i-n X % total residue i-n) where i = each tissue measured and n=total number of tissues measured	
Pesticides	Total DDx	DDT mixture	Allison et al. 1964	3.9	5.5	mg/kg	mortality	Cutthroat trout	21 month old	food	612 days	survival	control diet had 0.76 mg/kg DDT; LOAEL tissue residue measured at day 166 in fish fed to 1.0 mg/kg bw DDT and where mortality was observed; NOAEL is highest tissue concentration in fish fed 0.3 mg/kg bw DDT where significant mortality was not observed over entire exposure duration of 612 days; concentration is total chlorinated hydrocarbons	
Pesticides	Total DDx	"DDT" including DDE and DDD	Butler et al. 1969		5.6	mg/kg	mortality	pinfish	3.0 g	diet	21 days	35% mortality at 21 days	0% mortality in control; LOAEL is residue of dead fish (residues in living fish not reported); residues were 3.3 ug/g ww where morality was 10% (at 14 days); poorly reported study; no clear dose-response of tissues with mortality across the experiments presented in the paper	not recommended: tissue concentrations were not dose-responsive
Pesticides	Total DDx	sum of DDD, DDE, and DDT	Macek 1968a	7.6		mg/kg	growth, mortality	Brook trout fry	fry	food	156 days	survival, growth	other fish species from study not reported because NOAEL/LOAELs are much higher; no effect level reported; length but not weight of male fish was significantly greater than controls	
Pesticides	Total DDx	"DDT" including DDE and DDD	Butler et al. 1969		7.89	mg/kg	mortality	pinfish	3.0 g	diet	2 days	63.5% mortality	0% mortality in control; LOAEL is residue of dead fish (residues in living fish not reported); poorly reported study; no clear dose-response of tissues with mortality across the experiments presented in the paper	not recommended: tissue concentrations were not dose-responsive
Pesticides	Total DDx	sum of DDD, DDE, and DDT	Macek 1968b	11.2		mg/kg	growth	Brook trout	under yearling	diet	31 wks	increased growth	NOAEL effect is an increase in growth (significant) and not shown to be an adverse effect; DDD, DDE, and DDT concentrations at the LOAEL were 6.2, 1.59, and 3.4 ug/g ww (LOAEL is sum of these concentrations as the total DDT)	
Pesticides	Total DDx	sum of detected DDT and its metabolites (DDD and DDE)	Buhler et al. 1969	11.4	12.1	mg/kg	mortality	Chinook salmon	1.1 g	food	40 days	survival	tissues sampled at 4 and 7 days	
Pesticides	Total DDx	sum of DDD, DDE, and DDT	Macek 1968b		20.2 - 45.8	mg/kg	mortality	Brook trout	under yearling	diet	26 wks	reduced survival during stress (starvation)	LOAEL is range of total DDT (including DDD, DDE, 2,4'-DDT and 4,4'-DDT) in fish exposed to 2.0 mg/kg/wk DDT	
Pesticides	Total DDx	"DDT"	Warlen et al. 1977	24		mg/kg	growth	Atlantic menhaden		food	48 (109)	growth	radio tracer study; number in parentheses represents days observed after exposure; the number before represents days over which fish were exposed; no effect level reported;	
Pesticides	Total DDx	sum of detected DDT and its metabolites (DDD and DDE)	Hamelink et al. 1971		24	mg/kg	mortality	Green sunfish/ pumpkinseed		water	90 days	survival		
Pesticides	Total DDx	sum of detected DDT and its metabolites (DDD and DDE)	Pillai et al. 1977		26.5	mg/kg	mortality	Mosquito fish		water	16 days	survival	mortality and residue data reported for two different studies reported in this paper.	

Table 2. TSVs for fish whole-body tissue

Chemical Group	Chemical	Chemical Form	Source	NOAEL (WB)	LOAEL (WB)	Units (ww)	Endpoint	Test Species	Lifestage	Exposure Mode	Exposure Duration	Endpoint Effect	Notes	Rationale
Pesticides	Total DDx	sum of detected DDT and its metabolites (DDD and DDE)	Jarvinen et al. 1976, 1977	40		mg/kg	mortality	Fathead minnow	juvenile-adult		266 days	survival	no effect level reported	
Pesticides	Total DDx	sum of detected DDT and its metabolites (DDD and DDE)	Buhler et al. 1969	16.6	69.6	mg/kg	mortality	Coho salmon	3.7 g	food	60 days	survival	tissues sampled at 4 and 7 days	
Pesticides	Total DDx	sum of detected DDT and its metabolites (DDD and DDE)	Benton et al. 1994	51.4	92.7	mg/kg	growth, mortality	Sailfin molly		water	21 days	survival, growth	converted from dry weight to wet weight based on reported 24% solids; WB concentrations of 2,4'-DDT, 4,4'-DDT, 2,4'-DDE, 4,4'-DDE, 2,4'-DDD, and 4,4'-DDD were 87.1, 1.2, 0, 0.37, 4.06, and 0 ug/g ww, respectively	
Pesticides	Total DDx	sum of detected DDT and its metabolites (DDD and DDE)	Rhead and Perkins 1984	140	200	mg/kg	mortality	Goldfish (Carassius auratus)	9.1 g	food and water	58 days (NOAEL); 38 days (LOAEL)	survival	assumed dry weight tissue (not explicitly reported in study) and converted from dry weight to wet weight assuming 20% solids; LOAEL based on >20% of fish dying after accumulating >200 ug/g of DDT in residue; radio tracer study; NOAEL based on experiment 3 where only 15% mortality was experienced by the fish exposed for the full period of 28 days compared with about 12% mortality in control fish (no statistical analysis performed to determined whether that difference is significant but will assume it is not). NOAEL was identified as 140 ug/g (extrapolated visually from figure 2) which is the DDT concentration in fish in experiment 3 after 58 days.	
Pesticides	**Dieldrin**		**Shubat and Curtis 1986**	**0.12**	**0.20**	**mg/kg**	**mortality and growth**	**Rainbow trout**	**juvenile**	**food and water**	**16 wks**	**33% mortality**	**5 of 15 fish died in high treated water (no maintenance diet treatment) and 4 of 15 fish died in high treated water and maintenance treated diet; no statistics; assumed no mortalities in control. No replication (but mortality occurred with high water concentrations with and without high diet concentrations).**	**Selected TRVs: Lowest LOAEL and NOAEL that meet acceptability criteria**
Pesticides	Dieldrin		Shubat and Curtis 1986	0.548	5.65	mg/kg	mortality	Rainbow trout	juvenile	water	96 hrs	mortality		Selected TRVs: Lowest LOAEL and NOAEL that meet acceptability criteria
Pesticides	Dieldrin	92% pure (techniucal grade dieldrin)	Parrish et al. 1973	34	62.4	mg/kg	survival	Sheepshead minnow	NS	water	96 hrs		NOAEL and LOAEL are tisssue residues of surviving organisms; at NOAEL and LOAEL, mortality were 10% and 65%, respectively; control mortality was 10%	
Pesticides	Dieldrin		Muller et al. 2004	0.085 - 0.120		mg/kg	survival, growth	Largemouth bass	adult	food	30-50 days	body weight, length, condition factor, survival	estimated from graph; unclear if gonads included (measured at 1-3.5% of whole body concentration); blood not included.	not recommended: not a whole body concentration
Pesticides	Dieldrin		Shubat and Curtis 1986	1.4		mg/kg	growth	Rainbow trout	juvenile	food	16 wks		highest residue concentration in growth diet group (maintenance diet group with residues up to 0.36 ppm); no effect observed in body weight of treated fish groups	
Pesticides	Dieldrin		Gakstatter and Weiss 1967		3.7	mg/kg	behavior	Bluegill	5.7-8.6 g	water	5 hrs (32 day recovery)	equilibrium loss and convulsions	LOEC estimated from figure- residue at start day of recovery time; WB concentration excludes brain tissue (accounting for <2% of total body insecticide count)	not recommended: not a whole body concentration
Pesticides	Dieldrin		Poels et al. 1980		0.11	mg/kg	growth	Rainbow trout	7-month old	water	18 months	reduced growth (weight and length)	field study identified reduction in growth in trout living in water from Rhine River compared to the growth of trout in groundwater (considered to be the control solution); however, complex mixture of organo-chlorine compounds included DDE, DDT, PCB, dieldrin and others in test water collected from Rhine River; control water and Rhine River water not directly comparable because they hAve different physical properties and metals concentrations	not recommneded: organisms were field-exposed
Pesticides	Dieldrin		Gakstatter and Weiss 1967		3.8	mg/kg	behavior	Goldfish	5.2-5.6 g	water	8 hrs (32 day recovery)	hyperexcitability	residue at start day of recovery time; WB concentration excludes brain tissue (accounting for <2% of total body insecticide count); no effect on equilibrium loss and convulsions	not recommended: not a whole body concentration
Pesticides	**Endosulfan**	**tech endosulfan (sum of endosulfan I, II, and endosulfan sulfate)**	**Schimmel et al. 1977a**		**0.031**	**mg/kg**	**mortality**	**Spot**		**water**	**96 hr**	**35% mort; 10% mortality (control)**	**tissue residues of surviving fish**	**Selected TRV: Lowest LOAEL that meets acceptability criteria**
Pesticides	Endosulfan	endosulfan	Matthiessen et al. 1982		0.07 to 1.46	mg/kg	mortality	Mozambique tilapia	juvenile	water	24 hours	reproduction and mortality	LOEL = range of WB residues in dead fish from field locations 24 hr. after spraying.	not recommended: see notes
Pesticides	Endosulfan	tech endosulfan (sum of endosulfan I, II, and endosulfan sulfate)	Schimmel et al. 1977a	0.195	0.272	mg/kg	mortality	Pinfish		water	96 hr	35% mortality LOEC; 5% NOEC	tissue residues of surviving fish	
Pesticides	Endosulfan	tech endosulfan (sum of endosulfan I, II, and endosulfan sulfate)	Schimmel et al. 1977a		0.36	mg/kg	mortality	Mullet		water	96 hr	40% mort; 0% mortality (control)	tissue residues of surviving fish	

Table 2. TSVs for fish whole-body tissue

Chemical Group	Chemical	Chemical Form	Source	NOAEL (WB)	LOAEL (WB)	Units (ww)	Endpoint	Test Species	Lifestage	Exposure Mode	Exposure Duration	Endpoint Effect	Notes	Rationale
Pesticides	Endosulfan	endosulfan	Matthiessen et al. 1982		0.44	mg/kg	mortality	pike (Hepsetus odoe)	adult	water	3 days	mortality	average of caudal and total viscera concentrations in dead fish; no controls.	not recommended: not a whole body concentration
Pesticides	Endosulfan	endosulfan	Matthiessen and Logan 1984	NC	NC	mg/kg	mortality	Mozambique tilapia	juvenile	water	9 weeks	reproduction and mortality	no tissue data reported.	not recommended: see notes
Pesticides	Endrin	tech endrin	Fabacher 1976		0.0115	mg/kg	mortality	Largemouth bass	fingerlings	water	20 days	40% fingerling mortality	one dose; no statistics; static tanks treated every 5 days; residues from dead fish	Selected TRV: Lowest LOAEL that meets acceptability criteria
Pesticides	Endrin	endrin	Ludke et al. 1968		0.21	mg/kg	behavior	Golden Shiner		water	25 hrs	rapid opercular movements and hyperactivity	behavior endpoints defined as observed "poisoning symptoms" (resistant, i.e., pre-exposed, test fish not evaluated)	not recommended: endpoint not a direct measure of growth, survival, or reproduction
Pesticides	Endrin		Grant and Mehrle 1973	0.12	0.22	mg/kg	growth/ development	Rainbow trout	adult	food	163 days	decreased growth rate	residue concentrations are based on whole body; visceral fat concentration ratio reported in another study for dieldrin	not recommended: not a whole body concentration
Pesticides	**Endrin**	**analytical endrin**	**Jarvinen and Tyo 1978**		**0.24**	**mg/kg**	**mortality**	**Fathead minnow**	**30d**	**food and water**	**300 days (also reprod period)**		**Statistically significant results at LOAEL**	
Pesticides	Endrin		Argyle et al. 1973	0.307		mg/kg	mortality, growth	Channel catfish	fingerlings	food	198 days		no statistics; only no-effect level reported; LOAEL is average residue from day 20 to day 198	
Pesticides	Endrin		Argyle et al. 1973	0.41	0.72	mg/kg	mortality	Channel catfish	fingerlings	water	55 days		no statistics - 40% mortality; LOAEL is concentration at age 26 when mortality began; NOAEL is mean concentration when residue levels were maximal from days 49-55	
Pesticides	Endrin		Hansen et al. 1977	0.11	0.88	mg/kg	mortality	Sheepshead minnow	all	water	4 wks	juvenile survival-1 month survival of F2	saltwater species, embryos spawned from field-collected adults; tissue residues in juvenile fish-effects based on mortality effects in fry	not recommended: based on field-collected organisms
Pesticides	Endrin		Hansen et al. 1977	0.26	0.94	mg/kg	reproduction	Sheepshead minnow	all	water	2 generations	female fertility	saltwater species, embryos spawned from field-collected adults	not recommended: based on field-collected organisms
Pesticides	Endrin	Technical grade endrin	Schimmel et al. 1975	0.3	1.5	mg/kg	mortality	Sheepshead minnow		Water	96 hr		LOAEL is whole body residue after exposure in live organisms; At NOAEL- 0% mortality; at LOAEL -20% mortality; control mortality was 0%; no statistics reported	
Pesticides	Endrin		Ludke et al. 1968		1.66	mg/kg	mortality	Golden Shiner		water	8 hrs	100% mortality	LOAEL is average residue at time of death; average residue over 8 hours = 0.97 mg/kg ww (resistant [i.e. pre-exposed] test fish not evaluated)	
Pesticides	Endrin	Technical grade endrin	Schimmel et al. 1975	0.26	1.7	mg/kg	mortality	Sailfin molly		Water	96 hr		LOAEL is whole body residue after exposure in live organisms; At NOAEL- 0% mortality; at LOAEL -47% mortality; control mortality was 7%; no statistics reported	
Pesticides	alpha-Hexachlorocyclohexane		Canton et al. 1975		200	mg/kg	mortality	guppy (Lebistes reticulatus	juveniles	water	100	survival	In bioaccumulation experiment 800 µg/l * 250 (BCF) = 200,000 µg/kg which corresponds with graphed 200 mg/kg. This is the same concentration as the EC50 reported for a separate toxicity study reported in the same paper. High control mortality in tox study.	not recommended: high mortality in control
Pesticides	alpha-Hexachlorocyclohexane		Canton et al. 1978		655	mg/kg	mortality	guppy (Lebistes reticulatus	juveniles	water	120 hours	survival	Concentrations reported in text and graph disagree, text reports exposure @ 0.14 mg/l, graph shows 1400 µg/l. Graphs for artemia and guppy accumulation are switched. Graph shows guppy residue of 700 mg/kg; 0.14 µg/l*500 (average BCF) = 70 mg/kg. Author notes higher BCF than 1985 study. In 35 d guppy toxicity tests, no mortality occurred @ exposure concentrations up to 1.75 mg/l. 4 d LC50 = 1.31. Assuming a BCF of 500 results in a LOAEL of 655 mg/kg ww. Authors note decreasing sensitivity w/time.	not recommended: problematic reported results; see notes
Pesticides	alpha-Hexachlorocyclohexane		Canton et al. 1975	NC	NC	mg/kg	growth, mortality	rainbow trout	juveniles (200-250g)	water	3 months	growth, survival	Residue data reported for individual organs, not WB.	not recommended: no whole body concentrations
Pesticides	gamma-Hexachlorocyclohexane (lindane)		Gakstatter and Weiss 1967	1.5		mg/kg	behavior	Bluegill	5.7-8.6 g	water	19 hrs (32 day recovery)	"no symptoms of toxicity"	residue at start day of recovery time; WB concentration excludes brain tissue (accounting for <2% of total body insecticide count); no effect on equilibrium loss and convulsions	not recommended: endpoint not a direct measure of growth, survival, or reproduction and not a WB concentration
Pesticides	gamma-Hexachlorocyclohexane (lindane)		Gakstatter and Weiss 1967	2.3		mg/kg	behavior	Goldfish	5.2-5.6 g	water	19 hrs (32 day recovery)	"no symptoms of toxicity"	residue at start day of recovery time; WB concentration excludes brain tissue (accounting for <2% of total body insecticide count); no effect on equilibrium loss and convulsions	not recommended: endpoint not a direct measure of growth, survival, or reproduction and not a WB concentration

Table 2. TSVs for fish whole-body tissue

Chemical Group	Chemical	Chemical Form	Source	NOAEL (WB)	LOAEL (WB)	Units (ww)	Endpoint	Test Species	Lifestage	Exposure Mode	Exposure Duration	Endpoint Effect	Notes	Rationale
Pesticides	gamma-Hexachlorocyclohexane (lindane)		Marcelle and Thome 1983	0.187 (brain); 0.149 (liver); 0.013 (muscle)	3.527(brain); 5.005 (liver); 1.068 (muscle)	mg/kg	mortality	Gudgeon		water	96 hours	LC50	study defines 28.5 ppb in water as the "threshold beyond which the amount of accumulation of lindane in tissues and organs induced an increased mortality"- NOEC is residues at 28.5 ppb; LOEC is residues at 74.3 ppb (water) which is LC50; no replication of treatments; study is highly uncertain	not recommended: not a whole body concentration
Pesticides	gamma-Hexachlorocyclohexane (lindane)		Schimmel et al. 1977b		6.67	mg/kg	mortality	pinfish					not a measured concentration; LOAEL = LC50*average BCF	not recommended: whole body concentration estimated using BCF
Pesticides	gamma-Hexachlorocyclohexane (lindane)		Macek et al. 1976	6.13	9.53	mg/kg	mortality	Fathead minnow		water	48 days		residues were measured in eviscerated carcasses; 73% survival in LOEC, 93% survival in NOEC and control; highly uncertain	not recommended: not a whole body concentration
Pesticides	**gamma-Hexachlorocyclohexane (lindane)**		**Schimmel et al. 1977b**		**79**	**mg/kg**	**mortality**	**Sheepshead minnow**	**17-21 mm**			**LR50**	**LOAEL = reported tissue concentration for the approximate same water concentration as LC50. LC50 is 103.9 µg/l * average BCF of 490 = 50.9 µg/g**	**Selected TRV: only LOAEL that meets acceptability criteria**
Pesticides	Heptachlor	tech heptachlor	Andrews et al. 1966		<0.08 - 2.6	mg/kg	behavior	bluegill		diet	up to 140 days	hyperexcitability and erratic swimming	fish were exposed to 5 ppm technical heptachlor; swimming behavior and equilibrium effects were observed by end of exposure (140 days); however, the relationship between the tissue residues and onset of this behavioral effect was not clearly presented in the paper; behavior effects were observed in all fish at all exposure levels; LOEC is range of tissue residues over 140 day exposure in fish exposed to the lowest dose (5 ug/g technical heptachlor); heptachlor epoxide, other related compounds and DDT (up to 3.8 ppm) were also measured in fish tissue; neighboring fields were dusted with DDT during experiment.	not recommended: endpoint not a direct measure of growth, survival, or reproduction
Pesticides	Heptachlor	tech heptachlor: 65% heptachlor; 22% trans-chlordane; 2% cis-chlordane; 2% nonachlor	Schimmel et al. 1976		1.5	mg/kg	mortality	Spot		water	96 hr	LOEC- 25% mort	no statistical methods; saltwater study	Selected TRV: lowest LOAEL that meets acceptability criteria
Pesticides	Heptachlor	tech heptachlor	Andrews et al. 1966		1.9 - 2.6	mg/kg	growth	bluegill		diet	up to 140 days	average body weight	fish were exposed to 5 ppm technical heptachlor; growth effects were not statistically evaluated; LOAEL is range of heptachlor residue concentrations (in two replicates) where average body weight was reduced (approx 90% of controls) after 28 days; growth effects were more pronounced at higher dose levels and after greater exposure duration; heptachlor epoxide, other related compounds and DDT were also measured in fish tissue	not recommended: other chemicals measured in tissue
Pesticides	Heptachlor	heptachlor (99.8% pure)	Schimmel et al. 1976	1.7	5.3	mg/kg	mortality	Spot		water	96 hr	NOEC-0% mort; LOEC 85% mort	no statistical methods; saltwater study	
Pesticides	**Heptachlor**	**heptachlor**	**Goodman et al. 1978**	**4.8**	**10.4**	**mg/kg**	**survival**	**sheepshead minnow**	**embryo-fry**	**water**	**28 days**	**survival**	**no effects on growth occurred at LOAEL but growth effects occurred at higher exposure level. Concentrations of heptachlor epoxide, trans-chlordane, and cis-chlordane were 8.0, 9.1, and 2.6 mg/kg, respectively in LOAEL fish and were 4.2, 4.6, and 1.0 in NOAEL fish. Decreased swimming activity noted for lower exposure.**	
Pesticides	Heptachlor	tech heptachlor	Andrews et al. 1966		17.30 - 24.80	mg/kg	mortality	bluegill		water	24 hrs	90% mortality	fish were exposed to technical heptachlor; 90% mortality was observed after 72 hrs following exposure period in fish exposed to 0.0500 and 0.0375 ppm technical heptachlor; LOAEL is tissue residues at these dose levels at 72 hrs; heptachlor epoxide, other related compounds and DDT were also measured in fish tissue	not recommended: other chemicals measured in tissue
Pesticides	Heptachlor	tech heptachlor: 65% heptachlor; 22% trans-chlordane; 2% cis-chlordane; 2% nonachlor	Schimmel et al. 1976		20	mg/kg	mortality	Sheepshead minnow		water	96 hr	LOEC- 35% mort	no statistical methods; saltwater study	
Pesticides	Heptachlor	tech heptachlor: 65% heptachlor; 22% trans-chlordane; 2% cis-chlordane; 2% nonachlor	Schimmel et al. 1976	5.7	34	mg/kg	mortality	Pinfish		water	96 hr	NOEC-5% mort; LOEC-50% mort	no statistical methods; saltwater study	

Table 2. TSVs for fish whole-body tissue

Chemical Group	Chemical	Chemical Form	Source	NOAEL (WB)	LOAEL (WB)	Units (ww)	Endpoint	Test Species	Lifestage	Exposure Mode	Exposure Duration	Endpoint Effect	Notes	Rationale
Pesticides	**Heptachlor epoxide**	**tech heptachlor**	**Andrews et al. 1966**		**0.8 - 0.9**	**mg/kg**	**growth**	**bluegill**		**diet**	**up to 140 days**	**average body weight**	**fish were exposed to 5 ppm technical heptachlor; growth effects were not statistically evaluated; LOAEL is range of heptachlor residue concentrations (in two replicates) where average body weight was reduced (approx 90% of controls) after 28 days; growth effects were more pronounced at higher dose levels and after greater exposure duration; heptachlor, other related compounds and DDT were also measured in fish tissue**	**Selected TRV: lowest LOAEL that meets acceptability criteria**
Pesticides	Heptachlor epoxide	tech heptachlor	Andrews et al. 1966		1.66 - 2.40	mg/kg	mortality	bluegill		water	24 hrs	90% mortality	fish were exposed to technical heptachlor; 90% mortality was observed after 72 hrs following exposure period in fish exposed to 0.0500 and 0.0375 ppm technical heptachlor; LOAEL is tissue residues at these dose levels at 72 hrs; heptachlor, other related compounds and DDT were also measured in fish tissue	not recommended: other chemicals measured in tissue
Pesticides	Hexachlorobenzene	hexachlorobenzene (98% purity)	Sharifi et al. 1997		18.81	mg/kg	growth	Goldfish		diet	10 wks	reduced growth rate	fish were exposed to 1,3,5-trichlorobenzene, 1,2,3,5-trichlorobenzene, pentachlorobenzene, and DDT with WB concentrations of 1.35, 8.24, 14.56, and 4.91 ug/g ww, respectively; effects on growth cannot be solely attributed to hexachlorobenzene exposure	not recommended: fish were exposed to multiple chemicals
Pesticides	Hexachlorobenzene	hexachlorobenzene (99%)	Carlson and Kosian 1987	97		mg/kg	growth, mortality	Fathead Minnow	embryo - juvenile	water	32-day exposure	final body weight, survival	development/mortality; embryos 4-12 hrs old; exposure period during embryo-to-juvenile stage; NOAEL is mean tissue residue n=2; no significant effect on growth or survival	
Pesticides	Hexachlorobenzene		Nebeker et al. 1989	46.5		mg/kg	mortality, growth	Fathead Minnow		water	28-day exposure			
Pesticides	Hexachlorobenzene		Schuytema et al. 1990	282		mg/kg	mortality	Fathead Minnow		sediment and water	28-day exposure		exposure period followed by 15-28 day depuration; uptake/bioaccumulation study	
Pesticides	**Hexachlorobenzene**		**Schuytema et al. 1990**	**468**		**mg/kg**	**mortality**	**Fathead Minnow**		**water**	**28-day exposure**		**exposure period followed by 15-28 day depuration; uptake/bioaccumulation study**	**Selected TRVs: highest NOAEL that meets acceptability criteria**
Pesticides	**Methoxychlor**		**Oladimeji and Leduc 1975**	**0.05**	**0.3**	**mg/kg**	**growth**	**brook trout**	**yearlings**	**diet**	**30 days**	**body weight**	**fish were fed different concentrations of methoxychlor (33.6, 44.7, 67.13, and 134.8 ug/g) at varying rates (0.5, 1, 1.5, and 2% bw/d) so that the actual ingested concentration was the same (0.67 mg/kg bw/d); LOAEL is WB concentration in fish fed at 1% rate where reduced growth was significant from day 0-15 (however, growth was recovered in days 15-30); NOAEL is residue in fish fed at a rate of 0.5% bw/d; LOAEL and NOAEL were estimated using 80% moisture in organism and estimated from a graph; uncertain TRVs- tissue residues were greater in fish fed at a rate of 1.5% and 2%; however, effects were not as pronounced (no clear dose-response with critical tissue concentrations)**	**Selected TRVs: only LOAEL and NOAEL that meet acceptability criteria**
Pesticides	Methoxychlor		Lee et al. 1975	0.06	1.64	mg/kg	mortality	Striped mullet-(field-caught)	young juvenile	water	96-hr	97% mort	marine species; no statistics; controlled study but mortality data not presented; LOAEL 97% mortality; NOAEL 5.1% mortality; field-collected fish with unknown organic concentrations	not recommended: based on field-collected organisms
Pesticides	Methoxychlor		Lee et al. 1975	0.2	11.9	mg/kg	mortality	Striped mullet-(field-caught)	adult	water	96-hr	100% mort	marine species; no statistics; control data not presented; field-collected fish; 100% mortality at LOAEL; 0% at NOAEL	Selected TRV: lowest LOAEL that meets acceptability criteria

Shaded rows indicate studies and TRVs that are not recommended becauase TRVs do not meet acceptability criteria

Table 3. TSVs for fish egg tissue

Chemical Group	Chemical	Chemical Form	Source	NOEC (egg)	LOEC (egg)	Units (ww)	Test Species	Endpoint	Endpoint Effect	Lifestage	Exposure Mode	Exposure Duration	Notes	Rationale
Metals	**Mercury**	**inorganic Hg**	**Birge et al. 1979**		**0.06**	**mg/kg**	**Catfish**	reproduction (egg exposure)	**mortality**	**4 days post-hatch**	**water**	**spawning until 4 d post-hatch**	**LOAEL determined based on reported LC50 value based on water exposure (0.3 ug/L); in separate study, the egg tissue concentration associated with this exposure concentration was 0.06 mg/kg ww (and 48% survival was observed at hatching and 30% survival at 4 days post-hatching); control mortality data were not reported in the study where tissue residues were measured; control mortality data were not reported in the study where water exposure LC50 was reported; however, reference to a control is made**	**Selected TRV: Lowest LOAEL that meets acceptability criteria**
Metals	Mercury	methylmercury	Fjeld et al. 1998	0.09	0.27	mg/kg	Grayling	reproduction (egg exposure)	behavior- reduced feeding efficiency, reduced competitive ability (3 yrs later)	sac-fry	water	1st 10 days of develop-ment	NOEC and LOEC reported as yolk-fry concentration and effects observed 3 years later	not recommended: not direct measure of growth, survival, or reproduction
Metals	Mercury	methylmercury	Latif et al. 2001	0.99		mg/kg	Walleye (field-collected)	reproduction (egg exposure)	fertilization and hatching success, larval length	egg	maternal transfer		field-collected fish; mercury concentrations of diet not reported (mercury gradient determined by surface water concentrations)	not recommended: based on field-collected fish
Metals	Mercury	methylmercury	Fjeld et al. 1998		3.8	mg/kg	Grayling	reproduction (egg exposure)	increased fry mortality, incidence of jaw deformities	sac-fry	water	1st 10 days of develop-ment	NOEC and LOEC reported as yolk-fry concentration	
Metals	Mercury	methylmercury	Heisinger and Green 1975	16	29	mg/kg	Japanese medaka	reproduction (egg exposure)	hatchability; offspring behavior- equilibrium loss	egg	water	16 days	at LOEC - 20.8% hatchability; at NOEC - 58.3% hatchability; at control - 46.7% hatchability	
Dioxins/ Furans	TEQ-fish	2,3,7,8-TCDD	Giesy et al. 2002		0.76	pg/g	Rainbow trout	reproduction (egg exposure)	fry mortality	egg	maternal transfer	approx 300 days	adults fed dietary concentrations prior to spawning; a LOAEL of 0.3 pg/g based on egg viability is reported in text; however, concentration does not agree with concentrations (ave=0.76 pg/g) reported in Table 4 associated with the same dietary dose (1.8 pg/g ww- diet); egg LOAEL of 0.76 pg/g was assumed to be the correct value	
Dioxins/ Furans	**TEQ-fish**	**2,3,7,8-TCDD**	**Steevens et al. 2005**	**7.2**	**86**	**pg/g**	**various**		**survival, growth & reproduction**	**egg**	**various, maternal transfer, (perferred) , water, and injection**	**variable (multiple studies)**	**NOAEL calculated from the reported LCL of 0.088 ng/g lipid * 0.082 lipid; NOAEL based on compilation of TRVs from studies that consider the most sensitive life stage to toxicity; both LOAELs and NOAELs were used in the generation of the geometric mean and the lower confidence limit (LCL) and upper confidence limit (UCL) values; NOAEL is recommended LCL value; LOAEL is recommended UCL value of 86 pg/g (1.05 ng/g lipid); fish in data compilation included: brook trout, channel catfish, fathead minnow, Japanese medaka, lake herring, lake trout, northern pike, rainbow trout, white sucker and zebrafish**	**Selected TRV: Lowest bounded LOAEL and NOAEL that meet accetability critieria using an SSD approach**
Dioxins/ Furans	TEQ-fish	TEQ-fish	Weston (2004) (Housatonic ERA Vols 1-2)		21.5	pg/g	survival	medaka and rainbow trout	egg	injection (with field extract)	not specified	pathology and mortality combined	LOAEL is egg effect threshold reported in Housatonic ERA Phase II fish studies. The effects of injection of extracts were compared to the effects from injection of known PCB and TEQ standards. EC50s endpoints were based on the combined pathology and mortality effects observed per fish for each species/life stage/treatment/dose combination. Rainbow trout were the most sensitive species. ED50s were then used to develop thresholds for Housatonic River extracts; the values were increased to the highest concentration tested if an acceptable dose-response relationship was not observed (i.e., not all trials used to develop this ED50 showed clear dose-response relationships). The distribution of ED50s was considered and the average was used to generate the effects threshold ED50; LOAEL is the average ED50 calculated using sensitive trials only. Sensitive trials are defined as those for which the ED50 was based on a clear dose-response within the range of concentrations tested. Species included in the sensitive trials were medaka and rainbow trout but not largemouth bass	not recommended: LOAEL based on field extract exposed fish
Dioxins/ Furans	TEQ-fish	2,3,7,8-TCDD	Spitsbergen et al. 1991	15	40	pg/g	Lake trout	reproduction (egg exposure)	early life-stage mortality	egg	water	48 hrs	22.5% cumulative mortality (egg, hatching, sac-fry) at LOEC statistically significant; mortality at NOEC (15.8%) not statistically different from control (18%)	
Dioxins/ Furans	TEQ-fish	2,3,7,8-TCDD	Walker et al. 1994	34	40	pg/g	Lake trout	reproduction (egg exposure)	sac-fry mortality	egg	water		study measured through routes of exposure for the egg (maternal transfer, water, injection)–egg residues not statistically different based on exposure route; significant mortality observed at LOEC;	
Dioxins/ Furans	TEQ-fish	2,3,7,8-TCDD	Guiney et al. 1996	35	42	pg/g	Lake trout	reproduction (egg exposure)	early life-stage mortality	egg	water	48 hours	NOEC and LOEC (LC50) based on hatchery fish eggs; LOEC is LC50; NOEC and LC50 also reported in field-collected eggs (from Lake Ontario) and reference eggs (from Lake Ontario); Lake Ontario NOEC=30-45 pg/g and LC50=44-72 pg/g; Lake Superior NOEC=34 pg/g and LC50=65 pg/g	
Dioxins/ Furans	TEQ-fish	2,3,7,8-TCDD	1.53	33	44	pg/g	Lake trout	reproduction (egg exposure)	sac-fry mortality	egg	injection	single injection	LC50s also reported in study; sac-fry mortality most sensitive endpoint	not recommended: injection study

Table 3. TSVs for fish egg tissue

Chemical Group	Chemical	Chemical Form	Source	NOEC (egg)	LOEC (egg)	Units (ww)	Test Species	Endpoint	Endpoint Effect	Lifestage	Exposure Mode	Exposure Duration	Notes	Rationale
Dioxins/ Furans	TEQ-fish	2,3,7,8-TCDD	Walker et al. 1994	23	50	pg/g	Lake trout	reproduction (egg exposure)	sac-fry mortality	egg	maternal transfer	11 wks prior to spawning	parental fish exposed via diet; study measured through routes of exposure for the egg (maternal transfer, water, injection)–egg residues not statistically different based on exposure route; significant mortality observed at LOEC; mortality in control=7.2%	
Dioxins/ Furans	TEQ-fish	2,3,7,8-TCDD	Walker et al. 1991; Walker et al. 1992	34	55	pg/g	Lake trout	reproduction (egg exposure)	early life-stage and sac-fry mortality	egg	water	48 hrs	statistically significant effects observed at LOEC, frequency of sac-fry edema also statistically significant; LC50=65 pg/g	
Dioxins/ Furans	TEQ-fish	2,3,7,8-TCDD	Walker et al. 1994	44	55	pg/g	Lake trout	reproduction (egg exposure)	sac-fry mortality	egg	injection		study measured through routes of exposure for the egg (maternal transfer, water, injection)–egg residues not statistically different based on exposure route; significant mortality observed at LOEC	not recommended: injection study
Dioxins/ Furans	TEQ-fish	2,3,7,8-TCDD	Johnson et al. 1998	84	88	pg/g	Brook trout	reproduction (egg exposure)	swim-up and juvenile mortality	egg	maternal transfer	throughout egg devl'p	parental fish fed to adult (1.5 yr old) TCDD until spawning; LOEC is calculated LC10; LC10 is less than residue at which mortality was observed (at 156 pg/g ww); NOEC is egg residue where no significant mortality was observed; egg residues are approximately 39% of the parent female concentration	
Dioxins/ Furans	TEQ-fish	TEQ-fish	Weston (2004) (Housatonic ERA Vols 1-2)		100	pg/g	survival	largemouth bass, medaka and rainbow trout	egg	injection (with field extract)	not specified	pathology and mortality combined	LOAEL is egg effect threshold reported in Housatonic ERA Phase II fish studies. The effects of injection of extracts were compared to the effects from injection of known PCB and TEQ standards. EC50s endpoints were based on the combined pathology and mortality effects observed per fish for each species/life stage/treatment/dose combination. ED50s were then used to develop thresholds for Housatonic River extracts; the values were increased to the highest concentration tested if an acceptable dose-response relationship was not observed (i.e., not all trials used to develop this ED50 showed clear dose-response relationships). The distribution of ED50s was considered and the average was used to generate the effects threshold ED50; LOAEL is the average ED50 calculated for all fish tested: medaka, rainbow trout, and largemouth bass	not recommended: LOAEL based on field extract exposed fish
Dioxins/ Furans	TEQ-fish	2,3,7,8-TCDD	Walker and Peterson 1994	135	185	pg/g	Brook trout	reproduction (egg exposure)	sac-fry mortality	egg	water	48 hours	NOEC and LOEC as reported in study; at LOEC 25% mortality; at NOEC 10% mortality	
Dioxins/ Furans	TEQ-fish	2,3,7,8-TCDD	Walker et al. 1991	121	226	pg/g	Lake trout	reproduction (egg exposure)	sac-fry growth (length), hatchability	egg	water	48 hrs	statistically significant effects observed at LOEC	
Dioxins/ Furans	TEQ-fish	2,3,7,8-TCDD	Walker and Peterson 1991		230	pg/g	Rainbow trout	reproduction (egg exposure)	mortality - LC50	egg	injection	through fertile to onset of swimming	mortality associated with symptoms resembling blue-sac disease; not recommended for TRV selection; LC50 of early-life stage mortality; study determines TEFs for dioxins, furans, and other PCB congeners for fish; LC50 also reported for PCB 126, 77 and NOEC reported for PCB 105, 118, and 153 and other dioxins and furans	not recommended: injection study
Dioxins/ Furans	TEQ-fish	2,3,7,8-TCDD	Elonen et al. 1998; Spehar et al. 1997	175	270	pg/g	Lake herring	reproduction (egg exposure)	early life-stage growth and survival	egg	water	100 days	statistically significant effects observed at LOEC; six other fish species tested- lake herring was the most sensitive fish exposed to 2,3,7,8-TCDD; LC50=902 pg/g; LC10=509 pg/g	
Dioxins/ Furans	TEQ-fish	2,3,7,8-TCDD	Walker et al. 1992		279	pg/g	Rainbow trout	reproduction (egg exposure)	sac-fry mortality	egg	water	48 hours	LC50s also reported in study; sac-fry mortality most sensitive endpoint	
Dioxins/ Furans	TEQ-fish	2,3,7,8-TCDD	Walker et al. 1992	194	291	pg/g	Rainbow trout	reproduction (egg exposure)	sac-fry mortality	egg	injection	single injection	LC50s also reported in study; sac-fry mortality most sensitive endpoint	not recommended: injection study
Dioxins/ Furans	TEQ-fish	2,3,7,8-TCDD	Elonen et al. 1998; Spehar et al. 1997	235	435	pg/g	Fathead minnow	reproduction (egg exposure)	early life-stage growth and survival	egg	water	100 days	statistically significant effects observed at LOEC; LC50=539 pg/g; LC10=293 pg/g	
Dioxins/ Furans	TEQ-fish	2,3,7,8-TCDD	Prince and Cooper 1995		635	pg/g	Killifish (mummichog)	reproduction (egg exposure)	hatchability	egg	water	through hatch or 30d post-hatch	hatchability (61%); study compared the effects of TCDD-treated water on field-collected "non-impacted" eggs (from clean site - Tuckerton, NJ) and "impacted" eggs (from contaminated site - Newark Bay, NJ); no dose response from "impacted" eggs; LOEC derived from "non-impacted" eggs	
Dioxins/ Furans	TEQ-fish	2,3,7,8-TCDD	Elonen et al. 1998; Spehar et al. 1997	385	855	pg/g	Channel catfish	reproduction (egg exposure)	early life-stage growth and survival	egg	water	100 days	statistically significant effects observed at LOEC; LC50=644 pg/g; LC10=429 pg/g	
Dioxins/ Furans	TEQ-fish	2,3,7,8-TCDD	Elonen et al. 1998; Spehar et al. 1997	455	949	pg/g	Medaka	reproduction (egg exposure)	early life-stage growth and survival	egg	water	100 days	statistically significant effects observed at LOEC; LC50=1,110 pg/g; LC10=656 pg/g	
Dioxins/ Furans	TEQ-fish	2,3,7,8-TCDD	Elonen et al. 1998; Spehar et al. 1997	848	1,220	pg/g	White sucker	reproduction (egg exposure)	early life-stage growth and survival	egg	water	100 days	statistically significant effects observed at LOEC; LC50=1,890 pg/g; LC10=1,590 pg/g	

Table 3. TSVs for fish egg tissue

Chemical Group	Chemical	Chemical Form	Source	NOEC (egg)	LOEC (egg)	Units (ww)	Test Species	Endpoint	Endpoint Effect	Lifestage	Exposure Mode	Exposure Duration	Notes	Rationale
Dioxins/ Furans	TEQ-fish	2,3,7,8-TCDD	Elonen et al. 1998; Spehar et al. 1997	1,190	1,800	pg/g	Northern pike	reproduction (egg exposure)	early life-stage growth and survival	egg	water	100 days	statistically significant effects observed at LOEC; LC50=2,460 pg/g; LC10=1,530 pg/g	
Dioxins/ Furans	TEQ-fish	2,3,7,8-TCDD	Elonen et al. 1998; Spehar et al. 1997	424	2,000	pg/g	Zebra fish	reproduction (egg exposure)	early life-stage growth and survival	egg	water	100 days	statistically significant effects observed at LOEC; LC50=2,610 pg/g; LC10=1,610 pg/g	
Dioxins/ Furans	TEQ-fish	2,3,7,8-TCDD	Spitsbergen et al. 1988a	NC	NC	pg/g	Yellow perch	reproduction (egg exposure)	mortality and cessation of growth	egg	injection	single injection	no tissue residues are reported; only nominal injection dose is reported: at injected dose of 5.0 ng/g (LOEC dose) - 80% mortality; at injected dose of 1.0 ng/g (NOEC dose) - 0% mortality; effects observed up to 80 days post-injection	not recommended: see notes
Dioxins/ Furans	TEQ-fish	2,3,7,8-TCDD	Spitsbergen et al. 1988b	NC	NC	pg/g	Rainbow trout	reproduction (egg exposure)	mortality	egg	injection (IP)	single injection	no tissue residues are reported; only nominal injection dose is reported; 20% mortality (LOEC dose) at injected dose of 5.0 ng/g, 0% mortality (NOEC dose) at injected dose of 1.0 ng/g; effects observed for up to 35 days	not recommended: see notes
Dioxins/ Furans	TEQ-fish	2,3,7,8-TCDD	Spitsbergen et al. 1988b	NC	NC	pg/g	Rainbow trout	reproduction (egg exposure)	growth	egg	injection (IP)	single injection	no tissue residues are reported; only nominal injection dose is reported; statistically significant depressed growth at injected dose of 25 ng/g (LOEC dose); "depressed" growth at injected dose of 5 ng/g (NOEC dose) likely from food consumption; effects observed for up to 35 days	not recommended: see notes
PCBs	Total PCBs	Total PCBs	Nakayama et al. 2005	0.022		mg/kg	Japanese medaka	reproduction	reduced swim-up success and hatchability	egg	maternal exposure via diet	3 wks	no statistical effect on fish exposed to PCBs only; no impact on fertility, hatchability or swim-up; impact on increased time to hatching, but the study noted that increased time to hatching was not an adverse impact because it did not impact survival of the next generation	
PCBs	**Total PCBs**	**Aroclor 1260**	**Hugla and Thome 1999**		**0.0504 – 0.258**	**mg/kg**	**common barbel**	**reproduction (egg exposure)**	**reduced fecundity; failure to spawn**	**egg**	**maternal transfer**	**50 days**	**LOAEL determined assuming 80% moisture in organism, effects observed at lowest dose, therefore is an unbounded LOAEL; EROD induction also observed at LOAEL**	**Selected TRV: Lowest LOAEL range that meets acceptability criteria; no NOAEL from this study**
PCBs	Total PCBs	Aroclor mixture	Fisher et al. 1994		0.857	mg/kg	Atlantic salmon	reproduction (egg exposure)	live fry body weight	eyed embryo	water	48 hours	growth was significantly reduced at day 176 in fish exposed to all PCB concentrations; however the tissue residue was not dose responsive (1.53 ug/g ww was the reported egg tissue concentration at the lowest exposure concentration); significant effects on growth at each respective dose level were inconsistently reported in paper text and tables; no effect on reproduction was observed	not recommended: tissue concentrations were not dose-responsive
PCBs	Total PCBs	Aroclor 1254	Hendricks et al. 1981		1.64	mg/kg	Rainbow trout	reproduction (egg exposure)	fry growth	egg	maternal transfer	60 days	eggs were exposed via maternal transfer from gravid females fed 200 µg/g PCBs for 60 days	
PCBs	Total PCBs	PCB mixture	Mac et al. 1985		2.69	mg/kg	Lake trout	survival	decreased survivorship of fry	egg	water/ parental transfer		LOEC is egg residue; effects were observed in fry; eggs were field collected from Great Lakes on compared to hatchery fish (no real control group); LOEC was the mean WB conc in fish eggs collected from Lk Michigan where survival of fry was 4% (fry survival in other areas was 48-52%); total DDE concentrations in the eggs where the LOEC was reported was1.27 ug/g ww; therefore, fry mortality cannot be attributed to PCBs exposure only (DDE also likely involved in toxicity)	not recommended: based on field-collected eggs
PCBs	Total PCBs	Aroclor 1254	McCarthy et al. 2003		3.2	mg/kg	Atlantic croaker	reproduction (egg exposure)	reduction in larval growth rate and impaired response to startle stimulus	egg	maternal transfer to eggs	2 wks during reproduc-tion (adults)	parental fish fed dietary PCBs, eggs exposed via maternal transfer; residues not clearly presented	
PCBs	Total PCBs	Aroclor 1254	Mac and Seelye 1981	3	4.5	mg/kg	Lake trout	reproduction (egg exposure)	fry mortality	sac-fry	water and diet	48 days	field-collected eggs from Saugatuck, Michigan with unknown organics; no effect on fry growth was observed; LOEC is residue at 48 days and NOEC is control residue at 48 days; only one group was treated with 50 ng/L (water) and 0.72 mg/kg (diet) Aroclor 1254; elevated control mortality (12.5%); PCB exposure was via both food and water simultaneously	not recommended: based on field-collected eggs

Table 3. TSVs for fish egg tissue

Chemical Group	Chemical	Chemical Form	Source	NOEC (egg)	LOEC (egg)	Units (ww)	Test Species	Endpoint	Endpoint Effect	Lifestage	Exposure Mode	Exposure Duration	Notes	Rationale
PCBs	Total PCBs	Total PCBs	Weston (2004) (Housatonic ERA Vols 1-2)		51.1	mg/kg	survival	medaka and rainbow trout	egg	injection (with field extract)	not specified	pathology and mortality combined	LOAEL is egg effect threshold reported in Housatonic ERA Phase II fish studies. The effects of injection of extracts were compared to the effects from injection of known PCB and TEQ standards. EC50s endpoints were based on the combined pathology and mortality effects observed per fish for each species/life stage/treatment/dose combination. Rainbow trout were the most sensitive species. ED50s were then used to develop thresholds for Housatonic River extracts; the values were increased to the highest concentration tested if an acceptable dose-response relationship was not observed (i.e., not all trials used to develop this ED50 showed clear dose-response relationships). The distribution of ED50s was considered and the average was used to generate the effects threshold ED50; LOAEL is the average ED50 calculated using sensitive trials only. Sensitive trials are defined as those for which the ED50 was based on a clear dose-response within the range of concentrations tested. Species included in the sensitive trials were medaka and rainbow trout but not largemouth bass	not recommended: LOAEL based on field extract exposed fish
PCBs	Total PCBs	Aroclor 1254	Freeman and Idler 1975		77.9	mg/kg	Brook trout	reproduction (egg exposure)	reduced hatchability	egg	water	21 days	75% hatching at LOEC and 92% hatching in control; concentration in back muscle of dose fish with affected hatchability was 32.8 mg/kg ww	
PCBs	Total PCBs	Total PCBs	Weston (2004) (Housatonic ERA Vols 1-2)		131	mg/kg	survival	largemouth bass, medaka and rainbow trout	egg	injection (with field extract)	not specified	pathology and mortality combined	LOAEL is egg effect threshold reported in Housatonic ERA Phase II fish studies. The effects of injection of extracts were compared to the effects from injection of known PCB and TEQ standards. EC50s endpoints were based on the combined pathology and mortality effects observed per fish for each species/life stage/treatment/dose combination. ED50s were then used to develop thresholds for Housatonic River extracts; the values were increased to the highest concentration tested if an acceptable dose-response relationship was not observed (i.e., not all trials used to develop this ED50 showed clear dose-response relationships). The distribution of ED50s was considered and the average was used to generate the effects threshold ED50; LOAEL is the average ED50 calculated for all fish tested: medaka, rainbow trout, and largemouth bass	not recommended: LOAEL based on field extract exposed fish
Pesticides	Total DDx	2,4'-DDT	Faulk et al. 1999		0.07	mg/kg	Atlantic croaker	reproduction (egg exposure)	behavior - reduced larval swimming ability	egg	diet	1 month	LOEC is egg residue--adult residues were not measured and adults were exposed; only 2,4'-DDT was measured (other metabolites were not measured)	not recommended: not direct measure of growth, survival, or reproduction
Pesticides	Total DDx	Total DDT	Cuerrier et al. 1967	0.178	0.464	mg/kg	Speckled, rainbow and Cutthroat trout	reproduction (egg exposure)	fry mortality	egg	field	60 days	field-collected eggs from wildlife stocks, hatchery, domestic stocks, commercial suppliers, and provincial and federal fish agencies; 70% fry mortality observed at LOEC; <15% mortality at NOEC- no control data for comparison or details on how mortality was recorded	not recommended: LOAEL based on field collected data and uncontrolled study
Pesticides	**Total DDx**	**Total DDT**	**Crawford and Guarino 1976**	**0.16**	**0.85**	**mg/kg**	**mummichog**	**reproduction**	**reduced % egg fertiliz**	**egg**	**water (lab)**	**24 hours**	**NOAEL was determined as average residue (range 0.051 to 0.37 mg/kg ww) in eggs produced from females exposed to 0.1 ppm DDT in water after 24 hrs of exposure where fertilization success was not affected; LOAEL not derived from study- study reports as one series of experiments where eggs were placed in suspension of 1.0 ppm and 10 ppm DDT for 30 minutes, sperm added and % fertilization determined; in eggs exposed to 1 ppm DDT, % fertilization was reduced in thre experiments 66% (compared with 92% in control), 76% (compared with 95% in control) and 4% (compared with 22% in control); no statistical analysis was conducted; in separate experiment, at fertilization (ie. time post-fertilization = 0), egg exposed to 1 ppm DDT in water for 24 hrs had residues of 0.85 ppm; however, this LOAEL (0.85 ppm) is inappropriate due to variability in tissue concentrations measured in eggs associated with effects (over a 24 hour period, egg concentrations ranged over 2 orders of magnitude [from 0.85 to 14.37 mg/kg ww] which was likely a factor of the very high exposure concentrations in the water [1 mg/kg DDT in water]).**	**Selected TRV: Lowest LOAEL and NOAEL that meet acceptability criteria**
Pesticides	Total DDx	Total DDE	Mac et al. 1985		1.27	mg/kg	Lake trout	reproduction (egg exposure)	decreased survivorship of fry	egg	water/ parental transfer		LOEC is egg residue--effects were observed in fry; eggs were field collected from Great Lakes on compared to hatchery fish (no real control group); LOEC was the mean WB conc in fish eggs collected from Lk Michigan where survival of fry was 4% (fry survival in other areas was 48-52%); PCB concentrations in the eggs where the LOEC was reported was 2.69 ug/g ww--cannot attribute fry mortality to DDE exposure only (PCBs also likely involved in toxicity)	not recommended: LOAEL based on field-collected eggs

Table 3. TSVs for fish egg tissue

Chemical Group	Chemical	Chemical Form	Source	NOEC (egg)	LOEC (egg)	Units (ww)	Test Species	Endpoint	Endpoint Effect	Lifestage	Exposure Mode	Exposure Duration	Notes	Rationale
Pesticides	Total DDx	DDT mixture	Smith and Cole 1973	1.2	2.4	mg/kg	Winter flounder	reproduction (egg exposure)	embryo mortality	egg	water	up to 12d post- spawn	field-collected adults from Narragansett Bay with unknown organics; at LOEC- 99% mortality at 10 days; at NOEC, 55% mortality at 10 days; control, 38-59% mortality at 10 days; 100% mortality in all treatments including control prior to feeding	not recommended: LOAEL based on field-collected eggs
Pesticides	Total DDx	DDT mixture	Burdick et al. 1964	2.7	2.9	mg/kg	Lake trout	reproduction (egg exposure)	fry mortality	egg	field (water)	4 yr study	eggs taken from field-collected adults in DDT-exposed waters in 1962 with unknown organics; residues in eggs based on egg residues and fry weight at yolk absorption; LOEC and NOEC are 1961 and 1962 average	not recommended: LOAEL based on field-collected eggs

Shaded rows indicate studies and TRVs that are not recommended becauase TRVs do not meet acceptability criteria

Table 4. TSVs for fish diet

Chemical Group	Analyte	Chemical Form	NOAEL (mg/kg BW/day)	LOAEL (mg/kg BW/day)	Source	Exposure rate notes	NOEC (mg/kg)	LOEC (mg/kg)	Weight basis	Moisture (%)	Diet type	Initial BW (kg)	End BW (kg)	(Initial + Final BW (kg))/2	BW notes	Feeding rate (kg-food/day)	FR (%BW/d)	Feeding rate notes	Endpoint	Test Species	Lifestage	Exposure Mode	Exposure Duration	Endpoint Effect	Notes	Rationale
Butyltins	**Tributyltin**	**tributyltin chloride**		**0.012**	**Lima et al. 2015**			**0.6**	**dw**		**prepared diet**		**0.0008285**		**end weight in Table 2**	**0.000017**	**2.0%**	**no feeding rate reported, Feeding rate of 2% BW/d adopted from Penglase et al. 2014 zebrafish study**	**growth, reproduction**	**Zebrafish**	**larvae**	**food**	**115 days**	**body weight, fecundity**	**growth effects only significant in female**	**selected TRV: lowest LOAEL that meets acceptability criteria**
Butyltins	Tributyltin	tributyltin chloride	0.012		Lima et al. 2015		0.6		dw		prepared diet		0.0008285		end weight in Table 2	0.000017	2.0%	no feeding rate reported, Feeding rate of 2% BW/d adopted from Penglase et al. 2014 zebrafish study	mortality	Zebrafish	larvae	food	115 days	mortality	no adverse effects observed- noted in results, no data included	
Butyltins	Tributyltin	tributyltin oxide		0.0020	Shimasaki et al. 2003			0.10	dw		prepared dry food	0.00004	0.00123	0.001	reported BW	0.000013	2.0%	fed ad libitum; assumed 2% BW/ day	growth, sex reversal	Japanese flounder	larvae	diet	approx 65 days	reduced body weight and length (35% reduction in weight and 12% reduction in length), increased sex reversal to male	highly uncertain study; all test fish were genetically XX fish by parents both XX but one parent phenotypically male and functional (so sex reversal had occurred prior to experiment); growth effect significant at 100 days and was recovered after 300 days past hatching (growth not significantly affected at 300 days; however, organisms were only exposed until day 100); no replication; survival not significantly affected, however, high mortality in all groups including control (control survival = 42%; LOAEL survival = 57%)	not recommended: see notes
Butyltins	Tributyltin	tri-n-butyltin oxide	0.030	0.15	Nakayama et al. 2005		1.0	5.0	dw		freeze-dried brine shrimp	0.0003		0.0003	end BW not reported	0.00001	3.0%	reported rate of 3% BW/day	reproduction	Japanese medaka	adult	diet	3 weeks	reduced swim-up failure	calculated body-weight normalized dose was same as reported in study	
Butyltins	Tributyltin	tri-n-butyltin oxide		1.0	Nakayama et al. 2004			33	dw		commercial diet	0.0003		0.0003	end BW not reported	0.00001	3.0%	reported rate of 3% BW/day	reproduction	Japanese medaka	adult	diet	3 weeks	reduced fertilization success	calculated body-weight normalized dose was same as reported in study; at LOAEL, changes in sexual behavior were also observed; at LOAEL, fertilization success was 46% (control was 96%) however, fecundity was not significantly affected	
Butyltins	Tributyltin	tri-n-butyltin oxide		1.0	Nirmala et al. 1999			100	dw		commercial diet	0.00031		0.00031	reported initial BW	0.00000	1.0%	reported rate of 1% BW/day	reproduction	Japanese medaka	adult	diet	3 weeks	reduced hatching success, swim-up success, and embryonic success	calculated body-weight normalized dose was same as reported in study; effects observed after 2 weeks of exposure	
Butyltins	Tributyltin	tributyltin oxide	1.0	10	Shimasaki et al. 2006		20	200	dw		not specified	0.046		0.046	reported average male and female initial BW	0.00229	5.0%	reported rate of 5% BW/day	reproduction	Japanese whiting	mature	diet	30 days	reduced floating egg rate, hatchability, and no. of viable larvae	calculated body-weight normalized dose was same as reported in study; fish were field collected off coast of Japan	
Dioxins	**TCDD**	**2,3,7,8-TCDD**		**2.7E-08**	**Giesy et al. 2001**			**0.0000018**	**dw**		**fish feed**	**0.35**	**0.759**	**0.5545**	**Table 2 end weight, methods initial weight**	**0.008318**	**1.5%**	**no feeding rate reported**	**mortality**	**Rainbow trout**	**adult**	**food**	**342 days**	**mortality**		**selected TRV: lowest LOAEL that meets acceptability criteria**
Dioxins	TCDD	2,3,7,8-TCDD	2.8E-06	5.7E-06	Fisk et al. 1997		0.000189	0.00038	dw		prepared diet	0.007			only initial weight listed (average weight from methods methods)	0.000105	1.5%	listed in methods	growth	Whitefish	juvenile	food	30 days	growth		
Dioxins	TCDD	2,3,7,8-TCDD	2.9E-06	6.2E-06	Fisk et al. 1997		0.000192	0.000413	dw		prepared diet	0.007			only initial weight listed (average weight from methods methods)	0.000105	1.5%	listed in methods	growth	Rainbow trout	juvenile	food	30 days	growth	possibly increased mortality, but no statistics	

Table 4. TSVs for fish diet

Chemical Group	Analyte	Chemical Form	NOAEL (mg/kg BW/day)	LOAEL (mg/kg BW/day)	Source	Exposure rate notes	NOEC (mg/kg)	LOEC (mg/kg)	Weight basis	Moisture (%)	Diet type	Initial BW (kg)	End BW (kg)	(Initial + Final BW (kg))/2	BW notes	Feeding rate (kg-food/day)	FR (%BW/d)	Feeding rate notes	Endpoint	Test Species	Lifestage	Exposure Mode	Exposure Duration	Endpoint Effect	Notes	Rationale
Dioxins	TCDD	2,3,7,8-TCDD	1.4E-06		Giesy et al. 2001		0.00009		dw			0.35	0.759	0.5545	Table 2 end weight, methods initial weight	0.008318	1.5%	no feeding rate reported	growth	Rainbow trout	adult	food	342 days	growth	no adverse effects on growth observed; FR from Walter et al 2000 (associated study)	
Dioxins	TCDD	2,3,7,8-TCDD	1.5E+00		Kleeman et al. 1986		0.000494		dw		prepared diet	0.0105	0.12	0.06525	Figure 1 & average initial weight listed in methods	0.001958	3.0%		growth	Rainbow trout	juvenile	food	13 weeks	growth, mortality		
Dioxins	TCDD	2,3,7,8-TCDD	6.8E-06		Walter et al. 2000		0.00045		dw		prepared diet, assumed 80% moisture	0.35				0.005250	1.5%	based on average BW	growth	Rainbow trout		food	200 days	growth		
Metals	Aluminum	aluminum sulfate	500		Handy 1993a	based on reported feeding rate	10000		dw		pellets	0.17	0.168	0.170		0.0085	5.0%	5% BW/d	growth, mortality	Rainbow trout	171 g	food	42 days	body weight maintenance, mortality	only one dose tested; no data presented--"absence of toxicity observed;" 1 mortality, unknown sample size	not recommended: see notes
Metals	**Arsenic**	**sodium arsenite**		**0.6**	**Erickson et al. 2010**			**28**	**dw**		***Lumbriculus variegatus***	**0.00024**	**0.00089**	**0.00056**	**intitial BW for Exp. 6 from table 1, final BW for Exp. 6 from table 3**	**0.000012**	**2.1%**	**reported total ration divided by 30 days**	**growth**	**rainbow trou**	**juvenile**	**food**	**30 days**	**body weight**	**lower body weight accompanied by slower feeding rate and reduced food conversion efficiency**	**selected TRV: lowest LOAEL that meets acceptability criteria**
Metals	Arsenic	disodium arsenate heptahydrate	0.12		Cockell et al. 1991	based on reported feeding rate	8		dw		pellets	0.0076	0.028	0.018	exp 1; 2 kg/100 fish	0.00027	1.5%	0.03kg/fish/112 days	growth	Rainbow trout		food	16 weeks	body weight	feed refusal accompanied effects; reported exposure rate = 0.153	
Metals	Arsenic	disodium arsenate heptahydrate	0.21		Cockell et al. 1991	based on reported feeding rate	12		dw		pellets	0.002	0.0269	0.014	exp3	0.00025	1.7%	21.1g/fish over 12 wks	growth	Rainbow trout		food	24 weeks	body weight gain	feed consumption did not differ from controls; body weight gain reduced at 12 weeks, but not at 24 weeks (body weight was recovered); reported exposure rate = 0.281	
Metals	Arsenic	sodium arsenite	0.40		Oladimeji et al. 1984	based on reported feeding rate	20		dw		prepared food	0.029	0.048	0.039	65% weight gain	0.00077	2.0%	2% dw food to ww fish	growth	Rainbow trout	juvenile	food	8 weeks	body weight	concentrations in figure and text do not agree in study: 20 mg/kg is mentioned both as an effect level and a NOAEL in the text; however, it is shown in the figure to be not significant. 20 mg/kg = assumed NOAEL	
Metals	Arsenic	disodium arsenate heptahydrate		0.50	Cockell et al. 1991	based on reported feeding rate		49	dw		pellets	0.048	0.1171	0.083	exp 2	0.00084	1.0%	70.3g/fish over 12 wks	growth	Rainbow trout		food	24 weeks	body weight	feed refusal accompanied effects; effects attributed to feed refusal	not recommended: food refusal accompanied growth effect at LOAEL
Metals	Arsenic	disodium arsenate heptahydrate	0.52		Blazer et al. 1997	based on reported feeding rate	52.3		dw		prepared food	0.04	0.0642	0.052		0.00052	1.0%	1% BW/day	growth	Striped bass	juvenile	food	6 weeks	body weight	feed refusal accompanied effects	
Metals	Arsenic	disodium arsenate heptahydrate	0.55		Cockell et al. 1992	based on reported feeding rate	32		dw		pellets	0.0138	0.0708	0.042	exp1	0.00073	1.7%	61.2g food/84 days	growth	Rainbow trout		food	12 weeks	body weight	reported exposure rate=0.329 mg/kg bw/d; feed refusal accompanied effects	
Metals	**Arsenic**	**sodium arsenite**		**0.60**	**Oladimeji et al. 1984**	**based on reported feeding rate**		**30**	**dw**		**prepared food**	**0.029**	**0.045**	**0.037**	**55% weight gain**	**0.00075**	**2.0%**	**2% BW/day**	**growth**	**Rainbow trout**	**juvenile**	**food**	**8 weeks**	**body weight**	**food consumption not measured**	
Metals	Arsenic	disodium arsenate heptahydrate		0.62	Cockell et al. 1991	based on reported feeding rate		44	dw		pellets	0.0076	0.018	0.013	exp 1	0.00018	1.4%	0.02kg/fish/112 days	growth	Rainbow trout		food	16 weeks	body weight	feed refusal accompanied effects; reported exposure rate = 0.583	not recommended: food refusal accompanied growth effect at LOAEL
Metals	Arsenic	disodium arsenate heptahydrate	0.63		Cockell et al. 1991	based on reported feeding rate	33		dw		pellets	0.002	0.025	0.013	exp3	0.00025	1.9%	21.3g/fish over 12 wks	growth	Rainbow trout		food	24 weeks	body weight gain	feed consumption did not differ from controls; body weight gain reduced at 12 weeks, but not at 24 weeks; reported exposure rate = 0.855 mg/kg bw/d	
Metals	Arsenic	disodium arsenate heptahydrate		1.24	Cockell et al. 1991	based on reported feeding rate		65	dw		pellets	0.002	0.025	0.013	exp3	0.00025	1.9%	21.3g/fish over 12 wks	growth	Rainbow trout		food	24 weeks	body weight gain	reduced body weight at 12 and 24 weeks	
Metals	Arsenic	disodium arsenate		1.0	Cockell and Bettger 1993	based on reported feeding rate		58	dw		prepared food	0.036	0.059	0.047	BW at 28 days	0.00083	1.8%	23.19 g/ fish over 4 wks	growth	Rainbow trout		food	12 weeks	body weight	feed refusal accompanied effects	not recommended: food refusal accompanied growth effect at LOAEL
Metals	Arsenic	disodium arsenate heptahydrate		1.0	Cockell et al. 1992	based on reported feeding rate		60	dw		pellets	0.0138	0.046	0.030	exp1	0.00051	1.7%	43.2g food/84 days	growth	Rainbow trout		food	12 weeks	body weight	feed refusal accompanied effects; reported exposure rate=0.552 mg/kg bw/d	not recommended: food refusal accompanied growth effect at LOAEL
Metals	Arsenic	disodium arsenate heptahydrate		1.4	Cockell et al. 1992	based on reported feeding rate		55	dw		pellets	0.00186	0.0078	0.005	expt 2	0.00012	2.6%	6.96g/56d	growth	Rainbow trout		food	8 weeks	body weight	feed refusal accompanied effects; growth effects at LOAEL; reported exposure rate = 1.552	not recommended: food refusal accompanied growth effect at LOAEL

Table 4. TSVs for fish diet

Chemical Group	Analyte	Chemical Form	NOAEL (mg/kg BW/day)	LOAEL (mg/kg BW/day)	Source	Exposure rate notes	NOEC (mg/kg)	LOEC (mg/kg)	Weight basis	Moisture (%)	Diet type	Initial BW (kg)	End BW (kg)	(Initial + Final BW (kg))/2	BW notes	Feeding rate (kg-food/day)	FR (%BW/d)	Feeding rate notes	Endpoint	Test Species	Lifestage	Exposure Mode	Exposure Duration	Endpoint Effect	Notes	Rationale
Metals	Arsenic	arsenic trioxide		1.7	Cockell and Hilton 1988	based on reported feeding rate		137	dw		pellets	0.00359	0.00559	0.005	diet DSA120	0.000056	1.2%	3.12g/56 days	growth	Rainbow trout		food	8 weeks	body weight	feed refusal accompanied effects; greater than 10% mortality at LOAEL; study also reported effects of organic arsenic which was not toxic at high levels; reported exposure rate = 1.56	not recommended: food refusal accompanied growth effect at LOAEL
Metals	Arsenic	disodium arsenate heptahydrate		1.9	Blazer et al. 1997	based on reported feeding rate		188.8	dw		prepared food	0.04	0.0452	0.043		0.00043	1.0%	1% BW/day	growth	Striped bass	juvenile	food	6 weeks	body weight	feed refusal accompanied effects	not recommended: food refusal accompanied growth effect at LOAEL
Metals	Arsenic	disodium arsenate		2.9	Cockell and Hilton 1988	based on reported feeding rate		180	dw		pellets	0.00359	0.00956	0.007	diet AT200	0.00011	1.6%	6.0g/56d	growth	Rainbow trout		food	8 weeks	body weight	Greater than 10% mortality at LOAEL; feed refusal accompanied effects; study also reported effects of organic arsenic which was not toxic at high levels; reported exposure rate = 2.97	not recommended: food refusal accompanied growth effect at LOAEL
Metals	Cadmium		0.016		Maage 1990	assumed avg Atlantic salmon FR 2.8% BW/D	0.570		dw		pellets	0.00017	0.00046	0.000315		0.0000088	2.8%	assumed avg Atlantic salmon FR 2.8% BW/D	growth	Atlantic salmon	fry	diet (pellet)	4 wks	body weight	no control was used in study; fish were exposed to diet with copper, cadmium, and zinc; an increase in growth was observed at NOEC; not recommended for TRV selection	not recommended: uncontrolled study
Metals	**Cadmium**	**cadmium nitrate**		**0.010**	**Kim et al. 2004; Kang et al. 2005**	**based on reported feeding rate**		**0.5**	**dw**		**pellets**	**0.0247**		**0.0247**		**0.000494**	**2.0%**	**2% per day based on initial BW**	**growth**	**Rockfish**	**juvenile**	**food**	**60 days**	**body weight and length growth rate; condition factor**	**significance of effect on body weight and body length growth rate at 0.5 and 5 mg/kg dw; condition factor was reduced at all diet concentrations (0.5, 5, 25, and 125 mg/kg), but was not significant at 25 mg/kg; a significant inverse relationship was observed between weight gain and the exposure concentration of dietary Cd at 25 and 125 mg/kg dw**	**selected TRV: lowest LOAEL that meets acceptability criteria**
Metals	Cadmium	cadmium chloride	1.6		Hatakeyama and Yasuno 1982	calculated as cumulative cd exposure/estimated bw from 1987 study/30 days	171		ww	86.7%	Moina macrocopa		0.0000183	0.000018	based on L-W relationship (Garcia et al. 2008)		5.2%	assumed 5.2% BW/d on avg. of reported FR in 1987 study	mortality	Guppy		food	10-30 days		fed exposed Monia macrocopa, significant growth effect at day 10 disappeared at day 20 in fish fed 126 and 171 µg/g dw. 86% Mortality @ LOAEL vs. 0% in control. Body weight calculated as W (mg) =0.0084L (mm)^3.0447 (Garcia et al. 2008).	
Metals	Cadmium	cadmium nitrate	2.5		Kim et al. 2004	based on reported feeding rate	125		dw		pellets	0.0247		0.0247		0.000494	2.0%	2% per day based on initial BW	mortality	Rockfish	juvenile	food	60 days		fish fed prepared diet treated with chemical salts.	
Metals	Cadmium	cadmium chloride	4.1		Mount et al. 1994	based on reported feeding rate	69		dw		brine shrimp	0.000182	0.00104	0.000611		0.000037	6.0%	6% BW/day (dw basis)	mortality, growth	Rainbow trout	fry	primarily food	60 days	100% survival, body weight and length	Cu,Cd, Pb, Zn in water at 23, .97, 3.32, and 46.3 µg/L, respectively,1.1 ppb Cd and some other metals in water in addition to dietary exposure; only no-effect reported; fish exposed to live prey	
Metals	Cadmium	cadmium nitrate	5.9		Baldisserotto et al. 2005	based on reported feeding rate	294		dw		prepared food	0.0135	0.0205806	0.017040	end BW based on average 1.7483% SGR over 30 days	0.000341	2.0%	2% per day	mortality, growth	Rainbow trout	juvenile	food	15-30 days	specific growth rate, survival	dietary dose was not reported as ww or dw.	
Metals	Cadmium	Cadmium nitrate	9.4		Franklin et al. 2005	based on reported feeding rate	471		dw		prepared food	0.014	0.024	0.019	average end BW over all treatments	0.000380	2.0%	2% BW/ per day	mortality, growth	Rainbow trout	juvenile	food	28 days	growth rate, survival	fish fed prepared diet treated with chemical salts; reported exposure rate=8.3 mg/kg/d	
Metals	Cadmium	cadmium nitrate	16	28	Szebedinsky et al 2001	based on reported feeding rate	786	1395	dw		prepared food	0.005		0.005		0.000100	2.0%	2% BW/ per day	mortality	Rainbow trout	juvenile	food	36 days	% mortality		
Metals	Cadmium	cadmium nitrate	28	45	Szebedinsky et al 2001	based on reported feeding rate	1395	2265	dw		prepared food	0.005		0.005		0.000100	2.0%	2% BW/ per day	growth	Rainbow trout	juvenile	food	36 days	reduced specific growth rate (weight)	significantly reduced growth rate at LOAEL	
Metals	Cadmium	cadmium sulfate		68	Handy 1993b	based on reported feeding rate		10,000	dw		pellets	0.13	0.131	0.13	BW unchanged	0.00089	0.68%	6.82g/kg fish/d	mortality	Rainbow trout		food	28 days		39% (14 of 36) mortality between day 3 and 23 of exposure period; fish fed prepared diet	
Metals	Cadmium	cadmium chloride	20	200	Szczerbik et al. 2006	based on reported feeding rate	1000	10000	dw	20.0%	pellets	0.56	8.99	4.8		0.0955	2.0%		mortality, growth, reproduction	Goldfish (prussian carp)	juvenile - adult		3 years		all female fish; non-significant decrease in ovulation in 0.1 and 1.0 ug/g treatment groups; no replication	
Metals	Cadmium		7.0		Lundebye et al. 1999		250		dw		prepared diet	0.0265		0.026500	initial body weight	0.000742	2.8%	assumed avg Atlantic salmon FR 2.8% BW/D	growth	Atlantic salmon	fry	food	4 weeks		No effect on growth-rate (body weight)	
Metals	Cadmium	cadmium chloride	NC	NC	Hatakeyama and Yasuno 1987		210		ww	86.7%	midge larva	8.0	0.0017	4.0	assumed 181% increase at 30 days				reproduc-tion	Guppy	adult	food	2 months	# live fry, fry mortality, premature embryos	fed exposed *Chironomus yoshimatsui* (midge larvae), no reproductive effect after 2 months. Dose can't be accurately determined from reported data.	not recommended: cannot derive dose (see notes)
Metals	Cadmium	cadmium chloride	NC	NC	Hatakeyama and Yasuno 1987		274		ww	86.7%	midge larva	0.0000183	0.0017	0.000859	181% increase at 30 days				growth	Guppy	2 months	food	30 days	body weight	fed exposed Chironomus yoshimatsui (midge larvae), no growth effect by day 30. Dose can't be accurately determined from reported data.	not recommended: cannot derive dose (see notes)

Table 4. TSVs for fish diet

Chemical Group	Analyte	Chemical Form	NOAEL (mg/kg BW/day)	LOAEL (mg/kg BW/day)	Source	Exposure rate notes	NOEC (mg/kg)	LOEC (mg/kg)	Weight basis	Moisture (%)	Diet type	Initial BW (kg)	End BW (kg)	(Initial + Final BW (kg))/2	BW notes	Feeding rate (kg-food/day)	FR (%BW/d)	Feeding rate notes	Endpoint	Test Species	Lifestage	Exposure Mode	Exposure Duration	Endpoint Effect	Notes	Rationale
Metals	Cadmium	cadmium chloride	NC	NC	Hatakeyama and Yasuno 1987		500	800	ww	86.7%	midge larva	0.0000183	0.00154	0.000779	assumed Male of female BW at 30 d				reproduc-tion	Guppy	30 day old	food	7 months	cumulative number of fry produced	fed exposed Chironomus yoshimatsui (midge larvae); cumulative number of fry decreased to about 60% of the control in fish exposed to 80 and 160 µg/L; no discussion of statistics; unclear on the reproductive effects at lower levels; LOEC is estimated using figure, no replication. Dose can't be accurately determined from reported data.	not recommended: cannot derive dose (see notes)
Metals	Cadmium	cadmium chloride	NC	NC	Hatakeyama and Yasuno 1987			800	ww	86.7%	midge larva	0.0000183	0.0017	0.000859	assumed Male of female BW at 30 d				reproduc-tion	Guppy	30 day old	food	7 months	cumulative number of fry produced	fed exposed *Chironomus yoshimatsui* (midge larvae); cumulative number of fry decreased to about 60% of the control in fish exposed to 80 and 160 µg/L; no discussion of statistics; unclear on the reproductive effects at lower levels; LOEC is estimated using figure, no replication. Dose can't be accurately determined from reported data.	not recommended: cannot derive dose (see notes)
Metals	Cadmium	cadmium chloride	NC	NC	Hatakeyama and Yasuno 1987			1,250	ww	86.7%	midge larva	0.0000183	0.0013	0.000659	assumed Male of female BW at 30 d				mortality, growth	Guppy	30 day old	food	7 months	female growth and mortality	fed exposed *Chironomus yoshimatsui* (midge larvae); female body weight decreased - 68% of control at the 48th day in fish exposed to 160 µg/L; 6 of 7 females died that were exposed to 160 µg/L; no discussion of statistics- unclear on growth effects at the other doses; LOEC is estimated using figure; no effect on male growth, no replication. Dose can't be accurately determined from reported data.	not recommended: cannot derive dose (see notes)
Metals	Chromium	chromium yeast	0.067	0.11	Magzoub et al. 2010		1.4	2.4	dw		commercial feed, 9.4% ww	0.01855	0.05353	0.03604	end BW is for control group at 84 days	0.0017		mean food intake for control group	growth	Tilapia	juvenile (fingerlings)	feed	84 days	18% reduction of BW of LOAEL treatment compared to control	LOAEL derived from the higher of two treatments using Cr yeast, which was the only treatment to be significantly different from the control. This treatment group had overall mean values lower than the remaining groups (BW, FIR, GR, and feed efficiency ratio).	not recommended: chromium yeast
Metals	Chromium	inorganic trivalent chromium (chromic(III) oxide)	0.12		Magzoub et al. 2010		2.5		dw		commercial feed, 9.4% ww	0.01855	0.05353	0.03604	end BW is for control group at 84 days	0.0017		mean food intake for control group	growth	Tilapia	juvenile (fi	feed	84 days		NOAEL derived from the highest of two treatments using chromic(III)oxide, which was not significantly different from the control or remaining groups.	
Metals	**Chromium**	**trivalent chromium**	**0.92**		**Walsh et al. 1994**		**46**		**dw**					**0.01615**	**BW based on Baker et al. 1998**	**0.0003**	**2.0%**	**assumed 2% BW/D**	**growth**	**Grey mullet**	**2 yrs old**	**food and sediment**	**8 wks**		**there was actually a significant increase in growth of the Cr-exposed fish (not an adverse effect). Fish were exposed to Cr in both diet and sediments simultaneously**	**selected TRV: highest NOAEL that meets acceptability criteria**
Metals	**Cobalt**	**cobalt chloride**		1.4	**Javed 2013**	**based on reported exposure rate**		**67.8**	**dw**		**not specified in paper, dry weight assumed**	**0.0801**	**0.12085**	**0.100475**	**used control body weight (Initial:Table 1, Final: Table 2)**	**0.00201**	**2.0%**	**Observed feeding rate very low, so 2% of BW was used**	**growth**	**White Carp (*Cirrhina mrigala*)**	**120 days old**	**food**	**12 weeks**	**growth**	**Observed feeding rate very low, so 2% of BW was used**	**selected TRV: lowest LOAEL that meets acceptability criteria**
Metals	Cobalt	cobalt chloride		1.5	Javed 2013	based on reported exposure rate		74.3	dw		not specified in paper, dry weight assumed	0.0807	0.11545	0.098075	used control body weight (Initial:Table 1, Final: Table 2)	0.00196	2.0%	Observed feeding rate very low, so 2% of BW was used	growth	Indian carp (*Catla catla*)	120 days old	food	12 weeks	growth	Observed feeding rate very low, so 2% of BW was used	
Metals	Cobalt	cobalt chloride		1.6	Javed 2013	based on reported exposure rate		80.9	dw		not specified in paper, dry weight assumed	0.0744	0.10617	0.090285	used control body weight (Initial:Table 1, Final: Table 2)	0.00181	2.0%	Observed feeding rate very low, so 2% of BW was used	growth	Rohu (*Labeo rohita*)	120 days old	food	12 weeks	growth	Observed feeding rate very low, so 2% of BW was used	
Metals	Cobalt	cobalt chloride		3.1	Yaqub and Javed 2012			155	dw		prepared diet	0.00897		0.00897	Table 1, no final body weight reported	0.00018	2.0%	not reported; assumed 2%	mortality	White carp (*Cirrhina mrigala*)	60 day old	food	96 hours	mortality	data entered are for the 60 d age group (the most sensitive of the three age groups reported), mean 96 hr LC50 entered (mean lethal concentration also reported)	
Metals	Cobalt	cobalt chloride		3.4	Yaqub and Javed 2012			169	dw		prepared diet	0.01088		0.01088	Table 1, no final body weight reported	0.00022	2.0%	not reported; assumed 2%	mortality	Rohu (*Labeo rohita*)	60 day old	food	96 hours	mortality	data entered are for the 60 d age group (the most sensitive of the three age groups reported), mean 96 hr LC50 entered (mean lethal concentration also reported)	
Metals	Cobalt	cobalt chloride		3.4	Yaqub and Javed 2012			172	dw		prepared diet	0.01277		0.01277	Table 1, no final body weight reported	0.00026	2.0%	not reported; assumed 2%	mortality	Indian carp (*Catla catla*)	60 day old	food	96 hours	mortality	data entered are for the 60 d age group (the most sensitive of the three age groups reported), mean 96 hr LC50 entered (mean lethal concentration also reported)	

Table 4. TSVs for fish diet

Chemical Group	Analyte	Chemical Form	NOAEL (mg/kg BW/day)	LOAEL (mg/kg BW/day)	Source	Exposure rate notes	NOEC (mg/kg)	LOEC (mg/kg)	Weight basis	Moisture (%)	Diet type	Initial BW (kg)	End BW (kg)	(Initial + Final BW (kg))/2	BW notes	Feeding rate (kg-food/day)	FR (%BW/d)	Feeding rate notes	Endpoint	Test Species	Lifestage	Exposure Mode	Exposure Duration	Endpoint Effect	Notes	Rationale
Metals	Cobalt	cobalt chloride	83		Anadu et al 1990		1664		dw		prepared diet, 9.9% ww	0.002	0.0033	0.00265	control weight estimated from Figure 2	0.00013	5.0%		growth	Tilapia (*Tilapia zillii*)	fingerling	food	12 weeks	growth	no adverse effects observed; study focused on nutrition value of cobalt, only positive effects observed	
Metals	Copper	copper sulfate	0.24		Murai et al. 1981	feeding rate reported in Murai and Andrews 1987	8		dw		prepared diet	0.015	0.077	0.046		0.00137	3.0%	3% BW/day (Murai and Andrews 1978)	growth	Channel catfish	fingerling	food	16 wks		significant effects at 4 weeks in 16- and 32-mg/kg treatments; growth gain per feed consumed was significantly lower for fish fed 8 mg/kg; fed purified diet; actual environmental conditions can be found in Murai and Andrews (1978)	not recommended: LOAEL could not be replicated (see notes)
Metals	Copper	copper sulfate		0.48	Murai et al. 1981	feeding rate reported in Murai and Andrews 1987		16	dw		prepared diet	0.015	0.058	0.036		0.00108	3.0%	3% BW/day (Murai and Andrews 1978)	growth	Channel catfish	fingerling	food	16 wks		not recommended because low sensitivity of catfish has not been confirmed in subsequent studies using similar exposures and fish of similar age (Erickson et al. 2003; Gatlin and Wilson 1986) and has been characterized as atypical by other studies of copper in fish (Lorentzen et al. 1998); significant effects at 4 weeks in 16- and 32-mg/kg treatments; growth gain per feed consumed was significantly lower for fish fed 8 mg/kg; fed purified diet; actual environmental conditions can be found in Murai and Andrews (1978); LOAEL could not be replicate in two independent trials by different authors	not recommended: LOAEL could not be replicated (see notes)
Metals	**Copper**	**copper sulfate**	**1.0**	**2.0**	**Kang et al. 2005**	**based on reported feeding rate**	**50**	**100**	**dw**		**pellets**	**0.026**	**0.035**	**0.031**	**ER based on initial BW**	**0.00061**	**2.0%**	**2% BW/day (initial BW)**	**growth**	**Rockfish**	**juvenile**	**food**	**60 days**	**body weight (growth rate)**	**fish fed prepared diet treated with chemical salts; at LOAEL and NOAEL effects of dietary copper were ~ 0.6% per day (specific growth rate)**	**selected TRV: lowest TRVs that meet acceptability criteria**
Metals	Copper	copper sulfate	2.2		Handy 1992 - Arch Env. Contam Toxicol. 22 parts 1&2 - p74-81 and 82-87	based on reported feeding rate	200		dw		pellets	0.14	0.14	0.14		0.0015	1.1%	0.35 kg food/kg fish over 32 days	mortality	Rainbow trout		food	32 days		only no-effect level concentration reported; fish fed fish meal; reported exposure rate = 70 mg Cu/kg fish/32 d = 15.9 mg/kg bw/d assuming average BW.	
Metals	Copper	copper sulphate pentahydrate	6.8		Lanno et al. 1985	based on reported feeding rate	287		dw			0.0038	0.025	0.014	experiment 1 diet 5	0.00034	2.4%	based on feed to gain ratio	growth	Rainbow trout		food	8 wks		feed refusal and 19% mortality was observed at 1,585 mg/kg-diet; fish fed prepared diet; only no-effect level concentration presented here. Feeding rate based on feed:gain ratio (1.4g food/g BW gainX7.4g gain/56 days=0.185g feed/d)	
Metals	Copper	copper sulfate	13		Miller et al. 1993	assumed average RBT FR	684		dw		pellets	0.0080	0.024	0.016	reported end BW	0.00030	1.9%	assumed average RBT FR	growth	Rainbow trout		food	42 days		only no-effect level concentration reported; fish fed fish meal	
Metals	Copper	Cu sulfate pentahydrate	14		Lundebye et al. 1999	assumed avg Atlantic salmon FR 2.8% BW/D	500		dw		prepared diet	0.00090	0.0081	0.0045	900% growth	0.000126	2.8%	assumed 2% BW/D	growth	Atlantic salmon	fry	food	3 mos		fish fed prepared diet	
Metals	Copper		14		Erickson et al. 2003	assumed 6% BW/d	240		dw		oligochaetes	1.00000		1.0		0.060000	6.0%	6% BW/day (dw basis)	growth	Channel catfish	fry	food	30 days	body weight		
Metals	Copper	copper sulphate pentahydrate	17		Berntssen et al. 1999b	based on reported feeding rate	691.3		dw		pellets	0.071	0.074	0.0725		0.0017	2.4%	2.4% of biomass fed daily	growth	Atlantic salmon	parr	food	4 wks	length, weight, or condition factor	no significant differences between the treated groups and control, control showed a significantly higher final weight than starting weight, and treated groups did not; only no-effect level concentration reported; fish fed fish meal	
Metals	Copper	copper sulphate pentahydrate	17		Lanno et al. 1985	based on initial BW and feeding rate in experiment 1	664		dw		pellets	0.012	0.014	0.0128	expt 2 diet 6, BW incorrectly reported, BW at 16 weeks is lower than initial BW	0.00032	2.5%	2.5%/d based on initial bw and expt 1 feeding rate	mortality, growth	Rainbow trout		food	24 wks		significant effects at 16 weeks; at 24 weeks, growth effects no longer apparent; fish fed prepared diet.	
Metals	Copper	copper sulphate pentahydrate	18		Lanno et al. 1985	based on reported feeding rate	730		dw		pellets	0.0038	0.011	0.0075	experiment 1 diet 6	0.00019	2.5%	based on feed to gain ratio	mortality	Rainbow trout		food	8 wks		study showed potential effects at higher concentrations- confounded by food avoidance; feed refusal and 19% mortality were observed at 1,585-mg/kg diet; only no-effect level concentration presented here; fish fed prepared diet. Feeding rate calculated from feed:gain ratio (1.4g food/g BW gainX7.4g gain/56 days=0.185g feed/d)	
Metals	Copper	copper sulphate pentahydrate		18	Lanno et al. 1985b	based on feed to gain ratio		730	dw			0.0038	0.011	0.0075	experiment 1 diet 6	0.00019	2.5%	based on feed to gain ratio	growth	Rainbow trout		food	8 wks		not statistically tested, feed refusal and 19% mortality was observed at 1,585 mg/kg-diet; fish fed prepared diet	

Table 4. TSVs for fish diet

Chemical Group	Analyte	Chemical Form	NOAEL (mg/kg BW/day)	LOAEL (mg/kg BW/day)	Source	Exposure rate notes	NOEC (mg/kg)	LOEC (mg/kg)	Weight basis	Moisture (%)	Diet type	Initial BW (kg)	End BW (kg)	(Initial + Final BW (kg))/2	BW notes	Feeding rate (kg-food/day)	FR (%BW/d)	Feeding rate notes	Endpoint	Test Species	Lifestage	Exposure Mode	Exposure Duration	Endpoint Effect	Notes	Rationale
Metals	Copper	copper sulphate pentahydrate		18	Lanno et al. 1985a	based on feed to gain ratio		796	dw		pellets	0.0031	0.015	0.0091	BW for diet 5	0.00021	2.3%	based on feed to gain ratio	growth	Rainbow trout		food	16 wks		fish were fed on control diet for 12 days after exposure period; fish fed prepared diet	
Metals	Copper	copper sulfate pentahydrate		20	Lundebye et al. 1999	assumed avg Atlantic salmon FR 2.8% BW/D		700	dw		prepared diet	0.00090	0.0072	0.0041	800% growth	0.0001134	2.8%	assumed avg Atlantic salmon FR 2.8% BW/D	growth	Atlantic salmon	fry	food	3 mos			
Metals	Copper	copper sulphate	20	28	Berntssen et al. 1999a	based on reported feeding rate	638	868	dw		pellets	0.00090	0.0087	0.0048		0.00015	3.2%	3.2% BW/day	growth	Atlantic salmon		food	3 months		fish fed fish meal; relevance of salts added to diet not best representative of ISA conditions	
Metals	Copper	copper sulphate pentahydrate	42		Kamunde et al. 2001	reported feeding rate	1,042		dw		pellets	37	70	53.5		2.1	4.0%	4% BW/ day	mortality, growth	Rainbow trout		food	28 days		non-significant growth inhibition at NOAEL; only no-effect level concentration reported; fish fed prepared diet	
Metals	Copper	copper chloride	26	50	Mount et al. 1994	based on reported feeding rate	440	830	dw		brine shrimp	0.00018	0.00128	0.00073		0.000044	6.0%	6% BW/day (dw basis)	mortality	Rainbow trout	fry	primarily food	60 days	69% and 95% surv at LOEC and NOEC	12 ppb Cu and some other metals in water in addition to dietary exposure; fish fed live Artemia; mortality was likely due to elevated copper concentrations in water rather than dietary copper; mortality reported at LOAEL was likely a result of aqueous copper exposure, not dietary copper	
Metals	Copper	copper sulphate pentahydrate	27		Alsop et al. 2007	based on reported feeding rate	1,368		dw		prepared diet	0.00025	0.000777	0.00051		0.0000103	2.0%		mortality, growth, reproduction	Zebrafish	juvenile		260 days		no effects observed	
Metals	Copper	copper chloride	60		Mount et al. 1994	based on reported feeding rate	1,000		dw		brine shrimp	0.00018	0.0010	0.00060		0.000036	6.0%	6% BW/day (dw basis)	growth	Rainbow trout	fry	primarily food	60 days	body weight and length	12 ppb Cu and some other metals in water in addition to dietary exposure; only no-effect level concentration reported; fish fed live *Artemia*	
Metals	Copper	copper sulphate pentahydrate		60	Baker et al. 1998	based on reported feeding rate		2,400	dw		prepared diet	0.011	0.021	0.01615		0.0004	2.5%	2.5% BW/day	growth	Grey mullet		food	67 days		effects associated with reduced feeding	
Metals	Copper	copper sulfate	69		Handy 1993b	based on reported feeding rate	10,000		dw		pellets	0.13	0.13	0.13		0.00091	0.69%	6.92 g food/kg fish/day	mortality	Rainbow trout		food	28 days		only no-effect level concentration reported; fish fed prepared diet	
Metals	Copper		NC	NC	Gatlin and Wilson 1986		40		dw							0.00000				Channel catfish	fingerling	food	13 weeks		insufficient data available to derive a dose	not recommended: cannot derive dose (see notes)
Metals	Copper		NC	NC	Lorentzen et al. 1998		98		dw							0.0000			growth/survival	Atlantic salmon	parr	food	12 weeks		insufficient data available to derive a dose	not recommended: cannot derive dose (see notes)
Metals	Lead	lead nitrate	13		Mount et al. 1994	based on reported feeding rate	210		dw		brine shrimp	0.000182	0.001084	0.00063		0.000038	6.0%	6% BW/day (dw basis)	mortality, growth	Rainbow trout	fry	primarily food	60 days	100% survival, body weight and length	3.2 ppb Pb and some other metals in water in addition to dietary exposure	
Metals	Lead	lead nitrate	13		Alves et al. 2006	based on reported feeding rate	520		dw		prepared diet	0.0045		0.0045		0.00011	2.5%	2.5% BW/day	mortality, growth	Rainbow trout	juvenile		21 days		no adverse effects observed	
Metals	Lead	lead nitrate	56		Dai et al. 2009	based on reported feeding rate	800		dw		prepared diet	0.03234	0.11254	0.07244		0.005071	7.0%	3-3.5% 2X/d (assumed 7%)	mortality, growth	Tilapia	juvenile		60 days		no adverse effects observed	
Metals	Lead	not specified	134		Goettl et al. 1976	assumed average RBT FR 1.9% BW/D	7,040		dw		pellets			0.091	average BW across experiment	0.00173	1.9%	assumed average RBT FR	growth	Rainbow trout	immature	food	191 days		no adverse effects observed	
Metals	Mercury	methylmercury		0.0015	Alvarez et al. 2006	based on reported feeding rate		0.25	dw	80%	shrimp or marlin			0.37	average BW	0.002220	0.60%	3% BW/day corrected for assumed 80% moisture	reproduction	Atlantic croaker	sexually mature	food	1 month	larval survival	Croaker were collected from Aransas Pass Ship Channel near Port Aransas, Texas; planktonic larval survival in control was 1.02% vs in the low and high dose groups was 0.19 and 0.07; no stats but clear mortality affect	
Metals	Mercury	methylmercury chloride	0.20		Drevnick and Sandheinrich 2003		3.93		dw		prepared food		0.00254		average male/female weights used (Table 2) no initial weight reported	0.000127	5.0%	FIR % found in methods	growth, mortality	Fathead minnow (*Pimephales promelas*)	90 days old	food	21 days	body weight, mortality	Male and female growth uneffected by Hg	
Metals	Mercury	methylmercury chloride		0.044	Drevnick and Sandheinrich 2003			0.87	dw		prepared food		0.00254		average male/female weight used, no initial weight reported	0.000127	5.0%	FIR % found in methods	reproduction	fathead minnow (*Pimephales promela* s)	90 days old	food	21 days	spawning success		

Table 4. TSVs for fish diet

Chemical Group	Analyte	Chemical Form	NOAEL (mg/kg BW/day)	LOAEL (mg/kg BW/day)	Source	Exposure rate notes	NOEC (mg/kg)	LOEC (mg/kg)	Weight basis	Moisture (%)	Diet type	Initial BW (kg)	End BW (kg)	(Initial + Final BW (kg))/2	BW notes	Feeding rate (kg-food/day)	FR (%BW/d)	Feeding rate notes	Endpoint	Test Species	Lifestage	Exposure Mode	Exposure Duration	Endpoint Effect	Notes	Rationale
Metals	Mercury	methylmercury	0.012	0.089	Friedmann et al. 1996	based on reported feeding rate	0.685	4.94	dw		catfish fillets, assumed 80% ww		0.041	0.041	estimated final weight from Fig. 1 for control group	0.00073619	1.8%	FIR based on (1.5 g fillet 3X/week) + (1.4g fathead minnow/15 days)	growth	Walleye	juvenile	food	6 months	male growth	fish fed 1.0 mg/kg mercury in diet consisting of catfish fillets injected with methylmercury 3X per week; no significant effect on mortality observed; no replication, elevated control mortality (28%), increased growth and body length in fish fed 0.1 mg/kg mercury in diet; gonadalsomatic index (GSI) affected in both treatment groups	
Metals	Mercury	methylmercury	0.089		Friedmann et al. 1996	based on reported feeding rate	4.94		dw		catfish fillets, assumed 80% ww		0.041	0.041	estimated final weight from Fig. 1 for control group	0.00073619	1.8%	FIR based on (1.5 g fillet 3X/week) + (1.4g fathead minnow/15 days)	mortality	Walleye	juvenile	food	6 months	mortality	The mortality rate of the fish fed the low and high mercury-tainted diets were 45% and 32%, respectively. Mortality in the control was 28%. These differences were not statistically significant.	
Metals	Mercury	methylmercury chloride	0.076	0.16	Gharaei et al. 2008		7.88	16.22	dw		prepared food	0.08621	0.24838	0.167295	average initial/final control weight	0.001615286		average of control feeding rate. Table 3	mortality	Beluga (*Huso huso*)	juvenile	food	70 days	mortality	all fish in the high dose group died between days 40 and 42; mortality was low in the other groups	
Metals	Mercury	methylmercury chloride	0.0073	0.076	Gharaei et al. 2008		0.76	7.88	dw		prepared food	0.08621	0.24838	0.167295	average initial/final control weight	0.001615286		average of control feeding rate. Table 3	growth	Beluga (*Huso huso*)	juvenile	food	70 days	body weight		
Metals	Mercury	methylmercury		0.053	Hammerschmidt et al. 2002	assumed feeding rate info from Ogle and Knight 1989		0.88	dw		soft-moist fish food	0.003145		0.003145	average of control dose males (4.44g) and females (1.89g)	0.0001887	6.0%	assumed average fathead minnow FR dry diet from Ogle and Knight 1989	reproduction	Fathead minnow	juvenile and adult	food	multi-generation	spawning success	spawning success at LOAEL = 46%; 75% in control; no statistics; concentration in diet (0.88 ug/g dw) converted to ww from study assuming 10% moisture in fish prepared diet	
Metals	Mercury	methylmercury	0.51		Hammerschmidt et al. 2002	assumed feeding rate info from Ogle and Knight 1989	8.46		dw		soft-moist fish food	0.003145		0.003145	average of control dose males (4.44g) and females (1.89g)	0.0001887	6.0%	assumed average fathead minnow FR dry diet from Ogle and Knight 1989	mortality, growth	Fathead minnow	adult	food	multi-generation	mortality, growth	dietary methylmercury did not reduce the mortality or growth of adults	
Metals	Mercury	methylmercury chloride	0.0059	0.25	Houck and Cech 2004	feeding rate calculated based on BW and reported consumption/tank	0.52	22.1	dw		commercial trout food	0.00148	0.002	0.00174	control intitial and day 70 weight estimated from Fig. 2	0.0000197	1.1%	35 fish/tank and approximately 0.00069 kg/tank consumed per day (estimated from Fig. 1) = 0.0000197 kg/day/fish; ~1.1%BW/day	growth	Blackfish	juvenile	food	70 days	body weight		
Metals	Mercury	methylmercury chloride	0.25	0.63	Houck and Cech 2004	feeding rate calculated based on BW and reported consumption/tank	22.1	55.5	dw		commercial trout food	0.00148	0.002	0.00174	control intitial and day 70 weight estimated from Fig. 2 (BW for day 247 not reported)	0.0000197	1.1%	35 fish/tank and approximately 0.00069 kg/tank consumed per day (estimated from Fig. 1) = 0.0000197 kg/day/fish; ~1.1%BW/day	mortality	Blackfish	juvenile	food	247 days	mortality	There was little mortality during the first 70 days, however, by 247 days there was a significant decrease in survivorship in the high-dose group compared to all other treatment groups.	
Metals	Mercury	methylmercury chloride	0.63	1.3	Lee et al. 2011	based on reported feeding rate	25	50	dw		prepared food, assumed dw	0.03	0.17	0.09888	average initial BW, final BW calculated based on control data and formula presented in Table 2a	0.002472	2.5%	2-3% BW/day	growth, mortality	Green sturgeon	juvenile	food	8 weeks	body weight, mortality		

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Chemical Group	Analyte	Chemical Form	NOAEL (mg/kg BW/day)	LOAEL (mg/kg BW/day)	Source	Exposure rate notes	NOEC (mg/kg)	LOEC (mg/kg)	Weight basis	Moisture (%)	Diet type	Initial BW (kg)	End BW (kg)	(Initial + Final BW (kg))/2	BW notes	Feeding rate (kg-food/day)	FR (%BW/d)	Feeding rate notes	Endpoint	Test Species	Lifestage	Exposure Mode	Exposure Duration	Endpoint Effect	Notes	Rationale
Metals	Mercury	methylmercury chloride	1.3	2.5	Lee et al. 2011	based on reported feeding rate	50	100	dw		prepared food, assumed dw	0.03	0.11	0.06948	average initial BW, final BW calculated based on control data and formula presented in Table 2a	0.001737	2.5%	2-3% BW/day	growth, mortality	White sturgeon	juvenile	food	8 weeks	body weight, mortality		
Metals	Mercury	mercuric chloride			Matida et al. 1971						prepared food	0.00408	0.196	0.10004	average initial/final control weight. Table 7			5% based on wet weight food ingestion	growth	Rainbow trout	fingerling	food	40 weeks	body weight	not recommended- unclear at what dose level adverse effects are expected (no stats and growth values are not dose-responsive; also not recommended due to several study design concerns (e.g., field collected and contaminated food, outdated analytical methods)	see notes
Metals	Mercury	methylmercuric chloride			Matida et al. 1971						prepared food	0.00408	0.196	0.10004	average initial/final control weight. Table 7			5% based on wet weight food ingestion	growth	Rainbow trout	fingerling	food	40 weeks	body weight	not recommended- control data not reported; also not recommended due to several study design concerns (e.g., field collected and contaminated food, outdated analytical methods)	see notes
Metals	Mercury	ethyl mercuric phosphate			Matida et al. 1971						prepared food	0.00408	0.196	0.10004	average initial/final control weight. Table 7			5% based on wet weight food ingestion	growth	Rainbow trout	fingerling	food	40 weeks	body weight	not recommended- control data not reported; also not recommended due to several study design concerns (e.g., field collected and contaminated food, outdated analytical methods)	see notes
Metals	Mercury	phenyl mercuric acetate			Matida et al. 1971						prepared food	0.00408	0.196	0.10004	average initial/final control weight. Table 7			5% based on wet weight food ingestion	growth	Rainbow trout	fingerling	food	40 weeks	body weight	not recommended- control data not reported; also not recommended due to several study design concerns (e.g., field collected and contaminated food, outdated analytical methods)	see notes
Metals	Mercury	methyl-mercuric chloride	0.013	0.048	Matta et al. 2001	assumed feeding rate from Gutjahr-Gobell et al. 1999	0.5	1.9	dw		contaminated food			0.0119	weight for control	0.0002975	2.5%	feeding rate from Gutjahr-Gobell et al. 1999	mortality	Mummichog	adult	food	> = 6 wks	F0 male survival	fish fed commercial fish diet; organisms collected from pristine site in Georgia; survival of female mummichog was unaffected at all doses; dietary dose is measured concentration (NOAEL and LOAEL target diet concentrations were 0.2 and 0.5 mg/kg, respectively	
Metals	Mercury	methyl-mercuric chloride	0.14	1.4	Matta et al. 2001	assumed feeding rate from Gutjahr-Gobell et al. 1999	5.6	54	dw		contaminated food			0.0119	weight for control	0.0002975	2.5%	feeding rate from Gutjahr-Gobell et al. 1999	reproduction	Mummichog	adult	food	> = 6 wks	F1 fertilization success	fish fed commercial fish pellets; at same dose- no effect on the following parameters: F1 hatchability, survival, fecundity, F2 larval survival; fecundity, fertilization success, offspring weight, female survival	
Metals	Mercury	methyl-mercuric chloride	1.4		Matta et al. 2001	assumed feeding rate from Gutjahr-Gobell et al. 1999	54		dw		contaminated food			0.0119	weight for control from Table 1	0.0002975	2.5%	feeding rate from Gutjahr-Gobell et al. 1999	growth	Mummichog	adult	food	> = 6 wks	body weight	fish fed commercial fish pellets	
Metals	Mercury	methylmercury chloride		0.24	Penglase et al. 2014	1-3% estimated ww per day fed as dw		11.98	dw		prepared diet	0.00032	0.00032	0.00032	final BW not reported	0.0000064	2.0%	average of 1-3% BW/day	growth, survival	Zebrafish	juvenile	food	150 days	decreased weight, decreased survival (figure 2)	36% decreased weight compared to control, 25% decreased survival compared to control	
Metals	Mercury	methyl-mercury		0.48	Rodgers and Beamish 1982	based on reported feeding rate		23.9	dw		commercial trout food	0.0057	0.0197	0.0127		0.000254	2.0%	2%BW/day	growth	Rainbow trout	fingerling	food	12 weeks	body weight in hatchling fish	growth was significantly reduced in fish fed 23.9 µg/g in diet ad libitum and in fish fed 23.3 µg/g in diet at a rate of 2% of their body weight (NOTE: no effect on growth was reported in fish fed 23.3 µg/g or 75.2 µg/g in diet at a rate of 1% of their body weight); food pellets were freeze dried.	
Metals	Mercury	methyl-mercury	1.5		Rodgers and Beamish 1982	based on reported feeding rate	94.8		dw		commercial trout food	0.0057	0.0219	0.0138		0.0002208	1.6%	estimated average from regression presented in paper	mortality	Rainbow trout	fingerling	food	12 weeks		no mortality reported; fish fed ground pellets - food pellets were freeze dried.	
Metals	Mercury	methylmercury		0.052	Sandheinrich and Miller 2006	assumed feeding rate info from Ogle and Knight 1989		0.87	dw		dry contaminated fish food	0.00507		0.00507	control weight from Table 2	0.0003042	6.0%	assumed average fathead minnow FR dry diet from Ogle and Knight 1989	behavior	Fathead minnow	juvenile	food	juvenile through sexual maturity	spawning behavoir (time spent spawning)	5 replicates; the NOAEL dw is the control (0.06)	not recommended: behavior endpoint
Metals	Mercury	methylmercury	0.24		Sandheinrich and Miller 2006	assumed feeding rate info from Ogle and Knight 1989	3.93		dw		dry contaminated fish food	0.00507		0.00507	control weight from Table 2	0.0003042	6.0%	assumed average fathead minnow FR dry diet from Ogle and Knight 1989	mortality	Fathead minnow	juvenile	food	juvenile through sexual maturity	mortality		

Table 4. TSVs for fish diet

Chemical Group	Analyte	Chemical Form	NOAEL (mg/kg BW/day)	LOAEL (mg/kg BW/day)	Source	Exposure rate notes	NOEC (mg/kg)	LOEC (mg/kg)	Weight basis	Moisture (%)	Diet type	Initial BW (kg)	End BW (kg)	(Initial + Final BW (kg))/2	BW notes	Feeding rate (kg-food/day)	FR (%BW/d)	Feeding rate notes	Endpoint	Test Species	Lifestage	Exposure Mode	Exposure Duration	Endpoint Effect	Notes	Rationale
Metals	Mercury	methylmercury	0.0091	0.019	Webber and Haines 2003	calculated from feeding rate	0.455	0.959	dw		prepared food	0.009		0.009	based on calculated initial BW	0.00018	2.0%	2%BW/day	behavior	Golden shiner		food	90 days	shoal area, shoal depth, and time to reform shoal after predator exposure	growth was significantly reduced at this LOEC; however, growth effect attributed to low food consumption in one replicate and growth effect was not dose-responsive (no effect in fish fed 0.959 ug/g ww). Initial weight calculated from data: avg of 0.8g of fish per liter, 20 fish per tank, each tank was 227 liters; doses are overestimated because 42% of feedings left in low-Hg diet tank vs 9-24% in other five tanks	not recommended: behavior endpoint
Metals	Mercury	methylmercury	0.019		Webber and Haines 2003	calculated from feeding rate	0.959		dw		prepared food	0.009		0.009	based on calculated initial BW	0.00018	2.0%	2%BW/day	mortality, growth	Golden shiner		food	90 days	growth, mortality	growth was significantly reduced at this dose; however, effect on growth was not dose-responsive (no effect in fish fed 0.959 ug/g ww); initial weight calculated from data: avg of 0.8g of fish per liter, 20 fish per tank, each tank was 227 liters; doses are overestimated because 42% of feedings left in low-Hg diet tank vs 9-24% in other five tanks	
Metals	Mercury	methylmercury chloride	0.84		Wobeser 1975		120		dw		pork liver mixed with dry trout food (5:1 ratio), assumed 80% moisture	0.0209		0.0209	mean initial BW for first trial, final BW not reported	0.0001463	0.70%	average of 3-4% BW/day corrected for assumed 80% moisture	mortality	Rainbow trout	fingerling	food	105 days	mortality	There was no effect on mortality for the first or second trial (BW data for this entry based on first trial)	
Metals	Mercury	methylmercury chloride	0.28	0.56	Wobeser 1975		40	80	dw		pork liver mixed with dry trout food (5:1 ratio), assumed 80% moisture	0.0317		0.0317	mean initial BW for second trial, final BW not reported	0.0002219	0.70%	average of 3-4% BW/day corrected for assumed 80% moisture	growth	Rainbow trout	fingerling	food	105 days	body weight		
Metals	Nickel	nickel sulfate	2.9		Ptashynski et al. 2001		1500		dw		prepared diet, diet with brine shrimp	0.306			initial weight listed in methods, no other weights reported	0.000595	0.19%	0.5% of total body weight per tank every Monday, Wednesday, and Friday; 7 times over 18 days.	growth	Lake trout	2 years old	food	18 days	body weight		
Metals	Nickel	nickel sulfate	21		Ptashynski et al. 2001		11000		dw		prepared diet, diet without brine shrimp	0.306			initial weight listed in methods, no other weights reported	0.000595	0.19%	0.5% of total body weight per tank every Monday, Wednesday, and Friday; 7 times over 18 days.	growth	Lake trout	2 years old	food	18 days	body weight		
Metals	Nickel	nickel sulfate	11		Ptashynski et al. 2002		5500		dw		prepared diet, 80% ww assumed as no moisture % was given	0.272	0.345	0.3085	weight from Ptashynski and Klaverkamp 2002 (as cited), initial weight from methods, end weight from Fig. 1	0.000599861	0.19%	0.5% of total body weight per tank every Monday, Wednesday, and Friday; 7 times over 18 days.	growth	Lake whitefish	4 years old	food	104 days	growth	No observed adverse growth effects	
Metals	Nickel	nickel sulfate	27		Ptashynski et al. 2001		14000		dw		prepared diet, diet with brine shrimp	0.208			initial weight listed in methods, no other weights reported	0.000404444	0.19%	0.5% of total body weight per tank every Monday, Wednesday, and Friday; 7 times over 18 days.	growth	Lake whitefish	3 years old	food	18 days	body weight		
Metals	Nickel	nickel sulfate	21		Ptashynski et al. 2001		11000		dw		prepared diet, diet without brine shrimp	0.208			initial weight listed in methods, no other weights reported	0.000404444	0.19%	0.5% of total body weight per tank every Monday, Wednesday, and Friday; 7 times over 18 days.	growth	Lake whitefish	3 years old	food	18 days	body weight		

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Chemical Group	Analyte	Chemical Form	NOAEL (mg/kg BW/day)	LOAEL (mg/kg BW/day)	Source	Exposure rate notes	NOEC (mg/kg)	LOEC (mg/kg)	Weight basis	Moisture (%)	Diet type	Initial BW (kg)	End BW (kg)	(Initial + Final BW (kg))/2	BW notes	Feeding rate (kg-food/day)	FR (%BW/d)	Feeding rate notes	Endpoint	Test Species	Lifestage	Exposure Mode	Exposure Duration	Endpoint Effect	Notes	Rationale
Metals	Nickel	nickel chloride		1.6	Javed 2013	based on reported exposure rate		79.11	dw		not specified in paper, dry weight assumed	0.0801	0.12085	0.100475	used control body weight(Initial:Table 1, Final: Table 2)	0.00201	2.0%	Observed feeding rate very low, so 2% of BW was used	growth	White carp (*Cirrhina mrigala*)	120 days old	food	12 weeks	growth	Observed feeding rate very low, so 2% of BW was used	
Metals	**Nickel**	**nickel chloride**		**1.4**	**Javed 2013**	**based on reported exposure rate**		**70.4**	**dw**		**not specified in paper, dry weight assumed**	**0.0807**	**0.11545**	**0.098075**	**used control body weight(Initial:Table 1, Final: Table 2)**	**0.00196**	**2.0%**	**Observed feeding rate very low, so 2% of BW was used**	**growth**	**Indian carp (*Catla catla*)**	**120 days old**	**food**	**12 weeks**	**growth**	**Observed feeding rate very low, so 2% of BW was used**	**selected TRV: lowest LOAEL that meets acceptability criteria**
Metals	Nickel	nickel chloride		1.4	Javed 2013	based on reported exposure rate		71.99	dw		not specified in paper, dry weight assumed	0.0744	0.10617	0.090285	used control body weight(Initial:Table 1, Final: Table 2)	0.00181	2.0%	Observed feeding rate very low, so 2% of BW was used	growth	Rohu (*Labeo rohita*)	120 days old	food	12 weeks	growth	Observed feeding rate very low, so 2% of BW was used	
Metals	Selenium	seleno-L-methionine	0.20	0.39	Cleveland et al. 1993	based on observed feeding rate	6.5	13	dw		pellets	0.0002		0.0002	initial BW	0.000006	3.0%	3% BW per day based on initial BW	growth	Bluegill	juvenile	food	90 days	condition factor	dry weight TRVs calculated based on assumed 10% moisture in pelleted food	
Metals	Selenium	seleno-L-methionine	0.78		Cleveland et al. 1993	based on observed feeding rate	26		dw		pellets	0.0002		0.0002	initial BW	0.000006	3.0%	3% BW per day	mortality	Bluegill	juvenile	food	90 days		diet without brine shrimp; survival results were significantly different from the control at some doses, but there was no dose reponse relationship. Abstract stated that mortality was not affected in the dietary exposure, so the highest dose was considered a NOAEL.	
Metals	Selenium	not specified		0.80	Coughlan and Velte 1989	average of 2 reported exposure rates (µg/fish)		38.40	dw		red shiners, 75% moisture	0.220	0.2209	0.221		0.0046	2.1%	calculated from Se ingestion rate and prey Se concentration	growth, mortality	Striped bass	juvenile	food	up to 80 days	condition factor; body weight; survival	food avoidance observed; many more golden shiners consumed per feeding than red shiners; 0.3 ppm ww Se in WB (background); % moisture was approx. 75%. ER reported asaverage of 103 and 140 µg/fish/feeding x 3feedings/wk x fish/.221kg*mg/1000µg* 1 week/7 days; converted into dw using reported percent moisture in study (75%)	
Metals	Selenium	selenomethionine (SeMet)	0.19	0.36	Hamilton et al. 1990		9.6	18.2	dw		pellet	0.00125	0.0053	0.003	initial BW is from Table 4, no initial BW reported, used 30d control	0.0000655	2.0%	"fed a percentage of their body weight per day," cites unattainable source, ASSUME 2%	growth	Chinook salmon	swim-up larvae	dietary (spiked fish, spiked pellets) in freshwater	90 days	body weight, fork length	Table 4 using the SeMet diet for freshwater; SLD diet excluded because of higher concentrations of some elements; organic compounds were not analyzed and could be present	
Metals	Selenium	selenomethionine (SeMet)	0.71		Hamilton et al. 1990		35.4		dw		pellet	0.00594	0.0221	0.014	initial BW is from Table 6, no initial BW reported, used 30d control	0.0002804	2.0%	"fed a percentage of their body weight per day," cites unattainable source, ASSUME 2%	survival	Chinook salmon	70-mm fingerlings	dietary (spiked fish, spiked pellets) in freshwater	120 days	survival	from text - no survival effects	
Metals	Selenium	selenomethionine (SeMet)	0.36	0.71	Hamilton et al. 1990		18.2	35.4	dw		pellet	0.00594	0.0221	0.014	initial BW is from Table 6, no initial BW reported, used 30d control	0.0002804	2.0%	"fed a percentage of their body weight per day," cites unattainable source, ASSUME 2%	growth	Chinook salmon	70-mm fingerlings	dietary (spiked fish, spiked pellets) in freshwater	120 days	body weight, fork length	Table 6 using the SeMet diet for brackish water; SLD diet excluded because of higher concentrations of some elements; organic compounds were not analyzed and could be present	
Metals	Selenium	selenomethionine (SeMet)	0.11	0.19	Hamilton et al. 1990		5.3	9.6	dw		pellet	0.00125	0.0053	0.003	initial BW is from Table 4, no initial BW reported, used 30d control	0.000066	2.0%	"fed a percentage of their body weight per day," cites unattainable source, ASSUME 2%	survival	Chinook salmon	swim-up larvae	dietary (spiked fish, spiked pellets) in freshwater	90 days	survival	Table 3 using the SeMet diet for freshwater; SLD diet excluded because of higher concentrations of some elements; organic compounds were not analyzed and could be present	

Table 4. TSVs for fish diet

Chemical Group	Analyte	Chemical Form	NOAEL (mg/kg BW/day)	LOAEL (mg/kg BW/day)	Source	Exposure rate notes	NOEC (mg/kg)	LOEC (mg/kg)	Weight basis	Moisture (%)	Diet type	Initial BW (kg)	End BW (kg)	(Initial + Final BW (kg))/2	BW notes	Feeding rate (kg-food/day)	FR (%BW/d)	Feeding rate notes	Endpoint	Test Species	Lifestage	Exposure Mode	Exposure Duration	Endpoint Effect	Notes	Rationale
Metals	Selenium	selenomethionine	0.22		Hardy et al. 2010		11.2		dw		pellet	0.0097	0.3467	0.178	Table 1, initial weight is control at 0-12 weeks, end weight is control at weeks 48-80	0.003564	2.0%	not reported in study, Assume 2%	survival, mortality	Cutthroat trout	juvenile to adulthood	food	124 weeks	weight, mortality		
Metals	**Selenium**	**selenized yeast fed to worms**	**0.11**	**0.20**	**Knight et al. 2016**		**10.7**	**19.5**	**dw**		**Lumbriculus**	**0.00028**	**0.0042**	**0.002**	**final BW from Figure 1B**	**0.0000224**	**1.0%**	**fish fed at 5% wet weight; converted to dry weight assuming 80% moisture**	**growth**	**Rainbow trout**	**juvenile**	**diet**	**60 days**	**body weight**	**Significant effects at 7.1, 19.5, and 31.8 but not 10.7 mg/kg**	**selected TRV: highest NOAEL that meets acceptability criteria**
Metals	Selenium	seleno-L-methionine; Na2SeO4; Na2SeO3	0.90	1.2	Ogle and Knight 1989	based on reported feeding rate	15	20	dw		prepared diet mix (pellets)	0.00012	0.00109	0.001	initial at 0 days, final at 98 days	0.0000363	6.0%	6% BW/day based on avg of BW on various days	growth	Fathead minnow	adult	food	98 days + spawning periods		decreased palatability observed, food aversion-not strong effects	
Metals	Selenium	seleno-L-methionine; Na2SeO4; Na2SeO3	1.8		Ogle and Knight 1989	based on reported feeding rate	30		dw		prepared diet mix (pellets)	0.00011	0.00094	0.001	initial at 0 days, final at 98 days	0.0000315	6.0%	6% BW/day based on avg of BW on various days	reproduc-tion	Fathead minnow	adult	food	98 days + spawning periods			
Metals	Selenium	selenomethionine	0.48	0.98	Tashjian et al. 2006		20.5	41.7	dw		pellet	0.0298	0.1141042	0.072	End BW calculatd by BW increase %, equation in footnote of Table 1	0.001690874	2.4%	average of published range 1.95 - 2.75% bw per day	growth	White sturgeon	juvenile	food	4-wk, 8-wk	body weight increase	Table 1 presents body weight and significance, survival effects not significant	
Metals	Selenium	selenized yeast	0.32	0.65	Teh et al 2004		12.6	26	dw		pellet	0.0068	0.034	0.020	End BW estimated from Figure 1	0.00051	2.5%	3% BW per day feeding rate for first 5 months, adjusted to 2% BW per day after	growth, survival	Splittail	7 month old		5 and 9 mo	mortality, growth		
Metals	Selenium	selenomethionine (SeMe)		0.042	Vidal et al. 2005			4.6	dw		pellet	0.00037	0.00517	0.003	Initial weight of control, day 90 control weight	2.50E-05		Average of feeding rate over exposure period	growth	Rainbow trout	larval (24 day post hatch)	dietary	90 days	body weight, fork length	growth effect not dose responsive, 30% mortality in controls	not recommended: not dose responsive
Metals	Selenium	selenomethionine (SeMe)	0.16		Vidal et al. 2005		18		dw		pellet	0.00037	0.00517	0.003	Initial weight of control, day 90 control weight	2.50E-05		Average of feeding rate over exposure period	survival	Rainbow trout	juvenile	dietary	90 days	body weight, fork length	30% mortality in controls	not recommended: not dose responsive
Metals	Silver	silver sulfide	70		Galvez and Wood 1999	reported feeding rate	3000		dw		dried pellets	0.0025	none given	0.0025		0.00005825	2.3%	2.33% BW/ day	growth	Rainbow trout		food	58 days	growth rate		
Metals	**Vanadium**	**Sodium orthovanadate**	**0.038**	**0.19**	**Hilton and Bettger 1988**	**assumed average RBT FR 1.9% BW/D**	**2.0**	**10.2**	**dw**		**pellets**	**0.0029**	**0.0142**	**0.01**		**0.0002**	**1.9%**		**growth**	**Rainbow trout**	**juvenile**		**12 weeks**	**body weight**	**feeding rate based on feed:gain ratio is 1.6g feed/11.3g fish/84 days = 0.17% BW/d. Average rainbow trout feeding rate of 1.9% BW/d assumed because calculated feeding rate is excessively low.; reduced feeding at all doses but significant increase in food consumption/weight gain**	**selected TRVs: only NOAEL and LOAEL that meet acceptability criteria**
Metals	**Zinc**	**unspecified form**	**19**	**38**	**Takeda and Shimma 1977**	**assumed 1.9% BW/D**	**1000**	**2000**	**dw**		**prepared dry food**	**0.0083**	**0.0192**	**0.01375**		**0.00026**	**1.9%**	**assumed average RBT FR**	**growth**	**Rainbow trout**	**fingerling**	**food**	**6 wks**		**fish fed at same dose Zn with 0.5% Ca experienced no adverse effects.**	**selected TRV: only LOAEL and NOAEL that meet acceptability criteria**
Metals	Zinc	zinc chloride	114		Mount et al. 1994	based on reported feeding rate	1900		dw		brine shrimp	0.000182	0.001198	0.00069		0.000041	6.0%	6% BW/day (dw basis)	mortality, growth	Rainbow trout	fry	primarily food	60 days	body weight and length; 97% survival	50 ppb Zn and some other metals in water in addition to dietary exposure	not recommended; see notes
PAHs	**Benzo(a)pyrene**	**Benzo(a)pyrene**	**0.030**	**0.040**	**Kim et al. 2008**		**1.5**	**2.0**	**dw**		**pellets**	**0.0216**		**0.0216**		**0.000432**	**2.0%**	**2% of BW/day in acclimation ,assume same for study**	**growth**	**Rockfish**	**juevenile**	**food**	**30 days**	**growth**	**states there is stat diff between control and exp but results in table difficult to interpret (superscript and table note issue), no NOAEL-just control; 1.5 and 2.0 notes: LOEC = lowest dose with significantly lower growth rate from solvent control**	**selected TRV: lowest LOAEL that meets acceptability criteria**

Table 4. TSVs for fish diet

Chemical Group	Analyte	Chemical Form	NOAEL (mg/kg BW/day)	LOAEL (mg/kg BW/day)	Source	Exposure rate notes	NOEC (mg/kg)	LOEC (mg/kg)	Weight basis	Moisture (%)	Diet type	Initial BW (kg)	End BW (kg)	(Initial + Final BW (kg))/2	BW notes	Feeding rate (kg-food/day)	FR (%BW/d)	Feeding rate notes	Endpoint	Test Species	Lifestage	Exposure Mode	Exposure Duration	Endpoint Effect	Notes	Rationale
PAHs	Benzo(a)pyrene	Benzo(a)pyrene	0.21	2.3	Corrales et al. 2014	Reported 1% bw	10.44	113.6	dw		prepared diet				no BW reported, doses presented in paper		2.0%	1% bw twice per day	reproduction	Zebrafish	120 d post fertilization	food	23 days	Embryo mortality post fertilization at 96 hours	F1 Generation, cumulative mortality of F1 generation following parental (F0) dietary exposure o BaP	
PAHs	Benzo(a)pyrene	Benzo(a)pyrene	3.0		Alsop et al. 2007		150		dw		pellet	0.00035	0.00075	0.00055	estimated initial and final average BW for control males and females from Fig. 1	0.000011	2.0%	not reported, assumed 2%	mortality, growth, reproduction	Zebrafish	juvenile	food	260 days	mortality, body weight, fertilization rate, number eggs spawned	no effects observed	
PAHs	Benzo(a)pyrene	Benzo(a)pyrene	0.66		Rice et al. 2000	reported feeding rate	9.4		ww	80%	juvenile polychaete worms	0.034		0.034	weight estimated from length using the equation y (g) = 0.7714x (mm)	0.0024	7.0%	Reported	growth	English sole	juvenile	food	10-12 days		diet of exposed polychaetes exposed for 28 days; dose calculated by feeding rates; field collected fish; growth rate at LOAEL concentration was 0.4%; weight based on Lower Duwamish Waterway (Seattle, WA) data	
PAHs	Benzo(a)pyrene	Benzo(a)pyrene		1.4	Rice et al. 2000	based on reported feeding rate		23.2	ww	80%	juvenile polychaete worms	0.034		0.034	weight estimated from length using the equation y (g) = 0.7714x (mm)	0.0020	6.0%	Reported	growth	English sole	juvenile	food	10-12 days		diet of exposed polychaetes exposed for 28 days; dose calculated by feeding rates; field collected fish; growth rate at LOAEL concentration was 0.4%; weight based on Lower Duwamish Waterway (Seattle, WA) data	
PAHs	Benzo(a)pyrene	Benzo(a)pyrene	3.7		Hendricks et al. 1985	calculated from feeding rate	1,000		ww		prepared diet	0.0033	0.36	0.18	BW at 18 months	0.00092	0.50%		mortality	Rainbow trout	juvenile (3 month old)	food	18 months		TRV is average dose = 364 mg B(a)P over 18 months/ 0.18 kg bw; mortality was greater in control; NOAEL supported by additional 9-week study; casein diet; dose also reported as 1.9 (364 mg BAP/0.361kg fish/540d). Likely conservative because assuming a 2% feeding rate results in a dose of 20mg/kg fish/day)and the calculated feeding rate is 0.5%/day which is unlikely to sustain the fish for 18 months	
PAHs	Benzo(a)pyrene	Benzo(a)pyrene		3.7	Hendricks et al. 1985	reported exposure rate		1,000	ww		prepared diet	0.0033	0.36	0.18	BW at 18 months	0.00092	0.50%		growth	Rainbow trout	3 month old	food	18 months	reduced body weight	TRV is average dose = 364 mg B(a)P over 18 months/ 0.18 kg bw; total mortality was higher in the control group; casein diet; dose also reported as 1.9 (364 mg BAP/0.361kg fish/540d=1.86 mg/kg BW/day; selected dose is likely conservative because assuming a 2% feeding rate results in a dose of 20mg/kg fish/day) and the calculated feeding rate is 0.5%/day which is unlikely to sustain the fish for 18 months	
PAHs	Benzo(a)pyrene	Benzo(a)pyrene	13		Wu et al. 2003	based on reported exposure rate	81		dw		pellets	0.0266	0.028	0.0273		0.0014	5.0%	5% of body weight per day	mortality, growth	Areolated grouper	juvenile	food	4 Wks + 4 wks recovery	survival, body length & weight	dose reported in study; exposure was dietary force feeding - fish were force fed pellet into larynx. Fish were force-fed 5% of their body weight per day. Concentration reported as 107.4 µg BaP/pellet. And a pellet was 5% of initial BW (2.66g) resulting in a concentration of 81 mg/kg. based on reported exposure rate.	
PAHs	Benzo(a)pyrene	Benzo(a)pyrene	1.9	19	Hart and Heddle 1991	assumed average RBT FR 1.9% BW/D	100	1,000	dw		assume pellets	0.002	0.004	0.0030		0.00006	1.9%	assumed average RBT FR	growth	Rainbow trout	juvenile	food	28 days		diet in commercial food	
PAHs	Total PAH	field collected PAH mixture		0.12	Rice et al. 2000	based on reported feeding rate		2.3	ww		juvenile polychaete worms	0.034		0.034	weight estimated from length using the equation y (g) = 0.7714x (mm)	0.0018	5.4%	Reported	growth	English sole	juvenile	food	10-12 days		diet of exposed polychaetes exposed for 28 days; dose calculated by feeding rates; field collected fish; growth rate at LOAEL concentration was 0.4%; weight based on Lower Duwamish Waterway (Seattle, WA) data; prey exposed to field mixture of PAHs	not recommended: LOAEL based on fish exposed to field-exposed prey

Table 4. TSVs for fish diet

Chemical Group	Analyte	Chemical Form	NOAEL (mg/kg BW/day)	LOAEL (mg/kg BW/day)	Source	Exposure rate notes	NOEC (mg/kg)	LOEC (mg/kg)	Weight basis	Moisture (%)	Diet type	Initial BW (kg)	End BW (kg)	(Initial + Final BW (kg))/2	BW notes	Feeding rate (kg-food/day)	FR (%BW/d)	Feeding rate notes	Endpoint	Test Species	Lifestage	Exposure Mode	Exposure Duration	Endpoint Effect	Notes	Rationale
PAHs	Total PAH	PAH mixture	5.0		Palm et al. 2003	based on reported feeding rate	252		ww	10%	pellets	0.0183		0.0183	BW at 4 weeks	0.00037	2.0%	2% BW/day	growth	Chinook salmon	juvenile	food	7 wks		converted to dw (based on 10% moisture in pelleted food as reported in study) NOAEL-252 mg/kg dw; PAH mixture includes: acenaphthene, benz[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, benzo[ghi]perylene, benzo[k]fluoranthene, chrysene, dibenz[a,h]anthracene, fluoranthene, fluorene, indeno[1,2,3-cd]pyrene, naphthalene, phenanthrene, pyrene	
PAHs	Total PAH	PAH mixture	5.0		Palm et al. 2003	based on reported feeding rate	252		ww	10%	pellets	0.0183		0.0183	BW at 4 weeks	0.00037	2.0%	2% BW/day	disease resistance	Chinook salmon	juvenile	food	4 wks exposure, 2 wks immuno-challenge		fish were exposed to *Listonella anguillarum* following PAH exposure; No difference was observed between PAH-exposed fish and controls in either fish that were vaccinated against the bacterium or those that weren't vaccinated; converted to dry weight (based on 10% moisture in pelleted food as reported in study) NOAEL-280 mg/kg dw; PAH mixture includes: acenaphthene, benz[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, benzo[ghi]perylene, benzo[k]fluoranthene, chrysene, dibenz[a,h]anthracene, fluoranthene, fluorene, indeno[1,2,3-cd]pyrene, naphthalene, phenanthrene, pyrene	
PAHs	**Total PAH**	**PAH mixture[b]**	**6.2**	**18**	**Meador et al 2006**	**reported exposure rate**	**324**	**951**	**dw**		**pellet**	**0.01295**		**0.01295**		**0.00025**	**1.9%**	**1.9% BW/d as reported in study**	**growth**	**Chinook salmon**	**juvenile**	**ingestion**	**58 days**	**reduction in growth (DW), but possibly due to toxicant induced starvation**	**High variability among all treatments**	**selected TRVs: only LOAEL that meets acceptability criteria; NOAEL is highest NOAEL below selected LOAEL that meets acceptability criteria**
PCBs	Total PCBs	Aroclor 1254		0.019	Berlin et al. 1981	assumed average brook trout FR dry diet		1.14	dw		Oregon moist mush and pellets	0.097	3.8	1.9		0.0331245	1.7%	assumed average brook trout FR dry diet	mortality	Brook trout	fry	water and food	176 days	fry mortality	field-collected eggs from Lake Michigan with starting egg residues of 7.6 µg/g PCBs and 4.7 µg/g DDE; mortality is estimated; fish fed Oregon Moist pellets	not recommended: field-collected organisms
PCBs	Total PCBs	Aroclor 1242		0.60	Hansen et al. 1976	based on reported feeding rate		20	dw		pellets	0.0128	0.05	0.031	Initial and day 140 BW for control group	0.000942	3.0%	3% BW/day	growth	Channel catfish	fingerling	food	20 wks	reduced weight gain	Growth was recovered in the treatment group when PCB was removed from diet	
PCBs	Total PCBs	Aroclor 1254		4.0	Hendricks et al. 1981			200	dw		semipurified casein test diet; assumed dw	not reported		0.36	estimated from Hendricks et al. 1985	0.0072	2.0%	assumed 2% BW/d	reproduction	Rainbow trout	adult	food	2 months	offspring fry growth	gravid females fed 200 µg/g PCBs for 60 days; fish fed Oregon Moist pellets	
PCBs	**Total PCBs**	**Aroclor 1260**		**0.25**	**Hugla and Thome 1999**	**assumed 2% BW/D**		**12.5**	**dw**		**not specified**			**0.469**	**average of 4-5 year old controls (males and females) from Hugla et al. 1995**	**0.00938**	**2.0%**	**assumed 2% BW/d**	**reproduction**	**Barbel**	**adult**	**food**	**75 days**	**reduced egg hatching rate (failure to spawn)**	**growth was not measured in this study; no weights or temperature were reported; after a 1 yr period of detox, spawning rate for the high dose group was the same as the control and low dose group**	**Uncertainty in reduced fecundity endpoint, so range of LOAELs selected**
PCBs	**Total PCBs**	**Aroclor 1260**		**0.05**	**Hugla and Thome 1999**	**assumed 2% BW/D**		**2.5**	**dw**		**not specified**			**0.469**	**average of 4-5 year old controls (males and females) from Hugla et al. 1995**	**0.00938**	**2.0%**	**assumed 2% BW/d**	**reproduction**	**Barbel**	**adult**	**food**	**75 days**	**reduced fecundity, EROD induction**	**effects observed at lowest dose, therefore is an unbounded LOAEL; growth was not measured in this study; no weights were reported.**	**selected TRV: lowest LOAEL; uncertainty in reduced fecundity endpoint, so range of LOAELs selected**
PCBs	Total PCBs	Aroclor 1254	0.11		Lieb et al. 1974	calculated based on total PCB consumption in Table III	15		dw		pellets	0.00077	0.078	0.039	end BW estimated from Fig. 5 for control group	0.0041875	na		mortality, growth	Rainbow trout	14-wk	food	32 weeks		only no-effect level reported; fish fed pellet food	
PCBs	Total PCBs	Aroclor 1268	0.80		Matta et al. 2001	assumed feeding rate from Gutjahr-Gobell et al. 1999	32		dw		contaminated food			0.0119	weight for control	0.0002975	2.5%	feeding rate from Gutjahr-Gobell et al. 1999	mortality, growth, reproduction	Mummichog	adult	food	> = 6 wks	fertilization and hatching success, larval survival, weight, survival	two generations of progeny observed; only no-effect level reported; fish fed pellet food	

Table 4. TSVs for fish diet

Chemical Group	Analyte	Chemical Form	NOAEL (mg/kg BW/day)	LOAEL (mg/kg BW/day)	Source	Exposure rate notes	NOEC (mg/kg)	LOEC (mg/kg)	Weight basis	Moisture (%)	Diet type	Initial BW (kg)	End BW (kg)	(Initial + Final BW (kg))/2	BW notes	Feeding rate (kg-food/day)	FR (%BW/d)	Feeding rate notes	Endpoint	Test Species	Lifestage	Exposure Mode	Exposure Duration	Endpoint Effect	Notes	Rationale
PCBs	Total PCBs	Aroclor 1254		0.40	McCarthy et al. 2003	reported exposure rate					ground shrimp			na	not needed because body-weight normalized dose calculated in paper	na	na	not needed because body-weight normalized dose calculated in paper	reproduction	Atlantic croaker	adult	food	2 weeks	growth rate, impaired larval response to startle stimulus	wild fish used; parental fish fed dietary PCBs; behavior effect could results in increased susceptibility to predation; fish fed ground shrimp	
PCBs	Total PCBs	Aroclor 1254	0.37		Powell et al. 2003	based on reported feeding rate	18.4	-	dw		pellets, 7.5% moisture	0.00839	0.015	0.012	based on control group average	0.00023	2.0%	ad libitum up to 2% BW/day	growth	Chinook salmon	juvenile	food	28 days	body weight	whole body burdens ranged from 0.74 to 0.98 mg/kg ww over the 13-day period following treatment; only no-effect level reported; fish fed pelleted salmon feed - 7.5% moisture	
PCBs	Total PCBs	PCB-126		0.0010	Quabius et al. 1997			0.05	dw		prepared diet	0.0209	0.0256	0.023	control weight reported in methods in results (1a)	0.00047	2.0%	based on average BW	growth	Tilapia		food	5 days	growth	duplicate experiments performed with the same results. Experiment 1b not entered	not recommended: 5-day acute growth study
PCBs	Total PCBs	PCB-126	0.0010		Quabius et al. 1997		0.05		dw		prepared diet	0.0209	0.0256	0.023	control weight reported in methods in results (1a)	0.00047	2.0%	based on average BW	mortality	Tilapia		food	5 days	mortality	no adverse effects observed	
Pesticides	Dieldrin	1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-1,4,5,8-dimethanonaphthalene	0.0081		Johnson et al. 2007		0.81		dw		pellet	0.155			Average initial weight of both experimental groups, no final weight reported	0.0016	1.0%	pelleted food mixed with fish oil	growth, mortality, reproduction	Largemouth bass	mature; 2 years old	food	120 days	% fry hatching	No significant effects on reproduction when exposed through the ovarian cycle, high variablity among fish of the same age and reproductive stage, no dose response relationship, no effect on mortality; no effects for 30-day experiment	
Pesticides	DDE	2,2-bis(4-chlorophenyl)-1,1-dichloroethylene	0.50		Johnson et al. 2007		50		dw		pellet	0.155			Average initial weight of both experimental groups, no final weight reported	0.0016	1.0%	pelleted food mixed with fish oil	growth, mortality, reproduction	Largemouth bass	mature; 2 years old	food	120 days	% fry hatching	No significant effects on reproduction when exposed through the ovarian cycle, high variablity among fish of the same age and reproductive stage, no dose response relationship, no effect on mortality; no effects for 30-day experiment	
Pesticides	Endosulfan	Technical mixture (67% alpha endosulfan, 33% beta-endosulfan), 99.8 % purity	0.011		Petri et al. 2006		0.71		dw		fish meal	0.0466	0.097	0.0718		0.001077	1.5%		growth	Atlantic salmon	pre-smolt	food	49 days	growth	no effect if considering growth separate from condition factor; there was an effect for condition factor (which includes growth); paper calculated estimated dose; fed by automatic feeders twice daily and collected excess food	
Pesticides	Endrin	99% pure Endrin	0.043	0.15	Grant and Mehrle 1973	doses provided in paper	2.15	7.25	dw		pellets, assumed dw	0.199	0.473	0.336	Table 2, weight of control at start, plus gain of control at 163 d	0.00672	2.0%		growth	Rainbow trout	mature	food	163 days	growth	LOAEL and NOAEL based on growth inhibition	
Pesticides	Endrin	not specified	0.14	0.43	Grant and Mehrle 1970	doses provided in paper			dw		pellets, assumed dw				na - doses provided in paper			na - doses provided in paper	mortality, growth	Goldfish	sexually mature male	food	157 days	growth	LOAEL and NOAEL based on growth inhibition	
Pesticides	Total DDT	p,p'-DDE		0.0048	Berlin et al. 1981	assumed average brook trout FR dry diet		0.28	dw		Oregon moist mush and pellets, 8% ww	0.095	3.4	1.8		0.0299625	1.7%	assumed average brook trout FR dry diet	mortality	Brook trout	fry	water and diet	176 days	fry mortality	field-collected eggs from Lake Michigan with starting egg residues of 7.6 µg/g PCBs and 4.7 µg/g DDE; mortality is estimated; fish fed Oregon Moist pellets	not recommended: field-collected organisms

Table 4. TSVs for fish diet

Chemical Group	Analyte	Chemical Form	NOAEL (mg/kg BW/day)	LOAEL (mg/kg BW/day)	Source	Exposure rate notes	NOEC (mg/kg)	LOEC (mg/kg)	Weight basis	Moisture (%)	Diet type	Initial BW (kg)	End BW (kg)	(Initial + Final BW (kg))/2	BW notes	Feeding rate (kg-food/day)	FR (%BW/d)	Feeding rate notes	Endpoint	Test Species	Lifestage	Exposure Mode	Exposure Duration	Endpoint Effect	Notes	Rationale
Pesticides	Technical DDT	sum of DDE and DDD detected in tissue	0.48	1.2	Buhler et al. 1969	dose calculated from Table 2; LOEC = 30.9 mg DDT/kg-bw/ 26.6d; NOEC = 3.37 mg/ kg-bw/ 7d					prepared diet				body weight not used in dose calculation			feeding rate not used in dose calculation	mortality	Chinook salmon	0.61 g fingerling	food	40 days	survival	Based on results from Trial I	
Pesticides	Total DDT	"DDT" including DDE and DDD		1.2	Butler 1969	based on observed feeding rate		20.4	dw		oysters, assumed 80% ww			0.003	Avg wt. expt 4	0.00018	6.0%	30% BW/d, corrected for assumed 80% ww	mortality	Pinfish	3.0 g	diet (oysters)	21 days	44% mortality at 10 days	4% mortality in control	
Pesticides	Total DDT	"DDT" including DDE and DDD		0.94	Butler 1969	based on observed feeding rate		23.5	dw		oysters, assumed 80% ww			0.0048	Avg wt. expt 5	0.000192	4.0%	20% BW/d, corrected for assumed 80% ww	mortality	Pinfish	4.8 g	diet (oysters)	15 days	35% mortality at 21 days	0% mortality in control	
Pesticides	Total DDT	total DDT	0.036		Hilton et al. 1983	assumed 2% BW/D	1.89		dw		pellets	0.0037	0.132	0.1		0.00128915	1.9%	assumed average RBT FR	mortality, growth	Rainbow trout	juvenile	diet (pellet)	24 weeks	final body weight, survival	no effect on growth, survival, or behavior was observed at the NOAEL; significant increase in serum T4 levels was reported at this highest exposure dose group (not an adverse effect)	not recommended: based on fish exposed to field-collected prey
Pesticides	Total DDT	p,p'-DDT		2.7	Jarvinen et al. 1976, 1977	assumed 6% BW/D		45.6	dw		dried clam	0.00012		0.00012	initial BW from Ogle and Knight 1989	0.0000072	6.0%	assumed average fathead minnow FR dry diet (Ogle and Knight 1989)	mortality	Fathead minnow	juvenile-adult	food	266 days	survival	Probability of survival in food exposed fish was approximately 78% versus approximately 90% survival in controls, the difference was statistically significant	
Pesticides	Total DDT	p,p'-DDT	0.29		Macek 1968a	based on observed ER 2mg/kg-bw/wk					pellets	0.03	0.045	0.037	exposed 1x per week	na	na	not needed - dose presented in paper	mortality	Brook trout	under yearling	diet	26 weeks	reduced survival during stress (starvation)	LOAEL is range of total DDT (including DDD, DDE, 2,4'-DDT and 4,4'-DDT) in fish exposed to 2.0 mgkg/wk DDT; controls found to have 0.36 µg/kg DDT (0.0071 mg/kg/d). NOEC/LOEC not presented as concentration in this table because dose presented as mg/kg bw/week.	
Pesticides	Total DDT	p,p'-DDT		0.29	Macek 1968a	based on observed ER 2mg/kg-bw/wk					pellets	0.03	0.0417	0.036	exposed 2x per week	na	na	not needed - dose presented in paper	growth	Brook trout	under yearling	diet	31 weeks	reduced growth	No adverse effects (significant increase in growth, not a decrease); controls found to have 0.36 µg/kg DDT (0.0071 mg/kg/d). NOEC/LOEC not presented as concentration in this table because dose presented as mg/kg bw/week.	
Pesticides	**Total DDT**	**p,p'-DDT**		**0.14**	**Macek 1968b**	**1 mg/kg bw/wk**					**pellets**	**0.162**		**0.162**		**na**	**na**	**not needed - dose presented in paper**	**reproduction**	**Brook trout**	**sex mat yearlings**	**food**	**156 days**		**embryo mortality; LOAEL= reproduction effect in fish fed 1.0 mg/kg/wk (or 7.2 mg/kg DDT in diet); fish fed pellet diet**	**selected TRV: lowest LOAEL that meets acceptability criteria**
Pesticides	Total DDT	p,p'-DDT	0.29		Macek 1968b	2.0 mg/kg/wk					pellets	0.162	0.383	0.273		na	na	not needed - dose presented in paper	mortality, growth	Brook trout	sex mat yearlings	food	156 days	survival, growth	no effect level reported; length but not weight of male fish was significantly greater than controls; NOAEL- no effect on growth or mortality in fish fed 2.0 mg/kg/wk (or 14.4 mg/kg DDT in diet); fish fed pellet diet;	
Pesticides	Total DDT	sum of detected DDT and its metabolites (DDD and DDE)	0.045		Macek and Korn 1970	reported feeding rate and exposure rate, also dosed 0.006mg/kg/day from water	3.0		dw		pellets			0.121	BW data extrapolated from L-W relationship W = 0.0002 xL ^2.65 (L= 6 inches)	0.0018	1.5%	fed 1.5%bw/day	mortality	Brook trout	juvenile	food	120 days		no effect level reported; fish fed 3.0 mg/kg dw once daily at a rate of 1.5% of their body weight/day; fish fed pellet diet; length weight relationship based on (http://wlapwww.gov.bc.ca/nor/fish/stocking/ferguson/)	
Pesticides	Total DDT	sum of detected DDT and its metabolites (DDD and DDE)	0.14		Macek et al. 1970	reported exposure rate	1.0		dw			0.015	0.096	0.055		0.0011	2.0%	2% BW/day	mortality, growth	Rainbow trout	15 g	food	168 days	survival, growth	radio tracer study; no effect level reported; fish fed pellet diet	
Pesticides	Total DDT	sum of detected DDT and its metabolites (DDD and DDE)	0.019		Rhead and Perkins 1984	assumed 2% BW/D	0.93		dw		prepared food	0.00455		0.00455	based on initial BW	0.0001	2.0%	fed to satiety daily assumed 2% BW/d	mortality	Goldfish	9.1 g	food	58 days	survival	radio tracer study; no effect level reported; fish fed synthetic diet- approximately 41% water, however analytical methods suggest that dw basis is presented.	
Pesticides	Total DDT	14C-p,p'-DDT	0.0023		Warlen et al. 1977	based on reported feeding rate	0.093		dw		prepared food	0.0068	0.69	0.348	based on initial BW	0.0087	2.5%	based on initial BW	growth	Atlantic menhaden		food	48 days	growth	radio tracer study; number in parentheses represents days observed after exposure; the number before represents days over which fish were exposed; no effect level reported; fish fed pellets; 15mg DW adjusted to WW using conversion factor of .22WW to DW	

Table 5. TSVs for bird egg tissue

Chemical Group	Chemical	Chemical Form	NOAEL	LOAEL	Units (ww)	Source	Endpoint	Test Species	Exposure Mode	Exposure Duration	Effect Endpoint	Notes	Rationale
Metals	Mercury	methylmercury chloride		0.12	mg/kg	Heinz et al. 2009	reproduction	White ibis and American kestrel	injection (air cell)	through hatching (single injection at developmental stage equivalent to 3-days in chickens)	survival (mortality at 90% of egg incubation period)	Endpoint was LC50; eggs were collected from the wild from areas believed to be free of heavy contamination by mercury; the paper noted that LC50s would be higher than those maternally deposited in the eggs by the mother and that the data are most useful for ranking sensitive species; white ibis and American kestrel were the most sensitive of the species tested	not recommended: LOAEL based on field collected eggs
Metals	Mercury		0.50		mg/kg	Wiemeyer et al. 1984	reproduction	Bald eagle	Field study- 14 states in 1969-1979		5-year productivity	suggested NOAEL above which adverse effects on reproduction might be expected; correlated with a decrease in 5-year productivity; multiple COCs—PCBs, DDE, and other pesticides; PCBs and DDE associated with decreased productivity; mercury effects on productivity less clear and therefore highly uncertain	
Metals	Mercury		0.52 (in 1977) and 0.51 (in 1978)		mg/kg	Haseltine et al. 1981	reproduction	red-breasted merganser	Field study- islands on Lake Michigan 1977 and 1978		hatching success	NOAEL is geometric mean in 1977 and 1978, respectively, where hatching success was "fairly successful" (81.7 and 82.6% successful); other species tested (common merganser, mallard, gadwall, and black duck) were less sensitive than the red-breasted merganser; hatching success apparently not affected- qualitative discussion only- appear unaffected or marginally affected	
Metals	Mercury	mercuric chloride	0.30	0.7	mg/kg	Stoewsand et al. 1971	reproduction	Japanese quail, one day old	food	10 wks	eggshell thickness	significant effects observed on eggshell thinning; no effect on hatchability, fertility, or egg production	not recommended: no direct effect on growth, survival or reproduction measured
Metals	**Mercury**	**methyl mercury chloride**		**0.74**	**mg/kg**	**Heinz and Hoffman 2003**	**reproduction**	**Mallard**	**food**	**reproductive period (through 2 laying periods)**	**embryo development (observed deformities)**	**LOAEL is the lower end of the range of egg residues (0.74 - 38) reported where effect was observed; study recommends that a LOAEL at 1 µg/g or less will result in embryo deformities and reduced hatchability for a small percentage of mallard embryos**	**Selected TRV: lowest LOAEL that meets acceptability criteria; no NOAEL available from study**
Metals	Mercury	methyl mercury		0.83	mg/kg	Heinz 1979	reproduction, behavior	Mallard	food	3 generations	egg and young production, eggshell thinning, duckling response to maternal call, duckling avoidance behavior	LOAEL is average egg residue laid from birds fed 0.5 mg Hg/kg; range of residues = 0.79 - 0.86 µg/g ww; only one dose used	
Metals	Mercury	methyl mercury chloride		0.93	mg/kg	Heinz and Hoffman 2003	reproduction	Mallard	food	reproductive period (through 2 laying periods)	embryo development (observed deformities)	LOAEL is the lower end of the range of egg residues (0.93 - 18) reported where effect was observed; study recommends that a LOAEL at 1 µg/g or less will result in embryo deformities and reduced hatchability for a small percentage of mallard embryos	
Metals	Mercury	Methyl mercury	0.79 - 1.05	5.46 - 7.39	mg/kg	Heinz 1976	reproduction	Mallard	food	2 years	offspring survival, avoidance response of offspring	statistically significant effects; LOAEL and NOAEL is range of egg residues reported where effect was observed	
Metals	Mercury	methyl mercury dicyandiamide	1.0	6.0 - 9.0	mg/kg	Heinz 1974	reproduction	Mallard	food	through hatching (12 months)	depressed hatching success, depressed egg production, and increased duckling mortality to 1 wk of age	no discussion of statistical significance of effects	
Metals	Mercury	mercuric sulfate		29.0	mg/kg	Scott et al. 1975	reproduction	White leghorn chickens	food	8 wks	hatchability	LOAEL is the Hg concentration in eggs following 8 weeks exposure to 200 mg/kg Hg in the diet; egg residue lower than in eggs laid from birds fed 10 mg/kg Hg as methylmercury chloride	not recommended: chicken reproductive endpoint
Metals	Mercury	methylmercury chloride		40.2	mg/kg	Scott et al. 1975	reproduction	White leghorn chickens	food	8 wks	egg weight, fertility and hatchability of eggs	LOAEL is the Hg concentration in eggs following 8 weeks exposure to 10 mg/kg Hg in the diet; egg residue higher than in eggs laid from birds fed 200 mg/kg Hg as mercuric sulfate	not recommended: chicken reproductive endpoint
Dioxins/ furans	TEQ-bird	2,3,7,8-TCDD	1.530000	0.010	ng/g	Henshel et al. 1993	reproduction	Chicken	injection (yolk and air sac)	single injection + 5 days intubation (untreated)	embryo abnormalities	occurrence of abnormalities= 16.7% (1/6) at LOAEL (0/6 at control); no discussion of statistical significance	not recommended: chicken reproductive endpoint

Table 5. TSVs for bird egg tissue

Chemical Group	Chemical	Chemical Form	NOAEL	LOAEL	Units (ww)	Source	Endpoint	Test Species	Exposure Mode	Exposure Duration	Effect Endpoint	Notes	Rationale
Dioxins/ furans	TEQ-bird	PCB 126 (using a TEF of 0.1)		0.03	ng/g	Hoffman et al. 1998	reproduction	Chicken	injection (air cell)	single injection on day 4	hatching weight without yolk sac, embryo and hatching malformation	effects observed through hatching; most sensitive reproductive endpoints; unbounded LOAEL; LC50=0.4 ng/g	not recommended: chicken reproductive endpoint
Dioxins/ furans	TEQ-bird	2,3,7,8-TCDD		0.122	ng/g	Henshel et al. 1997	reproduction	White leghorn chicken	injection (yolk)	single injection + 21 days untreated	embryo mortality	LC50 for yolk-injected eggs based on probit analysis (146 pg/g based on graphic interpretation; LC50 for air-sac injection eggs = 297 and 255 pg/g based on probit analysis and graphic interpretation, respectively	not recommended: chicken reproductive endpoint
Dioxins/ furans	TEQ-bird	2,3,7,8-TCDD		0.15	ng/g	Powell et al. 1996	reproduction	White leghorn chicken	injection	single injection + intubation period (untreated)	embryo abnormality and mortality	LC50	not recommended: chicken reproductive endpoint
Dioxins/ furans	TEQ-bird	2,3,7,8-TCDD	0.080	0.16	ng/g	Powell et al. 1996	reproduction	White leghorn chicken	injection	single injection + intubation period (untreated)	embryo mortality, embryo deformities	100% mortality at injected concentrations greater than 0.16 (LOAEL); 28% mortality at NOAEL- not statistically different from control; control = 23% mortality	not recommended: chicken reproductive endpoint
Dioxins/ furans	TEQ-bird	PCB 126 (using a TEF of 0.1)		0.23	ng/g	Powell et al. 1996	reproduction	White leghorn chicken	injection	single injection + intubation period (untreated)	embryo mortality	LC50	not recommended: chicken reproductive endpoint
Dioxins/ furans	TEQ-bird	2,3,7,8-TCDD	0.050	0.25	ng/g	Augspurger et al. 2008	reproduction	White leghorn chicken	injection (yolk)	single injection	embryo mortality	84% mortality at LOAEL vs. 24% mortality in non-injected controls.	not recommended: chicken reproductive endpoint
Dioxins/ furans	TEQ-bird	PCB 77 (using a TEF of 0.05)	0.060	0.30	ng/g	Hoffman et al. 1998	reproduction	Chicken	injection (air cell)	single injection on day 4	hatching success, embryo malformation	effects observed through hatching; most sensitive reproductive endpoints; LC50=2.6 ng/g	not recommended: chicken reproductive endpoint
Dioxins/ furans	TEQ-bird	2,3,7,8-TCDD	0.100	0.300	ng/g	Henshel et al. 1997	reproduction	White leghorn chicken	injection (yolk and air sac)	single injection + 21 days untreated	embryo mortality and hatching body weight	100% mortality in yolk-injected eggs; 39% survival in air-sac injected eggs	not recommended: chicken reproductive endpoint
Dioxins/ furans	TEQ-bird	PCB 126 (using a TEF of 0.1)	0.16	0.32	ng/g	Powell et al. 1996	reproduction	White leghorn chicken	injection	single injection + intubation period (untreated)	embryo mortality, embryo deformities	92% mortality at LOAEL; LC50=2.6 ng/g; 22% mortality at NOAEL (not statistically different from control); 8.5% mortality at control	not recommended: chicken reproductive endpoint
Dioxins/ furans	TEQ-bird	TEQ	0.322		ng/g	Powell et al. 1997	reproduction	Double-crested cormorants	field	field exposure	embryo mortality, gross abnormalities, body weight	no observed effects in extract from field-collected double-crested cormorant eggs; injections made into field-collected eggs from isolated "clean" colony in Manitoba, Canada	
Dioxins/ furans	**TEQ-bird**	**2,3,7,8-TCDD**		**1.0**	**ng/g**	**Janz and Bellward 1996**	**reproduction**	**Pigeon**	**injection (air cell)**	**single injection + 18 day incubation**	**hatchability**	**hatchability at LOAEL (57.9%) significantly different than control (73.7%)**	**Selected TRV: lowest LOAEL that meets acceptability criteria; no NOAEL available from study**
Dioxins/ furans	TEQ-bird	2,3,7,8-TCDD	0.10	1.0	ng/g	Nosek et al. 1992	reproduction	Ring-necked pheasant	injection (albumin)	single injection (effects observed up to 5 days)	embryo mortality	significant mortality (57.5%) at LOAEL; mortality at NOAEL (38.7%) not significantly different than control (37.5%); LC50 = 1.352 ng/g	not recommended: pheasant reproductive endpoint
Dioxins/ furans	TEQ-bird	2,3,7,8-TCDD		2.0	ng/g	Janz and Bellward 1996	reproduction	Great blue heron	injection (air cell)	single injection + 28 day incubation	hatchability	hatchability at LOAEL (82.4%) and hatchability at control = 100% (not statistically evaluated); not a clear adverse effect on hatchability at LOAEL; uncertain LOAEL	
Dioxins/ furans	TEQ-bird	2,3,7,8-TCDD	2.3		pg/g ww	Henny et al. 2003	reproduction	Osprey	Field study- Willamette River in 1993 (reference site - Cascade mountains)		productivity	NOAEL is geometric mean (range = 1.5 - 5.6 pg/g) of egg residues; residues measured when osprey productivity in 1993 = 1.64 young/ active nest, which is twice the number needed to maintain a stable population; small number of eggs over large areas (10 eggs over 135 miles); DDE also present but at low concentrations, also PCBs and dieldrin present	field study
Dioxins/ furans	TEQ-bird	2,3,7,8-TCDD	2.57 - 7.42		pg/g ww	Thomas and Anthony 1999, 2003	reproduction	Great Blue Heron	Field study- Lower Columbia River and Willamette River 1994-1995 (reference site - Samish Island, Washington)		breeding behavior (nest attendance and visitation), fledging, reproductive success	Field locations at or near pulp and paper mills; hatching, fledging, and reproductive success were similar to that reported in healthy populations (no effect); NOAEL is geometric mean from 5 sites over 2 years; TCDD concentrations were impacting individual herons but not at the colony level; other COCs—PCBs (geometric mean range from 474-2,842 µg/g), DDE (geometric mean range from 331-1,432 µg/g)	field study

Table 5. TSVs for bird egg tissue

Chemical Group	Chemical	Chemical Form	NOAEL	LOAEL	Units (ww)	Source	Endpoint	Test Species	Exposure Mode	Exposure Duration	Effect Endpoint	Notes	Rationale
Dioxins/ furans	TEQ-bird	2,3,7,8-TCDD		4.0	ng/g	Powell et al. 1997	reproduction	Double-crested cormorants	injection (yolk)	single injection + intubation period (untreated)	embryo mortality	50% mortality (significant) at LOAEL; control mortality=27-28%; injections made into field-collected eggs from isolated "clean" colony in Manitoba, Canada	
Dioxins/ furans	TEQ-bird	2,3,7,8-TCDD		4.0	ng/g	Powell et al. 1998	reproduction	Double-crested cormorants	injection (yolk)	single injection + intubation period (untreated)	embryo mortality	LC50 for embryo mortality; injections made into field-collected eggs from isolated "clean" colony in Manitoba, Canada	
Dioxins/ furans	TEQ-bird	PCB 126 (using a TEF of 0.1)		4.4	ng/g	Hoffman et al. 1998	reproduction	Common tern	injection (air cell)	single injection on day 4	embryo survival, hatching success	effects observed through hatching; most sensitive reproductive endpoints; unbounded LOAEL; LC50=104 ng/g	
Dioxins/ furans	TEQ-bird	2,3,7,8-TCDD	4.6		ng/g	Augspurger et al. 2008	reproduction	wood duck	injection (yolk)	single injection	embryo mortality	no mortality compared to noninjected controls	
Dioxins/ furans	TEQ-bird	PCB 77 (using a TEF of 0.05)		5.0	ng/g	Hoffman et al. 1998	reproduction	American kestrel	injection (air cell)	single injection on day 6	embryo survival, hatching success, embryo malformation	effects observed through hatching; most sensitive reproductive endpoints; unbounded LOAEL; LC50=688 ng/g	
Dioxins/ furans	TEQ-bird	2,3,7,8-TCDD	1.3	5.4	ng/g	Powell et al. 1998	reproduction	Double-crested cormorants	injection (yolk)	single injection + intubation period (untreated)	embryo mortality	significant mortality at LOAEL; injections made into field-collected eggs from isolated "clean" colony in Manitoba, Canada	
Dioxins/ furans	TEQ-bird	2,3,7,8-TCDD	1.0	10	ng/g	Nosek et al. 1992	reproduction	Ring-necked pheasant	injection (yolk)	single injection (effects observed up to 5 days)	embryo mortality	significant mortality (97.5%) at LOAEL; mortality at NOAEL (60.0%) not significantly different than control (50%); LC50 = 2.182 ng/g	
Dioxins/ furans	TEQ-bird	PCB 126 (using a TEF of 0.1)		16	ng/g	Powell et al. 1997	reproduction	Double-crested cormorants	injection (yolk)	single injection + intubation period (untreated)	embryo mortality	LC50 (estimated); injections made into field-collected eggs from isolated "clean" colony in Manitoba, Canada	
Dioxins/ furans	TEQ-bird	PCB 126 (using a TEF of 0.1)	7.0	17.5	ng/g	Powell et al. 1998	reproduction	Double-crested cormorants	injection (yolk)	single injection + intubation period (untreated)	embryo mortality	significant mortality at LOAEL; injections made into field-collected eggs from isolated "clean" colony in Manitoba, Canada	
Dioxins/ furans	TEQ-bird	PCB 126 (using a TEF of 0.1)		17.7	ng/g	Powell et al. 1998	reproduction	Double-crested cormorants	injection (yolk)	single injection + intubation period (untreated)	embryo mortality	LC50 for embryo mortality; injections made into field-collected eggs from isolated "clean" colony in Manitoba, Canada	
Dioxins/ furans	TEQ-bird	PCB 126 (using a TEF of 0.1)	2.3	23	ng/g	Hoffman et al. 1998	reproduction	American kestrel	injection (air cell)	single injection on day 6	hatchability	hatchability at LOAEL statistically significant from control; not statistically different at NOAEL	
Dioxins/ furans	TEQ-bird	2,3,7,8-TCDD		31.98	pg/g ww	Anthony et al. 1993	reproduction	Bald eagle	Field study- Columbia River estuary 1980- 1987		breeding success (productivity, eggshell thinning)	LOAEL is mean residue (range= 5.1 - 61 pg/g) where depressed productivity (0.56 young/ occupied site) was observed in Bald eagles; direct toxicity role of dioxins is less clear- PCBs and DDE were correlated with adverse effect on productivity; role of dioxins on productivity less clear than PCBs and DDE; PCB residue average=12.7 µg/g and DDE residues average=7.7 µg/g	not recommended: LOAEL based on field collected eggs
Dioxins/ furans	TEQ-bird	2,3,7,8-TCDD		>37.3	pg/g ww	Kubiak et al. 1989	reproduction	Forster's tern	Field study- Green Bay, Lake Michigan during 1983 nesting season (refrence location - Lake Poygan [uncontaminated lake at inland location in WI])		impaired reproductive success (increased incubation period, reduced hatchability, lower offspring body weight, and edema occurrence)	LOAEL is median 2,3,7,8-TCDD concentration (range = 14 - 105 pg/g ww) from Green Bay-collected eggs associated with impaired reproductive success; multiple COCs, including pesticides	not recommended: LOAEL based on field collected eggs
Dioxins/ furans	TEQ-bird	PCB 126 (using a TEF of 0.1)	20	40	ng/g	Powell et al. 1997	reproduction	Double-crested cormorants	injection (yolk)	single injection + intubation period (untreated)	embryo mortality	86.7% mortality (significant) at LOAEL; 60% mortality at NOAEL (not significant from control); injections made into field-collected eggs from isolated "clean" colony in Manitoba, Canada	

Table 5. TSVs for bird egg tissue

Chemical Group	Chemical	Chemical Form	NOAEL	LOAEL	Units (ww)	Source	Endpoint	Test Species	Exposure Mode	Exposure Duration	Effect Endpoint	Notes	Rationale
Dioxins/ furans	TEQ-bird	2,3,7,8-TCDD		78	pg/g ww	Woodford et al. 1998	reproduction	Osprey	Field study- Wisconsin River- downstream from bleach kraft mills 1992 - 1996 (reference locations at two upstream areas)		chick growth	LOAEL is geometric mean residue (range = 29 - 162 pg/g) associated with reduction in chick growth; however, no effect on egg hatching or chick fledging; chick growth may have been an effect from other field/ environmental conditions; other COCs, except DDE and DDT were not measured; no statistical difference DDE and DDT residues between study site and reference location	not recommended: LOAEL based on field collected eggs
Dioxins/ furans	TEQ-bird	2,3,7,8-TCDD	303		ng/g	Elliott and Harris 2001/2002	reproduction	Bald eagle	Field study - Vancouver BC, sites in the vicinity of bleach kraft mill		hatchability	This NOAEL was calculated from unpublished data cited in the paper (Nisbet and Elliott unpubl. Data)	
PCBs	Total PCBs		0.474 - 2.842		mg/kg	Thomas and Anthony 1999, 2003	reproduction	Great blue heron	Field study- Lower Columbia River and Willamette River 1994-1995 (reference site - Samish Island, Washington)		breeding behavior (nest attendance and visitation), fledging, reproductive success	Field locations at or near pulp and paper mills; maximum concentration of total PCBs had significantly lower nest attendance than reference site; however, hatching, fledging, and reproductive success were similar to that reported in healthy populations (no effect); NOAEL is geometric mean from 5 sites over 2 years; other COCs— 2,3,7,8-TCDD (geometric mean range from 2.57-7.42 pg/g), DDE (geometric mean range from 331-1,432 µg/g)	not recommended: LOAEL based on field collected eggs
PCBs	Total PCBs	Aroclor 1254: Aroclor 1260	0.69		mg/kg	Henny et al. 2003	reproduction	Osprey	Field study- Willamette River in 1993 (reference site - Cascade mountains)		productivity	NOAEL is geometric mean (range = 0.348-3.68 µg/g) of total PCB (congeners) egg residues; residues measured when osprey productivity in 1993 = 1.64 young/ active nest, which is twice the number needed to maintain a stable population; BMFs calculated; small number of eggs over large areas (10 eggs over 135 miles); other COCs—dioxins and dieldrin also present	not recommended: LOAEL based on field collected eggs
PCBs	Total PCBs	Aroclor 1248	0.41	3.1	mg/kg	Scott et al. 1975	reproduction	White leghorn chickens	food	8 wks	egg production and egg hatchability	NOAEL and LOAEL are the Aroclor 1248 concentration in eggs following 8 weeks exposure to 1 and 10 mg/kg Aroclor 1248 in the diet, respectively	not recommended: chicken reproductive endpoint
PCBs	Total PCBs	Aroclor 1248	3.32 and 7.12		mg/kg	McLane and Hughes 1980	reproduction	Screech owl	food	2 generations	eggshell thickness, egg production, hatching success, fledging success	no effect on reproduction in birds fed 3 ppm; residues are average egg residues in 1976 and 1977; DDE detected in eggs was 0.37 and 0.46 mg/kg (average)	
PCBs	Total PCBs			3.6 - 7.3	mg/kg	Yamashita et al. 1993	reproduction	Double-crested Cormorant	Field study- upper Great Lakes from May - August 1988		incidence of embryo malformations (live-deformities in eggs)	LOAEL is range of egg residues; residues measured where high incidence of embryo mortalities observed; incidence of malformations not attributed to one contaminant but generally associated with PCBs, dioxins and furans; DDE also present at 2.2-6.3 µg/g but DDE not expected to cause malformations; TEQ concentrations present at 350-1,300 pg/g and also associated with embryo malformations	not recommended: LOAEL based on field collected eggs
PCBs	Total PCBs			4.1	mg/kg	Hoffman et al. 1986	reproduction	Black-crowned night heron	Field study- Bair Island, San Francisco Bay National Wildlife Refuge 1983 (reference site - Patuxent Wildlife Research Center)		embryonic growth	LOAEL is mean residue (range=0.8 - 52 µg/g) of site eggs; egg weights and embryo weight (including the partially absorbed yolk sac) were not significantly different from control; however, embryo weight minus yolk sac was significantly less than control; significant negative correlation between embryo weight (minus yolk sac) and PCB concentrations; uncertain whether weights would persist through hatching; other COCs—DDE and other organochlorine pesticides	not recommended: LOAEL based on field collected eggs
PCBs	Total PCBs			4.2 - 18	mg/kg	Yamashita et al. 1993	reproduction	Caspian tern	Field study- upper Great Lakes from May - August 1988		incidence of embryo malformations (live-deformities in eggs)	LOAEL is range of egg residues; residues measured where high incidence of embryo mortalities observed- incidence of malformations not attributed to one contaminant but generally associated with PCBs, dioxins and furans; DDE also present at 2.3-6.3 µg/g but DDE not expected to cause malformations; TEQ concentrations present at 1,300-2,800 pg/g and also associated with embryo malformations	not recommended: LOAEL based on field collected eggs
PCBs	Total PCBs			4.4 - 14.8 (outlier = 0.05 µg/g)	mg/kg	Tillitt et al. 1992	reproduction	Double-crested cormorant	Field study- 12 locations from 5 regional areas of the Great Lakes- 1986 - 1988 (reference site- 1 site outside the Great Lakes)		reproductive success	LOAEL is mean total PCB residue from 11 of 12 sites within the Great Lakes associated with 21-39% egg mortality- one site was excluded because it was an outlier (where PCB residue = 0.05 µg/g); TEQ concentrations based on H4IIE bioassay; other COCs—TEQ also measured	not recommended: LOAEL based on field collected eggs

Table 5. TSVs for bird egg tissue

Chemical Group	Chemical	Chemical Form	NOAEL	LOAEL	Units (ww)	Source	Endpoint	Test Species	Exposure Mode	Exposure Duration	Effect Endpoint	Notes	Rationale
PCBs	Total PCBs		<4.5	4.5 - <10	mg/kg	Wiemeyer et al. 1984	reproduction	Bald eagle	Field study- 14 states in 1969-1979		5-year productivity	NOAEL associated with mean 5-year productivity of 0.8 young per occupied breeding area; LOAEL associated with mean 5-year productivity of 0.6; 0.7=minimum level associated with population stability in Bald eagles; 1.0=production of healthy populations in breeding areas (Sprunt et al. 1973 as cited in paper); multiple COCs—PCBs, DDE, and mercury; DDE correlated with PCBs, and DDE also associated with decreased productivity; uncertainty in whether to attribute effects to PCBs or DDE or both	not recommended: LOAEL based on field collected eggs
PCBs	Total PCBs		4.75		mg/kg	Blus et al. 1977	reproduction	Brown pelican	Field study- South Carolina 1969 - 1973		reproductive success	NOAEL is geometric mean (range 0.91 - 19 µg/g) concentration measured in 1973 when reproductive success was 1.66 young per nest; 1.2-1.5 young fledge/ breeding female needed to maintain a stable population; other COCs—other organochlorine pesticides, heavy metals	field study
PCBs	Total PCBs	Aroclor 1248		5.6	mg/kg	Lowe and Stendell 1991	reproduction	American kestrel	food	5.5 months	eggshell weight and thickness	only one dose used; at LOAEL average eggshell thickness was 5% less than pre-1947 average, which is less than the range of critical values (15-20%) associated with reproductive population level effects (Anderson and Hickey 1972 as cited in study)	not recommended: effect not a direct measure of growth, survival, or reproduction
PCBs	Total PCBs		3.0 - <5.6	5.6 - <13	mg/kg	Wiemeyer et al. 1993	reproduction	Bald eagle	Field study- 15 states in 1980- 1984		5-year productivity	LOAEL is residue interval where 0.61 young/ occupied nest normal 5-year productivity is observed; NOAEL is residue interval where 0.81 young/ occupied nest normal 5-year productivity is observed; 0.7 productivity needed to maintain stable population; DDE correlated with PCBs- high uncertainty that effect is due to PCBs: "preponderance of evidence suggests that DDE is primarily responsible for production decrease;" other COCs—DDE, Hg, and other organochlorine pesticides	not recommended: LOAEL based on field collected eggs
PCBs	Total PCBs		7.0		mg/kg	Harris et al. 1993	reproduction	Forster's tern	Field study- Green Bay, Lake Michigan 1988 (reference colony from Kubiak et al. (1989))		hatching success	NOAEL is recommended NOAEL from study based on no effect on hatching success	
PCBs	Total PCBs			12.7	mg/kg	Anthony et al. 1993	reproduction	Bald eagle	Field study- Columbia River estuary 1980- 1987		breeding success (productivity, eggshell thinning)	LOAEL is mean residue (range=4.8 - 26.7 µg/g) associated with depressed productivity (0.56 young/ occupied site) in Bald eagles; other COCs—2,3,7,8-TCDD residue average=31.98 pg/g and DDE residues average=7.7 µg/g, DDE also associated with decrease in productivity	not recommended: LOAEL based on field collected eggs
PCBs	Total PCBs	Aroclor 1254	<5	>15	mg/kg	Platonow and Reinhart 1973	reproduction	White leghorn chickens	food	39 wks (14 wks for 50 ppm group)	hatchability	LOAEL is residue where instantaneous depression of hatchability and embryotoxicity is observed; NOAEL is where hatchability of fertile eggs is unaffected; however, at NOAEL fertility and egg production are significantly reduced (study attributes it to mating inactivity and not PCB exposure)- uncertain NOAEL	not recommended: chicken reproductive endpoint
PCBs	**Total PCBs**	**Aroclor 1254**		**16**	**mg/kg**	**Peakall et al. 1972; Peakall and Peakall 1973**	**reproduction**	**Ringed turtle-dove**	**food**	**2 generations**	**hatchability, embryo mortality**	**egg residue reported at 50 mg/kg dw in Peakall et al. (1972); statistical comparison not evaluated**	**Selected TRV: highest NOAEL below selected LOAEL that meets acceptability criteria; no NOAEL available from study**
PCBs	Total PCBs		20 (1977) and 19 (1978)		mg/kg	Haseltine et al. 1981	reproduction	Red-breasted merganser	Field study- islands on Lake Michigan 1977 and 1978		hatching success	NOAEL is geometric mean in 1977 and 1978, respectively, where hatching success was "fairly successful" (81.7 and 82.6% successful); other species tested- common merganser, mallard, gadwall, and black duck- were less sensitive than the red-breasted merganser; hatching success apparently not affected- qualitative discussion only- appear unaffected or marginally affected- no reference site to compare productivity; other COCs—other organochlorine pesticides, heavy metals	

Table 5. TSVs for bird egg tissue

Chemical Group	Chemical	Chemical Form	NOAEL	LOAEL	Units (ww)	Source	Endpoint	Test Species	Exposure Mode	Exposure Duration	Effect Endpoint	Notes	Rationale
PCBs	Total PCBs			22.2	mg/kg	Kubiak et al. 1989	reproduction	Forster's tern	Field study- Green Bay, Lake Michigan during 1983 nesting season (refrence location - Lake Poygan [uncontaminated lake at inland location in WI])		impaired reproductive success	LOAEL is median PCB concentration from Green Bay collected eggs associated with impaired reproductive success (increased incubation period, reduced hatchability, lower offspring body weight, and edema occurrence); multiple COCs—pesticides	not recommended: LOAEL based on field collected eggs
PCBs	Total PCBs	Aroclor 1254	23		mg/kg	Custer and Heinz 1980	reproduction	Mallard	food	~ 1 month	Reproductive success (number hens laying, time to first hatch, clutch size, egg fertility, egg hatchability, duckling survival to 3 wks nest attentiveness)	no effect on reproductive success in birds fed 25 ppm fed at least one month prior to egg laying	
PCBs	Total PCBs			23.8	mg/kg	Weseloh et al. 1983	reproduction	Double-crested eormorant	Field study- Lake Heron 1972 - 1973		reproductive success	LOAEL is average residue where severe reproductive failure observed (2.4% known to hatch; fledging success= 0.06 - 0.11 young/ pair); other COCs—average DDE residues = 14.5 µg/g also associated with reproductive failure	not recommended: LOAEL based on field collected eggs
PCBs	Total PCBs	1:1:1 ratio of Aroclor 1248:1254: 1260	34.1		mg/kg	Fisher et al. 2001	reproductive behavior	American kestrels	food	1 mo prior to mating through mating period	courtship behavior	no adverse effect on male sexual behavior and no change in female sexual behavior or frequency of copulation; study performed along with Fernie et al. 2000, 2001	
PCBs	Total PCBs	1:1:1 ratio of Aroclor 1248:1254: 1260		34.1	mg/kg	Fernie et al. 2000, 2001	reproduction	American kestrels	food	100 days until eggs hatched	reproductive success of parents exposed *in ovo*	no statistics- egg laying endpoint: 91% in controls laid a clutch of eggs; 75% in LOAEL group; fledging success 55% for PCB females (LOAEL group), 93% for controls	
PCBs	Total PCBs	Total PCBs	84			Henning et al. 2003	reproduction	American robin	Field study - 10 yr floodplain of Housatonic River watershed in Berkshire County, MA; 2001 (reference sites - public lands within the Housatonic River watershed that were located well over 300 m from Housatonic River floodplain)		nest outcome, fertility, survival to hatchling, survival to fledging	field study - no effect on reproductive endpoints in birds with mean (n=9) egg concentration of 84 mg/kg ww from Housatonic River watershed in Berkshire County, MA; restricted to 10-year floodplain, 2001	
PCBs	Total PCBs	Aroclor 1242	105		mg/kg	Haseltine and Prouty 1980	reproduction	Mallard	food	12 wks	hatchability, embryo mortality, egg viability, embryo abnormalities	no effect on reproductive endpoints; eggshell thinning was significantly different from control but did not affect reproductive success	
PCBs	Total PCBs	unknown	142		mg/kg	Gilman et al. 1978	reproduction	Herring gulls	injection	single injection + 30 days untreated	embryonic and chick mortality	injection of 1) extract from field-collected Lake Ontario herring gull eggs or 2) synthetic mixture of PCB, DDE, mirex, photomirex and hexachlorobenzene was used; results were unexpected (no significant effect observed)	
PCBs	Total PCBs	Aroclor 1242	NC	NC	mg/kg	Britton and Huston 1973	reproduction	White leghorn chickens	food	6 wks + 5 wks untreated	hatchability	LOAEL and NOAEL reported as yolk concentration, not egg concentration; hatchability reduced in chickens fed 10 ppm in diet for 6 weeks (yolk residues of 3.7 µg/g [LOAEL]) and in chickens fed 20 ppm in diet for 2 weeks (yolk residues of 2.4 µg/g [LOAEL]); no effect in chickens fed 5 ppm (yolk residues=1.7 µg/g [NOAEL])	not recommended: see notes
Pesticides	Total DDx	p,p'-DDE	0.331 - 1.432		mg/kg	Thomas and Anthony 1999, 2003	reproduction	Great blue heron	Field study- Lower Columbia River and Willamette River 1994-1995 (reference site - Samish Island, Washington) (reference site -Samish Island, Washington)		breeding behavior (nest attendance and visitation), fledging, reproductive success	Field locations at or near pulp and paper mills; maximum concentration of DDE had significantly lower nest attendance than reference site; however, hatching, fledging, and reproductive success were similar to that reported in healthy populations (no effect); NOAEL is geometric mean from 5 sites over 2 years; other COCs— 2,3,7,8-TCDD (geometric mean range from 2.57-7.42 pg/g), total PCBs (geometric mean range from 474-2,842 µg/g)	

Table 5. TSVs for bird egg tissue

Chemical Group	Chemical	Chemical Form	NOAEL	LOAEL	Units (ww)	Source	Endpoint	Test Species	Exposure Mode	Exposure Duration	Effect Endpoint	Notes	Rationale
Pesticides	Total DDx	DDE	0.82 - 22		mg/kg	Littrell 1986	reproduction	Osprey	Field study- Eagle Lake, CA 1973 - 1979; 1983 - 1984		eggshell thinning	NOAEL is range of residues where shell thickness was below "normal" levels of 0.5 mm (from pre-1947 data) for some eggs but no statistical analysis was done; osprey population was stable and eggshell thinning is not a major mortality factor; HIGH UNCERTAINTY- unknown if less than "normal" levels of eggshell thickness in some eggs is affecting reproduction	
Pesticides	Total DDx	DDE	1.3		mg/kg	Klaas et al. 1980	reproduction	Clapper rail	Field study- eastern and southern United States 1972 - 1974		eggshell thinning	NOAEL is highest geometric mean residue measured at a location; no significant effect on eggshell thinning (compared to pre-1947 data) was observed in clapper rails at any location or other species tested (common gallinule, purple gallinule, and limpkin); other COCs—other organochlorine contaminants	
Pesticides	Total DDx	DDE	2.09		mg/kg	Blus et al. 1977	reproduction	Brown pelicans	Field study- South Carolina 1969 - 1973		reproductive success	NOAEL is geometric mean (range 0.65 - 8.6 µg/g) concentration measured in 1973 when reproductive success was 1.66 young/ nest; 1.2-1.5 young fledge/ breeding female needed to maintain a stable population; other COCs—PCBs, other organochlorine pesticides, heavy metals	
Pesticides	Total DDx	DDE	2.17 - 3.3		mg/kg	Elliott et al. 1996	reproduction	Bald eagle	Field study- Pacific Coast of Canada- Fraser River near bleached kraft paper mills 1990 - 1992 (reference site - Pacific Coast of Canada)		eggshell thinning	NOAEL is range of geometric mean residue levels reported in contaminated sites where more than one egg was collected, and where eggshell thinning was not significantly different from pre-1947 average; other COCs—mercury, dioxins and dioxin-like chemicals, PCBs (no field effects measured for these COCs—only DDE was associated with eggshell thinning)	
Pesticides	Total DDx	DDE	2.3		mg/kg	Henny et al. 2003	reproduction	Osprey	Field study- Willamette River in 1993 (reference site - Cascade mountains)		productivity	NOAEL is geometric mean (range = 0.24 - 12 µg/g) of DDE egg residues; residues measured when osprey productivity in 1993 = 1.64 young/ active nest which is twice the number needed to maintain a stable population; small number of eggs over large areas (10 eggs over 135 miles); other COCs—dioxins, PCBs and dieldrin present	
Pesticides	Total DDx	DDE	1.3	3.5	mg/kg	Wiemeyer et al. 1984	reproduction	Bald eagle	Field study- 14 states in 1969-1979		5-year productivity	NOAEL associated with mean 5-year productivity of 1.0 young/occupied breeding area; LOAEL associated with mean 5-year productivity of 0.7 young/occupied breeding area; 0.7= minimum level associated with population stability in Bald eagles, 1.0= production of healthy populations in breeding areas (Sprunt et al. 1973 as cited in paper); regarding eggshell thinning: at 3 µg/g ww, eggshell thickness near normal; at 5 µg/g ww, 10% thinning in eggs and at 15 µg/g ww and production dropped markedly, almost 100% reproductive failure; multiple COCs—PCBs, mercury, and other pesticides; PCBs correlated with DDE and PCBs also associated with decreased productivity- uncertainty in whether to attribute effects to PCBs or DDE or both	not recommended: LOAEL based on field collected eggs
Pesticides	Total DDx	DDE	<2.2 - <3.6	3.6 - <6.3	mg/kg	Wiemeyer et al. 1993	reproduction	Bald eagle	Field study- 15 states in 1980- 1984		5-year productivity	LOAEL is residue interval where half normal 5-year productivity is observed (0.53 young/ occupied nest); NOAEL is residue interval where near normal 5-year productivity is reported (0.98 - 1.02 young/ occupied nest); 0.7 productivity needed to maintain stable population; other COCs-PCBs, Hg, and other organochlorine pesticides	not recommended: LOAEL based on field collected eggs
Pesticides	Total DDx	DDE	3.9		mg/kg	Custer et al. 1983	reproduction	Black-crowned night heron	Field study- 2 mixed species locations in New England and 3 in North Carolina		reproductive success	Negligible reproductive effects were reported and number of young per nesting attempt (production) were sufficient to maintain a study population along the North Atlantic; possible effect of DDE at levels greater than NOAEL; other COCs—other organochlorine contaminants	

Table 5. TSVs for bird egg tissue

Chemical Group	Chemical	Chemical Form	NOAEL	LOAEL	Units (ww)	Source	Endpoint	Test Species	Exposure Mode	Exposure Duration	Effect Endpoint	Notes	Rationale
Pesticides	Total DDx	DDE	3.9		mg/kg	Custer et al. 1999	reproduction	double-crested cormorants	Field study- Green Bay, Lake Michigan 1994 and 1995		hatching success	LOAEL is mean residue (range = 0.96 - 10.8 µg/g ww) associated with good to excellent hatching success compared to other locations; number of young produced per nest was similar or greater than that reported in relatively uncontaminated colonies (Weseloh et al. 1995 as cited in study); however, results do suggest an association between DDE and reduced hatching success; other organochlorines measured	
Pesticides	Total DDx	DDE	2.9	3.9	mg/kg	Wiemeyer et al. 1988	reproduction	Osprey	14 states in 1970 - 1979		brood size	LOAEL is based on effect level of 0.8 young fledged/active nest (Spitzer et al. 1983 as cited in study); other COCs—mercury, PCBs, and other organochlorine pesticides; however, were measured at low concentrations likely not resulting in adverse effects	not recommended: LOAEL based on field collected eggs
Pesticides	Total DDx	DDE		3.98	mg/kg	Fox 1976	reproduction	Common Tern	Field study- Buffalo Lake, Alberta, Canada May - August 1972 (reference site - used results from another study as "arbitrary standards")		reproductive success	LOAEL is overall mean (range 0.05 - 11.08 µg/g ww) associated with reduced hatching success as compared to the 1.1 fledged chicks/pair/year necessary to maintain population stability (Nisbet pers. comm. as cited in study); other COCs—other organochlorine pesticides; study considers DDE only	not recommended: LOAEL based on field collected eggs
Pesticides	Total DDx	DDE		4	mg/kg	Wiemeyer et al. 1993	reproduction	Bald eagle	Field study- 15 states in 1980- 1984		eggshell thinning	10% eggshell thinning at LOAEL; 15% eggshell thinning at 16 mg/kg ww; mean 5-year production is 0.55 at 10-15% thinning (correlation between thinning and production); 0.7 young/occupied nest needed to maintain stable population; other COCs-PCBs, Hg, and other organochlorine pesticides	not recommended: LOAEL based on field collected eggs
Pesticides	Total DDx	DDE		4.2 - 8.7	mg/kg	Wiemeyer et al. 1988	reproduction	Osprey	Field study- 14 states in 1970 - 1979		eggshell thinning	LOAEL is egg residues associated with 15% and 20% eggshell thinning, respectively- where eggshell thinning is 18% or more, no raptor population has been able to maintain a stable population (Lincer 1975 as cited in study); therefore LOAEL is between 4.2 and 8.7 µg/g ww; other COCs—mercury, PCBs, and other organochlorine pesticides; however, were measured at low concentrations likely not resulting in adverse effects	not recommended: LOAEL based on field collected eggs
Pesticides	Total DDx	DDE	4.26		mg/kg	Blus et al. 1985	reproduction	Long-billed curlew	Field study- Umatilla National Wildlife Refuge 1978 - 1979		eggshell thinning	NOAEL is mean residue where no significant effect on eggshell thinning (compared to pre-DDT use data) was observed; Other COCs—PCB concentrations of 1.2 µg/g	
Pesticides	Total DDx	DDE	4.48		mg/kg	Elliott and Martin 1994	reproduction	Cooper's hawk	Field study- south-central Ontario 1986 - 1989		eggshell thinning	LOAEL is mean residue (range 3.4 - 6.0 µg/g ww) where shell thickness is 8%, less than a threshold level of 17% for effects on reproductive success in peregrine falcon populations (Peakall et al. 1975 as cited in study); 4 of 12 eggs were ≥ 17% thinning from pre-1947 mean; other COCs—PCBs and other organochlorine pesticides	
Pesticides	Total DDx	DDE	6.5 (1979) 6.2 (1980) 6.2 (1981)		mg/kg	White et al. 1984	reproduction	Black skimmer	Field study- 3 sites along south Texas coast 1979 - 1981		eggshell thinning	NOAEL is geometric mean residue in 1979, 1980, and 1981, respectively where eggshell thinning was 4-12%, less than the critical level (15-20%) causing population declines (based on Anderson and Hickey 1972 as cited in study); other COCs—other organochlorine pesticides	
Pesticides	Total DDx	DDE	3.2	7.0	mg/kg	King et al. 1991	reproduction	Black skimmer	Field study- Lavaca Bay, Texas from April - July 1984 (reference site - San Antonio Bay)		hatching success	NOAEL is geometric mean of eggs in nests where some of eggs hatched; LOAEL is geometric mean of eggs in nest where no eggs hatched; correlation between DDE residues in black skimmers and hatching success; other COCs—mercury, PCBs, selenium, and DDE	not recommended: LOAEL based on field collected eggs
Pesticides	Total DDx	DDE	7.23		mg/kg	Elliott and Martin 1994	reproduction	Sharp-shinned hawk	Field study- south-central Ontario 1986 - 1989		eggshell thinning	LOAEL is mean residue (range 4.88 - 10.1 µg/g ww) where shell thickness is 10%, less than a threshold level of 17% for effects on reproductive success in peregrine falcon populations (Peakall et al. 1975 as cited in study); 3/12 eggs were ≥ 17% thinning from pre-1947 mean; other COCs—PCBs and other organochlorine pesticides	

Table 5. TSVs for bird egg tissue

Chemical Group	Chemical	Chemical Form	NOAEL	LOAEL	Units (ww)	Source	Endpoint	Test Species	Exposure Mode	Exposure Duration	Effect Endpoint	Notes	Rationale
Pesticides	Total DDx	DDE	7.4 (1977) and 7.6 (1978)		mg/kg	Haseltine et al. 1981	reproduction	Red-breasted merganser	Field study- islands on Lake Michigan 1977 and 1978		hatching success	NOAEL is geometric mean in 1977 and 1978, respectively, where hatching success was "fairly successful" (81.7 and 82.6% successful); other species tested (common merganser, mallard, gadwall, and black duck) were less sensitive than the red-breasted merganser; hatching success apparently not affected- qualitative discussion only- appear unaffected or marginally affected; no reference site to compare productivity; other COCs—other organochlorine pesticides, heavy metals	
Pesticides	Total DDx	DDE	9.3 and 10.6		mg/kg	Ambrose et al. 1988	reproduction	Peregrine falcon	Field study- Alaska 1960s-1980s		reproductive success	NOAEL is geometric mean residue where reproductive success was judged by authors to be "excellent", at 1.9 young/pair; additionally, eggshell thinning was 13% (compared to pre-1947 data); other COCs—other organochlorine contaminants	
Pesticides	Total DDx	p,p'-DDE		9.7	mg/kg	Anthony et al. 1993	reproduction	Bald eagle	Field study- Columbia River estuary 1980- 1987		breeding success (productivity, eggshell thinning)	LOAEL is mean residue (range= 4.0 - 20 µg/g) associated with depressed productivity (0.56 young per occupied site) in bald eagles; other COCs—PCB residue average=12.7 µg/g and 2,3,7,8-TCDD residues average=31.98 pg/g; PCBs also associated with decrease in productivity	not recommended: LOAEL based on field collected eggs
Pesticides	Total DDx	o,p'-DDT	3.0	10	mg/kg	Kamata et al. 2009	reproduction	Japanese quail	injection (yolk)	single injection (effect observed through hatching and into second generation)	reduced hatchability of first generation	significant effects a LOAEL (10 mg/kg); however, effect at 30 mg/kg was not significantly different from control, and effect at 100 mg/kg was significantly different in experiment 2 but not experiment 1	not recommended: tissue concentrations were not dose-responsive (see notes)
Pesticides	**Total DDx**	**"DDE"**		**12 (1975)** and 41 (1976)	**mg/kg**	**Mendenhall et al. 1983**	**reproduction**	**Barn owls**	**food**	**2 yrs (2 nestings)**	**eggshell breakage/ thickness; nestling mort**	**only one dietary dose level used; LOAEL is geometric mean residue in birds fed 2.83 mg/kg DDE for two years**	**Selected TRV: lowest LOAEL that meets acceptability criteria; no NOAEL available from study**
Pesticides	Total DDx	DDE		14.5	mg/kg	Weseloh et al. 1983	reproduction	Double-crested Cormorants	Field study- Lake Heron 1972 - 1973		reproductive success and eggshell thinning	LOAEL is average residue where severe reproductive failure was observed (2.4% known to hatch; fledging success= 0.06 - 0.11 young/ pair); BCFs reported for PCBs and DDE; other COCs—average PCB residues = 23.8 µg/g also associated with reproductive failure	not recommended: LOAEL based on field collected eggs
Pesticides	Total DDx	p.p'-DDE		15.4	mg/kg	Haegele and Hudson 1974	reproduction	Mallard	food	96 days	eggshell thickness (1st and 2nd reproductive season)	birds were fasted pre-treatment (domestic so OK); table 2 and text results conflict; LOAEL is mean residue reported in birds fed 40 ppm DDE in diet (only one dose level used); LOAEL measured in second season only	
Pesticides	Total DDx	DDE		18.5	mg/kg	Elliott et al. 1988	reproduction	Northern gannet	Field study- Eastern Canada 1968 - 1984		eggshell thinning	LOAEL is mean residue in fresh eggs where average eggshell thickness was 17% less than pre-1947 average, which is within the range of critical values (15-20%) associated with reproductive population level effects (Anderson and Hickey 1972 as cited in study); difficulty in separating DDE effects on eggshell thinning and embryo toxic effects of PCBs; other organochlorine COCs	not recommended: LOAEL based on field collected eggs
Pesticides	Total DDx	p,p'-DDE	10.72, 4.76	21.8, 18	mg/kg	Krantz et al. 1970	reproduction	Bald eagle	Field study- Maine- area with poor nesting success in 1968 (reference sites - Wisconsin and Everglades Park, FL- areas with successful nesting)		reproductive success	LOAEL is average residues in 1968 and 1967 (n=1 in 1967) in area where poor reproductive success was observed; NOAEL is average residues in 1968 in areas where good reproductive success was observed; HIGH UNCERTAINTY associated with study due to qualitative results; "good" and "poor" reproductive success is not quantitatively discussed; no statistics	not recommended: LOAEL based on field collected eggs
Pesticides	Total DDx	DDE	22.6		mg/kg	Gilman et al. 1978	reproduction	Herring gull	injection	single injection + 30 days untreated	embryonic and chick mortality	injection of 1) extract from field-collected Lake Ontario herring gull eggs or 2) synthetic mixture of PCB, DDE, mirex, photomirex and hexachlorobenzene was used; results were unexpected (no significant effect observed)	
Pesticides	Total DDx	p,p' DDE	3.09	32.4	mg/kg	Wiemeyer and Porter 1970	reproduction	American kestrel	food	1 yr (2 clutches)	eggshell thickness	only one dose level was used; LOAEL is average egg residue in year in which eggshell thickness decline was observed	

Table 5. TSVs for bird egg tissue

Chemical Group	Chemical	Chemical Form	NOAEL	LOAEL	Units (ww)	Source	Endpoint	Test Species	Exposure Mode	Exposure Duration	Effect Endpoint	Notes	Rationale
Pesticides	Total DDx	DDT mixture, mainly DDE		43	mg/kg	Nygard 1983	reproduction	Peregrine falcon	Field study- Norway 1976-1979 (reference sites - Europe and North American)		eggshell thinning	LOAEL is average residue (range 25 - 90 µg/g ww) associated with eggshell thinning 19-23% thinner than pre-1947 eggs which is critical eggshell thinning; HIGH UNCERTAINTY-only three eggs were analyzed (residues in two eggs were reported as DDTs and one as DDE and then averaged); other organochlorine pesticide COCs	not recommended: LOAEL based on field collected eggs
Pesticides	Total DDx	DDE		46.3	mg/kg	Longcore et al. 1971	reproduction	Black duck	food	reproductive period (through incubation and hatching)	eggshell thinning and cracking, embryo mortality, duckling survival	significant effects observed; LOAEL is mean egg residue	
Pesticides	Total DDx	commercial DDT	53 - 62		mg/kg	Scott et al. 1975	reproduction	White leghorn chickens	food	8 wks	egg production, egg hatchability, and egg strength	NOAEL is the DDT concentration in eggs following 8 weeks exposure to 100 mg/kg DDT in the diet	
Pesticides	Total DDx	p,p-DDE		64.9	mg/kg	Longcore and Samson 1973	reproduction	Black duck	food	7 mos	shell thickness, egg weight, hatchability, duckling mort	only one dietary dose level used; LOAEL is mean (range = 36.4-89.0 mg/kg ww) residue in birds fed 10 mg/kg DDE	
Pesticides	Total DDx	DDE mixture	1.9-7.88	84.5	mg/kg (dw)	Lincer 1975	reproduction	American kestrel	food	~ 5 mos	eggshell thickness	field-collected birds used in controlled laboratory experiment, background concentration unknown; note: residues are reported in dry weight	not recommended: LOAEL based on field-collected organisms
Pesticides	Total DDx	DDT	50	100	mg/kg	Dunachie and Fletcher 1969	reproduction	White leghorn chicken	injection (yolk)	single injection (effect observed through hatching)	chick survival	chick survival approximately 50% of control at LOAEL when starved (not fed); not statistically evaluated; uncertain LOAEL	
Pesticides	Total DDx	"DDT"-likely mixture		162	mg/kg	Genelly and Rudd 1956	reproduction	Ring-necked pheasant	food	8 wks	offspring survival	LOAEL is average egg residue (n=2) in treatment group fed 90 mg/kg DDT	
Pesticides	Total DDx	p,p'-DDT	105	184	mg/kg	Bryan et al. 1989	reproduction	Japanese quail	injection (albumin)	single injection (effects observed through incubation)	hatchability of eggs from in ovo treated birds		
Pesticides	Total DDx	o,p'-DDT	105	526	mg/kg	Bryan et al. 1989	reproduction	Japanese quail	injection (albumin)	single injection (effects observed through incubation)	hatchability of eggs from in ovo treated birds, survival to 5 wks		
Pesticides	Total DDx	p,p'-DDT	658		mg/kg	Bryan et al. 1989	behavior	Japanese quail	injection (albumin)	single injection (effects observed through incubation)	reproductive behavior (male sexual behavior)		
Pesticides	Total DDx	o,p'-DDT	184	658	mg/kg	Bryan et al. 1989	behavior	Japanese quail	injection (albumin)	single injection (effects observed through incubation)	reproductive behavior (male sexual behavior)		
Pesticides	Total DDx	DDT	NC	NC	µg/g	Smith et al. 1970	reproduction	Chicken	injection (yolk)	single injection (effect observed through 4 wk old chicks)	hatchability	no clear dose response and no statistical comparison, not recommended	not recommended: tissue concentrations were not dose-responsive (see notes)
Pesticides	Dieldrin		0.004		mg/kg	Henny et al. 2003	reproduction	Osprey	field study; Willamette River in 1993; reference site in Cascade mountains		productivity	NOAEL is geometric mean (range =0.0007-0.0339 µg/g) of dieldrin egg residues; residues measured when osprey productivity in 1993 = 1.64 young per active nest, twice the number needed to maintain a stable population; BMFs calculated; small number of eggs over large areas (10 eggs over 135 miles); other COCs—DDE also present but at low concentrations, dioxins and PCBs also present	not recommended: LOAEL based on field collected eggs
Pesticides	Dieldrin		0.45		mg/kg	Blus et al. 1977	reproduction	Brown pelican	field study; South Carolina 1969 - 1973		reproductive success	NOAEL is geometric mean (range 0.16 - 1.65 µg/g) concentration measured in 1973 when reproductive success was 1.66 young/ nest; 1.2-1.5 young fledge/ breeding female needed to maintain a stable population	not recommended: LOAEL based on field collected eggs
Pesticides	Dieldrin			1.0	mg/kg	Wiemeyer et al. 1984	reproduction	Bald eagle	field study; 14 states in 1969-1979		5-year productivity	suggested LOAEL at which adverse effects on reproduction might be expected; multiple COCs—PCBs, DDE, mercury, and other pesticides; PCBs and DDE associated with decreased productivity; dieldrin effects on productivity less clear and therefore uncertain	not recommended: LOAEL based on field collected eggs
Pesticides	**Dieldrin**	**dieldrin**		**3.0**	**mg/kg**	**Genelly and Rudd 1956**	**reproduction**	**Ring-necked pheasant**	**food**	**8 wks**	**offspring survival, egg production**	**LOAEL is average egg residue (n=2) in treatment group fed 22 mg/kg dieldrin**	

Table 5. TSVs for bird egg tissue

Chemical Group	Chemical	Chemical Form	NOAEL	LOAEL	Units (ww)	Source	Endpoint	Test Species	Exposure Mode	Exposure Duration	Effect Endpoint	Notes	Rationale
Pesticides	Dieldrin	dieldrin	3.6 (1975) and 8.1 (1976)		mg/kg	Mendenhall et al. 1983	reproduction	Barn owls	food	2 yrs (2 nestlings)	eggshell breakage, eggshell thickness, nestling mortality, hatching success, clutch size	only one dietary dose level used; NOAEL is geometric mean residue in birds fed 0.5 mg/kg dieldrin	
Pesticides	Dieldrin	dieldrin	4.2		mg/kg	Graves et al. 1969	reproduction	White leghorn chickens	food	16 wks	egg production, egg hatch, 14-d chick survival	NOAEL is average egg residue following 16 weeks exposure to 5 mg/kg dietary dieldrin	
Pesticides	Dieldrin	HEOD		19.1	mg/kg	Walker et al. 1969	reproduction	Japanese quail	food	18 wks	fertility	LOAEL is average egg residue over 18 weeks laid by quail fed 10 ppm dieldrin where reduced fertility was observed but not statistically evaluated	not recommended: effect not a direct measure of growth, survival, or reproduction
Pesticides	Dieldrin	HEOD-99% pure (dieldrin 85% HEOD)	12	27	mg/kg	Brown et al. 1974	reproduction	Red-light Sussex hybrids	food	13 mos	chick survival	NOAEL and LOAEL are average geometric mean egg residue measured at each sampling time (where n=6 eggs per sampling period) from day 133 to day 232 of exposure; 8 sampling times were measured during this exposure	
Pesticides	Dieldrin	dieldrin	15.7	33.6	mg/kg	Baxter et al. 1969	reproduction	Pheasant	gelatin capsule	2 generations	egg production	NOAEL is the mean egg residue in eggs laid by birds fed 4 mg dieldrin per week and LOAEL is the mean egg residue in eggs laid by birds fed 6 mg dieldrin per week; no effect on fertility, hatchability, and chick survival and chick body weight	

Shaded rows indicate studies and TRVs that are not recommended becauase TRVs do not meet acceptability criteria

Table 6. TSVs for bird diet

Chemical Group	Chemical	Chemical Form	NOAEL (mg/kg bw/d)	LOAEL (mg/kg bw/d)	Source	Endpoint	Test Species	Exposure Mode	FI (kg dw or L/day)	Wet or Dry?	FI Default?	Nagy bird guild	Body Weight (kg)	BW Default?	% Moisture	NEC wet (ppm)	NEC dry (ppm)	LEC wet (ppm)	LEC dry (ppm)	Exposure Duration	Effect Endpoint	Notes	Rationale
Metals	Arsenic	sodium arsenate	6.1		Camardese et al. 1990	mortality, growth	Mallard	food	0.0128	W			0.6305		13.1%	300	345.2243959			10 wks	female	growth effects seen at 30 ppm for females; growth result does not warrant LOAELs (recovered)	
Metals	Arsenic	Copper acetoarsenite (As^{+3})	2.3	6.8	USFWS 1969	mortality	Brown-headed cowbird	food	0.0090	D	1	2	0.049		10%	11.085	12.31666667	33.255	36.95	7 months	20% mortality at LOAEL; 0% mortality at NOAEL and control	multiple chemical exposure - both copper and arsenic	not recommended: birds exposed to multiple chemicals
Metals	Arsenic	sodium arsen	40		Stanley et al. 1994	growth	Mallard	food	0.1082	W	2		1.082	B	10%	400	444.4444444			115-128 days	body weight	body weight gain differed but could not be separated in stat analysis	
Metals	**Arsenic**	**sodium arsenate**	**10**	**40**	**Stanley et al. 1994**	**reproduction**	**Mallard**	**food**	**0.1082**	**W**	**2**		**1.082**	**B**	**10%**	**100**	**111.1111111**	**400**	**444.4444444**	**115-128 days**	**delayed egg laying; depressed egg weight and shell thinning; decrease offspring body weight and production**	**reproductive effects suggested due to insufficient food intake**	**Selected TRV:Lowest LOAEL that meets acceptability criteria**
Metals	Arsenic	sodium arsenate		42	Whitworth et al. 1991	behavior	Mallard- (birth to 9 weeks)	food	0.0120	D	1	4	0.1	A	13.2%			300	345.4231434	9 wks	increased resting behavior, decreased alertness behavior	poor body weight	
Metals	Arsenic	sodium arsenite	25	50	USFWS 1964	survival	Mallard - young	food	0.1082	W	2		1.082	B	10%	250	277.7777778	500	555.5555556	154 days	mortality	12% mortality @ NOAEL (250 ppm); 60% mortality @ LOAEL; 12-31% mortality in controls	
Metals	Cadmium	cadmium chloride		0.40	Heinz and Haseltine 1983	behavior	Black duck	food	0.1250	W	2		1.25	B	10%			4		4 months prior to egg laying- 1 wk after hatching	avoidance response in 7 day old chicks (distance run from fright stimulus)	87	not recommended: not direct measure of growth, survival, or reproduction
Metals	Cadmium	cadmium chloride	1.5		Cain et al. 1983	growth	Mallard young (females)	food	0.0883	W	2		0.8825		10%	14.6	16.22222222			12 wks	body weight		
Metals	Cadmium	$CdSO_4$*$8H_2O$	0.73	2.9	Leach et al. 1979	reproduction	Leghorn hen	food	0.1019	W	3		1.70	C		12.22		48.22		48 wks	egg production, shell thickness		not recommended: chicken reproductive endpoint
Metals	**Cadmium**	**cadmium chloride**		**4.0**	**Richardson et al. 1974**	**growth**	**Japanese quail (chicks)**	**food**	**0.0050**	**D**	**1**	**3**	**0.093**	**G**					**75**	**6 wks**	**male body weight**		**Selected TRV: Lowest LOAEL that meets acceptability criteria; no NOAEL available from study**
Metals	Cadmium	cadmium chloride	16		DiGiulio and Scanlon 1984	growth	Mallard	food	0.122	W			1.119			150				42 day	body weight		
Metals	Cadmium	cadmium chloride	2		White and Finley 1978b	mortality	Mallard	food	0.110	W			1.153			200				90 days		focus on tissue accumulation; no statistics; 0% mortality	
Metals	Cadmium	cadmium chloride	20		White and Finley 1978a	mortality, growth	Mallard	food	0.110	W			1.153			210				30-90 days	body weight, adult mortality	no statistics for mortality; 0% mortality	
Metals	Cadmium	cadmium chloride	1.5	20	White and Finley 1978a	reproduction	Mallard	food	0.110	W			1.153			15.2		210		30-90 days	egg production	cited in article "egg laying was sporadic" and # of eggs laid per group varied considerably (so did the number of laying hens); ave no. eggs/hen @ LOAEL (200 ppm) = 1; ave no. eggs/hen @ NOAEL (20 ppm) = 3.7; ave no. eggs/hen @ controls = 3.5.	
Metals	Cadmium	cadmium chloride		24	Freeland and Cousins 1973	growth	Leghorn chicks	food	0.0434	D	4		0.138						75	21 days	male body weight		
Metals	Cadmium	cadmium chloride		40	Pritzl et al. 1974	growth	Leghorn chicks	food	0.0577	D	4		0.574	A					400	20 days	male body weight	effect of eggshell thinning on reproductive success (e.g., hatchability or offspring viability) was not reported	
Metals	Cadmium	cadmium chloride		47	DiGiulio and Scanlon 1984	growth	Mallard	food	0.108	W			1.027					450		42 day	body weight		
Metals	Chromium	chromium picolinate	0.10		Lien et al. 2004	reproduction	White leghorn layers (hens)	food	0.1019	W	3		1.70	C		1.6				28 days	egg weight and shell thickness	effect of eggshell thinning on reproductive success (e.g., hatchability or offspring viability) was not reported	
Metals	Chromium	$CrCl_3$ * H_2O	0.17		Jensen and Maurice 1980	reproduction	leghorn laying hen	food	0.0997	W	3		1.71	C		2.948414093				4 wks	egg production and wt, interior quality	Cr+3	
Metals	**Chromium**	**Cr 3+ as $CrK(SO_4)_2$**	**1.0**	**5.0**	**Haseltine et al. unpub as cited in Sample 1996**	**reproduction**	**Black duck**	**food**	**0.1250**	**W**	**2**		**1.25**	**B**		**10**		**50**		**10 months (and critical lifestage)**	**duckling survival**	**original paper could not be located (is cited in Sample 1996)**	**Selected TRVs: lowest LOAEL that meets acceptability criteria; highest NOAEL below selected LOAEL that meets acceptability criteria**
Metals	Chromium	Na2CrO4	7.7		Romoser et al. 1961	mortality, growth	Nichols chicks	food	0.0286	W	4		0.12	A		32.13844252				22 days	male adult mortality, male body weight		
Metals	Chromium	Cr6+ (fm K_2CrO_4)		105	Chung et al. 1985	mortality, growth	broiler chicks	food	0.0295	W	4		0.254	A				900		2 wks	body weight, adult mortality	Cr+6	
Metals	Chromium	Cr6+ (fm $Cr_2(SO_4)_3$*4 H_2O	465		Chung et al. 1985	mortality	broiler chicks	food	0.0295	W	4		0.254	A		4000				2 wks		unclear controls	
Metals	Chromium	Cr6+ (fm $Cr_2(SO_4)_3$*4 H_2O		465	Chung et al. 1985	growth	broiler chicks	food	0.0295	W	4		0.254	A				4000		2 wks	body weight		

Table 6. TSVs for bird diet

Chemical Group	Chemical	Chemical Form	NOAEL (mg/kg bw/d)	LOAEL (mg/kg bw/d)	Source	Endpoint	Test Species	Exposure Mode	FI (kg dw or L/day)	Wet or Dry?	FI Default?	Nagy bird guild	Body Weight (kg)	BW Default?	% Moisture	NEC wet (ppm)	NEC dry (ppm)	LEC wet (ppm)	LEC dry (ppm)	Exposure Duration	Effect Endpoint	Notes	Rationale
Metals	**Cobalt**	**cobalt chloride**		**23.1**	**Diaz et al. 1994**	**growth**	**broiler chicks**	**food**	**0.027**	**W**			**0.1462**					**125**		**14 days**	**body weight, mortality**		**Selected TRVs: only LOAEL that meets acceptability criteria**
Metals	Copper	Copper sulfate, copper amino acid complex	2.1		Dozier et al. 2003	mortality, growth	Broiler chicks	food	0.0295	D	4		0.254	A			18			17 days	body weight, mortality	unbounded NOAEL - NOAEL is background concentration (6 ppm) in diet plus exposure concentration (12 ppm)	
Metals	Copper	Copper sulfate (hydrous)	11.2		Balevi & Coskun 2004	mortality, reproduction	Hisex-Brown hens	food	0.09585	D			1.71	C	8.30%		200			90 days	damaged egg ratio, egg weight and survival		
Metals	Copper	Copper sulfate	15		Lien et al. 2004	reproduction	White leghorn layers (hens)	food	0.1019	W	3		1.70	C		250				28 days	egg weight and shell thickness		
Metals	**Copper**	**Copper sulfate**		**19**	**Jensen and Maurice 1978**	**growth**	**chicks**	**food**	**0.044**	**W**	**5**		**0.591**					**250**		**28 days**	**growth and feed efficiency**	**growth significantly reduced at LOAEL; unbounded LOAEL**	**Selected TRV: lowest LOAEL that meets acceptability criteria; no NOAEL available from study**
Metals	Copper	Copper sulfate	16	29	Smith 1969	growth	Chicks, day-old	food	0.044	W	5		0.534	F		200		350		25 days	growth		
Metals	Copper	Copper sulfate	21	41	Poupoulis and Jensen 1976	growth	Chicks	food	0.044	W	5		0.534	F		250		500		4 wks	growth and gizzard erosion		
Metals	Copper	Copper oxide	47	62	Mehring et al. 1960	mortality, growth	Chicks	food	0.044	W	5		0.534	F		570		749		10 wks	growth, mortality		
Metals	Copper	Copper chloride		66	Persia et al. 2004	growth	Chicks	food	0.0509	D			0.3845	X					500	8-22 days	body weight	selected lowest LOAELs observed over the 4 experiments	
Metals	Lead	Lead acetate		0.2	Edens and Garlich 1983; Edens et al. 1976	reproduction	Japanese quail, from day of hatching	food	0.031	W	6		0.155	G				1		5 wks	egg production		not recommended: chicken reproductive endpoint
Metals	Lead	Lead acetate	0.2	2.0	Edens and Garlich 1983	reproduction	Japanese quail, 6 weeks old	food	0.031	W	6		0.155	G		1		10		5 wks	egg production		not recommended: chicken reproductive endpoint
Metals	Lead	Lead nitrate	2.5		Finley et al. 1976	mortality	Mallards, first-year	food	0.1082	W	2		1.082	B		25				12 wks	mortality, pathologic lesions		
Metals	Lead	Lead acetate	1.64	3.3	Edens and Garlich 1983	reproduction	Leghorn chickens	food	0.121	W	6		1.84	G		25		50		4 wks	egg production		not recommended: chicken reproductive endpoint
Metals	Lead	Metallic lead powder	5.82		Pattee 1984	mortality, reproduction	American kestrel	food	0.0136	D	1	6	0.13		10%	50	55.55555556			5-7 months	mortality, fertility, egg production, eggshell thinning		
Metals	Lead	Lead acetate	10.9		Kendall and Scanlon 1981	reproduction	Ringed Turtle-Dove	Drinking water	0.017	W	8		0.155	E		100				2 wks prior to mating through breeding (11 wks)	onset of egg laying, egg production, juvenile body weight, egg fertility	only one dose used	
Metals	Lead	Lead acetate	2.0	20	Edens et al. 1976	reproduction	Japanese quail	food	0.031	W	6		0.155	G		10		100		12 wks	egg hatchability		not recommended: domestic species (quail) reproductive endpoint
Metals	**Lead**	**Lead acetate**	**5.5**	**28**	**Morgan et al. 1975**	**growth**	**Japanese quail (chicks)**	**food**	**0.0040**	**D**	**1**	**3**	**0.0715**		**10%**		**100**		**500**	**6 wks**	**body weight**		**Selected TRV: lowest LOAEL that meets acceptability criteria; highest growth NOAEL below selected LOAEL that meets acceptability criteria**
Metals	Lead	Lead acetate	75		Kendall and Scanlon 1982	growth	Ringed turtle-dove	Oral intubation												7 days	Growth, ALAD activity		
Metals	Lead	Lead acetate	50	100	Burger and Gochfeld 1995a	behavior	Herring gull (chicks)	single ip injection												single injection + 42 days untreated	thermoregulation behavior (increased time to reach shade)	single intraperitoneal injection; behavior endpoint not direct measure of mortality, growth, or reproduction	not recommended: not direct measure of growth, survival, or reproduction and injection study
Metals	Lead	Lead acetate		100	Burger and Gochfeld 1994	growth	Herring gull (chicks)	single ip injection												single injection + 21 days untreated	depressed growth (temporarily significant)	single intraperitoneal injection	not recommended: injection study
Metals	Lead	Lead nitrate		100	Burger 1990	behavior	Herring gull (chicks)	single ip injection												single injection + 45 days untreated	altered behavior-righting response, balance, individual recognition, begging, thermoregulation, fish swallowing speed and depth perception	single intraperitoneal injection; unbounded LOAEL; endpoints monitored until day 45 (day-old chicks at start)	not recommended: not direct measure of growth, survival, or reproduction and injection study
Metals	Lead	Lead nitrate		100	Burger and Gochfeld 1993	behavior	Herring gull (chicks)	single ip injection												single injection + 18 days untreated	altered behavior-response time, locomotor activity, required longer time to reach food	single intraperitoneal injection; endpoints monitored until day 19 (day-old chicks at start)	not recommended: not direct measure of growth, survival, or reproduction and injection study

Table 6. TSVs for bird diet

Chemical Group	Chemical	Chemical Form	NOAEL (mg/kg bw/d)	LOAEL (mg/kg bw/d)	Source	Endpoint	Test Species	Exposure Mode	FI (kg dw or L/day)	Wet or Dry?	FI Default?	Nagy bird guild	Body Weight (kg)	BW Default?	% Moisture	NEC wet (ppm)	NEC dry (ppm)	LEC wet (ppm)	LEC dry (ppm)	Exposure Duration	Effect Endpoint	Notes	Rationale
Metals	Lead	Metallic lead powder	25	125	Hoffman et al. 1985	growth	American kestrel nestlings	Oral intubation												10 days	Growth		
Metals	Lead	Lead nitrate		200	Burger and Gochfeld 1995b	growth	Common tern (chicks)	single ip injection												single injection + 25 days untreated	depressed growth	single intraperitoneal injection	not recommended: injection study
Metals	Lead	Lead nitrate		200	Gochfeld and Berger 1988	growth	Common tern (chicks)	single ip injection												single injection + 21 days untreated	depressed growth	single intraperitoneal injection	not recommended: injection study
Metals	Lead	Lead nitrate		200	Burger and Gochfeld 1988	behavior	Common tern (chicks)	single ip injection												two injections at day 2 and 7	altered behavior-locomotion, righting response, and depth perception	endpoints monitored for 17 days; single intraperitoneal injection	not recommended: injection study
Metals	Lead	Lead nitrate		400	Burger and Gochfeld 1988	mortality	Common tern (chicks)	single ip injection												two injections at day 2 and 7	20% survival	endpoints monitored until day 17; single intraperitoneal injection; 100% survival in control birds	
Metals	**Mercury**	**Methylmercury dicyandiamide**		**0.064**	**Heinz 1979**	**reproduction**	**Mallard**	**food**	**0.1280**	**W**	**2**		**1**	**B**				**0.5**		**3 generations**	**egg and young production, eggshell thinning**	**only one dose used; form of mercury is used as a fungicide and is not typically found in a riverine environment; effect on duckling response to maternal call, duckling avoidance behavior also observed at LOAEL**	**Selected TRV: Lowest LOAEL that meets acceptability criteria**
Metals	Mercury	Methylmercury dicyandiamide		0.064	Heinz 1975	behavior	Mallard	food	0.1280	W	2		1	B				0.5		multi-generational; adults fed prior to egg laying and chicks fed	avoidance response in 2 and 8 day old chicks (distance run from fright stimulus; maternal call response)		not recommended: not direct measure of growth, survival, or reproduction
Metals	Mercury	methyl mercuric chloride		0.073	Albers et al. 2007	reproduction	American kestrel	food	0.0136	D	1	6	0.13	I					0.7	1 mo prior to egg laying through egg laying period	number of fledglings	Bayesian model was used to determine that an estimated 24% decline in fledged young per pair would occur at dietary concentrations of 0.7 mg/kg dw mercury	
Metals	Mercury	Methylmercury chloride		0.091	Spalding et al. 2000	growth	Great egret, one day old	food	0.185	W	7		1.02	H				0.5		14 wks	Growth		
Metals	Mercury	Methylmercury chloride		0.091	Bouton et al. 1999	behavior	Great egret, juvenile	gelatin capsule	0.185	W	7		1.02	H				0.5		approx 6 wks	motivation to hunt prey, tendency to seek shade, altered maintenance behavior and activity	unbounded LOAEL	not recommended: not direct measure of growth, survival, or reproduction
Metals	Mercury	Cesaran M-mercuric fungicide containing methylmercury chloride		0.30	Kreitzer and Heinz 1974	behavior	Japanese quail	food	0.0048	D	1	3	0.09	B	10%			5	5.6	8 days treated + 6 days untreated	avoidance response (depressed response to stimuli); results not clearly reported-assumed significant effect		not recommended: not direct measure of growth, survival, or reproduction
Metals	**Mercury**	**Methylmercury dicyandiamide**	**0.050**	0.30	**Heinz 1974**	**reproduction**	**Mallard**	**food**	**0.1082**	**W**	**2**		**1.082**	**B**		**0.5**		**3**		**12 months through hatching**	**depressed hatching success, depressed egg production, and increased duckling mortality to 1 week of age**	**egg residues also reported; no discussion of statistical significance of effects; form of mercury is used as a fungicide and is not typically found in a riverine environment**	**Selected TRV: highest NOAEL below selected LOAEL that meets acceptability criteria based on same species and endpoint**
Metals	**Mercury**	**Methylmercury dicyandiamide**	**0.050**	0.30	**Heinz 1976**	**reproduction**	**Mallard**	**food**	**0.1082**	**W**	**2**		**1.082**	**B**		**0.5**		**3**		**2 years**	**offspring survival, avoidance response of offspring**	**statistically significant effects; form of mercury is used as a fungicide and is not typically found in a riverine environment**	**Selected TRV: highest NOAEL below selected LOAEL that meets acceptability criteria based on same species and endpoint**
Metals	Mercury	Methylmercury chloride	0.50		Heinz 1980	reproduction	Mallard	food	0.1082	W	2		1.082	B		5				>60 days	eggshell thickness		
Metals	Mercury	methylmercury chloride	0.45	0.9	Hill and Shaffner 1976	reporduction	Japanese quail	food	0.0169	D	7		0.15	E	10%		4		8	5 days	egg production		
Metals	Mercury	methylmercury chloride		0.9	Hill and Soares 1987	mortality	Japanese quail (chicks at hatching)	food	0.0053	D	1	3	0.1	A	10%			16.0	17.75412921	5 days	hatchling mortality (16%)	chicks fed from hatching to 5 days; control mortality was 3%; LC50 via gavage and IM injection = 11 and 8 mg/kg bw, respectively	
Metals	Mercury	methyl mercuric chloride	0.63	1.26	Bennett et al. 2009	reproduction	American kestrel	food	0.0136	D	1	6	0.13	I			6		12	39-49	adult mortality	all 5 birds in the 12 ppm group dosed between 39 and 49 days after exposure began (median of 45 days); signs of neurotoxicity in birds exposed at 6 ppm after 42 days of exposure	
Metals	Mercury	Methylmercury chloride	0.72	1.4	Scheuhammer 1988	mortality	Zebra finch	food	0.0034	D	1	2	0.012	B	10%	2.25	2.5	4.5	5	76 days	Survival		
Metals	Mercury	Methylmercury chloride	0.43	1.6	Spann et al. 1986a	mortality	Northern bobwhite, 12 day old	food	0.0150	W	5		0.19	F		5.4		20		6 wks	Survival		
Metals	Mercury	Mercuric chloride	0.80	1.6	Stoewsand et al. 1971	reproduction	Japanese quail, one day old	food	0.031	W	6		0.155	G		4		8		10 wks	eggshell thickness		

Table 6. TSVs for bird diet

Chemical Group	Chemical	Chemical Form	NOAEL (mg/kg bw/d)	LOAEL (mg/kg bw/d)	Source	Endpoint	Test Species	Exposure Mode	FI (kg dw or L/day)	Wet or Dry?	FI Default?	Nagy bird guild	Body Weight (kg)	BW Default?	% Moisture	NEC wet (ppm)	NEC dry (ppm)	LEC wet (ppm)	LEC dry (ppm)	Exposure Duration	Effect Endpoint	Notes	Rationale
Metals	Mercury	Mercuric chloride	1.0	3.0	Leander et al. 1977	behavior	White corneaux pigeon	injection (im)												daily injections for up to 60 days	decreased learning response	injection into breast muscle; results not statistically evaluated; learning effect inconsistently impaired at lowest dose (NOAEL) and consistently impaired at LOAEL; endpoint not directly relevant to mortality, growth, or reproduction	not recommended: injection study
Metals	Mercury	Dimethyl mercury	5.24		Peakall and Lincer 1972	survival	American kestrel	food	0.0136	D	1	6	0.13	I	80%	10	50			3 months	eggshell thickness	poorly reported results: unclear whether 10 mg/kg is reported in ww or dw; assumed 80% moisture from day-old dead chicks in diet	not recommended: see notes
Metals	Mercury	methylmercury chloride		6.4	Hill and Soares 1987	mortality	Japanese quail	gavage													LC50- mortality		
Metals	Mercury	methylmercury chloride		8.8	Hill and Soares 1987	mortality	Japanese quail	injection													LC50- mortality		
Metals	Mercury	Mercuric chloride		11.1	Hill and Soares 1987	mortality	Japanese quail	gavage													LC50- mortality		
Metals	Mercury	Mercuric chloride		19.2	Hill and Soares 1987	mortality	Japanese quail	injection													LC50- mortality		
Metals	Mercury	Mercuric chloride		62	Hill and Soares 1987	mortality	Japanese quail (chicks)	food	0.0053	D	1	3	0.1	A	10%			1044.7	1160.82832	5 days	hatchling mortality (12%)	chicks fed from hatching to 5 days; control mortality was 3%; LC50 via gavage and IM injection = 26 and 15 mg/kg bw, respectively	
Metals	Nickel	nickel sulfate	15		Weber and Reid 1968	growth	Broiler chicks	food	0.067	W			0.484			111.6479002				4 wks	body weight gain		
Metals	Nickel	nickel acetate	17		Weber and Reid 1968	growth	Broiler chicks	food	0.069	W			0.467			117.9415878				4 wks	body weight gain		
Metals	**Nickel**	**nickel sulfate**		**33**	**Weber and Reid 1968**	**growth**	**Broiler chicks**	**food**	**0.083**	**W**			**0.39**					**156.30706**		**4 wks**	**body weight gain**		**Selected TRV: Lowest LOAEL that meets acceptability criteria**
Metals	Nickel	nickel acetate		38	Weber and Reid 1968	growth	Broiler chicks	food	0.086	W			0.376					165.11822		4 wks	body weight gain		
Metals	Nickel	nickel sulfate	77		Cain and Pafford 1981	mortality, growth	Mallard	food	0.0561	W	2		0.561		10%	774	860			90 days	mortality, body weight; bill length	no statistics for mortality; statistically significant growth effects at LOAEL	
Metals	Nickel	nickel sulfate		107	Cain and Pafford 1981	mortality, growth	Mallard	food	0.0178	W	2		0.178		10%			1069	1187.777778	90 days	mortality, body weight; bill length	no statistics for mortality; statistically significant growth effects at LOAEL	
Metals	Nickel	nickel sulfate	132		Eastin and O'Shea 1981	mortality, growth, reproduction	Mallard	food	0.178	W			1.082	B	10%	800				90 days	adult mortality; body weight; hatchling weight	no statistics for mortality; no treatment related deaths	
Metals	Selenium	sel-plex 50	0.025		Choct et al. 2004	mortality, growth	Broiler chicks	food	0.0982	D			0.993	A				0.25		~40 days	body weight		
Metals	Selenium	sodium selenite	0.025		Choct et al. 2004	mortality, growth	Broiler chicks	food	0.1007	D			0.993	A				0.25		~40 days	body weight		
Metals	**Selenium**	**selenomethionine**	**0.42**		**Heinz et al. 1989**	**reproduction**	**Mallard**	**food**	**0.1158**	**W**	**2**		**1.158**		**11%**	**4.15**				**~100 days**	**offspring growth/survival**	**statistically evaluated**	**Selected TRV: NOAEL based on same study as selected LOAEL**
Metals	Selenium	Na_2SeO_3	0.50		Heinz et al. 1987	reproduction	Mallard	food	0.104	W			1.036		9.5%	5				4 wks+laying(F0), 3 wks ducklings	embryo abnormalities		
Metals	**Selenium**	**selenomethionine**		**0.82**	**Heinz et al. 1989**	**reproduction**	**Mallard**	**food**	**0.1145**	**W**	**2**		**1.145**		**11%**			**8.15**		**~100 days**	**offspring growth/survival**	**statistically significant effects at LOAEL**	**Selected TRV: Lpwest LOAEL that meets acceptability criteria**
Metals	Selenium	Na_2SeO_3	1.0		Heinz et al. 1987	growth	Mallard	food	0.105	W			1.046		9.5%	10				4 wks+laying(F0), 3 wks ducklings	adult growth		
Metals	Selenium	Na_2SeO_3		1.0	Heinz et al. 1987	reproduction	Mallard	food	0.105	W			1.046		9.5%	5		10		4 wks before laying to 3 wks after hatching	embryo abnormalities		
Metals	Selenium	selenomethionine	1.6		Heinz et al. 1989	mortality, growth	Mallard	food	0.1107	W	2		1.107		11%	16.15				~100 d	body weight; adult mortality	no statistics for mortality; 0% mortality; growth effect may be result of food avoidance	
Metals	Selenium	Na_2SeO_3	2.1		Heinz et al. 1988	growth	Mallard	food	0.097	W			0.459		7%	10.1				42 days	body weight	Food avoidance observed. Selenomethionine also tested - less toxic	
Metals	Selenium	Na_2SeO_3	2.5		Heinz et al. 1987	mortality	Mallard	food	0.094	W			0.938		9.5%	25				4 wks before laying to 3 wks after hatching	adult mortality	100% mortality at LOAEL; 1 male mortality at NOAEL	
Metals	Selenium	Na_2SeO_3		2.5	Heinz et al. 1987	growth	Mallard	food	0.094	W			0.938		9.5%			25		4 wks before laying to 3 wks after hatching	adult growth		
Metals	Selenium	selenomethionine	1.0	3.2	Wiemeyer and Hoffman 1996	growth, reproduction	Screech owl	food	0.050	W			0.189		11%	3.7	8.8	12.1	30	~ 3 mos	body weight, hatching success, 5 day survival, clutch size, egg size and mass	food avoidance may have affected growth; calc NOAEL (based on Sample 1996) 0.44; LOAEL = 1.5	

Table 6. TSVs for bird diet

Chemical Group	Chemical	Chemical Form	NOAEL (mg/kg bw/d)	LOAEL (mg/kg bw/d)	Source	Endpoint	Test Species	Exposure Mode	FI (kg dw or L/day)	Wet or Dry?	FI Default?	Nagy bird guild	Body Weight (kg)	BW Default?	% Moisture	NEC wet (ppm)	NEC dry (ppm)	LEC wet (ppm)	LEC dry (ppm)	Exposure Duration	Effect Endpoint	Notes	Rationale
Metals	Selenium	selenomethionine		3.2	Wiemeyer and Hoffman 1996	growth	Screech owl	food	0.050	W			0.189		11%			12.1	30	~ 3 mos	body weight	Food avoidance may have affected growth; calc NOAEL (based on Sample 1996) 0.44; LOAEL = 1.5	
Metals	Selenium	selenomethionine		3.2	Wiemeyer and Hoffman 1996	reproduction	Screech owl	food	0.050	W			0.189		11%			12.1	30	~ 3 mos	hatching success, 5 day survival, clutch size, egg size and mass		
Metals	Selenium	Na_2SeO_3	4.6		Heinz et al. 1988	mortality	Mallard	food	0.075	W			0.326		7%	20.1				42 days		selenomethionine also tested - less toxic	
Metals	Selenium	Na_2SeO_3		4.6	Heinz et al. 1988	growth	Mallard	food	0.075	W			0.326		7%			20.1		42 days	body weight	food avoidance observed; selenomethionine also tested - less toxic	
Metals	Selenium	Na_2SeO_3		10	Heinz et al. 1987	mortality	Mallard	food	0.072	W			0.718		9.5%			100		4 wks before laying to 3 wks after hatching	adult mortality	100% mortality at LOAEL; 1 male mortality at NOAEL	
Metals	Selenium	Na_2SeO_3		10	Heinz et al. 1988	mortality	Mallard	food	0.038	W			0.146		7%			40.1		42 days		selenomethionine also tested - less toxic	
Metals	**Thallium**	**thallium sulfate**		**24**	**Hudson et al. 1984**	**mortality**	**Pheasant**	**oral gavage**												**max 14 days**	**LD50**	**LD50 value; assumed dose is thallium ion based;**	**Selected TRV: lowest LOAEL that meets acceptability criteria**
Metals	Thallium	thallium sulfate	17	34	Bean and Hudson 1976	mortality	Golden eagles	gelatin capsule												single dose + 21 days observed post-treatment		uncontrolled study, n=3, poor toxicity study; 2/3 birds died; one single dose observed for up to 21 days	not recommended: uncontrolled study
Metals	Thallium	thallium sulfate		37	Hudson et al. 1984	mortality	Mallard	oral gavage												max 14 days	LD50	LD50 value; assumed dose is thallium ion based	
Metals	**Vanadium**	**ammonium metavanadate**	**1.2**	**2.3**	**Ousterhout and Berg 1981**	**growth**	**White leghorn hens**	**food**	**0.0997**	**W**	**3**		**1.71**	**C**		**20**		**40**		**4 wks**	**body weight**		**Selected TRVs: lowest LOAEL that meets acceptability criteria; highest growth NOAEL below selected LOAEL that meets acceptability criteria**
Metals	Vanadium	ammonium metavanadate	2.0		Davis et al. 2002	reproduction	White leghorn hens	food	0.114	W			1.71	C			30			6 wks	egg weight, egg quality		
Metals	Vanadium	vanadium sulfate	11.4		White and Dieter 1978	growth, survival	Mallard	food	0.121	W			1.17				110			12 wks	body weight, survival		
Metals	Zinc	zinc sulfate, zinc amino acid complex	17		Dozier et al. 2003	mortality, growth	Broiler chicks	food	0.0295	D	4		0.254	A			150			17 days	body weight, mortality	NOAEL is background concentration (30 ppm) in diet plus exposure concentration (120 ppm)	
Metals	**Zinc**	**Zinc oxide, zinc sulfate, or zinc carbonate**	**82**	**124**	**Roberson and Schaible 1960**	**growth**	**White rock chicks**	**food**	**0.044**	**W**	**5**		**0.534**	**F**		**1000**		**1500**		**5 wks**	**growth**		**Selected TRVs: lowest LOAEL that meets acceptability criteria; highest growth NOAEL below selected LOAEL that meets acceptability criteria**
Metals	Zinc	Zinc sulfate	133		Stahl et al. 1990	reproduction	White leghorn hens	food and supplements	0.125	W			1.9			2028				44 wks	egg hatchability		
Metals	Zinc	Zinc carbonate		300	Gasaway and Buss 1972	mortality	Mallard (7 wk old)	food	0.1082	W	2		1.082	B				3000		60 days	mortality, leg paralysis		
Metals	Zinc	Zinc chloride		344	Persia et al. 2004	growth	Chicks	food	0.0395	D			0.2873						2500	8-22 days	body weight	selected lowest LOAELs observed over the 4 experiments	
Metals	Zinc	Zinc acetate	330	659	Oh et al. 1979	mortality, growth	Hubbard broiler chicks	food	0.044	W	5		0.534	F		4000		8000		5 wks	mortality, reduced growth		
Butyltins	**Tributyltin**	**TBTO**	**2.7**	**6.8**	**Coenen et al. 1992**	**reproduction**	**Japanese quail**	**food**	**0.0169**	**W**		**3**	**0.15**			**24**		**60**		**6 wks**	**embryo mortality in shell, hatchability**	**statistically significant effects**	**Selected TRV: lowest LOAEL and NOAEL that meet acceptability criteria**
Butyltins	**Tributyltin**	**TBTO**	**2.7**	**6.8**	**Schlatterer et al. 1993**	**reproduction**	**Japanese quail**	**food**	**0.0169**	**W**		**3**	**0.15**			**24**		**60**		**6 wks**	**no hatched eggs per pair**	**effects on reproduction were more consistent at 150 mg/kg (egg production, egg fertility, hatchability, offspring body weight, and 14-day offspring survival were all significantly affected); however, effect on number of hatched eggs/ pair significantly reduced at 60 mg/kg**	**Selected TRV: lowest LOAEL and NOAEL that meet acceptability criteria**
Butyltins	Tributyltin	TBTO	22.5		Schlatterer et al. 1993	growth	Japanese quail	food	0.0048	D	1	3	0.09	B	10%	375	416.6666667			6 wks	body weight		
Butyltins	Tributyltin	TBTO	42.3		Schlatterer et al. 1993	growth	Japanese quail	food	0.0169	W		3	0.15		10%	375	416.6666667			6 wks	body weight	no statistically significant effects	
PAHs	**Benzo(a)anthracene**		**0.58**		**Brausch et al. 2010**	**survival**	**Northern bobwhite quail**	**food**	**0.0082**	**D**	**1**	**3**	**0.1613**				**11.5**			**60 days**	**survival**		**Selected TRV: only NOAEL that meets acceptability criteria**

Table 6. TSVs for bird diet

Chemical Group	Chemical	Chemical Form	NOAEL (mg/kg bw/d)	LOAEL (mg/kg bw/d)	Source	Endpoint	Test Species	Exposure Mode	FI (kg dw or L/day)	Wet or Dry?	FI Default?	Nagy bird guild	Body Weight (kg)	BW Default?	% Moisture	NEC wet (ppm)	NEC dry (ppm)	LEC wet (ppm)	LEC dry (ppm)	Exposure Duration	Effect Endpoint	Notes	Rationale
PAHs	Benzo(a)anthrecene	Benzo(a)anthrecene	2000		Brausch et al. 2010	survival	Northern bobwhite quail	oral gavage												one dose - then observed for 48 hrs	survival		not recommended: gavage exposure (dietary TRV available)
PAHs	**Benzo(a)pyrene**	**benzo(a)pyrene**		**1.4**	**Hough et al. 1993**	**reproduction**	**pigeons**	**weekly im injection**												**5 mos**	**fertility, ovarian appearance**	**weekly intramuscular injection**	**Selected TRV: only LOAEL that meets acceptability criteria**
PAHs	Benzo(a)pyrene	benzo(a)pyrene	33		Rigdon and Neal 1963	growth	White Rock chicken	food	0.121	W	6		1.84	G		500				30 days	body weight gain	study inconclusive on the effect on egg fertility; at 250 mg/kg 0 of 50 eggs fertile in 1st trial and in second trial 41 of 45 eggs fertile at 250 mg/kg and 41 of 42 eggs fertile at 1,000 mg/kg in diet	
PAHs	**Naphthalene**	**Naphthalene**	**2000**		**Brausch et al. 2010**	**survival**	**Northern bobwhite quail**	**oral gavage**												**one dose - then observed for 48 hrs**	**survival**		**Selected TRV: only NOAEL that meets acceptability criteria**
PAHs	**Pyrene**	**Pyrene**	**2000**		**Brausch et al. 2010**	**survival**	**Northern bobwhite quail**	**oral gavage**												**one dose - then observed for 48 hrs**	**survival**		**Selected TRV: only NOAEL that meets acceptability criteria**
PAHs	**Total PAHs**	**aromatic hydrocarbon mixture including individual PAHs**	**40**		**Patton and Dieter 1980**	**growth**	**Mallard**	**food**	**0.1233**	**W**	**2**		**1.2333333**		**10%**			**400**	**444.4444444**	**7 months**	**little change in body weight**	**body weight significantly decreased at 400 ppm and 4,000 ppm PAHs at 3 months, but at 7 months change in growth was not significant; mixture with paraffin wax in food- aromatic mixture contained only some percentage of PAHs, not including benzo(a)pyrene**	**Selected TRV: only NOAEL that meets acceptability criteria**
PAHs	Total PAHs	Petroleum hydrocarbon mixture including PAHs)	400		Patton and Dieter 1980	mortality	Mallard	food	0.1218	W	2		1.218		10%	4000	4444.444444			7 months	mortality	mixture with paraffin wax in food- aromatic mixture contained only some percentage of PAHs, not including benzo(a)pyrene	
SVOCs	Bis(ethylhexyl) phthalate		1.11		Peakall 1974	reproduction	Ringed turtle-dove	food	0.0173	W	1	1	0.155	E	10%	10				4 wks	eggshell thickness		
SVOCs	**Bis(ethylhexyl) phthalate**		**67.8**		**O'Shea and Stafford 1980**	**growth**	**European starling**	**food**	**0.0216**	**W**			**0.0828**	**J**		**260**				**30 days**	**growth, food consumption**		**Selected TRV: NOAEL is highest NOAEL available that meets acceptability criteria (no LOAEL available that meets acceptability criteria)**
SVOCs	Bis(ethylhexyl) phthalate			329	Ishida et al. 1982	reproduction	Chicken	food	0.121	W	6		1.84	G				5000		230 days	cessation of egg laying, abnormal ovaries	domestic species	not recommended: chicken reproductive endpoint
Dioxins/ furans	**TEQ-bird**	**2,3,7,8-TCDD**	**0.000014**	**0.000143**	**Nosek et al. 1992**	**mortality, growth reproduction**	**Ring-necked pheasant**	**weekly IP injection**					**1.1**				**0.0001**		**0.001**	**10 wks- 1/wk**	**body weight loss, adult mortality, egg production and embryo survival**		**Selected TRVs: LOAEL and NOAEL are lowest TRVs available that meet acceptability criteria**
Dioxins/ furans	TEQ-bird	2,3,7,8-TCDD	0.001		Schwetz et al. 1973	growth	White leghorn, cockerels	oral intubation												20-21 days		mortality observed at other dose levels limited measure of growth at highest dose only	
Dioxins/ furans	TEQ-bird	2,3,7,8-TCDD	0.0001	0.001	Schwetz et al. 1973	mortality	White leghorn, cockerels	oral intubation												20-21 days		8/10 birds died in LOAEL group	
PCBs	Total PCBs	Aroclor 1248		0.35	Lowe and Stendell 1991	reproduction	American kestrel	food	0.0136	D	1	6	0.13	I	10%			3	3.3	5.5 months	eggshell weight and thickness	only one dose used	decreased eggshell weight and thickness were not associated with reduced hatchability
PCBs	Total PCBs	Aroclor 1242	0.29	0.58	Britton and Huston 1973	reproduction	White leghorn chickens	food	0.0997	W	3		1.71	C		5		10		6 wks + 5 wks untreated	hatchability	significant effects on hatchability	not recommended: chicken reproductive endpoint
PCBs	Total PCBs	Aroclor 1242		0.60	Hill et al. 1975	reproduction	Japanese quail	food	0.0048	D	1	3	0.09	B	10%			10	11.11111111	45 days	eggshell thinning	only one dose used	not recommended: endpoint not a direct measure of growth, survival, or reproduction and domestic species (quail) reproductive endpoint
PCBs	Total PCBs	Aroclor 1242		0.60	Hill et al. 1976	reproduction	Japanese quail	food	0.0048	D	1	3	0.09	B	10%			10	11.11111111	45 days	eggshell thinning		not recommended: endpoint not a direct measure of growth, survival, or reproduction and domestic species (quail) reproductive endpoint
PCBs	Total PCBs	Aroclor 1248	0.061	0.61	Scott et al. 1975	reproduction	White leghorn chickens	food	0.105	W			1.71	C		1		10		8 wks	egg production and egg hatchability	egg residues also reported	not recommended: chicken reproductive endpoint
PCBs	Total PCBs	Aroclor 1254	0.054		Ahmed et al. 1978	mortality, growth, reproduction	White leghorn males	food	0.0034	W			2.56			40				20 wks	fertility, hatchability, growth, mortality	no control values given	
PCBs	Total PCBs	Aroclor 1248	0.49		McLane and Hughes 1980	reproduction	Screech owl	food	0.0266	D	1	5	0.181	B	10%	3	3.333333333			2 generations	eggshell thickness, egg production, hatching success, fledging success		

Table 6. TSVs for bird diet

Chemical Group	Chemical	Chemical Form	NOAEL (mg/kg bw/d)	LOAEL (mg/kg bw/d)	Source	Endpoint	Test Species	Exposure Mode	FI (kg dw or L/day)	Wet or Dry?	FI Default?	Nagy bird guild	Body Weight (kg)	BW Default?	% Moisture	NEC wet (ppm)	NEC dry (ppm)	LEC wet (ppm)	LEC dry (ppm)	Exposure Duration	Effect Endpoint	Notes	Rationale
PCBs	Total PCBs	Aroclor 1232		1.2	Cecil et al. 1974	reproduction	White leghorn hens	food	0.0997	W	3		1.71	C				20		9 wks + 7 wks untreated then mated	hatchability, embryo abnormality, embryo mortality	only one dose used; no discussion of statistical significance	not recommended: chicken reproductive endpoint
PCBs	**Total PCBs**	**Aroclor 1254**		**1.4**	**Peakall et al. 1972; Peakall and Peakall 1973**	**reproduction**	**Ringed turtle-dove**	**food**	**0.0202**	**D**	**1**	**1**	**0.155**	**E**	**9%**			**10**	**10.98901099**	**2 generations**	**hatching success in second generation**	**egg tissue concentrations also reported in study**	**Selected TRV: Lowest LOAEL that meets acceptability criteria; no NOAEL available from study**
PCBs	Total PCBs	Aroclor 1254		1.6	Tori and Peterle 1983	behavior	Mourning dove	food	0.0168	D	1	1	0.119	B	10%			10	11.1	42 days (+30 days untreated following 2 wks post exposure)	reduced courtship behavior, fewer successful pair bonds formed (both statistically significant); also delay onset of nest initiation	unbounded LOAEL	
PCBs	Total PCBs	Aroclor 1254		1.6	Dahlgren et al. 1972	reproduction	Ring-necked pheasant	gelatin capsule					1.135	B				1.7857143		Once per wk for 16 wks	egg hatchability	dose reported in mg/kg/wk; daily dose derived from weekly dose (7 mg/ week/7)	
PCBs	Total PCBs	Aroclor 1254	2.5		Custer and Heinz 1980	reproduction	Mallard	food	0.1082	W	2		1.082	B		25				~ 1 month	Reproductive success		
PCBs	Total PCBs	Aroclor 1254	0.29	2.9	Platonow and Reinhart 1973	reproduction	White leghorn chickens	food	0.0997	W	3		1.71	C		5		50	50.0	39 wks (14 wks for 50 ppm group)	hatchability	statistically significant effect observed; LOAEL is residues where instantaneous depression of hatchability and embryotoxicity is observed; NOAEL is where hatchability of fertile eggs is unaffected; however, at NOAEL fertility and egg production are significantly reduced (study attributes it to mating inactivity and not PCB exposure)- uncertain NOAEL	
PCBs	Total PCBs	Aroclor 1254	3.9		Risebrough and Anderson 1975	reproduction	Mallard	food	0.1082	W	2		1.082	B		39				4 months	egg production, eggshell thinning		
PCBs	Total PCBs	1:1:1 ratio of Aroclor 1248:1254:1260		7	Fernie et al. 2003a	reproduction	American kestrel	food										4.85		100 days	offspring mortality and offspring body weight	birds were fed injected cockerels; stats not presented but 52% of offspring died within 3 days of hatching; no adverse effect observed in offspring body weight (actually significantly increased at this LOAEL dose for offspring mortality	
PCBs	Total PCBs	Aroclor 1254		9.5	Bird et al. 1983	reproduction	American kestrel	food										33		62-69 days	decreased sperm count and sperm concentration	endpoint is not a direct measure of reproductive success; assumed 80% moisture from day-old dead chicks in diet	
PCBs	Total PCBs	Aroclor 1254		12.0	Kreitzer and Heinz 1974	behavior	Japanese quail	food	0.0048	D	1	3	0.09	B	10%			200	222.2	8 days treated + 6 days untreated	avoidance response (depressed response to stimuli)	statistically significant effect; only one dose used	not recommended: not a direct measure of growth, survival, or reproduction
PCBs	Total PCBs	Aroclor 1242		15	Haseltine and Prouty 1980	reproduction	Mallard	food	0.1082	W	2		1.082	B				150		12 wks	hatchability, embryo mortality, egg viability, embryo abnormalities	egg tissue concentrations also reported in study	
PCBs	Total PCBs	1:1:1 ratio of Aroclor 1248:1254:1260		5 to 7	Fernie et al. 2000, 2001	reproduction	American kestrel	food												100 days until eggs hatched	egg laying in second generation (exposed in ovo); also some effect on clutch size and fledgling success	body weight-normalized dose estimated in study; no statistics- egg laying endpoint: 91% in controls laid a clutch of eggs; 75% in test group	
PCBs	Total PCBs	1:1:1 ratio of Aroclor 1248:1254:1260		5 to 7	Fernie et al. 2003b	reproduction	American kestrel	food												1 month prior to pairing until anticipated egg hatching	cracked eggs, embryo abnormalities;	birds were fed injected cockerels	
PCBs	Total PCBs	1:1:1 ratio of Aroclor 1248:1254:1260		5 to 7	Fernie et al. 2003c	reproduction	American kestrel	food												100 days	offspring growth rate reduced	birds were fed injected cockerels; unclear whether reduced growth rate in F2 nestlings was statistically evaluated; however, other studies indicate that effects in in F1 generation and parents were statistically significant at this dose	
PCBs	Total PCBs	1:1:1 ratio of Aroclor 1248:1254:1260		5 to 7	Fisher et al. 2001	reproduction	American kestrel	food												1 mo prior to mating through mating period	courtship behavior	body weight normalized dose estimated in study; no adverse effect on male sexual behavior and no change in female sexual behavior or frequency of copulation; study performed along with Fernie et al. 2000; 2001	not recommended: not a direct measure of growth, survival, or reproduction
PCBs	Total PCBs	Aroclor 1254	NC	NC	Stickel et al. 1984	mortality	common grackles, red-winged blackbirds, brown-headed cowbird, starling	food											1500	birds fed until 50% of birds died	study not useful- presents LT50 in four bird species at an extremely high dietary PCB concentration		not recommended: see notes

Table 6. TSVs for bird diet

Chemical Group	Chemical	Chemical Form	NOAEL (mg/kg bw/d)	LOAEL (mg/kg bw/d)	Source	Endpoint	Test Species	Exposure Mode	FI (kg dw or L/day)	Wet or Dry?	FI Default?	Nagy bird guild	Body Weight (kg)	BW Default?	% Moisture	NEC wet (ppm)	NEC dry (ppm)	LEC wet (ppm)	LEC dry (ppm)	Exposure Duration	Effect Endpoint	Notes	Rationale
Pesticides	**Aldrin**			**0.04**	**DeWitt 1956**	**mortality**	**Quail**	**food**	**0.0048**	**D**	**1**	**3**	**0.09**	**B**	**10%**			**0.5**	**0.56**	**5 mos**	**97.5% mortality in 127 days**		**Selected TRV: Lowest LOAEL that meets acceptability criteria**
Pesticides	Aldrin			0.7	DeWitt 1956	mortality	Pheasant	food	0.0464	D	1	3	1.135	B	10%			5	5.6	16-20 wks	100% mortality in 46 days		
Pesticides	Aldrin		10	20	Hall et al. 1971	growth	pen-reared pheasant chicks	gelatin capsule					0.007							7 wks (+ 9 wks untreated)	growth	dose calculation is highly uncertain; birds given one dose per week; growth significantly reduced in birds fed 1.0 mg in capsule; no effect on birds fed 0.5 mg	
Pesticides	Aldrin			92	Hall et al. 1971	mortality	pen-reared pheasant chicks	gelatin capsule					0.007							7 wks (+ 9 wks untreated)	growth	dose calculation is highly uncertain; birds given a dose 3X per wk; 8/22 birds died after single 1.5 mg dose (no stats); mortality at other doses not clearly reported	
Pesticides	Chlordane	tech chlordane	0.6		Ludke 1976	mortality, growth	Bobwhite quail	food	0.0082	D	1	3	0.1613		11%	10	11.23595506			10 wks	body weight, adult mortality		
Pesticides	Chlordane	Chlordane		1.5	Kreitzer and Heinz 1974	behavior	Japanese quail	food	0.0048	D	1	3	0.09	B	10%			25	27.8	8 days treated + 6 days untreated	avoidance response (depressed response to stimuli)	statistically significant effect; only one dose used	not recommended: not a direct measure of growth, survival, or reproduction
Pesticides	**Chlordane**	**experimental chlordane**		**20**	**Hill et al. 1975; Heath et al. 1972**	**mortality**	**Bobwhites (juvenile)**	**food**	**0.0053**	**D**	**1**	**3**	**0.1**	**A**	**10%**			**331**	**367.7777778**	**5 days**	**50% mortality**	**LC50 study**	**Selected TRV: Lowest LOAEL that meets acceptability criteria; no NOAEL available from study**
Pesticides	Chlordane	experimental chlordane		21	Hill et al. 1975; Heath et al. 1972	mortality	Japanese quail	food	0.0053	D	1	3	0.1	A	10%			350	388.8888889	5 days	50% mortality	LC50 study	
Pesticides	Chlordane	experimental chlordane		25	Hill et al. 1975; Heath et al. 1972	mortality	Ring-necked pheasant	food	0.0053	D	1	3	0.1	A	10%			430	477.7777778	5 days	50% mortality	LC50 study	
Pesticides	Chlordane	experimental chlordane		115	Hill et al. 1975; Heath et al. 1972	mortality	Mallard-young	food	0.0120	D	1	4	0.1	A	10%			858	953.3333333	5 days	50% mortality	LC50 study	
Pesticides	Total DDx	p,p'-DDT		0.15	Stickel and Rhodes 1970	reproduction	Quail	food	0.0048	D	1	3	0.09	B	10%			2.5	2.78	26 wks+12 days	eggshell thickness	effect on hatchability not observed, so uncertain if this concentration would adversely effect reproduction	not recommended: not a direct measure of growth, survival, or reproduction
Pesticides	Total DDx	tech DDT	0.18		Davison and Sell 1974	reproduction	Mallard	food	0.1110	W			1.22			2				11 mos	eggshell weight and thickness	statistically evaluated	
Pesticides	Total DDx	p,p'-DDT	0.19		Davison and Sell 1974	reproduction	Mallard	food	0.1150	W			1.19			2				11 mos	eggshell weight and thickness		
Pesticides	Total DDx	p,p'-DDT (technical grade)		0.44	Chura and Stewart 1967	growth	Bald eagle (field collected)	food	0.150	W			3.374					10		5 months (bird died after 7 months)	body weight- 49% weight loss in adult male (n=1) fed 10 ppm	no statistics presented; decrease in body weight does not appear dose-related; small sample size per dose (n=1,2, or 3); some birds were force-fed during training; LOEC observed at dose where n=1	not recommended: LOAEL based on field-collected birds and effects not dose-responsive
Pesticides	Total DDx	"DDE"	0.32		Mendenhall et al. 1983	mortality	Barn owls	food	0.0539	D	1	5	0.524	B	10%	2.83	3.144444444			2 yrs (2 nestings)	adult mortality	no statistics; 3 birds died (2 unknown cause of death); only one dietary dose level used	
Pesticides	**Total DDx**	**"DDE"**		**0.32**	**Mendenhall et al. 1983**	**reproduction**	**Barn owls**	**food**	**0.0539**	D	1	5	0.524	B	10%			2.83	3.1	**2 yrs (2 nestings)**	**eggshell breakage/ thickness; nestling mortality**	**only one dietary dose level used; egg residues also reported**	**Selected TRV: Lowest LOAEL that meets acceptability criteria; no NOAEL available from study**
Pesticides	Total DDx	"DDE"		0.35	Peakall et al. 1973	reproduction	American kestrel	food	0.0136	D	1	6	0.13	I	10%			3	3.3	14 days	eggshell thinning, egg permeability	egg yolk concentrations measured- no egg residues reported	
Pesticides	Total DDx	p,p'-DDE		0.90	Heath et al. 1969	reproduction	Mallard	food	0.1082	**W**	**2**		**1.082**	**B**				**9**	**10**	2 yrs	% cracked, hatchling survival/production, shell thickness, embryonation		Selected TRV: LOAEL based on study recommended in PAR and meets acceptability criteria; no NOAEL available from study
Pesticides	Total DDx	p,p-DDE		1.0	Longcore and Samson 1973	reproduction	Black duck	food	0.1250	W	2		1.25	B	10%			10	3	7 mos	shell thickness, egg weight, hatchability, duckling mortality	only one dietary dose level used; egg residues also reported	
Pesticides	Total DDx	p,p' DDE		1.0	Wiemeyer and Porter 1970; Porter and Wiemeyer 1972	reproduction	American kestrel	food	0.0136	D	1	6	0.13	I	10%			2.8	10	1 yr (2 clutches)	eggshell thickness	only one dose level was used; egg residues also reported	
Pesticides	Total DDx	DDE		1.0	Kolaja 1977	reproduction	Mallard	food	0.1082	W	2		1.082	B	10%			10	11.1	30 days	eggshell thinning	Effects on hatchability were not measured, so uncertain if this concentration would effect reproduction	
Pesticides	Total DDx	DDE		1.0	Longcore et al. 1971	reproduction	Black duck	food	0.1250	W	2		1.25	B				10		reproductive period (through incubation and hatching)	eggshell thinning and cracking, embryo mortality, duckling survival	significant effects observed	
Pesticides	Total DDx	DDT		1.0	Kolaja 1977	reproduction	Mallard	food	0.1082	W	2		1.082	B	10%			10	11.11	30 days	eggshell thinning	Effects on hatchability were not measured, so uncertain if this concentration would effect reproduction	

Table 6. TSVs for bird diet

Chemical Group	Chemical	Chemical Form	NOAEL (mg/kg bw/d)	LOAEL (mg/kg bw/d)	Source	Endpoint	Test Species	Exposure Mode	FI (kg dw or L/day)	Wet or Dry?	FI Default?	Nagy bird guild	Body Weight (kg)	BW Default?	% Moisture	NEC wet (ppm)	NEC dry (ppm)	LEC wet (ppm)	LEC dry (ppm)	Exposure Duration	Effect Endpoint	Notes	Rationale
Pesticides	Total DDx	DDE mixture	0.12	1.2	Lincer 1975	reproduction	American kestrel	food	0.0136	D	1	6	0.13	I	74%	0.3	1.132075472	3.0	11.3	~ 5 mos	eggshell thickness	field-collected birds used in controlled laboratory experiment, background concentration unknown; egg residues also reported	not recommended: based on field-collected birds
Pesticides	Total DDx	DDT mixture	1.3		Greichus and Hannon 1973	mortality	Double-crested cormorant	food	0.4	W			1.5604			5				9 wks		no statistical methods; mixture- 40% pp'-DDT, 30% pp'-DDD, 30% pp'-DDE	
Pesticides	Total DDx	p,p'-DDT	0.6	1.5	Stickel and Rhodes 1970	mortality	Japanese quail	food	0.0048	D	1	3	0.09	B	10%	10	11.11111111	25	27.8	26 wks+12 days		no statistics-5/12 male, 3/12 female died at LOAEL- control 0/24 diets; 2/24 die- NOAEL	
Pesticides	Total DDx	"DDE"		1.6	Peakall et al. 1973	reproduction	Ring dove	food	0.0168	D	1	1	0.119	B	10%			10	11.1	14 days	eggshell thinning, egg permeability	egg yolk concentrations measured; no egg residues reported	
Pesticides	Total DDx	tech DDT	1.8		Davison and Sell 1974	mortality	Mallard	food	0.1040	W			1.1733333			20				11 mos	female mortality	no statistics, but mortality <5%	
Pesticides	Total DDx	tech DDT		1.8	Davison and Sell 1974	reproduction	Mallard	food	0.1040	W			1.1733333					20		11 mos	eggshell weight and thickness	statistically significant effects	
Pesticides	Total DDx	p,p'-DDT	1.9		Davison and Sell 1974	mortality	Mallard	food	0.1150	W			1.21			20				11 mos	female mortality	no statistics, but mortality <5%	
Pesticides	Total DDx	p,p'-DDT		1.9	Davison and Sell 1974	reproduction	Mallard	food	0.1150	W			1.21					20		11 mos	eggshell weight and thickness		
Pesticides	Total DDx	p,p'-DDT	0.90	2.3	Heath et al. 1969	reproduction	Mallard	food	0.1082	W	2		1.082	B		9	10	22.5	25	2 yrs	shell thickness, % cracked eggs, hatchling surv/production)		
Pesticides	Total DDx	"DDT"- likely mixture	2.3		DeWitt 1956	reproduction	Pheasant	food	0.0464	D	1	3	1.135	B	10%	50	55.55555556			~9 mos	egg production	no statistical methods	
Pesticides	Total DDx	DDE	2.99		Kreitzer and Heinz 1974	behavior	Japanese quail	food	0.0048	D	1	3	0.09	B	10%	50	55.55555556			8 days treated + 6 days untreated	avoidance response (depressed response to stimuli)	no statistical significant effect observed; only one dose used	not recommended: not a direct measure of growth, survival, or reproduction
Pesticides	Total DDx	tech DDT	3.0		Shellenberger 1978	mortality, growth	Japanese quail	food	0.0048	D	1	3	0.09	B	10%	50	55.55555556			4 generation	adult mortality, body weight		
Pesticides	Total DDx	tech DDT		3.0	Shellenberger 1978	reproduction	Japanese quail	food	0.0048	D	1	3	0.09	B	10%			50	55.6	4 generation	fertility and hatchability	statistical methods not presented	
Pesticides	Total DDx	tech DDT	0.30	3.0	Stickel et al. 1966	mortality	Bald eagle	food												112 days		LOAEL- 50% mortality; small n, field captured eagles	
Pesticides	Total DDx	DDT mixture		3.1	Greichus and Hannon 1973	mortality	Double-crested cormorant	food	0.4	W			1.5923					12.5		9 wks		no statistical methods; mixture- 40% pp'-DDT, 30% pp'-DDD, 30% pp'-DDE	
Pesticides	Total DDx	p,p'-DDE		3.1	Pritchard et al. 1972	reproduction	White Pekin duck	food	0.2570	D	4		3.6287392		10%			40	44.4	2-3 wks	eggshell thick/breakage/ permeability, egg yolk/ shell gland weight	unbounded LOAEL, unknown if peer reviewed	
Pesticides	Total DDx	"DDE"		3.1	Peakall et al. 1973	reproduction	White Pekin duck	food	0.3895	D	4		5.5	D	10%			40	44.4	14 days	eggshell thinning, egg permeability	egg yolk concentrations measured; no egg residues reported	
Pesticides	Total DDx	"DDT"- likely mixture		3.5	DeWitt 1956	mortality	Pheasant	food										50		~8 mos		no statistical methods- implied	
Pesticides	Total DDx	p,p'-DDE		4.0	Haegele and Hudson 1974	reproduction	Mallard	food	0.1082	W	2		1.082	B	10%			40	44.4	96 days	eggshell thickness (1st and 2nd reproductive season)	unbounded LOAEL; birds were fasted pre-treatment (domestic so OK); table 2 and text results conflict; egg residues also reported	
Pesticides	Total DDx	"DDT"- likely mixture		4.5	Genelly and Rudd 1956	reproduction	Ring-necked pheasant	food	0.0572	W			1.135	B				90	90	8 wks	offspring survival	NEC=355 mg/kg: egg production, fertilization, and hatching; egg residues also reported	
Pesticides	Total DDx	DDE-SO_4	5.0		Kolaja 1977	reproduction	Mallard	food	0.1082	W	2		1.082	B	10%	50	55.55555556			30 days	eggshell thinning		
Pesticides	Total DDx	commercial DDT	5.8		Scott et al. 1975	reproduction	White leghorn chicken	food	0.0997	W	3		1.71	C		100	100			15 wks	egg reproduction, hatchability, strength	egg residues also reported	
Pesticides	Total DDx	p,p' DDE		5.9	Risebrough and Anderson 1975	reproduction	Mallard	food	0.174	D			1.082	B	10%				36.5	4 mos	eggshell thickness	LEC value = 34-39 mg/kg	
Pesticides	Total DDx	"DDT"- likely mixture	6		DeWitt 1956	reproduction	Quail	food	0.0048	D	1	3	0.09	B	10%	100	111.1111111			~9 mos	fertility	no statistical methods	
Pesticides	Total DDx	p,p-DDE		6.3	Haegele and Hudson 1973	reproduction	Ring dove	food	0.0168	D	1	1	0.119	B	10%			40	44.4	126 days	egg production, shell thickness, young mortality, clutch size		
Pesticides	Total DDx	DDT mixture	6.7		Greichus and Hannon 1973	growth	Double-crested cormorant	food	0.4	W			1.4934			25				9 wks	body weight	"no growth differences in surviving birds," NEC same as mortality?; mixture- 40% pp'-DDT, 30% pp'-DDD, 30% pp'-DDE	
Pesticides	Total DDx	"DDT"- likely mixture	7.2		DeWitt 1956	growth	Quail	food								150				~8 mos	body weight	no statistical methods- implied	
Pesticides	Total DDx	"DDT"- likely mixture		8.9	DeWitt 1956	mortality	Quail	food										100		~8 mos		no statistical methods- implied	

Table 6. TSVs for bird diet

Chemical Group	Chemical	Chemical Form	NOAEL (mg/kg bw/d)	LOAEL (mg/kg bw/d)	Source	Endpoint	Test Species	Exposure Mode	FI (kg dw or L/day)	Wet or Dry?	FI Default?	Nagy bird guild	Body Weight (kg)	BW Default?	% Moisture	NEC wet (ppm)	NEC dry (ppm)	LEC wet (ppm)	LEC dry (ppm)	Exposure Duration	Effect Endpoint	Notes	Rationale
Pesticides	Total DDx	"DDE"		9.1	Peakall et al. 1975	reproduction	White Pekin duck (mallard-domestic)	food					5.5					250		10 days	eggshell thinning	unbounded LOAEL; no statistical methods, egg yolk concentrations measured no whole egg residues measured	
Pesticides	Total DDx	tech DDT	16		Davison and Sell 1974	mortality, growth	Mallard	food	0.0795	W			0.98			200				11 wks	female mortality; body weight	no statistics; methods state technical DDT, however results report p,p'-DDT	
Pesticides	Total DDx	tech DDT	16		Davison and Sell 1974	growth	Mallard	food	0.1020	W			1.2466667			200				11 mos	body weight	no statistics	
Pesticides	Total DDx	tech DDT		16	Davison and Sell 1974	mortality	Mallard	food	0.1020	W			1.2466667					200		11 mos	female mortality	no statistics, but mortality <5%	
Pesticides	Total DDx	"DDT"- likely mixture	21		DeWitt 1956	growth	Pheasant	food								100				~8 mos	body weight	no statistical methods- implied	
Pesticides	Total DDx	p,p'-DDE	24		Davison et al. 1976	growth	Japanese quail	food	0.0140	W			0.116			200				13 wks	body weight		
Pesticides	Total DDx	p,p'-DDE	24		Davison et al. 1976	reproduction	Japanese quail	food	0.0140	W			0.116			200				13 wks	egg production, thickness, weight, calcium in eggshell; number and length of clutch		
Pesticides	Total DDx	p,p'-DDT	27		Davison and Sell 1974	growth	Mallard	food	0.1050	W			0.78			200				11 mos	body weight	no statistics	
Pesticides	Total DDx	p,p'-DDT		27	Davison and Sell 1974	mortality	Mallard	food	0.1050	W			0.78					200		11 mos	female mortality	no statistics, but mortality <5%	
Pesticides	Total DDx	p,p-DDD		34	Gill et al. 1970	mortality	Ring-necked pheasant	food	0.0023	D	1	3	0.03975		10%			522	580	8 days		median lethal value (LC50)	
Pesticides	Total DDx	p,p'-DDT		36	Gill et al. 1970	mortality	Ring-necked pheasant	food	0.0023	D	1	3	0.03975		10%			550	611.1	8 days		median lethal value (LC50)	
Pesticides	Total DDx	tech DDT		61	Gill et al. 1970	mortality	Ring-necked pheasant	food	0.0023	D	1	3	0.03975		10%			935	1038.9	8 days		median lethal value (LC50)	
Pesticides	Total DDx	p,p'-DDE		71	Gill et al. 1970	mortality	Ring-necked pheasant	food	0.0023	D	1	3	0.03975		10%			1086	1206.7	8 days		median lethal value (LC50)	
Pesticides	Total DDx	commercial DDT	NC	NC	Scott 1977	reproduction	White leghorn chickens															see Scott et al. 1975; domesticated species	not recommended: chicken reproductive endpoint
Pesticides	Total DDx	DDD	NC	NC	Stickel et al. 1970	mortality	cowbird	food											1500	birds fed until 50% of birds died	mortality	study not useful- presents LT50 at an extremely high dietary PCB concentration	not recommended: see notes
Pesticides	Total DDx	DDE	NC	NC	Stickel et al. 1970	mortality	cowbird	food											1500	birds fed until 50% of birds died	mortality	study not useful- presents LT50 at an extremely high dietary PCB concentration	not recommended: see notes
Pesticides	Dieldrin		0.06		DeWitt 1956	reproduction	Quail	food	0.0048	D	1	3	0.09	B	10%	1	1.111111111			repro period		no statistical difference from controls	
Pesticides	Dieldrin		0.06		Shellenberger 1978	mortality, growth, reproduction	Japanese quail	food	0.0048	D	1	3	0.09	B	10%	1	1.111111111			4 generation	adult mortality, body weight, fertility, hatchability, egg product	no statistics	
Pesticides	Dieldrin		0.063		Nebeker et al. 1992	mortality, growth	Mallard	food	0.0400	W			0.189			0.3				24d	body weight, leg length, adult mortality		
Pesticides	Dieldrin		0.066		Mendenhall et al. 1983	mortality, reproduction	Barn owl	food	0.0539	D	1	5	0.524	B	10%	0.58	0.644444444			2 yrs (2 nestings)	adult mortality, eggshell breakage/ thickness, nestling mortality, hatching success, clutch size	only one dietary dose level used; egg residues also reported	
Pesticides	**Dieldrin**		**0.080**	**0.12**	**DeWitt 1956**	**mortality**	**Quail**	**food**								**0.5**		**1**		**5 mos**	**17% mortality vs. 9% in control**	**winter maintenance diet, no statistics; results close to control**	**Selected TRVs: Lowest LOAEL that meets acceptability criteria; NOAEL is highest NOAEL below selected LOAEL that meets acceptability criteria**
Pesticides	Dieldrin			0.16	Lehner and Egbert 1969	reproduction	Mallard	food	0.1082	W	2		1.082	B				1.6		> 1 year	eggshell thinning	unknown if degree of eggshell thinning was enough to impair reproduction; unbounded LOAEL	not recommended: not a direct measure of growth, survival, or reproduction
Pesticides	Dieldrin	dieldrin		0.28	Gesell et al. 1979	behavior	Bobwhite	forced ingestion					0.178	B						28 days	operant behavior response	poorly controlled- control is the behavior of birds prior to treatment (not concurrent with treatment); significantly lower behavioral response at LOAEL	not recommended: not a direct measure of growth, survival, or reproduction
Pesticides	Dieldrin		0.29		Graves et al. 1969	reproduction	White leghorn chicken	food	0.0997	W	3		1.71	C		5				16 wks	egg production, egg hatch, 14-d chick survival	unbounded NOAEL	
Pesticides	Dieldrin		0.3		Graves et al. 1969	reproduction	White leghorn chicken	food	0.0997	W	3		1.71	C		5				16 wks	egg hatch, 14-d chick survival		
Pesticides	Dieldrin	dieldrin		0.30	Kreitzer and Heinz 1974	behavior	Japanese quail	food	0.0048	D	1	3	0.09	B	10%			5	5.6	8 days treated + 6 days untreated	avoidance response (depressed response to stimuli)	statistically significant effect; only one dose used	not recommended: not a direct measure of growth, survival, or reproduction
Pesticides	Dieldrin		0.09	0.45	DeWitt 1956	reproduction	Pheasant	food	0.0464	D	1	3	1.135	B	10%	2	2.222222222	10	11.1	repro period	eggs per hen, hatchability, chick survival	no statistics	
Pesticides	Dieldrin		0.24	0.47	Fergin and Schafer 1977	mortality	Bobwhite quail	food	0.0168	W			0.178	B		2.5		5		2 mos		LOAEL- 6 of 11 died (3M, 3F); NOAEL- 1 of 11 died (1F); control 0% mortality	

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Chemical Group	Chemical	Chemical Form	NOAEL (mg/kg bw/d)	LOAEL (mg/kg bw/d)	Source	Endpoint	Test Species	Exposure Mode	FI (kg dw or L/day)	Wet or Dry?	FI Default?	Nagy bird guild	Body Weight (kg)	BW Default?	% Moisture	NEC wet (ppm)	NEC dry (ppm)	LEC wet (ppm)	LEC dry (ppm)	Exposure Duration	Effect Endpoint	Notes	Rationale
Pesticides	Dieldrin		0.49		Davison and Sell 1974	reproduction	Mallard	food	0.118	W			1.1925			5				11 mos	eggshell weight and thickness		
Pesticides	Dieldrin			0.50	Dahlgren and Linder 1974	mortality	Ring-necked pheasant	gelatin capsule					1.135	B						3 generations	mortality	30% male mortality (3 of 10) at LOAEL; unbounded LOAEL	
Pesticides	Dieldrin		0.54		Hill et al. 1975	reproduction	Japanese quail	food	0.0048	D	1	3	0.09	B	10%	9	10			75 days	eggshell thinning		
Pesticides	Dieldrin			0.60	Walker et al. 1969	reproduction	Japanese quail	food	0.0048	D	1	3	0.09	B	10%			10	11.11111111	up to 18 wks	fertility	no statistics	
Pesticides	Dieldrin			0.60	DeWitt 1956	mortality	Pheasant	food										5		16-20 wks	100% mortality by 68 days	no statistics	
Pesticides	Dieldrin			0.65	Ahmed et al. 1978	mortality	White leghorn males	food	0.0682	W			2.62					25		20 wks		no statistics, no control values given; domesticated species	
Pesticides	Dieldrin		0.50	0.76	Baxter et al. 1969	mortality, growth, reproduction	Pheasant	gelatin capsule					1.135	B						2 generations	egg production, adult mortality, adult growth	no effect on fertility, hatchability, and chick survival and chick body weight; egg production and growth were statistically significantly different from control	
Pesticides	Dieldrin	dieldrin	0.8		Cool et al. 1972	behavior	Pheasant	gelatin capsule					1.135	B		0.857142857				3 wks	adoption behavior	unbounded NOAEL; adoptive behavior is not a direct measure of reproductive success	not recommended: not a direct measure of growth, survival, or reproduction
Pesticides	Dieldrin		0.50	0.8	Dahlgren and Linder 1974	reproduction	Ring-necked pheasant	gelatin capsule					1.135	B						3 generations	F1 chick survival (from hatching to 4 or 5 wks)		
Pesticides	Dieldrin	dieldrin		0.8	Dahlgren and Linder 1974	behavior	Ring-necked pheasant	gelatin capsule					1.135	B						3 generations	cliff selection and hand catching	endpoints are not relevant to growth, reproduction, or survival; unbounded LOAEL	not recommended: not a direct measure of growth, survival, or reproduction
Pesticides	Dieldrin			0.80	DeWitt 1956	mortality	Quail	food	0.0048	D	1	3	0.09	B	10%				1	16-20 wks	100% mortality by 76 days; 24% in control	no statistics, unbounded LOAEL	
Pesticides	Dieldrin		0.83		Brown et al. 1974	reproduction	Red-light Sussex hybrids	food	0.1613	D	4		2.151		10%	10	11.11111111			13 mos	chick survival	domesticated species	
Pesticides	Dieldrin			0.83	Brown et al. 1974	growth	Red-light Sussex hybrids	food	0.1613	D	4		2.151		10%			10	11.1	13 mos adults, 6 wks chicks	body weight	domesticated species	
Pesticides	Dieldrin			0.86	Genelly and Rudd 1956	reproduction	Ring-necked pheasant	food	0.0446	W			1.135	B	10%			22	24.4	8 wks	offspring survival, egg production	egg residues also reported	
Pesticides	Dieldrin			0.92	Davison and Sell 1974	reproduction	Mallard	food	0.117	W			1.2675					10		11 mos	eggshell weight and thickness		
Pesticides	Dieldrin		0.92		Davison and Sell 1974	mortality, growth	Mallard	food	0.117	W			1.2675			10				11 mos	body weight, adult mortality	no statistics	
Pesticides	Dieldrin		1.0		Lehner and Egbert 1969	mortality	Mallard	food	0.1082	W	2		1.082	B		10				> 1 year		no effect on mortality	
Pesticides	Dieldrin		1.1		Ahmed et al. 1978	growth, reproduction	White leghorn males	food	0.0524	W			2.41			50				20 wks	body weight; fertility, hatchability		
Pesticides	Dieldrin		0.56	1.12	Gesell and Robel 1979	mortality	Bobwhite	forced ingestion					0.178	B						28 days		mortality at LOAEL - 3 of 25 died- not statistically evaluated	
Pesticides	Dieldrin		0.6	1.2	Walker et al. 1969	mortality	Japanese quail	food	0.0048	D	1	3	0.09	B	10%	10	11.11111111	20	22.22222222	up to 18 wks		no statistics	
Pesticides	Dieldrin		1.3		Dahlgren and Linder 1970	reproduction	Ring-necked pheasant	gelatin capsule					1.135	B						2 generations	eggshell thickness, hatchability		
Pesticides	Dieldrin		1.7		Brown et al. 1974	mortality	Red-light Sussex hybrids	food	0.1619	D	4		2.159		10%	20	22.22222222			13 mos		decrease, not significant; domesticated species	
Pesticides	Dieldrin			1.7	Brown et al. 1974	reproduction	Red-light Sussex hybrids	food	0.1619	D	4		2.159		10%			20	22.22222222	13 mos	chick survival		
Pesticides	Dieldrin		0.95	1.9	Fergin and Schafer 1977	reproduction	Bobwhite quail	food	0.0168	W			0.178	B		10		20		2 mos	egg production	no statistics; data not presented	
Pesticides	Dieldrin			2.3	Hill et al. 1977	mortality	Bobwhites (juvenile)	food	0.0053	D	1	3	0.1	A	10%			38.2	42.44444444	5 days + 3 days untreated	50% mortality	LC50 study	
Pesticides	Dieldrin		2.4		Walker et al. 1969	growth	Japanese quail	food	0.0048	D	1	3	0.09	B	10%	40	44.44444444			up to 18 wks		no statistics	
Pesticides	Dieldrin			3.1	Hill et al. 1977	mortality	Japanese quail (chicks)	food	0.0053	D	1	3	0.1	A	10%			53.1	59	5 days + 3 days untreated	50% mortality	LC50 study	
Pesticides	Dieldrin			3.3	Hill et al. 1977	mortality	Ring-necked pheasants-young	food	0.0053	D	1	3	0.1	A	10%			55.1	61.22222222	5 days + 3 days untreated	50% mortality	LC50 study	
Pesticides	Dieldrin			3.8	Nebeker et al. 1992	mortality, growth	Mallard	food	0.0400	W			0.1675					16		24d	observed mortality; body weight, leg length	no statistics for mortality; LC50 at 29.5 µg/g	
Pesticides	Dieldrin		3.8		Fergin and Schafer 1977	growth	Bobwhite quail	food	0.0168	W			0.178	B		40				2 mos	body weight	no statistics	
Pesticides	Dieldrin		6.4		Nebeker et al. 1994	mortality, growth	Mallard-young	food	0.0125	D	1	4	0.1069		10%	49.3	54.77777778			8 days	body weight, bill length, leg length, adult mortality		

Table 6. TSVs for bird diet

Chemical Group	Chemical	Chemical Form	NOAEL (mg/kg bw/d)	LOAEL (mg/kg bw/d)	Source	Endpoint	Test Species	Exposure Mode	FI (kg dw or L/day)	Wet or Dry?	FI Default?	Nagy bird guild	Body Weight (kg)	BW Default?	% Moisture	NEC wet (ppm)	NEC dry (ppm)	LEC wet (ppm)	LEC dry (ppm)	Exposure Duration	Effect Endpoint	Notes	Rationale
Pesticides	Dieldrin			20	Hill et al. 1977	mortality	Mallard-young	food	0.0120	D	1	4	0.1	A	10%			153.3	170.3333333	5 days + 3 days untreated	50% mortality	LC50 study	
Pesticides	**Endosulfan**		**10**		**Abiola 1992**	**reproduction**	**Gray partridge**	**food**	**0.0183**	**D**	**1**	**3**	**0.4**		**10%**	**125**	**222.2222222**			**4 wks- during critical lifestage**	**number of eggs; egg fertility, embryo and chick mortality; eggs hatched**		**Selected TRV: only NOAEL that meets acceptability criteria**
Pesticides	Endrin	endrin		0.0058	Kreitzer 1980	behavior	Bobwhite quail	food												approx 138 days	impaired learning (ability to react appropriately to novel stimuli)	calculated dose reported in paper; learning behavior not a direct measurement of mortality, growth, and reproduction	not recommended: not a direct measure of growth, survival, or reproduction
Pesticides	Endrin			0.06	DeWitt 1956	reproduction	Quail	food	0.0048	D	1	3	0.09	B	10%			1	1.11	reprod period	chick survival - 64% vs. 83% control	no statistics	not recommended: based on domestic (quail) reproductive endpoint
Pesticides	**Endrin**		**0.070**		**DeWitt 1956**	**mortality**	**Quail**	**food**								**1**				**5 mos**		**no statistics**	**Selected TRV: NOAEL is highest NOAEL below selected LOAEL that meets acceptability criteria**
Pesticides	Endrin	Endrin		0.12	Kreitzer and Heinz 1974	behavior	Japanese quail	food	0.0048	D	1	3	0.09	B	10%			2	2.2	8 days treated + 6 days untreated	avoidance response (depressed response to stimuli)	statistically significant effect; only one dose used	not recommended: not a direct measure of growth, survival, or reproduction
Pesticides	**Endrin**			**0.20**	**DeWitt 1956**	**mortality**	**Quail**	**food**										**0.5**		**16-20 wks**		**no statistics**	**Selected TRV: lowest LOAEL that meets acceptability criteria**
Pesticides	Endrin		0.29		Spann et al. 1986b	growth	Mallard	food	0.1144	W	2		1.14		1%	2.9	3.2			7 mos	body weight		
Pesticides	Endrin		0.29		Spann et al. 1986b	reproduction	Mallard	food	0.1144	W	2		1.14		1%	2.9	3.2			7 mos	egg weight and fertility, shell thickness, duckling mortality/ body weight, clutch size, hatch		
Pesticides	Endrin			0.30	Roylance et al. 1985	growth, reproduction	Mallard	food	0.1216	W	2		1.22		10%			3	3.3	12 wks	body weight; onset egg production, embryo survival	information only provided in table for growth; no text on growth	
Pesticides	Endrin		0.33		Fleming et al. 1982	growth	Screech owl	food	0.0266	D	1	5	0.181	B	10%	0.75	2.3			mating-incubation	body weight		
Pesticides	Endrin			0.33	Fleming et al. 1982	reproduction	Screech owl	food	0.0266	D	1	5	0.181	B	10%			0.75	2.25	mating-incubation (crit. lifestage)	fledglings produced, egg production, number of hatched eggs	statistically significant effects at LOAEL	
Pesticides	Endrin		0.09	0.45	DeWitt 1956	reproduction	Pheasant	food	0.0464	D	1	3	1.135	B	10%	2	2.3	10	11.1	reprod period	chick survival, eggs per hen, hatchability	no statistics	
Pesticides	Endrin			0.60	DeWitt 1956	mortality	Pheasant	food										5		16-20 wks	100% mortality	no statistics	
Pesticides	**gamma-Hexachlorocyclohexane (gamma-BHC)**		**1.6**	**3.6**	**Chakravarty and Lahiri 1986**	**reproduction**	**Domestic mallard**	**oral intubation**												**8 wks**	**eggshell thickness, size, quality; clutch size**	**NOAEL dose- 2x/ wk; LOAEL dose: 3x/ wk; statistically significant effects**	**Selected TRVs: Lowest LOAEL and NOAEL that meet acceptability criteria**
Pesticides	gamma-Hexachlorocyclohexane (gamma-BHC)		20		Chakravarty et al. 1986	mortality, growth	Domestic mallard	oral intubation												8 wks	survival, body weight	no statistics for mortality- all birds remained healthy	
Pesticides	**Heptachlor**	**technical heptachlor**		**5**	**Hill et al. 1975; Heath et al. 1972**	**mortality**	**Bobwhites (juvenile)**	**food**	**0.0053**	**D**	**1**	**3**	**0.1**	**A**	**10%**			**92**	**102.2222222**	**5 days**	**50% mortality**	**LC50 study**	**Selected TRV: Lowest LOAEL that meets acceptability criteria**
Pesticides	Heptachlor	technical heptachlor		6	Hill et al. 1975; Heath et al. 1972	mortality	Japanese quail	food	0.0053	D	1	3	0.1	A	10%			93	103.3333333	5 days	50% mortality	LC50 study	
Pesticides	Heptachlor	technical heptachlor		13	Hill et al. 1975; Heath et al. 1972	mortality	Ring-necked pheasant	food	0.0053	D	1	3	0.1	A	10%			224	248.8888889	5 days	50% mortality	LC50 study	
Pesticides	Heptachlor	technical heptachlor		104	Hill et al. 1975; Heath et al. 1972	mortality	Mallard-young	food	0.0120	D	1	4	0.1	A	10%			780	866.6666667	5 days	50% mortality	LC50 study	
Pesticides	Hexachlorobenzene		1.1		Vos et al. 1971	reproduction	Japanese quail	food	0.0081	D	1	3	0.161		10%	20	22.22222222			90 days	hatchability, egg volume	egg volume sign lower at 20 ppm; unclear if this would warrant an adverse effect	not recommended: based on domestic (quail) reproductive endpoint
Pesticides	**Hexachlorobenzene**		**1.1**		**Vos et al. 1971**	**mortality**	**Japanese quail**	**food**	**0.0081**	**D**	**1**	**3**	**0.161**		**10%**	**20**	**22.22222222**			**90 days**		**no statistics- 2 of 15 deaths**	**Selected TRV: NOAEL is only survival NOAEL below selected LOAEL that meets acceptability criteria**
Pesticides	Hexachlorobenzene		1.2		Schwetz et al. 1974	growth	Japanese quail	food	0.0066	D	1	3	0.127		10%	20	22.22222222			90 days	body weight		
Pesticides	Hexachlorobenzene			1.2	Schwetz et al. 1974	reproduction	Japanese quail	food	0.0066	D	1	3	0.127		10%			20	22.2	90 days	chicks hatched and survival	statistically signif.	not recommended: based on domestic (quail) reproductive endpoint
Pesticides	Hexachlorobenzene			4.5	Vos et al. 1971	reproduction	Japanese quail	food	0.0076	D	1	3	0.148		10%			80	88.9	90 days	hatchability, egg volume	egg volume significantly lower at 20 ppm; unclear if this would warrant an adverse effect	not recommended: based on domestic (quail) reproductive endpoint

Table 6. TSVs for bird diet

Chemical Group	Chemical	Chemical Form	NOAEL (mg/kg bw/d)	LOAEL (mg/kg bw/d)	Source	Endpoint	Test Species	Exposure Mode	FI (kg dw or L/day)	Wet or Dry?	FI Default?	Nagy bird guild	Body Weight (kg)	BW Default?	% Moisture	NEC wet (ppm)	NEC dry (ppm)	LEC wet (ppm)	LEC dry (ppm)	Exposure Duration	Effect Endpoint	Notes	Rationale
Pesticides	Hexachlorobenzene		5		Vos et al. 1971	growth	Japanese quail	food	0.0076	D	1	3	0.148		10%	80	88.88888889			90 days	increased body weight	unclear if adverse effect is observed	
Pesticides	**Hexachlorobenzene**			**5**	**Vos et al. 1971**	**mortality**	**Japanese quail**	**food**	**0.0076**	**D**	**1**	**3**	**0.148**		**10%**			**80**	**88.9**	**90 days**		**no statistics- 5 of 15 deaths**	**Selected TRV: Lowest LOAEL that meets acceptability criteria**
Pesticides	**Methoxychlor**	**technical methoxychlor**	**34.6**	**346**	**Gee et al. 2004**	**reproduction**	**Zebra finch (chicks at 5-11 days old)**	**oral gavage**												**1 week**	**number of eggs hatched, broken/missing eggs**	**borderline effect on egg fertility at 346 mg/kg bw/d**	**Selected TRVs: only LOAEL that meets acceptability criteria and only NOAEL below selected LOAEL that meets acceptability criteria**
Pesticides	**Methoxychlor**		**34.6**	**346**	**Millam et al. 2002**	**mortality**	**Zebra finch chicks**	**oral gavage**												**1 week**	**mortality**	**significant mortality at LOAEL - 28.2% (13 to 46 died); significant increase in growth also observed at mortality LOAEL**	**Selected TRVs: only LOAEL that meets acceptability criteria and only NOAEL below selected LOAEL that meets acceptability criteria**
Pesticides	Methoxychlor	technical methoxychlor	831		Hill et al. 1975; Heath et al. 1972	mortality	Bobwhites (juvenile), Japanese quail, Ringed-necked pheasant, mallard (young)	food	0.0150	D	1	1	0.1	A	10%	5000	5555.555556			5 days	mortality	0% mortality	

Shaded rows indicate studies and TRVs that are not recommended becauase TRVs do not meet acceptability criteria

General Notes:

NC = TRV not calculated in database because more preferable studies v
FI = food ingestion rate
NEC = No effect concentration in exposure medium
LEC = Low effect concentration in exposure medium
W = wet weight basis
D = dry weight basis

Default ingestion rates:
1 - Nagy 2001
2 - Heinz et al. 1987
3 - NRC 1984
4 - NRC 1994
5 - EPA 1993
6 - Edens and Garlich 1983
7 - Sample et al 1996

Default body weight:
A - NRC 1994
B - Dunning 1993
C - NRC 1984
D - Peakall et al. 1975
E - Sample et al. 1996
F - EPA 1993
J - Birds of North American online (2006)
G - Edens and Garlich 1983
H - Arizona Game and Fish 2002
I - Pattee 1984
J - Birds of North American online (2006)
X - current study

Nagy bird group allometric equation
1- all birds: FI (kg/d dw) = [0.638*((bw(g))^0.685)]/1000
2- Passerines: FI = [0.630*((bw(g))^0.683)]/1000
3- Galliformes: FI = [0.088*((bw(g))^0.891)]/1000
4- Omnivorous birds: FI = [0.670*((bw(g))^0.627)]/1000
5- Carnivorous birds: FI = [0.849*((bw(g))^0.663)]/1000
6- Eurasian Kestrel: FI =(22.1/211)*bw(kg)

Table 7. TSVs for mammal diet

Chemical Group	Chemical	Chemical Form	NOAEL (mg/kg bw/d)	LOAEL (mg/kg bw/d)	Source	Endpoint	Test Species	Exposure Mode	FI (kg dw or L/day)	Wet or Dry?	FI Default?	Body Weight (kg)	BW Default?	% Moisture	NEC wet (ppm)	NEC dry (ppm)	LEC wet (ppm)	LEC dry (ppm)	Exposure Duration	Effect Endpoint	Notes	Rationale
Metals	Antimony	$SbCl_3$	0.060		Rossi et al. 1987	reproduction	NOS rat	drink water	0.032	W	2	0.282			0.53				39 d	offspring body weight		not recommended: drinking water study (and dietary TRV available)
Metals	Antimony	$SbCl_3$		0.060	Rossi et al. 1987	growth	NOS rat	drink water	0.032	W	2	0.282					0.533		39 d	maternal body weight		not recommended: drinking water study (and dietary TRV available)
Metals	Antimony	$(C_4H_4)_7SbK*1/2H_2O$	0.35		Schroeder et al. 1968b	mortality	Charles River CD mouse	drink water	0.0029	W		0.0418			5				lifetime	lifespan, longevity	significant effects periodically	not recommended: drinking water study (and dietary TRV available)
Metals	Antimony	$(C_4H_4)_7SbK*1/2H_2O$	0.57		Schroeder et al. 1970	growth	Long-Evans Rat	drink water	0.030	W	2	0.263			5				lifetime			not recommended: drinking water study (and dietary TRV available)
Metals	Antimony	$(C_4H_4)_7SbK*1/2H_2O$		0.57	Schroeder et al. 1970	mortality	Long-Evans Rat	drink water	0.030	W	2	0.263					5		lifetime	survival		not recommended: drinking water study (and dietary TRV available)
Metals	Antimony	$SbCl_3$		0.60	Rossi et al. 1987	reproduction	NOS rat	drink water	0.031	W	2	0.277					5.33		39 d	offspring body weight		not recommended: drinking water study (and dietary TRV available)
Metals	Antimony	potassium antimony tartrate, trivalent antimony salt	5.86	43.9	Poon et al. 1998	growth	Sprague-Dawley rat	drink water	0.000	W	2				50		500		13 wks	body weight	statistically significant effects	not recommended: drinking water study (and dietary TRV available)
Metals	**Antimony**	**Sb_2O_3**	**1489**		**Hext et al. 1999**	**growth, mortality**	**Rat**	**food**							**16702**				**90 d**	**growth rate; small increase in body weight**	**statistics not discussed**	**Selected TRV: only NOAEL available that meets acceptability criteria**
Metals	Arsenic	soluble arsenite	0.55		Schroeder et al. 1968a	reproduction	Rat	food and drink water				0.35	A		5				lifetime		LOAEL calculated using water concentration (5 mg/kg) and water consumption (0.038 kg/d; Caulder and Braun 1983) and food concentration (0.046 mg/kg) and food consump (0.028 kg/d; EPA 1988)	not recommended: exposure includes drinking water (and dietary TRV available)
Metals	Arsenic	soluble arsenite		1.26	Schroeder and Mitchener 1971; Schroeder and Balassa 1967	mortality, growth, reproduction	mouse	food and drink water				0.03	A				5		3 generation	decreased litter size	LOAEL calculated using water concentration (5 mg/kg) and water consumption (0.0075 kg/d) and food concentration (0.03 mg/kg) and food consumption (0.0055 kg/d)	not recommended: exposure includes drinking water (and dietary TRV available)
Metals	**Arsenic**	**Sodium arsenite-$NaAsO_2$**	**2.6**		**Byron et al. 1967**	**growth**	**Osborne-Mendel rat**	**food**	**0.025**	**W**	**1**	0.302		10%	31.25	34.7			**2 years**	**female body weight**	**no statistics- concentrations at test dose average +/- SE is outside control average +/- SE range; note: arsenite likely most toxic form**	**Selected TRV: highest NOAEL below selected LOAEL that meets acceptability criteria**
Metals	Arsenic	arsenic acid	1.53	3	Nemec et al. 1998	mortality, growth, reproduction	New Zealand white rabbit	gavage											13 days of gestation	maternal mortality and body weight, fetal mortality		not recommended: gavage exposure (dietary TRV available)
Metals	Arsenic	sodium arsenate	2.4	4.8	Stump et al. 1999	growth	Rat	injection (ip)											single dose-gestation d 9. Monitor to gest. day 20	maternal body weight	statistically significant effect; observed effects from day 0-day 20 gestation; most sensitive endpoint; single injection (4 doses)	not recommended: injection study
Metals	**Arsenic**	**Sodium arsenite-$NaAsO_2$**		**5.4**	**Byron et al. 1967**	**growth**	**Osborne-Mendel rat**	**food**	**0.024**	**W**	**1**	0.278		10%			62.5	**69.4**	**2 years**	**female body weight**	**no statistics- concentrations at test dose average +/- SE is outside control average +/- SE range; note: arsenite likely most toxic form**	**Selected TRV: lowest LOAEL that meets acceptability criteria**
Metals	Arsenic	arsenic trioxide	3.8	7.6	Stump et al. 1999	growth	Rat	injection (ip)											single dose-gestation d 9. Monitor to gest. day 20	maternal body weight	statistically significant effect; observed effects from day 0-day 20 gestation; body weight was recovered at LOAEL dose group by day 20; most sensitive endpoint; single injection (4 doses)	not recommended: injection study
Metals	Arsenic	arsenic trioxide	5	10	Holson et al. 2000	growth, reproduction	Rat	gavage											through mating and gestation	maternal body weight and fetal body weight		not recommended: gavage exposure (dietary TRV available)
Metals	Arsenic	arsenic trioxide	7.6	11.4	Stump et al. 1999	mortality	Rat	injection (ip)											single dose-gestation d 9. Monitor to gest. day 20	maternal mortality	no statistics performed on mortality data, but 0 of 25 control mortalities and 19 of 25 mortalities in LOAEL group	not recommended: injection study
Metals	Arsenic	arsenic trioxide	7.6	15.2	Stump et al. 1999	growth	Rat	gavage											single dose-gestation d 9. Monitor to gest. day 20	maternal body weight	statistically significant effect; observed effects from day 0-day 20 gestation; body weight was recovered at LOAEL dose group by day 20; most sensitive endpoint; single gavage treatment (4 doses)	not recommended: gavage exposure (dietary TRV available)
Metals	Arsenic	arsenic trioxide	15.2	22.7	Stump et al. 1999	mortality	Rat	gavage											single dose-gestation d 9. Monitor to gest. day 20	maternal mortality	no statistics performed on mortality data, but 0/25 control mortalities and 7/25 mortalities in LOAEL group	not recommended: gavage exposure (dietary TRV available)

Table 7. TSVs for mammal diet

Chemical Group	Chemical	Chemical Form	NOAEL (mg/kg bw/d)	LOAEL (mg/kg bw/d)	Source	Endpoint	Test Species	Exposure Mode	FI (kg dw or L/day)	Wet or Dry?	FI Default?	Body Weight (kg)	BW Default?	% Moisture	NEC wet (ppm)	NEC dry (ppm)	LEC wet (ppm)	LEC dry (ppm)	Exposure Duration	Effect Endpoint	Notes	Rationale
Metals	Arsenic	Arsenic acid	7.5	24	Nemec et al. 1998	mortality, reproduction	Swiss albino mouse	Gavage											10 gestational days	maternal mortality, fetal weight, developmental effects	mg/kg/d reported in study	not recommended: gavage exposure (dietary TRV available)
Metals	Cadmium	Cd acetate		0.36	Schroeder et al. 1965	mortality	Long-Evans rat	drink water											lifetime (23mos)			not recommended: drinking water study (and dietary TRV available)
Metals	Cadmium	cadmium	0.57		Schroeder et al. 1963	growth	Long-Evans hooded rat	drink water	0.0289	W	2	0.254			5				lifetime (21mos)	body weight		not recommended: drinking water study (and dietary TRV available)
Metals	Cadmium	cadmium		0.57	Schroeder et al. 1963	mortality	Long-Evans hooded rat	drink water	0.0289	W	2	0.254					5		lifetime (21mos)			not recommended: drinking water study (and dietary TRV available)
Metals	Cadmium	cadmium		0.71	Ali et al. 1986	reproduction	Rat	drink water	0.042	W		0.225					4.2		gestation	decreased offspring growth rate from postnatal days 0.4-21		not recommended: drinking water study (and dietary TRV available)
Metals	Cadmium	$CdCl_2$	0.88		Loeser and Lorke 1977b	mortality, growth	Beagle dog	food	0.283	W		9.7			30				3 mos	female body weight; female mortality	no statistics for adult female mortality- no mortality observed	
Metals	Cadmium	cadmium acetate		1.0	Rohrer et al. 1979	reproduction	Holtzman rat	injection (ip)											single injection on days 12, 14, 18, or 20 of gestation	decrease in fetal body weight, increase in fetal death	single injection, no statistics presented for any results	not recommended: injection study
Metals	Cadmium	cadmium chloride		1.1	Borzelleca et al. 1989	growth	Sprague-Dawley rat	drink water											10 days	Male body weight		not recommended: drinking water study (and dietary TRV available)
Metals	Cadmium		1.4		Schroeder and Mitchener 1971	mortality	Charles River mouse	drink water	0.0042	W	2	0.03	A		10				multigeneration al			not recommended: drinking water study (and dietary TRV available)
Metals	Cadmium			1.4	Schroeder and Mitchener 1971	reproduction	Charles River mouse	drink water	0.0042	W	2	0.03	A				10		multigeneration al	litter survival, runts, breeding failure, age at first litter, pregnancy interval, sex ratio, congenital problems		not recommended: drinking water study (and dietary TRV available)
Metals	Cadmium	$CdCl_2$		1.7	Webster 1978	reproduction	mouse	drink water	0.0057	W		0.0345					10		19 days	fetal body weight	decreased female body weight at 40 ppm but significance unknown	not recommended: drinking water study (and dietary TRV available)
Metals	Cadmium	$CdCl_2$	2.0		Zenick et al. 1982	growth, reproduction	Long-Evans hooded rat	drink water	0.0125	W		0.431			68.8				~75 d	body weight, pregnancy rate, litter size, fetal weight, testicular effects, sperm toxicity		not recommended: drinking water study (and dietary TRV available)
Metals	Cadmium	$CdCl_2$	3.0		Loeser and Lorke 1977a	mortality, growth	Wistar rat	food	0.018	W	1	0.179		10%	30	33.3			3 mos	adult mortality, growth	no statistics for adult mortality; no treatment-related deaths	
Metals	Cadmium	$CdCl_2$	3.3		Wilson et al. 1941	mortality, growth	Rat	food	0.016	W	1	0.154		10%	31	34.444			100 days		data not presented (no sample sizes; data not presented in study; too few details presented)	
Metals	Cadmium	cadmium chloride		3.5	Nagymajtényi et al. 1997	offspring behavior	Wistar rat	gavage											gestation though 8 wks post-weaning	offspring behavior- change in exploratory activity	endpoint is not a direct measure of growth, reproduction, or mortality	not recommended: not direct measure of growth, survival, or reproduction and injection study
Metals	Cadmium	$CdCl_2$	4.0		Baranski et al. 1983	mortality, reproduction	Wistar rat	gavage											11 wks	adult mortality; fetal survival, pregnancy, fetal/offspring body weight, fetal edema	no statistics for adult mortality; no treatment-related effects on mortality	not recommended: gavage exposure (dietary TRV available)
Metals	Cadmium	cadmium chloride		5.0	Nation et al. 1984	behavior	Sprague-Dawley rat	food											55 days	avoidance behavior	avoidance behavior measured by response of electronic shock platform; NOAEL dose actually increased reactivity to electrified platform	not recommended: not direct measure of growth, survival, or reproduction and injection study
Metals	Cadmium	$CdCl_2$		6.6	Wilson et al. 1941	mortality, growth	Rat	food	0.016	W	1	0.148		10%			62	62.000			data not presented (no sample sizes; data not presented in study; too few details presented)	not recommended: problematic data presentation (see notes)
Metals	Cadmium	cadmium chloride	3.5	7.0	Nagymajtényi et al. 1997	growth	Wistar rat	gavage											gestation though 8 wks post-weaning	male body weight after 12 weeks		not recommended: gavage exposure (dietary TRV available)
Metals	Cadmium	$CdCl_2$	1.0	10	Sutou et al. 1980	growth	Rat	gavage											>9 wks	body weight	gavage study; no statistics	not recommended: gavage exposure (dietary TRV available)
Metals	Cadmium	$CdCl_2$	13		Machemer and Lorke 1981	mortality, reproduction	Long-Evans rat	food							100				10 d	adult mortality; fertility, fetus weight/survival/ malformations	no statistics on adult mortality- 0% mortality	

Table 7. TSVs for mammal diet

Chemical Group	Chemical	Chemical Form	NOAEL (mg/kg bw/d)	LOAEL (mg/kg bw/d)	Source	Endpoint	Test Species	Exposure Mode	FI (kg dw or L/day)	Wet or Dry?	FI Default?	Body Weight (kg)	BW Default?	% Moisture	NEC wet (ppm)	NEC dry (ppm)	LEC wet (ppm)	LEC dry (ppm)	Exposure Duration	Effect Endpoint	Notes	Rationale
Metals	**Cadmium**	**$CdCl_2$**	**3.5**	**13**	**Machemer and Lorke 1981**	**growth**	**Long-Evans rat**	**food**							**30**		**100**		**10 d (pregnancy)**	**maternal body weight**	**statistically significant effects at LOAEL**	**Selected TRV: lowest LOAEL that meets acceptability criteria; NOAEL is highest NOAEL below selected LOAEL that meets acceptability criteria**
Metals	Cadmium	cadmium chloride		15.3	Borzelleca et al. 1989	mortality, growth	Sprague-Dawley rat	gavage											10 days	mortality, male body weight	at LOAEL 10-20% (n=10) mortality; at control 0% mortality; no statistics for adult mortality	not recommended: gavage exposure (dietary TRV available)
Metals	Cadmium	$CdCl_2$	115		Dodds-Smith et al. 1992	growth	Shrew	food											12 wks	female body weight		
Metals	Cadmium	$CdCl_2$		115	Dodds-Smith et al. 1992	growth	Shrew	food											12 wks	male body weight		
Metals	Cadmium			189	Pond and Walker 1975	growth, reproduction	Sprague-Dawley rat	food	0.1715	W		0.18115					200		12 wks	pup birth weight; adult body weight	High- and low-calcium diets tested with cadmium treatment - no relevant effects of calcium	
Metals	Chromium	Cr picolinate	0.14		Hasten et al. 1997	growth	Sprague-Dawley rat	food	0.024	W		0.30			1.68				12 wks	body weight and growth rate		
Metals	Chromium	chromium acetate	0.46		Schroeder et al. 1965	mortality, growth	Long Evans rat	drink water											lifetime	body weight; survival and lifespan		not recommended: exposure includes drinking water (and dietary TRV available)
Metals	Chromium	Cr3+	0.58		Schroeder et al. 1963	mortality, growth	Long Evans rat	drink water	0.030	W	2	0.26			5.1				lifetime	body weight, mortality		not recommended: exposure includes drinking water (and dietary TRV available)
Metals	Chromium	chromium trioxide		2.6	Gale 1978	reproduction	golden hamster	injection (iv)											single injection on day 8 of gestation	delayed ossification, greater % of fetuses with cleft palates, greater internal malformations	no statistics	not recommended: injection study
Metals	Chromium	K_2CrO_4 and $CrCl_3$	2.7		MacKenzie et al. 1958	mortality, growth	Sprague-Dawley rat	drink water	0.038	W	2	0.35	A		25				1 yr		no statistics for adult mortality- no treatment related mortality	not recommended: exposure includes drinking water (and dietary TRV available)
Metals	Chromium	chromium trioxide	2.6	3.9	Gale 1978	reproduction	golden hamster	injection (iv)											single injection on day 8 of gestation	at LOAEL: 29% fetuses resorbed and 29% fetal abnormalities; at NOAEL: 6% fetuses resorbed and 4% fetal abnormalities; at control: 2% fetuses resorbed and 0% fetal abnormalities	no statistics	not recommended: injection study
Metals	Chromium	chromium trioxide	5.2	7.8	Gale 1978	mortality	golden hamster	injection (iv)											single injection on day 8 of gestation	at LOAEL: 3 of 4 died; at NOAEL and control: 0% mortalities	no statistics	not recommended: injection study
Metals	Chromium	$CrCl_3$ or Cr Picolinate	8.3		Anderson et al. 1997	mortality, growth	Sprague-Dawley rat	food	0.026	W	1	0.31		10%	100	111			20 wks		statistics implied for mortality- no mortality observed	
Metals	Chromium	K2Cr2O7 (Cr6+)	39		Bataineh et al. 1997	reproduction	Sprague-Dawley rat	drink water	0.038	W	2	0.34			354				12 wks	fertility		not recommended: exposure includes drinking water (and dietary TRV available)
Metals	Chromium	K2Cr2O7 (Cr6+)		39	Bataineh et al. 1997	growth	Sprague-Dawley rat	drink water	0.038	W	2	0.34					354		12 wks	male body weight		not recommended: exposure includes drinking water (and dietary TRV available)
Metals	Chromium	K2Cr2O7 (Cr6+)		45	Kajojia et al. 1998	reproduction	Rat	drink water									250		3 mos	fetal weight, implantation loss		not recommended: exposure includes drinking water (and dietary TRV available)
Metals	Chromium	CrCl2 (Cr3+)	47		Bataineh et al. 1997	reproduction	Sprague-Dawley rat	drink water	0.038	W	2	0.34			423				12 wks	fertility		not recommended: exposure includes drinking water (and dietary TRV available)
Metals	Chromium	CrCl2 (Cr3+)		47	Bataineh et al. 1997	growth	Sprague-Dawley rat	drink water	0.038	W	2	0.34					423		12 wks	male body weight		not recommended: exposure includes drinking water (and dietary TRV available)
Metals	Chromium	K2Cr2O7 (Cr6+)	48		Trivedi et al. 1989	growth	mouse	drink water	0.0071	W		0.037							gestation	body weight gain	estimated Cr intake approx 47.6 mg/kg/d	not recommended: exposure includes drinking water (and dietary TRV available)
Metals	Chromium	K2Cr2O7 (Cr6+)		48	Trivedi et al. 1989	reproduction	mouse	drink water	0.0071	W		0.037							gestation	fetal weightlength, pup abnormality, implantations		not recommended: exposure includes drinking water (and dietary TRV available)

Table 7. TSVs for mammal diet

Chemical Group	Chemical	Chemical Form	NOAEL (mg/kg bw/d)	LOAEL (mg/kg bw/d)	Source	Endpoint	Test Species	Exposure Mode	FI (kg dw or L/day)	Wet or Dry?	FI Default?	Body Weight (kg)	BW Default?	% Moisture	NEC wet (ppm)	NEC dry (ppm)	LEC wet (ppm)	LEC dry (ppm)	Exposure Duration	Effect Endpoint	Notes	Rationale
Metals	Chromium	K2Cr2O7 (Cr6+)		58	Junaid et al. 1996	reproduction	mouse	drink water	0.0085	W		0.037					250		20 days	fetal/placental weight, number of resorptions/ implantations, pup survival and abnormalities	study reports daily Cr ingestion ~51 mg/kg/d	not recommended: exposure includes drinking water (and dietary TRV available)
Metals	Chromium	K2Cr2O7 (Cr6+)	45	60	Kajojia et al. 1998	growth	Rat	drink water							500		750		3 mos	body weight		not recommended: exposure includes drinking water (and dietary TRV available)
Metals	Chromium	Cr6+ (fm K_2CrO_4)	49	98	Elbetieha and Al-Hamood 1997	reproduction	Swiss mouse	drink water	0.0049	W	2	0.035			353.50102		707		12 wks	fertility		not recommended: exposure includes drinking water (and dietary TRV available)
Metals	Chromium	K2Cr2O7 (Cr6+)		98	Trivedi et al. 1989	growth	mouse	drink water	0.0072	W		0.037							gestation	body weight gain	estimated Cr intake approx 97.3 mg/kg/d	not recommended: exposure includes drinking water (and dietary TRV available)
Metals	Chromium	Cr6+ (fm K_2CrO_4)		99	Elbetieha and Al-Hamood 1997	growth	Swiss mouse	drink water	0.0045	W	2	0.032					707		12 wks	male body weight		not recommended: exposure includes drinking water (and dietary TRV available)
Metals	Chromium	potassium chromate (K_2CrO_4)	54	107	Gross and Heller 1946	reproduction	Young albino rat	food	0.028	W	1	0.35	A	10%	669.4		1338.8		unknown	sterility	very poor study; no numerical results presented; no statistics; effects based on "sterility" observed in rats, no numbers	not recommended: see notes
Metals	Chromium	Cr3+ (fm $CrCl_2$)		117	Elbetieha and Al-Hamood 1997	reproduction	Swiss mouse	drink water	0.0049	W	2	0.035					846.2		12 wks	fertility	unbounded LOAEL	not recommended: exposure includes drinking water (and dietary TRV available)
Metals	Chromium	Cr3+ (fm $CrCl_2$)		119	Elbetieha and Al-Hamood 1997	growth	Swiss mouse	drink water	0.0043	W	2	0.031					846.2		12 wks	male body weight	unbounded LOAEL	not recommended: exposure includes drinking water (and dietary TRV available)
Metals	Chromium	K2Cr2O7 (Cr6+)	207		Junaid et al. 1996	growth	mouse	drink water	0.0085	W		0.031			750				20 days	body weight	study reports daily Cr ingestion ~169 mg/kg/d	not recommended: exposure includes drinking water (and dietary TRV available)
Metals	Chromium	K2Cr2O7 (Cr6+)	238		Trivedi et al. 1989	mortality	mouse	drink water	0.0070	W		0.030							gestation		no statistics- 0% mortality; estimated Cr intake approx 243.3 mg/kg/d	not recommended: exposure includes drinking water (and dietary TRV available)
Metals	Chromium	chromic oxide green	1292		Ivankovic and Preussman 1975	growth, reproduction	Rat	food	0.013	W		0.26		10%	34211	38012			90 days	body weight, litter size, pregnancy rate, pup malformation		
Metals	**Chromium**	**chromic oxide green**	**1466**		**Ivankovic and Preussman 1975**	**mortality, growth**	**Rat**	**food**	**0.013**	**W**		**0.26**		**10%**	**34211**	**38012**			**2 yrs**	**body weight**		**Selected TRV: NOAEL is highest NOAEL available that meets acceptability criteria (no LOAEL available that meets acceptability criteria)**
Metals	**Cobalt**	**cobaltous chloride**		**1.0**	**Chetty et al. 1979**	**growth**	**Sprague-Dawley rat**	**diet**	**0.018**	**W**	**1**	**0.19**					**10**		**4 wks**	**body weight**		**Selected TRV: LOAEL is lowest LOAEL that meets acceptability**
Metals	Cobalt	cobalt sulfate	1.4		Mohiudden et al. 1970	growth	Guinea pigs	diet	0.035	W	1	0.50			20				5 wks			
Metals	Cobalt	cobalt sulfate		1.4	Mohiudden et al. 1970	mortality	Guinea pigs	diet	0.035	W	1	0.50					20		5 wks		4/20 guinea pigs died at LOAEL; 1/20 guinea pigs died at controls	
Metals	Cobalt	cobalt chloride	1.9	10	Wellman et al. 1984	growth	Hooded rats	diet	0.019	W	1	0.196			20		100		3 days	bdoy weight	reduced food aversion and food intake at LOAEL	
Metals	Copper	Copper sulfate pentahydrate	1.7	3.4	Haywood et al. 2004	growth	lambs (Ronaldsay)	milk replacement		W									69 days	body weight	Feeding rate of 1.7 L/d assumed from recommended milk replacer FR for 20 d old lambs. Weight at 23 d assumed. However because fed ad-libitum, FR is uncertain. Also fed hay w/ 7.9 mg/kg dw copper.	not recommended: uncertainty associated with dose derivation and non-relevant mammal receptor (lamb)
Metals	**Copper**	**$CuSO_4$**	**18**		**Aulerich et al. 1982**	**reproduction**	**mink**	**food**	**0.18**	**W**	**3**	**1.071**			**110.5**				**357 days**	**kit mortality, litter mass**	**no statistics (19% vs. 12% kit mortality; 100 g/kit)**	**Selected TRV: NOAEL is highest NOAEL below selected LOAEL that meets acceptability criteria**
Metals	**Copper**	**$CuSO_4$**		**26**	**Aulerich et al. 1982**	**reproduction**	**mink**	**food**	**0.18**	**W**	**3**	**1.088**					**160.5**		**357 days**	**kit mortality, litter mass**	**no statistics (38% mort- [12% control]; 70 g/kit [100 g/kit-control])**	**Selected TRV: LOAEL is lowest LOAEL that meets acceptability**
Metals	Copper	$CuSO_4$	43		Aulerich et al. 1982	growth	mink	food	0.18	W	3	1.056			260.5				153-657 d	body weight, no statistics		
Metals	Copper	$CuSO_4*5H_2O$	137		NTP 1993	mortality	Rat	food							2035.8044				13 wks		no statistics, 0% mortality	
Metals	Copper	$CuSO_4*5H_2O$	67	137	NTP 1993	growth	Rat	food							1017.9022		2035.8044		13 wks	body weight	no statistics	
Metals	Copper	$CuSO_4*5H_2O$	93	197	NTP 1993	growth	Rat	food							1017.9022		2035.8044		2 wks	body weight		
Metals	Copper	copper chloride	267		Dodds-Smith et al. 1992	mortality, growth	shrew	food											weanlings for 12 wks	body weight		
Metals	Copper	$CuSO_4*5H_2O$	305		NTP 1993	mortality	Rat	food							4071.60879				2 wks		no statistics, 0% mortality	
Metals	Copper	CuSO4	220	440	Hebert et al. 1993	Growth	Fischer rat	food	0.0385	W	1	0.35	A		2000		4000		13 weeks	reduced body weight gain in males	final body weight in experimental group sign. different from control group at concentrations of 4000 ppm (male rats); female bw was impacted at 8000 ppm	

Table 7. TSVs for mammal diet

Chemical Group	Chemical	Chemical Form	NOAEL (mg/kg bw/d)	LOAEL (mg/kg bw/d)	Source	Endpoint	Test Species	Exposure Mode	FI (kg dw or L/day)	Wet or Dry?	FI Default?	Body Weight (kg)	BW Default?	% Moisture	NEC wet (ppm)	NEC dry (ppm)	LEC wet (ppm)	LEC dry (ppm)	Exposure Duration	Effect Endpoint	Notes	Rationale
Metals	Copper	CuSO4	200	400	Hebert et al. 1993	Growth	mouse	food	0.006	W	1	0.030	A		1000		2000		13 weeks	reduced body weight gain in males	final body weight in experimental group sign. different from control group at concentrations of 2000 ppm (male rats). female bw was impacted at 4000 ppm	
Metals	Copper	$CuSO_4*5H_2O$	467		NTP 1993	mortality	mouse	food							2035.8044				13 wks		no statistics, 0% mortality	
Metals	Copper	$CuSO_4*5H_2O$	227	467	NTP 1993	growth	mouse	food							1017.9022		2035.8044		13 wks	body weight		
Metals	Copper	$CuSO_4*5H_2O$	749		NTP 1993	mortality, growth	mouse	food							4071.60879				2 wks		no statistics for mortality, 0% mortality (except 1 accidental death); body weight "slightly" lower with treatment, assumed not significant	
Metals	Lead	lead acetate		0.55	Reiter et al. 1975	behavior	Sprague-Dawley rat	drink water	0.0385	W	2	0.35	A				5		multi-generational	reflex development in offspring, reduced locomotor activity in adults	endpoint is not a direct measure of growth, reproduction, or mortality	not recommended: not direct measure of growth, survival, or reproduction
Metals	Lead	Triethyl lead chloride	0.5	1.5	Odenbro and Kihlstrom 1977	Reproduction	mouse	gavage (water)							0.5				Day 3-5 after mating	Decreased frequency of implanted ova		not recommended: gavage exposure (dietary TRV available)
Metals	Lead	Soluble lead		3.3	Schroeder and Mitchener 1971	Reproduction	Rat	food and drink water				0.35	A						3 generations	Offspring mortality and runts	25 mg/L in water and 0.20 mg/kg ww in food (LOAEL calc using FIR 0.028 kg/d; WIR=0.046 L/d)	not recommended: exposure includes drinking water (and dietary TRV available)
Metals	Lead	lead acetate	5.5		Reiter et al. 1975	growth	Sprague-Dawley rat	drink water	0.0385	W	2	0.35	A		50				multi-generational	body weight		not recommended: drinking water study (and dietary TRV available)
Metals	Lead	Lead acetate		5.5	Overmann 1977	behavior	Long Evans rat	intubation											18 days	altered operant behavior- response inhibition ability	not direct measure of growth, reproduction or mortality	not recommended: not direct measure of growth, survival, or reproduction
Metals	Lead	Soluble lead		6.3	Schroeder and Mitchener 1971	Reproduction	mouse	food and drink water				0.03	A						3 generations	Offspring mortality, runts, discontinuation of breeding	25 mg/L in water and 0.20 mg/kg ww in food (LOAEL calc using FIR=0.0055 kg/d; WIR=0.0075 L/d)	not recommended: exposure includes drinking water (and dietary TRV available)
Metals	Lead	Lead acetate	7.35		Iavicoli et al. 2006	reproduction	mouse	food	0.006	W	1	0.03	A	10%	40				2nd and 3rd generation through puberty	litter size		
Metals	Lead	Lead acetate	4.7	8.9	Kimmel et al. 1980	Growth	Rat	Drink water							25		50		12 wks	Growth of females through pregnancy and lactation	median dose was calculated in the study with body weights and food ingestion rates that were not presented	not recommended: drinking water study (and dietary TRV available)
Metals	Lead	Pb(NO3)2	3.1	15.6	Hackett et al. 1982	growth	Wistar rat	injection (iv)											Day 9 or 15 of gestation, monitor for 11 or 5 days	decrease in percent body weight gain in pregnant rat	daily injections (intravenous)- significant effect on growth observed	not recommended: injection study
Metals	Lead	Lead acetate		31.5	Hammond et al. 1990	growth	Sprague-Dawley rat	drink water	0.0113	W	2	0.09					250		12 days		drinking water exposure, only one dose level administered	not recommended: drinking water study (and dietary TRV available)
Metals	Lead	Lead acetate	44		Zenick et al. 1979	growth	Sprague-Dawley rat	drink water	0.0385	W	2	0.35	A		400				gestation through nursing	maternal care (nursing, pup retrieval), offspring reflex development, maternal body weight		not recommended: drinking water study (and dietary TRV available)
Metals	Lead	Lead acetate	49.2		Overmann 1977	growth	Long Evans rat	intubation											18 days	body weight		not recommended: intubation exposure (dietary TRV available)
Metals	**Lead**	**Lead acetate**	**11**	**90**	**Azar et al. 1973**	**Growth**	**Rat**	**food**	**0.028**	**W**	**1**	**0.35**	**A**		**141**		**1130**		**2 years**	**Offspring weight and kidney damage**		**Selected TRVs: Lowest LOAEL that meets acceptability criteria; NOAEL is highest NOAEL below selected LOAEL that meets acceptability criteria**
Metals	Lead	Lead acetate		112	Sharma and Kanwar 1985	Reproduction	Albino mouse	Drink water	0.004217	W	2	0.03	A				800		11 wks	Pup weight and survival		not recommended: drinking water study (and dietary TRV available)
Metals	Lead	Lead acetate		120	Angell and Weiss 1982	behavior, growth	Long Evans rat	drink water	0.0385	W	2	0.35	A				1090		age 3 days to age 133 days	altered operant behavior, body weight	behavior endpoint not direct measure of growth, reproduction or mortality	not recommended: drinking water study (and dietary TRV available)
Metals	Lead	Lead acetate		240	Wise 1981	growth (body weight, liver and kidney weight)	mouse (female)	food	0.003	W	1	0.0137		10%			1000		8 days	reduced body weight, liver and kidney weight	body weight was statistically significantly lower in mice with basal diet plus lead compared with basal diet and no added lead	
Metals	Mercury	Methylmercuric chloride		0.0084	Verschuuren et al. 1976	growth	Wistar rat	food	0.016	W	1	0.16		10%			0.0798885	0.088765	3 gen			
Metals	Mercury	Mercury	0.043		Wobeser et al. 1976a	growth	ranch mink	food	0.18	W	3	1.34	B	25%	0.33	0.44			145 days	juvenile growth	field-collected fish were fed to mink	
Metals	Mercury	Mercury	0.051		Wobeser et al. 1976a	mortality	ranch mink	food	0.13	W	3	0.87	B		0.33				145 days	female, adults	no statistics- 0% mortality; Field-collected fish were fed to mink	

Table 7. TSVs for mammal diet

Chemical Group	Chemical	Chemical Form	NOAEL (mg/kg bw/d)	LOAEL (mg/kg bw/d)	Source	Endpoint	Test Species	Exposure Mode	FI (kg dw or L/day)	Wet or Dry?	FI Default?	Body Weight (kg)	BW Default?	% Moisture	NEC wet (ppm)	NEC dry (ppm)	LEC wet (ppm)	LEC dry (ppm)	Exposure Duration	Effect Endpoint	Notes	Rationale
Metals	Mercury	mercury (in field-collected fish)	0.02	0.07	Dansereau et al. 1999	reproduction	mink	food	0.18	W	3	1.34	B	64.6%	0.12		0.56		multi-generational	number of females whelped	mink fed prepared diets of chicken carcasses, mink feed and 40% freshwater field-collected fish	not recommended: based on exposure to field-collected fish
Metals	Mercury	mercury (in field-collected fish)	0.07	0.12	Dansereau et al. 1999	mortality	mink	food	0.18	W	3	1.34	B	64.6%	0.5		0.9		multi-generational	adult mortality	mink fed prepared diets of chicken carcasses, mink feed and 40% freshwater field-collected fish; no control due to nonavailability of noncontaminated fish; inconsistency on whether or not mortality was observed at 0.5 mg/kg ww	not recommended: based on exposure to field-collected fish
Metals	Mercury	Methylmercuric chloride	0.19		Verschuuren et al. 1976	mortality, reproduction	Wistar rat	food	0.019	W	1	0.20		10%	1.99721227	2.2191			3 gen		no statistics for mortality- no mortalities reported	
Metals	**Mercury**	**Methylmercuric chloride**	**0.16**	**0.25**	**Wobeser et al. 1976b**	**mortality, growth**	**mink**	**food**	**0.18**	**W**	**3**	**1.34**	**B**		**1.2**		**1.9**		**93 days**		**statistically significant growth effects at LOAEL; no statistics for mortality; 0% mortality at NOAEL; 2/5 died at LOAEL**	**Selected TRV: Lowest LOAEL and NOAEL for selected receptors that meet acceptability criteria**
Metals	Mercury	methyl-mercury		0.64	Aulerich et al. 1974	mortality, growth	mink	food	0.15	W		1.2					5		2 months		significant decrease in body weight; 100% mortality; results of $HgCl_2$ study not entered	
Metals	Mercury	$HgCl_2$ and MeHg acetate	0.70		Schroeder and Mitchener 1975	mortality, growth	Charles River CD mouse	drink water	0.0044	W	2	0.031			5				Life		paper discusses growth results; no effects in HgCl2 study	not recommended: drinking water study (and dietary TRV available)
Metals	Mercury	methyl-mercury hydroxide	2.0	3.0	Hughes and Annau 1976	reproduction	mouse	injection											single injection-gestation day 8	pup survival, pup body weight		not recommended: injection study
Metals	Nickel		0.35		Schroeder et al. 1974	mortality	Long-Evans rat	drink water	0.07	W					5				2-4 yr: lifetime	lifespan, longevity		not recommended: drinking water study (and dietary TRV available)
Metals	Nickel			0.35	Schroeder et al. 1974	growth	Long-Evans rat	drink water	0.07	W							5		2-4 yr: lifetime	body weight		not recommended: drinking water study (and dietary TRV available)
Metals	Nickel		0.58		Schroeder and Mitchener 1971	mortality	Rat	drink water	0.038	W	2	0.35	A		5.31				multigeneration al			not recommended: drinking water study (and dietary TRV available)
Metals	Nickel			0.58	Schroeder and Mitchener 1971	reproduction	Rat	drink water	0.038	W	2	0.35	A				5.31		multigeneration al	litter survival, number of runts		not recommended: drinking water study (and dietary TRV available)
Metals	Nickel	nickel chloride		1.41	Smith et al. 1993	reproduction	Long-Evans rat	drink water	0.141	W							10		11 wks+reprod period	pup mortality in 2nd breeding	female only	not recommended: drinking water study (and dietary TRV available)
Metals	Nickel	$Ni(SO)_4$	8.4		Ambrose et al. 1976	growth	Wistar rat	food	0.025	W	1	0.30		10%	100	111			2 yrs	body weight; increased number of stillborns in F1 generation	growth effect was statistically evaluated; no statistical for reproductive effects	
Metals	Nickel	nickel acetate	6	8.5	Hogan 1985	mortality	mouse	injection (ip)											single injection at 3,9, or 14 wks; monitor for 5 days	Mortality (LD50 tests). LOAEL=30% mortality after 5 days in 14-week males (0% mortality in NOAEL)	single injection, acute response. No statistics	not recommended: injection study
Metals	Nickel	nickel chloride	8	12	Sunderman et al. 1978	reproduction	Fischer rat	injection (im)											single injection on day 8 of gestation	intrauterine mortality	single injection	not recommended: injection study
Metals	Nickel	nickel chloride	16	17	Sunderman et al. 1978	mortality	Fischer rat	injection (im)											single injection on day 8 of gestation	maternal mortality	single injection. LOAEL = LD5, NOAEL = no mortalities in parallel experiment (LD50=22mg Ni/kg)	not recommended: injection study
Metals	Nickel	NiCl2	20		Nation et al. 1985	growth	Sprague-Dawley rat	food											14 days + 61 days untreated	body weight		
Metals	Nickel	NiCl2	10	20	Nation et al. 1985	behavior	Sprague-Dawley rat	food											14 days + 61 days untreated	altered operant behavior		not recommended: not direct measure of growth, survival, or reproduction
Metals	Nickel	nickel subsulfide	80		Sunderman et al. 1978	mortality	Fischer rat	injection (im)											single injection on day 6 of gestation	adult mortality	single injection, only one dose concentration administered	not recommended: injection study
Metals	Nickel	nickel subsulfide		80	Sunderman et al. 1978	reproduction	Fischer rat	injection (im)											single injection on day 6 of gestation	fetal mortality	single injection, only one dose concentration administered	not recommended: injection study

Table 7. TSVs for mammal diet

Chemical Group	Chemical	Chemical Form	NOAEL (mg/kg bw/d)	LOAEL (mg/kg bw/d)	Source	Endpoint	Test Species	Exposure Mode	FI (kg dw or L/day)	Wet or Dry?	FI Default?	Body Weight (kg)	BW Default?	% Moisture	NEC wet (ppm)	NEC dry (ppm)	LEC wet (ppm)	LEC dry (ppm)	Exposure Duration	Effect Endpoint	Notes	Rationale
Metals	**Nickel**	**Ni**	**20**	**80**	**Ambrose et al. 1976**	**reproduction**	**Wistar rat**	**food**	**0.028**	**W**	**1**	**0.35**		**10%**	**250**		**1000**		**3 generations**	**reduced offspring body weight**	**no statistics; on average offspring body weight was 73% of the control; study cited 1000 mg/kg as the "clear-cut adverse effect…"although succeeding generations recoved body weights (average of 92% of control); beagle dog data also available from study but no body weights or ingestion rates provided**	**Selected TRV: lowest LOAEL that meets acceptability criteria; NOAEL is highest NOAEL below selected LOAEL that meets acceptability criteria from same study**
Metals	Nickel	$Ni(SO)_4$		87	Ambrose et al. 1976	growth	Wistar rat	food	0.024	W	1	0.27		10%			1000	1111	2 yrs	body weight	statistically significant effects at LOAEL	
Metals	Nickel	nickel acetate		169	Weber and Reid 1969	growth	Webster Swiss mouse	food				0.027					1100		4 wks	body weight	acetate appears less toxic than sulfate	
Metals	Nickel	nickel acetate	210		Weber and Reid 1969	reproduction	Webster Swiss mouse	food	0.005	W	1	0.027		10%	1100	1222			weanling thru reprod	number of pups weaned	acetate appears less toxic than sulfate	
Metals	Nickel	$Ni(SO)_4$	230		Ambrose et al. 1976	mortality	Wistar rat	food	0.021	W	1	0.23		10%	2500	2778			2 yrs		no statistics- survival was poor at 2,500 ppm; not treatment-related	
Metals	Nickel	nickel acetate		313	Weber and Reid 1969	reproduction	Webster Swiss mouse	food	0.005	W	1	0.025		10%			1600	1778	weanling thru reprod	number of pups weaned	acetate appears less toxic than sulfate	
Metals	Nickel	$Ni(SO)_4$	2500		Ambrose et al. 1976	mortality	Beagle dog	food	0.324	W	1	14.3	A	10%	2500	2778			2 yrs		no statistics- 0% mortality; distantly related species	
Metals	Selenium	selenite	0.16		Behne et al. 1992	growth	Wistar rat	food	0.027	W	1	0.34			2				110 days	body weight		
Metals	**Selenium**	**L-selenomethionine**		**0.16**	**Behne et al. 1992**	**growth**	**Wistar rat**	**food**	**0.027**	**W**	**1**	**0.34**					**2**		**110 days**	**body weight**		**Selected TRV: Lowest LOAEL that meets acceptability criteria**
Metals	Selenium	$KSeO_3$	0.16	0.27	Rosenfeld and Beath 1954	reproduction	Wistar rat	drink water	0.038485	W	2	0.35	A		1.5		2.5		1 yr	pup growth, number weaned	statistics not presented	not recommended: drinking water study (and dietary TRV available)
Metals	Selenium	Na_2SeO_3, Nano-Se, or organic seleium	0.17	0.28	Jia et al. 2005	growth	Sprague-Dawley rat	food											13 wks	body weight		
Metals	Selenium	selenomethionine	0.36		Julius et al. 1983	growth	Hamster	food	0.00655	W		0.092			5.1				21d	body weight	no statistics	
Metals	Selenium	SeO_4	0.42		Schroeder and Mitchener 1971	mortality	Charles River mouse	drink water	0.004217	W	2	0.03	A		3				multigeneration al	survival		not recommended: drinking water study (and dietary TRV available)
Metals	Selenium	SeO_4		0.43	Schroeder and Mitchener 1971	reproduction	Charles River mouse	drink water	0.004217	W	2	0.03	A				3.06		multigeneration al	offspring mortality, number of runts, breeding failure		not recommended: drinking water study (and dietary TRV available)
Metals	Selenium	Na_2SeO_4		0.43	Schroeder and Mitchener 1972	mortality, growth	Swiss mouse	drink water	0.004217	W	2	0.03	A				3.06		lifetime	survival, body weight		not recommended: drinking water study (and dietary TRV available)
Metals	Selenium	$NaSeO_3$ or seleniferous wheat	0.42		Halverson et al. 1966	growth	Sprague-Dawley rat	food	0.0128	W		0.146			4.8				6 wks	body weight	statistically evaluated	
Metals	Selenium	$NaSeO_3$ or seleniferous wheat		0.54	Halverson et al. 1966	growth	Sprague-Dawley rat	food	0.01175	W		0.139					6.4		6 wks	body weight	statistically significant effects at LOAEL	
Metals	Selenium	$NaSeO_3$ or seleniferous wheat	0.64		Halverson et al. 1966	mortality	Sprague-Dawley rat	food	0.01	W		0.1255			8				6 wks		no statistics for mortality	
Metals	Selenium	$NaSeO_3$ or seleniferous wheat		0.81	Halverson et al. 1966	mortality	Sprague-Dawley rat	food	0.0098	W		0.1155					9.6		6 wks		no statistics for mortality	
Metals	Selenium	selenomethionine		0.76	Julius et al. 1983	growth	Hamster	food	0.0068	W		0.091					10.1		21d	body weight	no statistics	
Metals	Selenium	sodium selenite (NaSeO3)		0.87	Ferm et al. 1990	growth	Hamster	injection (iv)											single injection during gestation	maternal body weight	statistically significant effects at LOAEL	not recommended: injection study
Metals	Selenium	sodium selenite (NaSeO3)	1.82		Ferm et al. 1990	reproduction	Hamster	injection (iv)											single injection during gestation	number of abnormal litters	statistically significant effects at LOAEL	not recommended: injection study
Metals	Selenium	sodium selenate (Na2SeO4)	2.21	2.68	Ferm et al. 1990	growth, reproduction	Hamster	injection (iv)											single injection during gestation	maternal body weight, number of abnormal litters	statistically significant effects at LOAEL	not recommended: injection study
Metals	Selenium	Na_2SeO_3		3.4	Julius et al. 1983	growth	Hamster	food	0.0062	W		0.07375					40.25		21d	body weight	no statistics	
Metals	Selenium	Na_2SeO_3		5.8	Julius et al. 1983	mortality	Hamster	food	0.0045	W		0.062					80.25		21 d	female mortality	no statistics	
Metals	Selenium	sodium selenate (Na2SeO4)		7.11	Ferm et al. 1990	reproduction	Hamster	gavage											4 days of gestation	fetal body length	statistically significant effects at LOAEL	not recommended: gavage exposure (dietary TRV available)

Table 7. TSVs for mammal diet

Chemical Group	Chemical	Chemical Form	NOAEL (mg/kg bw/d)	LOAEL (mg/kg bw/d)	Source	Endpoint	Test Species	Exposure Mode	FI (kg dw or L/day)	Wet or Dry?	FI Default?	Body Weight (kg)	BW Default?	% Moisture	NEC wet (ppm)	NEC dry (ppm)	LEC wet (ppm)	LEC dry (ppm)	Exposure Duration	Effect Endpoint	Notes	Rationale
Metals	Selenium	sodium selenite (NaSeO3)	7.11	7.90	Ferm et al. 1990	reproduction	Hamster	gavage											4 days of gestation	number of abnormal litters, fetal body length	statistically significant effects at LOAEL	not recommended: gavage exposure (dietary TRV available)
Metals	Selenium	sodium selenate (Na2SeO4)	7.90	8.69	Ferm et al. 1990	growth	Hamster	gavage											4 days of gestation	maternal body weight	statistically significant effects at LOAEL	not recommended: gavage exposure (dietary TRV available)
Metals	**Thallium**	**thallium sulfate**	**0.74**		**Formigli et al. 1986**	**growth**	**Rat**	**drink water**				**0.365**							**30 or 60 d**		**statistically evaluated**	**Selected TRV: Only LOAEL that meets acceptability criteria**
Metals	Thallium	thallium sulfate		0.74	Formigli et al. 1986	reproduction	Rat	drink water				0.365							30 or 60 d	sperm motility	not relevant endpoint	not recommended: not direct measure of growth, survival, or reproduction
Metals	Vanadium	vanadium sulfate	1.05		Schroeder and Balassa 1967	growth	mouse	food and drink water				0.03	A				5		lifetime (1 yr)	body weight	NOAEL calculated by averaging 1st 6 mos exposure (water concentration=5 mg/L [water consumption=0.0075 L/d] and food concentration=1.4 mg/kg [food consumption=0.0055 kg/d]) and 2nd 6 mos exposure (food concentration=3.2 mg/kg [food consumption=0.0055 kg/d])	
Metals	**Vanadium**	**sodium meta-vanadate**		**2.7**	**Adachi et al. 2000**	**growth**	**Wistar rat**	**food**	**0.0142**			**0.267**						**50**	**10 weeks**	**body weight**		**Selected TRV: Lowest LOAEL that meets acceptability criteria; no NOAEL available from study**
Metals	Vanadium	sodium meta-vanadate		6.5	Elfant and Keen 1987	growth, reproduction	Sprague-Dawley rat	food	0.024	W	1	0.280					75		reproduction period	maternal body weight, offspring body weight gain and survival	body weight gain in offspring pups was 34% of control	
Metals	Zinc	$Zn(CH_3COO)_2*2H_2O$	191		Llobet et al. 1988	growth	Rat	drink water											3 mos	body weight	Zn aversion suspected; drinking water exposure	not recommended: drinking water study (and dietary TRV available)
Metals	**Zinc**	**zinc oxide**	**160**	**320**	**Schlicker and Cox 1968**	**reproduction**	**Sprague-Dawley rat**	**food**	**0.028**	**W**	**1**	**0.35**		**10%**	**2000**	**2222.2**	**4000**	**4444**	**gestation**	**fetal growth, number of resorptions**	**statistically significant effects at LOAEL**	**Selected TRV: Lowest LOAEL and NOAEL that meet acceptability criteria**
Metals	Zinc	zinc carbonate	80	400	Sutton and Nelson 1937	reproduction	Rat	food	0.028	W	1	0.35	A	10%	1000	1111.1	5000	5556	gestation	pregnancy, pup survival and body weight	no statistics	
Metals	Zinc	zinc oxide	149	433	Straube et al. 1980	growth	Ferret	food	0.17	W		0.6		76%	527	2195.8	1527	6362.5	2wks-6 mos		no statistics; exposure period variable	
Metals	Zinc	zinc carbonate	400	799	Sutton and Nelson 1937	growth	Rat	food	0.028	W	1	0.35	A	10%	5000	5555.6	10000	11111	gestation	body weight	no statistics	
Metals	Zinc	zinc oxide	433	858	Straube et al. 1980	mortality	Ferret	food	0.17	W		0.6		76%	1527	6362.5	3027	12612.5	2wks-6 mos		no statistics; exposure period variable; mortality endpoint measured incorrectly	
Butyltins	**DBT**	**dibutyltin dichloride**	**3.8**	**7.6**	**Harazono and Ema 2003**	**growth**	**Wistar rat**	**gavage**											3 days during pregnancy	maternal body weight		**Selected TRVs: lowest LOAEL and NOAEL available that meet acceptability criteria**
Butyltins	**DBT**	**dibutyltin dichloride**		**7.6**	**Ema et al. 2003**	**reproduction, growth**	**Wistar rat**	**gavage**											3 days during pregnancy	reduced no. implantations, no. of females pregnant, increased rate of postimplantation loss, reducedmaternal body weight		**Selected TRVs: lowest LOAEL that meets acceptability criteria**
Butyltins	DBT	di-butyltin chloride		10	Ema et al. 1995b	mortality, growth, reproduction	Wistar rat	gavage (stomach)											**day 7 and 8 of gestation**	**fetal body weight, embryo lethality, fetus abnormalities, adult mortality, maternal body weight**	most sensitive endpoints measured	
Butyltins	**TBT**	**tributyltin chloride**	**0.4**	**2.0**	**Omura et al. 2001**	**reproduction**	**Wistar rat**	**food**							**5**		**25**		**Multi-generational**	**pup body weight**		
Butyltins	TBT	tributyltin chloride		2.0	Makita et al. 2003; Makite et al. 2004	reproduction	Wistar rat	food									25		reproduction period	pup body weight		
Butyltins	TBT	bis (tri-n-butyltin) oxide	0.21	2.1	Wester et al. 1990	mortality, growth	Wistar rat	food	0.016	W		0.39	A		5		50		106 wks	male body weight gain, adult mortality		

Table 7. TSVs for mammal diet

Chemical Group	Chemical	Chemical Form	NOAEL (mg/kg bw/d)	LOAEL (mg/kg bw/d)	Source	Endpoint	Test Species	Exposure Mode	FI (kg dw or L/day)	Wet or Dry?	FI Default?	Body Weight (kg)	BW Default?	% Moisture	NEC wet (ppm)	NEC dry (ppm)	LEC wet (ppm)	LEC dry (ppm)	Exposure Duration	Effect Endpoint	Notes	Rationale
Butyltins	TBT	tributyltin oxide	2.1	4.3	Smialowicz et al. 1989	growth	Fisher rat (separate adult & pre-weanling groups)	gavage (oral)											10 days (either dosed over 10 consecutive days [adults] or dosed 3 times/wk until 10 doses [pre-weanlings])	reduction in body weight for pre-weanling rats	rats were dosed 3 times per week- so dose was normalized to a daily dose for a total of 10 doses (concentration multiplied by 3/7); gavage dose assumed bw normalized	not recommended: gavage exposure (dietary TRV available)
Butyltins	TBT	bis (tri-n-butyltin) oxide		5	Baroncelli et al. 1995	reproduction	Swiss mouse	gavage											days 6-15 of gestation	number of pups/ implantations	statistically significant effect; most sensitive endpoint measured	not recommended: gavage exposure (dietary TRV available)
Butyltins	TBT	tributyltin chloride	2.0	10	Ogata et al. 2001	reproduction	Wistar rat	food							25		125		Multi-generational	pup body weight, percentage of live pups		
Butyltins	TBT	tributyltin oxide	5	10	Crofton et al. 1989	growth, reproduction	Long-Evans rat	gavage (oral)											day 6- 20 of gestation	maternal body weight, litter size, pup body weight, increased age of sexual maturity	statistically evaluated effects	not recommended: gavage exposure (dietary TRV available)
Butyltins	TBT	tributyltin oxide	23.4	35	Davis et al. 1987	reproduction	mouse	gavage (stomach)											day 6-15 of gestation	number of living fetuses per litter, resorptions, fetal body weight	no statistics- at LOAEL 59% resorptions, 5% fetal survival and fetal body weight = 0.91g; at NOAEL 10.1% resorptions, 11.6% fetal survival and fetal body weight = 1.04 g; at control 9.1% resorptions, 11.5% fetal survival and fetal body weight = 1.13g	not recommended: gavage exposure (dietary TRV available)
Butyltins	TBT	bis (tri-n-butyltin) oxide	20	40	Baroncelli et al. 1990	growth, reproduction	Swiss albino mouse	gavage											days 6-15 of gestation	number of live fetuses, fetal body weight, fetal malformations, maternal growth	significant decrease in placental weight at 5 mg/kg/d (not reported as LOAEL)	not recommended: gavage exposure (dietary TRV available)
Butyltins	TBT	tributyltin chloride		40	Ema et al. 1995b	growth, reproduction	Wistar rat	gavage (stomach)											day 7 and 8 of gestation	post-implantation loss, maternal body weight change during pregnancy	most sensitive endpoints measured	not recommended: gavage exposure (dietary TRV available)
Butyltins	TBT	TBTCl		47.8	Ema et al. 1995a	growth, reproduction	Wistar rat	gavage											days 13-15 of gestation	fetal malformations, maternal growth	statistically significant effects at unbounded LOAEL	not recommended: gavage exposure (dietary TRV available)
Butyltins	TBT	tributyltin oxide	5.8	58 - 146	Davis et al. 1987	growth	mouse	gavage (stomach)											day 6-15 of gestation	body weight	no statistics- 10-40% reduction in growth at LOAEL range; "no effect" on growth at NOAEL, growth data not reported- qualitatively presented	not recommended: gavage exposure (dietary TRV available)
Butyltins	TBT	butyltin chloride		1000	Ema et al. 1995b	growth	Wistar rat	gavage (stomach)											day 7 and 8 of gestation	maternal body weight change during pregnancy	most sensitive endpoint measured	not recommended: gavage exposure (dietary TRV available)
PAHs	1-methylnaphthalene	1-methylnapthalene	150		Murata et al. 1993	growth	mouse	food											81 weeks	body weight		
PAHs	**1-methylnaphthalene**	**1-methyl-naphthalene**		**4,366**	**Hodson 1985**	**survival**	**rat**	**oral dose (assumed gavage)**												**mortality (LD50)**	**LD50 (4,366 mg/kg) was calculated by multiplying reported LC50 (30.7 mmol/kg) by mol. weight of 1-methylnapthalene (142.2 g/mol); original LD50 based on Tatken & Lewis 1983 (secondary citation); assumed "oral exposure" was a gavage exposure concentration**	**Selected TRV: only LOAEL available that meets acceptability criteria; no NOAEL available from study**
PAHs	**2-methylnaphthalene**	**2-methylnapthalene**	**54**	**114**	**Murata et al. 1997**	**growth**	**mouse**	**food**											**81 wks**	**body weight**	**male growth more sensitive than female**	**Selected TRVs: only LOAEL and NOAEL available that meet acceptability criteria**
PAHs	**Benzo(a)pyrene**	**benzo(a)pyrene**		**10**	**MacKenzie and Angevine 1981**	**reproduction**	**mouse**	**gavage**											**gestation (10 days)**	**pup body weight, testes weight**		**Selected TRV: LOAEL that meets acceptability criteria**
PAHs	Benzo(a)pyrene	benzo(a)pyrene	33.3		Neal and Rigdon 1967	mortality	mouse	food	0.004	W		0.03	A		250				up to 115 days	mortality	stomach tumor frequency increased at lower doses	
PAHs	Benzo(a)pyrene	benzo(a)pyrene	199		Rigdon and Neal 1965	growth, reproduction	white Swiss mouse	food	0.004	W	1	0.0175		10%	900	1000			prior to or following mating	adult body weight, embryonic development, embryonic malformations, and fertility	no statistics- results not clearly presented in paper, overall conclusions taken from paper; decreased body weight attributed to decreased ingestion rat (not toxicity)	
PAHs	**Dibenzothiophene**			**470**	**Leighton 1989**	**mortality**	**mouse**	**gavage**											**<72 hrs**	**LD50**	**mice exposed to only one single dose**	**Selected TRV: only LOAEL available that meets acceptability criteria (no NOAEL available)**
PAHs	Naphthalene	Naphthalene	133		Shopp et al. 1984	mortality, growth	mouse	gavage											90 d	body weight, adult mortality	no statistics for mortality- no treatment related deaths	

Table 7. TSVs for mammal diet

Chemical Group	Chemical	Chemical Form	NOAEL (mg/kg bw/d)	LOAEL (mg/kg bw/d)	Source	Endpoint	Test Species	Exposure Mode	FI (kg dw or L/day)	Wet or Dry?	FI Default?	Body Weight (kg)	BW Default?	% Moisture	NEC wet (ppm)	NEC dry (ppm)	LEC wet (ppm)	LEC dry (ppm)	Exposure Duration	Effect Endpoint	Notes	Rationale
PAHs	**Naphthalene**	**Naphthalene**	**50**	**150**	**Navarro et al. 1991**	**growth**	**rat**	**gavage**											**10 days of pregnancy (gestation days 6-15)**	**reduction in maternal body weight gain**	**study reports that LOAEL should be 450 mg/kg/day; however maternal body weight gain was 31% less than the control group for those administered 150 mg/kg/day; gavage exposed is assumed to represent bw-normalized dose**	**Selected TRVs: Lowest LOAEL and NOAEL that meet acceptability criteria**
PAHs	Naphthalene	Naphthalene	125	250	Plasterer et al. 1985	growth	mouse	gavage											8 days of pregnancy	body weight	dose-response unclear	not recommended: not clear dose-response
PAHs	Naphthalene	Naphthalene		300	Plasterer et al. 1985	mortality, reproduction	mouse	gavage											8 days of pregnancy	maternal survival; litter size	85% survival; statistically significant effects at LOAEL	
SVOC	**4-methylphenol**			**1,238**	**Schafer and Bowles 1985**	**survival**	**Deer mouse**	**gavage**				**0.02**							**72 hour**	**mortality**	**LOAEL quoted is based off the "LDfr", which represents the average amount of the chemical that was ingested by each animal over the 3-day test period without killing more than 50% of the test animals (fr refers to the food reduction test).**	**Selected TRV: only LOAEL available that meets acceptability criteria (no NOAEL available)**
SVOC	**Benzaldehyde**			**1,250**	**Schafer and Bowles 1985**	**survival**	**Deer mouse**	**gavage**				**0.02**							**72 hour**	**mortality**	**LOAEL quoted is based off the "LDfr", which represents the average amount of the chemical that was ingested by each animal over the 3-day test period without killing more than 50% of the test animals (fr refers to the food reduction test). Another value quoted in the paper was the ALD, which had a value of 470 mg/kg, and represents the Approximate Lethal Dose; the calculation of the ALD used a single animal per level method with each succeeding treatment 50% higher than the preceeding level, whihc continued until mortality occurred. It is more appropriate to use LDfr than ALD; little details on test methods (including any information regarding controls)**	**Selected TRV: only LOAEL available that meets acceptability criteria (no NOAEL available)**
SVOCs	Bis (2-ethylhexyl) phthalate		36		Arcadi et al. 1998	growth	Long-Evans rat	drink water	0.038	W	2	0.35	A		325	325			~ 6 wks	maternal weight		not recommended: drinking water study (and dietary TRV available)
SVOCs	**Bis (2-ethylhexyl) phthalate**		**44**		**Tyl et al. 1988**	**Reproduction**	**mouse, CD-1**	**food**	**0.007**	**W**		**0.040**			**250**				**17 days (pregnancy)**	**fetal abnormalities increased**		**Selected TRV: NOAEL based on same study as selected LOAEL**
SVOCs	Bis (2-ethylhexyl) phthalate		70		Shiota et al. 1980	Reproduction	mouse, ICR-JCL	food	0.0061	W		0.044			500	500			18 days (pregnancy)	fetal death		
SVOCs	Bis (2-ethylhexyl) phthalate		91		Tyl et al. 1988	Growth	mouse, CD-1	food	0.0072	W		0.039			500				17 days (pregnancy)	maternal body weight		
SVOCs	**Bis (2-ethylhexyl) phthalate**			**91**	**Tyl et al. 1988**	**Reproduction**	**mouse, CD-1**	**food**	**0.0072**	**W**		**0.039**					**500**		**17 days (pregnancy)**	**fetal abnormalities increased**	**statistically significant effects at LOAEL**	**Selected TRVs: Lowest LOAEL that meets acceptability criteria**
SVOCs	Bis (2-ethylhexyl) phthalate		93		Carpenter et al. 1953	mortality, growth	Guinea pigs	food	0.035	W	1	0.49	A	10%	1300	1444			1 yr	life expectancy, body weight		
SVOCs	Bis (2-ethylhexyl) phthalate		14	136	Lamb et al. 1987	reproduction	mouse, COBS	food	0.0051	W		0.036			96.5		965		>24 wks (2 gen)	number of litters, viability	statistically evaluated	
SVOCs	Bis (2-ethylhexyl) phthalate		190		Shiota et al. 1980	Growth	mouse, ICR-JCL	food	0.0074	W		0.040			1000				18 days (pregnancy)	maternal weight		
SVOCs	Bis (2-ethylhexyl) phthalate			190	Shiota et al. 1980	Reproduction	mouse, ICR-JCL	food	0.0074	W		0.040					1000	1000	18 days (pregnancy)	fetal death		
SVOCs	Bis (2-ethylhexyl) phthalate			191	Tyl et al. 1988	Growth	mouse, CD-1	food	0.0071	W		0.037					1000		17 days (pregnancy)	maternal body weight		
SVOCs	Bis (2-ethylhexyl) phthalate		50	200	Mitchell et al. 1985	growth	rat, Alderley Park SPF	food											9 mo.	male body weight	dietary dose in paper appears incorrect, so body weight-normalized dose assumed accurate	
SVOCs	Bis (2-ethylhexyl) phthalate		292		Tyl et al. 1988	Mortality	mouse, CD-1	food	0.0068	W		0.035			1500				17 days (pregnancy)		no statistics, 0% mortality	
SVOCs	Bis (2-ethylhexyl) phthalate		320		Carpenter et al. 1953	mortality, growth	Sherman rat	food	0.028	W	1	0.35	A	10%	4000	4444			2 yr	life expectancy; body weight		
SVOCs	Bis (2-ethylhexyl) phthalate		104	320	Carpenter et al. 1953	reproduction	Sherman rat	food	0.028	W	1	0.35	A	10%	1300	1444	4000	4444	2 yr	decreased number of litters per female		

Table 7. TSVs for mammal diet

Chemical Group	Chemical	Chemical Form	NOAEL (mg/kg bw/d)	LOAEL (mg/kg bw/d)	Source	Endpoint	Test Species	Exposure Mode	FI (kg dw or L/day)	Wet or Dry?	FI Default?	Body Weight (kg)	BW Default?	% Moisture	NEC wet (ppm)	NEC dry (ppm)	LEC wet (ppm)	LEC dry (ppm)	Exposure Duration	Effect Endpoint	Notes	Rationale
SVOCs	Bis (2-ethylhexyl) phthalate			322	Kluwe et al. 1982	growth	rat, Fisher 344	food	0.019	W		0.34					6000	6000	103 wks	male body weight	statistics not presented	
SVOCs	Bis (2-ethylhexyl) phthalate		357		Tyl et al. 1988	growth, reproduction	rat, Fisher 344	food	0.014	W		0.20			5000				20 days (pregnancy)	maternal body weight; fetal growth decreased		
SVOCs	Bis (2-ethylhexyl) phthalate		397		Poon et al. 1997	mortality, growth	rat, Sprague-Dawley	food							5000				13 wks	body weight	no mortality reported	
SVOCs	Bis (2-ethylhexyl) phthalate			400	Shiota et al. 1980	Growth	mouse, ICR-JCL	food	0.0067	W		0.034					2000	2000	18 days (pregnancy)	maternal weight		
SVOCs	Bis (2-ethylhexyl) phthalate		407		Lamb et al. 1987	mortality, growth	mouse, COBS	food	0.0051	W		0.036			2895				>24 wks (2 gen)		no statistics	
SVOCs	Bis (2-ethylhexyl) phthalate		500		Parmar et al. 1995	mortality, growth	Wistar rat	gavage											30 days			not recommended: gavage exposure (dietary TRV available)
SVOCs	Bis (2-ethylhexyl) phthalate			666	Tyl et al. 1988	growth, reproduction	rat, Fisher 344	food	0.013	W		0.19					10000		20 days (pregnancy)	maternal body weight; fetal growth decreased		
SVOCs	Bis (2-ethylhexyl) phthalate		724		Kluwe et al. 1982	mortality	rat, Fisher 344	food	0.017	W		0.27			12000	12000			103 wks		no statistics; mortality in controls	
SVOCs	Bis (2-ethylhexyl) phthalate			799	Kluwe et al. 1982	growth	mouse, B6C3F	food	0.008	W		0.032					3000	3000	103 wks	body weight: female	statistics not presented	
SVOCs	Bis (2-ethylhexyl) phthalate		864		David et al. 2000b	Mortality	rat, Fisher 344	food							12500				104 wks			
SVOCs	Bis (2-ethylhexyl) phthalate		164	864	David et al. 2000b	Growth	rat, Fisher 344	food							2500		12500		104 wks	body weight		
SVOCs	Bis (2-ethylhexyl) phthalate		1000		Mitchell et al. 1985	mortality	rat, Alderley Park SPF	food											9 mo.		no statistics- no mortality reported; dietary dose in paper appears incorrect, so body weight-normalized dose assumed accurate	
SVOCs	Bis (2-ethylhexyl) phthalate		1055		Tyl et al. 1988	Mortality	rat, Fisher 344	food	0.009	W		0.17			20000				20 days (pregnancy)		no statistics- 0% mort	
SVOCs	Bis (2-ethylhexyl) phthalate			1125	Narotsky et al. 1995	reproduction	rat, Fisher 344	gavage											Gestation days 6-15	maternal body weight; increased prenatal mortality		not recommended: intubation exposure (dietary TRV available)
SVOCs	Bis (2-ethylhexyl) phthalate		292	1266	David et al. 2000a	Growth	mouse, B6C3F	food							1500		6000		104 wks	male body weight (female more variable)		
SVOCs	Bis (2-ethylhexyl) phthalate		672	1325	Kluwe et al. 1982	reproduction	mouse, B6C3F	food	0.0085	W		0.034			3000	3000	6000	6000	103 wks	testicular degeneration		
SVOCs	Bis (2-ethylhexyl) phthalate		323	1362	David et al. 2000a	Mortality	mouse, B6C3F	food							1500		6000		104 wks			
SVOCs	Bis (2-ethylhexyl) phthalate		1573		Kluwe et al. 1982	mortality	mouse, B6C3F	food	0.0085	W		0.032			6000	6000			103 wks		no statistics- no treatment related deaths	
SVOCs	Bis (2-ethylhexyl) phthalate		2200		Shiota et al. 1980	Mortality	mouse, ICR-JCL	food	0.0072	W		0.034			10000	10000			18 days (pregnancy)	maternal mortalities	no statistics- no mortalities	
Dioxins/ furans	TEQ-mammal	TEQ		0.00000224	Tillitt et al. 1996	Reproduction	mink	food (field-collected fish)											182 days (including reproduction)	kit body weight, kit survival	uncertainty–PCBs also detected (Total PCBs = 0.13 mg/kg bw/d at LOAEL) and other unknown contaminants in field-collected fish-; TEQ concentrations determined using TEFs of individual PHHs and additive model); most sensitive reproductive endpoints; study methods as Heaton et al. 1995a	not recommended: based on exposure to field-collected fish
Dioxins/ furans	TEQ-mammal	TEQ		0.00000344	Tillitt et al. 1996	Reproduction	mink	food (field-collected fish)											182 days (including reproduction)	kit body weight, kit survival	uncertainty–unknown organics in field-collected fish- TEQs also evaluated (Total PCBs = 0.13 mg/kg bw/d at LOAEL) TEQ concentrations determined using H4IIE rat hepatoma assay; most sensitive reproductive endpoints; study methods as Heaton et al. 1995a	not recommended: based on exposure to field-collected fish

Table 7. TSVs for mammal diet

Chemical Group	Chemical	Chemical Form	NOAEL (mg/kg bw/d)	LOAEL (mg/kg bw/d)	Source	Endpoint	Test Species	Exposure Mode	FI (kg dw or L/day)	Wet or Dry?	FI Default?	Body Weight (kg)	BW Default?	% Moisture	NEC wet (ppm)	NEC dry (ppm)	LEC wet (ppm)	LEC dry (ppm)	Exposure Duration	Effect Endpoint	Notes	Rationale
Dioxins/ furans	TEQ-mammal	TEQ		0.0000036	Heaton et al. 1995	Reproduction	mink	food (field-collected fish)											182 days (including reproduction)	kit body weight at 3 and 6 weeks, gestation length, kit survival	uncertainty–PCBs also detected (Total PCBs= 0.13 mg/kg bw/d at LOAEL) and unknown other contaminants in field-collected fish; TEQ concentrations determined using H4IIE rat hepatoma assay; most sensitive reproductive endpoints	not recommended: based on exposure to field-collected fish
Dioxins/ furans	**TEQ-mammal**	**2,3,7,8-TCDD**	**2.6E-06**		**Hochstein et al. 2001**	**reproduction**	**mink**	**food**	**0.18**	**W**	**3**	**1.089**			**0.000016**				**131 to 132 days**	**decreased survival in kits at 3 weeks**	**Body weight and ingestion rates used were specific to the no-effect and effect concentration test groups.**	**Selected TRV: highest NOAEL below selected LOAEL that meets acceptability criteria**
Dioxins/ furans	**TEQ-mammal**	**2,3,7,8-TCDD**		**8.8E-06**	**Hochstein et al. 2001**	**reproduction**	**mink**	**food**	**0.18**	**W**	**3**	**1.054**					**0.000053**		**131 to 132 days**	**decreased survival in kits at 3 weeks**	**Body weight and ingestion rates used were specific to the no-effect and effect concentration test groups.**	**Selected TRV: Lowest LOAEL that meets acceptability criteria**
Dioxins/ furans	TEQ-mammal	2,3,7,8-TCDD	0.0000049		Hochstein et al. 1998	mortality	mink	food	0.0429	W		0.8776			0.0001				125 days	body weight, adult mortality	body weight loss may be related to food suppression; 20% body weight loss in control	
Dioxins/ furans	TEQ-mammal	2,3,7,8-TCDD	0.00000065	0.0000049	DeCaprio et al. 1986	growth	Hartley guinea pig	food							0.00001		0.000076		90 days	body weight	no significant difference in food consumption from control; statistics evaluated	
Dioxins/ furans	TEQ-mammal	TEQ	0.0000107	0.0000068	Heaton et al. 1995	growth	mink	food (field-collected fish)											182 days (including reproduction)	maternal body weight; ingestion rate also significantly reduced	uncertainty–PCBs also detected (total PCBs=0.26 and 0.32 mg/kg bw/d at NOAEL and LOAEL) and other unknown organics in field-collected fish; TEQ concentrations determined using H4IIE rat hepatoma assay	not recommended: based on exposure to field-collected fish
Dioxins/ furans	TEQ-mammal	2,3,7,8-TCDD	0.0000010	0.000010	Murray et al. 1979	reproduction	Sprague-Dawley rat	food											3 generation	litter size and F2 postnatal survival		
Dioxins/ furans	TEQ-mammal	2,3,7,8-TCDD	0.0000049	0.0000285	DeCaprio et al. 1986	mortality	Hartley guinea pig	food							0.000076		0.00043		90 days	0% mortality at NOAEL; no statistics- 10 M and 10 F; 4 M and 4 F died at LOAEL	exposure through diet and water; calculated NOAEL and LOAEL based only 100% dietary exposure	
Dioxins/ furans	TEQ-mammal	2,3,7,8-TCDD		0.00005	Hochstein et al. 1998	mortality, growth	mink	food	0.0409	W		0.8183					0.0010		125 days	body weight, adult mortality	no statistical methods for mortality - 50% mortality; 12% mortality in control; body weight loss may be related to food suppression; 20% body weight loss in control	
Dioxins/ furans	TEQ-mammal	2,3,7,8-TCDD	0.00010		Murray et al. 1979	growth	Sprague-Dawley rat	food											3 generation	body weight		
Dioxins/ furans	TEQ-mammal	2,3,7,8-TCDD	0.00001	0.0001	Kociba et al. 1978	mortality, growth	Sprague-Dawley rat	food											2 yrs	female mortality; body weight		
Dioxins/ furans	TEQ-mammal	2,3,7,8-TCDD		0.0001	Aulerich et al. 1988	growth, reproduction	mink	IP injection											12 days	reduced male body weight, kit mortality	unbounded LOAEL; only one dose administered	not recommended: injection study
Dioxins/ furans	TEQ-mammal	2,3,7,8-TCDD		0.00032	Van Birgelen et al. 1994	growth	Sprague-Dawley rat	food											13 wks	body weight	unbounded LOAEL	
Dioxins/ furans	TEQ-mammal	2,3,7,8-TCDD		0.500	Olson et al. 1980	growth	Golden Syrian hamster	injection (ip)											single injection + 50 days untreated	body weight	body weight statistically different from control	not recommended: injection study
Dioxins/ furans	TEQ-mammal	2,3,7,8-TCDD		0.500	Olson et al. 1980	growth	Golden Syrian hamster	gastric intubation											single gavage + 50 days untreated	body weight	body weight statistically different from injection control; no intubation control	not recommended: intubation exposure (dietary TRV available)
Dioxins/ furans	TEQ-mammal	2,3,7,8-TCDD	0.19	1.37	Chapman and Schiller 1985	growth	mouse	gastric intubation											single gavage + 30 days untreated	body weight	body weight statistically different from control; LD50 for 30 day range from 0.182 - 2.570 mg/kg bw	not recommended: intubation exposure (dietary TRV available)
PCBs	Total PCBs			0.037	Restum et al. 1998	Reproduction	mink	food	0.20			1.34	B				0.25		multi-generational	kit body weight, onset of estrus (as indicated by vulvular swelling), decrease in females whelping	uncertainty–other organics in field-collected fish- dioxins, DDE, DDD, chlordane (effects may not be just result of PCB exposure); LOAEL calculated assuming 200 g food/ day; most sensitive reproductive endpoints	not recommended: based on exposure to field-collected fish
PCBs	Total PCBs	Aroclor 1254		0.074	Hornshaw et al. 1983	Reproduction	mink	food				1.34	B						290 days	kit survival to 4 wks (0%)	uncertainty–unknown organics in field-collected fish; LOAEL effect was observed in mink fed field-collected perch and white sucker (~0.66 ppm) from Lake Heron and Lake Erie assuming 150 g food/ day	not recommended: based on exposure to field-collected fish
PCBs	Total PCBs	Aroclor 1254	0.070	0.077	Hornshaw et al. 1983	Reproduction	mink	food				1.34	B						250 days	kit body weight	uncertainty–unknown organics in field-collected fish; LOAEL- effect was observed in mink fed field-collected perch scrap (~0.66 ppm) from Lake Erie assuming 150 g food/ day. NOAEL- no significant effect on kit body weight for mink fed other field-collected fish (concentrations in sucker were highest- used to calculate NOAEL)	not recommended: based on exposure to field-collected fish
PCBs	Total PCBs	Clophen A50		0.089	Brunström et al. 2001	reproduction	mink	food				1.12					0.1		18 months	kit growth		

Table 7. TSVs for mammal diet

Chemical Group	Chemical	Chemical Form	NOAEL (mg/kg bw/d)	LOAEL (mg/kg bw/d)	Source	Endpoint	Test Species	Exposure Mode	FI (kg dw or L/day)	Wet or Dry?	FI Default?	Body Weight (kg)	BW Default?	% Moisture	NEC wet (ppm)	NEC dry (ppm)	LEC wet (ppm)	LEC dry (ppm)	Exposure Duration	Effect Endpoint	Notes	Rationale
PCBs	**Total PCBs**	**Aroclor 1254**	**0.080**	**0.096**	**Chapman 2003**	**reproduction**	**mink**	**food**	**0.16 g/g body weight**						**0.5**		**0.6**		**2 breeding seasons (see notes)**	**decrease in number of live kits per mated female; lower in kit body weight at birth.**	**NOAEL and LOAEL based on interpolated dietary concentrations resulting in a 10% or 25% decrease in endpoint response in mink feeding studies; TRVs calculated in FFS assuming female mink IR of 0.16 g/g body weight-day (average farm-raised individuals in Michigan [Bleavins and Aulerich, 1981])**	**Selected TRV: Lowest bounded LOAEL and NOAEL that meet acceptability criteria**
PCBs	Total PCBs			0.13	Heaton et al. 1995; Tillitt et al. 1996	Reproduction	mink	food											182 days (including reproduction)	kit body weight at 3 and 6 weeks, gestation length, kit survival	uncertainty–TEQs also detected (3.6 mg/kg bw/d at LOAEL) and unknown other contaminants in field-collected fish; most sensitive reproductive endpoints	not recommended: based on exposure to field-collected fish
PCBs	Total PCBs	Aroclor 1254		0.13	Wren et al. 1987	Reproduction	mink	food	0.18	W	3	1.34	B				1		6 mos	reduced kit growth rate		
PCBs	Total PCBs	Aroclor 1254	0.077	0.17	Hornshaw et al. 1983	Reproduction	mink	food				1.34	B						250 days	kit survival at birth (0%)	uncertainty–unknown contaminants in field-collected fish; LOAEL- effect was observed in mink fed field-collected carp (~1.5 ppm) from Saginaw Bay (Lake Heron) assuming 150 g food/ day; NOAEL- no significant effect on kit survival was observed in mink fed other field-collected fish- whitefish, perch, alewife, sucker (concentrations in perch were highest- used to calculate NOAEL)	not recommended: based on exposure to field-collected fish
PCBs	Total PCBs	Aroclor 1254		0.22	Ringer 1983	reproduction	mink	food	0.15	W		1.34	B		1		2		4 and 9 months prior to giving birth	number of offspring per female, decrease in pup body weight	no statistics; at LOAEL: number of offspring/ female = 0.3; at NOAEL: number of offspring/ female = 4.3; at control: number of offspring/ female = 4.1 - 6.0	
PCBs	Total PCBs	Aroclor 1254	0.13	0.26	Aulerich and Ringer 1977	Reproduction	mink	food	0.18	W	3	1.34	B		1		2		4 months	Number of kits born alive (0% at 4 wks)		
PCBs	Total PCBs		0.26	0.32	Heaton et al. 1995	Growth	mink	food											182 days (including reproduction)	maternal body weight	uncertainty–TEQs also detected (6.8 and 10.7 mg/kg bw/d at NOAEL and LOAEL) and unknown other contaminants in field-collected fish; most sensitive reproductive endpoints	not recommended: based on exposure to field-collected fish
PCBs	Total PCBs	Clophen A50	0.27		Brunström et al. 2001	Growth	mink	food				1.12			0.3				18 months	maternal body weight	Clophen A50 mixture	
PCBs	Total PCBs	Aroclor 1254		0.39	Aulerich et al. 1985	Reproduction	mink	food	0.13	W	3	0.87	B				2.5		88-102 days	number of kits whelped and born alive (0%)		
PCBs	Total PCBs	mixture composition not reported		0.51	Jensen et al. 1977	Reproduction	mink	food	0.13	W	3	0.87	B				3.3		66 days	number of kits born alive	PCB composition not known	
PCBs	Total PCBs	Aroclor 1242		0.65	Bleavins et al. 1980	Reproduction	mink	food	0.18	W	3	1.34	B				5		8 months	reproductive failure		
PCBs	Total PCBs	Aroclor 1254		1.27	Linzey 1987	Reproduction	mouse	food	0.003			0.0232						10	7.5-18 months	reduced no. young per litter survival at 28 days	wild caught parents continuously exposed throughout 18 month study (litters occurred during that time); lab-raised parents paired at 12 weeks were exposed/studied for 9-15 months depending on pair; lab-raised parents paired at 16 weeks were exposed/studied for 7.5-9 months depending on pair	
PCBs	Total PCBs	Aroclor 1254		1.31	Hornshaw et al. 1986	growth	mink	food	0.18	W	3	1.34	B				10		4 wks	weight gain in adults		
PCBs	Total PCBs	Aroclor 1255		1.64	Kihlstrom et al. 1992	Reproduction	mink	food											3 months	all whelps stillborn		
PCBs	Total PCBs	Aroclor 1256	1.2	1.8	Aulerich et al. 1986	growth	mink	food											28 days	female growth	mink fed rabbit prey exposed to PCBs; LOAEL and NOAEL are average between male and female mg/kg bw/d dose; mortality was also recorded for a 28-day exposure but insufficient data to calculate an LOAEL	
PCBs	Total PCBs	Clophen A50		2.0	Kihlstrom et al. 1992	Reproduction	mink	food											3 months	all whelps stillborn		
PCBs	Total PCBs	Aroclor 1254	1.5	2.4	Aulerich et al. 1986	growth	mink	food											28 days	male and female growth	mink fed mink cereal diet; a mortality test was also run and recorded for a 28 day exposure but insufficient data to calculate an LOAEL	
PCBs	Total PCBs	Aroclor 1016		2.6	Bleavins et al. 1980	mortality, reproduction	mink	food	0.18	W	3	1.34	B				20		8 months	birth weight and growth rate of kits, and 25 % adult female mortality		

Table 7. TSVs for mammal diet

Chemical Group	Chemical	Chemical Form	NOAEL (mg/kg bw/d)	LOAEL (mg/kg bw/d)	Source	Endpoint	Test Species	Exposure Mode	FI (kg dw or L/day)	Wet or Dry?	FI Default?	Body Weight (kg)	BW Default?	% Moisture	NEC wet (ppm)	NEC dry (ppm)	LEC wet (ppm)	LEC dry (ppm)	Exposure Duration	Effect Endpoint	Notes	Rationale
PCBs	Total PCBs	Aroclor 1254	20		Simmons & McKee (1992)	growth	mouse	food	0.006	W	1	0.03	A		100				21 days		no effect on body weight	
PCBs	Total PCBs	Aroclor 1232	480	2000	Harris et al. 1993	growth	mink	injection (ip)											single injection + 14 days (untreated)	body weight gain	single injection (5 dose levels)	not recommended: injection study
Pesticides	**Aldrin**		**0.83**	**4.1**	**Reuber 1980**	**mortality**	**Osborne-Mendel rat**	**diet, food**	**0.026**	**W**	**1**	**0.32**		**10%**	**10**	**11**	**50**	**55.6**	**2 years**	**increased mortality**	**no statistics**	**Selected TRVs: only LOAEL and NOAEL available that meet acceptability criteria**
Pesticides	**Chlordane**	**tech chlordane**	**0.18**	**0.92**	**Khasawinah and Grutsch 1989**	**growth**	**mouse**	**food**	**0.006**	**W**	**1**	**0.03**	**A**	**10%**	**1**	**1.1**	**5**	**5.6**	**104 wk**	**body weight-males**	**study proposes NOAEL at 1 ppm; statistically significant effects at LOAEL**	**Selected TRVs: lowest LOAEL and NOAEL available that meet acceptability criteria**
Pesticides	Chlordane	tech chlordane	1.5		Ingle 1952	mortality, growth, reproduction	Osborne-Mendel rat	food	0.015	W		0.30			30				104 wk	body weight, adult mortality, viability of offspring	seizures at 30 ppm, no statistics for reproduction	
Pesticides	Chlordane	tech chlordane	2.3		Khasawinah and Grutsch 1989	mortality	mouse	food	0.006	W	1	0.03	A	10%	12.5	13.9			104 wk		study proposes NOAEL at 1 ppm	
Pesticides	Chlordane	gamma chlordane		3.7	Talamantes and Jang 1977	growth	mouse	injection (sc)				0.0202							day 2,3,4 after birth		effects observed for 12 wks; growth significantly affected, but recovered by 12 weeks	not recommended: injection study
Pesticides	Chlordane	alpha chlordane		3.8	Talamantes and Jang 1977	growth	mouse	injection (sc)				0.0195							day 2,3,4 after birth		effects observed for 12 wks; growth significantly affected, but recovered by 12 weeks	not recommended: injection study
Pesticides	Chlordane	tech chlordane	4.9		Ambrose et al. 1953	growth	Albino rat	food	0.013	W		0.4276			160				407 d	body weight-males	no statistics presented; 0% mortality	
Pesticides	Chlordane	tech chlordane		8.0	Ingle 1952	mortality, growth, reproduction	Osborne-Mendel rat	food	0.015	W		0.28					150		104 wk	body weight, adult mortality, viability of offspring	seizures at 30 ppm, no statistics for reproduction	
Pesticides	Chlordane	tech chlordane		11	Ambrose et al. 1953	growth	Albino rat	food	0.013	W		0.3766					320		407 d	body weight-males	no statistics presented; mortality observed throughout exposure	
Pesticides	Chlordane	tech chlordane	11	22	Ambrose et al. 1953	mortality	Albino rat	food	0.011	W		0.318			320		640		407 d			
Pesticides	Chlordane	tech chlordane	25		Bondy et al. 2000	growth	Sprague-Dawley rat	food											28 days	body weight		
Pesticides	Total Chlordane	tech chlordane	32.5		Shain et al. 1977	growth	Sprague-Dawley rat	food	0.055	D		0.511				300			90 days	body weight		
Pesticides	Chlordane	tech chlordane	40		Cassidy et al. 1994	growth	Sprague-Dawley rat	food	0.028	W	1	0.35	A	20%	500	625			reproduction period	body weight	no dose-related effects	
Pesticides	Chlordane	tech chlordane		40	Cassidy et al. 1994	reproduction	Sprague-Dawley rat	food	0.028	W	1	0.35	A	20%			500	625	reproduction period	testosterone levels in females		
Pesticides	Chlordane	tech chlordane	100	300	Balash et al. 1987	growth	Swiss mouse	gavage											30 d	body weight	gavage; males only	not recommended: gavage exposure (dietary TRV available)
Pesticides	Chlordane	tech chlordane	300		Balash et al. 1987	reproduction	Swiss mouse	gavage											30 d	testicular effects	gavage; males only; no statistical methods	not recommended: gavage exposure (dietary TRV available)
Pesticides	Total DDx	o,p'-DDT	0.24		Duby et al. 1971	reproduction	Sprague-Dawley rat	food	0.028	W	1	0.35	A	10%	3	3.3			2 generation	litter size and weight and uterine involution		
Pesticides	Total DDx	p,p'-DDT	0.6		Tarjan and Kemeny 1969	mortality, growth, reproduction	mouse	food	0.006	W	1	0.03	A	10%	3.2	3.6			5 generation	adult mortality, growth, number of pregnancies, number ov births, litter size, pup growth/survival	study estimates daily DDT ingestion: 0.4-0.7 mg/kg/d	
Pesticides	Total DDx	p,p'- DDT	1.0		Duby et al. 1971	reproduction	Sprague-Dawley rat	food	0.028	W	1	0.35	A	10%	12	13.3			2 generation	litter size and weight and uterine involution		
Pesticides	Total DDx	tech DDT	1.2		Duby et al. 1971	reproduction	Sprague-Dawley rat	food	0.028	W	1	0.35	A	10%	15	16.7			2 generation	litter size and weight and uterine involution		
Pesticides	Total DDx	"DDT"- chem form not specified, likely DDT mixture	1.3		Ware and Good 1967	mortality	mouse	food	0.006	W	1	0.03	A	17%	7	8.4			120 days			
Pesticides	Total DDx	o,p'- and p,p'-DDT	1.3		Seiler et al. 1994	reproduction	New Zealand white rabbits	gavage											12-15wks; 3/wk	fetal growth, fertilization rate, pre- and post- embryonic loss		not recommended: gavage exposure (dietary TRV available)
Pesticides	**Total DDx**	**"DDT"- chem form not specified, likely DDT mixture**		**1.3**	**Ware and Good 1967**	**reproduction**	**mouse**	**food**	0.006	W	1	0.03	A	17%			7	8.4	120 days	litter size		**Selected TRVs: Lowest LOAEL that meets acceptability criteria; no NOAEL available**

Table 7. TSVs for mammal diet

Chemical Group	Chemical	Chemical Form	NOAEL (mg/kg bw/d)	LOAEL (mg/kg bw/d)	Source	Endpoint	Test Species	Exposure Mode	FI (kg dw or L/day)	Wet or Dry?	FI Default?	Body Weight (kg)	BW Default?	% Moisture	NEC wet (ppm)	NEC dry (ppm)	LEC wet (ppm)	LEC dry (ppm)	Exposure Duration	Effect Endpoint	Notes	Rationale
Pesticides	Total DDx	tech DDT	1.6		Ottoboni 1972	mortality, growth, reproduction	Sprague-Dawley rat	food	0.028	W	1	0.35	A	10%	20	22.222			23 mos	adult mortality, growth, viable litter size, reproductive life-span	reported NOAEL in study ~ 1 mg/kg/d	
Pesticides	Total DDx	tech DDT		2.0	Nickerson and Sniffen 1973	reproduction	Sprague-Dawley rat	food											7.5 wks	fertility		
Pesticides	Total DDx	tech DDT	2.4		Wolfe et al. 1979	mortality, reproduction	Oldfield mouse	food	0.002	W		0.015			17.8				15 mos	adult mortality, litter size, litters per pair	statistical methods not presented	
Pesticides	Total DDx	o,p'-DDT	4.0		Wrenn et al. 1971	reproduction	Wistar rat	food	0.018	W	1	0.18		10%	40	44.4			18-23 wks	offspring mortality, fertility, fecundy, growth		
Pesticides	Total DDx	"DDT"- chem form not specified, likely DDT mixture	0.8	4.0	Fitzhugh 1948	reproduction	rat	food	**0.028**	**W**	**1**	**0.35**	**A**	**10%**	**10**	**11**	**50**	**55.6**	**2 yrs**	**number of young surviving to weaning (63% vs. 87% lower dose and 88% in control)**	no statistical methods; few details on methods; Sample (1996) NOAEL=0.8; LOAEL=4	
Pesticides	Total DDx			4.0	Paulsen et al. 1973	maternal behavior	Albino rat	food	0.028	W	1	0.35	A	10%			50			percent of time spent nursing	statistical methods not provided, doses appear to have been preceded by higher doses and switched once toxicity became apparent; small sample size (n=3), prior exposure, no statistics presented	not recommended: not direct measure of growth, survival, or reproduction
Pesticides	Total DDx	tech DDT	6.7		Jonsson et al. 1976	reproduction	Sprague-Dawley rat	food	0.022	W	1	0.25		10%	75	83.333			36 wks	litter size, mating and reproductive success	no statistics-mating and reproductive success	
Pesticides	Total DDx	tech DDT	10		Ottoboni et al. 1977	reproduction	Beagle dog	gavage											3 generation	gestation length, fertilization, pregnancy, litter size; pup mortality, viability, growth, sex; lactation ability	decreased age at puberty observed at 10 mg/kg but effect is not adverse by itself and is counter to other study results	not recommended: gavage exposure (dietary TRV available)
Pesticides	Total DDx	tech DDT	13		Jonsson et al. 1976	mortality	Sprague-Dawley rat	food	0.022	W	1	0.25		10%	150	166.67			37 wks			
Pesticides	Total DDx	tech DDT		13.4	Jonsson et al. 1976	reproduction	Sprague-Dawley rat	food	0.022	W	1	0.25		10%			150	166.66667	36 wks	litter size, mating and reproductive success	no statistics-mating and reproductive success	
Pesticides	Total DDx	tech DDT (DDD, DDE, DDT)	16		Ottoboni 1969	mortality, growth, reproduction	Sprague-Dawley rat	food	0.028	W	1	0.35	A	10%	200	222.2			3 generation	adult mortality, growth, fertility, viability, stillbirths, litter size, abnormalities, pup survival	Significant increase in ringtail disease but does not impact growth, survival or reproduction	
Pesticides	Total DDx	p,p'-DDT	1.6	16	Clement and Okey 1974	reproduction	Wistar rat	food	0.028	W	1	0.35	A	10%	20	22.2	200	222.2	6 mos	offspring growth	no statistics; growth <or= 50% of control	
Pesticides	Total DDx	p,p'-DDT	18		Thorpe and Walker 1973	mortality	mouse	food	0.006	W	1	0.03	A		100	100			2 yrs		no statistical methods- "mortality similar to controls"	
Pesticides	Total DDx	pp'-DDT, '-DDD, -DDE	21		Banerjee et al. 1996	mortality, growth	Wistar rat	food	0.016	W	1	0.16		10%	200	222.22			6 wks	mortality, body weight (males only)		
Pesticides	Total DDx	"DDT"- chem form not specified, likely DDT mixture		37	Cannon and Holcomb 1968	mortality	white lab mouse	food	0.006	W	1	0.03	A	10%			200	222.2	F0 mating, gestation and weaning+F1 breeding		no reproductive effects implied but statistics and results unclear	
Pesticides	Total DDx	p,p-DDD and -DDE		42	Tomatis et al. 1974	growth	CF-1 mouse	food	0.007	W	1	0.040		10%			250	278	123 wks	male growth	no statistics; poorly reported results	
Pesticides	Total DDx	p,p-DDD	43		Tomatis et al. 1974	mortality	CF-1 mouse	food	0.006	W	1	0.0360		10%	250	278			123 wks		no statistics and very poorly reported results	
Pesticides	Total DDx	p,p-DDD		43	Tomatis et al. 1974	mortality, growth	CF-1 mouse	food	0.006	W	1	0.0360		10%			250	278	123 wks	growth, adult mortality	no statistics and very poorly reported results	
Pesticides	Total DDx	tech DDT	9.2	46	Turusov et al. 1973	mortality, reproduction	mouse	food	0.006	W	1	0.03	A	10%	50	55.6	250	278	6 generation	lifespan, pup mortality	statistics not discussed	
Pesticides	Total DDx	"DDT"- chem form not specified, likely DDT mixture	55		Cannon and Holcomb 1968	growth	white lab mouse	food	0.006	W	1	0.03	A	10%	300	333			F0 mating, gestation and weaning+F1 breeding	body weight	no reproductive effects implied but statistics and results unclear	
Pesticides	Total DDx	p,p-DDE		58	Rossi et al. 1983	growth	Golden Syrian hamsters	food	0.014	W	1	0.12		10%			500	556	lifetime	body weight	statistics implied but not presented; average of 112 g vs. 128 g in control - significance unknown	
Pesticides	Total DDx	o,p'-DDT		80	Clement and Okey 1974	reproduction	Wistar rat	food	0.028	W	1	0.35	A	10%			1000	1111.1	6 mos	LOAEL= F1 litter size (no statistics) and production		
Pesticides	Total DDx	tech DDT	113		Rossi et al. 1983	mortality	golden Syrian hamster	food	0.014	W	1	0.13		10%	1000	1111			lifetime		Mixture- 70-75% p,p'-DDT; 20% o,p'-DDT; 0.2-4% p,p'-DDE	

Table 7. TSVs for mammal diet

Chemical Group	Chemical	Chemical Form	NOAEL (mg/kg bw/d)	LOAEL (mg/kg bw/d)	Source	Endpoint	Test Species	Exposure Mode	FI (kg dw or L/day)	Wet or Dry?	FI Default?	Body Weight (kg)	BW Default?	% Moisture	NEC wet (ppm)	NEC dry (ppm)	LEC wet (ppm)	LEC dry (ppm)	Exposure Duration	Effect Endpoint	Notes	Rationale
Pesticides	Total DDx	tech DDT		113	Rossi et al. 1983	growth	golden Syrian hamster	food	0.014	W	1	0.13		10%			1000	1111	lifetime	body weight	statistics implied for growth but not presented; unbounded LOAEL; mixture-70-75% p,p'-DDT; 20% o,p'-DDT; 0.2-4% p,p'-DDE	
Pesticides	Total DDx	p,p-DDE	115		Rossi et al. 1983	mortality	Golden Syrian hamsters	food	0.014	W	1	0.12		10%	1000	1111			lifetime			
Pesticides	Total DDx	tech DDT		333	Shabad et al. 1973	mortality, reproduction	mouse	gavage				0.03	A						multiple generations	adult mortality, pregnancy frequency, time and fetal survival	statistical methods unclear	not recommended: gavage exposure (dietary TRV available)
Pesticides	**Dieldrin**		**0.015**	**0.03**	**Harr et al. 1970**	**reproduction**	**Wistar rat**	**food**							**0.31**		**0.63**		**lifetime**	**reduced number of conceptions and no. litter weaned**	**no statistics presented in study so difficult to determine effects thresholds; reduced number of conceptions and no. litter weaned during 2nd breeding in 336 day old rats; LOAEL is concentration (0.63 mg/kg) where cumulative body weight normalized dose was 10.4 ug/g bw; cumulative body weight normalized dose was divided by age of rat (in days- 336 days); NOAEL is concentration (0.31 mg/kg) where cumulative body weight normalized dose was 5.2 ug/g bw; cumulative body weight normalized dose was divided by age of rat (in days- 336 days)**	**Selected TRVs: Lowest LOAEL and NOAELthat meet acceptability criteria**
Pesticides	Dieldrin	dieldrin	0.050		Walker et al. 1969	growth	Beagle dog	oral capsule											2 yrs	body weight		
Pesticides	Dieldrin			0.19	Treon and Cleveland 1955	reproduction	Carworth rat	food	0.030	W	1	0.40		10%			2.5	2.8	3 generations	offspring mortality	no statistics	
Pesticides	Dieldrin		0.50		Walker et al. 1969	mortality, growth	CFE rat	food	0.017	W		0.33			9.66	9.66			2 yrs		no dose-response for mortality: 1ppm~0.0475 and 0.05825 mg/kg/d (male and female)	
Pesticides	Dieldrin	tech dieldrin	0.92		Good and Ware 1969	mortality	CFS Swiss mouse	food	0.006	W	1	0.03	A	10%	5	5.5556			120 d			
Pesticides	Dieldrin	tech dieldrin		0.92	Good and Ware 1969	reproduction	CFS Swiss mouse	food	0.006	W	1	0.03	A	10%			5	5.6	120 d	litter size		
Pesticides	Dieldrin			0.92	Virgo and Bellward 1977	reproduction	mouse	food	0.006	W	1	0.03	A				5		4 wks prior to mating through gestation	18% pup survival	statistically significant effects (pup survival at control = 35%)	
Pesticides	Dieldrin	dieldrin	0.9	1.8	Virgo and Bellward 1977	behavior	mouse	food	0.006	W	1	0.03	A		5		10		4 wks prior to mating through gestation	maternal behavior (tendency/ onset of nursing)	Statistically significant effects; endpoint not direct measure of reproductive success	not recommended: not direct measure of growth, survival, or reproduction
Pesticides	Dieldrin			1.8	Thorpe and Walker 1973	mortality	CFI mouse	food	0.006	W	1	0.03	A	10%			10	11.1	2 yrs		mortality results not clear; liver tumors significant at 10 ppm	
Pesticides	Dieldrin	dieldrin		1.84	Bildstein and Forsyth 1979	behavior	White-footed mouse	food	0.006	W	1	0.03	A				10		approximately 3 months	altered anti-predator response to hawk	only one dose given; effect in number of mouse with no response increased from the number with no response in the control, and the number responding by freezing was significantly less than the number responding by freezing in control	not recommended: not direct measure of growth, survival, or reproduction
Pesticides	Dieldrin		1.9		Treon and Cleveland 1955	mortality	Carworth rat	food	0.030	W	1	0.40		10%	25	28			2 yrs			
Pesticides	Dieldrin		1.3	2.0	Treon and Cleveland 1955	mortality	Dogs	food							10		25		~9-15 mos		no statistics, no control; small sample size	
Pesticides	Dieldrin		2.2		Treon and Cleveland 1955	growth	Carworth rat	food	0.023	W	1	0.26		10%	25	28			6 mos			
Pesticides	Dieldrin		0.8	4.1	Fitzhugh et al. 1964; Reuber 1980	mortality	Osborne-Mendel rat	food	0.026	W	1	0.32		10%	10	11	50	55.6	2 yrs	increased mortality	no statistics	
Pesticides	Dieldrin		6.6		Treon and Cleveland 1955	mortality	Carworth rat	food	0.023	W	1	0.26		10%	75	83			6 mos			
Pesticides	Dieldrin		12		Fitzhugh et al. 1964	growth	Osborne-Mendel rat	food	0.026	W	1	0.32		10%	150	167			2 yrs	body weight		
Pesticides	Dieldrin	technical grade dieldrin		15	Walsh and Fink 1972	mortality	CF-1 mouse	injection											single injection, effects observed for 24 hrs	study measured time to death (LT50); LC50 =10.5 mg/kg; mortality observed at all doses administered	no control	not recommended: injection study
Pesticides	Dieldrin			26	Treon and Cleveland 1955	mortality	Carworth rat	food	0.023	W	1	0.26		10%			300	333.3	6 mos			

Table 7. TSVs for mammal diet

Chemical Group	Chemical	Chemical Form	NOAEL (mg/kg bw/d)	LOAEL (mg/kg bw/d)	Source	Endpoint	Test Species	Exposure Mode	FI (kg dw or L/day)	Wet or Dry?	FI Default?	Body Weight (kg)	BW Default?	% Moisture	NEC wet (ppm)	NEC dry (ppm)	LEC wet (ppm)	LEC dry (ppm)	Exposure Duration	Effect Endpoint	Notes	Rationale
Pesticides	Endosulfan		0.71		Zaidi et al. 1985	growth	Albino rat	injection (ip)											5 wks	growth	no effect on growth	not recommended: injection study
Pesticides	Endosulfan	endosulfan	0.36	0.71	Zaidi et al. 1985	behavior	Albino rat	injection (ip)											3 wks (NOAEL) and 5 wks (LOAEL)	increased aggressive behavior (as measured by foot shock-induced aggression)	behavior does not directly measure growth, mortality, or reproduction	not recommended: not direct measure of growth, survival, or reproduction
Pesticides	Endosulfan	endosulfan	0.5	1.0	Seth et al. 1986	behavior	Rat	injection (ip)											throughout gestation	aggressive behavior (as measured by number of fighting responses/ minute)	no effect on body weight, litter size, pup body weight	not recommended: not direct measure of growth, survival, or reproduction
Pesticides	Endosulfan	technical endosulfan alpha and beta isomers 1:2 ratio		2.0	Paul et al. 1992	behavior	Wistar rat	gastric gavage											90 days	inhibited avoidance response, impaired learning	only one dose given; statistically significant effects	not recommended: not direct measure of growth, survival, or reproduction
Pesticides	**Endosulfan**	**technical endosulfan**	**0.84**	**2.5**	**Hack et al. 1995**	**mortality, growth**	**mouse**	**food**											**24 mos**	**male mortality (males more sensitive than females), body weight**	**statistically significant effects at LOAEL**	**Selected TRVs: lowest LOAEL available that meets acceptability criteria; highest NOAEL below selected LOAEL that meets acceptability criteria**
Pesticides	Endosulfan	technical endosulfan	1.5	3.0	Dalsenter et al. 1999	growth	Rat	gavage											4 wks	body weight		not recommended: gavage exposure (dietary TRV available)
Pesticides	Endosulfan	technical endosulfan	3.0		Dalsenter et al. 1999	reproduction	Rat	gavage											4 wks	fertility, litter size, offspring survival, sex, development		not recommended: gavage exposure (dietary TRV available)
Pesticides	Endosulfan	technical endosulfan	0.65	3.3	Hack et al. 1995	growth	Rat	food											104 wks			
Pesticides	Endosulfan	technical endosulfan	3.5		Hack et al. 1995	mortality	Rat	food											104 wks		implied statistics- "mortality rate unaffected"	
Pesticides	Endosulfan	technical endosulfan	5.0		Dikshith et al. 1984	growth, reproduction	Rat	gavage											30 d	body weight; fertility, pup body weight, survival, number	calculated TRV in Sample (1996): NOAEL- 0.15	not recommended: gavage exposure (dietary TRV available)
Pesticides	Endosulfan	technical grade endosulfan		5.0	Gupta et al. 1978	reproduction	Rat	gavage											day 6-14 of gestation	fetal mortality and resorption	statistically significant effects observed until day 21 of gestation	not recommended: gavage exposure (dietary TRV available)
Pesticides	Endosulfan	technical endosulfan	10		Singh and Pandey 1990	growth	Rat	gavage											15 or 30 d	body weight		not recommended: gavage exposure (dietary TRV available)
Pesticides	Endosulfan		10		Sinha et al. 1997	mortality, growth	Rat	oral intubation											90 d			not recommended: intubation exposure (dietary TRV available)
Pesticides	Endosulfan	technical endosulfan	28		Gupta and Chandra 1977	mortality, growth	Rat	gavage				0.181			5				15 d		no statistics for mortality- 0% mortality; units on dose uncertain (unclear if body weight normalized); for growth, units on dose uncertain (unclear if body weight normalized)	not recommended: gavage exposure (dietary TRV available)
Pesticides	Endosulfan	technical endosulfan		62	Gupta and Chandra 1977	mortality, growth	Rat	gavage				0.161					10		15 d		no statistics for mortality- 0% mortality; units on dose uncertain (unclear if body weight normalized); for growth, units on dose uncertain (unclear if body weight normalized)	not recommended: gavage exposure (dietary TRV available)
Pesticides	Endrin		0.18		Treon et al. 1955	mortality	Dogs	food											1-18 mos		no statistics, limited sample size, inconsistencies in treatments	
Pesticides	Endrin		0.19		Treon et al. 1955	growth	Dogs	food											1-18 mos		no statistics, limited sample size, inconsistencies in treatments	
Pesticides	**Endrin**			**0.92**	**Good and Ware 1969**	**mortality, reproduction**	**Swiss mouse**	**food**	**0.006**	**W**	**1**	**0.03**	**A**	**10%**			**5**	**5.6**	**120 days**	**adult mortality, litter size, number of young/day**		**Selected TRVs: lowest LOAEL available that meets acceptability criteria; no NOAEL available from study**
Pesticides	Endrin		1.7		Morris 1968	reproduction	Deer mouse	food	0.012	W		0.03	A		4.37				68 days over 7 mos	litter mortality, 3 weaned, breeding pair availability	no statistics except number weaned, intermittent feeding periods	
Pesticides	Endrin		0.97	1.7	Morris 1968	mortality	Deer mouse	food	0.012	W		0.03	A		2.42		4.37		68 days over 7 mos		no statistics except number weaned, intermittent feeding periods	
Pesticides	Endrin		0.40	2.0	Treon et al. 1955	mortality, growth	Carworth rat	food	0.028	W	1	0.35	A	10%	5	5.56	25	27.8	106 wks	female mortality; male body weight		
Pesticides	Endrin	technical grade endrin		3.0	Walsh and Fink 1972	mortality	CF-1 mouse	injection											single injection, effects observed for 24 hrs	study measured time to death (LT50); LC50 =2.3 mg/kg; mortality observed at all doses administered	no control	not recommended: injection study

Table 7. TSVs for mammal diet

Chemical Group	Chemical	Chemical Form	NOAEL (mg/kg bw/d)	LOAEL (mg/kg bw/d)	Source	Endpoint	Test Species	Exposure Mode	FI (kg dw or L/day)	Wet or Dry?	FI Default?	Body Weight (kg)	BW Default?	% Moisture	NEC wet (ppm)	NEC dry (ppm)	LEC wet (ppm)	LEC dry (ppm)	Exposure Duration	Effect Endpoint	Notes	Rationale
Pesticides	**beta-hexachloro cyclohexane (beta-BHC)**		**5.7**		**Van Velsen et al. 1986**	**mortality, growth**	**Wistar rat**	**food**	**0.014**	**W**	**1**	**0.12**		**10%**	**50**	**55.556**			**13 wks**	**body weight, mortality**	**no statistics for mortality -0% mortality; mortality assumed when rat were comatose**	**Selected TRVs: only NOAEL below selected LOAEL that meets acceptability criteria**
Pesticides	**beta-hexachloro cyclohexane (beta-BHC)**			**31**	**Van Velsen et al. 1986**	**mortality, growth**	**Wistar rat**	**food**	**0.012**	**W**	**1**	**0.092**		**10%**			**250**	**275.3**	**13 wks**	**body weight, 50% mortality**	**no statistics for mortality -50% mortality; mortality assumed when rat were comatose**	**Selected TRVs: only LOAEL available that meets acceptability criteria**
Pesticides	beta-hexachloro cyclohexane (beta-BHC)		64		Srinivasan et al. 1991	growth	Wistar rat	food	0.028	W	1	0.35	A	10%	800	888.89			2 wks	body weight		
Pesticides	gamma-Hexachlorocyclohexane (gamma-BHC)	gamma HCH	0.80		Seiler et al. 1994	reproduction	NZ white rabbit	gavage											12-15wks; 3/wk	fertilization rate, implant, embryo loss		
Pesticides	gamma-Hexachlorocyclohexane (gamma-BHC)	gamma HCH	1.0		Dalsenter et al. 1997b	survival, growth	Rat	gavage											6 days lactation	maternal survival; maternal growth	statistical methods unclear	
Pesticides	**gamma-Hexachlorocyclohexane (gamma-BHC)**	**gamma HCH**		**3.75**	**Sircar & Lahiri, (1989)**	**growth, reproduction**	**rat**	**intragastric gavage**				**0.024**							**5 days (14-19 days of gestation)**	**reduced pup weight**	**Study also identified statistically significant impacts on reproductive endpoint (absence of implantation site, resorption of fetuses, pup mortality) however growth impacts (to pups) occurred at a lower dose. Effects on body weight in pups were reported from as low as 0.09 mg/animal/day in pregnant mother administered lindane during late stages of pregnancy. LOAEL calculated as reported concentartion of 0.09 mg/animal divided by average body weight (0.024 kg)**	**Selected TRVs: Lowest LOAEL that meets acceptability criteria; no NOAEL available from study**
Pesticides	gamma-Hexachlorocyclohexane (gamma-BHC)	gamma HCH	6.1		Palmer et al. 1978	mortality, growth, reproduction	CD strain rat	food	0.021	W		0.35	A	10%	103				3 generations	adult mortality, body weight, pregnancy rate, gestation period	no statistics for mortality- deaths considered unrelated to treatment	
Pesticides	gamma-Hexachlorocyclohexane (gamma-BHC)	gamma HCH	9.3		Rivett et al. 1978	mortality, growth	Beagle dog	food											32 wks		no statistical methods	
Pesticides	gamma-Hexachlorocyclohexane (gamma-BHC)	gamma HCH	10		Rivera et al. 1990	growth	Wistar rat	intragastric gavage											7 days 1st or 2nd wk postnatal	body weight until age 29 days	only one dose used; dose given 5 times per week, no clear adverse effect on growth	
Pesticides	gamma-Hexachlorocyclohexane (gamma-BHC)	gamma HCH		10	Rivera et al. 1990	behavior	Wistar rat	intragastric gavage											7 days 1st or 2nd wk postnatal	neuromotor reflexes as measured by decreases in righting response on day 4, 5, and 6	only one dose used; dose given 5 times per week	not recommended: not direct measure of growth, survival, or reproduction
Pesticides	gamma-Hexachlorocyclohexane (gamma-BHC)	gamma HCH		10	Rivera et al. 1998	behavior	Wistar rat	intragastric gavage											single dose (10 mg/kg) or I wk (20 mg/kg)	altered behavior at 20 mg/kg- improved acquisition of passive avoidance task but prolonged latency, decreased motor activity; altered behavior at 10 mg/kg- improved acquisition of passive avoidance task, increased motor activity	altered behavior not clearly demonstrated to be an adverse effect	not recommended: not direct measure of growth, survival, or reproduction
Pesticides	gamma-Hexachlorocyclohexane (gamma-BHC)	gamma HCH	30		Dalsenter et al. 1997a	reproduction	Wistar rat	gavage											singe dose at day 15 post-conception	litter size, offspring survival, offspring body weight, fertility	no effect on reproductive success; effect on sexual behavior (appeared to be decreased libido) and effect on sperm count was observed at 30 mg/kg; however, these effects did not affect reproduction	

Table 7. TSVs for mammal diet

Chemical Group	Chemical	Chemical Form	NOAEL (mg/kg bw/d)	LOAEL (mg/kg bw/d)	Source	Endpoint	Test Species	Exposure Mode	FI (kg dw or L/day)	Wet or Dry?	FI Default?	Body Weight (kg)	BW Default?	% Moisture	NEC wet (ppm)	NEC dry (ppm)	LEC wet (ppm)	LEC dry (ppm)	Exposure Duration	Effect Endpoint	Notes	Rationale
Pesticides	gamma-Hexachlorocyclohexane (gamma-BHC)	gamma HCH	25	33	Uphouse 1987	behavior	Fischer rat	injection (ip)											single injection	sexual behavior (lordosis position)	single injection (4 dose levels administered) in morning; effects observed in evening; endpoint dose does not directly measure reproductive success	not recommended: not direct measure of growth, survival, or reproduction
Pesticides	gamma-Hexachlorocyclohexane (gamma-BHC)		64		Srinivasan et al. 1991	growth	Wistar rat	food	0.028	W	1	0.35	A	10%	800	888.89			2 wks			
Pesticides	**Heptachlor**	**tech heptachlor**	**1.0**		**Crum et al. 1993**	**mortality, growth**	**mink**	**food**	**0.17**	**W**		**1.2**		**30%**	**5.15**				**181 days**	**adult mortality, female body weight, kit body weight**		**Selected TRVs: highest NOAEL below selected LOAEL available that meets acceptability criteria (based on mink)**
Pesticides	**Heptachlor**	**tech heptachlor**		**1.8**	**Crum et al. 1993**	**mortality, growth, reproduction**	**mink**	**food**	**0.16**	**W**		**0.94**		**30%**			**11.98**		**181 days**	**adult mortality, female body weight, kit body weight**		**Selected TRVs: lowest LOAEL available that meets acceptability criteria**
Pesticides	Heptachlor	99.8% pure	2.64		Shain et al. 1977	growth	Sprague-Dawley rat	food	0.055	D		0.419				20			90 days	body weight		
Pesticides	Heptachlor	tech heptachlor	3.1		Aulerich et al. 1990	growth	mink	food	0.24	W		1.9		62.6%	25				28 days	body weight	calc NOAEL= 3.11 (from Crum et al. 1993)	
Pesticides	Heptachlor	tech heptachlor	5.7		Aulerich et al. 1990	mortality	mink	food	0.19	W		1.7		62.6%	50				28 days		statistics for mortality not presented	
Pesticides	Heptachlor	tech heptachlor		5.7	Aulerich et al. 1990	growth	mink	food	0.19	W		1.7		62.6%			50		28 days	body weight		
Pesticides	Heptachlor	tech heptachlor		6.2	Aulerich et al. 1990	mortality	mink	food	0.1	W		1.6		62.6%			100		28 days		statistics for mortality not presented	
Pesticides	Heptachlor	99% pure	5.1	6.8	Narotsky et al. 1995	reproduction	rat, Fisher 344	gavage											gestation days 6-15	reduced pup weight		not recommended: gavage exposure (dietary TRV available)
Pesticides	**Hexachlorobenzene**			**0.13**	**Bleavins et al. 1984**	**reproduction**	**Ferret**	**food**	**0.18**	**W**	**3**	**1.36**	**B**	**28.6%**			**1**	**1.4**	**332 days**	**birth weight**		**Selected TRVs: lowest LOAEL available that meets acceptability criteria**
Pesticides	**Hexachlorobenzene**			**0.13**	**Bleavins et al. 1984**	**reproduction**	**mink**	**food**	**0.18**	**W**	**3**	**1.34**	**B**	**28.6%**			**1**	**1.4**	**331 days**	**birth weight**	**statistically significant effects at LOAEL**	**Selected TRVs: lowest LOAEL available that meets acceptability criteria**
Pesticides	Hexachlorobenzene			0.80	Grant et al. 1977	reproduction	Sprague-Dawley rat	food	0.028	W	1	0.35	A	10%			10	11.111111	4 generation	weanling weight		
Pesticides	Hexachlorobenzene		1.28		Lilienthal et al. 1996	reproduction	Wistar rat	food											>120 d	number of pups and weights		
Pesticides	Hexachlorobenzene	HCB	0.64	1.28	Lilienthal et al. 1996	behavior	Wistar rat	food											>120 d	operant behavior in adults	decreased post-reinforcement pause, but decreased efficiency of performance	not recommended: not direct measure of growth, survival, or reproduction
Pesticides	Hexachlorobenzene		3.2		Arnold et al. 1985	mortality, growth	Rat	food	0.028	W	1	0.35	A	10%	40	44.444			2 generation			
Pesticides	Hexachlorobenzene		0.64	3.2	Arnold et al. 1985	reproduction	Rat	food	0.028	W	1	0.35	A	10%	8.0	8.9	40	44.444444	2 generation	decreased viability		
Pesticides	Hexachlorobenzene			4.8	Kitchin et al. 1982	reproduction	Sprague-Dawley rat	food	0.028	W	1	0.35	A	10%			60	66.666667	~200 d	pup survival		
Pesticides	Hexachlorobenzene		11		Kitchin et al. 1982	mortality, growth	Sprague-Dawley rat	food	0.028	W	1	0.35	A	10%	140	155.6			> 100 d			
Pesticides	Hexachlorobenzene	HCB	1.2	12	Gralla et al. 1977	mortality, growth	Beagle dog	oral capsule				8.3							1 year		no statistics	
Pesticides	Hexachlorobenzene		3.2	16	Bleavins et al. 1984	mortality	Ferret	food	0.18	W	3	1.36	B	28.6%	25	35	125	175.1	332 days			
Pesticides	Hexachlorobenzene		3.3	16	Bleavins et al. 1984	mortality	mink	food	0.18	W	3	1.34	B	28.6%	25	35	125	175.1	331 days		no statistics; 0% mortality at NOAEL	
Pesticides	Hexachlorobenzene		13	26	Grant et al. 1977	mortality	Sprague-Dawley rat	food	0.028	W	1	0.35	A	10%	160	177.78	320	355.55556	4 generation		no statistics- 7 deaths at 320 ppm (F0 and F1); 1 death at 160 ppm (F1)	
Pesticides	Hexachlorobenzene		5.0	50	Den Tonkelaar et al. 1978	mortality, growth	Pig	food											90 d	Unknown affect of adding water to dosed food; normalized dose provided	no statistics; assumed dose is body weight-normalized	
Pesticides	Hexachlorobenzene			1000	Alvarez et al. 2000	reproduction	Rat	oral capsule											30 d	estrus cycle time; number of ova		
Pesticides	Methoxychlor			5.0	Chapin et al. 1997	growth	rat	gavage											gestation day 17-PND 7	dam body weight	dose units assumed body weight-normalized	not recommended: gavage exposure (dietary TRV available)
Pesticides	Methoxychlor			7.1	Gray et al. 1989	growth	Long Evans rat	gavage											weaning to 85 days	male body weight	dose frequency =2 times per week	not recommended: gavage exposure (dietary TRV available)

Table 7. TSVs for mammal diet

Chemical Group	Chemical	Chemical Form	NOAEL (mg/kg bw/d)	LOAEL (mg/kg bw/d)	Source	Endpoint	Test Species	Exposure Mode	FI (kg dw or L/day)	Wet or Dry?	FI Default?	Body Weight (kg)	BW Default?	% Moisture	NEC wet (ppm)	NEC dry (ppm)	LEC wet (ppm)	LEC dry (ppm)	Exposure Duration	Effect Endpoint	Notes	Rationale
Pesticides	Methoxychlor		7.1	14	Gray et al. 1989	reproduction	Long Evans rat	gavage											weaning to 85 days	female fecundity	dose frequency =2 times per week	not recommended: gavage exposure (dietary TRV available)
Pesticides	Methoxychlor			33	Amstislavsky et al. 1999	reproduction	mouse	injection (sc)											gestation day 5-7	pregnancy rate, number of offspring, sexual arousal and motivation	only one dose used, pregnancy rate = 40% (80-100% in control); decreased number of offspring (statistically significant)	not recommended: injection study
Pesticides	Methoxychlor		25	50	Gray et al. 1988	growth	rat	gavage											~ 11 mos (weaning-lactation)	male body weight at necropsy	statistics not described, control data not presented; not enough detail; exposure route unclear	not recommended: gavage exposure (dietary TRV available)
Pesticides	Methoxychlor			50	Chapin et al. 1997	reproduction	rat	gavage											parents thru gestation and pnd 7, pups pnd 7-42	offspring fertility	dose units assumed body weight-normalized	not recommended: gavage exposure (dietary TRV available)
Pesticides	**Methoxychlor**	**methoxychlor**		**56**	**You et al. 2002**	**growth, reproduction**	**Sprague-Dawley rat**	**food**	**0.016**	**W**		**0.23**					**800**		**gestation day 0-pnd 22 (adult), pnd 28-100 young**	**body weight; offspring growth rate, litter size, sex development of offspring**	**statistically significant effects at LOAEL**	**Selected TRV: lowest LOAEL available that meets acceptability criteria; no NOAEL available from study**
Pesticides	Methoxychlor		14 - 71	68 - 357	Swartz and Eroschenko 1998	reproduction	mouse	injection (ip)											14 days, prior to pregnancy	number of resorptions/ litter	LOAEL and NOAEL are range of mg/kg bw dose reported in study; injections were daily for 14 days	not recommended: injection study
Pesticides	Methoxychlor	tech methoxychlor		80	Harris et al. 1974	reproduction	Sprague-Dawley rat	food	0.028	W	1	0.35	A	10%			1000	1111.1111	parents treated, weanlings treated 8 wks thru mating	% mated, % littered		
Pesticides	Methoxychlor		17	86	Masutomi et al. 2003	growth, reproduction	Sprague-Dawley rat	food	0.028	W	1	0.35	A		216	240	1080	1200	gestation day 15, postnatal day 10	maternal body weight, offspring body weight, delayed onset of puberty	offspring and maternal body weight was significantly lower during experiment but was recovered by end of experiment	
Pesticides	Methoxychlor		50	100	Gray et al. 1988	reproduction	rat	gavage											~ 11 mos (weaning-lactation)	litter size, fertility	statistics not described, control data not presented; not enough detail; other reproductive endpoints (less relevant); exposure route unclear	not recommended: gavage exposure (dietary TRV available)
Pesticides	Methoxychlor			100	Bal 1984	reproduction	Wistar rat	gavage											14 days	infertile females, inhibition of spermatogenesis and folliculogenesis	impairment of reproductive success	not recommended: gavage exposure (dietary TRV available)
Pesticides	Methoxychlor	tech methoxychlor		168	Harris et al. 1974	reproduction	Sprague-Dawley rat	food	0.016	W		0.24					2500		pre-mating thru weaning	% mated, litter production and size		
Pesticides	Methoxychlor		100	200	Cummings and Gray 1989	reproduction	Holtzman rat	gavage											gestation day 1-8	number of implantations		not recommended: gavage exposure (dietary TRV available)
Pesticides	Methoxychlor	technical grade		206	Shain et al. 1977	growth	Sprague-Dawley rat	food	0.055	D		0.538						2000	90 days	body weight		
Pesticides	Methoxychlor	tech methoxychlor	167	250	Swartz and Corkern 1992	reproduction	CD-1 mouse	gavage				0.03	A		5		7.5		gestation day 6-15	fetal mortality		not recommended: gavage exposure (dietary TRV available)
Pesticides	Methoxychlor		500		Cummings and Gray 1989	growth	Holtzman rat	gavage											gestation day 1-8	body weight gain		not recommended: gavage exposure (dietary TRV available)
Pesticides	**trans-Nonachlor**	**trans-nonachlor**	**2.5**	**25**	**Bondy et al. 2000**	**growth, survival**	**rat**	**gavage**											**28 days**	**body weight- female**	**statistically significant effects at LOAEL; no statistics for mortality**	**Selected TRVs: only LOAEL and NOAEL available that meet acceptability criteria**
Pesticides	Octachlorostyrene	Octachloro-styrene	3.5		Chu et al. 1986	survival, growth	rat	food	0.026	D		0.3765				50			12 months	mortality, increased growth	mortality observed reported to not be related to dose exposure; no significant adverse effect on growth observed (body weight actually significantly increased at some doses for males, including the highest dose); calculated NOAEL is similar to the reported estimated dose - 3.1 mg/kg bw/day (male) and 4.4 mg/kg bw/day (female) and 3.8 mg/kg bw/day (average)	
Pesticides	**Octachlorostyrene**	**Octachloro-styrene**	**53**		**Chu et al. 1982**	**survival, growth**	**rat**	**food**	**0.022**	**D**		**0.206**				**500**			**28 days**	**no female mortality observed, no body weight effect**	**calculated NOAEL is higher than reported estimated dose which was cacluated based on final body weight rather than average (intial + final/2) body weight; effects on histological and biochemical parameters were observed but are not direct measures of growth, survival, or reproduction**	**Selected TRV: NOAEL is highest NOAEL available that meets acceptability criteria (no LOAEL available that meets acceptability criteria)**

Table 7. TSVs for mammal diet

Chemical Group	Chemical	Chemical Form	NOAEL (mg/kg bw/d)	LOAEL (mg/kg bw/d)	Source	Endpoint	Test Species	Exposure Mode	FI (kg dw or L/day)	Wet or Dry?	FI Default?	Body Weight (kg)	BW Default?	% Moisture	NEC wet (ppm)	NEC dry (ppm)	LEC wet (ppm)	LEC dry (ppm)	Exposure Duration	Effect Endpoint	Notes	Rationale
Pesticides	Octachlorostyrene	Octachloro-styrene	3,710		Chu et al. 1982	survival	rat	gavage											single exposure dose	no mortality observed	effects observed 14 days following single gavage exposure; effects on histological and biochemical parameters were observed but are not direct measures of growth, survival, or reproduction	not recommended: exposure based on gavage (dietary study available)

Shaded rows indicate studies and TRVs that are not recommended becauase TRVs do not meet acceptability criteria

D = dry weight basis
DWI = drinking water ingestion rate
FI = food ingestion rate
LEC = Low effect concentration in vehicle
NC = TRV not calculated in database because more preferable studies were available for TRV selection
NEC = No effect concentration in vehicle
W = wet weight basis

Default ingestion rates:
1 - EPA 1993, laboratory mammals: FI (kg/d ww) = 0.056*((bw (kg))^0.6611)
2 - Calder and Braun 1983, all mammals = DWI (L/d) = 0.099*((bw (kg))^0.9)
3 - Bleavins and Aulerich 1981
Default body weight:
A - EPA 1993
B - Bleavins and Aulerich 1981

Table A4-1a. Comparison of non-COPEC sediment detection limits (RM 0-13) to sediment TSVs

		Estuarine_TSV					Freshwater_TSV				
COI Group	COI	N	# NDs	# ND Exceed	% DL Exceed	Max EF	N	# NDs	# ND Exceeds	% DL Exceeds	Max EF
Herbicides	2,4-D	217	215	9	4%	**1.5**	194	192	2	1%	**1.5**
OC Pesticides	delta-BHC	379	235	0	0%	0.085	332	221	0	0%	0.085
OC Pesticides	Endosulfan sulfate	379	173	0	0%	0.035	332	151	0	0%	0.035
OC Pesticides	Endrin aldehyde	379	364	0	0%	0.011	332	311	0	0%	0.011
VOCs	1,2-Dichlorobenzen	161	117	4	3%	**12**	136	121	4	3%	**5.0**
VOCs	1,3-Dichlorobenzen	160	132	4	3%	**5.0**	135	127	4	3%	**5.0**
VOCs	2-Butanone	103	50	0	0%	0.057	93	49	0	0%	0.057
VOCs	Benzene	161	154	9	6%	**15**	136	130	9	7%	**15**
VOCs	Carbon disulfide	161	68	3	4%	**6.3**	136	83	3	4%	**6.3**
VOCs	Chlorobenzene	161	138	0	0%	0.52	136	127	0	0%	0.75
VOCs	Chloroform	161	160	4	3%	**7.5**	136	135	4	3%	**7.5**
VOCs	Cyclohexane	161	160	3	2%	**2.9**	136	135	3	2%	**2.9**
VOCs	Ethylbenzene	161	152	68	45%	**38**	136	132	3	2%	**5.0**
VOCs	Isopropylbenzene	na	na	na	na	na	136	131	3	2%	**2.7**
VOCs	Methyl tert-butyl et	161	124	0	0%	0.0015	136	117	0	0%	0.0015
VOCs	Methylene chloride	162	161	69	43%	**37**	137	134	46	34%	**37**
VOCs	o-Xylene	161	152	66	43%	**38**	136	127	2	2%	**1.7**
VOCs	Styrene	161	160	0	0%	0.75	136	135	0	0%	0.75
VOCs	Tetrachloroethylene	161	107	0	0%	0.15	136	96	0	0%	0.15
VOCs	Trichloroethene	161	124	25	20%	**19**	136	108	20	19%	**19**

Table A4-2a. Comparison of non-COPEC surface water detection limits (RM 0-13) to estuarine TSVs

		Marine_TSV				
COI Group	COI	N	# NDs	# DL Exceeds	% DL Exceeds	Max EF
Metals	Antimony (total)	200	108	0	0	0.033
Metals	Beryllium (total)	200	104	0	0	0.03
Metals	Cobalt (total)	200	0	0		
Metals	Thallium (total)	200	145	0	0	0.025
PAHs	1-Methylnaphthalene	200	30	0	0	0.0048
PAHs	2-Methylnaphthalene	200	56	0	0	0.000061
PAHs	Acenaphthene	200	0	0		
PAHs	Acenaphthylene	200	5	0	0	2.1E-06
PAHs	Benzo(b)fluoranthene	200	11	0	0	0.0034
PAHs	Benzo(g,h,i)perylene	200	13	0	0	0.0013
PAHs	Fluorene	200	70	0	0	0.0033
PAHs	Indeno(1,2,3-cd)pyrene	200	16	0	0	0.0032
PAHs	Naphthalene	200	51	0	0	0.049
PAHs	Phenanthrene	200	12	0	0	0.05
SVOCs	1,1'-Biphenyl	167	164	0	0	0.079
SVOCs	2,4-Dimethylphenol	167	164	0	0	0.011
SVOCs	2,4-Dinitrotoluene	167	166	0	0	0.025
SVOCs	2-Methylphenol	167	165	0	0	0.085
SVOCs	4-Bromophenyl-phenylether	167	166	0	0	0.73
SVOCs	Bis-(2-chloroethyl)ether	167	166	0	0	0.00012
SVOCs	Dibenzofuran	167	164	0	0	0.3
SVOCs	Diethylphthalate	169	144	0	0	0.01
SVOCs	Di-n-butylphthalate	167	157	0	0	0.11
SVOCs	n-Nitrosodiphenylamine	167	166	0	0	0.0052
OC	2,4'-DDD	200	10	0	0	0.036
OC	2,4'-DDT	200	108	0	0	0.032
OC	4,4'-DDD	200	3	0	0	0.17
OC	Aldrin	200	138	0	0	0.00032
OC	alpha-BHC	200	10	0	0	0.00004
OC	beta-BHC	200	40	0	0	0.00081
OC	delta-BHC	200	182	0	0	0.00019
OC	Endosulfan I	200	185	0	0	0.26
OC	Endosulfan II	200	162	0	0	0.21
OC	Endosulfan sulfate	200	49	0	0	0.0042
OC	Endrin	200	178	0	0	0.18
OC	Endrin aldehyde	200	197	0	0	0.0028
OC	gamma-BHC (Lindane)	200	9	0	0	0.0024
OC	Heptachlor	200	119	0	0	0.11
OC	Heptachlor epoxide	200	9	0	0	0.047
OC	Methoxychlor	200	161	0	0	0.1
VOCs	1,1,1-Trichloroethane	200	198	0	0	0.045
VOCs	1,1-Dichloroethane	200	199	0	0	0.011
VOCs	1,2,4-Trichlorobenzene	200	190	0	0	0.37
VOCs	1,2-Dichlorobenzene	200	192	0	0	0.012
VOCs	1,4-Dichlorobenzene	200	196	0	0	0.053
VOCs	Acetone	200	187	0	0	0.013
VOCs	Benzene	200	195	0	0	0.0045
VOCs	Carbon disulfide	200	198	0	0	0.54
VOCs	Chlorobenzene	200	147	0	0	0.02
VOCs	Chloroform	200	110	0	0	0.28
VOCs	Ethylbenzene	200	183	0	0	0.02
VOCs	m, p-Xylene	200	157	0	0	0.038
VOCs	o-Xylene	200	198	0	0	0.038
VOCs	Tetrachloroethylene	200	33	0	0	0.011
VOCs	Toluene	200	198	0	0	0.0023
VOCs	Trichloroethene	200	38	0	0	0.024
VOCs	Vinyl chloride	200	196	0	0	0.00054

Table A4-2b. Comparison of non-COPEC surface water detection limits (RM 4-17.4) to freshwater TSVs

		FW_TSV				
COI Group	COI	N	# NDs	# DL Exceeds	% DL Exceeds	Max EF
Metals	Antimony (total)	98	24	0	0	0.033
Metals	Beryllium (total)	98	39	0	0	0.03
Metals	Cobalt (total)	98	0	0		
Metals	Thallium (total)	98	75	0	0	0.025
PAHs	1-Methylnaphthalene	98	2	0	0	0.0048
PAHs	2-Methylnaphthalene	98	9	0	0	0.000061
PAHs	Acenaphthene	98	0	0		
PAHs	Acenaphthylene	98	1	0	0	0.0000021
PAHs	Benzo(b)fluoranthene	98	0	0		
PAHs	Benzo(g,h,i)perylene	98	0	0		
PAHs	Fluorene	98	19	0	0	0.0033
PAHs	Indeno(1,2,3-cd)pyrene	98	0	0		
PAHs	Naphthalene	98	10	0	0	0.054
PAHs	Phenanthrene	98	0	0		
SVOCs	1,1'-Biphenyl	90	89	0	0	0.079
SVOCs	2,4-Dimethylphenol	90	87	0	0	0.011
SVOCs	2,4-Dinitrotoluene	90	90	0	0	0.025
SVOCs	2-Methylphenol	90	88	0	0	0.085
SVOCs	4-Bromophenyl-phenylether	90	90	0	0	0.73
SVOCs	Bis-(2-chloroethyl)ether	90	90	0	0	0.00012
SVOCs	Dibenzofuran	90	88	0	0	0.3
SVOCs	Diethylphthalate	90	80	0	0	0.01
SVOCs	Di-n-butylphthalate	90	84	0	0	0.11
SVOCs	n-Nitrosodiphenylamine	90	90	0	0	0.0052
OC Pesticides	2,4'-DDD	98	1	0	0	0.036
OC Pesticides	2,4'-DDT	98	34	0	0	0.032
OC Pesticides	4,4'-DDD	98	1	0	0	0.17
OC Pesticides	Aldrin	98	52	0	0	0.024
OC Pesticides	alpha-BHC	98	8	0	0	0.00004
OC Pesticides	beta-BHC	98	28	0	0	0.00081
OC Pesticides	delta-BHC	98	89	0	0	0.00019
OC Pesticides	Endosulfan I	98	89	0	0	0.14
OC Pesticides	Endosulfan II	98	67	0	0	0.14
OC Pesticides	Endosulfan sulfate	98	14	0	0	0.0042
OC Pesticides	Endrin	98	82	0	0	0.012
OC Pesticides	Endrin aldehyde	98	96	0	0	0.0028
OC Pesticides	gamma-BHC (Lindane)	98	3	0	0	0.039
OC Pesticides	Heptachlor	98	45	0	0	0.01
OC Pesticides	Heptachlor epoxide	98	0	0		
OC Pesticides	Methoxychlor	98	74	0	0	0.1
VOCs	1,1,1-Trichloroethane	98	96	0	0	0.045
VOCs	1,1-Dichloroethane	98	97	0	0	0.011
VOCs	1,2,4-Trichlorobenzene	98	98	0	0	0.083
VOCs	1,2-Dichlorobenzene	98	90	0	0	0.71
VOCs	1,4-Dichlorobenzene	98	98	0	0	0.053
VOCs	Acetone	98	87	0	0	0.013
VOCs	Benzene	98	96	0	0	0.0044
VOCs	Carbon disulfide	98	96	0	0	0.54
VOCs	Chlorobenzene	98	77	0	0	0.38
VOCs	Chloroform	98	57	0	0	0.28
VOCs	Ethylbenzene	98	85	0	0	0.068
VOCs	m, p-Xylene	98	65	0	0	0.038
VOCs	o-Xylene	98	96	0	0	0.038
VOCs	Tetrachloroethylene	98	12	0	0	0.011
VOCs	Toluene	98	96	0	0	0.25
VOCs	Trichloroethene	98	13	0	0	0.024
VOCs	Vinyl chloride	98	94	0	0	0.00054

Table A4-3. Comparison of non-COPEC invetebrate tissue detection limits to NOAEL TSVs

			Invert_NOAEL_TSV				
COI Group	COI	Species	N	# NDs	# DL Exceeds	% DL Exceed	Max EF
Butyltin	Tributyltin	BlueCrab	24	0	0	na	na
Butyltin	Tributyltin	MusselEst	3	0	0	na	na
Butyltin	Tributyltin	MusselFW	5	1	0	0	0.0045
Butyltin	Tributyltin	WormEst	5	4	0	0	0.015
Butyltin	Tributyltin	WormFW	9	4	0	0	0.0045
Metals	Thallium	BlueCrab	24	20	0	0	0.0028
Metals	Thallium	MusselEst	3	3	0	0	0.0023
Metals	Thallium	MusselFW	5	4	0	0	0.0043
Metals	Thallium	WormEst	5	3	0	0	0.00064
Metals	Thallium	WormFW	9	0	0	na	na
OC Pesticides	Aldrin	BlueCrab	24	19	0	0	0.000082
OC Pesticides	Aldrin	MusselEst	3	1	0	0	0.000027
OC Pesticides	Aldrin	MusselFW	5	2	0	0	0.000019
OC Pesticides	Aldrin	WormEst	5	5	0	0	0.000023
OC Pesticides	Aldrin	WormFW	13	5	0	0	0.00016
OC Pesticides	Endrin	BlueCrab	24	23	0	0	0.92
OC Pesticides	Endrin	MusselEst	3	3	0	0	0.13
OC Pesticides	Endrin	MusselFW	5	5	0	0	0.17
OC Pesticides	Endrin	WormEst	5	5	0	0	0.13
OC Pesticides	Endrin	WormFW	13	13	0	0	0.22
OC Pesticides	gamma-BHC (Lindane)	BlueCrab	24	19	0	0	0.3
OC Pesticides	gamma-BHC (Lindane)	MusselEst	3	3	0	0	0.2
OC Pesticides	gamma-BHC (Lindane)	MusselFW	5	5	0	0	0.18
OC Pesticides	gamma-BHC (Lindane)	WormEst	5	5	0	0	0.12
OC Pesticides	gamma-BHC (Lindane)	WormFW	13	13	0	0	0.21
OC Pesticides	Heptachlor	BlueCrab	24	19	0	0	0.012
OC Pesticides	Heptachlor	MusselEst	3	3	0	0	0.007
OC Pesticides	Heptachlor	MusselFW	5	4	0	0	0.01
OC Pesticides	Heptachlor	WormEst	5	5	0	0	0.0011
OC Pesticides	Heptachlor	WormFW	13	12	0	0	0.0015
OC Pesticides	Hexachlorobenzene	BlueCrab	24	0	0	na	na
OC Pesticides	Hexachlorobenzene	MusselEst	3	3	0	0	0.000003
OC Pesticides	Hexachlorobenzene	MusselFW	5	0	0	na	na
OC Pesticides	Hexachlorobenzene	WormEst	5	0	0	na	na
OC Pesticides	Hexachlorobenzene	WormFW	13	1	0	0	0.000013
OC Pesticides	Methoxychlor	BlueCrab	24	24	0	0	0.083
OC Pesticides	Methoxychlor	MusselEst	3	3	0	0	0.035
OC Pesticides	Methoxychlor	MusselFW	5	5	0	0	0.028
OC Pesticides	Methoxychlor	WormEst	5	5	0	0	0.043
OC Pesticides	Methoxychlor	WormFW	13	10	0	0	0.1
SVOCs	Bis-(2-ethylhexyl)phthalate	BlueCrab	24	24	0	0	0.001
SVOCs	Bis-(2-ethylhexyl)phthalate	MusselEst	3	3	0	0	0.00047
SVOCs	Bis-(2-ethylhexyl)phthalate	MusselFW	5	4	0	0	0.00048
SVOCs	Bis-(2-ethylhexyl)phthalate	WormEst	5	5	0	0	0.001
SVOCs	Bis-(2-ethylhexyl)phthalate	WormFW	2	0	0	na	na

Table A4-4. Comparison of non-COPEC fish tissue detection limits to NOAEL TSVs

			Fish_NOAEL_TSV				
COI Group	COI	Species	N	# NDs	# DL Exceeds	% DL Exceeds	Max EF
Butyltin	Dibutyltin	American eel	21	14	0	0	0.00036
Butyltin	Dibutyltin	Brown bullhead	6	3	0	0	0.0036
Butyltin	Dibutyltin	Carp	12	9	0	0	0.0045
Butyltin	Dibutyltin	Channel catfish	11	9	0	0	0.00016
Butyltin	Dibutyltin	Largemouth bass	3	1	0	0	0.000091
Butyltin	Dibutyltin	Mummichog	18	0	0	na	na
Butyltin	Dibutyltin	Northern pike	1	0	0	na	na
Butyltin	Dibutyltin	Other forage fish	10	3	0	0	0.00018
Butyltin	Dibutyltin	Smallmouth bass	3	0	0	na	na
Butyltin	Dibutyltin	White catfish	19	0	0	na	na
Butyltin	Dibutyltin	White perch	22	7	0	0	0.00044
Butyltin	Dibutyltin	White sucker	5	0	0	na	na
Butyltin	Tributyltin	American eel	21	4	0	0	0.0084
Butyltin	Tributyltin	Brown bullhead	6	1	0	0	0.084
Butyltin	Tributyltin	Carp	12	3	0	0	0.1
Butyltin	Tributyltin	Channel catfish	11	0	0	na	na
Butyltin	Tributyltin	Largemouth bass	3	1	0	0	0.0021
Butyltin	Tributyltin	Mummichog	18	0	0	na	na
Butyltin	Tributyltin	Northern pike	1	0	0	na	na
Butyltin	Tributyltin	Other forage fish	10	2	0	0	0.0042
Butyltin	Tributyltin	Smallmouth bass	3	0	0	na	na
Butyltin	Tributyltin	White catfish	19	0	0	na	na
Butyltin	Tributyltin	White perch	22	0	0	na	na
Butyltin	Tributyltin	White sucker	5	0	0	na	na
OC Pesticides	Endrin	American eel	21	20	5	25	**2.6**
OC Pesticides	Endrin	Brown bullhead	6	6	0	0	0.7
OC Pesticides	Endrin	Carp	12	11	4	36	**3.5**
OC Pesticides	Endrin	Channel catfish	11	10	0	0	0.75
OC Pesticides	Endrin	Largemouth bass	3	3	0	0	0.67
OC Pesticides	Endrin	Mummichog	18	18	0	0	0.19
OC Pesticides	Endrin	Northern pike	1	1	0	0	0.8
OC Pesticides	Endrin	Other forage fish	10	9	0	0	0.6
OC Pesticides	Endrin	Smallmouth bass	3	3	0	0	0.37
OC Pesticides	Endrin	White catfish	19	18	1	5.6	**1.7**
OC Pesticides	Endrin	White perch	22	21	0	0	0.96
OC Pesticides	Endrin	White sucker	5	5	0	0	0.47
OC Pesticides	gamma-BHC (Lindane)	American eel	21	3	0	0	0.00024
OC Pesticides	gamma-BHC (Lindane)	Brown bullhead	6	3	0	0	0.00002
OC Pesticides	gamma-BHC (Lindane)	Carp	12	4	0	0	0.00018
OC Pesticides	gamma-BHC (Lindane)	Channel catfish	11	8	0	0	0.000061
OC Pesticides	gamma-BHC (Lindane)	Largemouth bass	3	3	0	0	0.000061
OC Pesticides	gamma-BHC (Lindane)	Mummichog	18	4	0	0	5.2E-06
OC Pesticides	gamma-BHC (Lindane)	Northern pike	1	1	0	0	0.000081
OC Pesticides	gamma-BHC (Lindane)	Other forage fish	10	8	0	0	0.000034
OC Pesticides	gamma-BHC (Lindane)	Smallmouth bass	3	3	0	0	0.000061
OC Pesticides	gamma-BHC (Lindane)	White catfish	19	8	0	0	0.00009
OC Pesticides	gamma-BHC (Lindane)	White perch	22	7	0	0	0.000085
OC Pesticides	gamma-BHC (Lindane)	White sucker	5	2	0	0	7.1E-06
OC Pesticides	Heptachlor	American eel	21	10	0	0	0.00055
OC Pesticides	Heptachlor	Brown bullhead	6	4	0	0	0.00058
OC Pesticides	Heptachlor	Carp	12	3	0	0	0.0019
OC Pesticides	Heptachlor	Channel catfish	11	3	0	0	0.00056
OC Pesticides	Heptachlor	Largemouth bass	3	0	0	na	na
OC Pesticides	Heptachlor	Mummichog	18	18	0	0	0.00019
OC Pesticides	Heptachlor	Northern pike	1	0	0	na	na
OC Pesticides	Heptachlor	Other forage fish	10	4	0	0	0.00039
OC Pesticides	Heptachlor	Smallmouth bass	3	0	0	na	na

Table A4-4. Comparison of non-COPEC fish tissue detection limits to NOAEL TSVs

			Fish_NOAEL_TSV				
COI Group	COI	Species	N	# NDs	# DL Exceeds	% DL Exceeds	Max EF
OC Pesticides	Heptachlor	White catfish	19	5	0	0	0.00049
OC Pesticides	Heptachlor	White perch	22	14	0	0	0.001
OC Pesticides	Heptachlor	White sucker	5	4	0	0	0.00059
OC Pesticides	Hexachlorobenzene	American eel	21	0	0	na	na
OC Pesticides	Hexachlorobenzene	Brown bullhead	6	1	0	0	0.000012
OC Pesticides	Hexachlorobenzene	Carp	12	1	0	0	6.2E-06
OC Pesticides	Hexachlorobenzene	Channel catfish	11	0	0	na	na
OC Pesticides	Hexachlorobenzene	Largemouth bass	3	0	0	na	na
OC Pesticides	Hexachlorobenzene	Mummichog	18	1	0	0	2E-07
OC Pesticides	Hexachlorobenzene	Northern pike	1	0	0	na	na
OC Pesticides	Hexachlorobenzene	Other forage fish	10	0	0	na	na
OC Pesticides	Hexachlorobenzene	Smallmouth bass	3	0	0	na	na
OC Pesticides	Hexachlorobenzene	White catfish	19	0	0	na	na
OC Pesticides	Hexachlorobenzene	White perch	22	1	0	0	0.000001
OC Pesticides	Hexachlorobenzene	White sucker	5	0	0	na	na
OC Pesticides	Methoxychlor	American eel	21	21	0	0	0.14
OC Pesticides	Methoxychlor	Brown bullhead	6	6	0	0	0.01
OC Pesticides	Methoxychlor	Carp	12	12	0	0	0.048
OC Pesticides	Methoxychlor	Channel catfish	11	11	0	0	0.078
OC Pesticides	Methoxychlor	Largemouth bass	3	3	0	0	0.02
OC Pesticides	Methoxychlor	Mummichog	18	18	0	0	0.02
OC Pesticides	Methoxychlor	Other forage fish	10	10	0	0	0.018
OC Pesticides	Methoxychlor	Smallmouth bass	3	3	0	0	0.016
OC Pesticides	Methoxychlor	White catfish	19	19	0	0	0.038
OC Pesticides	Methoxychlor	White perch	22	21	0	0	0.026
OC Pesticides	Methoxychlor	White sucker	5	5	0	0	0.006

Table A4-5. Comparison of detection limits of analytes never detected in sediment to TSVs

Analyte Group	Analyte	Units	Sediment < RM 13 (estuarine)			Sediment ≥ RM 4 (freshwater)			Sediment TSV (NJDEP 2009)	
			N	Min DL	Max DL	N	Min DL	Max DL	Estuarine	FW
SVOCs	2,2'-Oxybis(1-chloropropane)	ug/kg	379	126	11900	332	126	11900	na	na
SVOCs	2,4,5-Trichlorophenol	ug/kg	379	126	11900	332	126	11900	3	na
SVOCs	2,4,6-Trichlorophenol	ug/kg	379	126	11900	332	126	11900	6	208
SVOCs	2,4-Dichlorophenol	ug/kg	379	126	11900	332	126	11900	5	81.7
SVOCs	2,4-Dimethylphenol	ug/kg	379	210	23100	332	200	23100	na	304
SVOCs	2,4-Dinitrophenol	ug/kg	348	613	58000	314	613	58000	na	6.21
SVOCs	2-Chloronaphthalene	ug/kg	379	126	11900	332	126	11900	na	417
SVOCs	2-Chlorophenol	ug/kg	379	126	11900	332	126	11900	8	31.9
SVOCs	2-Methylphenol	ug/kg	379	126	11900	332	126	11900	na	na
SVOCs	2-Nitroaniline	ug/kg	379	126	11900	332	126	11900	na	na
SVOCs	2-Nitrophenol	ug/kg	379	126	11900	332	126	11900	na	na
SVOCs	3,3'-Dichlorobenzidine	ug/kg	379	210	23100	332	200	23100	na	127
SVOCs	3-Nitroaniline	ug/kg	379	210	23100	332	200	23100	na	na
SVOCs	4,6-Dinitro-2-methylphenol	ug/kg	379	244	23100	332	244	23100	na	na
SVOCs	4-Bromophenyl-phenylether	ug/kg	379	126	11900	332	126	11900	na	na
SVOCs	4-Chloro-3-methylphenol	ug/kg	379	126	11900	332	126	11900	na	na
SVOCs	4-Chloroaniline	ug/kg	378	126	11900	331	126	11900	na	na
SVOCs	4-Chlorophenyl-phenylether	ug/kg	379	126	11900	332	126	11900	na	na
SVOCs	4-Nitroaniline	ug/kg	379	210	23100	332	200	23100	na	na
SVOCs	4-Nitrophenol	ug/kg	379	244	23100	332	244	23100	na	13.3
SVOCs	Atrazine	ug/kg	379	126	11900	332	126	11900	na	na
SVOCs	Bis-(2-chloroethoxy)methane	ug/kg	379	126	11900	332	126	11900	na	na
SVOCs	Bis(2-chloroethyl) ether	ug/kg	379	126	11900	332	126	11900	na	3520
SVOCs	Hexachlorobutadiene	ug/kg	379	126	11900	332	126	11900	1.3	26.5
SVOCs	Hexachlorocyclopentadiene	ug/kg	371	126	11900	327	126	11900	na	901
SVOCs	Hexachloroethane	ug/kg	379	126	11900	332	126	11900	73	584
SVOCs	Nitrobenzene	ug/kg	379	126	11900	332	126	11900	na	145
PCB Aroclors	Aroclor-1016	ug/kg	187	0.47	120	164	0.47	170	na	na
PCB Aroclors	Aroclor-1221	ug/kg	187	0.47	120	164	0.47	170	na	na
PCB Aroclors	Aroclor-1232	ug/kg	187	0.47	120	164	0.47	170	na	na
PCB Aroclors	Aroclor-1248	ug/kg	187	0.47	120	164	0.47	170	na	na
PCB Aroclors	Aroclor-1262	ug/kg	187	0.47	120	164	0.47	170	na	na
OC Pesticides	Toxaphene	ug/kg	80	0.25	69	67	0.22	69	na	0.077
VOCs	1,1,1-Trichloroethane	ug/kg	161	0.8	150	136	0.8	150	na	213
VOCs	1,1,2,2-Tetrachloroethane	ug/kg	141	0.8	150	123	0.8	150	na	850
VOCs	1,1,2-Trichloro-1,2,2-trifluoroethan	ug/kg	64	2	20	56	2	33	na	na
VOCs	1,1,2-Trichloroethane	ug/kg	161	0.8	150	136	0.8	150	na	518
VOCs	1,1-Dichloroethane	ug/kg	161	0.8	150	136	0.8	150	na	na
VOCs	1,1-Dichloroethene	ug/kg	161	0.8	150	136	0.8	150	na	na
VOCs	1,2-Dibromo-3-chloropropane	ug/kg	160	2	570	135	2	570	na	na
VOCs	1,2-Dibromoethane	ug/kg	161	2	570	136	2	570	na	na
VOCs	1,2-Dichloroethane	ug/kg	161	0.8	150	136	0.8	150	na	260
VOCs	1,2-Dichloropropane	ug/kg	161	0.8	150	136	0.8	150	na	333
VOCs	2-Hexanone	ug/kg	161	2.1	5700	136	2.1	5700	na	na
VOCs	Bromochloromethane	ug/kg	161	0.8	150	136	0.8	150	na	na
VOCs	Bromodichloromethane	ug/kg	161	0.8	150	136	0.8	150	na	na
VOCs	Bromoform	ug/kg	161	0.97	150	136	0.89	150	na	492
VOCs	Bromomethane	ug/kg	160	0.8	150	135	0.8	150	na	na
VOCs	Carbon tetrachloride	ug/kg	161	0.8	150	136	0.8	150	na	1450
VOCs	Chloroethane	ug/kg	161	0.8	150	136	0.8	150	na	na
VOCs	cis-1,3-Dichloropropene	ug/kg	161	0.8	150	136	0.8	150	na	na
VOCs	Dibromochloromethane	ug/kg	161	0.8	150	136	0.8	150	na	na
VOCs	Dichlorodifluoromethane	ug/kg	161	0.8	150	136	0.8	150	na	na
VOCs	trans-1,2-Dichloroethene	ug/kg	161	0.8	150	136	0.8	150	na	na
VOCs	trans-1,3-Dichloropropene	ug/kg	161	0.8	150	136	0.8	150	na	na
VOCs	Trichlorofluoromethane	ug/kg	161	0.8	150	136	0.8	150	na	na
VOCs	Vinyl chloride	ug/kg	161	0.8	150	136	0.8	150	na	202

TPH-A	n-Nonane	mg/kg	105	0.1	4.3	96	0.4	4.3	na	na
TPH-A	n-Octane	mg/kg	106	0.1	4.3	96	0.4	4.3	na	na

Max HQ	
Estuarine	FW
na	na
3967	na
1983	**57**
2380	**146**
na	**76**
na	**9340**
na	**29**
1488	**373**
na	na
na	na
na	na
na	**182**
na	na
na	na
na	na
na	na
na	na
na	na
na	na
na	**1737**
na	na
na	na
na	**3.4**
9154	**449**
na	**13**
163	**20**
na	**82**
na	na
na	na
na	na
na	na
na	na
na	**896**
na	0.70
na	0.18
na	na
na	0.29
na	na
na	na
na	na
na	na
na	0.58
na	0.45
na	na
na	na
na	na
na	0.30
na	na
na	0.10
na	na
na	na
na	na
na	na
na	na
na	na
na	na
na	0.74

na	na
na	na

Table A4-6. Comparison of detection limits of analytes never detected in surface water to TSVs

Analyte Group	Analyte	Units	Surface water < RM 13 (estuarine)			Surface water ≥ RM 4 (fresh)			Surface water TSV		Max HQ	
			N	Min DL	Max DL	N	Min DL	Max DL	Estuarine	FW	Estuarine	FW
Butyltin	Tetrabutyltin	ug/l	200	0.05	0.05	98	0.05	0.05	na	na	na	na
SVOCs	2,2'-Oxybis(1-chloropropane	ug/l	167	0.19	0.22	90	0.19	0.22	na	na	na	na
SVOCs	2,4,5-Trichlorophenol	ug/l	167	0.94	1.1	90	0.94	1.1	na	na	na	na
SVOCs	2,4,6-Trichlorophenol	ug/l	167	0.94	1.1	90	0.94	1.1	na	4.9	na	0.22
SVOCs	2,4-Dichlorophenol	ug/l	167	0.19	0.22	90	0.19	0.22	na	11	na	0.020
SVOCs	2,4-Dinitrophenol	ug/l	167	4.7	5.4	90	4.7	5.4	na	19	na	0.28
SVOCs	2-Chloronaphthalene	ug/l	167	0.19	0.22	90	0.19	0.22	na	0.396	na	0.56
SVOCs	2-Chlorophenol	ug/l	167	0.94	1.1	90	0.94	1.1	na	24	na	0.046
SVOCs	2-Nitroaniline	ug/l	167	4.7	5.4	90	4.7	5.4	na	na	na	na
SVOCs	2-Nitrophenol	ug/l	167	0.94	1.1	90	0.94	1.1	na	na	na	na
SVOCs	3,3'-Dichlorobenzidine	ug/l	167	0.94	1.1	90	0.94	1.1	na	4.5	na	0.24
SVOCs	3-Nitroaniline	ug/l	167	4.7	5.4	90	4.7	5.4	na	na	na	na
SVOCs	4,6-Dinitro-2-methylphenol	ug/l	167	4.7	5.4	90	4.7	5.4	na	na	na	na
SVOCs	4-Chloro-3-methylphenol	ug/l	167	0.94	1.1	90	0.94	1.1	na	na	na	na
SVOCs	4-Chlorophenyl-phenylether	ug/l	167	0.94	1.1	90	0.94	1.1	na	na	na	na
SVOCs	4-Nitroaniline	ug/l	167	4.7	5.4	90	4.7	5.4	na	na	na	na
SVOCs	4-Nitrophenol	ug/l	167	4.7	5.4	90	4.7	5.4	na	60	na	0.090
SVOCs	Atrazine	ug/l	167	0.94	1.1	90	0.94	1.1	na	1.8	na	0.61
SVOCs	Dimethylphthalate	ug/l	167	0.94	1.1	90	0.94	1.1	na	na	na	na
SVOCs	Di-n-octylphthalate	ug/l	167	0.94	1.1	90	0.94	1.1	na	na	na	na
SVOCs	Hexachlorobutadiene	ug/l	167	0.19	0.22	90	0.19	0.22	na	0.053	na	**4.2**
SVOCs	Hexachlorocyclopentadiene	ug/l	146	0.94	1.1	86	0.94	1.1	na	77	na	0.014
SVOCs	Hexachloroethane	ug/l	167	0.94	1.1	90	0.94	1.1	na	8	na	0.14
SVOCs	Isophorone	ug/l	167	0.94	1.1	90	0.94	1.1	na	920	na	0.0012
SVOCs	Nitrobenzene	ug/l	167	1.9	2.2	90	1.9	2.2	na	220	na	0.010
SVOCs	Pentachlorophenol	ug/l	167	0.94	1.1	90	0.94	1.1	7.9	0.5	0.14	**2.2**
SVOCs	Phenol	ug/l	167	0.19	0.22	90	0.19	0.22	na	4	na	0.055
PCB Congener	PCB-80	ng/l	320	0.0004	0.0026	154	0.0004	0.0026	na	na	na	na
PCB Congener	PCB-142	ng/l	320	0.00077	0.0084	154	0.0008	0.0084	na	na	na	na
PCB Congener	PCB-161	ng/l	320	0.00051	0.0056	154	0.0005	0.0056	na	na	na	na
PCB Congener	PCB-186	ng/l	320	0.00038	0.004	154	0.0004	0.004	na	na	na	na
PCB Congener	PCB-192	ng/l	320	0.0004	0.0042	154	0.0004	0.0042	na	na	na	na
PCB Congener	PCB-204	ng/l	320	0.00034	0.003	154	0.0003	0.003	na	na	na	na
VOCs	1,1,2,2-Tetrachloroethane	ug/l	200	0.5	0.5	98	0.5	0.5	na	380	na	0.0013
VOCs	1,1,2-Trichloroethane	ug/l	200	0.5	0.5	98	0.5	0.5	na	500	na	0.0010
VOCs	1,1-Dichloroethene	ug/l	200	0.5	0.5	98	0.5	0.5	na	25	na	0.020
VOCs	1,2,3-Trichlorobenzene	ug/l	200	2	2	98	2	2	na	8	na	0.25
VOCs	1,2-Dibromo-3-chloropropan	ug/l	200	2	2	98	2	2	na	na	na	na
VOCs	1,2-Dibromoethane	ug/l	200	2	2	98	2	2	na	na	na	na
VOCs	1,2-Dichloroethane	ug/l	200	0.5	0.5	98	0.5	0.5	na	100	na	0.0050
VOCs	1,2-Dichloropropane	ug/l	200	0.5	0.5	98	0.5	0.5	na	360	na	0.0014
VOCs	1,3-Dichlorobenzene	ug/l	200	0.5	0.5	98	0.5	0.5	na	38	na	0.013
VOCs	2-Butanone	ug/l	200	20	20	98	20	20	na	14000	na	0.0014
VOCs	2-Hexanone	ug/l	200	20	20	98	20	20	na	na	na	na
VOCs	4-Methyl-2-pentanone	ug/l	200	20	20	98	20	20	na	170	na	0.12
VOCs	Bromochloromethane	ug/l	200	0.5	0.5	98	0.5	0.5	na	na	na	na
VOCs	Bromoform	ug/l	200	0.5	0.5	98	0.5	0.5	na	230	na	0.0022
VOCs	Bromomethane	ug/l	200	0.5	0.5	98	0.5	0.5	na	na	na	na
VOCs	Carbon Tetrachloride	ug/l	200	0.5	0.5	98	0.5	0.5	na	9.8	na	0.051
VOCs	Chloroethane	ug/l	200	0.5	0.5	98	0.5	0.5	na	na	na	na
VOCs	cis-1,3-Dichloropropene	ug/l	200	0.5	0.5	98	0.5	0.5	na	na	na	na
VOCs	Cyclohexane	ug/l	200	1	1	98	1	1	na	na	na	na
VOCs	Dibromochloromethane	ug/l	200	0.5	0.5	98	0.5	0.5	na	na	na	na
VOCs	Dichlorodifluoromethane	ug/l	200	0.5	0.5	98	0.5	0.5	na	na	na	na
VOCs	Methyl acetate	ug/l	200	1	1	98	1	1	na	na	na	na
VOCs	Methyl tert-butyl ether (MTB	ug/l	200	0.5	0.5	98	0.5	0.5	5000	10000	0.00010	#######
VOCs	Methylcyclohexane	ug/l	200	1	1	98	1	1	na	na	na	na

VOCs	Methylene chloride	ug/l	200	2	2	98	2	2	na	940	na	0.0021
VOCs	Styrene	ug/l	200	0.5	0.5	98	0.5	0.5	na	32	na	0.016
VOCs	trans-1,2-Dichloroethene	ug/l	200	0.5	0.5	98	0.5	0.5	na	590	na	0.00085
VOCs	trans-1,3-Dichloropropene	ug/l	200	0.5	0.5	98	0.5	0.5	na	0.055	na	**9.1**
VOCs	Trichlorofluoromethane	ug/l	200	0.5	0.5	98	0.5	0.5	na	na	na	na

Table A4-7. Comparison of detection limits of analytes never detected in tissue to TSVs

			Invertebrates			Fish			Tissue TSV		Max HQ	
nalyte Grou	Analyte	Units	N	Min DL	Max DL	N	Min DL	Max DL	Inverts	Fish	Inverts	Fish
SVOCs	1,1'-Biphenyl	ug/kg	41	190	2000	130	860	8000	na	na	na	na
SVOCs	2,2'-Oxybis(1-chloropropane	ug/kg	41	190	2000	130	860	8000	na	na	na	na
SVOCs	2,4,5-Trichlorophenol	ug/kg	41	190	2000	130	860	8000	na	na	na	na
SVOCs	2,4,6-Trichlorophenol	ug/kg	41	190	2000	130	860	8000	na	na	na	na
SVOCs	2,4-Dichlorophenol	ug/kg	41	190	2000	130	860	8000	na	na	na	na
SVOCs	2,4-Dimethylphenol	ug/kg	41	190	2000	130	860	8000	na	5990	na	**1.3**
SVOCs	2,4-Dinitrophenol	ug/kg	17	770	8000	76	3400	32000	5200	2950	**1.5**	**11**
SVOCs	2,4-Dinitrotoluene	ug/kg	41	190	2000	130	860	8000	na	na	na	na
SVOCs	2,6-Dinitrotoluene	ug/kg	41	190	2000	130	860	8000	na	na	na	na
SVOCs	2-Chloronaphthalene	ug/kg	41	190	2000	130	860	8000	na	na	na	na
SVOCs	2-Chlorophenol	ug/kg	41	190	2000	130	860	8000	na	12800	na	0.63
SVOCs	2-Methylphenol	ug/kg	41	190	2000	130	860	8000	na	na	na	na
SVOCs	2-Nitroaniline	ug/kg	41	190	2000	130	860	8000	na	na	na	na
SVOCs	2-Nitrophenol	ug/kg	41	190	2000	130	860	8000	na	na	na	na
SVOCs	3,3'-Dichlorobenzidine	ug/kg	41	190	2000	130	860	8000	na	na	na	na
SVOCs	3-Nitroaniline	ug/kg	41	190	2000	130	860	8000	6215.6	na	0.32	na
SVOCs	4,6-Dinitro-2-methylphenol	ug/kg	17	770	8000	130	3400	32000	na	na	na	na
SVOCs	4-Bromophenyl-phenylether	ug/kg	41	190	2000	130	860	8000	na	na	na	na
SVOCs	4-Chloro-3-methylphenol	ug/kg	41	190	2000	130	860	8000	na	na	na	na
SVOCs	4-Chloroaniline	ug/kg	41	190	2000	130	860	8000	na	11900	na	0.67
SVOCs	4-Chlorophenyl-phenylether	ug/kg	41	190	2000	130	860	8000	na	na	na	na
SVOCs	4-Methylphenol	ug/kg	na; evaluated as COI			130	860	8000	na	7900	na	**1.0**
SVOCs	4-Nitroaniline	ug/kg	41	190	2000	130	860	8000	na	na	na	na
SVOCs	4-Nitrophenol	ug/kg	17	380	4000	130	1700	16000	770	9500	**5.2**	**1.7**
SVOCs	Atrazine	ug/kg	41	190	2000	130	860	8000	190	73.6	**11**	**109**
SVOCs	Bis-(2-chloroethoxy)methan	ug/kg	41	190	2000	130	860	8000	na	na	na	na
SVOCs	Bis-(2-chloroethyl)ether	ug/kg	41	190	2000	130	860	8000	na	110	na	**73**
SVOCs	Bis(2-ethylhexyl)phthalate	ug/kg	na; evaluated as COI			130	860	8000	na	390	na	**21**
SVOCs	Butylbenzylphthalate	ug/kg	41	190	2000	130	860	8000	na	6450	na	**1.2**
SVOCs	Caprolactam	ug/kg	41	190	2000	130	860	8000	na	na	na	na
SVOCs	Carbazole	ug/kg	41	190	2000	130	860	8000	na	na	na	na
SVOCs	Dibenzofuran	ug/kg	41	190	2000	130	860	8000	na	na	na	na
SVOCs	Diethylphthalate	ug/kg	41	190	2000	130	860	8000	na	1100	na	**7.3**
SVOCs	Dimethylphthalate	ug/kg	41	190	2000	130	860	8000	50	500	**40**	**16**
SVOCs	Di-n-butylphthalate	ug/kg	41	190	2000	130	860	8000	50	na	**40**	na
SVOCs	Di-n-octylphthalate	ug/kg	41	190	2000	130	860	8000	na	na	na	na
SVOCs	Hexachlorobutadiene	ug/kg	41	190	2000	130	860	8000	9160	3480	0.22	**2.3**
SVOCs	Hexachlorocyclopentadiene	ug/kg	17	190	2000	130	860	8000	na	na	na	na
SVOCs	Hexachloroethane	ug/kg	41	190	2000	130	860	8000	na	na	na	na
SVOCs	Isophorone	ug/kg	41	190	2000	130	860	8000	na	650	na	**12**
SVOCs	Nitrobenzene	ug/kg	41	190	2000	130	860	8000	na	na	na	na
SVOCs	n-Nitroso-di-n-propylamine	ug/kg	41	190	2000	130	860	8000	na	na	na	na
SVOCs	n-Nitrosodiphenylamine	ug/kg	41	190	2000	130	860	8000	na	2000	na	**4.0**
SVOCs	Pentachlorophenol	ug/kg	17	770	8000	130	3400	32000	na	na	na	na
SVOCs	Phenol	ug/kg	41	190	2000	130	860	8000	15500	11400	0.13	0.70
PCB Aroclo	Aroclor-1016	ug/kg	34	3.5	7.6	129	1.8	20	na	na	na	na
PCB Aroclo	Aroclor-1221	ug/kg	34	3.5	7.6	129	1.8	20	na	na	na	na
PCB Aroclo	Aroclor-1232	ug/kg	34	3.5	7.6	129	1.8	20	na	na	na	na
PCB Aroclo	Aroclor-1248	ug/kg	34	3.5	7.6	129	1.8	20	na	na	na	na
PCB Aroclo	Aroclor-1262	ug/kg	34	3.5	7.6	129	1.8	20	na	na	na	na
PCB Aroclo	Aroclor-1268	ug/kg	34	3.5	7.6	129	1.8	20	na	na	na	na
PCB Conge	PCB-78	ug/kg	53	0.0002	0.013	131	0.002	0.12	na	na	na	na
PCB Conge	PCB-80	ug/kg	53	0.0002	0.012	131	0.002	0.12	na	na	na	na
PCDDs/PCI	1,2,3,7,8,9-HxCDF	ng/kg	53	0.016	0.4	131	0.044	0.65	na	na	na	na
OC Pesticic	Mirex	ug/kg	18	0.032	0.13	na			20	35	0.0065	na

Table A5-1. Comparison of LPRSA sediment concentrations to FFS sediment screening thresholds

COI Group	COI[a]	Units	Min Detect	Qual	Max Detect	Qual	Min DL	Max DL	N	Detects	Screening Level NOAA ER-L	Screening Level NJDEP Benchmark	Screening Level Wildlife Based PCL	Max Detect Exceeds Aquatic benchmark?	Max Detect Exceeds Wildlife-based PCL?	Basis of Lowest Screening Level
Metals	Aluminum	mg/kg	1840		18900	J			426	426	-	-	-	-	-	na
Metals	Antimony	mg/kg	0.03	J	11.8	J	0.034	0.052	426	423	-	-	-	-	-	na
Metals	Arsenic	mg/kg	0.48	J	118	J			426	426	8.2	8.2	170	**Yes**	No	NOAA ER-L
Metals	Barium	mg/kg	21.1		1040	J			426	426	-	-	-	-	-	na
Metals	Beryllium	mg/kg	0.099		1.22	J			426	426	-	-	-	-	-	na
Metals	Cadmium	mg/kg	0.053		46.6	J			426	426	1.2	1.2	3	**Yes**	**Yes**	NOAA ER-L
Metals	Calcium	mg/kg	560		23200	J			426	426	-	-	-	-	-	na
Metals	Chromium	mg/kg	4.03	J	1580	J			426	426	81	81	41	**Yes**	**Yes**	Wildlife PCL
Metals	Cobalt	mg/kg	1.8	J	25.6	J			423	423	-	-	-	-	-	na
Metals	Copper	mg/kg	4.19	J	930	J			503	503	34	34	13	**Yes**	**Yes**	Wildlife PCL
Metals	Iron	mg/kg	6190		53100				426	426	-	-	-	-	-	na
Metals	Lead	mg/kg	3.94		2050				422	422	46.7	47	11	**Yes**	**Yes**	Wildlife PCL
Metals	Magnesium	mg/kg	1040		10200	J			426	426	-	-	-	-	-	na
Metals	Manganese	mg/kg	57.5		7110	J			424	424	-	-	-	-	-	na
Metals	Mercury	ug/kg	16.1		24300	J			429	429	150	150	37	**Yes**	**Yes**	Wildlife PCL
Metals	Methyl mercury	ug/kg	0.035	J	23	J	0.089	0.089	137	136	-	-	-	-	-	na
Metals	Nickel	mg/kg	4.15		200	J			501	501	20.9	21	22	**Yes**	**Yes**	NOAA ER-L
Metals	Potassium	mg/kg	186		6190				423	423	-	-	-	-	-	na
Metals	Selenium	mg/kg	0.038	J	5.2		0.033	2	406	341	-	-	0.92	-	**Yes**	Wildlife PCL
Metals	Silver	mg/kg	0.023	J	20.4	J			426	426	1	1	1300	**Yes**	No	NOAA ER-L
Metals	Sodium	mg/kg	42.5		21500	J			425	425	-	-	-	-	-	na
Metals	Thallium	mg/kg	0.021		0.997	J	0.019	0.041	426	422	-	-	-	-	-	na
Metals	Titanium	mg/kg	89.6		994				426	426	-	-	-	-	-	na
Metals	Vanadium	mg/kg	3.99	J	110	J			426	426	-	-	-	-	-	na
Metals	Zinc	mg/kg	23.5		2000				426	426	150	150	47	**Yes**	**Yes**	Wildlife PCL
Butyltin	Monobutyltin	ug/kg	0.37	J	210	J	1.2	25	426	376	-	-	-	-	-	na
Butyltin	Dibutyltin	ug/kg	0.89	J	2300		1.2	25	426	393	-	-	-	-	-	na
Butyltin	Tributyltin	ug/kg	0.39	J	270	J	1.1	27	426	361	25	-	3600	**Yes**	No	NOAA ER-L
Butyltin	Tetrabutyltin	ug/kg	1.1	J	250	J	1.1	34	426	58	-	-	-	-	-	na
PAHs	1-Methylnaphthalene	ug/kg	1.82	J	198000	J	0.6	110	427	416	-	-	-	-	-	na
PAHs	1-Methylphenanthrene	ug/kg	0.3	J	44500	J	0.977	13	427	425	-	-	-	-	-	na
PAHs	2,3,5-Trimethylnaphthalene	ug/kg	0.585	J	14800	J	0.059	7.7	427	414	-	-	-	-	-	na
PAHs	2,6-Dimethylnaphthalene	ug/kg	0.989	J	54900	J	0.18	12	427	419	-	-	-	-	-	na
PAHs	2-Methylnaphthalene	ug/kg	3.3	J	145000	J	1.2	4930	427	411	70	70	-	**Yes**	-	NOAA ER-L
PAHs	Acenaphthene	ug/kg	1.3		142000	J	0.81	12	427	423	16	16	-	**Yes**	-	NOAA ER-L
PAHs	Acenaphthylene	ug/kg	0.192	J	7870	J	0.14	16	427	425	44	44	-	**Yes**	-	NOAA ER-L
PAHs	Anthracene	ug/kg	0.216	J	60800	J	0.41	16	427	425	85.3	85	-	**Yes**	-	NJ Benchmark
PAHs	Benzo(a)anthracene	ug/kg	1.1		41000	J	0.89	0.89	427	426	261	261	-	**Yes**	-	NOAA ER-L
PAHs	Benzo(a)pyrene	ug/kg	1.62		41000		0.6	0.6	427	426	430	430	-	**Yes**	-	NOAA ER-L
PAHs	Benzo(b/j)fluoranthene	ug/kg	2.35		54800		1.2	1.2	427	426	-	-	-	-	-	na
PAHs	Benzo(e)pyrene	ug/kg	1.31		25600		0.73	0.73	427	426	-	-	-	-	-	na
PAHs	Benzo(g,h,i)perylene	ug/kg	1.53		22500		1.2	1.2	427	426	-	-	-	-	-	na
PAHs	Benzo(k)fluoranthene	ug/kg	1.2		24000	J	0.032	0.032	427	426	-	-	-	-	-	na
PAHs	Chrysene	ug/kg	1.3	J	53100				427	427	384	384	-	**Yes**	-	NOAA ER-L
PAHs	Dibenzo(a,h)anthracene	ug/kg	3.48		4700	J	0.044	140	427	419	63.4	63	-	**Yes**	-	NJ Benchmark
PAHs	Dibenzothiophene	ug/kg	0.193	J	9260		21	28	427	425	-	-	-	-	-	na
PAHs	Fluoranthene	ug/kg	1.9	J	163000				427	427	600	600	-	**Yes**	-	NOAA ER-L
PAHs	Fluorene	ug/kg	1.7		66400	J	0.82	28	427	423	19	19	-	**Yes**	-	NOAA ER-L
PAHs	Indeno(1,2,3-cd)pyrene	ug/kg	1.25		18500		0.71	0.71	427	426	-	-	-	-	-	na

Table A5-1. Comparison of LPRSA sediment concentrations to FFS sediment screening thresholds

COI Group	COI[a]	Units	Min Detect	Qual	Max Detect	Qual	Min DL	Max DL	N	Detects	Screening Level: NOAA ER-L	Screening Level: NJDEP Benchmark	Screening Level: Wildlife Based PCL	Max Detect Exceeds Aquatic benchmark?	Max Detect Exceeds Wildlife-based PCL?	Basis of Lowest Screening Level
PAHs	Naphthalene	ug/kg	5.87	J	252000	J	3	9860	427	389	160	160	-	**Yes**	-	NOAA ER-L
PAHs	Perylene	ug/kg	12.9		10100	J			427	427	-	-	-	-	-	na
PAHs	Phenanthrene	ug/kg	15.4		220000	J	1.95	2.6	427	425	240	240	-	**Yes**	-	NOAA ER-L
PAHs	Pyrene	ug/kg	3	J	123000				427	427	665	665	-	**Yes**	-	NOAA ER-L
PAHs	Total benzofluoranthenes	ug/kg	3.55		76900		1.2	1.2	427	426	-	-	-	-	-	na
PAHs	Total carcinogenic PAHs	ug/kg	0.0013	J	53300	J			427	427	-	-	-	-	-	na
PAHs	Total HPAHs	ug/kg	6.2	J	510000	J			427	427	552	552	-	**Yes**	-	NOAA ER-L
PAHs	Total LPAHs	ug/kg	0.408	J	749000	J	3	3	427	426	1700	1700	-	**Yes**	-	NOAA ER-L
PAHs	Total PAHs	ug/kg	6.2	J	1090000	J			427	427	4022	4000	-	**Yes**	-	NJ Benchmark
SVOCs	1,1'-Biphenyl	ug/kg	21.5	J	15400	J	167	9560	427	23	-	-	-	-	-	na
SVOCs	2,4-Dinitrotoluene	ug/kg	1070		1070		126	11900	427	1	-	-	-	-	-	na
SVOCs	2,6-Dinitrotoluene	ug/kg	1100		1100		126	11900	427	1	-	-	-	-	-	na
SVOCs	4-Methylphenol	ug/kg	130	J	1600	J	126	11900	427	10	-	-	-	-	-	na
SVOCs	Acetophenone	ug/kg	40.9	J	3600	J	126	11900	427	78	-	-	-	-	-	na
SVOCs	Benzaldehyde	ug/kg	21.8	J	2400	J	167	11900	422	245	-	-	-	-	-	na
SVOCs	Bis-(2-ethylhexyl)phthalate	ug/kg	53.9	J	287000	J	168	11000	427	399	-	-	-	-	-	na
SVOCs	Butylbenzylphthalate	ug/kg	46	J	25000	J	126	11900	427	198	-	-	-	-	-	na
SVOCs	Caprolactam	ug/kg	74	J	270	J	170	23100	427	3	-	-	-	-	-	na
SVOCs	Carbazole	ug/kg	45	J	9900	J	167	9560	427	246	-	-	-	-	-	na
SVOCs	Dibenzofuran	ug/kg	40.8	J	9970	J	167	9560	427	108	-	-	-	-	-	na
SVOCs	Diethylphthalate	ug/kg	130	J	300	J	126	11900	427	3	-	-	-	-	-	na
SVOCs	Dimethylphthalate	ug/kg	165	J	165	J	126	11900	427	1	-	-	-	-	-	na
SVOCs	Di-n-butylphthalate	ug/kg	53.1	J	830	J	126	11900	427	41	-	-	-	-	-	na
SVOCs	Di-n-octylphthalate	ug/kg	31	J	45100	J	170	18600	427	260	-	-	-	-	-	na
SVOCs	Isophorone	ug/kg	135	J	24500	J	126	11900	427	5	-	-	-	-	-	na
SVOCs	n-Nitroso-di-n-propylamine	ug/kg	560		560		126	11900	427	1	-	-	-	-	-	na
SVOCs	n-Nitrosodiphenylamine	ug/kg	39	J	2180	J	126	11900	427	22	-	-	-	-	-	na
SVOCs	Pentachlorophenol	ug/kg	370	J	370	J	244	23100	427	1	-	-	420000	-	No	Wildlife PCL
SVOCs	Phenol	ug/kg	240	J	860	J	126	11900	427	8	-	-	-	-	-	na
PCB Aroclors	Aroclor-1242	ug/kg	0.96	JN	4900	JN	0.52	58	226	215	-	-	370	-	**Yes**	Wildlife PCL
PCB Aroclors	Aroclor-1254	ug/kg	1.1	JN	4800	J	0.54	49	226	219	-	-	370	-	**Yes**	Wildlife PCL
PCB Aroclors	Aroclor-1260	ug/kg	0.8	JN	1400	J	0.52	170	226	176	-	-	370	-	**Yes**	Wildlife PCL
PCB Aroclors	Aroclor-1268	ug/kg	300		300		0.47	170	226	1	-	-	-	-	-	na
PCB Aroclors	Total PCB Aroclors	ug/kg	2.3	JN	7800	JN	0.54	2	226	222	22.7	23	370	**Yes**	**Yes**	NOAA ER-L
PCB Congeners	Total PCB Congeners	ug/kg	1.34	J	28600	Z			429	429	22.7	23	370	**Yes**	**Yes**	NOAA ER-L
PCB Congeners	PCB TEQ-Fish	ng/kg	0.000122	Z	33.1	J			429	429	3.2	-	2.5	**Yes**	**Yes**	Wildlife PCL
PCDDs/PCDFs	1,2,3,4,6,7,8-HpCDD	ng/kg	3.92	Z	3360	J	3.89	6.95	428	425	-	-	-	-	-	na
PCDDs/PCDFs	1,2,3,4,7,8-HxCDD	ng/kg	0.0729	J	76.8		0.101	2.41	428	401	-	-	-	-	-	na
PCDDs/PCDFs	1,2,3,6,7,8-HxCDD	ng/kg	0.117	J	338	J	0.18	2.71	428	416	-	-	-	-	-	na
PCDDs/PCDFs	1,2,3,7,8,9-HxCDD	ng/kg	0.297	J	192	J	0.113	3.08	428	410	-	-	-	-	-	na
PCDDs/PCDFs	1,2,3,7,8-PeCDD	ng/kg	0.118	J	269	J	0.0849	3.05	428	396	-	-	-	-	-	na
PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	0.2	J	51100	J	0.0319	0.833	428	418	3.2	-	2.5	**Yes**	**Yes**	Wildlife PCL
PCDDs/PCDFs	OCDD	ng/kg	53.9		38400	J	43.3	57.3	428	426	-	-	-	-	-	na
PCDDs/PCDFs	1,2,3,4,6,7,8-HpCDF	ng/kg	1.03	J	5900	J	1.62	3.1	428	425	-	-	-	-	-	na
PCDDs/PCDFs	1,2,3,4,7,8,9-HpCDF	ng/kg	0.0782	J	253	J	0.094	10.6	428	399	-	-	-	-	-	na
PCDDs/PCDFs	1,2,3,4,7,8-HxCDF	ng/kg	0.14	J	1500	J	0.616	1.19	428	423	-	-	-	-	-	na
PCDDs/PCDFs	1,2,3,6,7,8-HxCDF	ng/kg	0.1	Z	291	J	0.111	1.35	428	414	-	-	-	-	-	na
PCDDs/PCDFs	1,2,3,7,8,9-HxCDF	ng/kg	0.101	J	19.7		0.0363	5.83	428	119	-	-	-	-	-	na
PCDDs/PCDFs	1,2,3,7,8-PeCDF	ng/kg	0.118	J	97.3	J	0.0717	5.36	428	409	-	-	-	-	-	na
PCDDs/PCDFs	2,3,4,6,7,8-HxCDF	ng/kg	0.0841	J	182	J	0.109	1.36	428	417	-	-	-	-	-	na
PCDDs/PCDFs	2,3,4,7,8-PeCDF	ng/kg	0.093	Z	541	J	0.0683	1.24	428	420	-	-	-	-	-	na

Table A5-1. Comparison of LPRSA sediment concentrations to FFS sediment screening thresholds

COI Group	COI[a]	Units	Min Detect	Qual	Max Detect	Qual	Min DL	Max DL	N	Detects	Screening Level: NOAA ER-L	Screening Level: NJDEP Benchmark	Screening Level: Wildlife Based PCL	Max Detect Exceeds Aquatic benchmark?	Max Detect Exceeds Wildlife-based PCL?	Basis of Lowest Screening Level
PCDDs/PCDFs	2,3,7,8-TCDF	ng/kg	0.363	J	334	J	0.0808	15.1	428	406	-	-	-	-	-	na
PCDDs/PCDFs	OCDF	ng/kg	1.3	J	15700	J	3.13	50.2	428	421	-	-	-	-	-	na
PCDDs/PCDFs	Dioxin TEQ-Fish	ng/kg	0.037	JF	51400	J			428	428	3.2	-	2.5	**Yes**	**Yes**	Wildlife PCL
PCDDs/PCDFs	Total TEQ-Fish	ng/kg	0.0457	JF	51400	J			428	428	3.2	-	2.5	**Yes**	**Yes**	Wildlife PCL
OC Pesticides	2,4'-DDD	ug/kg	0.051	J	416	J	0.0409	2.2	427	421	2	-	830	**Yes**	No	NOAA ER-L
OC Pesticides	2,4'-DDE	ug/kg	0.012	J	640	J	0.013	2.1	427	400	2.2	-	19	**Yes**	**Yes**	NOAA ER-L
OC Pesticides	2,4'-DDT	ug/kg	0.024	J	65	J	0.0024	4.3	427	351	1	-	140	**Yes**	No	NOAA ER-L
OC Pesticides	4,4'-DDD	ug/kg	0.176	J	870	J	0.0442	5.3	427	423	2	-	830	**Yes**	**Yes**	NOAA ER-L
OC Pesticides	4,4'-DDE	ug/kg	0.12	J	1600	J	0.138	2.1	427	422	2.2	2.2	19	**Yes**	**Yes**	NOAA ER-L
OC Pesticides	4,4'-DDT	ug/kg	0.026	J	1100	J	0.0282	4.7	427	408	1	-	140	**Yes**	**Yes**	NOAA ER-L
OC Pesticides	Aldrin	ug/kg	0.0063	J	24	J	0.0038	41	427	350	-	-	460	-	No	Wildlife PCL
OC Pesticides	alpha-BHC	ug/kg	0.0087	J	7.57	J	0.0018	0.68	427	251	-	-	1200	-	No	Wildlife PCL
OC Pesticides	alpha-Chlordane	ug/kg	0.042	J	220	J	2	6.7	427	425	-	-	2000	-	No	Wildlife PCL
OC Pesticides	beta-BHC	ug/kg	0.0077	J	12		0.0026	0.7	427	289	-	-	1200	-	No	Wildlife PCL
OC Pesticides	cis-Nonachlor	ug/kg	0.033	Z	67	J	0.015	16	427	409	-	-	-	-	-	na
OC Pesticides	delta-BHC	ug/kg	0.0057	J	3.62	J	0.00097	0.85	427	157	-	-	1200	-	No	Wildlife PCL
OC Pesticides	Dieldrin	ug/kg	0.015	J	152	J	0.0164	1.4	427	419	0.02	-	270	**Yes**	No	NOAA ER-L
OC Pesticides	Endosulfan I	ug/kg	0.064	J	0.47	J	0.0057	2.6	427	6	-	-	4900	-	No	Wildlife PCL
OC Pesticides	Endosulfan II	ug/kg	0.059		18	J	0.031	77	427	188	-	-	4900	-	No	Wildlife PCL
OC Pesticides	Endosulfan sulfate	ug/kg	0.011	J	4.9	J	0.0039	1.2	427	229	-	-	4900	-	No	Wildlife PCL
OC Pesticides	Endrin	ug/kg	0.06	J	4.1		0.0027	19	424	15	-	-	35	-	No	Wildlife PCL
OC Pesticides	Endrin aldehyde	ug/kg	0.012	J	1	J	0.0016	5.5	427	22	-	-	35	-	No	Wildlife PCL
OC Pesticides	Endrin ketone	ug/kg	0.0056	J	1.46	J	0.0019	3.5	427	88	-	-	35	-	No	Wildlife PCL
OC Pesticides	gamma-BHC (Lindane)	ug/kg	0.014	J	9.41	J	0.00248	0.87	427	153	-	-	1200	-	No	Wildlife PCL
OC Pesticides	gamma-Chlordane	ug/kg	0.0597	Z	290	J	0.052	4	427	425	-	-	2000	-	No	Wildlife PCL
OC Pesticides	Heptachlor	ug/kg	0.007	J	7.87		0.002	0.42	427	323	-	-	-	-	-	na
OC Pesticides	Heptachlor epoxide	ug/kg	0.0242	J	9	J	0.0021	1.5	427	399	-	-	9700	-	No	Wildlife PCL
OC Pesticides	Hexachlorobenzene	ug/kg	0.051		181	J	0.0094	170	428	380	-	-	93000	-	No	Wildlife PCL
OC Pesticides	Methoxychlor	ug/kg	0.0711	J	160	J	0.0017	70	427	121	-	-	110000	-	No	Wildlife PCL
OC Pesticides	Oxychlordane	ug/kg	0.0061	J	8.5	J	0.0038	0.6	427	371	-	-	-	-	-	na
OC Pesticides	Total Chlordane	ug/kg	0.042	J	760	J			427	427	-	-	2000	-	No	Wildlife PCL
OC Pesticides	Total DDx	ug/kg	0.317	Z	2800	J	0.138	5.3	427	424	1.58	1.6	19	**Yes**	**Yes**	NOAA ER-L
OC Pesticides	Total Endosulfan	ug/kg	0.016	J	22	J	0.031	77	427	269	-	-	4900	-	No	Wildlife PCL
OC Pesticides	trans-Nonachlor	ug/kg	0.078	J	180	J	0.043	0.0673	427	425	-	-	-	-	-	na
Herbicides	2,4,5-T	mg/kg	0.00201	J	0.00201	J	0.011	1.9	256	1	-	-	-	-	-	na
Herbicides	2,4,5-TP (Silvex)	mg/kg	0.0039	J	1.1	NJ	0.011	1.1	256	4	-	-	-	-	-	na
Herbicides	2,4-D	mg/kg	0.017	J	0.039	J	0.045	1.9	256	2	-	-	-	-	-	na
Herbicides	2,4-DB	mg/kg	0.024	J	0.12	J	0.045	1.9	255	3	-	-	-	-	-	na
VOCs	1,2,3-Trichlorobenzene	ug/kg	1.1	J	30	J	0.8	570	184	5	-	-	3800000	-	No	Wildlife PCL
VOCs	1,2,4-Trichlorobenzene	ug/kg	0.15	J	14	J	0.8	670	185	35	-	-	3800000	-	No	Wildlife PCL
VOCs	1,2-Dichlorobenzene	ug/kg	0.23	J	7.4	J	0.8	150	185	45	-	-	2700000	-	No	Wildlife PCL
VOCs	1,3-Dichlorobenzene	ug/kg	0.12	J	2.3	J	0.8	150	184	28	-	-	560000	-	No	Wildlife PCL
VOCs	1,4-Dichlorobenzene	ug/kg	0.12	J	76	J	0.8	50	185	79	-	-	560000	-	No	Wildlife PCL
VOCs	1,4-Dioxane	ug/kg	664	J	664	J	126	11900	298	1	-	-	-	-	-	na
VOCs	2-Butanone	ug/kg	3.5	J	140	J	4.1	2000	116	62	-	-	-	-	-	na
VOCs	4-Methyl-2-pentanone	ug/kg	1.4	J	9.8	J	4.1	2000	183	9	-	-	-	-	-	na
VOCs	Acetone	ug/kg	10		1000	J	4.2	2000	183	69	-	-	-	-	-	na
VOCs	Benzene	ug/kg	0.067	J	0.56	J	0.8	150	185	7	-	340	-	No	-	NJ Benchmark
VOCs	Carbon disulfide	ug/kg	0.12	J	21	J	0.8	150	185	97	-	-	-	-	-	na
VOCs	Chlorobenzene	ug/kg	0.11	J	6	J	0.8	150	185	23	-	-	-	-	-	na
VOCs	Chloroform	ug/kg	0.14	J	0.14	J	0.8	150	185	1	-	-	-	-	-	na

Table A5-1. Comparison of LPRSA sediment concentrations to FFS sediment screening thresholds

COI Group	COI[a]	Units	Min Detect	Qual	Max Detect	Qual	Min DL	Max DL	N	Detects	Screening Level: NOAA ER-L	Screening Level: NJDEP Benchmark	Screening Level: Wildlife Based PCL	Max Detect Exceeds Aquatic benchmark?	Max Detect Exceeds Wildlife-based PCL?	Basis of Lowest Screening Level
VOCs	Chloromethane	ug/kg	0.53	J	9.9	J	0.8	150	185	5	-	-	-	-	-	na
VOCs	cis-1,2-Dichloroethylene	ug/kg	0.24	J	50	J	0.89	150	185	33	-	-	-	-	-	na
VOCs	Cyclohexane	ug/kg	4.4	J	4.4	J	0.8	290	185	1	-	-	-	-	-	na
VOCs	Ethylbenzene	ug/kg	0.16	J	3	J	0.8	150	185	10	-	1400	-	No	-	NJ Benchmark
VOCs	Isopropylbenzene	ug/kg	0.31	J	4.3	J	2	570	185	13	-	-	-	-	-	na
VOCs	m, p-Xylene	ug/kg	0.11	J	34	J	0.8	84	185	30	-	120	-	No	-	NJ Benchmark
VOCs	Methyl acetate	ug/kg	0.92	J	4800	J	0.8	12	186	53	-	-	-	-	-	na
VOCs	Methyl tert-butyl ether (MTBE)	ug/kg	0.12	J	50	J	0.88	150	185	41	-	-	-	-	-	na
VOCs	Methylcyclohexane	ug/kg	0.51	J	7.4	J	0.8	290	185	8	-	-	-	-	-	na
VOCs	Methylene chloride	ug/kg	0.36	J	4	J	4.1	670	186	3	-	-	-	-	-	na
VOCs	o-Xylene	ug/kg	0.11	J	3.7	J	0.8	150	185	10	-	120	-	No	-	NJ Benchmark
VOCs	Styrene	ug/kg	0.37	J	0.39	J	0.8	150	185	2	-	-	-	-	-	na
VOCs	Tetrachloroethylene	ug/kg	0.24	J	12	J	0.8	150	185	59	-	450	-	No	-	NJ Benchmark
VOCs	Toluene	ug/kg	2	J	15	J	0.8	170	186	11	-	2500	-	No	-	NJ Benchmark
VOCs	Trichloroethene	ug/kg	0.3	J	6	J	0.89	150	185	39	-	1600	-	No	-	NJ Benchmark
TPH-A	Total petroleum hydrocarbons (C9-C44)	mg/kg	260		6100				129	129	-	-	-	-	-	na
TPH-A	Total saturated hydrocarbons	mg/kg	0.53		190				129	129	-	-	-	-	-	na
TPH-E	Total petroleum hydrocarbons (Extractable)	mg/kg	37.7	J	18000	J	27	300	427	424	-	-	-	-	-	na
TPH-P	Total petroleum hydrocarbons (Purgeable)	mg/kg	3	J	3	J	2	200	136	2	-	-	-	-	-	na
Wet chemistry	Cyanide	mg/kg	0.06	J	19		0.067	1.05	297	189	-	-	-	-	-	na

[a] Only COIs (i.e., chemicals detected) are included in table.

APPENDIX B. BENTHIC DATA CALCULATION FILES

Annotated List of Tables

The tables described below present the results of analyses related to the baseline ecological risk assessment of benthic invertebrates in the Lower Passaic River Study Area (LPRSA). This appendix (Appendix B) is the companion to Appendix P and Section 6 of the baseline ecological risk assessment (BERA) of the LPRSA (main text). Appendix P provides a textual description of the data and analyses for individual lines of evidence (LOEs). Appendix B presents data tables from LOE analyses that support the summary of results in Appendix P. Also, the weight of evidence (WOE) analysis presented in Section 6 of the BERA main text is supported by data tables presented in Appendix B (as well as the analyses in Appendix P). These are described in more detail below (and in text boxes contained within data tables):

- **Table B1.** Spearman rank correlation results
  - All data used to calculate correlations are from Appendix K and are reproduced in Table B1-1 (site wide) and B1-2 (freshwater only). Only sediment quality triad (SQT) data from fall 2009 sampling of the LPRSA were used. Only a subset of all chemical parameters were included. Data were split into site wide and freshwater datasets to be consistent with guidance from USEPA Region 2. The reduced chemical list was provided by USEPA Region 2 for the specific purpose of reducing the number of correlation tests run with LPRSA SQT data.
  - Tables B1-3 and B1-4 present the results of correlation tests (as p-values and r-values).
  - Table B1-5 presents the uncertainty analysis of the correlation results; a Bonferroni corrected result is presented. The Bonferroni-corrected result represents r-values for correlations that also had p-values below the Bonferroni-adjusted alpha level. Also, only chemical-biological endpoint pairs are presented in that table (rather than producing results from chemical-chemical pairs as well).
  - Table B1-6 presents the summary of correlation results without Bonferroni correction and only for chemical-biological endpoint pairs. This table is reproduced in the text of Appendix P.
  - A notes tab describes how the analyses were conducted using R software (R Core Team 2016).
- **Table B2.** Multivariate statistical analysis results
  - Tables B2-1 and B2-2 provide two SQT datasets used to conduct multivariate statistical analyses. Table B2-1 provides the dataset for Method 1, which is intended to provide a large number of reference area samples and chemicals

of potential ecological concern (COPECs). Table B2-2 provides a reduced chemical dataset (termed Method 2) intended to include COPECs that USEPA previously identified as being important to compare statistically with benthic invertebrate response variables. The dataset provided in Table B2-2 has many missing values, which limits the size of the principal component analysis (PCA) and exploratory factor analysis (EFA) output.

- Tables B2-3 and B2-4 report the results from PCA and EFA based on the Method 1 and Method 2 datasets (Tables B2-1 and B2-2, respectively). Eigenvalues, varimax-rotated loading values, and EFA factor scores (based on rotated axes) are provided.
- Tables B2-5 and B2-6 provide the results of multiple linear regression (MLR) analyses of benthic invertebrate response variables and sediment chemistry factor scores or habitat variables. MLR results include model fit statistics, modeling notes, and model selection rationale.
- Table B2-7 provides a comparison of the MLR results based on Method 1 and Method 2, and a final conclusion that combines the results from both methods into a single narrative statement.

- **Table B3.** Comparison of LPRSA benthic community metric data with Jamaica Bay and Mullica River/Great Bay reference data (estuarine)
  - Table B3-1 provides the biological endpoint data from regional reference areas.
  - Table B3-2 reports the results from the chemical screen of reference area sediment chemistry data against effect range-low (ERL) and effect range-median (ERM) sediment quality guidelines as recommended by USEPA. ERL and ERM quotient values are reported.
  - Table B3-3 presents the summary of the screen in Table B3-2, which sums the number of exceedances of ERLs and ERMs in reference area samples. Sediment samples from reference areas were excluded from further use if there were >3 ERL exceedances and/or >0 ERM exceedances for any chemical.
  - Table B3-4 presents the toxicity screen of reference area data (consistent with USEPA Region 2 guidance) as well as the final indication of acceptability of the reference sample (i.e., passed both chemical and toxicological screens). Note that the quantitative analysis of uncertainty included in the BERA included an alternate approach to establishing a reference area; that approach omitted the toxicological screening step (but used the same chemistry screening step) when establishing reference sample acceptability. Instead, the uncertainty analysis-based dataset was analyzed for outliers,

and any outliers were omitted in the final dataset for the uncertainty analysis.

- Table B3-5 presents the calculation of reference envelope threshold values (5th and/or 95th percentiles, depending on the biological endpoint). Thresholds calculated as part of the uncertainty analysis are also provided.
- Tables B3-6 and B3-7 provide the results of the comparison of LPRSA biological endpoint data against the Jamaica Bay reference envelope threshold values. Table B3-7 presents the results based on the uncertainty analysis. Results are provided as a binary (1/0) pass/fail. An LPRSA sample "passes" if it is within the reference envelope and fails if it is outside the envelope. Tables B3-6 and B3-7 also report LOE summary columns, which are used in the WOE analyses in Appendix B Table B8.
- Tables B3-8 and B3-9 provide the results of the comparison of LPRSA biological endpoint data against the Mullica River/Great Bay estuary reference envelope threshold values. Table B3-9 presents the results based on the uncertainty analysis. Results are provided as a binary (1/0) pass/fail. An LPRSA sample "passes" if it is within the reference envelope and fails if it is outside the envelope. Tables B3-8 and B3-9 also report LOE summary columns, which are used in the WOE analyses in Appendix B Table B9.

- **Table B4.** Comparison of LPRSA benthic community metric data with data from above Dundee Dam (freshwater)
  - Table B4 provides analogous tables to B3 but for the upstream reference area in the LPRSA above Dundee Dam. Freshwater Mullica River data are considered but ultimately removed as unacceptable in this table (see notes in Table B4-1).
  - Table B4-1 presents the biological dataset from above Dundee Dam.
  - Table B4-2 and B4-3 present the chemical chemical and toxicological screens of data from above Dundee Dam. The chemical screen was based on a mean probable effect concentration quotient threshold of 0.5 (consistent with guidance from USEPA Region 2). The toxicity screen was similar for freshwater and estuarine datasets (see notes in Tables B4-3 and B3-4). The uncertainty analysis-based dataset was analyzed for toxicity outliers, and any outliers were omitted in the final dataset for the uncertainty analysis.
  - Table B4-4 presents the reference envelope thresholds for biological endpoints.
  - Tables B4-5 and B4-6 present the comparison of LPRSA biological endpoint data to reference envelope thresholds. Table B4-6 presents the results based on the quantitative analysis of uncertainty. The LOEs are summarized in

both tables, and those values are carried forward into the WOE analysis in Appendix B Tables B8 and B9.

- **Table B5.** Comparison of LPRSA sediment toxicity data to negative control test results
  - Tables include results of t-tests comparing LPRSA sediment toxicity test results to negative control results. Source data for these analyses are provided in Appendix K Table K5. The process for selecting the relevant t-test type is described in the Appendix P text and was consistent with USEPA Region 2 guidance.
  - Tables include calculation of 1-90th percentile Minimum Significant Difference (MSD) and a comparison of LPRSA data to that threshold. Source data for these analyses are provided in Appendix K Table K5. The calculation of the 1-90th percentile MSD is described in the Appendix P text and by Phillips et al. (2001). This approach is presented as part of the quantitative analysis of uncertainty.
- **Table B6.** Mann-Whitney U (MWU) test results comparing LPRSA data to reference area datasets
  - Table B6-1 includes data tables for MWU tests. Table B6-1b presents the dataset based on the quantitative analysis of uncertainty.
  - Table B6-2 includes MWU results from comparisons of LPRSA and reference area datasets. Results are in the form of the p-value (significance). The results of MWU tests are also presented in Appendix P.
- **Table B7.** Sediment chemistry LOE analysis for LPRSA data
  - Table B7-1 provides screen of LPRSA sediment chemistry data against T20/T50 values as well as the sum of T20/T50 values exceeded for each LPRSA location. Chemistry LOE weights are assigned to each LPRSA location.
  - Table B7-2 provides the derivation of mean-quotient threshold values for the quantitative analysis of uncertainty. Mean-quotients from reference area samples are ranked and compared with the observation of "toxic" results from sediment toxicity testing at those locations. The derivation of mean-quotient thresholds is described in the Appendix P text.
  - Table B7-3 provides the results of the comparison of LPRSA sediment chemistry data to the mean-quotient thresholds derived in Table B7-2.
- **Table B8.** WOE analysis for LPRSA based on comparisons to urban reference area data (Jamaica Bay and the area above Dundee Dam)

- Tables B8-1 and B8-2 include results from benthic community metric and sediment toxicity LOEs (Tables B3 and B4) and the sediment chemistry LOE (Table B7). Results from the quantitative analysis of uncertainty are also provided.
- Table B8-3 presents the framework for assigning WOE conclusions from the sum of LOE scores as well as the results form the WOE analysis. Results from the quantitative analysis of uncertainty are also provided.
- Table B8-4 provides a summary of the WOE conclusions. Table B8-4 is reproduced in Section 6 of the BERA main text.

- **Table B9**. WOE analysis for LPRSA based on comparisons to non-urban reference area data (Mullica River/Great Bay estuary)
  - Tables B9-1 through B9-4 are analogous to Tables B8-1 through B8-4, but using the LOEs based on comparisons of LPRSA data to non-urban reference area data (rather than urban reference area data). Table B9-4 is reproduced in Section 6 of the BERA main text.
- **Table B10.** Post-hoc analysis of LPRSA SQT locations with "medium impacts" result from WOE analysis (Tables B8 and B9)
  - Table B10-1 provides the framework for re-categorizing "medium impact" WOE analysis results for the purpose of addressing uncertainty.
  - Tables B10-2 through B10-5 present the re-categorization of "medium impact" results from WOE analyses. This was done for urban and non-urban WOE analyses as well as analyses run as part of the quantitative analysis of uncertainty.
  - Table B10-6 presents the summary of revised WOE conclusions. These tables are reproduced in Section 6 of the BERA main text.

References

Phillips BM, Hunt JW, Anderson BS, Puckett HM, Fairey R, Wilson CJ, Tjeerdema R. 2001. Statistical significance of sediment toxicity test results: threshold values derived by the detectable significance approach. Environ Toxicol Chem 20(2):371-373.

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Table B1-1. Sitewide dataset for Spearman correlation analysis

Location ID	Toxicity Test Type	Lead	Mercury	Zinc	Total HPAHs	Total LPAHs	Total PAHs	Bis-(2-ethylhexyl) phthalate	Total PCB Congeners	Total DDx	*C. dilutus* weight	*C. dilutus* biomass	*C. dilutus* survival	*H. azteca* weight	*H. azteca* biomass
LPRT01A	Estuarine	125	2000	238	19000	3700	23000	3900	550	26				93.6	0.823
LPRT01C	Estuarine	97.7	1800	203	22000	2000	24000	3000	530	66				52.9	0.259
LPRT01D	Estuarine	132	2300	280	20000	2700	23000	5400	660	59				86.1	0.699
LPRT01B	Estuarine	180	2900	351	13000	2000	15000	6000	1100	49				80.9	0.715
LPRT01E	Estuarine	87.8	1500	177	18000	1900	20000	4100	290	20				49.7	0.186
LPRT01F	Estuarine	167	1500	386	25000	3300	28000	4400	620	88				73.4	0.69
LPRT01G	Estuarine	138	1900	306	16000	2100	18000	5300	520	150				72.9	0.647
LPRT02A	Estuarine	181	1600	442	21000	2600	24000	8800	720	58				65.9	0.556
LPRT02D	Estuarine	146	1800	364	28000	4800	32000	7400	810	52				68.5	0.567
LPRT02B	Estuarine	244	1600	401	22000	2900	25000	7500	860	90				76.9	0.596
LPRT02C	Estuarine	176	1800	449	37000	4100	41000	9000	880	100				71.3	0.679
LPRT02E	Estuarine	193	1600	447	33000	4600	38000	10000	780	180				83.4	0.683
LPRT02F	Estuarine	214	2000	546	28000	3600	32000	9700	1200	85				66	0.606
LPRT03A	Estuarine	205	1900	489	28000	3800	32000	8700	1100	180				103.3	0.844
LPRT03B	Estuarine	161	660	270	46000	7600	53000	5600	2000	140				95	0.83
LPRT03C	Estuarine	163	1500	370	33000	5800	38000	8000	700	73				66.6	0.426
LPRT03D	Estuarine	200	2000	439	43000	5800	49000	8600	1100	210				71.4	0.642
LPRT03E	Estuarine	185	2000	500	25000	2900	28000	9800	890	110				109.7	0.951
LPRT03F	Estuarine	162	1600	409	31000	4400	35000	6400	970	140				59.8	0.432
LPRT04A	Estuarine	42.6	120	96.2	1900	310	2200	390	36	110				97.1	0.959
LPRT04B	Estuarine	285	2800	531	51000	6200	57000	12000	2700	140				79.9	0.708
LPRT04C	Estuarine	173	3300	693	28000	4900	33000	15000	6800	55				40.5	0.17
LPRT04D	Estuarine	180	1000	389	45000	5700	51000	5000	910	110				75.3	0.514
LPRT04E	Estuarine	205	1600	526	33000	3700	36000	7200	1200	60				59.6	0.353
LPRT04F	Freshwater	114	840	200	63000	13000	76000	1900	470	100	96.5	0.821	0.83	51.2	0.44
LPRT05A	Estuarine	281	2600	508	110000	59000	170000	7400	670	74				16.9	0.0258
LPRT05B	Estuarine	224	1900	488	43000	6100	50000	7900	780	57				20.7	0.0595
LPRT05C	Freshwater	165	1600	349	28000	4800	33000	7100	1000	79	71.7	0.703	0.95	37.4	0.186
LPRT05D	Freshwater	202	2300	467	33000	4000	37000	10000	950	480	1	0.713	0.89	47.1	0.315
LPRT05E	Freshwater	167	1300	331	18000	2800	21000	8600	650	75	71.1	0.706	0.96	65.7	0.45
LPRT05F	Freshwater	220	1800	463	26000	3200	29000	19000	1200	60	60.9	0.651	1	48.4	0.16
LPRT06A	Freshwater	235	2300	583	27000	3300	31000	11000	1000	93	60.9	0.59	0.94	43.3	0.385
LPRT06B	Freshwater	221	2200	543	28000	3500	32000	12000	1000	94	78.7	0.656	0.83	34.1	0.213
LPRT06C	Estuarine	192	890	293	46000	7900	54000	5600	570	63				48.1	0.255
LPRT06D	Freshwater	380	810	288	35000	5800	41000	5800	480	71	68.7	0.621	0.9	28.5	0.193
LPRT06E	Freshwater	232	950	318	49000	8800	58000	8200	750	78	80.4	0.738	0.9	46.8	0.37
LPRT06F	Freshwater	225	2300	462	29000	3400	32000	13000	970	91	65.8	0.607	0.88	65.5	0.582
LPRT07A	Freshwater	150	730	229	28000	3700	32000	3200	680	55	92	0.9	0.96	47.4	0.307
LPRT07B	Freshwater	181	1200	358	45000	5300	50000	8800	1400	82	65.7	0.646	0.95	36.6	0.0732
LPRT07C	Freshwater	410	3600	673	35000	5700	41000	52000	3600	250	50.2	0.522	1	49.8	0.361

Table B1-1. Sitewide dataset for Spearman correlation analysis

Location ID	Toxicity Test Type	Lead	Mercury	Zinc	Total HPAHs	Total LPAHs	Total PAHs	Bis-(2-ethylhexyl) phthalate	Total PCB Congeners	Total DDx	*C. dilutus* weight	*C. dilutus* biomass	*C. dilutus* survival	*H. azteca* weight	*H. azteca* biomass
LPRT07D	Freshwater	268	1400	588	27000	3300	30000	13000	940	100	80.9	0.746	0.89	53.4	0.35
LPRT07E	Freshwater	294	2600	521	37000	4400	41000	13000	1300	1300	69.3	0.592	0.85	54.9	0.416
LPRT08A	Freshwater	307	3700	476	100000	55000	160000	8300	840	70	74.7	0.756	0.97	48.8	0.218
LPRT08B	Freshwater	199	2100	472	23000	2700	25000	14000	830	100	65.3	0.682	1	63.1	0.399
LPRT08C	Freshwater	325	6200	770	85000	18000	100000	20000	1800	780	56.4	0.597	1	65.3	0.225
LPRT08D	Freshwater	151	300	167	34000	7300	42000	2100	340	68	116.5	0.836	0.73	55.8	0.429
LPRT08E	Freshwater	68.3	150	106	11000	930	12000	770	71	95	89.1	0.944	1.1	108.1	0.469
LPRT09B	Freshwater	38.5	150	400	25000	4600	29000	800	25000	310	93.4	0.802	0.85	100.7	0.726
LPRT09H	Freshwater	37.8	160	92.8	4700	660	5300	260	1700	110	90.9	0.785	0.84	61.3	0.497
LPRT09A	Freshwater	168	970	226	26000	3400	29000	5200	1900	160	59.6	0.579	0.94	47	0.125
LPRT09C	Freshwater	72.2	360	163	27000	3600	31000	2200	550	42	79.1	0.692	0.88	86.8	0.602
LPRT09D	Freshwater	211	2300	535	27000	2900	29000	12000	820	71	80	0.831	1	55.9	0.438
LPRT09E	Freshwater	262	1800	460	37000	3700	40000	8000	1000	74	75.6	0.756	0.97	54.9	0.328
LPRT09F	Freshwater	302	2400	430	22000	2600	25000	14000	2400	140	97.3	0.905	0.91	46.6	0.211
LPRT09G	Freshwater	36.2	290	102	1400	84	1400	1000	170	17	116	0.975	0.94	61.5	0.635
LPRT10A	Freshwater	211	1800	511	31000	3400	34000	4200	880	80	44.2	0.345	0.79	68.7	0.414
LPRT10B	Freshwater	251	2800	439	20000	3100	23000	5500	3500	140	22.5	0.0471	0.16	50.1	0.0903
LPRT10C	Freshwater	174	1200	412	21000	2400	23000	3650	640	64	36.2	0.363	0.99	72.4	0.524
LPRT10D	Freshwater	51.4	110	205	18000	2700	21000	810	56	37	72.5	0.573	0.8	88.7	0.92
LPRT10E	Freshwater	230	1400	502	53000	6600	60000	12000	700	100	70.7	0.726	0.99	67.3	0.255
LPRT11A	Freshwater	46.8	240	159	27000	4900	32000	205	190	23	65.4	0.522	0.8	80.6	0.763
LPRT11B	Freshwater	428	4100	897	36000	7100	43000	750	560	41	40.6	0.203	0.47	58.8	0.374
LPRT11C	Freshwater	142	320	165	31000	6100	38000	700	120	36	94	0.773	0.83	79.3	0.508
LPRT11D	Freshwater	128	920	311	29000	3600	33000	2100	450	55	65.4	0.557	0.88	75.2	0.607
LPRT11E	Freshwater	256	2100	639	31000	3600	35000	6000	1200	75	50.4	0.464	0.93	55.3	0.524
LPRT11F	Freshwater	233	1800	492	34000	7600	42000	800	250	21	48.5	0.458	0.95	83.2	0.428
LPRT11G	Freshwater	397	5800	1070	37000	4400	42000	12500	8900	200	17.5	0.124	0.73	30.6	0.0607
LPRT12A	Freshwater	223	1800	558	28000	2900	31000	4600	1200	96	58.3	0.559	0.95	47.6	0.321
LPRT12B	Freshwater	228	1700	506	36000	4700	41000	5000	940	110	39.2	0.38	0.98	56.5	0.477
LPRT12C	Freshwater	187	1500	374	28000	3900	32000	3250	1300	140	36.7	0.293	0.8	45	0.27
LPRT12D	Freshwater	133	1000	330	18000	2200	20000	1200	290	33	48.2	0.489	1	43.3	0.259
LPRT12E	Freshwater	319	3300	607	34000	5000	39000	14000	3500	120	28.1	0.254	0.91	48.8	0.273
LPRT13A	Freshwater	116	670	277	42000	8200	50000	3800	470	36	58.5	0.511	0.87	46.5	0.301
LPRT13B	Freshwater	162	2200	385	24000	2900	26000	25000	4000	65	55.6	0.52	0.94	53.4	0.483
LPRT13C	Freshwater	147	2600	359	27000	3300	30000	12000	1100	110	62.5	0.627	1	49.2	0.409
LPRT13D	Freshwater	39.9	210	80.7	3900	590	4500	910	110	12	40.7	0.38	0.94	56.6	0.518
LPRT13E	Freshwater	140	830	338	27000	3700	31000	6700	410	42	75.5	0.734	0.97	50.4	0.458
LPRT13F	Freshwater	107	350	203	31000	4500	35000	4800	260	29	109.2	1.04	0.95	67	0.537
LPRT13G	Freshwater	173	1200	444	22000	3500	26000	8700	800	360	66.6	0.66	0.99	58.3	0.53
LPRT14A	Freshwater	132	410	211	27000	3200	30000	3300	280	36	47.8	0.445	0.93	54.1	0.273

Table B1-1. Sitewide dataset for Spearman correlation analysis

Location ID	Toxicity Test Type	Lead	Mercury	Zinc	Total HPAHs	Total LPAHs	Total PAHs	Bis-(2-ethylhexyl) phthalate	Total PCB Congeners	Total DDx	*C. dilutus* weight	*C. dilutus* biomass	*C. dilutus* survival	*H. azteca* weight	*H. azteca* biomass
LPRT14B	Freshwater	163	390	259	23000	3300	27000	7000	250	26	48.8	0.483	0.99	35	0.161
LPRT14C	Freshwater	110	220	177	39000	9600	49000	840	280	18	66.7	0.613	0.93	60.3	0.523
LPRT14D	Freshwater	160	390	256	26000	4000	31000	3300	300	22	46.5	0.373	0.8	49.9	0.268
LPRT14E	Freshwater	45.6	150	98	17000	2700	20000	640	120	11	52.7	0.507	0.96	39.1	0.214
LPRT14F	Freshwater	96.1	250	114	23000	4900	28000	4900	120	12	74.2	0.681	0.93	53.9	0.482
LPRT15A	Freshwater	102	340	211	26000	3900	29000	2800	200	21	54.2	0.541	1	59	0.359
LPRT15B	Freshwater	193	880	506	27000	2700	30000	2450	400	69	49.3	0.495	1	71.2	0.55
LPRT15C	Freshwater	62.3	90	90.2	19000	4400	23000	400	56	10	45.8	0.431	0.94	57.3	0.46
LPRT15D	Freshwater	96.8	210	96	14000	2500	16000	1200	68	7.8	46.9	0.359	0.79	59.5	0.445
LPRT15E	Freshwater	56.9	240	121	19000	4100	24000	710	69	7.1	47.5	0.464	0.98	66.7	0.594
LPRT15F	Freshwater	31.1	200	87	20000	7800	28000	310	92	3.7	48	0.438	0.93	67.1	0.635
LPRT16A	Freshwater	44.7	130	105	6900	780	7600	130	40	6.4	78.6	0.538	0.74	68.5	0.525
LPRT16B	Freshwater	47.4	240	128	22000	4600	27000	970	190	15	85.7	0.663	0.79	119.4	1.14
LPRT16C	Freshwater	21.3	94	72.2	9400	1400	11000	175	30	6.1	93.4	0.791	0.88	107.4	1.05
LPRT16D	Freshwater	30	68	89	75000	13000	88000	130	52	11	104.9	1.01	0.96	72.7	0.634
LPRT16E	Freshwater	148	400	252	37000	7000	44000	330	78	24	106.6	0.895	0.84	106.7	1.03
LPRT17D	Freshwater	126	270	135	40000	6800	47000	920	110	13	53.6	0.516	0.96	66.6	0.702
LPRT17A	Freshwater	127	500	181	32000	5900	37000	1200	2900	17	50.5	0.433	0.79	64.5	0.649

Note: benthic community data was not collected at LPRT16B

Table B1-1 presents the sitewide (RM 0 to RM 17.4) LPRSA SQT dataset that was used to conduct the Spearman rank correlation analyses sum

Table B1-1. Sitewide dataset for S

Location ID	Toxicity Test Type	Lead	Mercury	Zinc	*H. azteca* survival	*A. abdita* survival	Abundance (per m^2)	Taxa Richness	Shannon-Wiener H'	Pielou's J'	Swartz's Dominance Index	Hilsenhoff Biotic Index	TOC	Percent fines
LPRT01A	Estuarine	125	2000	238	0.87	0.87	1090	8	1.06	0.507	2		3	97
LPRT01C	Estuarine	97.7	1800	203	0.42	0.92	2740	16	2.01	0.727	4.67		2	77.2
LPRT01D	Estuarine	132	2300	280	0.81	0.58	2050	12.3	1.63	0.65	3		2.4	88.8
LPRT01B	Estuarine	180	2900	351	0.89	0.95	614	8.22	1.34	0.662	2.67		2.1	93.7
LPRT01E	Estuarine	87.8	1500	177	0.25	0.85	2750	13.1	1.71	0.669	3.11		1.4	43.1
LPRT01F	Estuarine	167	1500	386	0.95	0.85	357	7	1.06	0.537	2		3.2	77.5
LPRT01G	Estuarine	138	1900	306	0.89	0.97	973	10.7	1.42	0.6	2.33		3	91.7
LPRT02A	Estuarine	181	1600	442	0.86	0.89	709	9.33	1.57	0.718	3.11		2.2	81.9
LPRT02D	Estuarine	146	1800	364	0.82	0.95	1290	13.1	2.07	0.816	5		3.7	83.5
LPRT02B	Estuarine	244	1600	401	0.71	0.69	127	6.67	1.68	0.887	4		2.4	63.2
LPRT02C	Estuarine	176	1800	449	0.95	0.92	630	7.67	1.67	0.823	3.67		4	80.1
LPRT02E	Estuarine	193	1600	447	0.82	0.78	155	5.5	1.42	0.83	3.5		3.3	68.8
LPRT02F	Estuarine	214	2000	546	0.9	0.83	240	9.33	1.73	0.807	4		3.8	78.8
LPRT03A	Estuarine	205	1900	489	0.82	0.61	320	2.67	0.427	0.43	1.33		4.2	53.5
LPRT03B	Estuarine	161	660	270	0.87	0.94	773	6.33	1.45	0.803	3		1.8	23.7
LPRT03C	Estuarine	163	1500	370	0.56	0.87	894	7.33	1.21	0.61	2.56		3.9	76.5
LPRT03D	Estuarine	200	2000	439	0.85	0.87	1370	10.9	1.69	0.728	3.89		1.8	57.2
LPRT03E	Estuarine	185	2000	500	0.86	0.89	593	7.67	1.17	0.69	2		4.2	94.1
LPRT03F	Estuarine	162	1600	409	0.73	0.84	693	8.67	1.49	0.697	3		3	82.1
LPRT04A	Estuarine	42.6	120	96.2	0.98	0.82	3420	9.33	1.31	0.599	2.56		2.1	45.4
LPRT04B	Estuarine	285	2800	531	0.87	0.23	523	6.33	1.41	0.79	2.67		3.1	47.6
LPRT04C	Estuarine	173	3300	693	0.36	0.15	721	8.44	1.52	0.778	3.44		2	29.8
LPRT04D	Estuarine	180	1000	389	0.69	0.71	1220	5.33	0.507	0.297	1		3.8	35.6
LPRT04E	Estuarine	205	1600	526	0.62	0.83	1170	6	1.07	0.607	2.33		6.9	53.1
LPRT04F	Freshwater	114	840	200	0.86		333	4.67	1.09	0.757	2.33		3	23.1
LPRT05A	Estuarine	281	2600	508	0.069	0.37	2280	11.1	1.54	0.64	3		4.2	66
LPRT05B	Estuarine	224	1900	488	0.16	0.88	852	9	1.57	0.746	3.56		5.3	71.3
LPRT05C	Freshwater	165	1600	349	0.53		2940	10.3	1.33	0.57	2.33		2.6	63
LPRT05D	Freshwater	202	2300	467	0.68		227	6	1.08	0.603	2.67		3.6	85.9
LPRT05E	Freshwater	167	1300	331	0.7		200	3.67	1.08	0.85	2		3.1	42.4
LPRT05F	Freshwater	220	1800	463	0.33		147	3.33	0.737	0.74	2		3.6	66
LPRT06A	Freshwater	235	2300	583	0.87		6530	7	0.843	0.463	1.56		5.6	92.8
LPRT06B	Freshwater	221	2200	543	0.65		3380	4.33	0.147	0.1	1		4.7	93.8
LPRT06C	Estuarine	192	890	293	0.53	0.88	4660	9.89	1.2	0.528	2		2.2	23.4
LPRT06D	Freshwater	380	810	288	0.63		7030	8.33	1.13	0.533	2		3.8	23.5
LPRT06E	Freshwater	232	950	318	0.81		2490	7.33	1.21	0.603	2.33		3.1	20.9
LPRT06F	Freshwater	225	2300	462	0.89		927	2.33	0.547	0.727	1.67		3.6	70.6
LPRT07A	Freshwater	150	730	229	0.67		5110	9	0.942	0.436	1.78		2.8	7.6
LPRT07B	Freshwater	181	1200	358	0.22		3200	7.67	0.933	0.467	1.67		3.9	23.5
LPRT07C	Freshwater	410	3600	673	0.71		2680	7.33	0.893	0.469	1.44		3.6	82.7

Table B1-1. Sitewide dataset for S

Location ID	Toxicity Test Type	Lead	Mercury	Zinc	*H. azteca* survival	*A. abdita* survival	Abundance (per m^2)	Taxa Richness	Shannon-Wiener H'	Pielou's J'	Swartz's Dominance Index	Hilsenhoff Biotic Index	TOC	Percent fines
LPRT07D	Freshwater	268	1400	588	0.65		1630	5.33	0.44	0.26	1		5.8	63.2
LPRT07E	Freshwater	294	2600	521	0.75		3740	6.67	0.383	0.217	1		4.5	97.5
LPRT08A	Freshwater	307	3700	476	0.51		253	4.33	0.863	0.657	1.67		3.2	56.9
LPRT08B	Freshwater	199	2100	472	0.63		340	3	0.773	0.703	2		4.1	97.4
LPRT08C	Freshwater	325	6200	770	0.36		4030	10.6	1.23	0.534	2.22		4.4	67.8
LPRT08D	Freshwater	151	300	167	0.76		843	5.67	1.1	0.677	2		2.1	4.6
LPRT08E	Freshwater	68.3	150	106	0.69		4070	8.11	1.04	0.523	1.78		1.6	1.8
LPRT09B	Freshwater	38.5	150	400	0.71		533	3.67	0.877	0.717	2		1.8	1
LPRT09H	Freshwater	37.8	160	92.8	0.81		1330	7.33	0.98	0.503	1.67		2.8	1.4
LPRT09A	Freshwater	168	970	226	0.37		1300	9.33	1.14	0.51	2		1.9	0.2
LPRT09C	Freshwater	72.2	360	163	0.68		9890	9.11	1.07	0.55	2		2.5	8.1
LPRT09D	Freshwater	211	2300	535	0.79		20300	10.9	0.947	0.399	1.56		3.9	90.2
LPRT09E	Freshwater	262	1800	460	0.6		6180	9.33	1.04	0.46	2		4.3	66.2
LPRT09F	Freshwater	302	2400	430	0.43		5380	8.67	0.647	0.3	1		3.9	60.9
LPRT09G	Freshwater	36.2	290	102	1		1090	4.67	0.967	0.627	2		0.45	4.4
LPRT10A	Freshwater	211	1800	511	0.65		11100	9.67	0.81	0.357	1.33		3.2	64.3
LPRT10B	Freshwater	251	2800	439	0.19		7210	14.7	1.22	0.453	1.67		2	29.1
LPRT10C	Freshwater	174	1200	412	0.69		24300	12.8	0.968	0.378	1.44		2.2	48.9
LPRT10D	Freshwater	51.4	110	205	1		5030	13.7	1.49	0.593	3		1.1	2.2
LPRT10E	Freshwater	230	1400	502	0.37		37900	11.8	1.19	0.484	2.33		4.4	63.2
LPRT11A	Freshwater	46.8	240	159	0.93		4280	14	1.48	0.57	2.33		1.2	5.4
LPRT11B	Freshwater	428	4100	897	0.65		4610	13.3	1.65	0.647	3		1.9	68.8
LPRT11C	Freshwater	142	320	165	0.65		6100	13.7	1.28	0.497	2.33		1.6	11.1
LPRT11D	Freshwater	128	920	311	0.8		29600	16.2	1.38	0.5	2.56		2.6	30.2
LPRT11E	Freshwater	256	2100	639	0.89		21200	11.3	1.08	0.462	2.11		4.9	79.4
LPRT11F	Freshwater	233	1800	492	0.53		6050	16	1.62	0.587	3.33		1.5	39.6
LPRT11G	Freshwater	397	5800	1070	0.16		3170	7	0.84	0.44	1.67		4	60.4
LPRT12A	Freshwater	223	1800	558	0.68		7270	15.6	1.38	0.51	2.67		2.1	84.8
LPRT12B	Freshwater	228	1700	506	0.84		8160	13	1.34	0.52	2.67		3.5	58
LPRT12C	Freshwater	187	1500	374	0.59		9850	15.3	1.26	0.463	2.33		1.9	25.1
LPRT12D	Freshwater	133	1000	330	0.59		5870	11	1.07	0.443	1.67		2	39.6
LPRT12E	Freshwater	319	3300	607	0.53		20900	9.56	1.23	0.57	2.44		3	47
LPRT13A	Freshwater	116	670	277	0.56		2600	11.3	1.28	0.54	2		5.4	21.6
LPRT13B	Freshwater	162	2200	385	0.9		5790	11.7	1.33	0.547	2		3.6	64.1
LPRT13C	Freshwater	147	2600	359	0.84		4630	9	1.07	0.49	2		4.6	83.9
LPRT13D	Freshwater	39.9	210	80.7	0.93		680	7.67	1.43	0.727	3.33		0.47	4.5
LPRT13E	Freshwater	140	830	338	0.9		23200	12.9	1.4	0.55	2.89		1.7	26.1
LPRT13F	Freshwater	107	350	203	0.82		12400	12.9	1.42	0.554	2.67		0.87	10.9
LPRT13G	Freshwater	173	1200	444	0.94		2690	8	1.15	0.57	2		2.5	36.6
LPRT14A	Freshwater	132	410	211	0.45		27600	14.2	1.41	0.543	2.56	9.56	1.9	16.1

Table B1-1. Sitewide dataset for S

Location ID	Toxicity Test Type	Lead	Mercury	Zinc	*H. azteca* survival	*A. abdita* survival	Abundance (per m^2)	Taxa Richness	Shannon-Wiener H'	Pielou's J'	Swartz's Dominance Index	Hilsenhoff Biotic Index	TOC	Percent fines
LPRT14B	Freshwater	163	390	259	0.46		11500	14	1.63	0.62	3.67	9.36	1.6	17.6
LPRT14C	Freshwater	110	220	177	0.86		9120	17.8	1.36	0.468	2.3	9.39	2.4	2.9
LPRT14D	Freshwater	160	390	256	0.64		7980	17	1.73	0.61	3.67	8.99	1.1	14.1
LPRT14E	Freshwater	45.6	150	98	0.53		4520	14.7	1.57	0.587	2.67	8.54	1.5	3.6
LPRT14F	Freshwater	96.1	250	114	0.88		8450	19	1.96	0.677	5	8.67	1.1	2.8
LPRT15A	Freshwater	102	340	211	0.59		30600	18.7	1.61	0.55	2.67	8.99	1.5	13.1
LPRT15B	Freshwater	193	880	506	0.78		21800	14.2	1.34	0.562	2.33	9.64	5.7	31.1
LPRT15C	Freshwater	62.3	90	90.2	0.81		2060	11.7	1.55	0.637	3.33	8.53	2.2	1.9
LPRT15D	Freshwater	96.8	210	96	0.74		15700	17.1	1.69	0.6	3.22	9.32	0.36	3.4
LPRT15E	Freshwater	56.9	240	121	0.89		7020	18.3	1.85	0.64	4	9.1	0.56	1.8
LPRT15F	Freshwater	31.1	200	87	0.95		4180	15.3	1.61	0.593	3.33	8.76	0.2	1.4
LPRT16A	Freshwater	44.7	130	105	0.79		12800	22.7	1.58	0.507	2.67	9.19	0.93	4.8
LPRT16B	Freshwater	47.4	240	128	0.95								2.6	2.2
LPRT16C	Freshwater	21.3	94	72.2	0.98		10400	21.2	2.07	0.71	5.33	8.56	0.56	10.7
LPRT16D	Freshwater	30	68	89	0.87		8680	17.3	1.8	0.633	4	8.06	0.68	3.9
LPRT16E	Freshwater	148	400	252	0.93		1990	8	1.32	0.64	2.67	8.91	2.1	11.4
LPRT17D	Freshwater	126	270	135	1		3640	9.56	0.901	0.433	1.67	9.45	0.85	2
LPRT17A	Freshwater	127	500	181	0.99		2770	11.3	1.41	0.583	2	8.96	0.19	12.1

Note: benthic community data was not collected at L

Table B1-1 presents the sitewide (RM marized in later tabs within

Table B1-2. Tidal freshwater dataset for Spearman correlation analysis

ID	Tox zone	Total PAHs	Bis-(2-ethylhexyl)phthalate	Phenol	Total PCB Congeners	Total Chlordanes	Total DDx	*C. dilutus* weight	*C. dilutus* biomass	*C. dilutus* survival	*H. azteca* weight	*H. azteca* biomass	*H. azteca* survival	Abundance (per m^2)
LPRT14A	Freshwater	30000	3300	165	280	60	36	47.8	0.445	0.93	54.1	0.273	0.45	27600
LPRT14B	Freshwater	27000	7000	150	250	46	26	48.8	0.483	0.99	35	0.161	0.46	11500
LPRT14C	Freshwater	49000	840	125	280	27	18	66.7	0.613	0.93	60.3	0.523	0.86	9120
LPRT14D	Freshwater	31000	3300	150	300	51	22	46.5	0.373	0.8	49.9	0.268	0.64	7980
LPRT14E	Freshwater	20000	640	110	120	21	11	52.7	0.507	0.96	39.1	0.214	0.53	4520
LPRT14F	Freshwater	28000	4900	120	120	21	12	74.2	0.681	0.93	53.9	0.482	0.88	8450
LPRT15A	Freshwater	29000	2800	150	200	51	21	54.2	0.541	1	59	0.359	0.59	30600
LPRT15B	Freshwater	30000	2450	415	400	93	69	49.3	0.495	1	71.2	0.55	0.78	21800
LPRT15C	Freshwater	23000	400	100	56	15	10	45.8	0.431	0.94	57.3	0.46	0.81	2060
LPRT15D	Freshwater	16000	1200	125	68	18	7.8	46.9	0.359	0.79	59.5	0.445	0.74	15700
LPRT15E	Freshwater	24000	710	115	69	13	7.1	47.5	0.464	0.98	66.7	0.594	0.89	7020
LPRT15F	Freshwater	28000	310	110	92	11	3.7	48	0.438	0.93	67.1	0.635	0.95	4180
LPRT16A	Freshwater	7600	130	110	40	15	6.4	78.6	0.538	0.74	68.5	0.525	0.79	12800
LPRT16B	Freshwater	27000	970	140	190	24	15	85.7	0.663	0.79	119.4	1.14	0.95	
LPRT16C	Freshwater	11000	175	135	30	3.7	6.1	93.4	0.791	0.88	107.4	1.05	0.98	10400
LPRT16D	Freshwater	88000	130	125	52	40	11	104.9	1.01	0.96	72.7	0.634	0.87	8680
LPRT16E	Freshwater	44000	330	145	78	32	24	106.6	0.895	0.84	106.7	1.03	0.93	1990
LPRT17D	Freshwater	47000	920	115	110	28	13	53.6	0.516	0.96	66.6	0.702	1	3640
LPRT17A	Freshwater	37000	1200	135	2900	44	17	50.5	0.433	0.79	64.5	0.649	0.99	2770

Note: benthic community data was not collected at LPRT16B

Table B1-2 presents the tidal freshwater LPRSA (RM 13 to RM 17.4) SQT dataset that was used to conduct the Spearman rank correlation analyses sur

Taxa Richness	Shannon-Wiener H'	Pielou's J'	Swartz's Dominance Index	Hilsenhoff Biotic Index	TOC	Percent fines
14.2	1.41	0.543	2.56	9.56	1.9	16.1
14	1.63	0.62	3.67	9.36	1.6	17.6
17.8	1.36	0.468	2.3	9.39	2.4	2.9
17	1.73	0.61	3.67	8.99	1.1	14.1
14.7	1.57	0.587	2.67	8.54	1.5	3.6
19	1.96	0.677	5	8.67	1.1	2.8
18.7	1.61	0.55	2.67	8.99	1.5	13.1
14.2	1.34	0.562	2.33	9.64	5.7	31.1
11.7	1.55	0.637	3.33	8.53	2.2	1.9
17.1	1.69	0.6	3.22	9.32	0.36	3.4
18.3	1.85	0.64	4	9.1	0.56	1.8
15.3	1.61	0.593	3.33	8.76	0.2	1.4
22.7	1.58	0.507	2.67	9.19	0.93	4.8
					2.6	2.2
21.2	2.07	0.71	5.33	8.56	0.56	10.7
17.3	1.8	0.633	4	8.06	0.68	3.9
8	1.32	0.64	2.67	8.91	2.1	11.4
9.56	0.901	0.433	1.67	9.45	0.85	2
11.3	1.41	0.583	2	8.96	0.19	12.1

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Table B1-3a. Sitewide SRC results, p-values

	Lead	Mercury	Zinc	Total HPAHs	Total LPAHs	Bis-(2-ethylhexyl) phthalate	Total PCB Congeners	Total DDx	*C. dilutus* weight	*C. dilutus* biomass	*C. dilutus* survival	*H. azteca* weight
Lead	NA	0	0	2.84E-08	0.0158748	0	8.55E-13	2.59E-10	0.0226746	0.1658434	0.4118504	0.0004331
Mercury	0	NA	0	0.001326	0.5064204	0	4.44E-16	2.16E-09	0.0117772	0.18937	0.2481935	0.0074305
Zinc	0	0	NA	5.17E-06	0.1434465	0	4.44E-16	1.81E-11	0.0171907	0.1558722	0.1963996	0.0211015
Total HPAHs	2.84E-08	0.001326	5.17E-06	NA	0	0.00126883	0.00093879	0.0031443	0.7394158	0.4570534	0.7440156	0.0518813
Total LPAHs	0.0158748	0.5064204	0.1434465	0	NA	0.56285139	0.34708033	0.7605032	0.6469903	0.6775085	0.2654806	0.3316597
Bis-(2-ethylhexyl)phthalate	0	0	0	0.0012688	0.5628514	NA	0	1.56E-11	0.3236585	0.7529153	0.0124967	0.0004868
Total PCB Congeners	8.55E-13	4.44E-16	4.44E-16	0.0009388	0.3470803	0	NA	0	0.1634278	0.5575246	0.9776911	0.0054035
Total DDx	2.59E-10	2.16E-09	1.81E-11	0.0031443	0.7605032	1.56E-11	0	NA	0.7627947	0.3320988	0.5502738	0.4585478
***C. dilutus* weight**	0.0226746	0.0117772	0.0171907	0.7394158	0.6469903	0.32365855	0.16342782	0.7627947	NA	0	0.7342605	0.042996
***C. dilutus* biomass**	0.1658434	0.18937	0.1558722	0.4570534	0.6775085	0.75291532	0.55752465	0.3320988	0	NA	0.1456313	0.23334
***C. dilutus* survival**	0.4118504	0.2481935	0.1963996	0.7440156	0.2654806	0.01249671	0.97769112	0.5502738	0.7342605	0.1456313	NA	0.4982745
***H. azteca* weight**	0.0004331	0.0074305	0.0211015	0.0518813	0.3316597	0.00048676	0.00540354	0.4585478	0.042996	0.23334	0.4982745	NA
***H. azteca* biomass**	9.01E-06	0.0017702	0.0021821	0.0221817	0.292847	0.00042949	0.00641512	0.1846506	0.0163525	0.1957433	0.1996037	0
***H. azteca* survival**	2.24E-05	0.0018666	0.0010551	0.0184218	0.2590663	0.00507259	0.00607274	0.0774832	0.0336452	0.20705	0.3041122	1.09E-09
***A. abdita* survival**	0.060865	0.385817	0.0298045	0.2920371	0.3308339	0.23455707	0.26237442	0.4468361	NA	NA	NA	0.9746464
Abundance (per m2)	0.2815766	0.0099935	0.1457635	0.6464744	0.563548	0.00321816	0.00254478	0.0006571	0.1043637	0.0174235	0.5055762	0.1789558
Taxa Richness	0.0003195	0.0007997	0.000355	0.0620035	0.7070962	1.24E-07	1.07E-06	3.68E-09	0.017476	0.0006309	0.6844278	0.9781703
Shannon-Wiener H'	0.000269	0.0094729	0.0006124	0.1513108	0.6161246	0.00033974	2.13E-05	1.18E-06	0.0780499	0.0109117	0.4221549	0.1313014
Pielou's J'	0.0837074	0.7332876	0.2208432	0.5516287	0.5401499	0.98477462	0.24692891	0.2078947	0.4863424	0.3276033	0.80743	0.0290177
Swartz's Dominance Index	0.002413	0.0299062	0.0095975	0.3956793	0.4235034	0.00908773	0.00013755	7.42E-05	0.1919997	0.1542916	0.7252685	0.1001757
Hilsenhoff Biotic Index	0.0038252	0.0070589	0.0048292	0.3841369	0.3402662	0.03773973	0.04349162	0.0296936	0.3491982	0.3557868	0.6523946	0.7291239
TOC	4.37E-13	2.66E-11	1.78E-15	4.24E-05	0.3073066	4.00E-15	1.13E-08	7.60E-10	0.8938956	0.3138975	0.1493069	0.028925
Percent fines	1.60E-11	0	0	0.100708	0.2108708	4.44E-15	2.08E-07	2.26E-07	0.0787295	0.5401779	0.090085	0.3857979

NA -- not applicable
TOC -- total organic carbon
Note: p-values less than 0.05 are considered statistically significant

Table B1-3b. Sitewide SRC results, r-values

	Lead	Mercury	Zinc	Total HPAHs	Total LPAHs	Bis-(2-ethylhexyl) phthalate	Total PCB Congeners	Total DDx	*C. dilutus* weight	*C. dilutus* biomass	*C. dilutus* survival	*H. azteca* weight
Lead	1	0.793819	0.8805259	0.5251032	0.2430795	0.734963	0.64390731	0.5846884	-0.2701969	-0.1662545	0.0989087	-0.3487226
Mercury	0.793819	1	0.8347019	0.3198299	0.0679105	0.78025693	0.70848495	0.5592466	-0.2974025	-0.1575805	0.1388429	-0.2688602
Zinc	0.8805259	0.8347019	1	0.4421199	0.1488782	0.75226051	0.70534444	0.613842	-0.2820038	-0.1702047	0.1551412	-0.2327352
Total HPAHs	0.5251032	0.3198299	0.4421199	1	0.8380689	0.32102245	0.32904872	0.2954265	0.0401727	0.0896756	-0.0394381	-0.1969842
Total LPAHs	0.2430795	0.0679105	0.1488782	0.8380689	1	0.05915637	0.09599344	0.0311841	0.0552881	0.0502143	-0.1339326	-0.099093
Bis-(2-ethylhexyl)phthalate	0.734963	0.7802569	0.7522605	0.3210225	0.0591564	1	0.71407938	0.6153809	-0.118825	0.038021	0.2950403	-0.3458346
Total PCB Congeners	0.6439073	0.7084849	0.7053444	0.3290487	0.0959934	0.71407938	1	0.7248334	-0.167195	-0.0707763	-0.0033786	-0.2789949
Total DDx	0.5846884	0.5592466	0.613842	0.2954265	0.0311841	0.61538094	0.72483337	1	-0.0364537	0.1167838	0.0720795	-0.0757407

***C. dilutus* weight**	-0.2701969	-0.2974025	-0.2820038	0.0401727	0.0552881	-0.118825	-0.16719498	-0.0364537	1	0.9149849	-0.0409977	0.2409011
***C. dilutus* biomass**	-0.1662545	-0.1575805	-0.1702047	0.0896756	0.0502143	0.03802096	-0.07077628	0.1167838	0.9149849	1	0.1744622	0.1432524
***C. dilutus* survival**	0.0989087	0.1388429	0.1551412	-0.0394381	-0.1339326	0.29504028	-0.00337864	0.0720795	-0.0409977	0.1744622	1	-0.0816852
***H. azteca* weight**	-0.3487226	-0.2688602	-0.2327352	-0.1969842	-0.099093	-0.3458346	-0.27899489	-0.0757407	0.2409011	0.1432524	-0.0816852	1
***H. azteca* biomass**	-0.4318163	-0.3118898	-0.3060025	-0.2308776	-0.1073274	-0.3489305	-0.27358091	-0.1351221	0.2840854	0.1553663	-0.1540502	0.8712726
***H. azteca* survival**	-0.4142034	-0.3104083	-0.3259616	-0.2377222	-0.1151033	-0.2809628	-0.27532277	-0.179193	0.2524893	0.1515619	-0.1236866	0.567651
***A. abdita* survival**	-0.3654437	-0.1738483	-0.4185269	-0.2104539	-0.194555	-0.2366974	-0.22353125	-0.1527629	NA	NA	NA	-0.0064201
Abundance (per m2)	-0.1104277	-0.2604052	-0.1488037	-0.0471558	-0.0593621	-0.2962261	-0.30311412	-0.339961	-0.1957535	-0.2834322	0.0808974	-0.1375939
Taxa Richness	-0.3578773	-0.3348896	-0.3553263	-0.1902229	-0.0386392	-0.5059887	-0.47180647	-0.5548867	-0.2833055	-0.398628	-0.0494379	0.0028148
Shannon-Wiener H'	-0.3620023	-0.2622046	-0.3417592	-0.1468062	0.0515387	-0.3563912	-0.41720736	-0.4701618	-0.212029	-0.3025286	-0.0974658	0.1542958
Pielou's J'	-0.1765176	-0.0350421	-0.1254422	-0.0611822	0.0629531	0.00196307	-0.11868347	-0.1290075	0.084578	0.1187305	-0.0296605	0.2217817
Swartz's Dominance Index	-0.3046522	-0.2206013	-0.261766	-0.0872058	0.0821919	-0.2635922	-0.37756774	-0.3912243	-0.1578021	-0.1720899	-0.0427541	0.1679125
Hilsenhoff Biotic Index	0.6453279	0.6110537	0.6327479	0.2183138	-0.2386364	0.49276137	0.48062021	0.5123967	-0.2343831	-0.2312855	0.1140066	-0.0877646
TOC	0.6501086	0.6097885	0.6959797	0.401193	0.1041812	0.68996012	0.53776789	0.5720512	0.0161139	0.1212284	0.1729092	-0.2207707
Percent fines	0.6151168	0.8262585	0.7171913	0.1667859	-0.1275071	0.68912327	0.49591556	0.4946393	-0.2100427	-0.0739079	0.2026576	-0.0885709

TOC -- total organic carbon

Table B1-3 presents the results from the Spearman rank correlation of sitewide LPRSA (RM 13 to RM 17.4) SQT data (Table B1-1). The two subtables w
present the calculated p-values (level of significance of the rank correlation test) and r values (strength of correlations) based on Spearman rank corre

H. azteca biomass	*H. azteca* survival	*A. abdita* survival	Abundance (per m^2)	Taxa Richness	Shannon-Wiener H'	Pielou's J'	Swartz's Dominance Index	Hilsenhoff Biotic Index	TOC	Percent fines
9.01E-06	2.24E-05	0.060865	0.28157657	0.0003195	0.000269	0.0837074	0.00241295	0.0038252	4.37E-13	1.60E-11
0.0017702	0.0018666	0.385817	0.00999354	0.0007997	0.0094729	0.7332876	0.02990623	0.0070589	2.66E-11	0
0.0021821	0.0010551	0.0298045	0.14576352	0.000355	0.0006124	0.2208432	0.00959752	0.0048292	1.78E-15	0
0.0221817	0.0184218	0.2920371	0.64647444	0.0620035	0.1513108	0.5516287	0.39567929	0.3841369	4.24E-05	0.100708
0.292847	0.2590663	0.3308339	0.563548	0.7070962	0.6161246	0.5401499	0.42350343	0.3402662	0.3073066	0.2108708
0.0004295	0.0050726	0.2345571	0.00321816	1.24E-07	0.0003397	0.9847746	0.00908773	0.0377397	4.00E-15	4.44E-15
0.0064151	0.0060727	0.2623744	0.00254478	1.07E-06	2.13E-05	0.2469289	0.00013755	0.0434916	1.13E-08	2.08E-07
0.1846506	0.0774832	0.4468361	0.00065708	3.68E-09	1.18E-06	0.2078947	7.42E-05	0.0296936	7.60E-10	2.26E-07
0.0163525	0.0336452	NA	0.1043637	0.017476	0.0780499	0.4863424	0.19199973	0.3491982	0.8938956	0.0787295
0.1957433	0.20705	NA	0.01742354	0.0006309	0.0109117	0.3276033	0.15429165	0.3557868	0.3138975	0.5401779
0.1996037	0.3041122	NA	0.5055762	0.6844278	0.4221549	0.80743	0.72526848	0.6523946	0.1493069	0.090085
0	1.09E-09	0.9746464	0.1789558	0.9781703	0.1313014	0.0290177	0.10017565	0.7291239	0.028925	0.3857979
NA	0	0.6458421	0.07791184	0.8085174	0.0787635	0.010817	0.0593782	0.5150748	0.0106912	0.2927686
0	NA	0.1529081	0.2642478	0.8797805	0.134915	0.0604018	0.11881193	0.2931001	0.0124772	0.2665997
0.6458421	0.1529081	NA	0.50451306	0.1447563	0.4003113	0.6845431	0.55209134	NA	0.4731681	0.0244414
0.0779118	0.2642478	0.5045131	NA	0	0.1879219	2.92E-09	0.90026976	0.0397418	0.0204978	0.0042288
0.8085174	0.8797805	0.1447563	0	NA	7.48E-14	0.222154	5.10E-07	0.5530084	1.14E-07	0.0011967
0.0787635	0.134915	0.4003113	0.18792189	7.48E-14	NA	1.03E-09	0	0.062894	4.86E-08	0.0485404
0.010817	0.0604018	0.6845431	2.92E-09	0.222154	1.03E-09	NA	3.11E-15	0.0049665	0.033419	0.8563811
0.0593782	0.1188119	0.5520913	0.90026976	5.10E-07	0	3.11E-15	NA	0.0144507	8.15E-06	0.207372
0.5150748	0.2931001	NA	0.03974182	0.5530084	0.062894	0.0049665	0.01445066	NA	0.2673958	0.1430707
0.0106912	0.0124772	0.4731681	0.02049778	1.14E-07	4.86E-08	0.033419	8.15E-06	0.2673958	NA	1.91E-13
0.2927686	0.2665997	0.0244414	0.00422883	0.0011967	0.0485404	0.8563811	0.20737198	0.1430707	1.91E-13	NA

H. azteca biomass	*H. azteca* survival	*A. abdita* survival	Abundance (per m^2)	Taxa Richness	Shannon-Wiener H'	Pielou's J'	Swartz's Dominance Index	Hilsenhoff Biotic Index	TOC	Percent fines
-0.4318163	-0.4142034	-0.3654437	-0.11042767	-0.3578773	-0.3620023	-0.1765176	-0.30465221	0.6453279	0.6501086	0.6151168
-0.3118898	-0.3104083	-0.1738483	-0.26040524	-0.3348896	-0.2622046	-0.0350421	-0.22060128	0.6110537	0.6097885	0.8262585
-0.3060025	-0.3259616	-0.4185269	-0.1488037	-0.3553263	-0.3417592	-0.1254422	-0.26176602	0.6327479	0.6959797	0.7171913
-0.2308776	-0.2377222	-0.2104539	-0.04715581	-0.1902229	-0.1468062	-0.0611822	-0.0872058	0.2183138	0.401193	0.1667859
-0.1073274	-0.1151033	-0.194555	-0.05936212	-0.0386392	0.0515387	0.0629531	0.08219192	-0.2386364	0.1041812	-0.1275071
-0.3489305	-0.2809628	-0.2366974	-0.29622614	-0.5059887	-0.3563912	0.0019631	-0.26359221	0.4927614	0.6899601	0.6891233
-0.2735809	-0.2753228	-0.2235312	-0.30311412	-0.4718065	-0.4172074	-0.1186835	-0.37756774	0.4806202	0.5377679	0.4959156
-0.1351221	-0.179193	-0.1527629	-0.33996096	-0.5548867	-0.4701618	-0.1290075	-0.39122432	0.5123967	0.5720512	0.4946393

0.2840854	0.2524893	NA	-0.19575354	-0.2833055	-0.212029	0.084578	-0.15780208	-0.2343831	0.0161139	-0.2100427
0.1553663	0.1515619	NA	-0.28343219	-0.398628	-0.3025286	0.1187305	-0.17208993	-0.2312855	0.1212284	-0.0739079
-0.1540502	-0.1236866	NA	0.0808974	-0.0494379	-0.0974658	-0.0296605	-0.04275409	0.1140066	0.1729092	0.2026576
0.8712726	0.567651	-0.0064201	-0.1375939	0.0028148	0.1542958	0.2217817	0.16791251	-0.0877646	-0.2207707	-0.0885709
1	0.8654637	0.0926323	-0.17986752	-0.0249251	0.179363	0.2577206	0.19213471	-0.1641714	-0.25681	-0.1073447
0.8654637	1	0.2828051	-0.11446484	-0.0155576	0.1528821	0.1913812	0.15942363	-0.2622613	-0.2515276	-0.1133126
0.0926323	0.2828051	1	0.13420987	0.2882938	0.1686803	0.0819322	0.11968729	NA	-0.1441483	0.4319785
-0.1798675	-0.1144648	0.1342099	1	0.7393659	0.1348324	-0.5578479	-0.01289096	0.4883842	-0.2350082	-0.2879996
-0.0249251	-0.0155576	0.2882938	0.73936594	1	0.6683242	-0.1250896	0.48400486	-0.1497934	-0.5072885	-0.3242083
0.179363	0.1528821	0.1686803	0.13483238	0.6683242	1	0.5708508	0.93020153	-0.4470285	-0.5198072	-0.2008457
0.2577206	0.1913812	0.0819322	-0.55784786	-0.1250896	0.5708508	1	0.69435263	-0.6311983	-0.2162069	0.0186158
0.1921347	0.1594236	0.1196873	-0.01289096	0.4840049	0.9302015	0.6943526	1	-0.5654995	-0.4357579	-0.1291547
-0.1641714	-0.2622613	NA	0.48838416	-0.1497934	-0.4470285	-0.6311983	-0.56549954	1	0.2761118	0.3593186
-0.25681	-0.2515276	-0.1441483	-0.2350082	-0.5072885	-0.5198072	-0.2162069	-0.43575794	0.2761118	1	0.6575738
-0.1073447	-0.1133126	0.4319785	-0.28799957	-0.3242083	-0.2008457	0.0186158	-0.12915474	0.3593186	0.6575738	1

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Table B1-4a. Tidal freshwater SRC results, p-values

	Total PAHs	Bis-(2-ethylhexyl) phthalate	Phenol	Total PCB Congeners	Total Chlordanes	Total DDx	*C. dilutus* weight	*C. dilutus* biomass	*C. dilutus* survival	*H. azteca* weight	*H. azteca* biomass	*H. azteca* survival
Total PAHs	NA	5.16E-01	1.36E-01	3.71E-02	4.09E-03	1.22E-02	4.11E-01	3.68E-01	4.41E-01	7.78E-01	4.70E-01	4.39E-01
Bis-(2-ethylhexyl)phthalate	5.16E-01	NA	6.96E-03	2.65E-04	4.63E-03	1.63E-03	9.08E-02	1.58E-01	4.12E-01	4.33E-03	2.12E-02	6.21E-02
Phenol	1.36E-01	6.96E-03	NA	6.14E-03	5.52E-05	2.57E-05	8.21E-01	7.93E-01	6.42E-01	9.86E-01	6.48E-01	1.81E-01
Total PCB Congeners	3.71E-02	2.65E-04	6.14E-03	NA	2.18E-04	8.08E-05	2.76E-01	2.38E-01	5.40E-01	9.57E-02	2.13E-01	2.76E-01
Total Chlordanes	4.09E-03	4.63E-03	5.52E-05	2.18E-04	NA	1.80E-08	8.42E-01	8.75E-01	2.28E-01	2.82E-01	1.81E-01	6.33E-02
Total DDx	1.22E-02	1.63E-03	2.57E-05	8.08E-05	1.80E-08	NA	9.09E-01	9.57E-01	2.82E-01	2.73E-01	2.31E-01	8.49E-02
***C. dilutus* weight**	4.11E-01	9.08E-02	8.21E-01	2.76E-01	8.42E-01	9.09E-01	NA	1.33E-09	5.34E-01	8.62E-03	1.41E-02	9.43E-02
***C. dilutus* biomass**	3.68E-01	1.58E-01	7.93E-01	2.38E-01	8.75E-01	9.57E-01	1.33E-09	NA	7.21E-01	2.93E-02	5.27E-02	2.15E-01
***C. dilutus* survival**	4.41E-01	4.12E-01	6.42E-01	5.40E-01	2.28E-01	2.82E-01	5.34E-01	7.21E-01	NA	2.94E-01	2.07E-01	2.27E-01
***H. azteca* weight**	7.78E-01	4.33E-03	9.86E-01	9.57E-02	2.82E-01	2.73E-01	8.62E-03	2.93E-02	2.94E-01	NA	2.05E-07	2.27E-03
***H. azteca* biomass**	4.70E-01	2.12E-02	6.48E-01	2.13E-01	1.81E-01	2.31E-01	1.41E-02	5.27E-02	2.07E-01	2.05E-07	NA	7.64E-08
***H. azteca* survival**	4.39E-01	6.21E-02	1.81E-01	2.76E-01	6.33E-02	8.49E-02	9.43E-02	2.15E-01	2.27E-01	2.27E-03	7.64E-08	NA
Abundance (per m2)	3.92E-01	1.72E-01	2.89E-02	6.48E-01	1.69E-01	3.49E-01	9.58E-01	7.91E-01	4.54E-01	7.11E-01	8.78E-02	6.95E-03
Taxa Richness	8.72E-02	4.84E-01	5.59E-01	1.30E-01	1.14E-01	4.41E-02	2.89E-01	2.08E-01	6.81E-01	6.33E-01	7.94E-01	7.54E-01
Shannon-Wiener H'	6.59E-02	9.71E-01	7.22E-01	1.04E-01	1.16E-01	4.20E-02	8.87E-01	8.80E-01	8.47E-01	7.44E-01	5.81E-01	8.51E-01
Pielou's J'	2.70E-01	6.24E-01	8.01E-01	8.21E-02	1.27E-01	2.68E-01	8.68E-01	5.93E-01	8.66E-01	6.66E-01	5.39E-01	4.11E-01
Swartz's Dominance Index	9.82E-02	6.44E-01	5.89E-01	3.17E-02	7.79E-02	7.31E-02	9.77E-01	6.22E-01	9.28E-01	9.80E-01	8.09E-01	9.84E-01
Hilsenhoff Biotic Index	5.07E-01	3.77E-02	5.37E-02	4.35E-02	6.17E-02	2.97E-02	3.49E-01	3.56E-01	6.52E-01	7.29E-01	5.15E-01	2.93E-01
TOC	5.33E-01	2.91E-01	1.21E-01	1.41E-01	7.05E-02	3.74E-03	6.81E-01	3.38E-01	3.10E-01	7.97E-01	4.32E-01	1.07E-01
Percent fines	4.63E-01	5.77E-02	1.94E-05	3.29E-02	1.56E-04	6.32E-04	8.47E-01	9.94E-01	7.00E-01	4.50E-01	1.41E-01	2.11E-02

NA -- not applicable
TOC -- total organic carbon
Note: p-values less than 0.05 are considered statistically significant

Table B1-4b. Tidal freshwater SRC results, r-values

	Total PAHs	Bis-(2-ethylhexyl) phthalate	Phenol	Total PCB Congeners	Total Chlordanes	Total DDx	*C. dilutus* weight	*C. dilutus* biomass	*C. dilutus* survival	*H. azteca* weight	*H. azteca* biomass	*H. azteca* survival
Total PAHs	1	0.159	0.355	0.481	0.627	0.562	0.200	0.219	0.188	0.069	0.177	0.189
Bis-(2-ethylhexyl)phthalate	0.159	1	0.597	0.743	0.620	0.672	-0.399	-0.337	0.200	-0.624	-0.524	-0.436
Phenol	0.355	0.597	1	0.604	0.791	0.811	0.056	0.064	0.114	0.004	-0.112	-0.321
Total PCB Congeners	0.481	0.743	0.604	1	0.750	0.780	-0.263	-0.284	0.150	-0.393	-0.299	-0.264
Total Chlordanes	0.627	0.620	0.791	0.750	1	0.923	-0.049	-0.039	0.291	-0.260	-0.321	-0.434
Total DDx	0.562	0.672	0.811	0.780	0.923	1	-0.028	0.013	0.260	-0.265	-0.289	-0.406
***C. dilutus* weight**	0.200	-0.399	0.056	-0.263	-0.049	-0.028	1	0.944	-0.152	0.584	0.553	0.395
***C. dilutus* biomass**	0.219	-0.337	0.064	-0.284	-0.039	0.013	0.944	1	0.088	0.500	0.451	0.298
***C. dilutus* survival**	0.188	0.200	0.114	0.150	0.291	0.260	-0.152	0.088	1	-0.254	-0.303	-0.291
***H. azteca* weight**	0.069	-0.624	0.004	-0.393	-0.260	-0.265	0.584	0.500	-0.254	1	0.896	0.656
***H. azteca* biomass**	0.177	-0.524	-0.112	-0.299	-0.321	-0.289	0.553	0.451	-0.303	0.896	1	0.908

***H. azteca* survival**	0.189	-0.436	-0.321	-0.264	-0.434	-0.406	0.395	0.298	-0.291	0.656	0.908	1
Abundance (per m2)	-0.215	0.337	0.515	0.116	0.339	0.234	0.013	0.067	0.188	-0.094	-0.414	-0.612
Taxa Richness	-0.414	-0.176	-0.148	-0.371	-0.386	-0.479	0.264	0.312	-0.104	0.121	-0.066	-0.080
Shannon-Wiener H'	-0.443	-0.009	-0.090	-0.396	-0.383	-0.484	-0.036	0.038	-0.049	-0.083	-0.139	-0.048
Pielou's J'	-0.275	-0.124	-0.064	-0.421	-0.373	-0.276	0.042	0.135	-0.043	0.109	0.155	0.207
Swartz's Dominance Index	-0.402	-0.117	-0.137	-0.507	-0.426	-0.432	-0.007	0.125	0.023	-0.006	-0.061	0.005
Hilsenhoff Biotic Index	0.167	0.493	0.462	0.481	0.449	0.512	-0.234	-0.231	0.114	-0.088	-0.164	-0.262
TOC	0.153	0.255	0.369	0.351	0.424	0.631	0.101	0.233	0.246	-0.063	-0.191	-0.381
Percent fines	0.179	0.443	0.817	0.491	0.761	0.712	0.047	-0.002	0.095	-0.184	-0.351	-0.525

TOC -- total organic carbon

Table B1-4 presents the results from the Spearman rank correlation of freshwater LPRSA (RM 13 to RM 17.4) SQT data (Table B1-2). The two subtables present the calculated p-values (level of significance of the rank correlation test) and r values (strength of correlations) based on Spearman rank correla

Abundance (per m^2)	Taxa Richness	Shannon-Wiener H'	Pielou's J'	Swartz's Dominance Index	Hilsenhoff Biotic Index	TOC	Percent fines
3.92E-01	8.72E-02	6.59E-02	2.70E-01	9.82E-02	5.07E-01	5.33E-01	4.63E-01
1.72E-01	4.84E-01	9.71E-01	6.24E-01	6.44E-01	3.77E-02	2.91E-01	5.77E-02
2.89E-02	5.59E-01	7.22E-01	8.01E-01	5.89E-01	5.37E-02	1.21E-01	1.94E-05
6.48E-01	1.30E-01	1.04E-01	8.21E-02	3.17E-02	4.35E-02	1.41E-01	3.29E-02
1.69E-01	1.14E-01	1.16E-01	1.27E-01	7.79E-02	6.17E-02	7.05E-02	1.56E-04
3.49E-01	4.41E-02	4.20E-02	2.68E-01	7.31E-02	2.97E-02	3.74E-03	6.32E-04
9.58E-01	2.89E-01	8.87E-01	8.68E-01	9.77E-01	3.49E-01	6.81E-01	8.47E-01
7.91E-01	2.08E-01	8.80E-01	5.93E-01	6.22E-01	3.56E-01	3.38E-01	9.94E-01
4.54E-01	6.81E-01	8.47E-01	8.66E-01	9.28E-01	6.52E-01	3.10E-01	7.00E-01
7.11E-01	6.33E-01	7.44E-01	6.66E-01	9.80E-01	7.29E-01	7.97E-01	4.50E-01
8.78E-02	7.94E-01	5.81E-01	5.39E-01	8.09E-01	5.15E-01	4.32E-01	1.41E-01
6.95E-03	7.54E-01	8.51E-01	4.11E-01	9.84E-01	2.93E-01	1.07E-01	2.11E-02
NA	2.83E-02	3.78E-01	2.32E-01	9.58E-01	3.97E-02	4.83E-01	3.11E-02
2.83E-02	NA	1.50E-03	5.90E-01	3.59E-02	5.53E-01	3.35E-01	5.31E-01
3.78E-01	1.50E-03	NA	3.56E-03	2.11E-07	6.29E-02	4.30E-02	5.59E-01
2.32E-01	5.90E-01	3.56E-03	NA	1.01E-05	4.97E-03	4.92E-01	5.42E-01
9.58E-01	3.59E-02	2.11E-07	1.01E-05	NA	1.45E-02	2.72E-01	4.42E-01
3.97E-02	5.53E-01	6.29E-02	4.97E-03	1.45E-02	NA	2.67E-01	1.43E-01
4.83E-01	3.35E-01	4.30E-02	4.92E-01	2.72E-01	2.67E-01	NA	2.79E-01
3.11E-02	5.31E-01	5.59E-01	5.42E-01	4.42E-01	1.43E-01	2.79E-01	NA

Abundance (per m^2)	Taxa Richness	Shannon-Wiener H'	Pielou's J'	Swartz's Dominance Index	Hilsenhoff Biotic Index	TOC	Percent fines
-0.215	-0.414	-0.443	-0.275	-0.402	0.167	0.153	0.179
0.337	-0.176	-0.009	-0.124	-0.117	0.493	0.255	0.443
0.515	-0.148	-0.090	-0.064	-0.137	0.462	0.369	0.817
0.116	-0.371	-0.396	-0.421	-0.507	0.481	0.351	0.491
0.339	-0.386	-0.383	-0.373	-0.426	0.449	0.424	0.761
0.234	-0.479	-0.484	-0.276	-0.432	0.512	0.631	0.712
0.013	0.264	-0.036	0.042	-0.007	-0.234	0.101	0.047
0.067	0.312	0.038	0.135	0.125	-0.231	0.233	-0.002
0.188	-0.104	-0.049	-0.043	0.023	0.114	0.246	0.095
-0.094	0.121	-0.083	0.109	-0.006	-0.088	-0.063	-0.184
-0.414	-0.066	-0.139	0.155	-0.061	-0.164	-0.191	-0.351

-0.612	-0.080	-0.048	0.207	0.005	-0.262	-0.381	-0.525
1	0.516	0.221	-0.296	0.014	0.488	0.177	0.509
0.516	1	0.691	0.136	0.497	-0.150	-0.241	-0.158
0.221	0.691	1	0.649	0.907	-0.447	-0.482	-0.148
-0.296	0.136	0.649	1	0.845	-0.631	-0.173	-0.154
0.014	0.497	0.907	0.845	1	-0.565	-0.274	-0.193
0.488	-0.150	-0.447	-0.631	-0.565	1	0.276	0.359
0.177	-0.241	-0.482	-0.173	-0.274	0.276	1	0.262
0.509	-0.158	-0.148	-0.154	-0.193	0.359	0.262	1

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Table B1-5a.SRC results, r-values of significant correlations after Bonferroni correction of alpha, sitewide data

	C. dilutus weight	*C. dilutus* biomass	*C. dilutus* survival	*H. azteca* weight	*H. azteca* biomass	*H. azteca* survival	*A. abdita* survival	Abundance (per m^2)	Taxa Richness	Shannon-Wiener H'	Pielou's J'
Lead				-0.349	-0.432	-0.414			-0.358	-0.362	
Mercury											
Zinc									-0.355		
Total HPAHs											
Total LPAHs											
Bis-(2-ethylhexyl)phthalate					-0.349				-0.506	-0.356	
Total PCB Congeners											
Total DDx									-0.555	-0.470	

Note: Only r-values from significant Spearman rank correlation analyses (Bonferroni-corrected alpha = 0.0005) are presented in Table B1-5

Table B1-5b.SRC results, r-values of significant correlations after Bonferroni correction of alpha, tidal freshwate

	C. dilutus weight	*C. dilutus* biomass	*C. dilutus* survival	*H. azteca* weight	*H. azteca* biomass	*H. azteca* survival	Abundance (per m^2)	Taxa Richness	Shannon-Wiener H'	Pielou's J'	Swartz's Dominance Index
Total PAHs											
Bis-(2-ethylhexyl)phthalate											
Phenol											
Total PCB Congeners											
Total Chlordanes											
Total DDx											

Note: There were no significant Spearman rank correlations (Bonferroni-corrected alpha = 0.0007) for the tidal freshwater dataset

Table B1-5 presents r-values for significant Spearman rank correlations between chemical analytes (column A) and benthic response variable after Bonferroni correction for multiple tests (i.e., corrected_alpha = alpha/n_variables). The two subtables present the r-values based on co (RM 0 to RM 17.4) LPRSA SQT data and tidal freshwater (RM 13 to 17.4) LPRSA SQT data. The Bonferroni-corrected alpha values are reporte each sub-table.

The correction of alpha values using the Bonferroni method is intended to reduce the potential for observing a false positive correlation, giv observing a false positive is (ideally) 5% per test. The false positive rate is balanced against the false negative rate, in that applying the Bonfe becomes more likely to conclude that no correlation exists between two variables, when there actually is a relationship. Functionally, the da B1-5 indicates which correlations have a high degree of significance. A high degree of significance does not imply a strong correlation. Rathe

Swartz's Dominance Index	Hilsenhoff Biotic Index
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Hilsenhoff Biotic Index

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Table B1-6. Summary of SRC results, r-values of significant correlations

	C. dilutus weight	*C. dilutus* biomass	*C. dilutus* survival	*H. azteca* weight	*H. azteca* biomass	*H. azteca* survival	*A. abdita* survival	Abundance (per m^2)	Taxa Richness	Shannon-Wiener H'	Pielou's J'	Swartz's Dominance Index
Sitewide LPRSA												
Lead	-0.270	--	--	**-0.349**	**-0.432**	**-0.414**	--	--	**-0.358**	**-0.362**	--	-0.305
Mercury	-0.297	--	--	-0.269	-0.312	-0.310	--	-0.260	-0.335	-0.262	--	-0.221
Zinc	-0.282	--	--	-0.233	-0.306	-0.326	-0.419	--	**-0.355**	-0.342	--	-0.262
Total HPAHs	--	--	--	--	-0.231	-0.238	--	--	--	--	--	--
Total LPAHs	--	--	--	--	--	--	--	--	--	--	--	--
Total PAHs	--	--	--	--	-0.219	-0.226	--	--	--	--	--	--
Bis-(2-ethylhexyl)phthalate	--	--	0.295	-0.346	**-0.349**	-0.281	--	-0.296	**-0.506**	**-0.356**	--	-0.264
Total PCB congeners	--	--	--	-0.279	-0.274	-0.275	--	-0.303	-0.472	-0.417	--	-0.378
Total DDx	--	--	--	--	--	--	--	-0.340	**-0.555**	**-0.470**	--	**-0.391**
TOC	--	--	--	-0.221	-0.257	-0.252	--	-0.235	-0.507	-0.520	-0.216	-0.436
Percent fines	--	--	--	--	--	--	0.432	-0.288	-0.324	-0.201	--	--
Tidal Freshwater												
Total PAHs	--	--	--	--	--	--	na	--	--	--	--	--
Bis-(2-ethylhexyl)phthalate	--	--	--	-0.624	-0.524	--	na	--	--	--	--	--
Phenol	--	--	--	--	--	--	na	0.515	--	--	--	--
Total PCB congeners	--	--	--	--	--	--	na	--	--	--	--	-0.507
Total Chlordanes	--	--	--	--	--	--	na	--	--	--	--	--
Total DDx	--	--	--	--	--	--	na	--	-0.479	-0.484	--	--
TOC	--	--	--	--	--	--	na	--	--	-0.482	--	--
Percent fines	--	--	--	--	--	-0.525	na	0.509	--	--	--	--

na -- not applicable
SRC -- Spearman Rank Correlation
TOC -- total organic carbon
Note: *A. abdita* survival was not tested in the tidal freshwater zone
Note: Only r-values from significant Spearman rank correlation analyses ($p < 0.05$) are presented in Table B1-6
Bold values are significant after Bonferroni correction (see Table B1-5)

Table B1-6 presents r-values for significant Spearman rank correlations between chemical analytes (column A) and benthic response variables (row 3). table is split into results for correlations of sitewide (RM 0 to RM 17.4) LPRSA SQT data and tidal freshwater (RM 13 to 17.4) LPRSA SQT data. Emphasis added for test results that are significant after Bonferroni-correction of the test alpha level (Table B1-5), suggesting greater certainty in the significanc

Hilsenhoff Biotic Index
0.645
0.611
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All correlation analyses were conducted using R version 3.2.2
The `rcorr` function from the `Hmisc` package (in R) was used to calculate Spearman rank correlation coefficients (r-values) and p-values (Tables B1-3 and
Pairwise deletion was used to eliminate missing values when conducting Spearman rank correlations

Table B2-1. Method 1 MLR dataset

Area of Interest	Location ID	*C. dilutus* survival (% of control)	*C. dilutus* biomass (% of control)	*H. azteca* survival (% of control)	*H. azteca* biomass (% of control)	*A. abdita* survival (% of control)	Abundance (per m^2)	Richness	Shannon-Wiener H'	Pielou's J'	Swartz's Dominance Index	Hilsenhoff Biotic Index
LPRSA	LPRT01A			0.87	0.823	0.87	1090	8	1.06	0.507	2	
LPRSA	LPRT01B			0.89	0.715	0.95	614	8.22	1.34	0.662	2.67	
LPRSA	LPRT01C			0.42	0.259	0.92	2740	16	2.01	0.727	4.67	
LPRSA	LPRT01D			0.81	0.699	0.58	2050	12.3	1.63	0.65	3	
LPRSA	LPRT01E			0.25	0.186	0.85	2750	13.1	1.71	0.669	3.11	
LPRSA	LPRT01F			0.95	0.69	0.85	357	7	1.06	0.537	2	
LPRSA	LPRT01G			0.89	0.647	0.97	973	10.7	1.42	0.6	2.33	
LPRSA	LPRT02A			0.86	0.556	0.89	709	9.33	1.57	0.718	3.11	
LPRSA	LPRT02B			0.71	0.596	0.69	127	6.67	1.68	0.887	4	
LPRSA	LPRT02C			0.95	0.679	0.92	630	7.67	1.67	0.823	3.67	
LPRSA	LPRT02D			0.82	0.567	0.95	1290	13.1	2.07	0.816	5	
LPRSA	LPRT02E			0.82	0.683	0.78	155	5.5	1.42	0.83	3.5	
LPRSA	LPRT02F			0.9	0.606	0.83	240	9.33	1.73	0.807	4	
LPRSA	LPRT03A			0.82	0.844	0.61	320	2.67	0.427	0.43	1.33	
LPRSA	LPRT03B			0.87	0.83	0.94	773	6.33	1.45	0.803	3	
LPRSA	LPRT03C			0.56	0.426	0.87	894	7.33	1.21	0.61	2.56	
LPRSA	LPRT03D			0.85	0.642	0.87	1370	10.9	1.69	0.728	3.89	
LPRSA	LPRT03E			0.86	0.951	0.89	593	7.67	1.17	0.69	2	
LPRSA	LPRT03F			0.73	0.432	0.84	693	8.67	1.49	0.697	3	
LPRSA	LPRT04A			0.98	0.959	0.82	3420	9.33	1.31	0.599	2.56	
LPRSA	LPRT04B			0.87	0.708	0.23	523	6.33	1.41	0.79	2.67	
LPRSA	LPRT04C			0.36	0.17	0.15	721	8.44	1.52	0.778	3.44	
LPRSA	LPRT04D			0.69	0.514	0.71	1220	5.33	0.507	0.297	1	
LPRSA	LPRT04E			0.62	0.353	0.83	1170	6	1.07	0.607	2.33	
LPRSA	LPRT04F	0.83	0.821	0.86	0.44		333	4.67	1.09	0.757	2.33	
LPRSA	LPRT05A			0.069	0.0258	0.37	2280	11.1	1.54	0.64	3	
LPRSA	LPRT05B			0.16	0.0595	0.88	852	9	1.57	0.746	3.56	
LPRSA	LPRT05C	0.95	0.703	0.53	0.186		2940	10.3	1.33	0.57	2.33	
LPRSA	LPRT05D	0.89	0.713	0.68	0.315		227	6	1.08	0.603	2.67	
LPRSA	LPRT05E	0.96	0.706	0.7	0.45		200	3.67	1.08	0.85	2	
LPRSA	LPRT05F	1	0.651	0.33	0.16		147	3.33	0.737	0.74	2	
LPRSA	LPRT06A	0.94	0.59	0.87	0.385		6530	7	0.843	0.463	1.56	
LPRSA	LPRT06B	0.83	0.656	0.65	0.213		3380	4.33	0.147	0.1	1	
LPRSA	LPRT06C			0.53	0.255	0.88	4660	9.89	1.2	0.528	2	
LPRSA	LPRT06D	0.9	0.621	0.63	0.193		7030	8.33	1.13	0.533	2	
LPRSA	LPRT06E	0.9	0.738	0.81	0.37		2490	7.33	1.21	0.603	2.33	
LPRSA	LPRT06F	0.88	0.607	0.89	0.582		927	2.33	0.547	0.727	1.67	
LPRSA	LPRT07A	0.96	0.9	0.67	0.307		5110	9	0.942	0.436	1.78	
LPRSA	LPRT07B	0.95	0.646	0.22	0.0732		3200	7.67	0.933	0.467	1.67	
LPRSA	LPRT07C	1	0.522	0.71	0.361		2680	7.33	0.893	0.469	1.44	
LPRSA	LPRT07D	0.89	0.746	0.65	0.35		1630	5.33	0.44	0.26	1	

LPRSA	LPRT07E	0.85	0.592	0.75	0.416	3740	6.67	0.383	0.217	1	
LPRSA	LPRT08A	0.97	0.756	0.51	0.218	253	4.33	0.863	0.657	1.67	
LPRSA	LPRT08B	1	0.682	0.63	0.399	340	3	0.773	0.703	2	
LPRSA	LPRT08C	1	0.597	0.36	0.225	4030	10.6	1.23	0.534	2.22	
LPRSA	LPRT08D	0.73	0.836	0.76	0.429	843	5.67	1.1	0.677	2	
LPRSA	LPRT08E	1.1	0.944	0.69	0.469	4070	8.11	1.04	0.523	1.78	
LPRSA	LPRT09A	0.94	0.579	0.37	0.125	1300	9.33	1.14	0.51	2	
LPRSA	LPRT09B	0.85	0.802	0.71	0.726	533	3.67	0.877	0.717	2	
LPRSA	LPRT09C	0.88	0.692	0.68	0.602	9890	9.11	1.07	0.55	2	8.81
LPRSA	LPRT09D	1	0.831	0.79	0.438	20300	10.9	0.947	0.399	1.56	9.73
LPRSA	LPRT09E	0.97	0.756	0.6	0.328	6180	9.33	1.04	0.46	2	9.64
LPRSA	LPRT09F	0.91	0.905	0.43	0.211	5380	8.67	0.647	0.3	1	9.8
LPRSA	LPRT09G	0.94	0.975	1	0.635	1090	4.67	0.967	0.627	2	9.14
LPRSA	LPRT09H	0.84	0.785	0.81	0.497	1330	7.33	0.98	0.503	1.67	
LPRSA	LPRT10A	0.79	0.345	0.65	0.414	11100	9.67	0.81	0.357	1.33	9.76
LPRSA	LPRT10B	0.16	0.0471	0.19	0.0903	7210	14.7	1.22	0.453	1.67	9.43
LPRSA	LPRT10C	0.99	0.363	0.69	0.524	24300	12.8	0.968	0.378	1.44	9.4
LPRSA	LPRT10D	0.8	0.573	1	0.92	5030	13.7	1.49	0.593	3	9.1
LPRSA	LPRT10E	0.99	0.726	0.37	0.255	37900	11.8	1.19	0.484	2.33	9.02
LPRSA	LPRT11A	0.8	0.522	0.93	0.763	4280	14	1.48	0.57	2.33	9.46
LPRSA	LPRT11B	0.47	0.203	0.65	0.374	4610	13.3	1.65	0.647	3	9.36
LPRSA	LPRT11C	0.83	0.773	0.65	0.508	6100	13.7	1.28	0.497	2.33	9.58
LPRSA	LPRT11D	0.88	0.557	0.8	0.607	29600	16.2	1.38	0.5	2.56	9.49
LPRSA	LPRT11E	0.93	0.464	0.89	0.524	21200	11.3	1.08	0.462	2.11	9.77
LPRSA	LPRT11F	0.95	0.458	0.53	0.428	6050	16	1.62	0.587	3.33	9.43
LPRSA	LPRT11G	0.73	0.124	0.16	0.0607	3170	7	0.84	0.44	1.67	9.78
LPRSA	LPRT12A	0.95	0.559	0.68	0.321	7270	15.6	1.38	0.51	2.67	9.16
LPRSA	LPRT12B	0.98	0.38	0.84	0.477	8160	13	1.34	0.52	2.67	9.46
LPRSA	LPRT12C	0.8	0.293	0.59	0.27	9850	15.3	1.26	0.463	2.33	9.59
LPRSA	LPRT12D	1	0.489	0.59	0.259	5870	11	1.07	0.443	1.67	9.61
LPRSA	LPRT12E	0.91	0.254	0.53	0.273	20900	9.56	1.23	0.57	2.44	9.77
LPRSA	LPRT13A	0.87	0.511	0.56	0.301	2600	11.3	1.28	0.54	2	9.6
LPRSA	LPRT13B	0.94	0.52	0.9	0.483	5790	11.7	1.33	0.547	2	9.8
LPRSA	LPRT13C	1	0.627	0.84	0.409	4630	9	1.07	0.49	2	9.83
LPRSA	LPRT13D	0.94	0.38	0.93	0.518	680	7.67	1.43	0.727	3.33	9.24
LPRSA	LPRT13E	0.97	0.734	0.9	0.458	23200	12.9	1.4	0.55	2.89	9.58
LPRSA	LPRT13F	0.95	1.04	0.82	0.537	12400	12.9	1.42	0.554	2.67	9.11
LPRSA	LPRT13G	0.99	0.66	0.94	0.53	2690	8	1.15	0.57	2	9.62
LPRSA	LPRT14A	0.93	0.445	0.45	0.273	27600	14.2	1.41	0.543	2.56	9.56
LPRSA	LPRT14B	0.99	0.483	0.46	0.161	11500	14	1.63	0.62	3.67	9.36
LPRSA	LPRT14C	0.93	0.613	0.86	0.523	9120	17.8	1.36	0.468	2.3	9.39
LPRSA	LPRT14D	0.8	0.373	0.64	0.268	7980	17	1.73	0.61	3.67	8.99
LPRSA	LPRT14E	0.96	0.507	0.53	0.214	4520	14.7	1.57	0.587	2.67	8.54
LPRSA	LPRT14F	0.93	0.681	0.88	0.482	8450	19	1.96	0.677	5	8.67
LPRSA	LPRT15A	1	0.541	0.59	0.359	30600	18.7	1.61	0.55	2.67	8.99
LPRSA	LPRT15B	1	0.495	0.78	0.55	21800	14.2	1.34	0.562	2.33	9.64
LPRSA	LPRT15C	0.94	0.431	0.81	0.46	2060	11.7	1.55	0.637	3.33	8.53
LPRSA	LPRT15D	0.79	0.359	0.74	0.445	15700	17.1	1.69	0.6	3.22	9.32
LPRSA	LPRT15E	0.98	0.464	0.89	0.594	7020	18.3	1.85	0.64	4	9.1

LPRSA	LPRT15F	0.93	0.438	0.95	0.635		4180	15.3	1.61	0.593	3.33	8.76
LPRSA	LPRT16A	0.74	0.538	0.79	0.525		12800	22.7	1.58	0.507	2.67	9.19
LPRSA	LPRT16C	0.88	0.791	0.98	1.05		10400	21.2	2.07	0.71	5.33	8.56
LPRSA	LPRT16D	0.96	1.01	0.87	0.634		8680	17.3	1.8	0.633	4	8.06
LPRSA	LPRT16E	0.84	0.895	0.93	1.03		1990	8	1.32	0.64	2.67	8.91
LPRSA	LPRT17A	0.79	0.433	0.99	0.649		2770	11.3	1.41	0.583	2	8.96
LPRSA	LPRT17D	0.96	0.516	1	0.702		3640	9.56	0.901	0.433	1.67	9.45
UPR	UPRT18H	0.96	0.797	0.94	0.471		11500	19	2.01	0.683	4.33	9.41
UPR	UPRT18I	0.72	0.676	0.81	0.316		20600	21.7	2.26	0.737	5.67	8.64
UPR	UPRT18J	0.91	0.747	1	0.539		16800	15.7	1.47	0.537	2	9.69
UPR	UPRT18K	0.88	0.723	0.83	0.498		16100	22	1.99	0.647	4	8.85
UPR	UPRT19J	0.039	0	0	0		1030	8.33	1.27	0.633	2.33	9.62
UPR	UPRT19K	0.76	0.643	0.99	0.618		11800	33	2.67	0.76	9	8.53
UPR	UPRT19L	0.8	0.674	0.72	0.414		14300	25.7	2.35	0.723	6.67	8.19
UPR	UPRT19M	0.82	0.775	0.49	0.264		15200	24	2.39	0.75	6.33	8.25
UPR	UPRT20A	0.81	0.758	0.67	0.261		9950	18.7	2.13	0.727	5.33	8.39
UPR	UPRT20B	0.82	0.813	0.83	0.434		19500	23	1.94	0.617	4.33	8.94
UPR	UPRT20C	0.92	0.939	0.85	0.571		3820	12.3	1.55	0.623	3	9.56
UPR	UPRT20D	0.81	0.637	0.82	0.432		15100	32.3	2.56	0.737	7	8.7
UPR	UPRT20E	0.87	0.742	0.73	0.404		5500	23	2.65	0.86	8.33	7.86
UPR	UPRT20F	0.55	0.348	0.014	0.00156		9180	29.7	2.75	0.813	9.67	7.99
UPR	UPRT20G	0.87	0.847	0.76	0.355		16100	19	2.13	0.727	5.67	8.82
UPR	UPRT21A	0.91	0.791	0.77	0.389		11200	21	2.19	0.72	4.33	8.28
UPR	UPRT21B	0.81	0.96	0.21	0.0871		18400	18	1.56	0.54	2.67	9.48
UPR	UPRT21C	0.74	0.705	0.87	0.488		11500	32.3	2.73	0.79	9.33	7.95
UPR	UPRT21D	0.72	0.763	0.7	0.314		13400	21.3	2.18	0.717	5	8.08
UPR	UPRT21E	0.86	0.714	0.64	0.284		6390	16.7	1.79	0.643	3.67	8.69
UPR	UPRT21F	0.9	1.03	0.81	0.454		14000	26.7	2.27	0.697	6	8.4
UPR	UPRT21G	0.85	0.746	0.7	0.452		2070	13.7	2.01	0.773	4.33	7.64
UPR	UPRT22A	0.71	0.637	0.89	0.518		3490	17.7	1.76	0.617	4	6.84
UPR	UPRT22B	0.83	0.742	0.66	0.473		5880	25.3	2.16	0.667	5	7.02
Jamaica Bay	2200_26_JB002					0.96	2875	18	2.17	0.75	5	
Jamaica Bay	2200_26_JB006					0.91	35500	35	1.61	0.45	2.5	
Jamaica Bay	2200_26_JB008					0.53	1687.5	8	1.58	0.77	3.5	
Jamaica Bay	2200_26_JB012					0	62.5	2	0.66	0.96	2	
Jamaica Bay	2200_26_JB015					0.38	125	4	1.36	0.98	3	
Jamaica Bay	2200_26_JB018					0.81	21375	14.5	1.15	0.44	2	
Jamaica Bay	2200_26_JB022					1.04	25112.5	23.5	1.53	0.48	2.5	
Jamaica Bay	2200_26_JB026					1.08	37662.5	42.5	2.38	0.64	5.5	
Jamaica Bay	2200_26_JB031					0.92	44825	28.5	1.56	0.47	2	
Jamaica Bay	2200_26_JB033					0.94	146675	38.5	1.83	0.5	3.5	
Jamaica Bay	2200_26_JB039					0.38	282150	44	2.04	0.54	4	
Jamaica Bay	2200_26_JB041					0.69	324700	42	1.8	0.48	3	
Jamaica Bay	2200_26_JB042					1.03	6075	25	1.94	0.6	4	
Jamaica Bay	2200_26_JB043					0.74	86137.5	33	2.29	0.68	6.5	
Jamaica Bay	2200_27_JB101					0.98	42462.5	14	0.59	0.22	1	
Jamaica Bay	2200_27_JB103					0.93	25	1	0.35	0.5	1	
Jamaica Bay	2200_27_JB104					0.8	5662.5	7.5	0.8	0.38	1.5	
Jamaica Bay	2200_27_JB106					0.92	230575	40	2	0.54	4.5	

Jamaica Bay	2200_27_JB108	0.96	6887.5	20	1.54	0.52	2.5	
Jamaica Bay	2200_27_JB110	0.99	32712.5	21	1.46	0.48	2.5	
Jamaica Bay	2200_27_JB111	0.97	111675	26	1.69	0.54	3.5	
Jamaica Bay	2200_27_JB112	0.98	22487.5	29	1.85	0.55	4.5	
Jamaica Bay	2200_27_JB113	0.95	33125	27.5	1.4	0.42	2	
Jamaica Bay	2200_27_JB114	0.97	67787.5	34	2.25	0.64	6	
Jamaica Bay	2200_27_JB115	0.94	21500	41	2.76	0.75	8	
Jamaica Bay	2200_27_JB117	1	51712.5	29	2.05	0.61	5	
Jamaica Bay	2200_27_JB119	0.98	14050	21.5	1.57	0.51	2.5	
Jamaica Bay	2200_27_JB120	1	20375	22	1.41	0.45	2.5	
Jamaica Bay	2300_M0_NY-0029-A	0.957	660	17	0.92	0.74	6	
Jamaica Bay	2300_M1_NY-0032-A	0.989	18830	48	0.9	0.54	4	
Jamaica Bay	2300_M2_NY-0029-A	0.902	675	7	0.52	0.61	2	
Jamaica Bay	2300_M2_NY-0235-A	0.904	1375	7	0.5	0.6	2	
Jamaica Bay	2300_M2_NY-0239-A	0.787	25	1	0		1	
Jamaica Bay	2300_M3_NY03-0236	0.867	11900	28	1.08	0.75	6	
Jamaica Bay	2300_M4_NY04-0234	0.948	47600	21	0.52	0.39	2	
Mullica River	NJ00-0041	0.851	4825	15	1.93	0.71	4	6.79
Mullica River	NJ01-0120	0.895	5825	19	2.05	0.69	5	8.77
Mullica River	NJ02-0232	0.872	3900	14	1.53	0.58	3	6.97
Mullica River	NJ06-0046	0.418	3625	10	1.9	0.82	4	8.61
Mullica River and Great Bay	2300_L3_NJ03-0038	0.88	2000	14	2.13	0.81	5	
Mullica River and Great Bay	2300_L4_NJ04-0427	0.901	27600	45	1.86	0.49	4	
Mullica River and Great Bay	2300_L4_NJ04-0429	0.957	350	8	1.91	0.92	5	
Mullica River and Great Bay	2300_L5_NJ05-0059	0.929	22075	22	1.14	0.37	2	
Mullica River and Great Bay	2300_L6_NJ06-0015	1	7100	39	2.79	0.76	9	
Mullica River and Great Bay	2300_L6_NJ06-0027	0.948	3800	30	3.01	0.88	11	
Mullica River and Great Bay	2300_L6_NJ06-0035	1	4725	30	2.61	0.77	7	
Mullica River and Great Bay	NCCA10-2622	0.859	2525	8	0.92	0.44	2	
Mullica River and Great Bay	NJ00-0035	0.989	6200	23	1.38	0.44	2	
Mullica River and Great Bay	NJ01-0036	0.989	1470	17	2.01	0.71	4	
Mullica River and Great Bay	NJ01-0038	1.01	1675	11	1.68	0.7	3	
Mullica River and Great Bay	NJ01-0116	0.922	13000	33	1.94	0.56	4	
Mullica River and Great Bay	NJ01-0118	0.844	8050	37	2.93	0.81	10	
Mullica River and Great Bay	NJ01-0122	0.979	9950	14	1.68	0.64	3	
Mullica River and Great Bay	NJ02-0227	1	51375	34	1.01	0.29	2	
Mullica River and Great Bay	NJ02-0229	0.915	15550	18	1.54	0.53	2	
Mullica River and Great Bay	NJ02-0230	1.07	46100	42	1.51	0.4	3	
Jamaica Bay	JB301	0.725	1980	17	1.83	0.66	3	
Jamaica Bay	JB303	1.01	70	2.5	0.67	0.96	2	
Jamaica Bay	JB305	1	8460	16	2.08	0.76	4.5	
Jamaica Bay	JB306	1.01	11960	14.5	1.82	0.68	3.5	
Jamaica Bay	JB307	1.01	151580	19.5	1.61	0.54	3.5	
Jamaica Bay	JB309	0.033	146200	17	0.97	0.34	2	
Jamaica Bay	JB310	0.033	2890	13.5	1.59	0.61	2.5	
Jamaica Bay	JB313	0.813	1100	3	0.31	0.27	1	
Jamaica Bay	JB315	0.11	5050	14.5	1.81	0.68	3.5	
Jamaica Bay	JB316	0.11	33550	20	1.52	0.52	2.5	
Jamaica Bay	JB317	0.912	19990	34	2.46	0.7	7	

Jamaica Bay	JB319	0.9	480	8.5	1.78	0.86	4
Jamaica Bay	JB322	0.811	21300	30.5	2.07	0.61	4.5
Jamaica Bay	JB323	0.411	195430	23.5	1.25	0.4	2
Jamaica Bay	JB354	0.211	4360	11.5	2.05	0.85	5
Jamaica Bay	JB358	0.544	820	9	1.54	0.85	3
Jamaica Bay	JB359	0.744	7320	25.5	2.2	0.68	5.5
Jamaica Bay	JB361	0.611	20940	12	1.44	0.58	2.5
Jamaica Bay	JB364	0.822	61490	16.5	0.86	0.31	1
Jamaica Bay	JB366	0.0111	48960	21	1.26	0.41	1.5
Jamaica Bay	JB367	0.067	131130	20	1.22	0.41	2
Jamaica Bay	JB368	0.681	94200	21.5	1.47	0.48	2.5
Jamaica Bay	JB371	0.135	155520	23.5	1.6	0.51	3
Jamaica Bay	JB372	0.802	20	1	0		1
Jamaica Bay	JB374	0.729	60	2	0.63	0.91	1.5
Jamaica Bay	JB380	0.785	18970	24	1.69	0.53	3
Jamaica Bay	JB381	0.698	110	3.5	1.1	0.88	2.5
Jamaica Bay	JB386	0.891	410	8	1.75	0.85	4

Cells highlighted in orange indicate missing sediment chemistry values; if there was a missing sediment chemistry value for any analyte, the entire sample was excluded when conducting PCA and EFA
PCA -- pricipal component analysis
EFA -- exploratory factor analysis

The data provided in Table B2-1 was used for the analyses conducted as part of Method 1. This is described in greater detail in Appendix P Section 4.1.2.1, which outlines the differences between the Method 1 and Method 2 datasets. The two methods were used to incorporate more COPEC variables while minimizing the number of reference area samples omitted (due to data gaps) (Method 1) and to use a pre-determined subset of COPECs (based on guidance from USEPA), which resulted in many reference area samples (particularly those from Jamaica Bay and Mullica River and Great Bay) being excluded when conducting principal component analysis.

Principal component analysis (PCA) and exploratory factor analysis (EFA) were conducted with only the chemical concentration data presented here (columns P through AS). Concentration data were log-transformed, centered, and scaled prior to conducting PCA and EFA, but the data presented here are in their original units. The PCA and EFA methods are discussed further in Section 4.1.2.3.

Multiple linear regression (MLR) models were developed using EFA factor scores (Table B2-3c) as well as the benthic response variables presented here (columns C through M). Habitat variables (columns N and O) were also included in MLR analyses. The different MLR modeling approaches are described in Appendix P Section 4.1.2.3.

Total Organic Carbon (%)	Total Fines (%)	Antimony (mg/kg)	Arsenic (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Mercury (µg/kg)	Nickel (mg/kg)	Silver (mg/kg)	Zinc (mg/kg)	alpha-Chlordane (µg/kg)	Dieldrin (µg/kg)	Hexachlorobenzene (µg/kg)	Total DDx (µg/kg)	1-methylnaphthalene (µg/kg)
3	97	0.55	12	1.1	127	122	125	2000	41.5	2.5	238	2.7	0.92	3.7	26	110
2.1	93.7	0.67	13.7	2.3	182	184	180	2900	39.3	4.3	351	3.5	0.7	1.1	49	85
2	77.2	0.39	7	1.4	82.9	99.2	97.7	1800	22.5	1.9	203	6	1.9	3.1	66	84
2.4	88.8	0.77	7.7	1.8	104	123	132	2300	26.2	2.6	280	9.6	2.8	3.2	59	96
1.4	43.1	0.56	13.5	0.77	67.1	145	87.8	1500	16.5	0.92	177	2.6	0.93	1.7	20	150
3.2	77.5	0.9	6.8	2	87.3	123	167	1500	24.9	2.4	386	20	4.8	3.4	88	98
3	91.7	0.92	7.5	1.7	95.2	119	138	1900	25.1	2.7	306	13	3.4	4.1	150	73
2.2	81.9	0.91	8.2	2.7	87.7	143	181	1600	29.2	2.5	442	14	3.4	4	58	84
2.4	63.2	1	7.9	2.4	104	134	244	1600	26.2	2.6	401	13	2.5	2.5	90	82
4	80.1	1	7.3	2.4	113	165	176	1800	24.7	2.2	449	23	4.7	3.9	100	130
3.7	83.5	0.58	9.6	2	105	140	146	1800	28.8	2	364	12	4.7	3.3	52	170
3.3	68.8	1.3	7.2	2.8	97.5	163	193	1600	28	4.5	447	33	5.2	4.2	180	150
3.8	78.8	5.5	9.3	3.5	115	181	214	2000	32.8	3.1	546	25	3.8	3.1	85	110
4.2	53.5	0.99	10.4	2.9	101	143	205	1900	23.5	2.5	489	19	3	6.5	180	120
1.8	23.7	1.8	3.5	1.4	52.5	92.3	161	660	17.3	1.1	270	15	3.4	3	140	240
3.9	76.5	0.85	5.2	1.9	82.2	129	163	1500	19.2	1.8	370	16	4.5	7	73	220
1.8	57.2	1	10.3	3.4	110	166	200	2000	29.9	3.6	439	17	4.9	25	210	270
4.2	94.1	0.84	9.1	3.4	111	172	185	2000	32.7	2.7	500	28	6.8	4	110	96
3	82.1	0.73	7.3	2.8	88	154	162	1600	26.9	2.6	409	20	4.8	6.5	140	180
2.1	45.4	0.21	5.7	0.21	41.1	25.8	42.6	120	19.1	0.26	96.2	1.4	0.66	7.2	110	7.9
3.1	47.6	0.91	7.6	4.3	128	165	285	2800	28.2	4.7	531	26	9.4	4.3	140	190
2	29.8	1.1	9.5	5.3	296	396	173	3300	28.5	3.2	693	18	6.8	6.9	55	110
3.8	35.6	0.67	5.3	2.5	67.5	133	180	1000	21.2	1.4	389	24	4.8	2.7	110	190
6.9	53.1	0.98	8.2	2.9	102	173	205	1600	25.3	2.5	526	22	5	2.7	60	130
3	23.1	0.74	4.7	1.1	58.8	90.5	114	840	20.1	1.1	200	16	19	36	100	470
4.2	66	2.4	15.5	2.4	110	280	281	2600	36.1	3.7	508	17	5.3	3.5	74	1800
5.3	71.3	1.5	11.7	3.3	116	195	224	1900	38	2.9	488	20	7.8	3.5	57	180
2.6	63	0.6	4.7	2.1	68.2	123	165	1600	21.3	1.8	349	17	5	2.7	79	200
3.6	85.9	0.87	10.1	2.8	129	180	202	2300	30.3	2.7	467	20	6.5	8.3	480	150
3.1	42.4	0.73	6.1	2.1	75.5	128	167	1300	22.3	2.1	331	9.5	2.5	2.6	75	150
3.6	66	1.1	6.9	4.7	113	170	220	1800	29.4	2.6	463	21	5.7	7.2	60	110
5.6	92.8	0.88	9	3.4	130	205	235	2300	31.1	3	583	19	5.5	3.6	93	120
4.7	93.8	0.87	9.2	3.3	127	196	221	2200	31.9	3	543	19	6.3	3.8	94	140
2.2	23.4	0.91	3.1	1.5	54.7	95.2	192	890	15.7	1.2	293	15	4.3	2	63	200
3.8	23.5	0.93	3.8	1.5	57.3	112	380	810	17.8	0.99	288	17	5.4	2.5	71	170
3.1	20.9	1.6	3.8	1.7	51.2	115	232	950	16.7	1.1	318	20	3.4	2.1	78	190
3.6	70.6	0.75	6.6	3.3	99	176	225	2300	27.7	2.8	462	20	4	2.6	91	110
2.8	7.6	0.43	3.3	1.5	40.1	69.4	150	730	13.9	0.88	229	8.6	2.4	1.1	55	160
3.9	23.5	2.1	3.7	2.2	89.5	118	181	1200	17.4	1.7	358	18	4	6.2	82	210
3.6	82.7	1.2	7.8	6.3	214	247	410	3600	44.7	5	673	25	4.1	3	250	160
5.8	63.2	1.2	8.4	3.6	123	174	268	1400	32	2.6	588	21	8.2	2.8	100	110

4.5	97.5	0.86	8.9	4.1	152	225	294	2600	36	2.9	521	21	5.3	11	1300	220
3.2	56.9	1.9	10.8	3	119	183	307	3700	33	2.6	476	15	5.2	2.4	70	2100
4.1	97.4	0.84	6.7	2.9	110	177	199	2100	27.3	2.9	472	18	6.6	3	100	97
4.4	67.8	1.4	13.5	13.4	279	331	325	6200	44.8	6.7	770	16	5.1	12	780	340
2.1	4.6	0.67	2	0.66	32	62.3	151	300	15.4	3.2	167	7.7	2.9	1	68	420
1.6	1.8	0.29	1.4	0.28	14.6	36.7	68.3	150	15.1	0.17	106	8.3	2.2	0.53	95	10
1.9	0.2	0.75	4.3	1.6	69.2	97.1	168	970	16.3	1.1	226	17	8.2	7.7	160	73
1.8	1	0.76	1.1	0.25	11.1	16.3	38.5	150	6.9	0.15	400	11	3.1	1.1	310	41
2.5	8.1	0.46	1.6	0.82	20.8	36	72.2	360	9	0.49	163	11	2.6	0.77	42	80
3.9	90.2	0.79	6.7	3.3	101	162	211	2300	27.8	2.6	535	25	8.1	3.9	71	130
4.3	66.2	0.91	7.2	3.6	123	181	262	1800	32.2	2.4	460	27	8.7	3.3	74	130
3.9	60.9	0.85	6.7	5.2	158	195	302	2400	31.3	2.6	430	14	5.6	17	140	86
0.45	4.4	0.86	1.8	0.54	18.8	24.9	36.2	290	7.9	0.3	102	5.2	2.2	1.4	17	22
2.8	1.4	0.31	1.8	0.25	22.8	17.9	37.8	160	7.4	0.11	92.8	3.8	1.6	0.58	110	21
3.2	64.3	1.4	4.8	2.9	106	154	211	1800	16.6	2.3	511	27	7.1	2.3	80	100
2	29.1	1.1	5.1	7.2	197	180	251	2800	16.6	4.7	439	19	6.8	4.6	140	94
2.2	48.9	0.91	3.4	2.1	85	126	174	1200	13.8	2.2	412	20	5.2	1.5	64	97
1.1	2.2	0.56	1.5	0.4	9.6	48	51.4	110	6.9	0.12	205	31	3.6	0.39	37	12
4.4	63.2	1.1	5	2.8	81.1	133	230	1400	21.9	1.8	502	34	9.8	3	100	210
1.2	5.4	0.33	0.91	0.3	23.3	21.9	46.8	240	5.4	0.22	159	7.5	1.6	0.48	23	130
1.9	68.8	2.8	5.7	2.2	112	331	428	4100	20.3	1.9	897	6.5	1.8	0.71	41	240
1.6	11.1	0.26	1.2	0.61	38.2	40.5	142	320	6.4	0.36	165	11	2.9	0.69	36	100
2.6	30.2	0.5	2.5	1.5	54.9	99.6	128	920	12.2	1.1	311	21	4.9	1.4	55	130
4.9	79.4	1.1	4.7	3.5	130	192	256	2100	18.4	3	639	39	10	1.6	75	110
1.5	39.6	1.3	3.8	1.4	42.3	133	233	1800	15.3	0.98	492	6.3	2.4	0.6	21	350
4	60.4	1.6	12.7	11.3	512	340	397	5800	35.5	6.5	1070	23	9.5	19	200	160
2.1	84.8	0.99	4.8	3.2	129	194	223	1800	19.1	3.2	558	32	11	2.8	96	120
3.5	58	1	5.1	4	110	172	228	1700	20.9	3.8	506	35	9.4	2.8	110	180
1.9	25.1	0.85	3.8	4.9	102	139	187	1500	16.5	2.9	374	19	6.8	2.1	140	190
2	39.6	1.6	3	1.3	63.2	108	133	1000	16.2	1.1	330	11	3.8	1	33	72
3	47	0.97	7.5	5.8	209	184	319	3300	30.6	4.3	607	25	9.4	4	120	150
5.4	21.6	0.46	2.6	1.2	32.8	67.7	116	670	11.9	0.98	277	20	6.3	1.7	36	290
3.6	64.1	0.81	3.3	2.3	86.7	123	162	2200	17.1	3	385	20	4.7	1.4	65	99
4.6	83.9	0.87	4.5	2.6	81.7	126	147	2600	200	2.6	359	37	13	2.9	110	110
0.47	4.5	0.43	0.88	0.35	16.5	20	39.9	210	4.6	0.32	80.7	3	0.5	0.14	12	34
1.7	26.1	1.5	3.2	1.6	44.8	83.4	140	830	17.3	1.5	338	21	7.1	1	42	98
0.87	10.9	0.55	2	0.85	37.6	46.5	107	350	10.5	0.63	203	21	7.2	0.72	29	180
2.5	36.6	0.81	4.1	2.8	82.6	141	173	1200	22.2	3.3	444	28	6	1.6	360	90
1.9	16.1	0.38	2.1	1.2	27.4	55.3	132	410	13.8	0.84	211	18	3.5	0.93	36	92
1.6	17.6	0.49	2.2	11.3	25.1	56.3	163	390	13.9	0.78	259	15	3.7	0.8	26	130
2.4	2.9	0.29	1.2	0.36	16	25.4	110	220	14.7	0.3	177	7.8	2.6	0.83	18	640
1.1	14.1	0.72	2.2	1.1	26.3	57.1	160	390	13	1.1	256	15	4.7	0.83	22	110
1.5	3.6	0.31	1.2	0.36	14.9	23.7	45.6	150	8.5	3.4	98	6.7	2	0.45	11	160
1.1	2.8	0.32	1	0.29	14.1	23.9	96.1	250	9.1	0.39	114	6.7	2	0.48	12	220
1.5	13.1	0.39	1.6	0.71	20	56	102	340	9.8	0.72	211	16	3.4	0.68	21	130
5.7	31.1	1.3	3.8	1.7	62.3	123	193	880	15.6	1.7	506	30	8.3	2.2	69	110
2.2	1.9	0.35	1.8	1.1	14.3	21.9	62.3	90	8.1	0.25	90.2	4.2	1.5	0.24	10	110
0.36	3.4	0.23	0.94	0.36	12.1	25.9	96.8	210	9.6	0.34	96	5.8	1.1	0.55	7.8	68
0.56	1.8	0.17	1.4	0.36	14.7	40.9	56.9	240	9.6	0.34	121	4.1	1.4	0.26	7.1	200

0.2	1.4	4.8	2	0.27	10.6	16.2	31.1	200	8.1	0.79	87	3.1	0.97	0.29	3.7	330
0.93	4.8	0.4	9.1	0.29	16.5	20.3	44.7	130	5.8	0.18	105	4.7	0.96	8.8	6.4	20
0.56	10.7	0.11	0.85	0.22	9.6	13.3	21.3	94	5.3	0.17	72.2	2	1.4	0.058	6.1	49
0.68	3.9	0.33	1.5	0.26	11.6	18.7	30	68	8.3	0.39	89	11	3.3	0.29	11	240
2.1	11.4	0.63	1.2	0.62	24.1	43.1	148	400	7.5	0.46	252	11	2.8	0.58	24	200
0.19	12.1	0.84	1.5	1.4	15.6	39.8	127	500	11.2	0.67	181	14	14	0.94	17	200
0.85	2	0.22	0.87	0.33	15.3	28.4	126	270	8.6	0.43	135	8.8	3	0.69	13	360
0.784	4.5	0.236	0.95	0.455	12.7	31.7	73.8	380	10.5	0.409	163	3.7	0.776	0.183	6.9	66
2.86	3.1	0.266	0.89	0.393	17.7	26.8	163	334	8.91	0.262	3820	4.5	1.5	0.432	14	1100
1.26	8.6	0.417	1.09	1.02	14.8	43.3	107	461	13	0.744	214	7.2	1.6	0.641	18	321
5.43	1.8	0.11	0.92	0.406	9.41	26.2	52.6	304	9.08	0.586	124	3.93	1.34	0.263	11	406
8.4	91.2	8.76	24	4.65	112	537	1560	5650	24.4	2.88	2140	2	0.35	15	1.7	66000
1.25	3.4	0.359	0.89	0.443	11.2	23.9	51.5	281	9.72	0.597	144	5.9	2.1	0.593	14	452
2.95	1.2	0.064	1.03	0.351	12.2	26.4	64.6	262	12.4	0.306	105	2.03	0.745	0.118	1.7	76
2.03	0.4	0.059	0.82	0.271	7.5	18.7	37.9	257	9.58	0.079	146	1.6	0.742	0.083	3.1	84
2	8.7	0.274	1.3	0.452	15.2	47.7	53.5	273	17.3	0.479	76.5	5.1	0.975	0.388	9.5	48.3
2.43	3.8	0.126	1.06	0.355	13.7	30.6	56.5	161	13	0.19	241	5.1	1.2	0.209	7.9	81
4.89	83.7	2.11	4.59	2.42	42	142	1000	2770	28.9	1.4	1140	18.8	4.8	1.4	25	5380
4.15	71.1	0.671	5.35	4.02	47.9	101	223	3380	17.6	5.49	610	4.17	1.06	0.528	83	5120
0.739	9.5	0.102	0.75	0.144	7.88	18.6	35.4	74.4	9.13	0.109	115	2.4	0.61	0.079	3.7	55
6.98	54.2	5.77	6.64	1.56	61.2	272	822	2640	14.7	1.46	732	2.8	0.65	5.6	3	86400
0.531	2.5	0.152	0.82	0.209	10.6	18.7	88.9	51.6	8.58	0.282	200	3.1	0.5	0.109	4.9	30.6
1.04	1.4	0.058	1.21	0.152	11.7	28	32.9	108	10.1	1.01	115	1.63	0.799	0.0885	3.2	1940
5.8	47.2	0.312	3.81	1.15	57.2	94.6	181	490	20.8	0.374	373	53.1	13.1	1.44	55	79.2
3.44	1.6	0.108	1.44	0.193	8.21	16	41.7	1510	6.95	0.189	23.7	3	1.24	0.314	5	132
0.88	0.7	0.084	0.89	0.119	14.5	42.7	30.5	40.4	13	0.148	109	1.56	0.75	0.102	3.2	18
2.9	1.2	0.064	1.34	0.188	17.9	17.5	43.9	53.1	26.1	0.436	132	2.7	1.42	0.262	5.7	353
1.42	7	0.18	1.08	0.527	15.3	27.7	63.3	291	9.78	0.68	117	13.8	106	0.249	20	66
2.02	0.4	0.049	0.95	0.195	13.8	377	227	51.6	10.2	0.116	102	1.81	1.18	0.167	3.8	60
0.4	0.4	0.222	1.29	0.135	12.7	14.1	23.4	30.7	10.2	0.089	109	1.2	0.731	0.062	4.8	43.1
1.24	0.9	0.096	0.95	0.113	7.96	14.5	80.4	42.1	8.34	0.054	70.4	1.79	0.654	0.184	1.9	27.9
0.292	3.6	0.04	2.7	0.277	30.2	9.8	17.1	54	8.17	0.195	30	0.17	0.06	0.01	0.4	12
0.195	5.3	0.5	1.24	0.234	26.2	4.52	16.5	48	5.05	0.033	36	0.08	0.04	0.01	0.43	12
0.768	37.1	0.58	5.85	1.63	66.8	79.7	62.7	354	17.9	2.24	148	4.38	1.2	0.1	9.5	15
1.52	72.6	9.03	6.08	8.79	109	589	651	2150	181	4.32	1280	13.4	3.47	24.6	40	1400
0.83	82.1	0.74	10.3	2.36	69.4	88.7	77.9	375	21.3	2.45	212	3.49	1	0.37	8.3	12
0.97	68.5	0.96	11.6	2.07	87.9	86.8	107	666	23.2	2.57	225	3.26	0.04	0.41	13	23
0.258	7.3	0.11	2.47	0.317	40	8.14	22.4	117	6.55	0.239	46	0.06	0.06	0.01	0.44	12
0.348	3.3	0.5	1.61	0.422	21.7	5.97	19.9	111	4.23	0.182	39	0.05	0.04	0.01	0.32	12
0.274	5.2	0.13	1.34	0.257	35.5	4.98	18.2	63	8.75	0.115	38	0.06	0.09	0.05	0.29	12
0.539	24.3	0.23	5	0.67	62.1	37	51.6	343	12.1	1.21	98	0.39	0.17	0.1	1.9	12
1.12	39	0.15	4.2	0.422	40.3	25	39.2	409	11.3	0.834	67	0.81	0.16	0.14	3.3	12
1.14	39.7	0.29	9.72	0.71	76.9	49.2	74.1	481	15.9	1.74	124	1.06	1	0.35	5.2	17
0.208	0.8	0.12	0.73	0.043	11.7	3.33	10.2	35	2.15	0.116	11	0.06	0.07	0.01	0.58	12
1.58	18.9	0.34	4.64	0.374	39.6	23.5	35.2	243	11.1	0.761	65	0.64	0.1	0.19	4.4	12
6.55	87.8	1.58	14.8	2.93	114	175	127	650	33.3	4.67	344	5.6	2.24	0.1	20	23
8.45	79.7	1.28	9.44	1.56	72.7	84.8	76.5	256	25.1	2.31	225	6.73	4.48	0.04	25	23
4.11	28.3	0.23	3.6	0.569	41.5	24.7	29.6	141	9.8	0.755	83	0.19	0.26	0.01	2	24
5.47	78.5	1.21	12.1	0.687	102	81.5	97.7	545	27.7	2.73	180	4.68	1.44	0.17	11	17

0.74	6.5	0.1	2.19	0.111	21	4	14.4	38	3.6	0.119	30	0.02	0.02	0.02	0.16	12
1.4	3.1	0.1	1.35	0.041	31.9	5	6.85	67	3.4	0.056	15	0.01	1	0.02	0.17	12
7.7	82	1.11	11.2	1.16	94.2	93.5	96.2	410	27.1	2.63	199	6.24	2.36	0.23	13	19
0.198	6.7	0.15	2.41	0.232	27	7	15.6	69	4.4	0.328	45	1	1	0.02	0.24	12
1.2	7.8	1.14	1.89	0.218	31.1	4.4	10.3	80	3.2	0.16	33	0.06	0.09	0.04	0.45	12
1.3	9.3	0.21	2.63	0.131	34.3	6.6	16	82	4.3	0.241	30	0.2	0.24	0.06	1.3	12
0.745	3.6	1.15	2.88	0.018	48	3.7	7.49	40	5.2	0.031	15	0.02	0.26	0.02	0.34	12
3.86	40.9	1.16	6.5	0.354	46.8	33	55.6	88	15.2	0.758	128	0.68	0.46	0.01	3.4	24
0.579	4.3	0.84	2.08	0.069	28.8	2.8	9.73	35	4.1	0.075	20	0.01	1	0.03	0.21	12
0.691	2.7	0.13	1.38	0.045	16	2.4	6.71	30	3.5	0.069	13	0.01	1	0.04	0.17	12
0.04	3.1	1	1	1	1	1	2	100	1	1	7		1	1	1	0.58
0.171		1	1	1	5	4	5	50	3	1	14		1	1		0.08
0.096	2.7	1	1	0.4	1.39	1.04	2.62	50	0.43	0.67	4.81		1	1	1	0.14
4.18	83.5	4.36	9.6	1.84	40.2	88.8	75.5	420	17.3	1.93	197		1.4	1	11	0.3
8.72	96.5	6.66	11.8	2.93	55.9	196	195	590	24.3	2.41	451		7	1	10	0.47
0.062		1	1	0.4	2.88	7.28	5.23	10	2.56	0.4	21.4		1.6	1.6	1.6	0.04
3.79	63.5	1.11	10.1	1.45	41.8	52.5	64	520	16.8	0.4	123		1	7	7.9	7.9
0.5	2.6	0.2	1	0.02	12	4	17.2	20	3	0.2	24	0.035	0.24	0.045	0.69	1.7
0.24	0.9	0.3	3	0.02	12	4	15.7	20	3	0.2	22	0.36	0.36	0.18	1	6.6
2.94	3.9	0.39	2.9	1	14.1	4.2	11.6	33	2.2	0.1	13.1	0.4	0.35	0.5	0.92	0.75
2.4	13.4	0.14	4.08	0.035	15.9	2.62	7.33	17	4.75	0.72	18.5	1	1	1	1	2.4
4.53	46.2	0.39	6.6	0.95	34.9	7.3	13.5	42	13.4	0.14	44.1	0.4	0.35	0.5	0.32	10
2.21	76	0.28	10.9	2.8	67.5	17.5	35.5	220	24.1	0.63	103	0.4	0.35	1.2	2.3	10
5.57	84.1	0.35	16.4	1.2	69.4	17.3	40.9	180	26.1	0.4	117	0.4	0.35	0.5	0.92	10
3.03		0.46	12.7	0.98	78.4	26.7	37.3	260	29.7	0.5	108	0.03	0.06	0.22	0.34	0.75
1.97	48.4	0.27	7.58	0.175	50.9	14.2	20.9	157	17.1	1.39	74.2	1	1	1	1	1.3
1.32	98.8	0.27	7.8	1.4	49	11.6	28.4	180	18.2	0.44	71.1	0.03	0.06	0.22	0.88	0.75
0.12	3.7	0.13	2.4	1.1	24.3	1.1	12.6	13	6.9	0.18	32.3	0.03	0.06	1.4	0.34	0.75
0.017	1.17	0.1	0.4	0.025	7.1	1.6	4.6	10	1.7	0.025	5.9	1	1	1	1	1
0.9	59.7	0.4	10	0.29	73	20	28.7	170	26	0.8	111	0.097	0.19	0.18	3	3.1
0.12	2	0.01	1	0.02	2	1	2.4	20	1	0.1	5	0.25	0.25	0.12	0.031	0.18
4.34	84.8	0.3	17	0.2	93	16	14	40	36	0.4	103	0.46	0.037	0.23	0.37	0.3
2.13	82.8	0.4	10	0.3	77	23	37.2	240	27	0.8	115	0.19	0.14	0.16	4.9	2.8
10	61.1	0.3	12	0.1	82	15	19.5	50	32	0.3	78	0.84	0.064	0.42	0.46	16
3.35	32	0.2	6	0.05	31	8	19.4	70	12	0.3	60	0.24	0.18	0.13	2.6	4.9
0.21	16.6	0.23	3	2.4	33.5	5.6	15.6	40	11	0.24	38.1	0.4	0.35	0.5	0.92	0.75
6.61	89.4	0.5	13.9	1.6	65.9	16.7	42.8	150	24.8	0.41	115	0.4	0.35	0.5	2.7	0.75
0.84	32.3	0.01	7.5	0.2				110		0.27		0.17	0.17	0.17	0.17	7
0.085	2.43	0.23	1.3	0.12	8.8	2.2	7.9	17	3	0.052	23.1	0.5	0.5	0.5	0.99	10
4.7	46	1.1	9.2	2	66.5	80.3	83.4	430	24.1	2.4	186	0.5	0.5	0.5	3	10
1.7	28.7	0.8	9.5	1.7	71	36.8	70.4	390	21	1.2	115	0.81	0.5	0.5	2.8	10
2.9	37.1	0.79	8.3	1.4	61.4	57.2	79.4	440	19.3	1.3	140	0.5	0.5	0.5	8.6	10
7.8	38.2	2.2	16.7	2.3	87	108	155	540	33	2.7	267	8.1	0.5	0.5	45	10
4.3	62.6	1.1	12.3	2	84.7	72.2	102	590	27.8	2	182	1.3	0.5	0.5	2.7	10
1.6	25.1	0.44	5	1.3	47.1	25.7	40.1	250	17	0.77	86.9	0.5	0.5	0.5	7.4	10
6	63.4	1.7	15.5	2.7	99	104	137	620	36.3	2.6	280	5.6	0.5	0.5	17	10
0.32	6.23	0.24	2.2	0.36	17.7	6.3	18.5	55	4.7	0.16	28.7	0.5	0.5	0.5	0.5	10
1.9	27.7	0.68	7.3	1.1	64.9	41.6	59.8	340	21	1.2	112	1.1	0.5	0.5	1.8	19
0.3	5.06	0.28	1.8	0.16	13.7	5	14.5	43	4	0.15	25.6	0.5	0.5	0.5	0.5	10

0.044	1.12	0.22	1.3	0.2	13.3	2.5	8.7	17	3.2	0.065	14.2	0.5	0.5	0.5	0.77	10
0.22	3.31	0.26	2.4	0.21	18.8	5.2	16	48	5.2	0.14	24.3	0.5	0.39	0.5	3.1	10
4.4	80.3	0.89	11.9	1.5	78.2	53.3	82	640	24.9	1.7	145	0.5	0.5	0.5	2.6	10
2.9	9.92	0.81	9.2	1.4	66.1	43.5	67.7	430	21.5	1.4	122	0.5	0.5	0.5	2.5	10
0.23	2.99	0.26	1.8	0.12	14	3.9	13.6	28	3.8	0.099	19.8	0.5	0.5	0.5	0.5	10
0.23	2.05	0.23	2.2	0.24	18.2	4.6	15.6	42	4.4	0.12	24.1	0.5	0.5	0.5	0.5	10
1.3	10.5	0.9	2.6	0.8	45.1	40	42.2	110	14.1	0.71	90	2	0.5	0.5	11	10
7.1	53.6	1.5	15.8	2	88.9	85	125	610	31	2.3	217	1.8	0.5	0.5	9	10
2.2	17.2	0.44	4.7	0.64	34.7	21.5	38.2	200	10.3	0.58	64	0.5	0.5	0.5	2.6	10
4.8	57.7	0.93	11.7	1.8	83.6	59.8	89.3	580	26.6	1.9	156	0.5	0.5	0.5	14	10
1.2	13.9	0.32	3.2	0.43	26.9	11.9	27.4	150	7.3	0.35	44.7	0.5	0.5	0.5	2.8	10
5.1	45.7	0.91	11.1	1.6	85.9	72.1	97.2	580	27.5	2.1	168	2.1	0.5	0.5	11	10
11	64.6	4.7	20.7	4.8	126	322	347	1000	52	3	705	42	0.5	0.5	41	41
3.8	60.1	1.1	8.8	1.7	66.5	80.5	124	530	24	1.6	210	0.5	0.5	0.5	9	11
0.35	3.15	0.2	1.1	0.12	9	4.8	11.7	36	3.7	0.11	22.9	0.5	0.5	0.5	1.2	10
0.12	1.04	0.18	1.6	0.12	12.7	2.8	7.8	17	3	0.044	11.4	0.5	0.5	0.5	0.5	10
0.081	1.47	0.23	1.3	0.12	7.9	2.1	8.7	17	2.3	0.038	8.9	0.5	0.5	0.5	0.5	10

1-methylphenanthrene (µg/kg)	2-methylnaphthalene (µg/kg)	Acenaphthene (µg/kg)	Acenaphthylene (µg/kg)	Anthracene (µg/kg)	Benzo(a)anthracene (µg/kg)	Benzo(a)pyrene (µg/kg)	Benzo(g,h,i)perylene (µg/kg)	Chrysene (µg/kg)	Dibenzo(a,h)anthracene (µg/kg)	Fluoranthene (µg/kg)	Fluorene (µg/kg)	Indeno(1,2,3-c,d)perylene (µg/kg)	Naphthalene (µg/kg)	Pyrene (µg/kg)
160	200	240	410	980	2200	1800	1300	2000	410	3500	190	1500	810	3200
110	180	130	250	430	1300	1100	1200	1300	240	2300	95	1100	510	2100
130	200	110	460	430	2400	2800	2000	2400	400	3100	140	1900	440	2800
160	190	210	370	460	1800	1700	1900	1900	400	3400	130	1900	460	3400
180	260	130	450	360	1600	2900	1600	1900	330	2000	140	2200	440	2700
270	160	190	400	590	2700	2000	2100	2500	430	4700	170	2100	340	4300
130	140	140	270	390	1600	1400	1500	1600	320	3100	94	1400	380	2600
140	150	260	270	410	2000	1600	1800	2000	370	4400	150	1700	310	3600
130	160	180	390	550	2400	1900	2000	2200	420	3600	110	1900	370	3800
260	290	210	500	680	3100	6000	2600	4100	510	6500	200	2800	510	4800
240	320	410	630	1200	2400	2400	2000	3800	400	4700	360	1700	770	6200
350	230	450	450	960	3600	2500	2600	4000	530	6200	240	2600	380	5700
280	210	310	420	680	2800	2300	2500	3000	480	5400	170	2200	360	4700
370	190	290	610	780	3200	2500	1800	3300	460	5600	200	1900	350	5000
500	280	1000	960	1300	6400	4800	3800	5000	800	6900	390	3600	550	6500
360	360	360	830	1300	3100	2700	2200	4600	510	5600	360	2300	900	6500
990	440	460	1100	1300	5400	4300	4000	5100	890	6200	260	3500	820	6600
220	180	230	400	490	2300	2000	2400	2900	490	4800	150	2300	350	4100
270	340	150	440	1200	2200	2400	2200	3800	24	5700	400	2000	670	7100
21	14	18	18	58	170	210	180	200	32	380	19	130	23	310
1900	400	270	1600	1400	4500	9500	3200	6600	1100	5500	490	3500	610	4800
590	180	190	490	1200	2700	2200	1800	4200	20	4800	330	1700	340	6200
610	310	400	620	940	6700	4700	1800	5900	350	9600	300	1800	440	7200
430	210	250	570	690	3700	5100	2500	4000	470	4900	210	1800	370	4200
5600	420	460	800	3500	5300	5100	3400	10000	140	10000	1000	2900	500	19000
13000	3300	22000	3100	19000	13000	9100	5900	19000	57	18000	1100	4800	5300	27000
520	240	660	510	890	4200	4300	2500	4800	470	9300	360	2300	450	7300
310	350	340	560	660	2700	3000	1400	3700	420	5500	230	1700	600	4000
300	270	270	410	640	3300	3900	2600	4400	460	6200	230	2200	550	4600
180	230	290	300	400	1500	2600	1500	1800	430	3300	250	1200	440	2600
210	250	190	330	640	3000	2100	2300	2900	500	4800	210	1800	390	3600
230	230	200	390	540	2300	3800	2800	2600	480	4300	240	2300	540	3400
240	270	230	420	580	2600	3300	3100	2600	640	4300	260	2600	630	3500
780	310	500	850	2100	4700	4300	2400	5900	570	8100	500	2500	450	11000
340	260	480	510	870	3800	3600	2400	3400	550	6800	370	3400	440	5100
490	290	760	430	990	5600	5000	2100	4900	490	11000	630	2400	580	8000
250	220	230	310	510	2200	3100	2500	2900	610	4900	270	3000	410	3600
270	290	270	360	540	2400	2900	2500	2900	570	4700	330	2700	620	3700
460	320	430	570	820	5400	6200	3000	5200	520	8300	310	2400	450	6700
480	290	310	680	1400	3900	2500	2400	4200	670	5800	430	2400	750	7400
200	190	200	400	440	2300	2700	2800	2700	540	4600	270	2300	420	3600

320	320	390	840	600	3200	4500	2900	3600	630	6400	310	3600	750	5300
1500	3400	4200	1500	2400	8900	11000	8200	12000	1900	19000	4200	8900	14000	13000
210	180	150	280	350	1900	2600	2200	2200	620	3600	200	2000	410	2800
1000	630	1800	530	2800	9400	11000	3900	8500	1100	17000	1600	5300	950	13000
490	420	480	330	900	3900	3800	2700	3500	720	6700	630	2100	550	4900
100	27	32	110	130	1200	1100	1200	1200	170	2100	35	1000	78	1600
250	130	400	250	920	2800	1900	1700	2800	410	4600	270	1500	260	6100
120	46	310	110	590	3000	2100	1600	2500	320	5700	230	1200	67	3700
270	100	230	280	370	3300	3000	1800	3000	360	5400	190	1700	150	3900
260	240	180	350	520	2400	3000	2200	3300	500	4600	160	1800	440	3400
300	240	240	480	550	3500	3300	2600	4000	530	6900	200	2400	410	5500
240	170	130	210	310	1600	2700	2000	2300	460	3700	180	1900	350	2900
13	22	12	16	16	120	140	180	130	32	220	28	130	67	190
41	35	42	130	92	720	660	190	600	78	740	31	230	88	630
190	190	190	320	480	3000	2700	2900	3600	530	5000	200	2600	350	4400
270	200	230	290	610	2000	1700	1600	2400	350	3700	250	1500	310	3600
130	170	120	220	390	2000	1800	1800	2300	360	3500	130	1900	270	3100
120	12	73	51	330	2100	1500	1200	1900	270	4100	84	1200	44	2700
450	390	330	690	950	6100	6100	4000	7000	750	8800	410	3700	460	6400
180	170	250	200	420	2900	2600	2000	2400	370	6100	230	2100	190	4600
710	600	560	780	1000	3900	3500	3100	4400	680	5600	480	3100	830	5200
380	110	430	310	860	3800	2900	2200	3300	490	6200	340	2300	170	5200
220	210	200	310	480	3000	2600	2300	3800	520	5400	190	2200	270	4400
250	180	220	360	530	2800	2900	2800	3400	560	5200	190	2800	290	4600
940	780	750	800	920	3600	3600	2400	4400	530	6500	570	2300	650	5500
340	280	350	360	730	3400	3400	2900	4400	610	7100	250	3000	460	6300
200	220	180	280	400	2700	2700	2500	2900	440	4400	130	2300	390	4200
350	370	320	530	670	3400	3500	3200	4100	670	5900	220	3200	480	5300
290	360	280	430	560	3300	2300	2400	3400	470	4800	200	1900	430	4500
210	160	240	270	360	2400	1500	1200	2200	260	3000	120	1300	200	3100
470	300	310	530	630	2800	4400	3200	4000	670	5100	360	3400	450	3900
890	400	550	1200	1200	4000	5800	3600	5500	910	5300	640	3500	660	4300
210	200	170	250	420	2000	2000	2000	2900	310	4400	160	1800	290	4000
230	210	180	330	620	2200	2300	2900	3100	500	4500	170	2500	330	3900
42	61	36	51	58	450	360	310	370	69	750	29	300	150	670
230	150	190	250	510	2900	2300	2300	2900	340	5500	220	2200	230	4400
330	250	360	580	650	3400	2400	2000	3800	520	6100	280	2700	330	5400
210	150	250	230	490	2000	1700	1000	2800	270	5000	170	1300	220	4300
240	170	170	230	300	2200	3200	2300	2800	410	4700	210	2600	240	3800
230	210	200	230	390	1600	2800	1900	2500	400	4500	240	1700	230	3300
640	1200	610	550	1000	4500	5200	3000	4600	800	5900	670	3200	1500	4100
280	170	260	330	480	2200	3100	2400	3100	480	4400	280	2300	270	3200
300	160	180	640	400	1800	2400	1300	2200	360	2600	210	1000	230	2800
360	240	420	480	610	2300	2800	1700	2400	410	4500	400	1800	380	3400
270	200	280	310	470	2100	2700	2300	2700	450	5000	280	2000	290	3600
170	210	130	280	380	2500	2500	2500	3100	480	4500	110	2300	290	4000
210	130	280	160	480	1700	2200	810	2000	230	4500	350	910	230	3100
230	90	240	190	270	1300	1300	1100	1600	270	2700	190	1100	150	1900
410	300	330	470	570	2200	2500	1300	2200	350	3500	340	1200	500	2900

450	490	590	450	670	1900	2400	1100	2400	340	4200	860	1200	1000	3000
39	32	52	62	84	820	540	560	830	110	1300	36	510	59	1100
130	56	98	140	130	1100	1400	760	1000	150	1700	77	580	98	1200
330	220	1800	140	810	7600	7000	4000	7400	620	19000	650	4100	250	13000
400	310	580	600	830	5100	3700	2100	4000	540	6900	430	2300	500	6000
450	250	460	910	780	3100	3500	2300	3700	570	5500	480	2700	320	4700
1100	540	450	1500	1100	4800	6100	1900	5600	640	5900	600	2000	770	5300
202	106	94	270	307	840	1290	785	1160	194	1140	105	712	129	1300
1390	1120	1400	1970	2100	4120	6460	2940	6970	497	5600	828	1790	1380	7690
877	520	272	1020	1290	4300	4700	2820	6130	371	4470	406	1580	525	4810
1180	478	576	1420	1840	3440	5120	1580	4770	306	3340	535	944	481	5160
114000	12100	87500	25000	120000	97500	136000	46000	101000	11900	157000	71600	33700	22400	215000
1320	473	571	1010	1800	4500	5850	3220	6990	462	5300	652	1850	570	6340
319	115	131	456	488	1000	1290	685	1130	183	1020	127	621	119	1420
175	70	104	143	224	534	643	381	627	66	708	90	317	68	845
443	71	154	202	535	1130	1450	846	1730	145	2740	163	756	81	2890
189	107	149	144	301	771	950	728	983	131	1230	110	686	111	1330
2530	1990	4920	2170	3510	7190	10700	5070	9570	947	12500	2520	5020	2160	11900
7400	3400	9280	2100	7520	5770	5970	3990	7400	697	13200	5890	2740	1600	16700
1060	77	54	320	546	918	1370	766	1410	88	1580	102	345	82	2640
39200	29400	79200	6030	52900	39100	39100	12000	45500	1960	58900	35300	9150	29500	89600
51	15.3	63	90	100	279	395	253	387	39.6	434	31.6	183	33.1	442
256	1230	856	323	721	375	447	263	512	42.1	950	722	154	3450	971
251	121	91	1050	659	1320	1550	608	2520	124	4020	189	825	255	3370
649	96	333	333	673	1420	2090	1210	2320	235	2410	258	931	105	2740
38.8	10.6	18	46	61	136	181	116	228	26.5	298	19.5	91	22.5	304
536	664	1790	430	727	1650	2300	1140	2150	221	3690	519	926	2730	3350
145	84	94	1120	347	892	1060	673	1500	112	2150	125	551	172	1760
168	113	207	1090	496	742	586	770	695	67	1880	199	360	256	1490
18.8	44.2	16	32.8	36.1	122	100	101	175	8.1	166	16.9	56	130	177
525	13.2	270	387	637	1210	1710	723	1630	154	1510	198	624	29.6	2290
12	12	12	12	12	36	31	21	78	12	46	12	24	28	63
12	12	12	12	14	38	33	12	38	12	64	12	20	16	59
12	30	18	55	150	260	240	12	310	12	650	38	40	64	520
3200	2100	830	590	2500	3200	3000	1900	4700	12	8300	1500	1800	1600	7600
77	45	36	12	110	210	270	12	320	12	640	72	12	84	550
37	54	42	100	220	350	370	190	440	12	880	86	43	94	770
12	12	12	12	19	47	52	34	52	12	71	12	32	14	76
12	12	12	12	12	18	16	12	19	12	36	12	12	17	38
12	12	12	12	12	12	12	12	12	12	14	12	12	14	12
12	26	12	31	57	97	120	69	120	16	190	22	76	62	180
12	23	12	35	56	100	110	93	130	20	190	23	93	52	190
12	37	22	48	92	140	160	130	180	29	370	39	140	71	330
92	12	12	58	44	130	110	62	130	14	140	12	54	24	250
12	24	44	30	200	220	140	53	230	14	750	93	12	50	490
25	64	36	96	200	410	370	290	480	100	870	55	440	110	750
30	49	38	57	160	380	470	400	530	30	1100	66	30	89	930
24	8.1	24	9.7	14	29	30	41	33	24	59	6.5	56	32	56
25	49	31	59	87	190	190	130	230	45	300	26	210	95	280

12	12	12	12	12	12	12	12	12	12	4.4	12	12	12	12
61	12	5.5	37	56	100	57	64	110	34	260	8.7	80	12	220
33	58	41	99	160	330	290	200	440	68	680	49	310	90	580
12	12	12	12	12	5.2	4	12	4.4	12	10	12	12	12	8.4
12	12	12	12	12	10	7.2	12	8.8	12	17	12	12	12	16
12	4	4	5.2	12	27	24	29	31	16	51	5.2	38	12	47
12	12	12	12	12	6.8	5.6	12	7.2	12	11	12	12	12	9.9
24	13	24	18	24	50	68	97	68	24	100	24	140	35	100
12	12	12	12	12	12	12	12	12	12	2.8	12	12	12	3.2
12	12	12	12	15	69	31	22	70	12	120	12	32	12	110
0.5	1.18	0.68	0.23	0.57	1.11	1.38	1.11	0.8	0.25	3.63	1.57	0.95	0.99	2.28
0.12	0.15	0.07	0.05	0.24	0.58	0.8	0.43	0.52	1	1.13	0.1	0.56	0.16	1.27
0.07	0.29	0.07	1	0.06	0.15	0.12	0.09	0.11	1	1	0.11	0.1	0.41	0.55
0.67	0.92	0.44	0.44	2.15	10.4	13	9.03	7.61	1.59	25.2	0.86	7.94	1.13	23.1
1.9	1.31	1.99	1.25	5.43	20.7	29	26.1	27	3.7	55.4	2.78	20.6	2.1	52.1
0.07	0.11	0.07	0.07	0.04	0.71	0.84	0.77	0.72	0.14	1.44	0.07	0.61	0.26	1.02
8.2	18.5	7.6	9.4	26.5	69.3	90.4	77.3	63.4	12.1	130	11.6	71.1	28.1	127
6.6	1.8	2.4	8.6	20	37	35	26	48	5.8	97	5	30	2.8	83
42	10	47	1.1	100	1700	2300	1300	1800	440	2000	35	1100	14	1900
1.3	0.85	1.2	0.6	0.6	13	12	1.2	18	1.9	39	1.5	1.7	0.6	32
10.7	2.8	8.5	20.7	23	123	104	61.6	124	19.9	209	11.6	68.4	3.1	148
10	10	10	10	10	20	16	11	16	10	37	10	10	10	36
10	10	10	10	10	20	18	11	19	10	28	10	11	10	25
10	10	10	10	10	10	10	10	10	10	11	10	10	10	12
1.2	0.85	1.2	0.6	0.6	12	0.6	1.2	18	1.9	32	1.5	1.7	0.6	32
3.4	2.6	1.3	2.9	6.4	18.5	21.1	10.8	23.3	4.8	32	2.6	16.8	2.7	24.8
1.2	0.85	1.2	0.6	8	22	18	1.2	22	1.9	40	1.5	1.7	0.6	26
1.2	0.85	1.2	0.6	0.6	1.1	0.6	1.2	0.6	1.9	0.85	1.5	1.7	0.6	1.7
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8.1	6	2	7	16	43	48	38	48	7.2	77	4.4	38	7.9	81
0.17	0.21	0.042	0.04	0.049	0.69	0.1	0.2	0.56	0.7	0.28	0.082	0.091	0.37	0.21
0.58	0.5	0.22	0.23	0.69	1.5	0.94	1.2	1.9	0.17	3.8	1.5	1.1	1.2	3.4
8.3	5.2	2.5	10	17	51	60	40	52	8	83	5	38	7.3	85
2.4	29	3.7	1.6	2.4	4.2	3.2	3.2	5	0.61	13	3.6	2.9	68	9.6
3.4	9.9	1.2	4.1	5.9	16	19	15	23	3.1	45	2.3	14	22	43
1.3	0.85	1.2	0.6	0.6	1.1	0.6	1.2	0.6	1.9	10	1.5	1.7	0.6	1.7
1.3	0.85	1.2	15	21	47	43	29	63	1.9	78	1.5	29	0.6	100
7	7	7	7	7	7	7	7	7	7	20	7	7	7	14
10	10	10	10	10	10	10	10	10	10	12	10	10	10	10
10	19	10	18	36	120	88	40	110	10	160	14	41	11	250
38	16	12	17	41	130	100	49	140	10	170	12	41	18	260
110	19	31	74	110	430	420	170	360	59	1100	45	160	26	480
25	21	10	27	36	260	240	110	250	10	580	19	110	17	510
22	16	11	20	58	160	140	51	170	10	240	19	55	17	250
13	10	10	12	24	100	69	20	96	10	170	10	22	10	180
10	10	10	10	20	56	42	15	60	10	110	10	17	11	110
10	10	10	10	10	29	30	16	24	10	37	10	16	10	28
39	46	23	36	86	360	290	80	360	10	430	38	87	44	670
10	10	10	10	10	10	10	10	10	10	16	10	10	10	12

10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
23	27	15	27	68	130	130	60	140	10	270	24	55	26	170
22	19	14	21	60	120	97	38	130	10	310	21	39	22	190
10	10	10	10	10	10	10	10	10	10	15	10	10	10	10
10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
10	10	10	10	27	110	110	51	110	10	280	10	52	10	160
31	22	14	29	62	170	130	63	190	10	300	19	63	22	290
22	10	10	14	42	92	74	33	120	10	130	19	32	10	130
19	19	10	19	40	110	96	44	120	10	200	14	46	19	180
10	10	10	10	21	43	34	20	43	10	79	10	16	10	75
10	20	13	19	46	130	100	35	150	10	230	19	38	15	200
10	80	130	98	400	1000	820	220	700	10	930	190	240	110	1400
10	25	28	36	93	230	200	59	260	10	350	31	59	23	330
42	10	14	19	70	150	130	63	130	10	270	27	55	10	260
10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
10	10	10	10	10	10	10	10	10	10	10	10	10	10	10

Table B2-2. Method 2 MLR dataset

Area of Interest	Location ID	*C. dilutus* survival (% of control)	*C. dilutus* biomass (% of control)	*H. azteca* survival (% of control)	*H. azteca* biomass (% of control)	*A. abdita* survival (% of control)	Abundance (per m^2)	Species Richness	Shannon-Weiner H'	Pielou's J'	Swartz's Dominance	Hilsenhoff Biotic Index	Total organic carbon (%)	Total fines (%)	Lead (mg/kg)
LPRSA	LPRT01A			0.87	0.823	0.87	1090	8	1.06	0.507	2		3	97	125
LPRSA	LPRT01B			0.89	0.715	0.95	614	8.22	1.34	0.662	2.67		2.1	93.7	180
LPRSA	LPRT01C			0.42	0.259	0.92	2740	16	2.01	0.727	4.67		2	77.2	97.7
LPRSA	LPRT01D			0.81	0.699	0.58	2050	12.3	1.63	0.65	3		2.4	88.8	132
LPRSA	LPRT01E			0.25	0.186	0.85	2750	13.1	1.71	0.669	3.11		1.4	43.1	87.8
LPRSA	LPRT01F			0.95	0.69	0.85	357	7	1.06	0.537	2		3.2	77.5	167
LPRSA	LPRT01G			0.89	0.647	0.97	973	10.7	1.42	0.6	2.33		3	91.7	138
LPRSA	LPRT02A			0.86	0.556	0.89	709	9.33	1.57	0.718	3.11		2.2	81.9	181
LPRSA	LPRT02B			0.71	0.596	0.69	127	6.67	1.68	0.887	4		2.4	63.2	244
LPRSA	LPRT02C			0.95	0.679	0.92	630	7.67	1.67	0.823	3.67		4	80.1	176
LPRSA	LPRT02D			0.82	0.567	0.95	1290	13.1	2.07	0.816	5		3.7	83.5	146
LPRSA	LPRT02E			0.82	0.683	0.78	155	5.5	1.42	0.83	3.5		3.3	68.8	193
LPRSA	LPRT02F			0.9	0.606	0.83	240	9.33	1.73	0.807	4		3.8	78.8	214
LPRSA	LPRT03A			0.82	0.844	0.61	320	2.67	0.427	0.43	1.33		4.2	53.5	205
LPRSA	LPRT03B			0.87	0.83	0.94	773	6.33	1.45	0.803	3		1.8	23.7	161
LPRSA	LPRT03C			0.56	0.426	0.87	894	7.33	1.21	0.61	2.56		3.9	76.5	163
LPRSA	LPRT03D			0.85	0.642	0.87	1370	10.9	1.69	0.728	3.89		1.8	57.2	200
LPRSA	LPRT03E			0.86	0.951	0.89	593	7.67	1.17	0.69	2		4.2	94.1	185
LPRSA	LPRT03F			0.73	0.432	0.84	693	8.67	1.49	0.697	3		3	82.1	162
LPRSA	LPRT04A			0.98	0.959	0.82	3420	9.33	1.31	0.599	2.56		2.1	45.4	42.6
LPRSA	LPRT04B			0.87	0.708	0.23	523	6.33	1.41	0.79	2.67		3.1	47.6	285
LPRSA	LPRT04C			0.36	0.17	0.15	721	8.44	1.52	0.778	3.44		2	29.8	173
LPRSA	LPRT04D			0.69	0.514	0.71	1220	5.33	0.507	0.297	1		3.8	35.6	180
LPRSA	LPRT04E			0.62	0.353	0.83	1170	6	1.07	0.607	2.33		6.9	53.1	205
LPRSA	LPRT04F	0.83	0.821	0.86	0.44		333	4.67	1.09	0.757	2.33		3	23.1	114
LPRSA	LPRT05A			0.069	0.0258	0.37	2280	11.1	1.54	0.64	3		4.2	66	281
LPRSA	LPRT05B			0.16	0.0595	0.88	852	9	1.57	0.746	3.56		5.3	71.3	224
LPRSA	LPRT05C	0.95	0.703	0.53	0.186		2940	10.3	1.33	0.57	2.33		2.6	63	165
LPRSA	LPRT05D	0.89	0.713	0.68	0.315		227	6	1.08	0.603	2.67		3.6	85.9	202
LPRSA	LPRT05E	0.96	0.706	0.7	0.45		200	3.67	1.08	0.85	2		3.1	42.4	167
LPRSA	LPRT05F	1	0.651	0.33	0.16		147	3.33	0.737	0.74	2		3.6	66	220
LPRSA	LPRT06A	0.94	0.59	0.87	0.385		6530	7	0.843	0.463	1.56		5.6	92.8	235
LPRSA	LPRT06B	0.83	0.656	0.65	0.213		3380	4.33	0.147	0.1	1		4.7	93.8	221
LPRSA	LPRT06C			0.53	0.255	0.88	4660	9.89	1.2	0.528	2		2.2	23.4	192
LPRSA	LPRT06D	0.9	0.621	0.63	0.193		7030	8.33	1.13	0.533	2		3.8	23.5	380
LPRSA	LPRT06E	0.9	0.738	0.81	0.37		2490	7.33	1.21	0.603	2.33		3.1	20.9	232
LPRSA	LPRT06F	0.88	0.607	0.89	0.582		927	2.33	0.547	0.727	1.67		3.6	70.6	225
LPRSA	LPRT07A	0.96	0.9	0.67	0.307		5110	9	0.942	0.436	1.78		2.8	7.6	150
LPRSA	LPRT07B	0.95	0.646	0.22	0.0732		3200	7.67	0.933	0.467	1.67		3.9	23.5	181
LPRSA	LPRT07C	1	0.522	0.71	0.361		2680	7.33	0.893	0.469	1.44		3.6	82.7	410

LPRSA	LPRT07D	0.89	0.746	0.65	0.35	1630	5.33	0.44	0.26	1		5.8	63.2	268
LPRSA	LPRT07E	0.85	0.592	0.75	0.416	3740	6.67	0.383	0.217	1		4.5	97.5	294
LPRSA	LPRT08A	0.97	0.756	0.51	0.218	253	4.33	0.863	0.657	1.67		3.2	56.9	307
LPRSA	LPRT08B	1	0.682	0.63	0.399	340	3	0.773	0.703	2		4.1	97.4	199
LPRSA	LPRT08C	1	0.597	0.36	0.225	4030	10.6	1.23	0.534	2.22		4.4	67.8	325
LPRSA	LPRT08D	0.73	0.836	0.76	0.429	843	5.67	1.1	0.677	2		2.1	4.6	151
LPRSA	LPRT08E	1.1	0.944	0.69	0.469	4070	8.11	1.04	0.523	1.78		1.6	1.8	68.3
LPRSA	LPRT09A	0.94	0.579	0.37	0.125	1300	9.33	1.14	0.51	2		1.9	0.2	168
LPRSA	LPRT09B	0.85	0.802	0.71	0.726	533	3.67	0.877	0.717	2		1.8	1	38.5
LPRSA	LPRT09C	0.88	0.692	0.68	0.602	9890	9.11	1.07	0.55	2	8.81	2.5	8.1	72.2
LPRSA	LPRT09D	1	0.831	0.79	0.438	20300	10.9	0.947	0.399	1.56	9.73	3.9	90.2	211
LPRSA	LPRT09E	0.97	0.756	0.6	0.328	6180	9.33	1.04	0.46	2	9.64	4.3	66.2	262
LPRSA	LPRT09F	0.91	0.905	0.43	0.211	5380	8.67	0.647	0.3	1	9.8	3.9	60.9	302
LPRSA	LPRT09G	0.94	0.975	1	0.635	1090	4.67	0.967	0.627	2	9.14	0.45	4.4	36.2
LPRSA	LPRT09H	0.84	0.785	0.81	0.497	1330	7.33	0.98	0.503	1.67		2.8	1.4	37.8
LPRSA	LPRT10A	0.79	0.345	0.65	0.414	11100	9.67	0.81	0.357	1.33	9.76	3.2	64.3	211
LPRSA	LPRT10B	0.16	0.0471	0.19	0.0903	7210	14.7	1.22	0.453	1.67	9.43	2	29.1	251
LPRSA	LPRT10C	0.99	0.363	0.69	0.524	24300	12.8	0.968	0.378	1.44	9.4	2.2	48.9	174
LPRSA	LPRT10D	0.8	0.573	1	0.92	5030	13.7	1.49	0.593	3	9.1	1.1	2.2	51.4
LPRSA	LPRT10E	0.99	0.726	0.37	0.255	37900	11.8	1.19	0.484	2.33	9.02	4.4	63.2	230
LPRSA	LPRT11A	0.8	0.522	0.93	0.763	4280	14	1.48	0.57	2.33	9.46	1.2	5.4	46.8
LPRSA	LPRT11B	0.47	0.203	0.65	0.374	4610	13.3	1.65	0.647	3	9.36	1.9	68.8	428
LPRSA	LPRT11C	0.83	0.773	0.65	0.508	6100	13.7	1.28	0.497	2.33	9.58	1.6	11.1	142
LPRSA	LPRT11D	0.88	0.557	0.8	0.607	29600	16.2	1.38	0.5	2.56	9.49	2.6	30.2	128
LPRSA	LPRT11E	0.93	0.464	0.89	0.524	21200	11.3	1.08	0.462	2.11	9.77	4.9	79.4	256
LPRSA	LPRT11F	0.95	0.458	0.53	0.428	6050	16	1.62	0.587	3.33	9.43	1.5	39.6	233
LPRSA	LPRT11G	0.73	0.124	0.16	0.0607	3170	7	0.84	0.44	1.67	9.78	4	60.4	397
LPRSA	LPRT12A	0.95	0.559	0.68	0.321	7270	15.6	1.38	0.51	2.67	9.16	2.1	84.8	223
LPRSA	LPRT12B	0.98	0.38	0.84	0.477	8160	13	1.34	0.52	2.67	9.46	3.5	58	228
LPRSA	LPRT12C	0.8	0.293	0.59	0.27	9850	15.3	1.26	0.463	2.33	9.59	1.9	25.1	187
LPRSA	LPRT12D	1	0.489	0.59	0.259	5870	11	1.07	0.443	1.67	9.61	2	39.6	133
LPRSA	LPRT12E	0.91	0.254	0.53	0.273	20900	9.56	1.23	0.57	2.44	9.77	3	47	319
LPRSA	LPRT13A	0.87	0.511	0.56	0.301	2600	11.3	1.28	0.54	2	9.6	5.4	21.6	116
LPRSA	LPRT13B	0.94	0.52	0.9	0.483	5790	11.7	1.33	0.547	2	9.8	3.6	64.1	162
LPRSA	LPRT13C	1	0.627	0.84	0.409	4630	9	1.07	0.49	2	9.83	4.6	83.9	147
LPRSA	LPRT13D	0.94	0.38	0.93	0.518	680	7.67	1.43	0.727	3.33	9.24	0.47	4.5	39.9
LPRSA	LPRT13E	0.97	0.734	0.9	0.458	23200	12.9	1.4	0.55	2.89	9.58	1.7	26.1	140
LPRSA	LPRT13F	0.95	1.04	0.82	0.537	12400	12.9	1.42	0.554	2.67	9.11	0.87	10.9	107
LPRSA	LPRT13G	0.99	0.66	0.94	0.53	2690	8	1.15	0.57	2	9.62	2.5	36.6	173
LPRSA	LPRT14A	0.93	0.445	0.45	0.273	27600	14.2	1.41	0.543	2.56	9.56	1.9	16.1	132
LPRSA	LPRT14B	0.99	0.483	0.46	0.161	11500	14	1.63	0.62	3.67	9.36	1.6	17.6	163
LPRSA	LPRT14C	0.93	0.613	0.86	0.523	9120	17.8	1.36	0.468	2.3	9.39	2.4	2.9	110
LPRSA	LPRT14D	0.8	0.373	0.64	0.268	7980	17	1.73	0.61	3.67	8.99	1.1	14.1	160
LPRSA	LPRT14E	0.96	0.507	0.53	0.214	4520	14.7	1.57	0.587	2.67	8.54	1.5	3.6	45.6
LPRSA	LPRT14F	0.93	0.681	0.88	0.482	8450	19	1.96	0.677	5	8.67	1.1	2.8	96.1
LPRSA	LPRT15A	1	0.541	0.59	0.359	30600	18.7	1.61	0.55	2.67	8.99	1.5	13.1	102
LPRSA	LPRT15B	1	0.495	0.78	0.55	21800	14.2	1.34	0.562	2.33	9.64	5.7	31.1	193
LPRSA	LPRT15C	0.94	0.431	0.81	0.46	2060	11.7	1.55	0.637	3.33	8.53	2.2	1.9	62.3
LPRSA	LPRT15D	0.79	0.359	0.74	0.445	15700	17.1	1.69	0.6	3.22	9.32	0.36	3.4	96.8

LPRSA	LPRT15E	0.98	0.464	0.89	0.594		7020	18.3	1.85	0.64	4	9.1	0.56	1.8	56.9
LPRSA	LPRT15F	0.93	0.438	0.95	0.635		4180	15.3	1.61	0.593	3.33	8.76	0.2	1.4	31.1
LPRSA	LPRT16A	0.74	0.538	0.79	0.525		12800	22.7	1.58	0.507	2.67	9.19	0.93	4.8	44.7
LPRSA	LPRT16C	0.88	0.791	0.98	1.05		10400	21.2	2.07	0.71	5.33	8.56	0.56	10.7	21.3
LPRSA	LPRT16D	0.96	1.01	0.87	0.634		8680	17.3	1.8	0.633	4	8.06	0.68	3.9	30
LPRSA	LPRT16E	0.84	0.895	0.93	1.03		1990	8	1.32	0.64	2.67	8.91	2.1	11.4	148
LPRSA	LPRT17A	0.79	0.433	0.99	0.649		2770	11.3	1.41	0.583	2	8.96	0.19	12.1	127
LPRSA	LPRT17D	0.96	0.516	1	0.702		3640	9.56	0.901	0.433	1.67	9.45	0.85	2	126
UPR	UPRT18H	0.96	0.797	0.94	0.471		11500	19	2.01	0.683	4.33	9.41	0.784	4.5	73.8
UPR	UPRT18I	0.72	0.676	0.81	0.316		20600	21.7	2.26	0.737	5.67	8.64	2.86	3.1	163
UPR	UPRT18J	0.91	0.747	1	0.539		16800	15.7	1.47	0.537	2	9.69	1.26	8.6	107
UPR	UPRT18K	0.88	0.723	0.83	0.498		16100	22	1.99	0.647	4	8.85	5.43	1.8	52.6
UPR	UPRT19J	0.039	0	0	0		1030	8.33	1.27	0.633	2.33	9.62	8.4	91.2	1560
UPR	UPRT19K	0.76	0.643	0.99	0.618		11800	33	2.67	0.76	9	8.53	1.25	3.4	51.5
UPR	UPRT19L	0.8	0.674	0.72	0.414		14300	25.7	2.35	0.723	6.67	8.19	2.95	1.2	64.6
UPR	UPRT19M	0.82	0.775	0.49	0.264		15200	24	2.39	0.75	6.33	8.25	2.03	0.4	37.9
UPR	UPRT20A	0.81	0.758	0.67	0.261		9950	18.7	2.13	0.727	5.33	8.39	2	8.7	53.5
UPR	UPRT20B	0.82	0.813	0.83	0.434		19500	23	1.94	0.617	4.33	8.94	2.43	3.8	56.5
UPR	UPRT20C	0.92	0.939	0.85	0.571		3820	12.3	1.55	0.623	3	9.56	4.89	83.7	1000
UPR	UPRT20D	0.81	0.637	0.82	0.432		15100	32.3	2.56	0.737	7	8.7	4.15	71.1	223
UPR	UPRT20E	0.87	0.742	0.73	0.404		5500	23	2.65	0.86	8.33	7.86	0.739	9.5	35.4
UPR	UPRT20F	0.55	0.348	0.014	0.00156		9180	29.7	2.75	0.813	9.67	7.99	6.98	54.2	822
UPR	UPRT20G	0.87	0.847	0.76	0.355		16100	19	2.13	0.727	5.67	8.82	0.531	2.5	88.9
UPR	UPRT21A	0.91	0.791	0.77	0.389		11200	21	2.19	0.72	4.33	8.28	1.04	1.4	32.9
UPR	UPRT21B	0.81	0.96	0.21	0.0871		18400	18	1.56	0.54	2.67	9.48	5.8	47.2	181
UPR	UPRT21C	0.74	0.705	0.87	0.488		11500	32.3	2.73	0.79	9.33	7.95	3.44	1.6	41.7
UPR	UPRT21D	0.72	0.763	0.7	0.314		13400	21.3	2.18	0.717	5	8.08	0.88	0.7	30.5
UPR	UPRT21E	0.86	0.714	0.64	0.284		6390	16.7	1.79	0.643	3.67	8.69	2.9	1.2	43.9
UPR	UPRT21F	0.9	1.03	0.81	0.454		14000	26.7	2.27	0.697	6	8.4	1.42	7	63.3
UPR	UPRT21G	0.85	0.746	0.7	0.452		2070	13.7	2.01	0.773	4.33	7.64	2.02	0.4	227
UPR	UPRT22A	0.71	0.637	0.89	0.518		3490	17.7	1.76	0.617	4	6.84	0.4	0.4	23.4
UPR	UPRT22B	0.83	0.742	0.66	0.473		5880	25.3	2.16	0.667	5	7.02	1.24	0.9	80.4
Jamaica Bay	2200_26_JB002					0.96	2875	18	2.17	0.75	5		0.292	3.6	17.1
Jamaica Bay	2200_26_JB006					0.91	35500	35	1.61	0.45	2.5		0.195	5.3	16.5
Jamaica Bay	2200_26_JB008					0.53	1687.5	8	1.58	0.77	3.5		0.768	37.1	62.7
Jamaica Bay	2200_26_JB012					0	62.5	2	0.66	0.96	2		1.52	72.6	651
Jamaica Bay	2200_26_JB015					0.38	125	4	1.36	0.98	3		0.83	82.1	77.9
Jamaica Bay	2200_26_JB018					0.81	21375	14.5	1.15	0.44	2		0.97	68.5	107
Jamaica Bay	2200_26_JB022					1.04	25112.5	23.5	1.53	0.48	2.5		0.258	7.3	22.4
Jamaica Bay	2200_26_JB026					1.08	37662.5	42.5	2.38	0.64	5.5		0.348	3.3	19.9
Jamaica Bay	2200_26_JB031					0.92	44825	28.5	1.56	0.47	2		0.274	5.2	18.2
Jamaica Bay	2200_26_JB033					0.94	146675	38.5	1.83	0.5	3.5		0.539	24.3	51.6
Jamaica Bay	2200_26_JB039					0.38	282150	44	2.04	0.54	4		1.12	39	39.2
Jamaica Bay	2200_26_JB041					0.69	324700	42	1.8	0.48	3		1.14	39.7	74.1
Jamaica Bay	2200_26_JB042					1.03	6075	25	1.94	0.6	4		0.208	0.8	10.2
Jamaica Bay	2200_26_JB043					0.74	86137.5	33	2.29	0.68	6.5		1.58	18.9	35.2
Jamaica Bay	2200_27_JB101					0.98	42462.5	14	0.59	0.22	1		6.55	87.8	127
Jamaica Bay	2200_27_JB103					0.93	25	1	0.35	0.5	1		8.45	79.7	76.5
Jamaica Bay	2200_27_JB104					0.8	5662.5	7.5	0.8	0.38	1.5		4.11	28.3	29.6

Jamaica Bay	2200_27_JB106	0.92	230575	40	2	0.54	4.5		5.47	78.5	97.7
Jamaica Bay	2200_27_JB108	0.96	6887.5	20	1.54	0.52	2.5		0.74	6.5	14.4
Jamaica Bay	2200_27_JB110	0.99	32712.5	21	1.46	0.48	2.5		1.4	3.1	6.85
Jamaica Bay	2200_27_JB111	0.97	111675	26	1.69	0.54	3.5		7.7	82	96.2
Jamaica Bay	2200_27_JB112	0.98	22487.5	29	1.85	0.55	4.5		0.198	6.7	15.6
Jamaica Bay	2200_27_JB113	0.95	33125	27.5	1.4	0.42	2		1.2	7.8	10.3
Jamaica Bay	2200_27_JB114	0.97	67787.5	34	2.25	0.64	6		1.3	9.3	16
Jamaica Bay	2200_27_JB115	0.94	21500	41	2.76	0.75	8		0.745	3.6	7.49
Jamaica Bay	2200_27_JB117	1	51712.5	29	2.05	0.61	5		3.86	40.9	55.6
Jamaica Bay	2200_27_JB119	0.98	14050	21.5	1.57	0.51	2.5		0.579	4.3	9.73
Jamaica Bay	2200_27_JB120	1	20375	22	1.41	0.45	2.5		0.691	2.7	6.71
Jamaica Bay	2200_56_JB008	0.62	1712.5	8	1.33	0.75	2.5		6.35	95.2	83
Jamaica Bay	2200_56_JB018	0.33	887.5	5	1.23	0.76	2.5		5.1	46.9	82
Jamaica Bay	2200_56_JB026	0	243875	41.5	1.76	0.47	3.5		5.04	65.9	53
Jamaica Bay	2200_56_JB031	0.96	15325	25	2	0.62	4.5		0.346	5.9	11
Jamaica Bay	2200_56_JB033	0	80287.5	29	1.29	0.38	2		4.52	62.4	59
Jamaica Bay	2200_56_JB039	1	23800	29.5	1.83	0.54	3.5		3.04	55	50
Jamaica Bay	2200_56_JB041	0.93	146750	44	1.52	0.4	3		2.48	51.9	37
Jamaica Bay	2200_56_JB042	1.01	7425	26.5	1.98	0.61	4		0.227	20.2	4
Jamaica Bay	2200_56_JB043	0.89	22587.5	47	2.42	0.63	7		0.189	3.5	4
Jamaica Bay	2200_56_JB201	0.93	1512.5	13.5	2.05	0.79	4.5		0.272	20.1	2
Jamaica Bay	2200_56_JB202	1	60325	29.5	1.58	0.47	2.5		4.82	60.4	71
Jamaica Bay	2200_56_JB203	0.92	125	3	0.95	0.86	2.5		7.05	87.7	88
Jamaica Bay	2200_56_JB204	0.77	2237.5	7	1.3	0.67	3		4.9	77.8	74
Jamaica Bay	2200_56_JB205	0.86	962.5	11	1.87	0.81	4.5		0.153	20.4	4
Jamaica Bay	2200_56_JB206	0.97	8137.5	13	1.37	0.59	2.5		3.18	31.1	73
Jamaica Bay	2200_56_JB207	0.98	19637.5	13	0.76	0.29	1.5		5.29	53.7	117
Jamaica Bay	2200_56_JB209	1.02	85975	27	0.98	0.3	1.5		5.03	45.9	76
Jamaica Bay	2200_56_JB210	0.88	6562.5	20.5	1.66	0.55	3		0.47	6.3	13
Jamaica Bay	2200_56_JB211	0.73	3912.5	20	2.01	0.67	4		0.574	8.9	10
Jamaica Bay	2200_56_JB212	1	675	6.5	1	0.54	1.5		0.117	19.6	5
Jamaica Bay	2200_56_JB213	0.95	325	2	0.4	0.36	1.5		4.7	52.1	94
Jamaica Bay	2200_56_JB214	0.94	60675	24	0.71	0.23	1		2.34	54.8	38
Jamaica Bay	2200_56_JB215	0.39	73825	36	1.52	0.43	2		1.86	26.8	29
Jamaica Bay	2200_56_JB216	0.04	150912.5	39.5	1.39	0.38	2.5		0.344	6.7	9
Jamaica Bay	2200_56_JB217	1	7625	20.5	1.85	0.61	4		0.209	5.8	5
Jamaica Bay	2200_56_JB219	1.01	850	10.5	1.96	0.86	5		0.054	1.3	4
Jamaica Bay	2200_56_JB222	0.94	6700	12	0.92	0.4	1		0.16	4.1	5
Jamaica Bay	2200_56_JB223	0.14	22437.5	14	1.11	0.42	2		3.53	59.3	50
Jamaica Bay	2300_M0_NY-0029-A	0.957	660	17	0.92	0.74	6		0.04	3.1	2
Jamaica Bay	2300_M1_NY-0032-A	0.989	18830	48	0.9	0.54	4		0.171		5
Jamaica Bay	2300_M2_NY-0029-A	0.902	675	7	0.52	0.61	2		0.096	2.7	2.62
Jamaica Bay	2300_M2_NY-0235-A	0.904	1375	7	0.5	0.6	2		4.18	83.5	75.5
Jamaica Bay	2300_M2_NY-0239-A	0.787	25	1	0		1		8.72	96.5	195
Jamaica Bay	2300_M3_NY03-0236	0.867	11900	28	1.08	0.75	6		0.062		5.23
Jamaica Bay	2300_M4_NY04-0234	0.948	47600	21	0.52	0.39	2		3.79	63.5	64
Mullica River	NJ00-0041	0.851	4825	15	1.93	0.71	4	6.79	0.5	2.6	17.2
Mullica River	NJ01-0120	0.895	5825	19	2.05	0.69	5	8.77	0.24	0.9	15.7
Mullica River	NJ02-0232	0.872	3900	14	1.53	0.58	3	6.97	2.94	3.9	11.6

Mullica River	NJ06-0046	0.418	3625	10	1.9	0.82	4	8.61	2.4	13.4	7.33
Mullica River and (	2300_L3_NJ03-0038	0.88	2000	14	2.13	0.81	5		4.53	46.2	13.5
Mullica River and (	2300_L4_NJ04-0427	0.901	27600	45	1.86	0.49	4		2.21	76	35.5
Mullica River and (	2300_L4_NJ04-0429	0.957	350	8	1.91	0.92	5		5.57	84.1	40.9
Mullica River and (	2300_L5_NJ05-0059	0.929	22075	22	1.14	0.37	2		3.03		37.3
Mullica River and (	2300_L6_NJ06-0015	1	7100	39	2.79	0.76	9		1.97	48.4	20.9
Mullica River and (	2300_L6_NJ06-0027	0.948	3800	30	3.01	0.88	11		1.32	98.8	28.4
Mullica River and (	2300_L6_NJ06-0035	1	4725	30	2.61	0.77	7		0.12	3.7	12.6
Mullica River and (	NCCA10-2622	0.859	2525	8	0.92	0.44	2		0.017	1.17	4.6
Mullica River and (	NJ00-0035	0.989	6200	23	1.38	0.44	2		0.9	59.7	28.7
Mullica River and (	NJ01-0036	0.989	1470	17	2.01	0.71	4		0.12	2	2.4
Mullica River and (	NJ01-0038	1.01	1675	11	1.68	0.7	3		4.34	84.8	14
Mullica River and (	NJ01-0116	0.922	13000	33	1.94	0.56	4		2.13	82.8	37.2
Mullica River and (	NJ01-0118	0.844	8050	37	2.93	0.81	10		10	61.1	19.5
Mullica River and (	NJ01-0122	0.979	9950	14	1.68	0.64	3		3.35	32	19.4
Mullica River and (	NJ02-0227	1	51375	34	1.01	0.29	2		0.21	16.6	15.6
Mullica River and (	NJ02-0229	0.915	15550	18	1.54	0.53	2		6.61	89.4	42.8
Mullica River and (	NJ02-0230	1.07	46100	42	1.51	0.4	3		0.84	32.3	
Jamaica Bay	JB301	0.725	1980	17	1.83	0.66	3		0.085	2.43	7.9
Jamaica Bay	JB303	1.01	70	2.5	0.67	0.96	2		4.7	46	83.4
Jamaica Bay	JB305	1	8460	16	2.08	0.76	4.5		1.7	28.7	70.4
Jamaica Bay	JB306	1.01	11960	14.5	1.82	0.68	3.5		2.9	37.1	79.4
Jamaica Bay	JB307	1.01	151580	19.5	1.61	0.54	3.5		7.8	38.2	155
Jamaica Bay	JB309	0.033	146200	17	0.97	0.34	2		4.3	62.6	102
Jamaica Bay	JB310	0.033	2890	13.5	1.59	0.61	2.5		1.6	25.1	40.1
Jamaica Bay	JB313	0.813	1100	3	0.31	0.27	1		6	63.4	137
Jamaica Bay	JB315	0.11	5050	14.5	1.81	0.68	3.5		0.32	6.23	18.5
Jamaica Bay	JB316	0.11	33550	20	1.52	0.52	2.5		1.9	27.7	59.8
Jamaica Bay	JB317	0.912	19990	34	2.46	0.7	7		0.3	5.06	14.5
Jamaica Bay	JB319	0.9	480	8.5	1.78	0.86	4		0.044	1.12	8.7
Jamaica Bay	JB322	0.811	21300	30.5	2.07	0.61	4.5		0.22	3.31	16
Jamaica Bay	JB323	0.411	195430	23.5	1.25	0.4	2		4.4	80.3	82
Jamaica Bay	JB354	0.211	4360	11.5	2.05	0.85	5		2.9	9.92	67.7
Jamaica Bay	JB358	0.544	820	9	1.54	0.85	3		0.23	2.99	13.6
Jamaica Bay	JB359	0.744	7320	25.5	2.2	0.68	5.5		0.23	2.05	15.6
Jamaica Bay	JB361	0.611	20940	12	1.44	0.58	2.5		1.3	10.5	42.2
Jamaica Bay	JB364	0.822	61490	16.5	0.86	0.31	1		7.1	53.6	125
Jamaica Bay	JB366	0.0111	48960	21	1.26	0.41	1.5		2.2	17.2	38.2
Jamaica Bay	JB367	0.0667	131130	20	1.22	0.41	2		4.8	57.7	89.3
Jamaica Bay	JB368	0.681	94200	21.5	1.47	0.48	2.5		1.2	13.9	27.4
Jamaica Bay	JB371	0.135	155520	23.5	1.6	0.51	3		5.1	45.7	97.2
Jamaica Bay	JB372	0.802	20	1	0		1		11	64.6	347
Jamaica Bay	JB374	0.729	60	2	0.63	0.91	1.5		3.8	60.1	124
Jamaica Bay	JB380	0.785	18970	24	1.69	0.53	3		0.35	3.15	11.7
Jamaica Bay	JB381	0.698	110	3.5	1.1	0.88	2.5		0.12	1.04	7.8
Jamaica Bay	JB386	0.891	410	8	1.75	0.85	4		0.081	1.47	8.7

Cells highlighted in orange indicate missing sediment chemistry values; if there was a missing sediment chemistry value for any analyte, the entire sample was excluded when conducting PCA and EFA
PCA -- principal component analysis

The data provided in Table B2-2 was used for the analyses conducted as part of Method 2. This is described in greater detail in Appendix P Section 4.1.2.1, which outlines the differences between the Method 1 and Method 2 datasets. The two methods were used to incorporate more COPEC variables while minimizing the number of reference area samples omitted (due to data gaps) (Method 1) and to use a pre-determined subset of COPECs (based on guidance from USEPA), which resulted in many reference area samples (particularly those from Jamaica Bay and Mullica River and Great Bay) being excluded when conducting principal component analysis.

Principal component analysis (PCA) and exploratory factor analysis (EFA) were conducted with only the chemical concentration data presented here (columns P through AS). Concentration data were log-transformed, centered, and scaled prior to conducting PCA and EFA, but the data presented here are in their original units. The PCA and EFA methods are discussed further in Section 4.1.2.3.

Multiple linear regression (MLR) models were developed using EFA factor scores (Table B2-3c) as well as the benthic response variables presented here (columns C through M). Habitat variables (columns N and O) were also included in MLR analyses. The different MLR modeling approaches are described in Appendix P Section 4.1.2.3.

Mercury (µg/kg)	Zinc (mg/kg)	alpha-Chlordane (µg/kg)	Total DDx (µg/kg)	Total PAHs (µg/kg)	Total PCB Congeners (µg/kg)	Bis-(2-ethylhexyl) phthalate (µg/kg)
2000	238	10	26	23000	550	3900
2900	351	14	49	15000	1100	6000
1800	203	23	66	24000	530	3000
2300	280	35	59	23000	660	5400
1500	177	10	20	20000	290	4100
1500	386	68	88	28000	620	4400
1900	306	46	150	18000	520	5300
1600	442	48	58	24000	720	8800
1600	401	44	90	25000	860	7500
1800	449	78	100	41000	880	9000
1800	364	45	52	32000	810	7400
1600	447	120	180	38000	780	10000
2000	546	84	85	32000	1200	9700
1900	489	65	180	32000	1100	8700
660	270	53	140	53000	2000	5600
1500	370	57	73	38000	700	8000
2000	439	63	210	49000	1100	8600
2000	500	97	110	28000	890	9800
1600	409	66	140	35000	970	6400
120	96.2	4.4	110	2200	36	390
2800	531	100	140	57000	2700	12000
3300	693	65	55	33000	6800	15000
1000	389	90	110	51000	910	5000
1600	526	69	60	36000	1200	7200
840	200	56	100	76000	470	1900
2600	508	54	74	170000	670	7400
1900	488	69	57	50000	780	7900
1600	349	65	79	33000	1000	7100
2300	467	71	480	37000	950	10000
1300	331	34	75	21000	650	8600
1800	463	76	60	29000	1200	19000
2300	583	65	93	31000	1000	11000
2200	543	71	94	32000	1000	12000
890	293	58	63	54000	570	5600
810	288	58	71	41000	480	5800
950	318	69	78	58000	750	8200
2300	462	72	91	32000	970	13000
730	229	31	55	32000	680	3200
1200	358	68	82	50000	1400	8800
3600	673	93	250	41000	3600	52000

1400	588	77	100	30000	940	13000
2600	521	78	1300	41000	1300	13000
3700	476	52	70	160000	840	8300
2100	472	70	100	25000	830	14000
6200	770	63	780	100000	1800	20000
300	167	34	68	42000	340	2100
150	106	24	95	12000	71	770
970	226	67	160	29000	1900	5200
150	400	42	310	29000	25000	800
360	163	42	42	31000	550	2200
2300	535	86	71	29000	820	12000
1800	460	94	74	40000	1000	8000
2400	430	52	140	25000	2400	14000
290	102	19	17	1400	170	1000
160	92.8	14	110	5300	1700	260
1800	511	83	80	34000	880	8400
2800	439	69	140	23000	3500	11000
1200	412	60	64	23000	640	7300
110	205	110	37	21000	56	810
1400	502	120	100	60000	700	12000
240	159	29	23	32000	190	410
4100	897	20	41	43000	560	1500
320	165	34	36	38000	120	1400
920	311	68	55	33000	450	4200
2100	639	120	75	35000	1200	12000
1800	492	23	21	42000	250	1600
5800	1070	94	200	42000	8900	25000
1800	558	100	96	31000	1200	9200
1700	506	110	110	41000	940	10000
1500	374	64	140	32000	1300	6500
1000	330	37	33	20000	290	2400
3300	607	88	120	39000	3500	14000
670	277	65	36	50000	470	3800
2200	385	69	65	26000	4000	25000
2600	359	120	110	30000	1100	12000
210	80.7	10	12	4500	110	910
830	338	74	42	31000	410	6700
350	203	69	29	35000	260	4800
1200	444	95	360	26000	800	8700
410	211	60	36	30000	280	3300
390	259	46	26	27000	250	7000
220	177	27	18	49000	280	840
390	256	51	22	31000	300	3300
150	98	21	11	20000	120	640
250	114	21	12	28000	120	4900
340	211	51	21	29000	200	2800
880	506	93	69	30000	400	4900
90	90.2	15	10	23000	56	400
210	96	18	7.8	16000	68	1200

240	121	13	7.1	24000	69	710
200	87	11	3.7	28000	92	310
130	105	15	6.4	7600	40	260
94	72.2	3.7	6.1	11000	30	350
68	89	40	11	88000	52	260
400	252	32	24	44000	78	660
500	181	44	17	37000	2900	1200
270	135	28	13	47000	110	920
380	163	11.9	6.9	10800	56.7	605
334	3820	14	14	56100	89.9	4360
461	214	21.6	18	41200	169	1110
304	124	11.6	11	36900	75.4	2380
5650	2140	1.43	1.7	1590000	13.4	20500
281	144	17.7	14	50300	92.6	4810
262	105	6.26	1.7	10900	33.9	793
257	146	4.92	3.1	5970	42.7	774
273	76.5	14	9.5	16000	32.6	1750
161	241	15.3	7.9	9850	29.4	1870
2770	1140	53.2	25	107000	269	10800
3380	610	12.3	83	115000	332	8650
74.4	115	7.07	3.7	13200	11.3	748
2640	732	7.23	3	689000	20	18600
51.6	200	9.22	4.9	3460	32.1	772
108	115	5.44	3.2	12600	9.77	842
490	373	152	55	22400	237	6520
1510	23.7	9.27	5	19000	33	281
40.4	109	4.68	3.2	1920	8.1	4540
53.1	132	8.42	5.7	27200	38.5	210
291	117	39.6	20	14300	85.1	554
51.6	102	5.88	3.8	11300	17.7	784
30.7	109	3.86	4.8	1400	112	763
42.1	70.4	5.46	1.9	13700	16	815
54	30		0.4	420	5.69	
48	36		0.43	370	2.87	
354	148		9.5	3100	63.8	
2150	1280		40	52000	37.2	
375	212		8.3	3300	52.9	
666	225		13	4700	86.5	
117	46		0.44	520	4.92	
111	39		0.32	220	2	
63	38		0.29	64	6.2	
343	98		1.9	1400	24.7	
409	67		3.3	1400	22.3	
481	124		5.2	2300	39.4	
35	11		0.58	1200	2	
243	65		4.4	3100	26.4	
650	344		20	5500	313	
256	225		25	5800	507	
141	83		2	470	14.2	

545	180		11	2500	116
38	30		0.16	28	2
67	15		0.17	1300	2.61
410	199		13	4400	126
69	45		0.24	42	2
80	33		0.45	90	2.01
82	30		1.3	380	5.7
40	15		0.34	53	2
88	128		3.4	910	25.8
35	20		0.21	34	2
30	13		0.17	580	2
640	173	0	6.5	2600	
620	169	3.3	19	5000	
320	91	0	6.7	1200	
0	23	0	0	0	
490	117	0	6.1	1200	
500	114	0	3.7	1800	
380	77	0	0	1200	
0	0	0	0	520	
0	0	0	1.3	110	
0	0	0	0	0	
520	118	0	0	2100	
610	181	0	0	1800	
750	168	0	0	3200	
0	0	0	0	0	
500	116	0	0	9300	
500	218	6.9	15	3700	
470	122	0	7.1	4900	
100	32	0	1.7	280	
70	30	0	0	39	
0	0	0	0	0	
660	195	5.8	20	3300	
340	81	0	0	1000	
210	61	1	2.6	430	
90	31	0	1.8	0	
0	0	0	1.5	0	
0	0	0	1.4	0	
0	0	0	6.1	0	
490	101	0	5.8	2300	
100	7		1	18	1
50	14			7.1	3.9
50	4.81		1	3.1	12.8
420	197		11	130	70.6
590	451		10	310	167
10	21.4		1.6	8.6	6.8
520	123		7.9	900	34.6
20	24		0.69	490	
20	22		1	17000	
33	13.1		0.92	140	

17	18.5		1	1100	
42	44.1		0.32	170	0.05
220	103		2.3	160	2.85
180	117		0.92	23	0.05
260	108		0.34	94	0.36
157	74.2		1	210	1
180	71.1		0.88	170	14
13	32.3		0.34	2	0.05
10	5.9	1	1	1	
170	111		3	510	
20	5		0.031	1.7	
40	103		0.37	21	
240	115		4.9	570	
50	78		0.46	130	
70	60		2.6	250	
40	38.1		0.92	10	
150	115		2.7	520	
110			0.17	48	
17	23.1	0.5	0.99	12	
430	186	0.5	3	1100	
390	115	0.81	2.8	1300	
440	140	0.5	8.6	4300	
540	267	8.1	45	2800	
590	182	1.3	2.7	1500	
250	86.9	0.5	7.4	910	
620	280	5.6	17	590	
55	28.7	0.5	0.5	230	
340	112	1.1	1.8	3500	
43	25.6	0.5	0.5	40	
17	14.2	0.5	0.77	10	
48	24.3	0.5	3.1	10	
640	145	0.5	2.6	1500	
430	122	0.5	2.5	1400	
28	19.8	0.5	0.5	15	
42	24.1	0.5	0.5	10	
110	90	2	11	1200	
610	217	1.8	9	1800	
200	64	0.5	2.6	900	
580	156	0.5	14	1200	
150	44.7	0.5	2.8	440	
580	168	2.1	11	1300	
1000	705	42	41	9100	
530	210	0.5	9	2300	
36	22.9	0.5	1.2	1600	
17	11.4	0.5	0.5	10	
17	8.9	0.5	0.5	10	

Table B2-3a. Eigenvalues of principal components based on Method 1 sediment chemistry dataset

	Principal Component																				
Statistic	PC1	PC2	PC3	PC4	PC5	PC6	PC7	PC8	PC9	PC10	PC11	PC12	PC13	PC14	PC15	PC16	PC17	PC18	PC19	PC20	PC21
Eigenvalue	4.67	2.052	1.022	0.73	0.63	0.577	0.534	0.484	0.418	0.401	0.345	0.336	0.314	0.279	0.263	0.251	0.227	0.22	0.194	0.168	0.16
Percent of variance explained	73%	14%	3%	2%	1%	1%	1%	1%	1%	1%	0.4%	0.4%	0.3%	0.3%	0.2%	0.2%	0.2%	0.2%	0.1%	0.1%	0.1%
Cumulative variance explained	73%	87%	90%	92%	93%	94%	95%	96%	97%	97%	98%	98%	98%	99%	99%	99%	99%	99%	100%	100%	100%

Orange color indicates the number of components required to account for 95% of the variance in Method 1 sediment chemistry data
PC -- principal component

Table B2-3b. Loading values of varimax-rotated EFA factors based on Method 1 sediment chemistry dataset

	Factor						
Analyte	F1	F2	F3	F4	F5	F6	F7
Antimony (mg/kg)	0.29	0.71	0.13	-0.02	-0.21	0.00	0.00
Arsenic (mg/kg)	-0.13	0.91	-0.06	0.04	-0.03	-0.11	0.00
Cadmium (mg/kg)	0.28	0.81	0.31	-0.01	-0.12	0.14	-0.07
Chromium (mg/kg)	0.06	0.95	0.07	-0.04	0.01	-0.10	0.13
Copper (mg/kg)	0.52	0.75	0.28	0.06	0.17	0.14	-0.04
Lead (mg/kg)	0.62	0.66	0.27	0.03	0.04	0.22	0.00
Mercury (µg/kg)	0.52	0.75	0.26	0.01	0.03	0.00	0.04
Nickel (mg/kg)	0.23	0.84	0.14	0.03	0.16	0.10	-0.04
Silver (mg/kg)	0.31	0.83	0.24	0.05	0.06	-0.04	-0.05
Zinc (mg/kg)	0.57	0.67	0.29	0.01	0.10	0.18	-0.02
alpha-Chlordane (µg/kg)	0.54	0.35	0.71	0.00	0.09	0.10	-0.10
Dieldrin (µg/kg)	0.52	0.24	0.68	-0.02	-0.02	-0.01	0.06
Hexachlorobenzene (µg/kg)	0.33	0.51	0.52	-0.04	-0.22	-0.04	-0.01
Total DDx (µg/kg)	0.51	0.51	0.60	0.10	0.08	0.00	0.03
1-methylnaphthalene (µg/kg)	0.94	0.19	0.09	-0.23	-0.05	0.02	-0.07
1-methylphenanthrene (µg/kg)	0.94	0.16	0.15	-0.02	-0.08	0.07	0.00
2-methylnaphthalene (µg/kg)	0.91	0.29	0.16	-0.20	0.03	-0.03	-0.08
Acenaphthene (µg/kg)	0.94	0.19	0.16	-0.09	-0.11	0.05	-0.05
Acenaphthylene (µg/kg)	0.91	0.23	0.23	-0.03	0.04	0.09	0.02
Anthracene (µg/kg)	0.92	0.28	0.17	0.08	-0.01	0.07	-0.04
Benzo(a)anthracene (µg/kg)	0.88	0.27	0.32	0.21	0.03	0.00	0.00
Benzo(a)pyrene (µg/kg)	0.89	0.26	0.31	0.19	0.04	0.01	0.02
Benzo(g,h,i)perylene (µg/kg)	0.88	0.24	0.36	0.09	0.06	0.01	0.15
Chrysene (µg/kg)	0.88	0.27	0.32	0.21	0.05	0.00	-0.01
Dibenzo(a,h)anthracene (µg/kg)	0.85	0.15	0.38	0.02	-0.04	-0.04	0.21
Fluoranthene (µg/kg)	0.85	0.30	0.33	0.23	0.05	0.01	-0.02
Fluorene (µg/kg)	0.94	0.22	0.16	-0.06	-0.08	0.06	-0.08
Indeno(1,2,3-c,d)perylene (µg/kg)	0.86	0.25	0.37	0.09	0.04	0.00	0.19
Naphthalene (µg/kg)	0.90	0.29	0.19	-0.19	0.12	-0.06	-0.06
Pyrene (µg/kg)	0.87	0.30	0.29	0.23	0.05	0.02	-0.02

Orange color indicates absolute loading values >0.4; loading was used to interpret factors in terms of the original chemical variables
F -- factor

Table B2-3c. Scores of varimax-rotated factors based on Method 1 sediment chemistry dataset

Location ID	Factor						
	F1	F2	F3	F4	F5	F6	F7
LPRT01A	0.574	1.026	-0.75	-0.015	0.758	-1.479	0.645
LPRT01B	0.199	1.437	-0.581	-0.292	1.214	-0.912	0.941
LPRT01C	0.38	0.519	0.279	0.063	0.827	-1.451	0.831
LPRT01D	0.279	0.784	0.381	-0.257	0.521	-0.936	0.834
LPRT01E	0.617	0.558	-0.587	-0.17	1.037	-1.09	1.29
LPRT01F	0.245	0.633	0.817	0.064	0.092	-0.275	0.527
LPRT01G	0.049	0.757	0.784	-0.233	0.588	-0.869	0.55
LPRT02A	0.163	0.812	0.633	-0.009	0.126	-0.123	0.557
LPRT02B	0.201	0.862	0.508	0.043	0.555	-0.223	0.788
LPRT02C	0.396	0.759	0.759	0.002	0.424	-0.667	0.422
LPRT02D	0.596	0.791	0.1	-0.2	0.282	-0.785	-0.152
LPRT02E	0.338	0.787	0.97	0.007	-0.435	-0.147	0.202
LPRT02F	0.233	1.044	0.723	-0.009	-0.228	-0.106	0.526
LPRT03A	0.3	0.887	0.661	0.206	-0.404	-0.229	0.146
LPRT03B	0.849	0.04	0.633	0.098	-0.709	-0.124	0.416
LPRT03C	0.669	0.513	0.43	-0.313	0.263	-0.628	-0.176
LPRT03D	0.641	0.901	0.605	-0.305	-0.362	-0.85	0.471
LPRT03E	0.128	0.889	1.018	-0.133	0.195	-0.215	0.631
LPRT03F	0.471	0.751	0.407	-0.143	0.833	-0.351	-0.604
LPRT04A	-0.761	-0.12	0.455	0.668	0.2	-0.386	0.581
LPRT04B	0.602	0.909	0.68	-0.173	-0.54	-0.002	0.525
LPRT04C	0.243	1.557	0.028	0.469	0.112	0.204	-0.138
LPRT04D	0.611	0.402	0.689	0.538	-0.305	-0.284	-0.912
LPRT04E	0.375	0.789	0.617	0.237	-0.022	0.002	0.219
LPRT04F	1.072	0.092	0.313	0.537	-1.337	-0.332	-0.835
LPRT05A	1.795	1.077	-1.016	-0.644	-0.626	-0.454	-1.472
LPRT05B	0.51	1.014	0.411	0.316	-0.642	-0.112	-0.005
LPRT05C	0.516	0.445	0.62	-0.311	0.237	-0.48	-0.444
LPRT05D	0.303	0.982	0.895	-0.098	0.066	-0.851	0.145
LPRT05E	0.364	0.614	0.362	-0.488	0.117	-0.152	0.194
LPRT05F	0.221	0.919	0.831	-0.159	-0.042	-0.247	0.279
LPRT06A	0.262	1.021	0.667	-0.394	0.483	-0.122	0.804
LPRT06B	0.318	0.983	0.702	-0.555	0.412	-0.328	0.871
LPRT06C	0.875	0.118	0.275	0.486	-0.481	0.293	-0.297
LPRT06D	0.63	0.24	0.645	-0.094	-0.226	0.781	0.538
LPRT06E	0.767	0.21	0.567	0.31	-0.548	0.152	-0.563
LPRT06F	0.289	0.811	0.77	-0.285	0.221	0.101	0.926
LPRT07A	0.714	-0.117	0.444	-0.372	0.506	-0.306	0.604
LPRT07B	0.647	0.455	0.653	0.298	-0.57	-0.49	-0.051
LPRT07C	0.388	1.428	0.427	-0.191	0.019	0.13	0.175
LPRT07D	0.204	0.932	0.845	-0.292	0.194	0.141	0.823
LPRT07E	0.357	1.121	0.935	-0.573	0.049	-0.364	0.632
LPRT08A	1.675	0.885	-0.297	-1.828	0.131	-1.758	-0.169
LPRT08B	0.138	0.853	0.885	-0.389	0.422	-0.172	0.828

LPRT08C	0.798	1.739	0.233	0.092	-1.768	-0.643	0.093
LPRT08D	1	-0.321	0.249	-0.234	-0.317	-0.197	-0.155
LPRT08E	-0.124	-1.086	1.363	1.141	1.675	0.397	0.944
LPRT09A	0.297	0.323	0.951	0.443	-0.769	-0.051	-0.111
LPRT09B	0.395	-1.43	1.511	1.45	-1.267	0.245	-0.164
LPRT09C	0.541	-0.828	0.95	0.907	-0.424	-0.05	0.127
LPRT09D	0.225	0.801	0.921	-0.256	0.375	-0.24	0.249
LPRT09E	0.3	0.885	0.849	0.076	0.157	-0.128	0.32
LPRT09F	0.034	1.15	0.838	-0.284	0.113	-0.039	0.895
LPRT09G	-0.797	-0.652	1.377	-0.933	0.941	-0.285	0.075
LPRT09H	-0.191	-0.921	0.915	0.576	0.551	-1.035	-0.67
LPRT10A	0.232	0.666	1.057	0.019	0.189	-0.125	0.674
LPRT10B	0.085	1.189	0.802	-0.212	-0.621	-0.068	0.288
LPRT10C	0.153	0.458	0.966	-0.107	0.496	-0.044	0.576
LPRT10D	-0.103	-1.354	1.866	1.938	0.235	1.478	0.348
LPRT10E	0.608	0.446	1.036	0.095	-0.337	-0.128	0.198
LPRT11A	0.816	-1.19	0.62	0.578	-0.203	-0.695	0.335
LPRT11B	0.851	1.098	-0.524	-0.441	0.543	0.841	0.821
LPRT11C	0.726	-0.698	0.613	0.833	-0.783	0.685	0.535
LPRT11D	0.431	-0.014	0.989	0.186	0.223	-0.099	0.242
LPRT11E	0.173	0.804	1.125	-0.027	0.053	0.424	0.785
LPRT11F	1.072	0.26	-0.363	-0.396	-0.013	0.61	-0.021
LPRT11G	0.143	1.984	0.642	-0.106	-0.701	-0.476	0.81
LPRT12A	0.137	0.813	1.157	-0.242	0.495	-0.202	0.521
LPRT12B	0.384	0.727	1.08	-0.376	0.028	-0.179	0.452
LPRT12C	0.389	0.634	0.875	-0.311	-0.102	-0.438	0.035
LPRT12D	0.27	0.291	0.557	0.293	0.035	0.069	0.183
LPRT12E	0.315	1.203	0.81	-0.405	-0.484	-0.028	1.023
LPRT13A	0.97	-0.438	0.766	-0.419	-0.331	0.046	0.283
LPRT13B	0.232	0.528	0.846	-0.006	0.355	-0.168	0.33
LPRT13C	0.157	0.663	1.215	-0.267	0.445	-0.082	0.599
LPRT13D	-0.003	-1.043	0.477	-0.204	1.578	-0.816	-0.117
LPRT13E	0.354	0.042	1.001	0.325	-0.107	0.189	0.357
LPRT13F	0.712	-0.541	0.923	0.082	-0.267	-0.236	0.046
LPRT13G	0.059	0.621	1.143	0.214	-0.2	0.162	-0.506
LPRT14A	0.471	-0.503	1.07	0.162	0.37	0.271	0.564
LPRT14B	0.449	-0.298	0.96	-0.099	-0.302	0.894	0.111
LPRT14C	1.459	-1.169	0.227	-0.979	0.521	-0.799	-0.298
LPRT14D	0.571	-0.45	0.846	0.054	0.043	0.679	0.545
LPRT14E	0.759	-1.1	0.425	0.226	0.034	-0.527	-0.304
LPRT14F	1.029	-1.215	0.285	-0.115	-0.021	0.254	0.029
LPRT15A	0.658	-0.766	0.866	-0.038	0.34	0.504	0.197
LPRT15B	0.211	0.278	1.254	-0.066	0.642	0.043	0.481
LPRT15C	0.803	-1.081	0.119	0.585	-0.465	-0.114	-0.663
LPRT15D	0.591	-1.201	0.46	0.309	0.106	0.93	0.327
LPRT15E	1.064	-1.067	-0.173	-0.153	0.734	-0.151	-0.356
LPRT15F	1.336	-1.16	-0.383	-0.522	-0.442	-1.767	-0.933
LPRT16A	-0.126	-0.741	0.818	0.984	-0.096	-1.018	0.363
LPRT16C	0.546	-1.721	0.241	0.783	0.583	-0.536	0.253

LPRT16D	1.326	-1.637	0.647	1.304	-1.207	-1.222	-0.318
LPRT16E	1.007	-0.759	0.459	0.191	-0.087	0.193	-0.279
LPRT17A	0.85	-0.833	0.92	-0.04	-0.734	0.683	0.067
LPRT17D	1.342	-1.229	0.196	-0.081	0.217	-0.003	-0.761
UPRT18H	0.506	-0.999	0.039	0.115	0.834	1.114	0.392
UPRT18I	1.729	-0.968	-0.694	-0.631	0.512	1.196	-0.779
UPRT18J	1.192	-0.877	0.061	0.091	0.424	0.312	-0.621
UPRT18K	1.45	-1.364	-0.435	0.23	0.008	0.145	-1.263
UPRT19J	3.552	1.475	-3.635	-0.243	-2.573	1.432	0.199
UPRT19K	1.463	-1.365	-0.009	0.214	-0.254	-0.299	-0.67
UPRT19L	0.757	-1.136	-0.604	0.345	0.64	1.246	0.345
UPRT19M	0.541	-1.474	-0.392	0.218	0.488	1.507	-0.08
UPRT20A	0.507	-0.859	0.038	1.054	0.053	1.057	-0.087
UPRT20B	0.481	-1.123	0.207	-0.025	0.642	1.252	0.191
UPRT20C	1.685	0.441	-0.48	-1.335	-1.086	2.084	-0.409
UPRT20D	1.962	0.541	-1.415	-1.058	-2.351	0.68	-1.031
UPRT20E	0.791	-1.69	-0.539	1.168	1.06	1.282	-0.491
UPRT20F	3.383	0.721	-3.064	-1.454	-1.805	0.39	-1.835
UPRT20G	-0.094	-1.261	0.156	0.532	0.776	2.592	0.245
UPRT21A	1.405	-1.115	-1.405	-2.81	1.664	-0.772	-2.858
UPRT21B	0.11	0.024	1.152	0.081	0.686	1.014	-1.104
UPRT21C	0.96	-1.449	-0.166	0.835	-1.009	0.151	0.142
UPRT21D	-0.372	-1.09	-0.178	0.659	1.763	2.012	3E-04
UPRT21E	1.479	-1.255	-0.689	-1.083	1.332	-1.498	-1.233
UPRT21F	0.212	-1.123	1.365	-0.051	0.524	0.418	-0.832
UPRT21G	0.674	-0.778	-0.994	-0.234	3.119	3.975	-0.183
UPRT22A	-0.175	-1.257	-0.179	-0.83	2.594	-0.43	-1.091
UPRT22B	0.733	-1.769	-0.551	2.166	-0.908	2.952	0.813
2200_26_JB002	-0.509	-0.612	-1.563	-0.061	1.287	-0.688	-0.068
2200_26_JB006	-0.426	-0.856	-1.774	0.15	-0.05	-0.446	-0.059
2200_26_JB008	-0.74	0.779	-0.249	0.893	0.671	-0.405	-3.229
2200_26_JB012	1.011	1.649	-0.817	-1.259	0.085	1.861	-1.604
2200_26_JB015	-0.712	1.09	-0.528	0.838	-0.073	-0.48	-4.48
2200_26_JB018	-0.311	1.092	-1.018	0.689	0.659	0.233	-1.869
2200_26_JB022	-0.419	-0.327	-2.059	0.394	0.301	-0.316	0.954
2200_26_JB026	-0.576	-0.519	-1.997	-0.545	-0.04	0.078	0.148
2200_26_JB031	-0.74	-0.554	-1.668	-1.401	-0.364	0.298	0.935
2200_26_JB033	-0.497	0.448	-1.284	-0.022	1.555	-0.41	0.36
2200_26_JB039	-0.523	0.013	-0.693	-0.078	1.373	-0.482	0.428
2200_26_JB041	-0.51	0.684	-0.632	-0.182	0.901	-0.435	0.402
2200_26_JB042	0.199	-1.749	-1.897	1.295	0.794	-1.162	0.421
2200_26_JB043	-0.275	0.137	-1.318	1.31	-0.103	-0.768	-2.902
2200_27_JB101	-0.492	1.261	-0.018	-0.105	1.044	0.192	0.54
2200_27_JB103	-0.483	0.662	0.066	0.612	0.918	-0.13	-2.227
2200_27_JB104	-0.723	0.034	-1.243	-0.917	0.943	0.5	1.629
2200_27_JB106	-0.676	0.938	0.019	-0.615	1.091	-0.319	0.404
2200_27_JB108	-0.477	-0.814	-2.471	-1.18	-0.232	0.24	1.424
2200_27_JB110	0.13	-1.1	-2.571	1.556	0.33	-1.898	1.825
2200_27_JB111	-0.5	0.849	0.157	-0.111	0.667	-0.148	0.143

2200_27_JB112	-1.253	-0.681	-0.087	-2.787	-0.59	1.105	0.756
2200_27_JB113	-0.789	-0.543	-1.538	-1.42	-1.076	-0.442	0.9
2200_27_JB114	-0.914	-0.622	-0.772	-0.054	0.286	-0.725	1.424
2200_27_JB115	-0.627	-0.668	-2.201	-1.617	-0.72	-1.08	1.764
2200_27_JB117	-0.608	0.148	-0.833	-0.819	0.764	1.09	1.878
2200_27_JB119	-0.604	-0.836	-1.967	-1.733	-1.346	-0.861	1.963
2200_27_JB120	-0.077	-1.37	-2.117	1.079	-0.414	-2.339	0.383
NJ00-0041	-0.774	-1.358	-1.407	2.097	0.598	0.387	1.342
NJ01-0120	0.423	-1.797	-0.334	3.586	-0.853	-2.688	2.228
NJ02-0232	-2.205	-0.717	0.673	2.189	-1.797	-0.757	-2.625
NJ06-0046	-0.898	-1.417	0.588	2.087	-1.61	-1.655	0.573
2300_L3_NJ03-0038	-1.119	-0.183	-0.593	-0.636	-1.262	-0.519	-0.557
2300_L4_NJ04-0427	-1.403	0.777	-0.54	-0.887	-1.305	0.194	-0.193
2300_L4_NJ04-0429	-1.449	0.79	-0.791	-1.693	-1.091	0.882	0.554
2300_L6_NJ06-0015	-1.935	0.268	0.37	0.564	0.049	-0.335	0.492
2300_L6_NJ06-0027	-1.937	0.889	-1.779	3.03	-1.365	0.229	-1.505
2300_L6_NJ06-0035	-2.37	-0.422	-0.511	-1.211	-2.452	0.858	1.478
NCCA10-2622	-2.494	-2.143	1.73	-1.961	-0.74	0.727	-0.752
NJ00-0035	-1.138	0.647	-1.419	1.002	1.027	-0.634	1.486
NJ01-0036	-3.288	-2.259	1.485	-0.803	1.324	-0.867	-2.037
NJ01-0038	-2.894	0.917	-0.51	-0.087	1.185	0.574	-0.286
NJ01-0116	-1.208	0.692	-1.153	1.08	0.888	-0.198	1.362
NJ01-0118	-1.523	0.54	-0.912	-2.916	2.443	-1.815	-1.966
NJ01-0122	-1.218	-0.274	-0.77	-0.364	2.601	-1.699	-0.145
NJ02-0227	-2.85	0.041	0.8	-1.412	-1.936	1.66	0.373
NJ02-0229	-1.875	0.707	-0.369	2.924	-0.615	1.339	1.478
JB301	-1.049	-1.687	0.359	-1.78	-1.208	-0.157	-0.263
JB303	-0.976	1.151	-0.974	0.852	-0.021	0.829	-0.334
JB305	-0.872	0.837	-0.765	0.818	-0.215	0.065	-0.433
JB306	-0.364	0.692	-0.907	1.474	-0.603	0.384	0.581
JB307	-1.134	1.243	0.433	0.936	0.256	0.869	-0.478
JB309	-0.94	1.183	-0.716	0.907	-0.093	0.712	-0.379
JB310	-1.033	0.452	-0.521	1.041	-0.595	-0.13	-1.143
JB313	-1.654	1.526	0.247	-0.012	-0.323	1.524	-1.4
JB315	-1	-0.852	-0.067	-0.62	-0.924	-0.082	-0.295
JB316	-0.33	0.605	-0.95	1.003	0.117	-0.685	-1.114
JB317	-1.134	-1.061	0.012	-1.682	-0.942	0.364	-0.156
JB319	-1.082	-1.484	0.274	-1.79	-1.385	-0.332	-0.138
JB322	-1.234	-0.839	0.127	-1.843	-1.13	0.189	0.015
JB323	-0.738	1.082	-1.093	0.448	-0.007	0.129	-0.106
JB354	-0.79	0.898	-1.022	0.706	-0.187	0.072	-0.655
JB358	-1.105	-1.212	0.056	-1.731	-1.045	0.155	-0.092
JB359	-1.165	-0.935	-0.016	-1.801	-1.17	0.266	0.06
JB361	-1.09	0.112	0.314	0.73	0.022	0.554	-0.362
JB364	-0.947	1.298	-0.531	0.68	0.089	0.706	-0.462
JB366	-0.829	0.091	-0.629	0.872	-0.77	0.322	-0.477
JB367	-0.976	1.198	-0.828	0.535	0.085	0.195	-0.177
JB368	-1.02	-0.254	-0.303	0.1	-0.679	-0.058	-0.747
JB371	-1.114	1.164	-0.262	0.607	-0.187	0.514	-1.04

JB372	-0.519	1.671	0.265	0.245	0.129	1.668	-1.658
JB374	-0.661	1.095	-1.064	1.075	-0.019	0.783	-0.693
JB380	-0.289	-1.614	-0.265	1.353	-0.967	-0.266	-0.534
JB381	-1.042	-1.545	0.173	-1.752	-1.221	-0.409	-0.114
JB386	-0.999	-1.815	0.315	-1.765	-1.325	-0.254	-0.234

F-- factor

Table B2-3 provides three subtables of PCA and EFA output including PCA eigenvalues (Table B2-3a), EFA loading values (Table B2-3b), and EFA factor scores (Table B2-3c). These statistics are described in detail in Appendix P Section 4.1.2.2. Eigenvalues describe the relative importance of each principal component for explaining the overal variance of the chemical dataset. Loading values indicate which chemical variables are most associated with each factor. Scores are the factor variables, which were used in MLR analyses to predict benthic response variables.

PCA was conducted in R using the "prcomp" function, and EFA was conducted using the "fa" function (from the "psych" package). PCA and EFA were conducted on log-transformed, scaled, and centered chemistry data. Factors were generated using maximum likelihood estimation. Loading values were rotated using the "varimax" function. The number of factors selected for EFA was based on PCA results; the number of components required to explain 95% of the total variance was input as the number of factors to generate.

PC22	PC23	PC24	PC25	PC26	PC27	PC28	PC29	PC30
0.138	0.122	0.119	0.101	0.092	0.087	0.07	0.057	0.042
0.1%	0.0%	0.05%	0.03%	0.03%	0.03%	0.02%	0.01%	0.01%
100%	100%	100%	100%	100%	100%	100%	100%	100%

Table B2-4a. Eigenvalues of principal components based on Method 2 sediment chemistry dataset

	Principal Component							
Statistic	PC1	PC2	PC3	PC4	PC5	PC6	PC7	PC8
Eigenvalue	2.3163	1.1164	0.6882	0.5292	0.4717	0.3987	0.3737	0.3372
Percent of variance explained	67%	16%	6%	4%	3%	2%	2%	1%
Cumulative variance explained	67%	83%	89%	92%	94.8%	97%	99%	100%

Orange color indicates the number of components required to account for 95% of the variance in Method 2 sediment chemistry data
PC -- principal component

Table B2-4b. Loading values of varimax-rotated EFA factors based on Method 2 sediment chemistry dataset

	Factor					
Analyte	F1	F2	F3	F4	F5	F6
Lead (mg/kg)	0.25	0.80	0.40	0.15	0.06	0.07
Mercury (µg/kg)	0.41	0.57	0.35	0.60	0.10	0.02
Zinc (mg/kg)	0.33	0.66	0.45	0.10	0.14	0.12
alpha-Chlordane (µg/kg)	0.82	0.27	0.21	0.02	-0.02	-0.21
Total DDx (µg/kg)	0.91	0.17	0.20	0.18	-0.03	0.25
Total PAHs (µg/kg)	0.10	0.77	0.08	0.10	0.00	-0.06
Total PCB Congeners (µg/kg)	0.82	0.19	0.22	0.22	0.44	0.00
Bis-(2-ethylhexyl) phthalate (µg/kg)	0.40	0.47	0.72	0.21	0.05	-0.03

Orange color indicates absolute loading values >0.4; loading was used to interpret factors in terms of the original chemical variables
F -- factor

Table B2-4c. Scores of varimax-rotated EFA factors based on Method 2 sediment chemistry dataset

	Factor					
Location ID	F1	F2	F3	F4	F5	F6
LPRT01A	-0.7306	-0.286	0.0896	1.7889	1.1564	0.4534
LPRT01B	-0.356	-0.1742	0.3578	1.7252	1.3111	0.7529
LPRT01C	0.1128	-0.472	-0.3783	1.7364	-0.0826	0.4785
LPRT01D	0.0551	-0.2114	0.126	1.5437	0.0729	-0.0399
LPRT01E	-0.8903	-0.6924	0.4007	1.8337	0.5464	0.1479
LPRT01F	0.5387	0.2499	-0.2164	0.5146	-0.404	0.0226
LPRT01G	0.6285	-0.2962	0.0936	1.1767	-1.0541	0.79
LPRT02A	0.121	0.0772	0.693	0.4172	0.2367	-0.1341
LPRT02B	0.3778	0.2901	0.3799	0.2249	0.1775	0.4598
LPRT02C	0.6046	0.2054	0.4194	0.3675	-0.2514	-0.1929
LPRT02D	0.102	-0.0326	0.4384	0.809	0.4077	-0.3682
LPRT02E	1.0436	0.2151	0.4537	0.0225	-1.0589	0.0323
LPRT02F	0.5204	0.3604	0.4813	0.2959	0.2751	-0.3732
LPRT03A	0.8758	0.1739	0.3488	0.3231	-0.3557	0.6401
LPRT03B	1.1487	-0.1423	0.0529	-0.9239	0.8509	0.4148
LPRT03C	0.3646	0.0863	0.4574	0.3594	-0.1066	-0.1776
LPRT03D	0.9743	0.2303	0.2111	0.3766	-0.5188	0.7377
LPRT03E	0.6631	0.1736	0.5258	0.4587	-0.4196	-0.2709

LPRT03F	0.8229	0.0621	0.091	0.3887	-0.3006	0.333
LPRT04A	0.1889	-1.8889	-0.8624	0.0851	-2.3292	3.812
LPRT04B	0.9162	0.6225	0.2942	0.2658	0.6842	-0.2829
LPRT04C	0.3596	-0.0271	0.8595	0.8207	2.6989	-1.1098
LPRT04D	0.9122	0.3801	-0.2017	-0.4132	-0.1545	-0.077
LPRT04E	0.3568	0.4374	0.2424	0.1105	0.7403	-0.4611
LPRT04F	0.843	0.186	-1.1785	0.2352	-0.724	0.2296
LPRT05A	0.2437	1.2528	-0.2354	0.4555	-0.1481	0.0066
LPRT05B	0.2223	0.6469	0.238	0.3154	0.1964	-0.4929
LPRT05C	0.5099	0.05	0.2681	0.4435	0.1928	-0.306
LPRT05D	1.3758	0.0557	0.3259	0.5246	-1.4938	1.4754
LPRT05E	0.2131	-0.2347	0.7988	0.3422	0.0408	0.4177
LPRT05F	0.2632	0.0914	1.3591	0.0521	0.5406	-0.7774
LPRT06A	0.4027	0.4007	0.6267	0.4541	0.0713	0.0261
LPRT06B	0.4488	0.3074	0.7285	0.4121	-0.0028	-0.1119
LPRT06C	0.4261	0.3769	0.0827	-0.4081	-0.0755	-0.1783
LPRT06D	0.4222	0.9004	0.0585	-0.9864	-0.231	0.255
LPRT06E	0.5781	0.4433	0.3868	-0.6681	-0.0138	-0.1917
LPRT06F	0.4275	0.2595	0.7987	0.5029	-0.068	-0.2312
LPRT07A	0.3055	-0.0343	-0.25	-0.1257	0.5782	0.2881
LPRT07B	0.6555	0.1244	0.4514	-0.2577	0.6185	-0.3586
LPRT07C	1.0048	0.3334	1.8877	-0.083	0.4528	0.2251
LPRT07D	0.5599	0.4209	0.9142	-0.4558	-0.0017	0.0638
LPRT07E	1.9291	0.2298	0.3602	0.1907	-1.9748	2.4134
LPRT08A	0.1552	1.2738	-0.2183	0.9026	0.0896	-0.1431
LPRT08B	0.4484	0.0397	1.0064	0.4955	-0.3254	-0.0866
LPRT08C	1.4121	0.6896	0.4698	1.0506	-1.2538	1.8964
LPRT08D	0.5977	0.0541	-0.5552	-1.2366	-0.2651	0.6875
LPRT08E	0.6743	-0.8795	-0.9451	-0.8013	-2.2144	1.6944
LPRT09A	1.198	-0.2496	-0.0753	-0.2256	0.4579	0.2529
LPRT09B	2.5033	-1.5116	-1.541	-2.028	3.8103	1.258
LPRT09C	0.4761	-0.6813	-0.3403	-0.4471	0.4389	-0.4204
LPRT09D	0.3068	0.3313	0.7578	0.5516	-0.116	-0.5712
LPRT09E	0.5013	0.6751	0.1847	0.0716	0.173	-0.5368
LPRT09F	0.6911	0.1854	0.8037	0.2905	0.8491	0.4126
LPRT09G	-0.4089	-2.0509	-0.0484	1.0017	0.1257	-0.2689
LPRT09H	1.2752	-1.8459	-2.0861	-0.2003	1.7771	1.6898
LPRT10A	0.4738	0.4252	0.359	0.247	-0.0176	-0.3397
LPRT10B	0.8434	0.0967	0.4625	0.627	1.1378	0.005
LPRT10C	0.3086	0.0689	0.5331	0.0652	-0.0132	-0.1776
LPRT10D	0.6131	-0.3912	-0.9668	-1.5451	-2.2595	-0.5976
LPRT10E	0.7081	0.578	0.6325	-0.4228	-0.6286	-0.4742
LPRT11A	0.1217	-0.4	-1.9073	-0.0519	0.0447	-0.1817
LPRT11B	-0.5037	1.9551	-1.7503	1.5302	0.8768	1.1436
LPRT11C	0.0847	0.3295	-0.8745	-0.7726	-0.9771	0.3177
LPRT11D	0.375	0.0446	-0.0502	0.0998	-0.3539	-0.4641
LPRT11E	0.5055	0.6169	0.6171	0.066	0.2431	-0.7958
LPRT11F	-0.7119	1.2777	-1.2257	1.0536	0.3787	0.212
LPRT11G	0.9784	0.6988	0.87	0.5702	1.7858	-0.0043

LPRT12A	0.6617	0.4119	0.4078	0.0829	0.1393	-0.3697
LPRT12B	0.7469	0.4769	0.4358	-0.0462	-0.3331	-0.3296
LPRT12C	0.8744	0.0838	0.0934	0.1881	0.0995	0.3356
LPRT12D	-0.1662	0.1752	-0.437	0.6075	-0.104	-0.1015
LPRT12E	0.7508	0.5911	0.5149	0.4073	1.1831	-0.3094
LPRT13A	0.2495	0.0873	-0.1116	-0.2922	0.1294	-0.8832
LPRT13B	0.4603	-0.5323	1.6258	0.4191	1.8078	-1.1282
LPRT13C	0.7427	-0.156	0.6527	1.002	-0.463	-0.8396
LPRT13D	-0.7262	-1.6852	-0.1987	0.5246	0.2343	0.0687
LPRT13E	0.1932	0.0275	0.5466	-0.2413	-0.2706	-0.8034
LPRT13F	0.1737	-0.249	0.4888	-1.0176	-0.3585	-1.0646
LPRT13G	1.4234	-0.1375	0.4566	-0.2347	-1.4323	1.0379
LPRT14A	0.2433	-0.0039	-0.0107	-0.8223	-0.3344	-0.5774
LPRT14B	-0.1414	-0.0193	0.9611	-1.2146	-0.069	-0.586
LPRT14C	-0.0633	0.2818	-1.3208	-1.1377	0.8761	-0.2449
LPRT14D	-0.0853	0.2795	0.0334	-1.0624	0.3312	-0.7756
LPRT14E	-0.3843	-0.8311	-1.0024	-0.4501	0.2435	-0.646
LPRT14F	-0.6932	-0.6306	0.9948	-0.8622	-0.0464	-0.7551
LPRT15A	-0.0943	-0.1282	0.022	-0.7588	-0.1913	-0.9052
LPRT15B	0.4882	0.5324	0.0359	-0.4971	-0.6657	-0.208
LPRT15C	-0.529	-0.3758	-1.393	-1.1538	-0.2158	0.0332
LPRT15D	-0.914	-0.2863	-0.3815	-0.4765	-0.107	-0.6215
LPRT15E	-1.0086	-0.4229	-0.9323	0.1579	0.0999	-0.4516
LPRT15F	-1.1669	-0.7521	-1.7019	0.6416	1.0485	-1.1618
LPRT16A	-0.9171	-0.6776	-1.5958	-0.0173	-0.3087	-0.3163
LPRT16C	-1.2815	-1.7069	-0.8288	0.288	-0.1509	0.6899
LPRT16D	0.0223	-0.3742	-2.1306	-1.3206	-0.8791	-1.0811
LPRT16E	-0.2464	0.9416	-1.7593	-0.3375	-1.0137	0.3264
LPRT17A	0.2464	0.1184	-1.3587	-0.4767	3.3314	-1.4653
LPRT17D	-0.4369	0.468	-1.2158	-0.7002	-0.0962	-0.5159
UPRT18H	-1.252	-0.204	-1.0778	0.7946	-0.0571	-0.1439
UPRT18I	-1.1899	1.2611	0.7819	-1.9556	0.3527	1.2997
UPRT18J	-0.4318	0.2874	-1.0738	0.0112	0.1617	-0.039
UPRT18K	-0.9328	-0.8333	0.3119	0.1555	-0.3413	-0.2471
UPRT19J	-4.0707	4.1964	1.1829	0.6455	0.1799	1.3676
UPRT19K	-0.6862	-0.9494	0.9946	-0.3474	-0.5339	-0.5722
UPRT19L	-2.2098	-0.4483	-0.3687	0.6685	0.7589	-0.9879
UPRT19M	-1.931	-1.1716	-0.144	1.0039	0.6181	-0.2011
UPRT20A	-1.0472	-0.9895	0.1872	0.4717	-1.3342	-0.4337
UPRT20B	-1.1789	-0.7444	0.5991	-0.6612	-0.9696	-0.1042
UPRT20C	-0.7612	2.7029	0.2316	-0.4527	0.0164	-0.1631
UPRT20D	-0.3645	0.7823	0.3177	1.3298	-0.5198	1.7088
UPRT20E	-1.6348	-1.0147	0.0145	-0.7463	-1.0582	-0.0135
UPRT20F	-2.9108	3.0588	1.2068	0.1326	-0.6526	-0.1888
UPRT20G	-1.3135	-0.5727	0.1398	-2.1416	0.2635	0.4858
UPRT21A	-1.9088	-1.0952	0.1423	-0.0777	-1.1209	0.0151
UPRT21B	0.5335	0.2877	0.5839	-1.2446	-1.2784	-0.8732
UPRT21C	-1.5593	-0.6893	-2.3838	4.1699	-1.1019	-1.2077
UPRT21D	-2.0284	-2.4705	2.8981	-1.5371	-1.2078	0.1786

UPRT21E	-0.9168	-0.3354	-1.7534	-1.5008	0.2911	0.369
UPRT21F	-0.103	-0.3797	-1.4893	0.2642	-1.0333	-0.5064
UPRT21G	-1.6366	0.4743	-0.228	-2.646	-0.0124	0.8098
UPRT22A	-1.149	-2.6501	0.81	-1.6314	1.9891	0.5398
UPRT22B	-1.9082	-0.4914	0.1345	-2.0471	0.2617	-0.2913

F -- factor

Table B2-4 provides three subtables of PCA and EFA output including principal component eigenvalues (Table B2-4a), factor loading values (Table B2-4b), and factor scores (Table B2-4c). These statistics are described in detail in Appendix P Section 4.1.2.2. Eigenvalues describe the relative importance of each principal component for explaining the overal variance of the chemical dataset. Loading values indicate which chemical variables are most associated with each factor. Scores are the factor variables, which were used in MLR analyses to predict benthic response variables.

For more information, also see the notes from Table B2-3.

Table B2-5. Results of multiple linear regression modeling based on Method 1

Endpoint	Model	df	AIC	BIC	Adjusted r^2	PRESS	Predicted r^2	F-test Significant (p<0.5)?[a]	No. of Samples with Cook's D > 4/n	No. of Samples with DFFITS > 2 * sqrt(p/n)
Abundance (per m2)	Null	2	468	474	--	124	-0.0103	--	12	105
	Habitat-only	4	459	472	0.052	120	0.0193	Yes	12	11
	Limited combined	8	453	480	0.098	116	0.05	Yes / No	11	4
	Limited chemistry	6	455	475	0.08	116	0.055	Yes	11	5
	Full	11	448	484	0.136	113	0.0749	Yes	14	6
Richness	Null	2	1,450	1,456	--	18,500	-0.0103	--	10	80
	Habitat-only	4	1,435	1,449	0.079	17,357	0.0521	Yes	12	15
	Limited combined	8	1,379	1,406	0.322	13,161	0.281	Yes / No	19	15
	Limited chemistry	6	1,376	1,395	0.327	12,850	0.298	Yes	22	15
	Full	11	1,383	1,419	0.32	13,633	0.255	No	20	12
Shannon-Wiener H'	Null	2	328	335	--	60.6	-0.0103	--	13	99
	Habitat-only	4	302	315	0.135	54	0.0994	Yes	9	11
	Limited combined	8	256	282	0.328	43.8	0.269	Yes / No	18	9
	Limited chemistry	6	256	275	0.322	42.8	0.287	Yes	16	9
	Full	11	260	296	0.325	45.6	0.239	No	18	9
Pielou's J'	Null	2	-169	-163	--	4.7	-0.0103	--	10	97
	Habitat-only	4	-172	-159	0.023	4.7	-0.00438	Yes	14	7
	Limited combined	8	-173	-147	0.049	4.7	-0.00263	Yes / Yes	15	10
	Limited chemistry	6	-173	-153	0.037	4.7	0.00433	Yes	15	12
	Full	11	-182	-146	0.105	4.5	0.0432	Yes	13	11
	Null	2	-36	-30	--	9.5	-0.0103	--	18	94
	Habitat-only	4	-56	-43	0.104	8.7	0.0703	Yes	9	12

Swartz's Dominance Index (log)	Limited combined	8	-87	-60	0.25	7.6	0.191	Yes	No	17	10
	Limited chemistry	6	-87	-67	0.242	7.4	0.205	Yes		16	8
	Full	11	-85	-49	0.256	7.7	0.172	No		16	10
Hilsenhoff Biotic Index	Null	2	170	175	--	41.5	-0.0272	--		4	43
	Habitat-only	3	166	173	0.073	39.1	0.0315	Yes		5	0
	Limited combined	7	99	115	0.638	18.2	0.55	Yes	Yes	8	3
	Limited chemistry	6	97	111	0.641	17.8	0.559	Yes		7	3
	Full	10	93	116	0.678	16.7	0.587	Yes		9	4
C. dilutus survival	Null	2	-85	-80	--	2.2	-0.0216	--		4	59
	Habitat-only	3	-86	-78	0.019	2.3	-0.0898	No		4	1
	Limited combined	5	-94	-81	0.12	2.3	-0.0684	Yes	No	4	1
	Limited chemistry	4	-96	-86	0.13	2.2	-0.0247	Yes		6	2

	Full	7	-97	-80	0.169	2.2	-0.0274	Yes	5	2
C. dilutus biomass	Null	2	-25	-20	--	4.1	-0.0216	--	4	52
	Habitat-only	3	-25	-17	0.008	4.2	-0.0448	No	6	6
	Limited combined	6	-42	-27	0.202	3.6	0.119	Yes Yes	6	5
	Limited chemistry	5	-37	-24	0.148	3.7	0.089	Yes	6	5
	Full	9	-40	-17	0.207	3.6	0.0981	No	6	4
H. azteca survival	Null	2	-12	-7	--	6.3	-0.0167	--	9	68
	Habitat-only	4	-30	-19	0.151	5.5	0.115	Yes	9	4
	Limited combined	7	-62	-42	0.362	4.2	0.319	Yes Yes	8	3
	Limited chemistry	5	-40	-26	0.221	5.1	0.18	Yes	8	4
	Full	10	-57	-29	0.349	4.5	0.28	No	8	3
	Null	2	-23	-18	--	5.8	-0.0167	--	7	59
	Habitat-only	4	-36	-25	0.116	5.2	0.0879	Yes	8	9
	Limited combined	8	-57	-34	0.277	4.3	0.236	Yes Yes	7	8
	Limited chemistry	6	-34	-17	0.116	5.2	0.0773	Yes	7	7

H. azteca biomass	Full	10	-56	-28	0.285	4.4	0.228	No	8	6
A. abdita survival	Null	2	33	38	--	8.1	-0.0199	--	10	72
	Habitat-only	4	37	48	-0.02	8.3	-0.0475	No	6	1
	Limited combined	8	22	43	0.148	7.2	0.0944	Yes | Yes	5	2
	Limited chemistry	6	34	50	0.03	8	-0.00899	No	3	0
	Full	11	16	45	0.218	6.8	0.149	Yes	4	3

df – degrees of freedom AIC – Akiake's information criterion BIC – Bayesian information criter
n – sample size p – number of explanatory variables TOC – total organic carbon
Note: descriptions of the statistics presented in Table B2-5 are provided in Section 4.1.2.3 "MLR Model Comparison". Shaded rows indicate the "b
Gray-highlighted cells indicate which model was selected as the "best" based on the statistics and rationale provided.
[a.] Two separate, sequential F-tests were run by adding a set of models into an ANOVA; these tests compare each model to the mod
because it is always the first model entered into the ANOVA (with no prior model for comparison). The sequence of models added to the first ANC
variables before chemistry (i.e., whether chemistry improves the model significantly when accounting for habitat effects). The sequence for the se
variables after chemistry (i.e., whether habitat improves the model significantly when accounting for chemistry effects); the full model was not an
(redundant). In Table B2-5, results from the first test are reported for the habitat-only, limited combined (left-hand value), and full model; results

Table B2-5 is reproduced here for completeness; it is the same table as Appendix P Table 4-4. As noted above, the statistics in Table B2-5 are desc
4.1.2.3 "Model Development". The evaluation of VIF and path analyses is described in Appendix P Section 4.1.2.3 "Collinearity and Path Analysis".

Notes and Model Selection Rationale
The full model is significantly better than other models according to the F-test results, however the relevance of this result is dubious given the quality of the model fit. The inclusion of habitat improves on the null model but not the limited chemistry model, suggesting that chemistry is marginally more important than habitat for predicting abundance. Due to the very poor models generated using habitat and factor scores, this result is highly uncertain. Total fines, F3, and F7 are significant variables in the full model (t-test, $p<0.05$). F7 is essentially uninterpretable. Total fines has the largest coefficient among significant variables. F3 and F7 have similar coefficient values.
Based on Q-Q plots, the normality of richness model residuals is suspect; log-transformation of richness does not address this uncertainty, so the raw data are modeled. Based on model statistics, the limited chemistry model is best, though it appears to be influenced by more extreme values (based on Cook's D and DFFITS). Habitat variables do not improve the model, nor does the full set of chemical factors. The limited chemistry model performs better than the habitat-only model based on AIC, BIC, adjusted and predicted r2, and PRESS. F1, F2, and F3 are all significant factors when included in the full model (t-test, $p<0.05$); F1 and F2 have similar coefficients, and F3 is approximately 2 times larger then F1 and F2.
Model statistics (i.e., AIC, BIC, PRESS, and predicted r2) indicate that the limited chemistry model is best. The addition of habitat variables does not improve the chemistry model, nor does adding the full set of chemical factors. F2 and F3 are significant factors when included in the full model (t-test, $p<0.05$); the coefficients for these factors are similar.
The full model is "best" based on the higher r^2 values and slightly lower values for other statistics, however this result is very uncertain due to the poor fit of the model. Adding habitat significantly improves upon the limited chemistry model. TOC, total fines, F2, F3, and F7 are significant factors in the full model (t-test, $p<0.05$). F7 is essentially uninterpretable. Total fines is positively related to J'. The coefficients for total fines, F2, and F7 are largest (and similar to one another).
Q-Q plots suggest that model residuals are not normal, and residual-fitted value plots suggest

heterskedasticity of residuals. Log-transformation of SDI values sufficiently addresses both uncertainties. The limited chemistry model is “best”, as suggested by the AIC, BIC, PRESS, and predicted r2 statistics. Adding habitat variables to the limited chemistry model does not improve the model, nor does adding the full set of chemical factors. Total fines, F2, and F3 are significant factors in the full model (t-test, $p<0.05$). Total fines is positively related to SDI. F2 has the largest coefficient, but the coefficients for F3 and total fines are only slightly lower than F2 (within a factor of 2).	
Models are based on a small subset of data (n = 75, reduced from n = 205). VIF values were elevated for total fines and F2; path analysis indicates that F2 is more important than total fines for explaining HBI. Total fines was removed from models to reduce variance inflation (model uncertainty). Removing total fines does not substantially improve model fit. Diagnostic plots indicate that residuals are not normal for the habitat-only model, and that some extreme values may be influencing regressions. Log-transformation of HBI is not useful due to the small range of possible HBI values (0 – 10). The same problem is not as pronounced for the other models. The full model is selected as the best model based on its higher r2 values (and similar AIC and BIC values) even though the model is more complex. The predicted r2 value is highest for the full model, suggesting that it is not overfit. Also, the F-test results indicate that the addition of both habitat variables and the full chemical factor list significantly improves the model. F1, F2, F3, and F7 are significant factors in the full model (t-test, $p<0.05$). F7 is essentially uninterpretable. The F1 and F3 coefficients are greatest (and similar), and the F2 and F7 coefficients are approximately half of those for F1 and F3.	
Models are based on a small data subset (n = 94, down from n = 205). VIF values were elevated for F1 and F2 (and to a lesser extent total fines and F3); path analysis indicates that total fines and F2 (as well as F4 and F7) are not significant variables and that F3 is positively related to survival. Total fines, F3, F4, and F7 were dropped from models to address inflation across several variables. F1 and F2 were retained to account for the majority of variance associated with chemical variables. Diagnostic plots indicate that there are several extreme values that are likely influencing regressions. Based on the predicted r2 values, all models perform poorly. The limited chemistry model is “best”, in that it has similar AIC, BIC, PRESS, predicted r2, and extreme values to other models with a lower number of variables. Habitat variables (in this case only	

TOC) do not improve on the null model or the limited chemistry model. Due to the very poor fit of all models, the “best” result is highly uncertain. F1 and F6 are significant factors in the full model (t-test, p<0.05). F6 is essentially uninterpretable.
Models are based on a small data subset (n = 94, down from n = 205). VIF values are elevated for F1 and F2 (and, to a lesser extent, total fines, F3, F4, and F5); path analysis indicates that total fines, F3, and F4 are not significant, and F3 has a positive relationship with biomass. F3 and total fines were removed from models, which has an adverse impact on model fits but reduces model uncertainty. Based on model statistics, the limited combined model is best. The F-test result for that model (comparison to limited chemistry) indicates that the addition of TOC significantly improves the model, though model statistics (excepting r2 values) suggest the models are quite similar. Adding additional the full set of chemical factors does not improve on the limited combined model. Due to the poor fit of all models the “best” result is highly uncertain. TOC, F1, and F2 are significant factors in the full model, though TOC is positively related with biomass. Coefficients for each variable are similar (within a factor of 2).
Models are based on a small data subset (n = 121, down from n = 205). Q-Q plots indicate that the normality of residuals is suspect. Simple transformations (i.e., logarithmic or square-root) do not sufficiently address the issues associated with residuals. VIF values are elevated for F1 and F2 (and, to a lesser extent, total fines); path analysis indicates that total fines, F3, and F4 are not significant, and F3 has a positive relationship with biomass. Correlation tables suggested that F4 was correlated with several of the inflated variables as well. Removing F4 from models decreased VIF to an acceptable level (<5) for all variables while retaining the more important factors F1, F2, and F3. Based on model statistics, the limited combined model is best. The F-test result for that model (comparison to limited chemistry) indicates that the addition of habitat variables significantly improves on the limited chemistry model; other statistics also suggest that the limited combined model is best. Adding additional the full set of chemical factors does not improve on the limited combined model. TOC, total fines, F2, and F3 are significant factors in the full model, though both total fines and F3 have positive relationships with H. azteca survival. F2 and total fines have the largest coefficients; the coefficients (absolute) for F3 and TOC are approximately 2.5 times lower than F2.
Models are based on a small data subset (n = 121, down from n = 205). VIF values are elevated for F1 and F2 (and, to a lesser extent, total fines). Correlation analysis suggests that other factors (e.g. F5) are also

correlated with F1, F2, and total fines. Path analysis indicates that F5, F6, and F7 are not significant. Removing F5 from models decreased VIF to an acceptable level (<5) for all variables while retaining the more important factors F1, F2, and F3. Based on model statistics, the limited combined model is best. The F-test result for that model (comparison to limited chemistry) indicates that the addition of habitat variables significantly improves on the limited chemistry model; other statistics (e.g., PRESS and predicted r2) also suggest that the limited combined model is best. Adding additional the full set of chemical factors does not improve on the limited combined model. TOC, total fines, and F2 are significant factors in the full model, though total fines has a positive relationship with H. azteca biomass. F2 and total fines have the largest coefficients; the coefficient (absolute) for TOC is approxiately 2 times less than those of F2 or total fines.
Models are based on a small data subset (n = 102, down from n = 205). Diagnostic plots indicate that the linear models of A. abdita survival are questionable; there are substantial deviations from residual normality and many extreme residual values. Transformation of survival (using log or square root) does not address residual issues. Model statistics suggest that the full model is best, given that it has the highest adjusted r2 and predicted r2 while still having the lowest AIC; this suggests that the model is not overfit. Interestingly, neither the habitat nor limited chemistry variables (F1 through F4) significantly reduces model error relative to the null model, but the combination of all variables results in a significant improvement; adding the entire set of chemical factors improves the model further. Total fines, F2, and F7 are significant factors in the full model (t-test, p<0.05), though total fines is positively related to A. abdita survival. F7 is essentially uninterpretable. The coefficients for F2 and total fines are similar, but the coefficient for F7 is less than half that for F2.

rion PRESS – predicted residual error sum of squares VIF – variance inflation factor
SDI – Swartz's Dominance Index HBI – Hilsenhoff Biotic Index
best" model based on multiple statistics and best professional judgment.

el added previously to the ANOVA to determine if there is a significant reduction in model error. The null model is not tested
OVA was null, habitat-only, limited combined, then full model, so that the test results indicate the effect of adding habitat
econd test was null, limited chemistry, and limited combined models, so that the test indicates the effect of adding habitat
nalyzed in the second ANOVA because the comparison to the limited combined model was the same as for the first ANOVA
from the second test are reported for the limited combined (right-hand value) and limited chemistry models.

cribed in detail in Appendix P Section 4.1.2.3 "MLR Model Comparison". The model types are described in Appendix P Section
.

Table B2-6. Results of multiple linear regression modeling based on Method 2

Endpoint	Model Type	df	AIC	BIC	Adjusted r^2	PRESS	Predicted r^2	F-test Significant ($p < 0.5$)?[a]		No. samples with Cook's D > 4/n	No. Samples with DFFITS > 2 * sqrt(p/n)
Abundance (per m^2)	Null	2	222	228	--	43.6	-0.0167	--		4	68
	Habitat-only	4	205	216	0.147	37.6	0.125	Yes		1	6
	Limited combined	8	205	227	0.174	37.9	0.117	No	Yes	3	0
	Limited chemistry	6	211	227	0.12	40.3	0.0613	Yes		4	1
	Full	10	200	228	0.215	35.8	0.165	Yes		3	4
Richness	Null	2	803	809	--	5,330	-0.0167	--		6	52
	Habitat-only	4	780	791	0.19	4,424	0.156	Yes		5	7
	Limited combined	8	736	759	0.453	3,413	0.349	Yes	Yes	8	6
	Limited chemistry	6	740	757	0.426	3,541	0.325	Yes		9	5
	Full	10	731	759	0.483	3,271	0.376	Yes		8	7
	Null	2	185	191	--	32.2	-0.0167	--		7	54
	Habitat-only	4	168	179	0.149	28.2	0.11	Yes		8	10
	Limited combined	8	115	138	0.465	19.6	0.383	Yes	No	7	4
	Limited chemistry	6	116	133	0.453	19.8	0.377	Yes		7	5

Shannon-Wiener H'	Full	10	116	143	0.473	19.7	0.379	No		9	6
Pielou's J'	Null	2	-131	-125	--	2.4	-0.0167	--		6	63
	Habitat-only	4	-132	-121	0.024	2.4	-0.0114	No		5	6
	Limited combined	8	-139	-117	0.111	2.2	0.0677	Yes	No	7	3
	Limited chemistry	6	-141	-125	0.112	2.1	0.0824	Yes		5	2
	Full	10	-135	-107	0.097	2.3	0.0245	No		6	3
Swartz's Dominance Index (log)	Null	2	-34	-29	--	5.3	-0.0167	--		9	50
	Habitat-only	4	-47	-35	0.111	4.8	0.0715	Yes		4	8
	Limited combined	8	-91	-68	0.402	3.5	0.313	Yes	No	5	4
	Limited chemistry	6	-92	-75	0.399	3.5	0.323	Yes		7	5
	Full	10	-91	-63	0.411	3.6	0.303	No		7	6
Hilsenhoff Biotic Index	Null	2	147	152	--	32.1	-0.0288	--		3	40
	Habitat-only	4	127	136	0.266	24.4	0.219	Yes		5	2
	Limited combined	8	95	113	0.555	19.2	0.385	Yes	No	6	1
	Limited chemistry	6	92	106	0.564	17.9	0.426	Yes		7	1
	Full	10	99	122	0.541	21.1	0.324	No		7	1
	Null	2	-85	-80	--	2.2	-0.0216	--		4	59
	Habitat-only	4	-86	-76	0.031	2.3	-0.0856	Yes		5	2
	Limited combined	8	-100	-80	0.2	2.2	-0.0179	Yes	No	7	1

C. dilutus survival	Limited chemistry	6	-103	-87	0.206	2.1	0.0404	Yes		8	1
	Full	10	-112	-87	0.309	1.9	0.125	Yes		7	0
C. dilutus biomass	Null	2	-25	-20	--	4.1	-0.0216	--		4	52
	Habitat-only	4	-26	-16	0.03	4.2	-0.0301	No		5	4
	Limited combined	8	-34	-13	0.141	3.9	0.0326	Yes	No	5	3
	Limited chemistry	6	-33	-18	0.12	3.9	0.0467	Yes		5	4
	Full	10	-42	-16	0.227	3.5	0.123	Yes		7	3
H. azteca survival	Null	2	-12	-7	--	6.3	-0.0167	--		9	68
	Habitat-only	4	-30	-19	0.151	5.5	0.115	Yes		9	4
	Limited combined	8	-41	-19	0.248	5	0.187	Yes	Yes	11	4
	Limited chemistry	6	-34	-17	0.189	5.3	0.145	Yes		7	2
	Full	10	-41	-13	0.261	5	0.198	No		11	5
H. azteca biomass	Null	2	-23	-18	--	5.8	-0.0167	--		7	59
	Habitat-only	4	-36	-25	0.116	5.2	0.0879	Yes		8	9
	Limited combined	8	-55	-33	0.269	4.4	0.227	Yes	Yes	7	5
	Limited chemistry	6	-42	-25	0.168	4.9	0.135	Yes		7	7
	Full	10	-53	-25	0.267	4.4	0.215	No		6	6
A. abdita survival	Null	2	-4	-1	--	1.3	-0.0784	--		2	20
	Habitat-only	4	-4	2	0.068	1.4	-0.145	No		3	3
	Limited combined	8	-6	5	0.229	3.2	-1.67	No	Yes	5	4
	Limited chemistry	6	1	9	-0.049	2.6	-1.17	No		3	0
	Full	9	-4	8	0.201	4	-2.32	No		6	4

df – degrees of freedom AIC – Akiake's information criterion BIC – Bayesian information criterion
n – sample size p – number of explanatory variables TOC – total organic carbon
Note: descriptions of the statistics presented in Table B2-6 are provided in Section 4.1.2.3 "MLR Model Comparison". Shaded rov
Gray-highlighted cells indicate which model was selected as the "best" based on the statistics and rationale provided.
[a.] Two separate, sequential F-tests were run by adding a set of models into an ANOVA; these tests compare each r
error. The null model is not tested because it is always the first model entered into the ANOVA (with no prior model for compari
model, so that the test results indicate the effect of adding habitat variables before chemistry (i.e., whether chemistry improves
limited chemistry, and limited combined models, so that the test indicates the effect of adding habitat variables after chemistry
was not analyzed in the second ANOVA because the comparison to the limited combined model was the same as for the first AN
(left-hand value), and full model; results from the second test are reported for the limited combined (right-hand value) and limit

Table B2-6 is reproduced here for completeness; it is the same table as Appendix P Table 4-5. As noted above, the statistics in Ta
described in Appendix P Section 4.1.2.3 "Model Development". The evaluation of VIF and path analyses is described in Appendix

Notes and Model Selection Rationale
The habitat-only model is the best due to its relatively low AIC BIC, and PRESS statistics and relatively high predicted r2. Adding chemistry factors to the habitat-only model (i.e. limited combined model) does not significantly improve the model; the addition of F5 and F6 significantly improve the model, however these factors are associated with only a small portion of the total variance in sediment chemistry. F5 is mostly associated with PCBs, however PCBs are much more strongly associated with F1, which is not a significant factor in the full model. Based on the parsimony of the habitat-only model and its similarity in fit to the full model, the habitat-only model has been selected as best. Regardless, due to the poor fit of all models, this result is highly uncertain. Total fines, F5, and F6 are significant factors in the full model (t-test, $p<0.05$), though F6 is essentially uninterpretable. The coefficients for significant variables are similar (within a factor of 2).
The full model is best based on several statistics including the AIC, PRESS, and r2 values (adjusted and predicted), which suggest that the full model is not overfit. In the full model, total fines, F1, and F5 are significant factors (t-test, $p<0.05$). F1 has the highest coefficient among variables, though the coefficient for total fines is similar. The coefficient for F5 is approximately 3 times less than that for F1.
The additional of habitat variables does not improve on the limited chemistry model, which appears to be best. This

The additional of habitat variables does not improve on the limited chemistry model, which appears to be best. This is based partly on the rule of parsimony (e.g., having 6 variables rather than 8 or 10) and partly on reasonably good fit. The full and limited combined models, while having better fit statistics, do not include any significant variables (t-test, $p<0.05$) that are not also included in the limited chemistry model (i.e,. F1).
The limited chemistry model is “best” based on several model statistics (including AIC, BIC, PRESS, predicted r2 and number of influential points), though the relevance of this result is uncertain due to poor model fit. The addition of habitat variables does not improve the model. F1 is the only significant variable in the full model (t-test, $p<0.05$).
Q-Q and residual-fitted value plots suggest that there are trends and non-normality in residuals. Log-transformation addresses these issues. The limited chemistry model is best based on several statistics (AIC, BIC, PRESS, and predicted r2). The inclusion of habitat variables and additional chemical factors does not significantly improve the models. F1 is the only factor significantly related to SDI in the full model (t-test, $p<0.05$).
Residual-fitted value plots indicate a trend in residuals suggesting non-linearity, particularly for the habitat-only model. Basic transformations (i.e., log and square root) do not address these trends (and may not be mathematically appropriate for HBI). Models are based on a small data subset (n = 71, down from n = 121). The limited chemistry model is best based on most model statistics (i.e., AIC, BIC, r2 values, and PRESS). The addition of habitat variables does not improve the models, and only F1, F2, and F4 are significantly related to HBI (based on the full model; t-test, $p<0.05$). F1, F2, and F4 have similar coefficients, all within a factor of 2.
Models are generally better fir when including chemical factors. Models are based on a data subset (n = 94, down from n = 121). Of the models developed, the full model is best due to the improvement of the model after adding the full list of chemical factors (rather than the limited subset). And, because the PRESS is low and predicted r2 is high

for the full model, it is not likely overfit. Adding habitat variables does not significantly improve the model, so the full model is perhaps not as parsimonious as it could be. Regardless, chemistry factors appear to be more important than either TOC or total fines for predicting C. dilutus survival. Due to the weakness of the model fit, this result is highly uncertain. F1, F2, F5, and F6 are significantly related to C. dilutus survival (based on the full model; t-test, $p<0.05$); F6 is essentially uninterpretable. The coefficients for significant factors are all fairly similar. Due to poor model fits, these results are uncertain.
Models are generally better fir when including chemical factors. Models are based on a data subset (n = 94, down from n = 121). Of the models developed, the full model is best due to the improvement of the model after adding the full list of chemical factors (rather than the limited subset). And, because the PRESS is low and predicted r2 high for the full model, it is not likely overfit. Adding habitat variables does not significantly improve the model, so the full model is perhaps not as parsimonious as it could be. Regardless, chemistry factors (i.e., F2, F4, and F5) appear to be more important than either TOC or total fines for predicting C. dilutus biomass (based on the full model; t-test, $p<0.05$); F2 has the highest coefficient, and the coefficients of F4 and F5 are similar, about half that of F2. Due to the weakness of the model fit, this result is highly uncertain.
Q-Q plots suggest that residuals are not normally distributed. Transforming survival data does not address these residual issues. The limited combined model is the best, based on several statistics (i.e., AIC, BIC, and PRESS) as well as parsimony (8 parameters vs. 10 in the full model). The addition of the full set of chemical factors does not improve the model, but habitat factors are important. TOC, total fines, F2, and F3 are significantly related to H. azteca survival (based on the full model; t-test, $p<0.05$), though total fines is positively related to survival. Total fines, F2, and F3 have the largest (similar) coefficients; the coefficients (absolute) for TOC is approximately 3 times less than those for the other variables. Due to poor model fits, these results are uncertain.
The limited combined model is best based on all model statistics and considering that the inclusion of habitat variables and the limited subset of chemical factors significantly improved the models (but the full set of chemical factors did not improve the model further). Due to the poor fit of all models, this result is highly uncertain. TOC, total fines, F2, F3, and F4 are significantly related to H. azteca survival (based on the full model; t-test, $p<0.05$), though total fines is positively related to biomass. Total fines, F2, and F3 have the largest coefficients (similar); TOC and F4 are approximately 2 to 3 times less than the other variables. Due to poor model fits, these results are uncertain.
Models are based on a data subset (n = 27 [only LPRSA locations], down from n = 121). Diagnostic plots indicate that residuals are heteroskedastic, and that extreme values likely influence the regressions. Log-transformation does not address these issues. F6 is collinear with other variables (VIF>5), so it is dropped from the full model. F6 is essentially uninterpretable information about chemistry, so it does not contribute to an interpretable model. Based on the ANOVA tests, no model is a significant improvement over the null model. Although the addition of habitat variables results in a significant improvement over the limited chemistry model, again, neither model is significantly better than then null model. Therefore, the null model is “best”, which is to say that *A. abdita* survival is not related to habitat variables or chemical factors (included in the analysis herein). In the full model, only total fines is significantly related to survival, and that relationship is positive.

PRESS – predicted residual error sum of squares VIF – variance inflation factor
SDI – Swartz's Dominance Index HBI – Hilsenhoff Biotic Index
ws indicate the "best" model based on multiple statistics and best professional judgment.

model to the model added previously to the ANOVA to determine if there is a significant reduction in model
ison). The sequence of models added to the first ANOVA was null, habitat-only, limited combined, then full
the model significantly when accounting for habitat effects). The sequence for the second test was null,
(i.e., whether habitat improves the model significantly when accounting for chemistry effects); the full model
NOVA (redundant). In Table B2-6, results from the first test are reported for the habitat-only, limited combined
ted chemistry models.

able B2-6 are described in detail in Appendix P Section 4.1.2.3 "MLR Model Comparison". The model types are
P Section 4.1.2.3 "Collinearity and Path Analysis".

Table B2-7. Conclusion of multivariate analyses based on Methods 1 and 2

Benthic Response Variable	Method 1 F-test Result	Method 2 F-test Result	Method 1 Model Selection	Method 2 Model Selection	M1 and M2 Conclusions Agree?
Abundance (per m^2)	Chemistry is more important than habitat.	Habitat is more important than chemistry.	Full	Habitat-only	No
Richness	Chemistry is more important than habitat.	Chemistry and habitat are similarly important.	Limited chemistry	Full	Similar
Shannon-Wiener H'	Chemistry is more important than habitat.	Chemistry is more important than habitat.	Limited chemistry	Limited chemistry	Yes
Pielou's J'	Chemistry and habitat are similarly important.	Chemistry is more important than habitat.	Full	Limited chemistry	Similar
Swartz's Dominance Index	Chemistry is more important than habitat.	Chemistry is more important than habitat.	Limited chemistry	Limited chemistry	Yes
Hilsenhoff Biotic Index	Chemistry and habitat are similarly important.	Chemistry is more important than habitat.	Full	Limited chemistry	Similar
C. dilutus survival	Chemistry is more important than habitat.	Chemistry is more important than habitat.	Limited chemistry	Full	Yes
C. dilutus biomass	Chemistry and habitat are similarly important.	Chemistry is more important than habitat.	Limited combined	Full	Similar
H. azteca survival	Chemistry and habitat are similarly important.	Chemistry and habitat are similarly important.	Limited combined	Limited combined	Yes
H. azteca biomass	Chemistry and habitat are similarly important.	Chemistry and habitat are similarly important.	Limited combined	Limited combined	Yes
A. abdita survival	Chemistry and habitat are similarly important.	Neither chemistry nor habitat is important.	Full	Null	No

M1 -- Method 1
M2 -- Method 2
SDI -- Swartz's Dominance Index
HBI -- Hilsenhoff Biotic Index

Table B2-7 provides the conclusions for the multivariate analysis of sediment quality triad data. Columns B ar
(reported in Tables B2-5 and B2-6). The selected model structure(s) from Method 1 and Method 2 (Tables B2
provides an indication of whether the results agree or disagree or are similar.

Conclusion

Models selected are dissimilar. The relative importance of habitat variables and chemical factors on predictions of abundance is unclear.

Models selected are similar in that chemical variables appear to be more or similarly important than habitat variables for explaining richness. Method 1 F1, F2, and F3 were all significant, indicating a general negative relationship with most chemicals.

Results from two methods are in agreement. Chemistry factors are more important than habitat variables for explaining Shannon-Wiener H'. Method 1 F2 and F3 were important, indicating that metals and pesticides are most important for predicting H'.

The results from the two methods are similar, in that chemistry factors are more or similarly important than habitat variables for explaining Pielou's J'. Method 1 F2 and F3 were important, indicating that metals and pesticides are most important for predicting J'.

Results from two methods are in agreement. Chemistry factors are more important than habitat variables for explaining SDI. F2 and F3 were important, indicating that metals and pesticides are most important for predicting SDI.

Models are similar, in that chemistry factors are more or similarly important than habitat variables for explaining HBI. Method 1 F1, F2, and F3 were all significant, indicating a general negative relationship with most chemicals.

Results from two methods are in general agreement. Chemistry factors are more important than habitat variables for explaining *C. dilutus* survival. Method 1 F1 was the primary significant chemical factor, associated with polycyclic aromatic hydrocarbons, metals, and pesticides.

Results from the two methods are similar, in that chemistry factors are more or similarly important than habitat variables for explaining *C. dilutus* biomass. Method 1 F1 and F2 were significant factors, indicating a general negative relationship with most chemicals.

Results from the two methods agree; chemistry factors and habitat variables are both important for explaining *H. azteca* survival. Method 1 F2 and F3 were important, indicating that metals and pesticides are important for predicting *H. azteca* survival. Total fines and total organic carbon were important habitat variables.

Results from the two methods agree; chemistry factors and habitat variables are both important for explaining *H. azteca* biomass. Method 1 F2 was the more important chemical factor suggesting that metals and pesticides are related to biomass. Total fines is strongly related to biomass as well, but in a positive way. The positive relationship between fines and biomass suggest that toxicity test results are more likely driven by chemical exposures than physical effects of sediment grain size.

Results from the two methods disagree. The relative importance of habitat variables and chemical factors on predictions of abundance is unclear. Poor relationship between survival and chemical factors or habitat variables may be due to nonlinearity. Of the chemical factors and habitat variables evaluated, F2 (related to metals and pesticides) and total fines were most important in Method 1.

ıd C provide the conclusions from sequential F-tests
-5 and B2-6) are provided in columns D and E. Column F

Table B3-1. Estuarine, regional reference benthic metric and toxicity data

Area of Interest	Study	Location	Latitude	Longitude	Station type	SQT?	Abundance per m2	Taxa Richness	Shannon-Wiener H'	Pielou's J'
Mullica River and Great Bay	NCA Program New Jersey Atlantic Coast 2000	NJ00-0035	39.505	-74.399	Estuarine	Yes	6200	23	1.38	0.440
Mullica River and Great Bay	NCA Program New Jersey Atlantic Coast 2000	NJ00-0037	39.594	-74.551	Estuarine	No				
Mullica River and Great Bay	NCA Program New Jersey Atlantic Coast 2000	NJ01-0036	39.511	-74.297	Estuarine	Yes	1470	17	2.01	0.708
Mullica River and Great Bay	NCA Program New Jersey Atlantic Coast 2000	NJ01-0038	39.557	-74.48	Estuarine	Yes	1675	11	1.68	0.702
Mullica River and Great Bay	NCA Program New Jersey Atlantic Coast 2001	NJ01-0116	39.535	-74.377	Estuarine	Yes	13000	33	1.94	0.556
Mullica River and Great Bay	NCA Program New Jersey Atlantic Coast 2001	NJ01-0118	39.553	-74.454	Estuarine	Yes	8050	37	2.93	0.811
Mullica River and Great Bay	NCA Program New Jersey Atlantic Coast 2001	NJ01-0122	39.585	-74.538	Estuarine	Yes	9950	14	1.68	0.636
Mullica River and Great Bay	NCA Program New Jersey Atlantic Coast 2002	NJ02-0227	39.498	-74.334	Estuarine	Yes	51375	34	1.01	0.287
Mullica River and Great Bay	NCA Program New Jersey Atlantic Coast 2002	NJ02-0229	39.582	-74.536	Estuarine	Yes	15550	18	1.54	0.531
Mullica River and Great Bay	NCA Program New Jersey Atlantic Coast 2002	NJ02-0230	39.537	-74.334	Estuarine	Yes	46100	42	1.51	0.403
Mullica River and Great Bay	NCA Prog New Jersey Atlantic Coast 2003	2300_L3_NJ03-0038	39.5568	-74.4796	Estuarine	Yes	2000	14	2.13	0.805
Mullica River and Great Bay	NCA Prog New Jersey Atlantic Coast 2004	2300_L4_NJ04-0427	39.521	-74.379	Estuarine	Yes	27600	45	1.86	0.489
Mullica River and Great Bay	NCA Prog New Jersey Atlantic Coast 2004	2300_L4_NJ04-0429	39.568	-74.502	Estuarine	Yes	350	8	1.91	0.918
Mullica River and Great Bay	NCA Prog New Jersey Atlantic Coast 2005	2300_L5_NJ05-0059	39.505	-74.354	Estuarine	Yes	22075	22	1.14	0.369
Mullica River and Great Bay	NCA Prog New Jersey Atlantic Coast 2006	2300_L6_NJ06-0015	39.536	-74.388	Estuarine	Yes	7100	39	2.79	0.762
Mullica River and Great Bay	NCA Prog New Jersey Atlantic Coast 2006	2300_L6_NJ06-0027	39.5	-74.401	Estuarine	Yes	3800	30	3.01	0.884
Mullica River and Great Bay	NCA Prog New Jersey Atlantic Coast 2006	2300_L6_NJ06-0035	39.496	-74.36	Estuarine	Yes	4725	30	2.61	0.767
Mullica River and Great Bay	NCCA Program 2010	NCCA10-2622	39.50785	-74.33571	Estuarine	Yes	2525	8	0.918	0.441
Mullica River and Great Bay	1999 Late Summer/Early Fall RI-ESP Sampling Progr	MR9921SDM-TSI	39.577054	-74.540511	Estuarine	No				
Mullica River and Great Bay	1999 Late Summer/Early Fall RI-ESP Sampling Progr	MR9922SDM-TSI	39.55279	-74.480896	Estuarine	No				
Mullica River and Great Bay	1999 Late Summer/Early Fall RI-ESP Sampling Progr	MR9923SDM-TSI	39.553648	-74.403385	Estuarine	No				
Mullica River and Great Bay	EMAP-Delaware Bay 1990	2300_13_90-118	39.54167	-74.40833	Estuarine	No				
Mullica River and Great Bay	EMAP-Delaware Bay 1990	2300_13_90-120	39.55167	-74.415	Estuarine	No				
Mullica River and Great Bay	EMAP-Delaware Bay 1991	2300_14_91-348	39.49606	-74.38222	Estuarine	No				
Mullica River and Great Bay	EMAP-Delaware Bay 1991	2300_14_91-349	39.50367	-74.38467	Estuarine	No				
Jamaica Bay	REMAP, 1993	2200_26_JB002	40.63616	-73.797836	Estuarine	Yes	2875	18	2.17	0.750
Jamaica Bay	REMAP, 1993	2200_26_JB006	40.6083	-73.77319	Estuarine	Yes	35500	35	1.61	0.455
Jamaica Bay	REMAP, 1993	2200_26_JB008	40.641081	-73.816019	Estuarine	Yes	1688	8	1.58	0.766
Jamaica Bay	REMAP 1998	2200_56_JB008	40.6409	-73.8162	Estuarine	Yes	1713	8	1.33	0.748
Jamaica Bay	REMAP, 1993	2200_26_JB012	40.648469	-73.890094	Estuarine	Yes	63	2	0.665	0.959
Jamaica Bay	REMAP, 1993	2200_26_JB015	40.626179	-73.794061	Estuarine	Yes	125	4	1.36	0.980
Jamaica Bay	REMAP, 1993	2200_26_JB018	40.608684	-73.786069	Estuarine	Yes	21375	14.5	1.15	0.436
Jamaica Bay	REMAP 1998	2200_56_JB018	40.6096	-73.786	Estuarine	Yes	888	5	1.23	0.764
Jamaica Bay	REMAP, 1993	2200_26_JB022	40.604022	-73.779599	Estuarine	Yes	25113	23.5	1.53	0.485
Jamaica Bay	REMAP, 1993	2200_26_JB026	40.603411	-73.841641	Estuarine	Yes	37663	42.5	2.38	0.636
Jamaica Bay	REMAP 1998	2200_56_JB026	40.6034	-73.842	Estuarine	Yes	243875	41.5	1.76	0.472
Jamaica Bay	REMAP, 1993	2200_26_JB031	40.611179	-73.871529	Estuarine	Yes	44825	28.5	1.56	0.467
Jamaica Bay	REMAP 1998	2200_56_JB031	40.611	-73.8719	Estuarine	Yes	15325	25	2.00	0.621
Jamaica Bay	REMAP, 1993	2200_26_JB033	40.615974	-73.887738	Estuarine	Yes	146675	38.5	1.83	0.502
Jamaica Bay	REMAP 1998	2200_56_JB033	40.6161	-73.8879	Estuarine	Yes	80288	29	1.29	0.381
Jamaica Bay	REMAP, 1993	2200_26_JB039	40.586676	-73.845564	Estuarine	Yes	282150	44	2.04	0.540
Jamaica Bay	REMAP 1998	2200_56_JB039	40.587	-73.845	Estuarine	Yes	23800	29.5	1.83	0.543
Jamaica Bay	REMAP, 1993	2200_26_JB041	40.585592	-73.860123	Estuarine	Yes	324700	42	1.80	0.481
Jamaica Bay	REMAP 1998	2200_56_JB041	40.585	-73.8613	Estuarine	Yes	146750	44	1.52	0.401
Jamaica Bay	REMAP, 1993	2200_26_JB042	40.582913	-73.848083	Estuarine	Yes	6075	25	1.94	0.601
Jamaica Bay	REMAP 1998	2200_56_JB042	40.5827	-73.847	Estuarine	Yes	7425	26.5	1.98	0.608
Jamaica Bay	REMAP, 1993	2200_26_JB043	40.576184	-73.873706	Estuarine	Yes	86138	33	2.29	0.678

Table B3-1. Estuarine, regional reference benthic metric and toxicity data

Area of Interest	Study	Location	Latitude	Longitude	Station type	SQT?	Abundance per m2	Taxa Richness	Shannon-Wiener H'	Pielou's J'
Jamaica Bay	REMAP 1998	2200_56_JB043	40.5756	-73.8751	Estuarine	Yes	22588	47	2.42	0.628
Jamaica Bay	REMAP, 1994	2200_27_JB101	40.6395	-73.813667	Estuarine	Yes	42463	14	0.590	0.220
Jamaica Bay	REMAP, 1994	2200_27_JB103	40.629067	-73.787567	Estuarine	Yes	25	1	0.35	0.500
Jamaica Bay	REMAP, 1994	2200_27_JB104	40.621767	-73.8415	Estuarine	Yes	5663	7.5	0.799	0.382
Jamaica Bay	REMAP, 1994	2200_27_JB106	40.620783	-73.890333	Estuarine	Yes	230575	40	2.00	0.542
Jamaica Bay	REMAP, 1994	2200_27_JB108	40.61705	-73.85725	Estuarine	Yes	6888	20	1.54	0.515
Jamaica Bay	REMAP, 1994	2200_27_JB110	40.606533	-73.814567	Estuarine	Yes	32713	21	1.46	0.484
Jamaica Bay	REMAP, 1994	2200_27_JB111	40.6052	-73.790717	Estuarine	Yes	111675	26	1.69	0.538
Jamaica Bay	REMAP, 1994	2200_27_JB112	40.602533	-73.864867	Estuarine	Yes	22488	29	1.85	0.551
Jamaica Bay	REMAP, 1994	2200_27_JB113	40.595767	-73.8673	Estuarine	Yes	33125	27.5	1.40	0.421
Jamaica Bay	REMAP, 1994	2200_27_JB114	40.591167	-73.85135	Estuarine	Yes	67788	34	2.25	0.637
Jamaica Bay	REMAP, 1994	2200_27_JB115	40.63375	-73.869983	Estuarine	Yes	21500	41	2.76	0.754
Jamaica Bay	REMAP, 1994	2200_27_JB117	40.6234	-73.765233	Estuarine	Yes	51713	29	2.05	0.609
Jamaica Bay	REMAP, 1994	2200_27_JB119	40.60355	-73.875233	Estuarine	Yes	14050	21.5	1.57	0.512

Table B3-1. Estuarine, regional reference benthic metric and toxicity data

Area of Interest	Study	Location	Latitude	Longitude	Station type	SQT?	Abundance per m2	Taxa Richness	Shannon-Wiener H'	Pielou's J'
Jamaica Bay	REMAP, 1994	2200_27_JB120	40.596367	-73.812983	Estuarine	Yes	20375	22	1.41	0.453
Jamaica Bay	REMAP 1998	2200_56_JB201	40.5718	-73.8794	Estuarine	Yes	1513	13.5	2.05	0.792
Jamaica Bay	REMAP 1998	2200_56_JB202	40.6118	-73.8101	Estuarine	Yes	60325	29.5	1.58	0.472
Jamaica Bay	REMAP 1998	2200_56_JB203	40.6328	-73.8067	Estuarine	Yes	125	3	0.947	0.862
Jamaica Bay	REMAP 1998	2200_56_JB204	40.6082	-73.8898	Estuarine	Yes	2238	7	1.30	0.674
Jamaica Bay	REMAP 1998	2200_56_JB205	40.589	-73.8593	Estuarine	Yes	963	11	1.87	0.813
Jamaica Bay	REMAP 1998	2200_56_JB206	40.5954	-73.8047	Estuarine	Yes	8138	13	1.37	0.586
Jamaica Bay	REMAP 1998	2200_56_JB207	40.6286	-73.7591	Estuarine	Yes	19638	13	0.756	0.291
Jamaica Bay	REMAP 1998	2200_56_JB209	40.6051	-73.7872	Estuarine	Yes	85975	27	0.979	0.297
Jamaica Bay	REMAP 1998	2200_56_JB210	40.6275	-73.8712	Estuarine	Yes	6563	20.5	1.66	0.550
Jamaica Bay	REMAP 1998	2200_56_JB211	40.612	-73.8725	Estuarine	Yes	3913	20	2.01	0.672
Jamaica Bay	REMAP 1998	2200_56_JB212	40.5881	-73.8335	Estuarine	Yes	675	6.5	1.00	0.539
Jamaica Bay	REMAP 1998	2200_56_JB213	40.6189	-73.7777	Estuarine	Yes	325	2	0.395	0.360
Jamaica Bay	REMAP 1998	2200_56_JB214	40.6426	-73.8581	Estuarine	Yes	60675	24	0.714	0.232
Jamaica Bay	REMAP 1998	2200_56_JB215	40.6256	-73.837	Estuarine	Yes	73825	36	1.52	0.430
Jamaica Bay	REMAP 1998	2200_56_JB216	40.633	-73.8734	Estuarine	Yes	150913	39.5	1.39	0.378
Jamaica Bay	REMAP 1998	2200_56_JB217	40.5853	-73.8522	Estuarine	Yes	7625	20.5	1.85	0.612
Jamaica Bay	REMAP 1998	2200_56_JB219	40.5749	-73.887	Estuarine	Yes	850	10.5	1.96	0.855
Jamaica Bay	REMAP 1998	2200_56_JB222	40.6032	-73.8777	Estuarine	Yes	6700	12	0.917	0.398
Jamaica Bay	REMAP 1998	2200_56_JB223	40.5926	-73.8707	Estuarine	Yes	22438	14	1.11	0.423
Jamaica Bay	NCA Prog New York/New Jersey Harbor 2000	2300_M0_NY-0029-A	40.5733	-73.8834	Estuarine	Yes	660	17	0.915	0.744
Jamaica Bay	NCA Prog New York/New Jersey Harbor 2001	2300_M1_NY-0032-A	40.6269	-73.8831	Estuarine	Yes	18830	48	0.900	0.536
Jamaica Bay	NCA Prog New York/New Jersey Harbor 2002	2300_M2_NY-0029-A	40.5734	-73.8811	Estuarine	Yes	675	7	0.519	0.614
Jamaica Bay	NCA Prog New York/New Jersey Harbor 2002	2300_M2_NY-0235-A	40.6453	-73.82	Estuarine	Yes	1375	7	0.505	0.597
Jamaica Bay	NCA Prog New York/New Jersey Harbor 2002	2300_M2_NY-0239-A	40.659	-73.8388	Estuarine	Yes	25	1	0	
Jamaica Bay	NCA Prog New York/New Jersey Harbor 2003	2300_M3_NY03-0236	40.6312	-73.7424	Estuarine	Yes	11900	28	1.08	0.745
Jamaica Bay	NCA Prog New York/New Jersey Harbor 2004	2300_M4_NY04-0234	40.6079	-73.8823	Estuarine	Yes	47600	21	0.519	0.393
Jamaica Bay	CARP Sediment Ambient Study 1998-1999	2200_46_JBA11	40.5871	-73.8526	Estuarine	No				
Jamaica Bay	NCA Prog New York/New Jersey Harbor 2005	2300_M5_NY05-0002	40.594	-73.873	Estuarine	No				
Jamaica Bay	NCA Prog New York/New Jersey Harbor 2005	2300_M5_NY05-0010	40.629	-73.749	Estuarine	No				
Jamaica Bay	Region 2 2003 NY/NJ Harbor Data Sets	JB301	40.629	-73.759	Estuarine	Yes	1,980	17	1.83	0.656
Jamaica Bay	Region 2 2003 NY/NJ Harbor Data Sets	JB303	40.619	-73.778	Estuarine	Yes	70	2.5	0.666	0.961
Jamaica Bay	Region 2 2003 NY/NJ Harbor Data Sets	JB305	40.575	-73.87	Estuarine	Yes	8,460	16	2.08	0.762
Jamaica Bay	Region 2 2003 NY/NJ Harbor Data Sets	JB306	40.572	-73.88	Estuarine	Yes	11,960	14.5	1.82	0.682
Jamaica Bay	Region 2 2003 NY/NJ Harbor Data Sets	JB307	40.64	-73.847	Estuarine	Yes	151,580	19.5	1.61	0.544
Jamaica Bay	Region 2 2003 NY/NJ Harbor Data Sets	JB309	40.643	-73.858	Estuarine	Yes	146,200	17	0.968	0.343
Jamaica Bay	Region 2 2003 NY/NJ Harbor Data Sets	JB310	40.639	-73.828	Estuarine	Yes	2,890	13.5	1.59	0.613
Jamaica Bay	Region 2 2003 NY/NJ Harbor Data Sets	JB313	40.61	-73.81	Estuarine	Yes	1,100	3	0.308	0.266
Jamaica Bay	Region 2 2003 NY/NJ Harbor Data Sets	JB315	40.605	-73.786	Estuarine	Yes	5,050	14.5	1.81	0.680
Jamaica Bay	Region 2 2003 NY/NJ Harbor Data Sets	JB316	40.625	-73.837	Estuarine	Yes	33,550	20	1.52	0.520
Jamaica Bay	Region 2 2003 NY/NJ Harbor Data Sets	JB317	40.621	-73.812	Estuarine	Yes	19,990	34	2.46	0.697
Jamaica Bay	Region 2 2003 NY/NJ Harbor Data Sets	JB319	40.633	-73.807	Estuarine	Yes	480	8.5	1.78	0.856
Jamaica Bay	Region 2 2003 NY/NJ Harbor Data Sets	JB322	40.627	-73.871	Estuarine	Yes	21,300	30.5	2.07	0.608
Jamaica Bay	Region 2 2003 NY/NJ Harbor Data Sets	JB323	40.633	-73.873	Estuarine	Yes	195,430	23.5	1.25	0.398
Jamaica Bay	Region 2 2003 NY/NJ Harbor Data Sets	JB354	40.602	-73.877	Estuarine	Yes	4,360	11.5	2.05	0.848
Jamaica Bay	Region 2 2003 NY/NJ Harbor Data Sets	JB358	40.608	-73.89	Estuarine	Yes	820	9	1.54	0.853
Jamaica Bay	Region 2 2003 NY/NJ Harbor Data Sets	JB359	40.612	-73.872	Estuarine	Yes	7,320	25.5	2.20	0.676

Table B3-1. Estuarine, regional reference benthic metric and toxicity data

Area of Interest	Study	Location	Latitude	Longitude	Station type	SQT?	Abundance per m2	Taxa Richness	Shannon-Wiener H'	Pielou's J'
Jamaica Bay	Region 2 2003 NY/NJ Harbor Data Sets	JB361	40.584	-73.853	Estuarine	Yes	20,940	12	1.44	0.578
Jamaica Bay	Region 2 2003 NY/NJ Harbor Data Sets	JB364	40.593	-73.871	Estuarine	Yes	61,490	16.5	0.857	0.310
Jamaica Bay	Region 2 2003 NY/NJ Harbor Data Sets	JB366	40.589	-73.859	Estuarine	Yes	48,960	21	1.26	0.413
Jamaica Bay	Region 2 2003 NY/NJ Harbor Data Sets	JB367	40.588	-73.835	Estuarine	Yes	131,130	20	1.22	0.408
Jamaica Bay	Region 2 2003 NY/NJ Harbor Data Sets	JB368	40.592	-73.846	Estuarine	Yes	94,200	21.5	1.47	0.482
Jamaica Bay	Region 2 2003 NY/NJ Harbor Data Sets	JB371	40.595	-73.805	Estuarine	Yes	155,520	23.5	1.60	0.507
Jamaica Bay	Region 2 2003 NY/NJ Harbor Data Sets	JB372	40.596	-73.812	Estuarine	Yes	20	1	0	na
Jamaica Bay	Region 2 2003 NY/NJ Harbor Data Sets	JB374	40.624	-73.76	Estuarine	Yes	60	2	0.628	0.906
Jamaica Bay	Region 2 2003 NY/NJ Harbor Data Sets	JB380	40.629	-73.854	Estuarine	Yes	18,970	24	1.69	0.532
Jamaica Bay	Region 2 2003 NY/NJ Harbor Data Sets	JB381	40.601	-73.774	Estuarine	Yes	110	3.5	1.10	0.875
Jamaica Bay	Region 2 2003 NY/NJ Harbor Data Sets	JB386	40.604	-73.864	Estuarine	Yes	410	8	1.75	0.850

SQT -- sediment quality triad
na -- not applicable

Table B3-1 presents the regional reference data from Jamaica Bay (urban estuary) and Mullica River and Great Bay (non-urban estuary), which are used to quantify ref analyses in the BERA. Specifically, Table B3-1 provides sample information, benthic invertebrate community metric data and sediment toxicity test data for the amphip data in Table B3-1 have not been screened for sediment chemical contamination or excessive toxicity.

Swartz's Dominance Index	*A. abdita* survival (% of control)	Notes
2	0.989	
	0.777	No benthic community data
4	0.989	
3	1.010	
4	0.922	
10	0.844	
3	0.979	
2	1.000	
2	0.915	
3	1.070	
5	0.880	
4	0.901	
5	0.957	
2	0.929	
9	1.000	
11	0.948	
7	1.000	
2	0.859	
	1.070	No benthic community data
	1.030	No benthic community data
	1.030	No benthic community data
	0.600	No benthic community data
	0.690	No benthic community data
	0.957	No benthic community data
	0.894	No benthic community data
5	0.960	
2.5	0.910	
3.5	0.530	
2.5	0.620	
2	0.000	
3	0.380	
2	0.810	
2.5	0.330	
2.5	1.040	
5.5	1.080	
3.5	0.000	
2	0.920	
4.5	0.960	
3.5	0.940	
2	0.000	
4	0.380	
3.5	1.000	
3	0.690	
3	0.930	
4	1.030	
4	1.010	
6.5	0.740	

Swartz's Dominance Index	*A. abdita* survival (% of control)	Notes
7	0.890	
1	0.980	
1	0.930	
1.5	0.800	
4.5	0.920	
2.5	0.960	
2.5	0.990	
3.5	0.970	
4.5	0.980	
2	0.950	
6	0.970	
8	0.940	
5	1.000	
2.5	0.980	

Swartz's Dominance Index	*A. abdita* survival (% of control)	Notes
2.5	1.000	
4.5	0.930	
2.5	1.000	
2.5	0.920	
3	0.770	
4.5	0.860	
2.5	0.970	
1.5	0.980	
1.5	1.020	
3	0.880	
4	0.730	
1.5	1.000	
1.5	0.950	
1	0.940	
2	0.390	
2.5	0.040	
4	1.000	
5	1.010	
1	0.940	
2	0.140	
6	0.957	
4	0.989	
2	0.902	
2	0.904	
1	0.787	
6	0.867	
2	0.948	
	0.980	No benthic community data
	0.596	No benthic community data
	1.000	No benthic community data
3	0.725	
2	1.007	
4.5	1.003	
3.5	1.011	
3.5	1.011	
2	0.033	
2.5	0.033	
1	0.813	
3.5	0.110	
2.5	0.110	
7	0.912	
4	0.900	
4.5	0.811	
2	0.411	
5	0.211	
3	0.544	
5.5	0.744	

Swartz's Dominance Index	*A. abdita* survival (% of control)	Notes
2.5	0.611	
1	0.822	
1.5	0.011	
2	0.067	
2.5	0.681	
3	0.135	
1	0.802	
1.5	0.729	
3	0.785	
2.5	0.698	
4	0.891	

erence conditions for SQT
ood *Ampelisca abdita*. The

Table B3-2. Comparison of estuarine, regional reference chemistry data to ERL and ERMs

Area_of_Interest	Dataset	Study	Location	Latitude	Longitude	Upper_Depth	Lower_Depth
Jamaica Bay	Regional sediment (estuarine non-SQT)	CARP Sediment Ambient Study 1998-1999	2200_46_JBA11	40.5871	-73.8526	0	10
Jamaica Bay	Regional sediment (estuarine non-SQT)	CARP Sediment Ambient Study 1998-1999	2200_46_JBA11	40.5871	-73.8526	0	10
Jamaica Bay	Regional sediment (estuarine non-SQT)	CARP Sediment Ambient Study 1998-1999	2200_46_JBA11	40.5871	-73.8526	0	10
Jamaica Bay	Regional sediment (estuarine non-SQT)	CARP Sediment Ambient Study 1998-1999	2200_46_JBA11	40.5871	-73.8526	0	10
Jamaica Bay	Regional sediment (estuarine non-SQT)	CARP Sediment Ambient Study 1998-1999	2200_46_JBA11	40.5871	-73.8526	0	10
Jamaica Bay	Regional sediment (estuarine non-SQT)	CARP Sediment Ambient Study 1998-1999	2200_46_JBA11	40.5871	-73.8526	0	10
Jamaica Bay	Regional sediment (estuarine non-SQT)	CARP Sediment Ambient Study 1998-1999	2200_46_JBA11	40.5871	-73.8526	0	10
Jamaica Bay	Regional sediment (estuarine non-SQT)	CARP Sediment Ambient Study 1998-1999	2200_46_JBA11	40.5871	-73.8526	0	10
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Jamaica Bay	Regional sediment (estuarine non-SQT)	CARP Sediment Ambient Study 1998-1999	2200_46_JBA11	40.5871	-73.8526	0	10
Jamaica Bay	Regional sediment (estuarine non-SQT)	NCA Prog New York/New Jersey Harbor 2005	2300_M5_NY05-0002	40.594	-73.873	0	2
Jamaica Bay	Regional sediment (estuarine non-SQT)	NCA Prog New York/New Jersey Harbor 2005	2300_M5_NY05-0002	40.594	-73.873	0	2
Jamaica Bay	Regional sediment (estuarine non-SQT)	NCA Prog New York/New Jersey Harbor 2005	2300_M5_NY05-0002	40.594	-73.873	0	2
Jamaica Bay	Regional sediment (estuarine non-SQT)	NCA Prog New York/New Jersey Harbor 2005	2300_M5_NY05-0002	40.594	-73.873	0	2
Jamaica Bay	Regional sediment (estuarine non-SQT)	NCA Prog New York/New Jersey Harbor 2005	2300_M5_NY05-0002	40.594	-73.873	0	2
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Jamaica Bay	Regional sediment (estuarine non-SQT)	NCA Prog New York/New Jersey Harbor 2005	2300_M5_NY05-0002	40.594	-73.873	0	2
Jamaica Bay	Regional sediment (estuarine non-SQT)	NCA Prog New York/New Jersey Harbor 2005	2300_M5_NY05-0010	40.629	-73.749	0	2
Jamaica Bay	Regional sediment (estuarine non-SQT)	NCA Prog New York/New Jersey Harbor 2005	2300_M5_NY05-0010	40.629	-73.749	0	2
Jamaica Bay	Regional sediment (estuarine non-SQT)	NCA Prog New York/New Jersey Harbor 2005	2300_M5_NY05-0010	40.629	-73.749	0	2
Jamaica Bay	Regional sediment (estuarine non-SQT)	NCA Prog New York/New Jersey Harbor 2005	2300_M5_NY05-0010	40.629	-73.749	0	2
Jamaica Bay	Regional sediment (estuarine non-SQT)	NCA Prog New York/New Jersey Harbor 2005	2300_M5_NY05-0010	40.629	-73.749	0	2
Jamaica Bay	Regional sediment (estuarine non-SQT)	NCA Prog New York/New Jersey Harbor 2005	2300_M5_NY05-0010	40.629	-73.749	0	2
Jamaica Bay	Regional sediment (estuarine non-SQT)	NCA Prog New York/New Jersey Harbor 2005	2300_M5_NY05-0010	40.629	-73.749	0	2
Jamaica Bay	Regional sediment (estuarine non-SQT)	NCA Prog New York/New Jersey Harbor 2005	2300_M5_NY05-0010	40.629	-73.749	0	2
Jamaica Bay	Regional sediment (estuarine non-SQT)	NCA Prog New York/New Jersey Harbor 2005	2300_M5_NY05-0010	40.629	-73.749	0	2
Jamaica Bay	Regional sediment (estuarine non-SQT)	NCA Prog New York/New Jersey Harbor 2005	2300_M5_NY05-0010	40.629	-73.749	0	2
Jamaica Bay	Regional sediment (estuarine non-SQT)	NCA Prog New York/New Jersey Harbor 2005	2300_M5_NY05-0010	40.629	-73.749	0	2
Jamaica Bay	Regional sediment (estuarine non-SQT)	NCA Prog New York/New Jersey Harbor 2005	2300_M5_NY05-0010	40.629	-73.749	0	2

Table B3-2. Comparison of estuarine, regional reference chemistry data to ERL and ERMs

Area_of_Interest	Dataset	Study	Location	Latitude	Longitude	Upper_Depth	Lower_Depth
Jamaica Bay	Regional sediment (estuarine non-SQT)	NCA Prog New York/New Jersey Harbor 2005	2300_M5_NY05-0010	40.629	-73.749	0	2
Jamaica Bay	Regional sediment (estuarine non-SQT)	NCA Prog New York/New Jersey Harbor 2005	2300_M5_NY05-0010	40.629	-73.749	0	2
Jamaica Bay	Regional sediment (estuarine non-SQT)	NCA Prog New York/New Jersey Harbor 2005	2300_M5_NY05-0010	40.629	-73.749	0	2
Jamaica Bay	Regional sediment (estuarine non-SQT)	NCA Prog New York/New Jersey Harbor 2005	2300_M5_NY05-0010	40.629	-73.749	0	2
Jamaica Bay	Regional sediment (estuarine non-SQT)	NCA Prog New York/New Jersey Harbor 2005	2300_M5_NY05-0010	40.629	-73.749	0	2
Jamaica Bay	Regional sediment (estuarine non-SQT)	NCA Prog New York/New Jersey Harbor 2005	2300_M5_NY05-0010	40.629	-73.749	0	2
Jamaica Bay	Regional sediment (estuarine non-SQT)	NCA Prog New York/New Jersey Harbor 2005	2300_M5_NY05-0010	40.629	-73.749	0	2
Jamaica Bay	Regional sediment (estuarine non-SQT)	NCA Prog New York/New Jersey Harbor 2005	2300_M5_NY05-0010	40.629	-73.749	0	2
Jamaica Bay	Regional sediment (estuarine non-SQT)	NCA Prog New York/New Jersey Harbor 2005	2300_M5_NY05-0010	40.629	-73.749	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2000	2300_M0_NY-0029-A	40.5733	-73.8834	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2000	2300_M0_NY-0029-A	40.5733	-73.8834	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2000	2300_M0_NY-0029-A	40.5733	-73.8834	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2000	2300_M0_NY-0029-A	40.5733	-73.8834	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2000	2300_M0_NY-0029-A	40.5733	-73.8834	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2000	2300_M0_NY-0029-A	40.5733	-73.8834	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2000	2300_M0_NY-0029-A	40.5733	-73.8834	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2000	2300_M0_NY-0029-A	40.5733	-73.8834	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2000	2300_M0_NY-0029-A	40.5733	-73.8834	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2000	2300_M0_NY-0029-A	40.5733	-73.8834	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2000	2300_M0_NY-0029-A	40.5733	-73.8834	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2000	2300_M0_NY-0029-A	40.5733	-73.8834	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2000	2300_M0_NY-0029-A	40.5733	-73.8834	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2000	2300_M0_NY-0029-A	40.5733	-73.8834	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2000	2300_M0_NY-0029-A	40.5733	-73.8834	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2000	2300_M0_NY-0029-A	40.5733	-73.8834	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2000	2300_M0_NY-0029-A	40.5733	-73.8834	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2000	2300_M0_NY-0029-A	40.5733	-73.8834	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2000	2300_M0_NY-0029-A	40.5733	-73.8834	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2001	2300_M1_NY-0032-A	40.6269	-73.8831	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2001	2300_M1_NY-0032-A	40.6269	-73.8831	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2001	2300_M1_NY-0032-A	40.6269	-73.8831	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2001	2300_M1_NY-0032-A	40.6269	-73.8831	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2001	2300_M1_NY-0032-A	40.6269	-73.8831	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2001	2300_M1_NY-0032-A	40.6269	-73.8831	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2001	2300_M1_NY-0032-A	40.6269	-73.8831	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2001	2300_M1_NY-0032-A	40.6269	-73.8831	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2001	2300_M1_NY-0032-A	40.6269	-73.8831	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2001	2300_M1_NY-0032-A	40.6269	-73.8831	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2001	2300_M1_NY-0032-A	40.6269	-73.8831	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2001	2300_M1_NY-0032-A	40.6269	-73.8831	0	2
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Area_of_Interest	Dataset	Study	Location	Latitude	Longitude	Upper_Depth	Lower_Depth
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2001	2300_M1_NY-0032-A	40.6269	-73.8831	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2001	2300_M1_NY-0032-A	40.6269	-73.8831	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2001	2300_M1_NY-0032-A	40.6269	-73.8831	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2001	2300_M1_NY-0032-A	40.6269	-73.8831	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2001	2300_M1_NY-0032-A	40.6269	-73.8831	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2001	2300_M1_NY-0032-A	40.6269	-73.8831	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2001	2300_M1_NY-0032-A	40.6269	-73.8831	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2001	2300_M1_NY-0032-A	40.6269	-73.8831	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2002	2300_M2_NY-0029-A	40.5734	-73.8811	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2002	2300_M2_NY-0029-A	40.5734	-73.8811	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2002	2300_M2_NY-0029-A	40.5734	-73.8811	0	2
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Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2002	2300_M2_NY-0029-A	40.5734	-73.8811	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2002	2300_M2_NY-0235-A	40.6453	-73.82	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2002	2300_M2_NY-0235-A	40.6453	-73.82	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2002	2300_M2_NY-0235-A	40.6453	-73.82	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2002	2300_M2_NY-0235-A	40.6453	-73.82	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2002	2300_M2_NY-0235-A	40.6453	-73.82	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2002	2300_M2_NY-0235-A	40.6453	-73.82	0	2
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Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2002	2300_M2_NY-0235-A	40.6453	-73.82	0	2
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Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2002	2300_M2_NY-0235-A	40.6453	-73.82	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2002	2300_M2_NY-0235-A	40.6453	-73.82	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2002	2300_M2_NY-0235-A	40.6453	-73.82	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2002	2300_M2_NY-0235-A	40.6453	-73.82	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2002	2300_M2_NY-0235-A	40.6453	-73.82	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2002	2300_M2_NY-0235-A	40.6453	-73.82	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2002	2300_M2_NY-0239-A	40.659	-73.8388	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2002	2300_M2_NY-0239-A	40.659	-73.8388	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2002	2300_M2_NY-0239-A	40.659	-73.8388	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2002	2300_M2_NY-0239-A	40.659	-73.8388	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2002	2300_M2_NY-0239-A	40.659	-73.8388	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2002	2300_M2_NY-0239-A	40.659	-73.8388	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2002	2300_M2_NY-0239-A	40.659	-73.8388	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2002	2300_M2_NY-0239-A	40.659	-73.8388	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2002	2300_M2_NY-0239-A	40.659	-73.8388	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2002	2300_M2_NY-0239-A	40.659	-73.8388	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2002	2300_M2_NY-0239-A	40.659	-73.8388	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2002	2300_M2_NY-0239-A	40.659	-73.8388	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2002	2300_M2_NY-0239-A	40.659	-73.8388	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2002	2300_M2_NY-0239-A	40.659	-73.8388	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2002	2300_M2_NY-0239-A	40.659	-73.8388	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2002	2300_M2_NY-0239-A	40.659	-73.8388	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2002	2300_M2_NY-0239-A	40.659	-73.8388	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2002	2300_M2_NY-0239-A	40.659	-73.8388	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2002	2300_M2_NY-0239-A	40.659	-73.8388	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2002	2300_M2_NY-0239-A	40.659	-73.8388	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2003	2300_M3_NY03-0236	40.6312	-73.7424	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2003	2300_M3_NY03-0236	40.6312	-73.7424	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2003	2300_M3_NY03-0236	40.6312	-73.7424	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2003	2300_M3_NY03-0236	40.6312	-73.7424	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2003	2300_M3_NY03-0236	40.6312	-73.7424	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2003	2300_M3_NY03-0236	40.6312	-73.7424	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2003	2300_M3_NY03-0236	40.6312	-73.7424	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2003	2300_M3_NY03-0236	40.6312	-73.7424	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2003	2300_M3_NY03-0236	40.6312	-73.7424	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2003	2300_M3_NY03-0236	40.6312	-73.7424	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2003	2300_M3_NY03-0236	40.6312	-73.7424	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2003	2300_M3_NY03-0236	40.6312	-73.7424	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2003	2300_M3_NY03-0236	40.6312	-73.7424	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2003	2300_M3_NY03-0236	40.6312	-73.7424	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2003	2300_M3_NY03-0236	40.6312	-73.7424	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2003	2300_M3_NY03-0236	40.6312	-73.7424	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2003	2300_M3_NY03-0236	40.6312	-73.7424	0	2

Table B3-2. Comparison of estuarine, regional reference chemistry data to ERL and ERMs

Area_of_Interest	Dataset	Study	Location	Latitude	Longitude	Upper_Depth	Lower_Depth
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2003	2300_M3_NY03-0236	40.6312	-73.7424	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2003	2300_M3_NY03-0236	40.6312	-73.7424	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2003	2300_M3_NY03-0236	40.6312	-73.7424	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2003	2300_M3_NY03-0236	40.6312	-73.7424	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2003	2300_M3_NY03-0236	40.6312	-73.7424	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2003	2300_M3_NY03-0236	40.6312	-73.7424	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2004	2300_M4_NY04-0234	40.6079	-73.8823	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2004	2300_M4_NY04-0234	40.6079	-73.8823	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2004	2300_M4_NY04-0234	40.6079	-73.8823	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2004	2300_M4_NY04-0234	40.6079	-73.8823	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2004	2300_M4_NY04-0234	40.6079	-73.8823	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2004	2300_M4_NY04-0234	40.6079	-73.8823	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2004	2300_M4_NY04-0234	40.6079	-73.8823	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2004	2300_M4_NY04-0234	40.6079	-73.8823	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2004	2300_M4_NY04-0234	40.6079	-73.8823	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2004	2300_M4_NY04-0234	40.6079	-73.8823	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2004	2300_M4_NY04-0234	40.6079	-73.8823	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2004	2300_M4_NY04-0234	40.6079	-73.8823	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2004	2300_M4_NY04-0234	40.6079	-73.8823	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2004	2300_M4_NY04-0234	40.6079	-73.8823	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2004	2300_M4_NY04-0234	40.6079	-73.8823	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2004	2300_M4_NY04-0234	40.6079	-73.8823	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2004	2300_M4_NY04-0234	40.6079	-73.8823	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2004	2300_M4_NY04-0234	40.6079	-73.8823	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2004	2300_M4_NY04-0234	40.6079	-73.8823	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2004	2300_M4_NY04-0234	40.6079	-73.8823	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2004	2300_M4_NY04-0234	40.6079	-73.8823	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	NCA Prog New York/New Jersey Harbor 2004	2300_M4_NY04-0234	40.6079	-73.8823	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB008	40.6409	-73.8162	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB008	40.6409	-73.8162	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB008	40.6409	-73.8162	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB008	40.6409	-73.8162	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB008	40.6409	-73.8162	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB008	40.6409	-73.8162	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB008	40.6409	-73.8162	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB008	40.6409	-73.8162	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB008	40.6409	-73.8162	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB008	40.6409	-73.8162	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB008	40.6409	-73.8162	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB008	40.6409	-73.8162	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB008	40.6409	-73.8162	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB008	40.6409	-73.8162	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB008	40.6409	-73.8162	0	2

Table B3-2. Comparison of estuarine, regional reference chemistry data to ERL and ERMs

Area_of_Interest	Dataset	Study	Location	Latitude	Longitude	Upper_Depth	Lower_Depth
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB008	40.6409	-73.8162	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB008	40.6409	-73.8162	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB008	40.6409	-73.8162	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB008	40.6409	-73.8162	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB008	40.6409	-73.8162	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB008	40.6409	-73.8162	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB018	40.6096	-73.786	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB018	40.6096	-73.786	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB018	40.6096	-73.786	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB018	40.6096	-73.786	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB018	40.6096	-73.786	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB018	40.6096	-73.786	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB018	40.6096	-73.786	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB018	40.6096	-73.786	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB018	40.6096	-73.786	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB018	40.6096	-73.786	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB018	40.6096	-73.786	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB018	40.6096	-73.786	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB018	40.6096	-73.786	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB018	40.6096	-73.786	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB018	40.6096	-73.786	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB018	40.6096	-73.786	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB018	40.6096	-73.786	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB018	40.6096	-73.786	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB018	40.6096	-73.786	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB018	40.6096	-73.786	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB018	40.6096	-73.786	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB026	40.6034	-73.842	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB026	40.6034	-73.842	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB026	40.6034	-73.842	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB026	40.6034	-73.842	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB026	40.6034	-73.842	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB026	40.6034	-73.842	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB026	40.6034	-73.842	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB026	40.6034	-73.842	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB026	40.6034	-73.842	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB026	40.6034	-73.842	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB026	40.6034	-73.842	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB026	40.6034	-73.842	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB026	40.6034	-73.842	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB026	40.6034	-73.842	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB026	40.6034	-73.842	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB026	40.6034	-73.842	0	2

Table B3-2. Comparison of estuarine, regional reference chemistry data to ERL and ERMs

Area_of_Interest	Dataset	Study	Location	Latitude	Longitude	Upper_Depth	Lower_Depth
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB026	40.6034	-73.842	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB026	40.6034	-73.842	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB026	40.6034	-73.842	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB026	40.6034	-73.842	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB026	40.6034	-73.842	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB026	40.6034	-73.842	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB026	40.6034	-73.842	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB031	40.611	-73.8719	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB031	40.611	-73.8719	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB031	40.611	-73.8719	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB031	40.611	-73.8719	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB031	40.611	-73.8719	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB031	40.611	-73.8719	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB031	40.611	-73.8719	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB031	40.611	-73.8719	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB031	40.611	-73.8719	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB031	40.611	-73.8719	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB031	40.611	-73.8719	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB031	40.611	-73.8719	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB031	40.611	-73.8719	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB031	40.611	-73.8719	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB031	40.611	-73.8719	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB031	40.611	-73.8719	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB031	40.611	-73.8719	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB031	40.611	-73.8719	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB031	40.611	-73.8719	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB031	40.611	-73.8719	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB031	40.611	-73.8719	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB033	40.6161	-73.8879	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB033	40.6161	-73.8879	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB033	40.6161	-73.8879	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB033	40.6161	-73.8879	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB033	40.6161	-73.8879	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB033	40.6161	-73.8879	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB033	40.6161	-73.8879	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB033	40.6161	-73.8879	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB033	40.6161	-73.8879	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB033	40.6161	-73.8879	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB033	40.6161	-73.8879	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB033	40.6161	-73.8879	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB033	40.6161	-73.8879	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB033	40.6161	-73.8879	0	2

Table B3-2. Comparison of estuarine, regional reference chemistry data to ERL and ERMs

Area_of_Interest	Dataset	Study	Location	Latitude	Longitude	Upper_Depth	Lower_Depth
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB033	40.6161	-73.8879	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB033	40.6161	-73.8879	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB033	40.6161	-73.8879	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB033	40.6161	-73.8879	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB033	40.6161	-73.8879	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB033	40.6161	-73.8879	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB033	40.6161	-73.8879	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB033	40.6161	-73.8879	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB039	40.587	-73.845	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB039	40.587	-73.845	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB039	40.587	-73.845	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB039	40.587	-73.845	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB039	40.587	-73.845	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB039	40.587	-73.845	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB039	40.587	-73.845	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB039	40.587	-73.845	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB039	40.587	-73.845	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB039	40.587	-73.845	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB039	40.587	-73.845	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB039	40.587	-73.845	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB039	40.587	-73.845	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB039	40.587	-73.845	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB039	40.587	-73.845	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB039	40.587	-73.845	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB039	40.587	-73.845	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB039	40.587	-73.845	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB039	40.587	-73.845	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB039	40.587	-73.845	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB039	40.587	-73.845	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB041	40.585	-73.8613	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB041	40.585	-73.8613	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB041	40.585	-73.8613	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB041	40.585	-73.8613	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB041	40.585	-73.8613	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB041	40.585	-73.8613	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB041	40.585	-73.8613	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB041	40.585	-73.8613	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB041	40.585	-73.8613	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB041	40.585	-73.8613	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB041	40.585	-73.8613	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB041	40.585	-73.8613	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB041	40.585	-73.8613	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB041	40.585	-73.8613	0	2

Table B3-2. Comparison of estuarine, regional reference chemistry data to ERL and ERMs

Area_of_Interest	Dataset	Study	Location	Latitude	Longitude	Upper_Depth	Lower_Depth
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB041	40.585	-73.8613	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB041	40.585	-73.8613	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB041	40.585	-73.8613	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB041	40.585	-73.8613	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB041	40.585	-73.8613	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB041	40.585	-73.8613	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB041	40.585	-73.8613	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB041	40.585	-73.8613	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB041	40.585	-73.8613	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB042	40.5827	-73.847	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB042	40.5827	-73.847	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB042	40.5827	-73.847	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB042	40.5827	-73.847	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB042	40.5827	-73.847	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB042	40.5827	-73.847	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB042	40.5827	-73.847	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB042	40.5827	-73.847	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB042	40.5827	-73.847	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB042	40.5827	-73.847	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB042	40.5827	-73.847	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB042	40.5827	-73.847	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB042	40.5827	-73.847	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB042	40.5827	-73.847	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB042	40.5827	-73.847	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB042	40.5827	-73.847	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB042	40.5827	-73.847	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB042	40.5827	-73.847	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB042	40.5827	-73.847	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB042	40.5827	-73.847	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB043	40.5756	-73.8751	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB043	40.5756	-73.8751	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB043	40.5756	-73.8751	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB043	40.5756	-73.8751	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB043	40.5756	-73.8751	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB043	40.5756	-73.8751	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB043	40.5756	-73.8751	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB043	40.5756	-73.8751	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB043	40.5756	-73.8751	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB043	40.5756	-73.8751	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB043	40.5756	-73.8751	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB043	40.5756	-73.8751	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB043	40.5756	-73.8751	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB043	40.5756	-73.8751	0	2

Table B3-2. Comparison of estuarine, regional reference chemistry data to ERL and ERMs

Area_of_Interest	Dataset	Study	Location	Latitude	Longitude	Upper_Depth	Lower_Depth
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB043	40.5756	-73.8751	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB043	40.5756	-73.8751	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB043	40.5756	-73.8751	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB043	40.5756	-73.8751	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB043	40.5756	-73.8751	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB043	40.5756	-73.8751	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB043	40.5756	-73.8751	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB043	40.5756	-73.8751	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB043	40.5756	-73.8751	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB043	40.5756	-73.8751	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB201	40.5718	-73.8794	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB201	40.5718	-73.8794	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB201	40.5718	-73.8794	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB201	40.5718	-73.8794	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB201	40.5718	-73.8794	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB201	40.5718	-73.8794	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB201	40.5718	-73.8794	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB201	40.5718	-73.8794	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB201	40.5718	-73.8794	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB201	40.5718	-73.8794	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB201	40.5718	-73.8794	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB201	40.5718	-73.8794	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB201	40.5718	-73.8794	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB201	40.5718	-73.8794	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB201	40.5718	-73.8794	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB201	40.5718	-73.8794	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB201	40.5718	-73.8794	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB201	40.5718	-73.8794	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB201	40.5718	-73.8794	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB201	40.5718	-73.8794	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB201	40.5718	-73.8794	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB202	40.6118	-73.8101	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB202	40.6118	-73.8101	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB202	40.6118	-73.8101	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB202	40.6118	-73.8101	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB202	40.6118	-73.8101	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB202	40.6118	-73.8101	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB202	40.6118	-73.8101	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB202	40.6118	-73.8101	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB202	40.6118	-73.8101	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB202	40.6118	-73.8101	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB202	40.6118	-73.8101	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB202	40.6118	-73.8101	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB202	40.6118	-73.8101	0	2

Table B3-2. Comparison of estuarine, regional reference chemistry data to ERL and ERMs

Area_of_Interest	Dataset	Study	Location	Latitude	Longitude	Upper_Depth	Lower_Depth
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB202	40.6118	-73.8101	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB202	40.6118	-73.8101	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB202	40.6118	-73.8101	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB202	40.6118	-73.8101	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB202	40.6118	-73.8101	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB202	40.6118	-73.8101	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB202	40.6118	-73.8101	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB202	40.6118	-73.8101	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB202	40.6118	-73.8101	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB202	40.6118	-73.8101	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB202	40.6118	-73.8101	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB203	40.6328	-73.8067	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB203	40.6328	-73.8067	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB203	40.6328	-73.8067	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB203	40.6328	-73.8067	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB203	40.6328	-73.8067	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB203	40.6328	-73.8067	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB203	40.6328	-73.8067	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB203	40.6328	-73.8067	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB203	40.6328	-73.8067	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB203	40.6328	-73.8067	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB203	40.6328	-73.8067	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB203	40.6328	-73.8067	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB203	40.6328	-73.8067	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB203	40.6328	-73.8067	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB203	40.6328	-73.8067	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB203	40.6328	-73.8067	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB203	40.6328	-73.8067	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB203	40.6328	-73.8067	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB203	40.6328	-73.8067	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB203	40.6328	-73.8067	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB204	40.6082	-73.8898	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB204	40.6082	-73.8898	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB204	40.6082	-73.8898	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB204	40.6082	-73.8898	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB204	40.6082	-73.8898	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB204	40.6082	-73.8898	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB204	40.6082	-73.8898	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB204	40.6082	-73.8898	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB204	40.6082	-73.8898	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB204	40.6082	-73.8898	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB204	40.6082	-73.8898	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB204	40.6082	-73.8898	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB204	40.6082	-73.8898	0	2

Table B3-2. Comparison of estuarine, regional reference chemistry data to ERL and ERMs

Area_of_Interest	Dataset	Study	Location	Latitude	Longitude	Upper_Depth	Lower_Depth
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB204	40.6082	-73.8898	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB204	40.6082	-73.8898	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB204	40.6082	-73.8898	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB204	40.6082	-73.8898	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB204	40.6082	-73.8898	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB204	40.6082	-73.8898	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB204	40.6082	-73.8898	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB204	40.6082	-73.8898	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB204	40.6082	-73.8898	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB204	40.6082	-73.8898	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB204	40.6082	-73.8898	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB205	40.589	-73.8593	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB205	40.589	-73.8593	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB205	40.589	-73.8593	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB205	40.589	-73.8593	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB205	40.589	-73.8593	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB205	40.589	-73.8593	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB205	40.589	-73.8593	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB205	40.589	-73.8593	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB205	40.589	-73.8593	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB205	40.589	-73.8593	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB205	40.589	-73.8593	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB205	40.589	-73.8593	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB205	40.589	-73.8593	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB205	40.589	-73.8593	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB205	40.589	-73.8593	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB205	40.589	-73.8593	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB205	40.589	-73.8593	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB205	40.589	-73.8593	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB205	40.589	-73.8593	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB205	40.589	-73.8593	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB205	40.589	-73.8593	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB206	40.5954	-73.8047	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB206	40.5954	-73.8047	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB206	40.5954	-73.8047	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB206	40.5954	-73.8047	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB206	40.5954	-73.8047	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB206	40.5954	-73.8047	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB206	40.5954	-73.8047	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB206	40.5954	-73.8047	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB206	40.5954	-73.8047	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB206	40.5954	-73.8047	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB206	40.5954	-73.8047	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB206	40.5954	-73.8047	0	2

Table B3-2. Comparison of estuarine, regional reference chemistry data to ERL and ERMs

Area_of_Interest	Dataset	Study	Location	Latitude	Longitude	Upper_Depth	Lower_Depth
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB206	40.5954	-73.8047	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB206	40.5954	-73.8047	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB206	40.5954	-73.8047	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB206	40.5954	-73.8047	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB206	40.5954	-73.8047	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB206	40.5954	-73.8047	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB206	40.5954	-73.8047	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB206	40.5954	-73.8047	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB206	40.5954	-73.8047	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB206	40.5954	-73.8047	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB206	40.5954	-73.8047	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB206	40.5954	-73.8047	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB207	40.6286	-73.7591	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB207	40.6286	-73.7591	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB207	40.6286	-73.7591	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB207	40.6286	-73.7591	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB207	40.6286	-73.7591	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB207	40.6286	-73.7591	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB207	40.6286	-73.7591	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB207	40.6286	-73.7591	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB207	40.6286	-73.7591	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB207	40.6286	-73.7591	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB207	40.6286	-73.7591	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB207	40.6286	-73.7591	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB207	40.6286	-73.7591	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB207	40.6286	-73.7591	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB207	40.6286	-73.7591	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB207	40.6286	-73.7591	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB207	40.6286	-73.7591	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB207	40.6286	-73.7591	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB207	40.6286	-73.7591	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB209	40.6051	-73.7872	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB209	40.6051	-73.7872	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB209	40.6051	-73.7872	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB209	40.6051	-73.7872	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB209	40.6051	-73.7872	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB209	40.6051	-73.7872	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB209	40.6051	-73.7872	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB209	40.6051	-73.7872	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB209	40.6051	-73.7872	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB209	40.6051	-73.7872	0	2

Table B3-2. Comparison of estuarine, regional reference chemistry data to ERL and ERMs

Area_of_Interest	Dataset	Study	Location	Latitude	Longitude	Upper_Depth	Lower_Depth
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB209	40.6051	-73.7872	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB209	40.6051	-73.7872	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB209	40.6051	-73.7872	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB209	40.6051	-73.7872	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB209	40.6051	-73.7872	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB209	40.6051	-73.7872	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB209	40.6051	-73.7872	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB209	40.6051	-73.7872	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB209	40.6051	-73.7872	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB209	40.6051	-73.7872	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB209	40.6051	-73.7872	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB209	40.6051	-73.7872	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB209	40.6051	-73.7872	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB210	40.6275	-73.8712	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB210	40.6275	-73.8712	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB210	40.6275	-73.8712	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB210	40.6275	-73.8712	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB210	40.6275	-73.8712	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB210	40.6275	-73.8712	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB210	40.6275	-73.8712	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB210	40.6275	-73.8712	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB210	40.6275	-73.8712	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB210	40.6275	-73.8712	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB210	40.6275	-73.8712	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB210	40.6275	-73.8712	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB210	40.6275	-73.8712	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB210	40.6275	-73.8712	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB210	40.6275	-73.8712	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB210	40.6275	-73.8712	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB210	40.6275	-73.8712	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB210	40.6275	-73.8712	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB210	40.6275	-73.8712	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB211	40.612	-73.8725	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB211	40.612	-73.8725	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB211	40.612	-73.8725	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB211	40.612	-73.8725	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB211	40.612	-73.8725	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB211	40.612	-73.8725	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB211	40.612	-73.8725	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB211	40.612	-73.8725	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB211	40.612	-73.8725	0	2

Table B3-2. Comparison of estuarine, regional reference chemistry data to ERL and ERMs

Area_of_Interest	Dataset	Study	Location	Latitude	Longitude	Upper_Depth	Lower_Depth
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB211	40.612	-73.8725	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB211	40.612	-73.8725	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB211	40.612	-73.8725	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB211	40.612	-73.8725	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB211	40.612	-73.8725	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB211	40.612	-73.8725	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB211	40.612	-73.8725	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB211	40.612	-73.8725	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB211	40.612	-73.8725	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB211	40.612	-73.8725	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB211	40.612	-73.8725	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB211	40.612	-73.8725	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB211	40.612	-73.8725	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB212	40.5881	-73.8335	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB212	40.5881	-73.8335	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB212	40.5881	-73.8335	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB212	40.5881	-73.8335	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB212	40.5881	-73.8335	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB212	40.5881	-73.8335	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB212	40.5881	-73.8335	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB212	40.5881	-73.8335	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB212	40.5881	-73.8335	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB212	40.5881	-73.8335	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB212	40.5881	-73.8335	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB212	40.5881	-73.8335	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB212	40.5881	-73.8335	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB212	40.5881	-73.8335	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB212	40.5881	-73.8335	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB212	40.5881	-73.8335	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB212	40.5881	-73.8335	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB212	40.5881	-73.8335	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB212	40.5881	-73.8335	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB212	40.5881	-73.8335	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB213	40.6189	-73.7777	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB213	40.6189	-73.7777	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB213	40.6189	-73.7777	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB213	40.6189	-73.7777	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB213	40.6189	-73.7777	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB213	40.6189	-73.7777	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB213	40.6189	-73.7777	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB213	40.6189	-73.7777	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB213	40.6189	-73.7777	0	2

Table B3-2. Comparison of estuarine, regional reference chemistry data to ERL and ERMs

Area_of_Interest	Dataset	Study	Location	Latitude	Longitude	Upper_Depth	Lower_Depth
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB213	40.6189	-73.7777	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB213	40.6189	-73.7777	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB213	40.6189	-73.7777	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB213	40.6189	-73.7777	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB213	40.6189	-73.7777	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB213	40.6189	-73.7777	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB213	40.6189	-73.7777	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB213	40.6189	-73.7777	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB213	40.6189	-73.7777	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB213	40.6189	-73.7777	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB213	40.6189	-73.7777	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB213	40.6189	-73.7777	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB213	40.6189	-73.7777	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB213	40.6189	-73.7777	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB213	40.6189	-73.7777	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB214	40.6426	-73.8581	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB214	40.6426	-73.8581	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB214	40.6426	-73.8581	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB214	40.6426	-73.8581	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB214	40.6426	-73.8581	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB214	40.6426	-73.8581	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB214	40.6426	-73.8581	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB214	40.6426	-73.8581	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB214	40.6426	-73.8581	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB214	40.6426	-73.8581	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB214	40.6426	-73.8581	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB214	40.6426	-73.8581	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB214	40.6426	-73.8581	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB214	40.6426	-73.8581	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB214	40.6426	-73.8581	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB214	40.6426	-73.8581	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB214	40.6426	-73.8581	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB214	40.6426	-73.8581	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB214	40.6426	-73.8581	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB215	40.6256	-73.837	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB215	40.6256	-73.837	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB215	40.6256	-73.837	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB215	40.6256	-73.837	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB215	40.6256	-73.837	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB215	40.6256	-73.837	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB215	40.6256	-73.837	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB215	40.6256	-73.837	0	2

Table B3-2. Comparison of estuarine, regional reference chemistry data to ERL and ERMs

Area_of_Interest	Dataset	Study	Location	Latitude	Longitude	Upper_Depth	Lower_Depth
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB215	40.6256	-73.837	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB215	40.6256	-73.837	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB215	40.6256	-73.837	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB215	40.6256	-73.837	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB215	40.6256	-73.837	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB215	40.6256	-73.837	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB215	40.6256	-73.837	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB215	40.6256	-73.837	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB215	40.6256	-73.837	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB215	40.6256	-73.837	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB215	40.6256	-73.837	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB215	40.6256	-73.837	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB215	40.6256	-73.837	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB215	40.6256	-73.837	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB215	40.6256	-73.837	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB216	40.633	-73.8734	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB216	40.633	-73.8734	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB216	40.633	-73.8734	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB216	40.633	-73.8734	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB216	40.633	-73.8734	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB216	40.633	-73.8734	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB216	40.633	-73.8734	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB216	40.633	-73.8734	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB216	40.633	-73.8734	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB216	40.633	-73.8734	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB216	40.633	-73.8734	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB216	40.633	-73.8734	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB216	40.633	-73.8734	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB216	40.633	-73.8734	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB216	40.633	-73.8734	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB216	40.633	-73.8734	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB216	40.633	-73.8734	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB216	40.633	-73.8734	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB216	40.633	-73.8734	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB217	40.5853	-73.8522	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB217	40.5853	-73.8522	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB217	40.5853	-73.8522	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB217	40.5853	-73.8522	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB217	40.5853	-73.8522	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB217	40.5853	-73.8522	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB217	40.5853	-73.8522	0	2

Table B3-2. Comparison of estuarine, regional reference chemistry data to ERL and ERMs

Area_of_Interest	Dataset	Study	Location	Latitude	Longitude	Upper_Depth	Lower_Depth
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB217	40.5853	-73.8522	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB217	40.5853	-73.8522	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB217	40.5853	-73.8522	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB217	40.5853	-73.8522	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB217	40.5853	-73.8522	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB217	40.5853	-73.8522	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB217	40.5853	-73.8522	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB217	40.5853	-73.8522	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB217	40.5853	-73.8522	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB217	40.5853	-73.8522	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB217	40.5853	-73.8522	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB217	40.5853	-73.8522	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB217	40.5853	-73.8522	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB217	40.5853	-73.8522	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB217	40.5853	-73.8522	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB217	40.5853	-73.8522	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB219	40.5749	-73.887	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB219	40.5749	-73.887	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB219	40.5749	-73.887	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB219	40.5749	-73.887	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB219	40.5749	-73.887	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB219	40.5749	-73.887	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB219	40.5749	-73.887	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB219	40.5749	-73.887	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB219	40.5749	-73.887	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB219	40.5749	-73.887	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB219	40.5749	-73.887	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB219	40.5749	-73.887	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB219	40.5749	-73.887	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB219	40.5749	-73.887	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB219	40.5749	-73.887	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB219	40.5749	-73.887	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB219	40.5749	-73.887	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB219	40.5749	-73.887	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB222	40.6032	-73.8777	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB222	40.6032	-73.8777	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB222	40.6032	-73.8777	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB222	40.6032	-73.8777	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB222	40.6032	-73.8777	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB222	40.6032	-73.8777	0	2

Table B3-2. Comparison of estuarine, regional reference chemistry data to ERL and ERMs

Area_of_Interest	Dataset	Study	Location	Latitude	Longitude	Upper_Depth	Lower_Depth
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB222	40.6032	-73.8777	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB222	40.6032	-73.8777	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB222	40.6032	-73.8777	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB222	40.6032	-73.8777	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB222	40.6032	-73.8777	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB222	40.6032	-73.8777	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB222	40.6032	-73.8777	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB222	40.6032	-73.8777	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB222	40.6032	-73.8777	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB222	40.6032	-73.8777	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB222	40.6032	-73.8777	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB222	40.6032	-73.8777	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB222	40.6032	-73.8777	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB222	40.6032	-73.8777	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB222	40.6032	-73.8777	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB222	40.6032	-73.8777	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB222	40.6032	-73.8777	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB223	40.5926	-73.8707	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB223	40.5926	-73.8707	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB223	40.5926	-73.8707	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB223	40.5926	-73.8707	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB223	40.5926	-73.8707	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB223	40.5926	-73.8707	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB223	40.5926	-73.8707	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB223	40.5926	-73.8707	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB223	40.5926	-73.8707	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB223	40.5926	-73.8707	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB223	40.5926	-73.8707	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB223	40.5926	-73.8707	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB223	40.5926	-73.8707	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB223	40.5926	-73.8707	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB223	40.5926	-73.8707	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB223	40.5926	-73.8707	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB223	40.5926	-73.8707	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB223	40.5926	-73.8707	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB223	40.5926	-73.8707	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB223	40.5926	-73.8707	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP 1998	2200_56_JB223	40.5926	-73.8707	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB002	40.63616	-73.797836	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB002	40.63616	-73.797836	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB002	40.63616	-73.797836	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB002	40.63616	-73.797836	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB002	40.63616	-73.797836	0	2

Table B3-2. Comparison of estuarine, regional reference chemistry data to ERL and ERMs

Area_of_Interest	Dataset	Study	Location	Latitude	Longitude	Upper_Depth	Lower_Depth
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB002	40.63616	-73.797836	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB002	40.63616	-73.797836	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB002	40.63616	-73.797836	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB002	40.63616	-73.797836	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB002	40.63616	-73.797836	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB002	40.63616	-73.797836	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB002	40.63616	-73.797836	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB002	40.63616	-73.797836	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB002	40.63616	-73.797836	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB002	40.63616	-73.797836	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB002	40.63616	-73.797836	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB002	40.63616	-73.797836	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB002	40.63616	-73.797836	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB002	40.63616	-73.797836	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB002	40.63616	-73.797836	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB002	40.63616	-73.797836	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB002	40.63616	-73.797836	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB002	40.63616	-73.797836	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB002	40.63616	-73.797836	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB006	40.6083	-73.77319	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB006	40.6083	-73.77319	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB006	40.6083	-73.77319	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB006	40.6083	-73.77319	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB006	40.6083	-73.77319	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB006	40.6083	-73.77319	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB006	40.6083	-73.77319	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB006	40.6083	-73.77319	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB006	40.6083	-73.77319	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB006	40.6083	-73.77319	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB006	40.6083	-73.77319	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB006	40.6083	-73.77319	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB006	40.6083	-73.77319	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB006	40.6083	-73.77319	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB006	40.6083	-73.77319	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB006	40.6083	-73.77319	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB006	40.6083	-73.77319	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB006	40.6083	-73.77319	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB006	40.6083	-73.77319	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB008	40.641081	-73.816019	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB008	40.641081	-73.816019	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB008	40.641081	-73.816019	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB008	40.641081	-73.816019	0	2

Table B3-2. Comparison of estuarine, regional reference chemistry data to ERL and ERMs

Area_of_Interest	Dataset	Study	Location	Latitude	Longitude	Upper_Depth	Lower_Depth
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB008	40.641081	-73.816019	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB008	40.641081	-73.816019	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB008	40.641081	-73.816019	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB008	40.641081	-73.816019	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB008	40.641081	-73.816019	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB008	40.641081	-73.816019	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB008	40.641081	-73.816019	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB008	40.641081	-73.816019	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB008	40.641081	-73.816019	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB008	40.641081	-73.816019	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB008	40.641081	-73.816019	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB008	40.641081	-73.816019	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB008	40.641081	-73.816019	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB008	40.641081	-73.816019	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB008	40.641081	-73.816019	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB008	40.641081	-73.816019	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB008	40.641081	-73.816019	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB008	40.641081	-73.816019	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB008	40.641081	-73.816019	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB012	40.648469	-73.890094	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB012	40.648469	-73.890094	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB012	40.648469	-73.890094	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB012	40.648469	-73.890094	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB012	40.648469	-73.890094	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB012	40.648469	-73.890094	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB012	40.648469	-73.890094	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB012	40.648469	-73.890094	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB012	40.648469	-73.890094	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB012	40.648469	-73.890094	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB012	40.648469	-73.890094	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB012	40.648469	-73.890094	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB012	40.648469	-73.890094	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB012	40.648469	-73.890094	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB012	40.648469	-73.890094	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB012	40.648469	-73.890094	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB012	40.648469	-73.890094	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB012	40.648469	-73.890094	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB012	40.648469	-73.890094	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB012	40.648469	-73.890094	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB015	40.626179	-73.794061	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB015	40.626179	-73.794061	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB015	40.626179	-73.794061	0	2

Table B3-2. Comparison of estuarine, regional reference chemistry data to ERL and ERMs

Area_of_Interest	Dataset	Study	Location	Latitude	Longitude	Upper_Depth	Lower_Depth
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB015	40.626179	-73.794061	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB015	40.626179	-73.794061	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB015	40.626179	-73.794061	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB015	40.626179	-73.794061	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB015	40.626179	-73.794061	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB015	40.626179	-73.794061	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB015	40.626179	-73.794061	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB015	40.626179	-73.794061	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB015	40.626179	-73.794061	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB015	40.626179	-73.794061	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB015	40.626179	-73.794061	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB015	40.626179	-73.794061	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB015	40.626179	-73.794061	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB015	40.626179	-73.794061	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB015	40.626179	-73.794061	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB015	40.626179	-73.794061	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB015	40.626179	-73.794061	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB015	40.626179	-73.794061	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB015	40.626179	-73.794061	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB018	40.608684	-73.786069	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB018	40.608684	-73.786069	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB018	40.608684	-73.786069	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB018	40.608684	-73.786069	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB018	40.608684	-73.786069	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB018	40.608684	-73.786069	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB018	40.608684	-73.786069	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB018	40.608684	-73.786069	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB018	40.608684	-73.786069	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB018	40.608684	-73.786069	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB018	40.608684	-73.786069	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB018	40.608684	-73.786069	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB018	40.608684	-73.786069	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB018	40.608684	-73.786069	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB018	40.608684	-73.786069	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB018	40.608684	-73.786069	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB018	40.608684	-73.786069	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB018	40.608684	-73.786069	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB018	40.608684	-73.786069	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB022	40.604022	-73.779599	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB022	40.604022	-73.779599	0	2

Table B3-2. Comparison of estuarine, regional reference chemistry data to ERL and ERMs

Area_of_Interest	Dataset	Study	Location	Latitude	Longitude	Upper_Depth	Lower_Depth
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB022	40.604022	-73.779599	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB022	40.604022	-73.779599	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB022	40.604022	-73.779599	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB022	40.604022	-73.779599	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB022	40.604022	-73.779599	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB022	40.604022	-73.779599	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB022	40.604022	-73.779599	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB022	40.604022	-73.779599	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB022	40.604022	-73.779599	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB022	40.604022	-73.779599	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB022	40.604022	-73.779599	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB022	40.604022	-73.779599	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB022	40.604022	-73.779599	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB022	40.604022	-73.779599	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB022	40.604022	-73.779599	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB022	40.604022	-73.779599	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB022	40.604022	-73.779599	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB022	40.604022	-73.779599	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB022	40.604022	-73.779599	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB022	40.604022	-73.779599	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB022	40.604022	-73.779599	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB026	40.603411	-73.841641	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB026	40.603411	-73.841641	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB026	40.603411	-73.841641	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB026	40.603411	-73.841641	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB026	40.603411	-73.841641	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB026	40.603411	-73.841641	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB026	40.603411	-73.841641	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB026	40.603411	-73.841641	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB026	40.603411	-73.841641	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB026	40.603411	-73.841641	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB026	40.603411	-73.841641	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB026	40.603411	-73.841641	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB026	40.603411	-73.841641	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB026	40.603411	-73.841641	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB026	40.603411	-73.841641	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB026	40.603411	-73.841641	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB026	40.603411	-73.841641	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB026	40.603411	-73.841641	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB026	40.603411	-73.841641	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB031	40.611179	-73.871529	0	2

Table B3-2. Comparison of estuarine, regional reference chemistry data to ERL and ERMs

Area_of_Interest	Dataset	Study	Location	Latitude	Longitude	Upper_Depth	Lower_Depth
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB031	40.611179	-73.871529	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB031	40.611179	-73.871529	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB031	40.611179	-73.871529	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB031	40.611179	-73.871529	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB031	40.611179	-73.871529	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB031	40.611179	-73.871529	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB031	40.611179	-73.871529	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB031	40.611179	-73.871529	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB031	40.611179	-73.871529	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB031	40.611179	-73.871529	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB031	40.611179	-73.871529	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB031	40.611179	-73.871529	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB031	40.611179	-73.871529	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB031	40.611179	-73.871529	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB031	40.611179	-73.871529	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB031	40.611179	-73.871529	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB031	40.611179	-73.871529	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB031	40.611179	-73.871529	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB031	40.611179	-73.871529	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB031	40.611179	-73.871529	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB031	40.611179	-73.871529	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB033	40.615974	-73.887738	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB033	40.615974	-73.887738	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB033	40.615974	-73.887738	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB033	40.615974	-73.887738	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB033	40.615974	-73.887738	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB033	40.615974	-73.887738	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB033	40.615974	-73.887738	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB033	40.615974	-73.887738	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB033	40.615974	-73.887738	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB033	40.615974	-73.887738	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB033	40.615974	-73.887738	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB033	40.615974	-73.887738	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB033	40.615974	-73.887738	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB033	40.615974	-73.887738	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB033	40.615974	-73.887738	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB033	40.615974	-73.887738	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB033	40.615974	-73.887738	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB033	40.615974	-73.887738	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB033	40.615974	-73.887738	0	2

Table B3-2. Comparison of estuarine, regional reference chemistry data to ERL and ERMs

Area_of_Interest	Dataset	Study	Location	Latitude	Longitude	Upper_Depth	Lower_Depth
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB039	40.586676	-73.845564	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB039	40.586676	-73.845564	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB039	40.586676	-73.845564	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB039	40.586676	-73.845564	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB039	40.586676	-73.845564	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB039	40.586676	-73.845564	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB039	40.586676	-73.845564	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB039	40.586676	-73.845564	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB039	40.586676	-73.845564	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB039	40.586676	-73.845564	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB039	40.586676	-73.845564	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB039	40.586676	-73.845564	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB039	40.586676	-73.845564	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB039	40.586676	-73.845564	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB039	40.586676	-73.845564	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB039	40.586676	-73.845564	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB039	40.586676	-73.845564	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB039	40.586676	-73.845564	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB039	40.586676	-73.845564	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB039	40.586676	-73.845564	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB039	40.586676	-73.845564	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB039	40.586676	-73.845564	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB041	40.585592	-73.860123	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB041	40.585592	-73.860123	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB041	40.585592	-73.860123	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB041	40.585592	-73.860123	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB041	40.585592	-73.860123	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB041	40.585592	-73.860123	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB041	40.585592	-73.860123	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB041	40.585592	-73.860123	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB041	40.585592	-73.860123	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB041	40.585592	-73.860123	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB041	40.585592	-73.860123	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB041	40.585592	-73.860123	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB041	40.585592	-73.860123	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB041	40.585592	-73.860123	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB041	40.585592	-73.860123	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB041	40.585592	-73.860123	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB041	40.585592	-73.860123	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB041	40.585592	-73.860123	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB041	40.585592	-73.860123	0	2

Table B3-2. Comparison of estuarine, regional reference chemistry data to ERL and ERMs

Area_of_Interest	Dataset	Study	Location	Latitude	Longitude	Upper_Depth	Lower_Depth
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB041	40.585592	-73.860123	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB042	40.582913	-73.848083	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB042	40.582913	-73.848083	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB042	40.582913	-73.848083	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB042	40.582913	-73.848083	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB042	40.582913	-73.848083	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB042	40.582913	-73.848083	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB042	40.582913	-73.848083	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB042	40.582913	-73.848083	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB042	40.582913	-73.848083	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB042	40.582913	-73.848083	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB042	40.582913	-73.848083	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB042	40.582913	-73.848083	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB042	40.582913	-73.848083	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB042	40.582913	-73.848083	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB042	40.582913	-73.848083	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB042	40.582913	-73.848083	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB042	40.582913	-73.848083	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB042	40.582913	-73.848083	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB042	40.582913	-73.848083	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB042	40.582913	-73.848083	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB042	40.582913	-73.848083	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB042	40.582913	-73.848083	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB043	40.576184	-73.873706	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB043	40.576184	-73.873706	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB043	40.576184	-73.873706	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB043	40.576184	-73.873706	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB043	40.576184	-73.873706	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB043	40.576184	-73.873706	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB043	40.576184	-73.873706	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB043	40.576184	-73.873706	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB043	40.576184	-73.873706	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB043	40.576184	-73.873706	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB043	40.576184	-73.873706	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB043	40.576184	-73.873706	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB043	40.576184	-73.873706	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB043	40.576184	-73.873706	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB043	40.576184	-73.873706	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB043	40.576184	-73.873706	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB043	40.576184	-73.873706	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB043	40.576184	-73.873706	0	2

Table B3-2. Comparison of estuarine, regional reference chemistry data to ERL and ERMs

Area_of_Interest	Dataset	Study	Location	Latitude	Longitude	Upper_Depth	Lower_Depth
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB043	40.576184	-73.873706	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1993	2200_26_JB043	40.576184	-73.873706	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB101	40.6395	-73.813667	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB101	40.6395	-73.813667	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB101	40.6395	-73.813667	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB101	40.6395	-73.813667	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB101	40.6395	-73.813667	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB101	40.6395	-73.813667	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB101	40.6395	-73.813667	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB101	40.6395	-73.813667	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB101	40.6395	-73.813667	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB101	40.6395	-73.813667	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB101	40.6395	-73.813667	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB101	40.6395	-73.813667	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB101	40.6395	-73.813667	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB101	40.6395	-73.813667	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB101	40.6395	-73.813667	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB101	40.6395	-73.813667	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB101	40.6395	-73.813667	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB101	40.6395	-73.813667	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB101	40.6395	-73.813667	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB101	40.6395	-73.813667	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB101	40.6395	-73.813667	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB101	40.6395	-73.813667	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB101	40.6395	-73.813667	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB103	40.629067	-73.787567	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB103	40.629067	-73.787567	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB103	40.629067	-73.787567	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB103	40.629067	-73.787567	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB103	40.629067	-73.787567	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB103	40.629067	-73.787567	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB103	40.629067	-73.787567	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB103	40.629067	-73.787567	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB103	40.629067	-73.787567	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB103	40.629067	-73.787567	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB103	40.629067	-73.787567	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB103	40.629067	-73.787567	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB103	40.629067	-73.787567	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB103	40.629067	-73.787567	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB103	40.629067	-73.787567	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB103	40.629067	-73.787567	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB103	40.629067	-73.787567	0	2

Table B3-2. Comparison of estuarine, regional reference chemistry data to ERL and ERMs

Area_of_Interest	Dataset	Study	Location	Latitude	Longitude	Upper_Depth	Lower_Depth
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB103	40.629067	-73.787567	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB103	40.629067	-73.787567	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB103	40.629067	-73.787567	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB104	40.621767	-73.8415	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB104	40.621767	-73.8415	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB104	40.621767	-73.8415	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB104	40.621767	-73.8415	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB104	40.621767	-73.8415	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB104	40.621767	-73.8415	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB104	40.621767	-73.8415	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB104	40.621767	-73.8415	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB104	40.621767	-73.8415	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB104	40.621767	-73.8415	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB104	40.621767	-73.8415	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB104	40.621767	-73.8415	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB104	40.621767	-73.8415	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB104	40.621767	-73.8415	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB104	40.621767	-73.8415	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB104	40.621767	-73.8415	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB104	40.621767	-73.8415	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB104	40.621767	-73.8415	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB104	40.621767	-73.8415	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB104	40.621767	-73.8415	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB104	40.621767	-73.8415	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB106	40.620783	-73.890333	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB106	40.620783	-73.890333	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB106	40.620783	-73.890333	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB106	40.620783	-73.890333	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB106	40.620783	-73.890333	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB106	40.620783	-73.890333	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB106	40.620783	-73.890333	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB106	40.620783	-73.890333	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB106	40.620783	-73.890333	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB106	40.620783	-73.890333	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB106	40.620783	-73.890333	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB106	40.620783	-73.890333	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB106	40.620783	-73.890333	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB106	40.620783	-73.890333	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB106	40.620783	-73.890333	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB106	40.620783	-73.890333	0	2

Table B3-2. Comparison of estuarine, regional reference chemistry data to ERL and ERMs

Area_of_Interest	Dataset	Study	Location	Latitude	Longitude	Upper_Depth	Lower_Depth
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB106	40.620783	-73.890333	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB106	40.620783	-73.890333	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB106	40.620783	-73.890333	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB106	40.620783	-73.890333	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB108	40.61705	-73.85725	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB108	40.61705	-73.85725	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB108	40.61705	-73.85725	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB108	40.61705	-73.85725	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB108	40.61705	-73.85725	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB108	40.61705	-73.85725	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB108	40.61705	-73.85725	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB108	40.61705	-73.85725	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB108	40.61705	-73.85725	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB108	40.61705	-73.85725	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB108	40.61705	-73.85725	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB108	40.61705	-73.85725	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB108	40.61705	-73.85725	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB108	40.61705	-73.85725	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB108	40.61705	-73.85725	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB108	40.61705	-73.85725	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB108	40.61705	-73.85725	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB108	40.61705	-73.85725	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB108	40.61705	-73.85725	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB108	40.61705	-73.85725	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB110	40.606533	-73.814567	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB110	40.606533	-73.814567	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB110	40.606533	-73.814567	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB110	40.606533	-73.814567	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB110	40.606533	-73.814567	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB110	40.606533	-73.814567	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB110	40.606533	-73.814567	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB110	40.606533	-73.814567	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB110	40.606533	-73.814567	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB110	40.606533	-73.814567	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB110	40.606533	-73.814567	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB110	40.606533	-73.814567	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB110	40.606533	-73.814567	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB110	40.606533	-73.814567	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB110	40.606533	-73.814567	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB110	40.606533	-73.814567	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB110	40.606533	-73.814567	0	2

Table B3-2. Comparison of estuarine, regional reference chemistry data to ERL and ERMs

Area_of_Interest	Dataset	Study	Location	Latitude	Longitude	Upper_Depth	Lower_Depth
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB110	40.606533	-73.814567	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB110	40.606533	-73.814567	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB110	40.606533	-73.814567	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB110	40.606533	-73.814567	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB110	40.606533	-73.814567	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB111	40.6052	-73.790717	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB111	40.6052	-73.790717	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB111	40.6052	-73.790717	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB111	40.6052	-73.790717	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB111	40.6052	-73.790717	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB111	40.6052	-73.790717	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB111	40.6052	-73.790717	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB111	40.6052	-73.790717	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB111	40.6052	-73.790717	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB111	40.6052	-73.790717	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB111	40.6052	-73.790717	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB111	40.6052	-73.790717	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB111	40.6052	-73.790717	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB111	40.6052	-73.790717	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB111	40.6052	-73.790717	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB111	40.6052	-73.790717	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB111	40.6052	-73.790717	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB111	40.6052	-73.790717	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB111	40.6052	-73.790717	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB111	40.6052	-73.790717	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB111	40.6052	-73.790717	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB111	40.6052	-73.790717	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB111	40.6052	-73.790717	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB112	40.602533	-73.864867	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB112	40.602533	-73.864867	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB112	40.602533	-73.864867	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB112	40.602533	-73.864867	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB112	40.602533	-73.864867	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB112	40.602533	-73.864867	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB112	40.602533	-73.864867	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB112	40.602533	-73.864867	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB112	40.602533	-73.864867	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB112	40.602533	-73.864867	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB112	40.602533	-73.864867	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB112	40.602533	-73.864867	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB112	40.602533	-73.864867	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB112	40.602533	-73.864867	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB112	40.602533	-73.864867	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB112	40.602533	-73.864867	0	2

Table B3-2. Comparison of estuarine, regional reference chemistry data to ERL and ERMs

Area_of_Interest	Dataset	Study	Location	Latitude	Longitude	Upper_Depth	Lower_Depth
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB112	40.602533	-73.864867	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB112	40.602533	-73.864867	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB112	40.602533	-73.864867	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB112	40.602533	-73.864867	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB112	40.602533	-73.864867	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB112	40.602533	-73.864867	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB113	40.595767	-73.8673	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB113	40.595767	-73.8673	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB113	40.595767	-73.8673	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB113	40.595767	-73.8673	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB113	40.595767	-73.8673	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB113	40.595767	-73.8673	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB113	40.595767	-73.8673	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB113	40.595767	-73.8673	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB113	40.595767	-73.8673	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB113	40.595767	-73.8673	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB113	40.595767	-73.8673	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB113	40.595767	-73.8673	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB113	40.595767	-73.8673	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB113	40.595767	-73.8673	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB113	40.595767	-73.8673	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB113	40.595767	-73.8673	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB113	40.595767	-73.8673	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB113	40.595767	-73.8673	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB113	40.595767	-73.8673	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB113	40.595767	-73.8673	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB113	40.595767	-73.8673	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB113	40.595767	-73.8673	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB114	40.591167	-73.85135	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB114	40.591167	-73.85135	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB114	40.591167	-73.85135	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB114	40.591167	-73.85135	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB114	40.591167	-73.85135	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB114	40.591167	-73.85135	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB114	40.591167	-73.85135	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB114	40.591167	-73.85135	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB114	40.591167	-73.85135	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB114	40.591167	-73.85135	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB114	40.591167	-73.85135	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB114	40.591167	-73.85135	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB114	40.591167	-73.85135	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB114	40.591167	-73.85135	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB114	40.591167	-73.85135	0	2

Table B3-2. Comparison of estuarine, regional reference chemistry data to ERL and ERMs

Area_of_Interest	Dataset	Study	Location	Latitude	Longitude	Upper_Depth	Lower_Depth
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB114	40.591167	-73.85135	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB114	40.591167	-73.85135	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB114	40.591167	-73.85135	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB114	40.591167	-73.85135	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB114	40.591167	-73.85135	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB114	40.591167	-73.85135	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB114	40.591167	-73.85135	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB115	40.63375	-73.869983	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB115	40.63375	-73.869983	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB115	40.63375	-73.869983	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB115	40.63375	-73.869983	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB115	40.63375	-73.869983	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB115	40.63375	-73.869983	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB115	40.63375	-73.869983	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB115	40.63375	-73.869983	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB115	40.63375	-73.869983	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB115	40.63375	-73.869983	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB115	40.63375	-73.869983	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB115	40.63375	-73.869983	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB115	40.63375	-73.869983	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB115	40.63375	-73.869983	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB115	40.63375	-73.869983	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB115	40.63375	-73.869983	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB115	40.63375	-73.869983	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB115	40.63375	-73.869983	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB115	40.63375	-73.869983	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB115	40.63375	-73.869983	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB117	40.6234	-73.765233	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB117	40.6234	-73.765233	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB117	40.6234	-73.765233	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB117	40.6234	-73.765233	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB117	40.6234	-73.765233	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB117	40.6234	-73.765233	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB117	40.6234	-73.765233	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB117	40.6234	-73.765233	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB117	40.6234	-73.765233	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB117	40.6234	-73.765233	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB117	40.6234	-73.765233	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB117	40.6234	-73.765233	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB117	40.6234	-73.765233	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB117	40.6234	-73.765233	0	2

Table B3-2. Comparison of estuarine, regional reference chemistry data to ERL and ERMs

Area_of_Interest	Dataset	Study	Location	Latitude	Longitude	Upper_Depth	Lower_Depth
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB117	40.6234	-73.765233	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB117	40.6234	-73.765233	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB117	40.6234	-73.765233	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB117	40.6234	-73.765233	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB117	40.6234	-73.765233	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB117	40.6234	-73.765233	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB117	40.6234	-73.765233	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB117	40.6234	-73.765233	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB119	40.60355	-73.875233	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB119	40.60355	-73.875233	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB119	40.60355	-73.875233	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB119	40.60355	-73.875233	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB119	40.60355	-73.875233	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB119	40.60355	-73.875233	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB119	40.60355	-73.875233	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB119	40.60355	-73.875233	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB119	40.60355	-73.875233	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB119	40.60355	-73.875233	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB119	40.60355	-73.875233	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB119	40.60355	-73.875233	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB119	40.60355	-73.875233	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB119	40.60355	-73.875233	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB119	40.60355	-73.875233	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB119	40.60355	-73.875233	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB119	40.60355	-73.875233	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB119	40.60355	-73.875233	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB119	40.60355	-73.875233	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB119	40.60355	-73.875233	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB120	40.596367	-73.812983	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB120	40.596367	-73.812983	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB120	40.596367	-73.812983	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB120	40.596367	-73.812983	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB120	40.596367	-73.812983	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB120	40.596367	-73.812983	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB120	40.596367	-73.812983	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB120	40.596367	-73.812983	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB120	40.596367	-73.812983	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB120	40.596367	-73.812983	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB120	40.596367	-73.812983	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB120	40.596367	-73.812983	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB120	40.596367	-73.812983	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB120	40.596367	-73.812983	0	2

Table B3-2. Comparison of estuarine, regional reference chemistry data to ERL and ERMs

Area_of_Interest	Dataset	Study	Location	Latitude	Longitude	Upper_Depth	Lower_Depth
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB120	40.596367	-73.812983	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB120	40.596367	-73.812983	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB120	40.596367	-73.812983	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB120	40.596367	-73.812983	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB120	40.596367	-73.812983	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB120	40.596367	-73.812983	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB120	40.596367	-73.812983	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB120	40.596367	-73.812983	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	REMAP, 1994	2200_27_JB120	40.596367	-73.812983	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB301	40.629	-73.759	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB301	40.629	-73.759	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB301	40.629	-73.759	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB301	40.629	-73.759	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB301	40.629	-73.759	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB301	40.629	-73.759	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB301	40.629	-73.759	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB301	40.629	-73.759	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB301	40.629	-73.759	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB301	40.629	-73.759	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB301	40.629	-73.759	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB301	40.629	-73.759	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB301	40.629	-73.759	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB301	40.629	-73.759	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB301	40.629	-73.759	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB301	40.629	-73.759	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB301	40.629	-73.759	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB301	40.629	-73.759	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB303	40.619	-73.778	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB303	40.619	-73.778	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB303	40.619	-73.778	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB303	40.619	-73.778	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB303	40.619	-73.778	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB303	40.619	-73.778	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB303	40.619	-73.778	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB303	40.619	-73.778	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB303	40.619	-73.778	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB303	40.619	-73.778	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB303	40.619	-73.778	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB303	40.619	-73.778	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB303	40.619	-73.778	0	2

Table B3-2. Comparison of estuarine, regional reference chemistry data to ERL and ERMs

Area_of_Interest	Dataset	Study	Location	Latitude	Longitude	Upper_Depth	Lower_Depth
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB303	40.619	-73.778	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB303	40.619	-73.778	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB303	40.619	-73.778	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB303	40.619	-73.778	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB303	40.619	-73.778	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB303	40.619	-73.778	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB303	40.619	-73.778	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB303	40.619	-73.778	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB305	40.575	-73.87	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB305	40.575	-73.87	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB305	40.575	-73.87	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB305	40.575	-73.87	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB305	40.575	-73.87	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB305	40.575	-73.87	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB305	40.575	-73.87	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB305	40.575	-73.87	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB305	40.575	-73.87	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB305	40.575	-73.87	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB305	40.575	-73.87	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB305	40.575	-73.87	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB305	40.575	-73.87	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB305	40.575	-73.87	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB305	40.575	-73.87	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB305	40.575	-73.87	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB305	40.575	-73.87	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB305	40.575	-73.87	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB305	40.575	-73.87	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB306	40.572	-73.88	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB306	40.572	-73.88	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB306	40.572	-73.88	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB306	40.572	-73.88	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB306	40.572	-73.88	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB306	40.572	-73.88	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB306	40.572	-73.88	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB306	40.572	-73.88	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB306	40.572	-73.88	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB306	40.572	-73.88	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB306	40.572	-73.88	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB306	40.572	-73.88	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB306	40.572	-73.88	0	2

Table B3-2. Comparison of estuarine, regional reference chemistry data to ERL and ERMs

Area_of_Interest	Dataset	Study	Location	Latitude	Longitude	Upper_Depth	Lower_Depth
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB306	40.572	-73.88	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB306	40.572	-73.88	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB306	40.572	-73.88	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB306	40.572	-73.88	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB306	40.572	-73.88	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB306	40.572	-73.88	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB306	40.572	-73.88	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB307	40.64	-73.847	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB307	40.64	-73.847	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB307	40.64	-73.847	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB307	40.64	-73.847	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB307	40.64	-73.847	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB307	40.64	-73.847	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB307	40.64	-73.847	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB307	40.64	-73.847	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB307	40.64	-73.847	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB307	40.64	-73.847	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB307	40.64	-73.847	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB307	40.64	-73.847	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB307	40.64	-73.847	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB307	40.64	-73.847	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB307	40.64	-73.847	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB307	40.64	-73.847	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB307	40.64	-73.847	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB307	40.64	-73.847	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB307	40.64	-73.847	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB309	40.643	-73.858	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB309	40.643	-73.858	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB309	40.643	-73.858	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB309	40.643	-73.858	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB309	40.643	-73.858	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB309	40.643	-73.858	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB309	40.643	-73.858	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB309	40.643	-73.858	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB309	40.643	-73.858	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB309	40.643	-73.858	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB309	40.643	-73.858	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB309	40.643	-73.858	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB309	40.643	-73.858	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB309	40.643	-73.858	0	2

Table B3-2. Comparison of estuarine, regional reference chemistry data to ERL and ERMs

Area_of_Interest	Dataset	Study	Location	Latitude	Longitude	Upper_Depth	Lower_Depth
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB309	40.643	-73.858	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB309	40.643	-73.858	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB309	40.643	-73.858	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB309	40.643	-73.858	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB309	40.643	-73.858	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB309	40.643	-73.858	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB310	40.639	-73.828	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB310	40.639	-73.828	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB310	40.639	-73.828	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB310	40.639	-73.828	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB310	40.639	-73.828	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB310	40.639	-73.828	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB310	40.639	-73.828	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB310	40.639	-73.828	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB310	40.639	-73.828	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB310	40.639	-73.828	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB310	40.639	-73.828	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB310	40.639	-73.828	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB310	40.639	-73.828	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB310	40.639	-73.828	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB310	40.639	-73.828	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB310	40.639	-73.828	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB310	40.639	-73.828	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB310	40.639	-73.828	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB310	40.639	-73.828	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB313	40.61	-73.81	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB313	40.61	-73.81	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB313	40.61	-73.81	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB313	40.61	-73.81	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB313	40.61	-73.81	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB313	40.61	-73.81	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB313	40.61	-73.81	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB313	40.61	-73.81	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB313	40.61	-73.81	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB313	40.61	-73.81	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB313	40.61	-73.81	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB313	40.61	-73.81	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB313	40.61	-73.81	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB313	40.61	-73.81	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB313	40.61	-73.81	0	2

Table B3-2. Comparison of estuarine, regional reference chemistry data to ERL and ERMs

Area_of_Interest	Dataset	Study	Location	Latitude	Longitude	Upper_Depth	Lower_Depth
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB313	40.61	-73.81	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB313	40.61	-73.81	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB313	40.61	-73.81	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB313	40.61	-73.81	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB313	40.61	-73.81	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB315	40.605	-73.786	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB315	40.605	-73.786	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB315	40.605	-73.786	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB315	40.605	-73.786	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB315	40.605	-73.786	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB315	40.605	-73.786	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB315	40.605	-73.786	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB315	40.605	-73.786	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB315	40.605	-73.786	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB315	40.605	-73.786	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB315	40.605	-73.786	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB315	40.605	-73.786	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB315	40.605	-73.786	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB315	40.605	-73.786	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB315	40.605	-73.786	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB315	40.605	-73.786	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB315	40.605	-73.786	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB315	40.605	-73.786	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB315	40.605	-73.786	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB316	40.625	-73.837	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB316	40.625	-73.837	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB316	40.625	-73.837	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB316	40.625	-73.837	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB316	40.625	-73.837	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB316	40.625	-73.837	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB316	40.625	-73.837	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB316	40.625	-73.837	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB316	40.625	-73.837	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB316	40.625	-73.837	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB316	40.625	-73.837	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB316	40.625	-73.837	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB316	40.625	-73.837	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB316	40.625	-73.837	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB316	40.625	-73.837	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB316	40.625	-73.837	0	2

Table B3-2. Comparison of estuarine, regional reference chemistry data to ERL and ERMs

Area_of_Interest	Dataset	Study	Location	Latitude	Longitude	Upper_Depth	Lower_Depth
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB316	40.625	-73.837	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB316	40.625	-73.837	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB316	40.625	-73.837	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB316	40.625	-73.837	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB317	40.621	-73.812	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB317	40.621	-73.812	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB317	40.621	-73.812	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB317	40.621	-73.812	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB317	40.621	-73.812	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB317	40.621	-73.812	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB317	40.621	-73.812	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB317	40.621	-73.812	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB317	40.621	-73.812	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB317	40.621	-73.812	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB317	40.621	-73.812	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB317	40.621	-73.812	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB317	40.621	-73.812	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB317	40.621	-73.812	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB317	40.621	-73.812	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB317	40.621	-73.812	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB317	40.621	-73.812	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB317	40.621	-73.812	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB317	40.621	-73.812	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB317	40.621	-73.812	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB319	40.633	-73.807	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB319	40.633	-73.807	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB319	40.633	-73.807	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB319	40.633	-73.807	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB319	40.633	-73.807	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB319	40.633	-73.807	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB319	40.633	-73.807	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB319	40.633	-73.807	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB319	40.633	-73.807	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB319	40.633	-73.807	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB319	40.633	-73.807	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB319	40.633	-73.807	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB319	40.633	-73.807	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB319	40.633	-73.807	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB319	40.633	-73.807	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB319	40.633	-73.807	0	2

Table B3-2. Comparison of estuarine, regional reference chemistry data to ERL and ERMs

Area_of_Interest	Dataset	Study	Location	Latitude	Longitude	Upper_Depth	Lower_Depth
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB319	40.633	-73.807	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB319	40.633	-73.807	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB319	40.633	-73.807	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB322	40.627	-73.871	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB322	40.627	-73.871	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB322	40.627	-73.871	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB322	40.627	-73.871	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB322	40.627	-73.871	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB322	40.627	-73.871	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB322	40.627	-73.871	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB322	40.627	-73.871	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB322	40.627	-73.871	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB322	40.627	-73.871	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB322	40.627	-73.871	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB322	40.627	-73.871	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB322	40.627	-73.871	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB322	40.627	-73.871	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB322	40.627	-73.871	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB322	40.627	-73.871	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB322	40.627	-73.871	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB322	40.627	-73.871	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB322	40.627	-73.871	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB322	40.627	-73.871	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB322	40.627	-73.871	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB323	40.633	-73.873	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB323	40.633	-73.873	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB323	40.633	-73.873	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB323	40.633	-73.873	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB323	40.633	-73.873	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB323	40.633	-73.873	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB323	40.633	-73.873	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB323	40.633	-73.873	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB323	40.633	-73.873	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB323	40.633	-73.873	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB323	40.633	-73.873	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB323	40.633	-73.873	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB323	40.633	-73.873	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB323	40.633	-73.873	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB323	40.633	-73.873	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB323	40.633	-73.873	0	2

Table B3-2. Comparison of estuarine, regional reference chemistry data to ERL and ERMs

Area_of_Interest	Dataset	Study	Location	Latitude	Longitude	Upper_Depth	Lower_Depth
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB323	40.633	-73.873	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB323	40.633	-73.873	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB354	40.602	-73.877	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB354	40.602	-73.877	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB354	40.602	-73.877	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB354	40.602	-73.877	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB354	40.602	-73.877	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB354	40.602	-73.877	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB354	40.602	-73.877	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB354	40.602	-73.877	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB354	40.602	-73.877	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB354	40.602	-73.877	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB354	40.602	-73.877	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB354	40.602	-73.877	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB354	40.602	-73.877	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB354	40.602	-73.877	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB354	40.602	-73.877	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB354	40.602	-73.877	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB354	40.602	-73.877	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB354	40.602	-73.877	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB354	40.602	-73.877	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB354	40.602	-73.877	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB358	40.608	-73.89	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB358	40.608	-73.89	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB358	40.608	-73.89	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB358	40.608	-73.89	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB358	40.608	-73.89	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB358	40.608	-73.89	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB358	40.608	-73.89	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB358	40.608	-73.89	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB358	40.608	-73.89	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB358	40.608	-73.89	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB358	40.608	-73.89	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB358	40.608	-73.89	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB358	40.608	-73.89	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB358	40.608	-73.89	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB358	40.608	-73.89	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB358	40.608	-73.89	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB358	40.608	-73.89	0	2

Table B3-2. Comparison of estuarine, regional reference chemistry data to ERL and ERMs

Area_of_Interest	Dataset	Study	Location	Latitude	Longitude	Upper_Depth	Lower_Depth
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB358	40.608	-73.89	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB359	40.612	-73.872	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB359	40.612	-73.872	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB359	40.612	-73.872	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB359	40.612	-73.872	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB359	40.612	-73.872	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB359	40.612	-73.872	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB359	40.612	-73.872	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB359	40.612	-73.872	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB359	40.612	-73.872	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB359	40.612	-73.872	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB359	40.612	-73.872	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB359	40.612	-73.872	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB359	40.612	-73.872	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB359	40.612	-73.872	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB359	40.612	-73.872	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB359	40.612	-73.872	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB359	40.612	-73.872	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB359	40.612	-73.872	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB359	40.612	-73.872	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB361	40.584	-73.853	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB361	40.584	-73.853	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB361	40.584	-73.853	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB361	40.584	-73.853	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB361	40.584	-73.853	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB361	40.584	-73.853	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB361	40.584	-73.853	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB361	40.584	-73.853	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB361	40.584	-73.853	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB361	40.584	-73.853	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB361	40.584	-73.853	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB361	40.584	-73.853	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB361	40.584	-73.853	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB361	40.584	-73.853	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB361	40.584	-73.853	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB361	40.584	-73.853	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB361	40.584	-73.853	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB361	40.584	-73.853	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB361	40.584	-73.853	0	2

Table B3-2. Comparison of estuarine, regional reference chemistry data to ERL and ERMs

Area_of_Interest	Dataset	Study	Location	Latitude	Longitude	Upper_Depth	Lower_Depth
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB364	40.593	-73.871	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB364	40.593	-73.871	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB364	40.593	-73.871	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB364	40.593	-73.871	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB364	40.593	-73.871	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB364	40.593	-73.871	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB364	40.593	-73.871	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB364	40.593	-73.871	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB364	40.593	-73.871	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB364	40.593	-73.871	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB364	40.593	-73.871	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB364	40.593	-73.871	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB364	40.593	-73.871	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB364	40.593	-73.871	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB364	40.593	-73.871	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB364	40.593	-73.871	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB364	40.593	-73.871	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB364	40.593	-73.871	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB364	40.593	-73.871	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB364	40.593	-73.871	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB366	40.589	-73.859	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB366	40.589	-73.859	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB366	40.589	-73.859	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB366	40.589	-73.859	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB366	40.589	-73.859	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB366	40.589	-73.859	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB366	40.589	-73.859	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB366	40.589	-73.859	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB366	40.589	-73.859	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB366	40.589	-73.859	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB366	40.589	-73.859	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB366	40.589	-73.859	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB366	40.589	-73.859	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB366	40.589	-73.859	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB366	40.589	-73.859	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB366	40.589	-73.859	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB366	40.589	-73.859	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB367	40.588	-73.835	0	2

Table B3-2. Comparison of estuarine, regional reference chemistry data to ERL and ERMs

Area_of_Interest	Dataset	Study	Location	Latitude	Longitude	Upper_Depth	Lower_Depth
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB367	40.588	-73.835	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB367	40.588	-73.835	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB367	40.588	-73.835	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB367	40.588	-73.835	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB367	40.588	-73.835	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB367	40.588	-73.835	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB367	40.588	-73.835	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB367	40.588	-73.835	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB367	40.588	-73.835	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB367	40.588	-73.835	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB367	40.588	-73.835	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB367	40.588	-73.835	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB367	40.588	-73.835	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB367	40.588	-73.835	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB367	40.588	-73.835	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB367	40.588	-73.835	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB367	40.588	-73.835	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB367	40.588	-73.835	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB367	40.588	-73.835	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB368	40.592	-73.846	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB368	40.592	-73.846	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB368	40.592	-73.846	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB368	40.592	-73.846	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB368	40.592	-73.846	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB368	40.592	-73.846	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB368	40.592	-73.846	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB368	40.592	-73.846	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB368	40.592	-73.846	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB368	40.592	-73.846	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB368	40.592	-73.846	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB368	40.592	-73.846	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB368	40.592	-73.846	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB368	40.592	-73.846	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB368	40.592	-73.846	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB368	40.592	-73.846	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB368	40.592	-73.846	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB371	40.595	-73.805	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB371	40.595	-73.805	0	2

Table B3-2. Comparison of estuarine, regional reference chemistry data to ERL and ERMs

Area_of_Interest	Dataset	Study	Location	Latitude	Longitude	Upper_Depth	Lower_Depth
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB371	40.595	-73.805	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB371	40.595	-73.805	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB371	40.595	-73.805	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB371	40.595	-73.805	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB371	40.595	-73.805	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB371	40.595	-73.805	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB371	40.595	-73.805	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB371	40.595	-73.805	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB371	40.595	-73.805	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB371	40.595	-73.805	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB371	40.595	-73.805	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB371	40.595	-73.805	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB371	40.595	-73.805	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB371	40.595	-73.805	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB371	40.595	-73.805	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB371	40.595	-73.805	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB371	40.595	-73.805	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB371	40.595	-73.805	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB371	40.595	-73.805	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB372	40.596	-73.812	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB372	40.596	-73.812	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB372	40.596	-73.812	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB372	40.596	-73.812	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB372	40.596	-73.812	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB372	40.596	-73.812	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB372	40.596	-73.812	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB372	40.596	-73.812	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB372	40.596	-73.812	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB372	40.596	-73.812	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB372	40.596	-73.812	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB372	40.596	-73.812	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB372	40.596	-73.812	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB372	40.596	-73.812	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB372	40.596	-73.812	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB372	40.596	-73.812	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB374	40.624	-73.76	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB374	40.624	-73.76	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB374	40.624	-73.76	0	2

Table B3-2. Comparison of estuarine, regional reference chemistry data to ERL and ERMs

Area_of_Interest	Dataset	Study	Location	Latitude	Longitude	Upper_Depth	Lower_Depth
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB374	40.624	-73.76	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB374	40.624	-73.76	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB374	40.624	-73.76	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB374	40.624	-73.76	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB374	40.624	-73.76	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB374	40.624	-73.76	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB374	40.624	-73.76	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB374	40.624	-73.76	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB374	40.624	-73.76	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB374	40.624	-73.76	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB374	40.624	-73.76	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB374	40.624	-73.76	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB374	40.624	-73.76	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB374	40.624	-73.76	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB374	40.624	-73.76	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB374	40.624	-73.76	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB374	40.624	-73.76	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB374	40.624	-73.76	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB374	40.624	-73.76	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB380	40.629	-73.854	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB380	40.629	-73.854	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB380	40.629	-73.854	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB380	40.629	-73.854	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB380	40.629	-73.854	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB380	40.629	-73.854	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB380	40.629	-73.854	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB380	40.629	-73.854	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB380	40.629	-73.854	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB380	40.629	-73.854	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB380	40.629	-73.854	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB380	40.629	-73.854	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB380	40.629	-73.854	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB380	40.629	-73.854	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB380	40.629	-73.854	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB380	40.629	-73.854	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB381	40.601	-73.774	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB381	40.601	-73.774	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB381	40.601	-73.774	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB381	40.601	-73.774	0	2

Table B3-2. Comparison of estuarine, regional reference chemistry data to ERL and ERMs

Area_of_Interest	Dataset	Study	Location	Latitude	Longitude	Upper_Depth	Lower_Depth
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB381	40.601	-73.774	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB381	40.601	-73.774	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB381	40.601	-73.774	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB381	40.601	-73.774	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB381	40.601	-73.774	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB381	40.601	-73.774	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB381	40.601	-73.774	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB381	40.601	-73.774	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB381	40.601	-73.774	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB381	40.601	-73.774	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB381	40.601	-73.774	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB381	40.601	-73.774	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB381	40.601	-73.774	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB381	40.601	-73.774	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB381	40.601	-73.774	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB381	40.601	-73.774	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB381	40.601	-73.774	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB381	40.601	-73.774	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB386	40.604	-73.864	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB386	40.604	-73.864	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB386	40.604	-73.864	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB386	40.604	-73.864	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB386	40.604	-73.864	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB386	40.604	-73.864	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB386	40.604	-73.864	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB386	40.604	-73.864	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB386	40.604	-73.864	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB386	40.604	-73.864	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB386	40.604	-73.864	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB386	40.604	-73.864	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB386	40.604	-73.864	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB386	40.604	-73.864	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB386	40.604	-73.864	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB386	40.604	-73.864	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB386	40.604	-73.864	0	2
Jamaica Bay	Regional sediment (estuarine SQT)	Region 2 2003 NY/NJ Harbor Data Sets	JB386	40.604	-73.864	0	2
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	1999 Late Summer/Early Fall RI-ESP Sampling Progr	MR9921SDM-TSI	39.577054	-74.540511	0	15
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	1999 Late Summer/Early Fall RI-ESP Sampling Progr	MR9921SDM-TSI	39.577054	-74.540511	0	15
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	1999 Late Summer/Early Fall RI-ESP Sampling Progr	MR9921SDM-TSI	39.577054	-74.540511	0	15
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	1999 Late Summer/Early Fall RI-ESP Sampling Progr	MR9921SDM-TSI	39.577054	-74.540511	0	15
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	1999 Late Summer/Early Fall RI-ESP Sampling Progr	MR9921SDM-TSI	39.577054	-74.540511	0	15

Table B3-2. Comparison of estuarine, regional reference chemistry data to ERL and ERMs

Area_of_Interest	Dataset	Study	Location	Latitude	Longitude	Upper_Depth	Lower_Depth
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	1999 Late Summer/Early Fall RI-ESP Sampling Progr	MR9921SDM-TSI	39.577054	-74.540511	0	15
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	1999 Late Summer/Early Fall RI-ESP Sampling Progr	MR9921SDM-TSI	39.577054	-74.540511	0	15
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	1999 Late Summer/Early Fall RI-ESP Sampling Progr	MR9921SDM-TSI	39.577054	-74.540511	0	15
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	1999 Late Summer/Early Fall RI-ESP Sampling Progr	MR9921SDM-TSI	39.577054	-74.540511	0	15
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	1999 Late Summer/Early Fall RI-ESP Sampling Progr	MR9921SDM-TSI	39.577054	-74.540511	0	15
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	1999 Late Summer/Early Fall RI-ESP Sampling Progr	MR9921SDM-TSI	39.577054	-74.540511	0	15
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	1999 Late Summer/Early Fall RI-ESP Sampling Progr	MR9921SDM-TSI	39.577054	-74.540511	0	15
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	1999 Late Summer/Early Fall RI-ESP Sampling Progr	MR9921SDM-TSI	39.577054	-74.540511	0	15
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	1999 Late Summer/Early Fall RI-ESP Sampling Progr	MR9921SDM-TSI	39.577054	-74.540511	0	15
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	1999 Late Summer/Early Fall RI-ESP Sampling Progr	MR9921SDM-TSI	39.577054	-74.540511	0	15
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	1999 Late Summer/Early Fall RI-ESP Sampling Progr	MR9921SDM-TSI	39.577054	-74.540511	0	15
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	1999 Late Summer/Early Fall RI-ESP Sampling Progr	MR9921SDM-TSI	39.577054	-74.540511	0	15
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	1999 Late Summer/Early Fall RI-ESP Sampling Progr	MR9921SDM-TSI	39.577054	-74.540511	0	15
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	1999 Late Summer/Early Fall RI-ESP Sampling Progr	MR9921SDM-TSI	39.577054	-74.540511	0	15
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	1999 Late Summer/Early Fall RI-ESP Sampling Progr	MR9921SDM-TSI	39.577054	-74.540511	0	15
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	1999 Late Summer/Early Fall RI-ESP Sampling Progr	MR9921SDM-TSI	39.577054	-74.540511	0	15
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	1999 Late Summer/Early Fall RI-ESP Sampling Progr	MR9922SDM-TSI	39.55279	-74.480896	0	15
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	1999 Late Summer/Early Fall RI-ESP Sampling Progr	MR9922SDM-TSI	39.55279	-74.480896	0	15
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	1999 Late Summer/Early Fall RI-ESP Sampling Progr	MR9922SDM-TSI	39.55279	-74.480896	0	15
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	1999 Late Summer/Early Fall RI-ESP Sampling Progr	MR9922SDM-TSI	39.55279	-74.480896	0	15
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	1999 Late Summer/Early Fall RI-ESP Sampling Progr	MR9922SDM-TSI	39.55279	-74.480896	0	15
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	1999 Late Summer/Early Fall RI-ESP Sampling Progr	MR9922SDM-TSI	39.55279	-74.480896	0	15
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	1999 Late Summer/Early Fall RI-ESP Sampling Progr	MR9922SDM-TSI	39.55279	-74.480896	0	15
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	1999 Late Summer/Early Fall RI-ESP Sampling Progr	MR9922SDM-TSI	39.55279	-74.480896	0	15
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	1999 Late Summer/Early Fall RI-ESP Sampling Progr	MR9922SDM-TSI	39.55279	-74.480896	0	15
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	1999 Late Summer/Early Fall RI-ESP Sampling Progr	MR9922SDM-TSI	39.55279	-74.480896	0	15
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	1999 Late Summer/Early Fall RI-ESP Sampling Progr	MR9922SDM-TSI	39.55279	-74.480896	0	15
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	1999 Late Summer/Early Fall RI-ESP Sampling Progr	MR9922SDM-TSI	39.55279	-74.480896	0	15
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	1999 Late Summer/Early Fall RI-ESP Sampling Progr	MR9922SDM-TSI	39.55279	-74.480896	0	15
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	1999 Late Summer/Early Fall RI-ESP Sampling Progr	MR9922SDM-TSI	39.55279	-74.480896	0	15
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	1999 Late Summer/Early Fall RI-ESP Sampling Progr	MR9922SDM-TSI	39.55279	-74.480896	0	15
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	1999 Late Summer/Early Fall RI-ESP Sampling Progr	MR9922SDM-TSI	39.55279	-74.480896	0	15
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	1999 Late Summer/Early Fall RI-ESP Sampling Progr	MR9922SDM-TSI	39.55279	-74.480896	0	15
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	1999 Late Summer/Early Fall RI-ESP Sampling Progr	MR9922SDM-TSI	39.55279	-74.480896	0	15
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	1999 Late Summer/Early Fall RI-ESP Sampling Progr	MR9922SDM-TSI	39.55279	-74.480896	0	15
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	1999 Late Summer/Early Fall RI-ESP Sampling Progr	MR9923SDM-TSI	39.553648	-74.403385	0	15
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	1999 Late Summer/Early Fall RI-ESP Sampling Progr	MR9923SDM-TSI	39.553648	-74.403385	0	15
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	1999 Late Summer/Early Fall RI-ESP Sampling Progr	MR9923SDM-TSI	39.553648	-74.403385	0	15
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	1999 Late Summer/Early Fall RI-ESP Sampling Progr	MR9923SDM-TSI	39.553648	-74.403385	0	15
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	1999 Late Summer/Early Fall RI-ESP Sampling Progr	MR9923SDM-TSI	39.553648	-74.403385	0	15
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	1999 Late Summer/Early Fall RI-ESP Sampling Progr	MR9923SDM-TSI	39.553648	-74.403385	0	15
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	1999 Late Summer/Early Fall RI-ESP Sampling Progr	MR9923SDM-TSI	39.553648	-74.403385	0	15
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	1999 Late Summer/Early Fall RI-ESP Sampling Progr	MR9923SDM-TSI	39.553648	-74.403385	0	15

Table B3-2. Comparison of estuarine, regional reference chemistry data to ERL and ERMs

Area_of_Interest	Dataset	Study	Location	Latitude	Longitude	Upper_Depth	Lower_Depth
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	1999 Late Summer/Early Fall RI-ESP Sampling Progr	MR9923SDM-TSI	39.553648	-74.403385	0	15
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	1999 Late Summer/Early Fall RI-ESP Sampling Progr	MR9923SDM-TSI	39.553648	-74.403385	0	15
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	1999 Late Summer/Early Fall RI-ESP Sampling Progr	MR9923SDM-TSI	39.553648	-74.403385	0	15
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	1999 Late Summer/Early Fall RI-ESP Sampling Progr	MR9923SDM-TSI	39.553648	-74.403385	0	15
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	1999 Late Summer/Early Fall RI-ESP Sampling Progr	MR9923SDM-TSI	39.553648	-74.403385	0	15
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	1999 Late Summer/Early Fall RI-ESP Sampling Progr	MR9923SDM-TSI	39.553648	-74.403385	0	15
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	1999 Late Summer/Early Fall RI-ESP Sampling Progr	MR9923SDM-TSI	39.553648	-74.403385	0	15
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	1999 Late Summer/Early Fall RI-ESP Sampling Progr	MR9923SDM-TSI	39.553648	-74.403385	0	15
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	1999 Late Summer/Early Fall RI-ESP Sampling Progr	MR9923SDM-TSI	39.553648	-74.403385	0	15
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	1999 Late Summer/Early Fall RI-ESP Sampling Progr	MR9923SDM-TSI	39.553648	-74.403385	0	15
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	1999 Late Summer/Early Fall RI-ESP Sampling Progr	MR9923SDM-TSI	39.553648	-74.403385	0	15
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	1999 Late Summer/Early Fall RI-ESP Sampling Progr	MR9923SDM-TSI	39.553648	-74.403385	0	15
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	1999 Late Summer/Early Fall RI-ESP Sampling Progr	MR9923SDM-TSI	39.553648	-74.403385	0	15
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	EMAP-Delaware Bay 1990	2300_13_90-118	39.54167	-74.40833	0	2
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	EMAP-Delaware Bay 1990	2300_13_90-118	39.54167	-74.40833	0	2
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	EMAP-Delaware Bay 1990	2300_13_90-118	39.54167	-74.40833	0	2
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	EMAP-Delaware Bay 1990	2300_13_90-118	39.54167	-74.40833	0	2
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	EMAP-Delaware Bay 1990	2300_13_90-118	39.54167	-74.40833	0	2
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	EMAP-Delaware Bay 1990	2300_13_90-118	39.54167	-74.40833	0	2
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	EMAP-Delaware Bay 1990	2300_13_90-118	39.54167	-74.40833	0	2
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	EMAP-Delaware Bay 1990	2300_13_90-118	39.54167	-74.40833	0	2
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	EMAP-Delaware Bay 1990	2300_13_90-120	39.55167	-74.415	0	2
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	EMAP-Delaware Bay 1990	2300_13_90-120	39.55167	-74.415	0	2
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	EMAP-Delaware Bay 1990	2300_13_90-120	39.55167	-74.415	0	2
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	EMAP-Delaware Bay 1990	2300_13_90-120	39.55167	-74.415	0	2
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	EMAP-Delaware Bay 1990	2300_13_90-120	39.55167	-74.415	0	2
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	EMAP-Delaware Bay 1990	2300_13_90-120	39.55167	-74.415	0	2
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	EMAP-Delaware Bay 1990	2300_13_90-120	39.55167	-74.415	0	2
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	EMAP-Delaware Bay 1990	2300_13_90-120	39.55167	-74.415	0	2
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	EMAP-Delaware Bay 1990	2300_13_90-120	39.55167	-74.415	0	2
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	EMAP-Delaware Bay 1990	2300_13_90-120	39.55167	-74.415	0	2
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	EMAP-Delaware Bay 1990	2300_13_90-120	39.55167	-74.415	0	2
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	EMAP-Delaware Bay 1990	2300_13_90-120	39.55167	-74.415	0	2
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	EMAP-Delaware Bay 1991	2300_14_91-348	39.49606	-74.38222	0	2
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	EMAP-Delaware Bay 1991	2300_14_91-348	39.49606	-74.38222	0	2
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	EMAP-Delaware Bay 1991	2300_14_91-348	39.49606	-74.38222	0	2
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	EMAP-Delaware Bay 1991	2300_14_91-348	39.49606	-74.38222	0	2
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	EMAP-Delaware Bay 1991	2300_14_91-348	39.49606	-74.38222	0	2
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	EMAP-Delaware Bay 1991	2300_14_91-348	39.49606	-74.38222	0	2
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	EMAP-Delaware Bay 1991	2300_14_91-348	39.49606	-74.38222	0	2
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	EMAP-Delaware Bay 1991	2300_14_91-348	39.49606	-74.38222	0	2
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	EMAP-Delaware Bay 1991	2300_14_91-348	39.49606	-74.38222	0	2
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	EMAP-Delaware Bay 1991	2300_14_91-348	39.49606	-74.38222	0	2
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	EMAP-Delaware Bay 1991	2300_14_91-348	39.49606	-74.38222	0	2

Table B3-2. Comparison of estuarine, regional reference chemistry data to ERL and ERMs

Area_of_Interest	Dataset	Study	Location	Latitude	Longitude	Upper_Depth	Lower_Depth
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	EMAP-Delaware Bay 1991	2300_14_91-348	39.49606	-74.38222	0	2
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	EMAP-Delaware Bay 1991	2300_14_91-348	39.49606	-74.38222	0	2
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	EMAP-Delaware Bay 1991	2300_14_91-348	39.49606	-74.38222	0	2
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	EMAP-Delaware Bay 1991	2300_14_91-348	39.49606	-74.38222	0	2
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	EMAP-Delaware Bay 1991	2300_14_91-348	39.49606	-74.38222	0	2
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	EMAP-Delaware Bay 1991	2300_14_91-348	39.49606	-74.38222	0	2
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	EMAP-Delaware Bay 1991	2300_14_91-348	39.49606	-74.38222	0	2
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	EMAP-Delaware Bay 1991	2300_14_91-348	39.49606	-74.38222	0	2
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	EMAP-Delaware Bay 1991	2300_14_91-349	39.50367	-74.38467	0	2
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	EMAP-Delaware Bay 1991	2300_14_91-349	39.50367	-74.38467	0	2
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	EMAP-Delaware Bay 1991	2300_14_91-349	39.50367	-74.38467	0	2
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	EMAP-Delaware Bay 1991	2300_14_91-349	39.50367	-74.38467	0	2
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	EMAP-Delaware Bay 1991	2300_14_91-349	39.50367	-74.38467	0	2
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	EMAP-Delaware Bay 1991	2300_14_91-349	39.50367	-74.38467	0	2
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	EMAP-Delaware Bay 1991	2300_14_91-349	39.50367	-74.38467	0	2
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	EMAP-Delaware Bay 1991	2300_14_91-349	39.50367	-74.38467	0	2
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	EMAP-Delaware Bay 1991	2300_14_91-349	39.50367	-74.38467	0	2
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	EMAP-Delaware Bay 1991	2300_14_91-349	39.50367	-74.38467	0	2
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	EMAP-Delaware Bay 1991	2300_14_91-349	39.50367	-74.38467	0	2
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	EMAP-Delaware Bay 1991	2300_14_91-349	39.50367	-74.38467	0	2
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	EMAP-Delaware Bay 1991	2300_14_91-349	39.50367	-74.38467	0	2
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ00-0037	39.594	-74.551	0	2
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ00-0037	39.594	-74.551	0	2
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ00-0037	39.594	-74.551	0	2
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ00-0037	39.594	-74.551	0	2
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ00-0037	39.594	-74.551	0	2
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ00-0037	39.594	-74.551	0	2
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ00-0037	39.594	-74.551	0	2
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ00-0037	39.594	-74.551	0	2
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ00-0037	39.594	-74.551	0	2
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ00-0037	39.594	-74.551	0	2
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ00-0037	39.594	-74.551	0	2
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ00-0037	39.594	-74.551	0	2
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ00-0037	39.594	-74.551	0	2
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ00-0037	39.594	-74.551	0	2
Mullica River and Great Bay	Regional sediment (estuarine non-SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ00-0037	39.594	-74.551	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2003	2300_L3_NJ03-0038	39.5568	-74.4796	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2003	2300_L3_NJ03-0038	39.5568	-74.4796	0	2

Table B3-2. Comparison of estuarine, regional reference chemistry data to ERL and ERMs

Area_of_Interest	Dataset	Study	Location	Latitude	Longitude	Upper_Depth	Lower_Depth
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2003	2300_L3_NJ03-0038	39.5568	-74.4796	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2003	2300_L3_NJ03-0038	39.5568	-74.4796	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2003	2300_L3_NJ03-0038	39.5568	-74.4796	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2003	2300_L3_NJ03-0038	39.5568	-74.4796	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2003	2300_L3_NJ03-0038	39.5568	-74.4796	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2003	2300_L3_NJ03-0038	39.5568	-74.4796	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2003	2300_L3_NJ03-0038	39.5568	-74.4796	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2003	2300_L3_NJ03-0038	39.5568	-74.4796	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2003	2300_L3_NJ03-0038	39.5568	-74.4796	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2003	2300_L3_NJ03-0038	39.5568	-74.4796	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2003	2300_L3_NJ03-0038	39.5568	-74.4796	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2003	2300_L3_NJ03-0038	39.5568	-74.4796	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2003	2300_L3_NJ03-0038	39.5568	-74.4796	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2003	2300_L3_NJ03-0038	39.5568	-74.4796	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2003	2300_L3_NJ03-0038	39.5568	-74.4796	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2003	2300_L3_NJ03-0038	39.5568	-74.4796	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2003	2300_L3_NJ03-0038	39.5568	-74.4796	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2003	2300_L3_NJ03-0038	39.5568	-74.4796	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2003	2300_L3_NJ03-0038	39.5568	-74.4796	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2004	2300_L4_NJ04-0427	39.521	-74.379	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2004	2300_L4_NJ04-0427	39.521	-74.379	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2004	2300_L4_NJ04-0427	39.521	-74.379	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2004	2300_L4_NJ04-0427	39.521	-74.379	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2004	2300_L4_NJ04-0427	39.521	-74.379	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2004	2300_L4_NJ04-0427	39.521	-74.379	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2004	2300_L4_NJ04-0427	39.521	-74.379	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2004	2300_L4_NJ04-0427	39.521	-74.379	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2004	2300_L4_NJ04-0427	39.521	-74.379	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2004	2300_L4_NJ04-0427	39.521	-74.379	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2004	2300_L4_NJ04-0427	39.521	-74.379	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2004	2300_L4_NJ04-0427	39.521	-74.379	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2004	2300_L4_NJ04-0427	39.521	-74.379	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2004	2300_L4_NJ04-0427	39.521	-74.379	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2004	2300_L4_NJ04-0427	39.521	-74.379	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2004	2300_L4_NJ04-0427	39.521	-74.379	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2004	2300_L4_NJ04-0429	39.568	-74.502	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2004	2300_L4_NJ04-0429	39.568	-74.502	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2004	2300_L4_NJ04-0429	39.568	-74.502	0	2

Table B3-2. Comparison of estuarine, regional reference chemistry data to ERL and ERMs

Area_of_Interest	Dataset	Study	Location	Latitude	Longitude	Upper_Depth	Lower_Depth
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2004	2300_L4_NJ04-0429	39.568	-74.502	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2004	2300_L4_NJ04-0429	39.568	-74.502	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2004	2300_L4_NJ04-0429	39.568	-74.502	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2004	2300_L4_NJ04-0429	39.568	-74.502	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2004	2300_L4_NJ04-0429	39.568	-74.502	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2004	2300_L4_NJ04-0429	39.568	-74.502	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2004	2300_L4_NJ04-0429	39.568	-74.502	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2004	2300_L4_NJ04-0429	39.568	-74.502	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2004	2300_L4_NJ04-0429	39.568	-74.502	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2004	2300_L4_NJ04-0429	39.568	-74.502	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2004	2300_L4_NJ04-0429	39.568	-74.502	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2004	2300_L4_NJ04-0429	39.568	-74.502	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2004	2300_L4_NJ04-0429	39.568	-74.502	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2004	2300_L4_NJ04-0429	39.568	-74.502	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2004	2300_L4_NJ04-0429	39.568	-74.502	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2004	2300_L4_NJ04-0429	39.568	-74.502	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2004	2300_L4_NJ04-0429	39.568	-74.502	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2004	2300_L4_NJ04-0429	39.568	-74.502	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2004	2300_L4_NJ04-0429	39.568	-74.502	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2005	2300_L5_NJ05-0059	39.505	-74.354	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2005	2300_L5_NJ05-0059	39.505	-74.354	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2005	2300_L5_NJ05-0059	39.505	-74.354	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2005	2300_L5_NJ05-0059	39.505	-74.354	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2005	2300_L5_NJ05-0059	39.505	-74.354	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2005	2300_L5_NJ05-0059	39.505	-74.354	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2005	2300_L5_NJ05-0059	39.505	-74.354	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2005	2300_L5_NJ05-0059	39.505	-74.354	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2005	2300_L5_NJ05-0059	39.505	-74.354	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2005	2300_L5_NJ05-0059	39.505	-74.354	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2005	2300_L5_NJ05-0059	39.505	-74.354	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2005	2300_L5_NJ05-0059	39.505	-74.354	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2005	2300_L5_NJ05-0059	39.505	-74.354	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2005	2300_L5_NJ05-0059	39.505	-74.354	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2005	2300_L5_NJ05-0059	39.505	-74.354	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2005	2300_L5_NJ05-0059	39.505	-74.354	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2005	2300_L5_NJ05-0059	39.505	-74.354	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2005	2300_L5_NJ05-0059	39.505	-74.354	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2005	2300_L5_NJ05-0059	39.505	-74.354	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2006	2300_L6_NJ06-0015	39.536	-74.388	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2006	2300_L6_NJ06-0015	39.536	-74.388	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2006	2300_L6_NJ06-0015	39.536	-74.388	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2006	2300_L6_NJ06-0015	39.536	-74.388	0	2

Table B3-2. Comparison of estuarine, regional reference chemistry data to ERL and ERMs

Area_of_Interest	Dataset	Study	Location	Latitude	Longitude	Upper_Depth	Lower_Depth
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2006	2300_L6_NJ06-0015	39.536	-74.388	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2006	2300_L6_NJ06-0015	39.536	-74.388	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2006	2300_L6_NJ06-0015	39.536	-74.388	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2006	2300_L6_NJ06-0015	39.536	-74.388	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2006	2300_L6_NJ06-0015	39.536	-74.388	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2006	2300_L6_NJ06-0015	39.536	-74.388	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2006	2300_L6_NJ06-0015	39.536	-74.388	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2006	2300_L6_NJ06-0015	39.536	-74.388	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2006	2300_L6_NJ06-0015	39.536	-74.388	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2006	2300_L6_NJ06-0015	39.536	-74.388	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2006	2300_L6_NJ06-0015	39.536	-74.388	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2006	2300_L6_NJ06-0015	39.536	-74.388	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2006	2300_L6_NJ06-0015	39.536	-74.388	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2006	2300_L6_NJ06-0015	39.536	-74.388	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2006	2300_L6_NJ06-0015	39.536	-74.388	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2006	2300_L6_NJ06-0015	39.536	-74.388	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2006	2300_L6_NJ06-0015	39.536	-74.388	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2006	2300_L6_NJ06-0027	39.5	-74.401	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2006	2300_L6_NJ06-0027	39.5	-74.401	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2006	2300_L6_NJ06-0027	39.5	-74.401	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2006	2300_L6_NJ06-0027	39.5	-74.401	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2006	2300_L6_NJ06-0027	39.5	-74.401	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2006	2300_L6_NJ06-0027	39.5	-74.401	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2006	2300_L6_NJ06-0027	39.5	-74.401	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2006	2300_L6_NJ06-0027	39.5	-74.401	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2006	2300_L6_NJ06-0027	39.5	-74.401	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2006	2300_L6_NJ06-0027	39.5	-74.401	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2006	2300_L6_NJ06-0027	39.5	-74.401	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2006	2300_L6_NJ06-0027	39.5	-74.401	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2006	2300_L6_NJ06-0027	39.5	-74.401	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2006	2300_L6_NJ06-0027	39.5	-74.401	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2006	2300_L6_NJ06-0027	39.5	-74.401	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2006	2300_L6_NJ06-0027	39.5	-74.401	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2006	2300_L6_NJ06-0035	39.496	-74.36	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2006	2300_L6_NJ06-0035	39.496	-74.36	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2006	2300_L6_NJ06-0035	39.496	-74.36	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2006	2300_L6_NJ06-0035	39.496	-74.36	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2006	2300_L6_NJ06-0035	39.496	-74.36	0	2

Table B3-2. Comparison of estuarine, regional reference chemistry data to ERL and ERMs

Area_of_Interest	Dataset	Study	Location	Latitude	Longitude	Upper_Depth	Lower_Depth
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2006	2300_L6_NJ06-0035	39.496	-74.36	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2006	2300_L6_NJ06-0035	39.496	-74.36	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2006	2300_L6_NJ06-0035	39.496	-74.36	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2006	2300_L6_NJ06-0035	39.496	-74.36	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2006	2300_L6_NJ06-0035	39.496	-74.36	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2006	2300_L6_NJ06-0035	39.496	-74.36	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2006	2300_L6_NJ06-0035	39.496	-74.36	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2006	2300_L6_NJ06-0035	39.496	-74.36	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2006	2300_L6_NJ06-0035	39.496	-74.36	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2006	2300_L6_NJ06-0035	39.496	-74.36	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2006	2300_L6_NJ06-0035	39.496	-74.36	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2006	2300_L6_NJ06-0035	39.496	-74.36	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2006	2300_L6_NJ06-0035	39.496	-74.36	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2006	2300_L6_NJ06-0035	39.496	-74.36	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2006	2300_L6_NJ06-0035	39.496	-74.36	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Prog New Jersey Atlantic Coast 2006	2300_L6_NJ06-0035	39.496	-74.36	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ00-0035	39.505	-74.399	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ00-0035	39.505	-74.399	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ00-0035	39.505	-74.399	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ00-0035	39.505	-74.399	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ00-0035	39.505	-74.399	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ00-0035	39.505	-74.399	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ00-0035	39.505	-74.399	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ00-0035	39.505	-74.399	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ00-0035	39.505	-74.399	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ00-0035	39.505	-74.399	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ00-0035	39.505	-74.399	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ00-0035	39.505	-74.399	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ00-0035	39.505	-74.399	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ00-0035	39.505	-74.399	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ00-0035	39.505	-74.399	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ00-0035	39.505	-74.399	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ00-0035	39.505	-74.399	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ01-0036	39.511	-74.297	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ01-0036	39.511	-74.297	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ01-0036	39.511	-74.297	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ01-0036	39.511	-74.297	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ01-0036	39.511	-74.297	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ01-0036	39.511	-74.297	0	2

Table B3-2. Comparison of estuarine, regional reference chemistry data to ERL and ERMs

Area_of_Interest	Dataset	Study	Location	Latitude	Longitude	Upper_Depth	Lower_Depth
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ01-0036	39.511	-74.297	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ01-0036	39.511	-74.297	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ01-0036	39.511	-74.297	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ01-0036	39.511	-74.297	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ01-0036	39.511	-74.297	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ01-0036	39.511	-74.297	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ01-0036	39.511	-74.297	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ01-0036	39.511	-74.297	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ01-0036	39.511	-74.297	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ01-0036	39.511	-74.297	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ01-0036	39.511	-74.297	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ01-0036	39.511	-74.297	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ01-0036	39.511	-74.297	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ01-0036	39.511	-74.297	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ01-0036	39.511	-74.297	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ01-0038	39.557	-74.48	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ01-0038	39.557	-74.48	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ01-0038	39.557	-74.48	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ01-0038	39.557	-74.48	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ01-0038	39.557	-74.48	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ01-0038	39.557	-74.48	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ01-0038	39.557	-74.48	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ01-0038	39.557	-74.48	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ01-0038	39.557	-74.48	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ01-0038	39.557	-74.48	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ01-0038	39.557	-74.48	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ01-0038	39.557	-74.48	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ01-0038	39.557	-74.48	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ01-0038	39.557	-74.48	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ01-0038	39.557	-74.48	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2000	NJ01-0038	39.557	-74.48	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2001	NJ01-0116	39.535	-74.377	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2001	NJ01-0116	39.535	-74.377	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2001	NJ01-0116	39.535	-74.377	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2001	NJ01-0116	39.535	-74.377	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2001	NJ01-0116	39.535	-74.377	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2001	NJ01-0116	39.535	-74.377	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2001	NJ01-0116	39.535	-74.377	0	2

Table B3-2. Comparison of estuarine, regional reference chemistry data to ERL and ERMs

Area_of_Interest	Dataset	Study	Location	Latitude	Longitude	Upper_Depth	Lower_Depth
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2001	NJ01-0116	39.535	-74.377	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2001	NJ01-0116	39.535	-74.377	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2001	NJ01-0116	39.535	-74.377	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2001	NJ01-0116	39.535	-74.377	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2001	NJ01-0116	39.535	-74.377	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2001	NJ01-0116	39.535	-74.377	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2001	NJ01-0116	39.535	-74.377	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2001	NJ01-0116	39.535	-74.377	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2001	NJ01-0116	39.535	-74.377	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2001	NJ01-0116	39.535	-74.377	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2001	NJ01-0116	39.535	-74.377	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2001	NJ01-0116	39.535	-74.377	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2001	NJ01-0116	39.535	-74.377	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2001	NJ01-0116	39.535	-74.377	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2001	NJ01-0116	39.535	-74.377	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2001	NJ01-0118	39.553	-74.454	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2001	NJ01-0118	39.553	-74.454	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2001	NJ01-0118	39.553	-74.454	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2001	NJ01-0118	39.553	-74.454	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2001	NJ01-0118	39.553	-74.454	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2001	NJ01-0118	39.553	-74.454	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2001	NJ01-0118	39.553	-74.454	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2001	NJ01-0118	39.553	-74.454	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2001	NJ01-0118	39.553	-74.454	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2001	NJ01-0118	39.553	-74.454	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2001	NJ01-0118	39.553	-74.454	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2001	NJ01-0118	39.553	-74.454	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2001	NJ01-0118	39.553	-74.454	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2001	NJ01-0118	39.553	-74.454	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2001	NJ01-0118	39.553	-74.454	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2001	NJ01-0118	39.553	-74.454	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2001	NJ01-0118	39.553	-74.454	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2001	NJ01-0118	39.553	-74.454	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2001	NJ01-0122	39.585	-74.538	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2001	NJ01-0122	39.585	-74.538	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2001	NJ01-0122	39.585	-74.538	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2001	NJ01-0122	39.585	-74.538	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2001	NJ01-0122	39.585	-74.538	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2001	NJ01-0122	39.585	-74.538	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2001	NJ01-0122	39.585	-74.538	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2001	NJ01-0122	39.585	-74.538	0	2

Table B3-2. Comparison of estuarine, regional reference chemistry data to ERL and ERMs

Area_of_Interest	Dataset	Study	Location	Latitude	Longitude	Upper_Depth	Lower_Depth
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2001	NJ01-0122	39.585	-74.538	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2001	NJ01-0122	39.585	-74.538	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2001	NJ01-0122	39.585	-74.538	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2001	NJ01-0122	39.585	-74.538	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2001	NJ01-0122	39.585	-74.538	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2001	NJ01-0122	39.585	-74.538	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2001	NJ01-0122	39.585	-74.538	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2001	NJ01-0122	39.585	-74.538	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2001	NJ01-0122	39.585	-74.538	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2001	NJ01-0122	39.585	-74.538	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2001	NJ01-0122	39.585	-74.538	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2001	NJ01-0122	39.585	-74.538	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2001	NJ01-0122	39.585	-74.538	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2001	NJ01-0122	39.585	-74.538	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2001	NJ01-0122	39.585	-74.538	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2002	NJ02-0227	39.498	-74.334	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2002	NJ02-0227	39.498	-74.334	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2002	NJ02-0227	39.498	-74.334	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2002	NJ02-0227	39.498	-74.334	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2002	NJ02-0227	39.498	-74.334	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2002	NJ02-0227	39.498	-74.334	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2002	NJ02-0227	39.498	-74.334	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2002	NJ02-0227	39.498	-74.334	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2002	NJ02-0227	39.498	-74.334	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2002	NJ02-0227	39.498	-74.334	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2002	NJ02-0227	39.498	-74.334	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2002	NJ02-0227	39.498	-74.334	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2002	NJ02-0227	39.498	-74.334	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2002	NJ02-0227	39.498	-74.334	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2002	NJ02-0227	39.498	-74.334	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2002	NJ02-0227	39.498	-74.334	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2002	NJ02-0227	39.498	-74.334	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2002	NJ02-0227	39.498	-74.334	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2002	NJ02-0227	39.498	-74.334	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2002	NJ02-0227	39.498	-74.334	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2002	NJ02-0229	39.582	-74.536	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2002	NJ02-0229	39.582	-74.536	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2002	NJ02-0229	39.582	-74.536	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2002	NJ02-0229	39.582	-74.536	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2002	NJ02-0229	39.582	-74.536	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2002	NJ02-0229	39.582	-74.536	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2002	NJ02-0229	39.582	-74.536	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2002	NJ02-0229	39.582	-74.536	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2002	NJ02-0229	39.582	-74.536	0	2

Table B3-2. Comparison of estuarine, regional reference chemistry data to ERL and ERMs

Area_of_Interest	Dataset	Study	Location	Latitude	Longitude	Upper_Depth	Lower_Depth
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2002	NJ02-0229	39.582	-74.536	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2002	NJ02-0229	39.582	-74.536	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2002	NJ02-0229	39.582	-74.536	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2002	NJ02-0229	39.582	-74.536	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2002	NJ02-0229	39.582	-74.536	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2002	NJ02-0229	39.582	-74.536	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2002	NJ02-0229	39.582	-74.536	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2002	NJ02-0229	39.582	-74.536	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2002	NJ02-0229	39.582	-74.536	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2002	NJ02-0229	39.582	-74.536	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2002	NJ02-0229	39.582	-74.536	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2002	NJ02-0229	39.582	-74.536	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2002	NJ02-0229	39.582	-74.536	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2002	NJ02-0230	39.537	-74.334	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2002	NJ02-0230	39.537	-74.334	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2002	NJ02-0230	39.537	-74.334	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2002	NJ02-0230	39.537	-74.334	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2002	NJ02-0230	39.537	-74.334	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2002	NJ02-0230	39.537	-74.334	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2002	NJ02-0230	39.537	-74.334	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2002	NJ02-0230	39.537	-74.334	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2002	NJ02-0230	39.537	-74.334	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2002	NJ02-0230	39.537	-74.334	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2002	NJ02-0230	39.537	-74.334	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2002	NJ02-0230	39.537	-74.334	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2002	NJ02-0230	39.537	-74.334	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2002	NJ02-0230	39.537	-74.334	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2002	NJ02-0230	39.537	-74.334	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCA Program New Jersey Atlantic Coast 2002	NJ02-0230	39.537	-74.334	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCCA Program 2010	NCCA10-2622	39.50785	-74.33571	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCCA Program 2010	NCCA10-2622	39.50785	-74.33571	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCCA Program 2010	NCCA10-2622	39.50785	-74.33571	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCCA Program 2010	NCCA10-2622	39.50785	-74.33571	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCCA Program 2010	NCCA10-2622	39.50785	-74.33571	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCCA Program 2010	NCCA10-2622	39.50785	-74.33571	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCCA Program 2010	NCCA10-2622	39.50785	-74.33571	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCCA Program 2010	NCCA10-2622	39.50785	-74.33571	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCCA Program 2010	NCCA10-2622	39.50785	-74.33571	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCCA Program 2010	NCCA10-2622	39.50785	-74.33571	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCCA Program 2010	NCCA10-2622	39.50785	-74.33571	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCCA Program 2010	NCCA10-2622	39.50785	-74.33571	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCCA Program 2010	NCCA10-2622	39.50785	-74.33571	0	2

Table B3-2. Comparison of estuarine, regional reference chemistry data to ERL and ERMs

Area_of_Interest	Dataset	Study	Location	Latitude	Longitude	Upper_Depth	Lower_Depth
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCCA Program 2010	NCCA10-2622	39.50785	-74.33571	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCCA Program 2010	NCCA10-2622	39.50785	-74.33571	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCCA Program 2010	NCCA10-2622	39.50785	-74.33571	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCCA Program 2010	NCCA10-2622	39.50785	-74.33571	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCCA Program 2010	NCCA10-2622	39.50785	-74.33571	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCCA Program 2010	NCCA10-2622	39.50785	-74.33571	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCCA Program 2010	NCCA10-2622	39.50785	-74.33571	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCCA Program 2010	NCCA10-2622	39.50785	-74.33571	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCCA Program 2010	NCCA10-2622	39.50785	-74.33571	0	2
Mullica River and Great Bay	Regional sediment (estuarine SQT)	NCCA Program 2010	NCCA10-2622	39.50785	-74.33571	0	2

ERL -- effect range-low
ERM -- effect range-median
EF -- exceedance factor

Table B3-2 presents the regional reference data from Jamaica Bay (urban estuary) and Mullica River and Great Bay (non-urban estuary), which are used to quantify referenc
Specifically, Table B3-2 provides sample information and sediment chemical concentrations as well as the results of a screen of chemical concentrations against effect range
guidelines. The results of the sediment chemical concentration screen of regional data is presented in Table B3-3. The purpose of the chemical screen is to identify samples t

Depth_Unit	Sample_Date	Sort	Chemical_Group	Chemical	Detected	Result	Qual	Units	ERL	Value/ERL	ERL EF ≥ 1	ERM
cm	8/24/1999	A03	Metals	Arsenic	Yes	1.1	J	mg/kg	8.2	0.13	0	70
cm	8/24/1999	A07	Metals	Cadmium	Yes	0.0972	V	mg/kg	1.2	0.081	0	9.6
cm	8/24/1999	A09	Metals	Chromium	Yes	4		mg/kg	81	0.049	0	370
cm	8/24/1999	A11	Metals	Copper	Yes	1.9	J	mg/kg	34	0.056	0	270
cm	8/24/1999	A13	Metals	Lead	Yes	5.2		mg/kg	47	0.11	0	218
cm	8/24/1999	A16	Metals	Mercury	Yes	27.2	V	ug/kg	150	0.18	0	710
cm	8/24/1999	A18	Metals	Nickel	Yes	1.7	J	mg/kg	21	0.081	0	52
cm	8/24/1999	A21	Metals	Silver	No	0.21	U	mg/kg	1	0.21	0	3.7
cm	8/24/1999	A26	Metals	Zinc	Yes	12.1		mg/kg	150	0.081	0	410
cm	8/24/1999	C05	PAHs	2-Methylnaphthalene	Yes	4	BJ	ug/kg	70	0.057	0	670
cm	8/24/1999	C06	PAHs	Acenaphthene	No	1	U	ug/kg	16	0.063	0	500
cm	8/24/1999	C07	PAHs	Acenaphthylene	No	1	U	ug/kg	44	0.023	0	640
cm	8/24/1999	C08	PAHs	Anthracene	No	1	U	ug/kg	85	0.012	0	1100
cm	8/24/1999	C09	PAHs	Benzo(a)anthracene	No	2	U	ug/kg	261	0.0077	0	1600
cm	8/24/1999	C10	PAHs	Benzo(a)pyrene	No	3	U	ug/kg	430	0.007	0	1600
cm	8/24/1999	C15	PAHs	Chrysene	Yes	2	J	ug/kg	384	0.0052	0	2800
cm	8/24/1999	C16	PAHs	Dibenzo(a,h)anthracene	No	6	U	ug/kg	63	0.095	0	260
cm	8/24/1999	C18	PAHs	Fluoranthene	Yes	4	J	ug/kg	600	0.0067	0	5100
cm	8/24/1999	C19	PAHs	Fluorene	No	1	U	ug/kg	19	0.053	0	540
cm	8/24/1999	C21	PAHs	Naphthalene	Yes	7	BJ	ug/kg	160	0.044	0	2100
cm	8/24/1999	C23	PAHs	Phenanthrene	Yes	3	J	ug/kg	240	0.013	0	1500
cm	8/24/1999	C24	PAHs	Pyrene	Yes	4	BJ	ug/kg	665	0.006	0	2600
cm	8/24/1999	C37	PAHs	Total PAHs	Yes	20	J	ug/kg	4000	0.005	0	45000
cm	8/24/1999	G210	PCB Congeners	Total PCB Congeners	Yes	2	J	ug/kg	23	0.087	0	180
cm	8/24/1999	J05	OC Pesticides	4,4'-DDE	Yes	0.11		ug/kg	2.2	0.05	0	27
cm	8/24/1999	J43	OC Pesticides	Total DDx	Yes	0.32	J	ug/kg	1.6	0.2	0	46
cm	8/9/2005	A03	Metals	Arsenic	Yes	6.94		mg/kg	8.2	0.85	0	70
cm	8/9/2005	A07	Metals	Cadmium	Yes	2.23		mg/kg	1.2	1.9	1	9.6
cm	8/9/2005	A09	Metals	Chromium	Yes	31.9		mg/kg	81	0.39	0	370
cm	8/9/2005	A11	Metals	Copper	Yes	29.4		mg/kg	34	0.86	0	270
cm	8/9/2005	A13	Metals	Lead	Yes	39.3		mg/kg	47	0.84	0	218
cm	8/9/2005	A16	Metals	Mercury	Yes	264		ug/kg	150	1.8	1	710
cm	8/9/2005	A18	Metals	Nickel	Yes	13.7		mg/kg	21	0.65	0	52
cm	8/9/2005	A21	Metals	Silver	Yes	1.17		mg/kg	1	1.2	1	3.7
cm	8/9/2005	A26	Metals	Zinc	Yes	82		mg/kg	150	0.55	0	410
cm	8/9/2005	A03	Metals	Arsenic	Yes	15.3		mg/kg	8.2	1.9	1	70
cm	8/9/2005	A07	Metals	Cadmium	Yes	3		mg/kg	1.2	2.5	1	9.6
cm	8/9/2005	A09	Metals	Chromium	Yes	47.5		mg/kg	81	0.59	0	370
cm	8/9/2005	A11	Metals	Copper	Yes	100		mg/kg	34	2.9	1	270
cm	8/9/2005	A13	Metals	Lead	Yes	118		mg/kg	47	2.5	1	218
cm	8/9/2005	A16	Metals	Mercury	Yes	353		ug/kg	150	2.4	1	710
cm	8/9/2005	A18	Metals	Nickel	Yes	26.3		mg/kg	21	1.3	1	52
cm	8/9/2005	A21	Metals	Silver	Yes	2.92		mg/kg	1	2.9	1	3.7
cm	8/9/2005	A26	Metals	Zinc	Yes	296		mg/kg	150	2	1	410
cm	8/9/2005	C05	PAHs	2-Methylnaphthalene	Yes	15.3		ug/kg	70	0.22	0	670
cm	8/9/2005	C06	PAHs	Acenaphthene	Yes	14.9		ug/kg	16	0.93	0	500
cm	8/9/2005	C07	PAHs	Acenaphthylene	Yes	28.7		ug/kg	44	0.65	0	640
cm	8/9/2005	C08	PAHs	Anthracene	Yes	26.8		ug/kg	85	0.32	0	1100
cm	8/9/2005	C09	PAHs	Benzo(a)anthracene	Yes	172		ug/kg	261	0.66	0	1600

Depth_Unit	Sample_Date	Sort	Chemical_Group	Chemical	Detected	Result	Qual	Units	ERL	Value/ERL	ERL EF ≥ 1	ERM
cm	8/9/2005	C10	PAHs	Benzo(a)pyrene	Yes	328		ug/kg	430	0.76	0	1600
cm	8/9/2005	C15	PAHs	Chrysene	Yes	239		ug/kg	384	0.62	0	2800
cm	8/9/2005	C16	PAHs	Dibenzo(a,h)anthracene	Yes	31.6		ug/kg	63	0.5	0	260
cm	8/9/2005	C18	PAHs	Fluoranthene	Yes	514		ug/kg	600	0.86	0	5100
cm	8/9/2005	C19	PAHs	Fluorene	Yes	36.9		ug/kg	19	1.9	1	540
cm	8/9/2005	C21	PAHs	Naphthalene	Yes	14.9		ug/kg	160	0.093	0	2100
cm	8/9/2005	C24	PAHs	Pyrene	Yes	551		ug/kg	665	0.83	0	2600
cm	8/9/2005	C37	PAHs	Total PAHs	Yes	3000		ug/kg	4000	0.75	0	45000
cm	8/9/2005	J05	OC Pesticides	4,4'-DDE	Yes	12.6		ug/kg	2.2	5.7	1	27
cm	8/9/2005	J43	OC Pesticides	Total DDx	Yes	23		ug/kg	1.6	14	1	46
cm	8/1/2000	A03	Metals	Arsenic	No	1	U	mg/kg	8.2	0.12	0	70
cm	8/1/2000	A07	Metals	Cadmium	No	1	U	mg/kg	1.2	0.83	0	9.6
cm	8/1/2000	A09	Metals	Chromium	Yes	1		mg/kg	81	0.012	0	370
cm	8/1/2000	A11	Metals	Copper	No	1	U	mg/kg	34	0.029	0	270
cm	8/1/2000	A13	Metals	Lead	Yes	2		mg/kg	47	0.043	0	218
cm	8/1/2000	A16	Metals	Mercury	No	100	U	ug/kg	150	0.67	0	710
cm	8/1/2000	A18	Metals	Nickel	No	1	U	mg/kg	21	0.048	0	52
cm	8/1/2000	A21	Metals	Silver	No	1	U	mg/kg	1	1	1	3.7
cm	8/1/2000	A26	Metals	Zinc	Yes	7		mg/kg	150	0.047	0	410
cm	8/1/2000	C05	PAHs	2-Methylnaphthalene	Yes	1.18		ug/kg	70	0.017	0	670
cm	8/1/2000	C06	PAHs	Acenaphthene	Yes	0.68		ug/kg	16	0.043	0	500
cm	8/1/2000	C07	PAHs	Acenaphthylene	Yes	0.23		ug/kg	44	0.0052	0	640
cm	8/1/2000	C08	PAHs	Anthracene	Yes	0.57		ug/kg	85	0.0067	0	1100
cm	8/1/2000	C09	PAHs	Benzo(a)anthracene	Yes	1.11		ug/kg	261	0.0043	0	1600
cm	8/1/2000	C10	PAHs	Benzo(a)pyrene	Yes	1.38		ug/kg	430	0.0032	0	1600
cm	8/1/2000	C15	PAHs	Chrysene	Yes	0.8		ug/kg	384	0.0021	0	2800
cm	8/1/2000	C16	PAHs	Dibenzo(a,h)anthracene	Yes	0.25		ug/kg	63	0.004	0	260
cm	8/1/2000	C18	PAHs	Fluoranthene	Yes	3.63		ug/kg	600	0.0061	0	5100
cm	8/1/2000	C19	PAHs	Fluorene	Yes	1.57		ug/kg	19	0.083	0	540
cm	8/1/2000	C21	PAHs	Naphthalene	Yes	0.99		ug/kg	160	0.0062	0	2100
cm	8/1/2000	C24	PAHs	Pyrene	Yes	2.28		ug/kg	665	0.0034	0	2600
cm	8/1/2000	C37	PAHs	Total PAHs	Yes	18		ug/kg	4000	0.0045	0	45000
cm	8/1/2000	J05	OC Pesticides	4,4'-DDE	No	1	U	ug/kg	2.2	0.45	0	27
cm	8/1/2000	J43	OC Pesticides	Total DDx	No	1	U	ug/kg	1.6	0.63	0	46
cm	8/21/2001	A03	Metals	Arsenic	Yes	1		mg/kg	8.2	0.12	0	70
cm	8/21/2001	A07	Metals	Cadmium	No	1	U	mg/kg	1.2	0.83	0	9.6
cm	8/21/2001	A09	Metals	Chromium	Yes	5		mg/kg	81	0.062	0	370
cm	8/21/2001	A11	Metals	Copper	Yes	4		mg/kg	34	0.12	0	270
cm	8/21/2001	A13	Metals	Lead	Yes	5		mg/kg	47	0.11	0	218
cm	8/21/2001	A16	Metals	Mercury	No	50	U	ug/kg	150	0.33	0	710
cm	8/21/2001	A18	Metals	Nickel	Yes	3		mg/kg	21	0.14	0	52
cm	8/21/2001	A21	Metals	Silver	No	1	U	mg/kg	1	1	1	3.7
cm	8/21/2001	A26	Metals	Zinc	Yes	14		mg/kg	150	0.093	0	410
cm	8/21/2001	C05	PAHs	2-Methylnaphthalene	Yes	0.15		ug/kg	70	0.0021	0	670
cm	8/21/2001	C06	PAHs	Acenaphthene	Yes	0.07		ug/kg	16	0.0044	0	500
cm	8/21/2001	C07	PAHs	Acenaphthylene	Yes	0.05		ug/kg	44	0.0011	0	640
cm	8/21/2001	C08	PAHs	Anthracene	Yes	0.24		ug/kg	85	0.0028	0	1100
cm	8/21/2001	C09	PAHs	Benzo(a)anthracene	Yes	0.58		ug/kg	261	0.0022	0	1600
cm	8/21/2001	C10	PAHs	Benzo(a)pyrene	Yes	0.8		ug/kg	430	0.0019	0	1600

Depth_Unit	Sample_Date	Sort	Chemical_Group	Chemical	Detected	Result	Qual	Units	ERL	Value/ERL	ERL EF ≥ 1	ERM
cm	8/21/2001	C15	PAHs	Chrysene	Yes	0.52		ug/kg	384	0.0014	0	2800
cm	8/21/2001	C16	PAHs	Dibenzo(a,h)anthracene	No	1	U	ug/kg	63	0.016	0	260
cm	8/21/2001	C18	PAHs	Fluoranthene	Yes	1.13		ug/kg	600	0.0019	0	5100
cm	8/21/2001	C19	PAHs	Fluorene	Yes	0.1		ug/kg	19	0.0053	0	540
cm	8/21/2001	C21	PAHs	Naphthalene	Yes	0.16		ug/kg	160	0.001	0	2100
cm	8/21/2001	C24	PAHs	Pyrene	Yes	1.27		ug/kg	665	0.0019	0	2600
cm	8/21/2001	C37	PAHs	Total PAHs	Yes	7.1		ug/kg	4000	0.0018	0	45000
cm	8/21/2001	J05	OC Pesticides	4,4'-DDE	No	1	U	ug/kg	2.2	0.45	0	27
cm	8/14/2002	A03	Metals	Arsenic	No	1	U	mg/kg	8.2	0.12	0	70
cm	8/14/2002	A07	Metals	Cadmium	No	0.4	U	mg/kg	1.2	0.33	0	9.6
cm	8/14/2002	A09	Metals	Chromium	Yes	1.39		mg/kg	81	0.017	0	370
cm	8/14/2002	A11	Metals	Copper	Yes	1.04		mg/kg	34	0.031	0	270
cm	8/14/2002	A13	Metals	Lead	Yes	2.62		mg/kg	47	0.056	0	218
cm	8/14/2002	A16	Metals	Mercury	No	50	U	ug/kg	150	0.33	0	710
cm	8/14/2002	A18	Metals	Nickel	Yes	0.43		mg/kg	21	0.02	0	52
cm	8/14/2002	A21	Metals	Silver	Yes	0.67		mg/kg	1	0.67	0	3.7
cm	8/14/2002	A26	Metals	Zinc	Yes	4.81		mg/kg	150	0.032	0	410
cm	8/14/2002	C05	PAHs	2-Methylnaphthalene	Yes	0.29		ug/kg	70	0.0041	0	670
cm	8/14/2002	C06	PAHs	Acenaphthene	Yes	0.07		ug/kg	16	0.0044	0	500
cm	8/14/2002	C07	PAHs	Acenaphthylene	No	1	U	ug/kg	44	0.023	0	640
cm	8/14/2002	C08	PAHs	Anthracene	Yes	0.06		ug/kg	85	0.00071	0	1100
cm	8/14/2002	C09	PAHs	Benzo(a)anthracene	Yes	0.15		ug/kg	261	0.00057	0	1600
cm	8/14/2002	C10	PAHs	Benzo(a)pyrene	Yes	0.12		ug/kg	430	0.00028	0	1600
cm	8/14/2002	C15	PAHs	Chrysene	Yes	0.11		ug/kg	384	0.00029	0	2800
cm	8/14/2002	C16	PAHs	Dibenzo(a,h)anthracene	No	1	U	ug/kg	63	0.016	0	260
cm	8/14/2002	C18	PAHs	Fluoranthene	Yes	1		ug/kg	600	0.0017	0	5100
cm	8/14/2002	C19	PAHs	Fluorene	Yes	0.11		ug/kg	19	0.0058	0	540
cm	8/14/2002	C21	PAHs	Naphthalene	Yes	0.41		ug/kg	160	0.0026	0	2100
cm	8/14/2002	C24	PAHs	Pyrene	Yes	0.55		ug/kg	665	0.00083	0	2600
cm	8/14/2002	C37	PAHs	Total PAHs	Yes	3.1		ug/kg	4000	0.00078	0	45000
cm	8/14/2002	J05	OC Pesticides	4,4'-DDE	No	1	U	ug/kg	2.2	0.45	0	27
cm	8/14/2002	J43	OC Pesticides	Total DDx	Yes	1		ug/kg	1.6	0.63	0	46
cm	8/14/2002	A03	Metals	Arsenic	Yes	9.6		mg/kg	8.2	1.2	1	70
cm	8/14/2002	A07	Metals	Cadmium	Yes	1.84		mg/kg	1.2	1.5	1	9.6
cm	8/14/2002	A09	Metals	Chromium	Yes	40.2		mg/kg	81	0.5	0	370
cm	8/14/2002	A11	Metals	Copper	Yes	88.8		mg/kg	34	2.6	1	270
cm	8/14/2002	A13	Metals	Lead	Yes	75.5		mg/kg	47	1.6	1	218
cm	8/14/2002	A16	Metals	Mercury	Yes	420		ug/kg	150	2.8	1	710
cm	8/14/2002	A18	Metals	Nickel	Yes	17.3		mg/kg	21	0.82	0	52
cm	8/14/2002	A21	Metals	Silver	Yes	1.93		mg/kg	1	1.9	1	3.7
cm	8/14/2002	A26	Metals	Zinc	Yes	197		mg/kg	150	1.3	1	410
cm	8/14/2002	C05	PAHs	2-Methylnaphthalene	Yes	0.92		ug/kg	70	0.013	0	670
cm	8/14/2002	C06	PAHs	Acenaphthene	Yes	0.44		ug/kg	16	0.028	0	500
cm	8/14/2002	C07	PAHs	Acenaphthylene	Yes	0.44		ug/kg	44	0.01	0	640
cm	8/14/2002	C08	PAHs	Anthracene	Yes	2.15		ug/kg	85	0.025	0	1100
cm	8/14/2002	C09	PAHs	Benzo(a)anthracene	Yes	10.4		ug/kg	261	0.04	0	1600
cm	8/14/2002	C10	PAHs	Benzo(a)pyrene	Yes	13		ug/kg	430	0.03	0	1600
cm	8/14/2002	C15	PAHs	Chrysene	Yes	7.61		ug/kg	384	0.02	0	2800
cm	8/14/2002	C16	PAHs	Dibenzo(a,h)anthracene	Yes	1.59		ug/kg	63	0.025	0	260

Depth_Unit	Sample_Date	Sort	Chemical_Group	Chemical	Detected	Result	Qual	Units	ERL	Value/ERL	ERL EF ≥ 1	ERM
cm	8/14/2002	C18	PAHs	Fluoranthene	Yes	25.2		ug/kg	600	0.042	0	5100
cm	8/14/2002	C19	PAHs	Fluorene	Yes	0.86		ug/kg	19	0.045	0	540
cm	8/14/2002	C21	PAHs	Naphthalene	Yes	1.13		ug/kg	160	0.0071	0	2100
cm	8/14/2002	C24	PAHs	Pyrene	Yes	23.1		ug/kg	665	0.035	0	2600
cm	8/14/2002	C37	PAHs	Total PAHs	Yes	130		ug/kg	4000	0.033	0	45000
cm	8/14/2002	J05	OC Pesticides	4,4'-DDE	Yes	4.1		ug/kg	2.2	1.9	1	27
cm	8/14/2002	J43	OC Pesticides	Total DDx	Yes	11		ug/kg	1.6	6.9	1	46
cm	8/14/2002	A03	Metals	Arsenic	Yes	11.8		mg/kg	8.2	1.4	1	70
cm	8/14/2002	A07	Metals	Cadmium	Yes	2.93		mg/kg	1.2	2.4	1	9.6
cm	8/14/2002	A09	Metals	Chromium	Yes	55.9		mg/kg	81	0.69	0	370
cm	8/14/2002	A11	Metals	Copper	Yes	196		mg/kg	34	5.8	1	270
cm	8/14/2002	A13	Metals	Lead	Yes	195		mg/kg	47	4.1	1	218
cm	8/14/2002	A16	Metals	Mercury	Yes	590		ug/kg	150	3.9	1	710
cm	8/14/2002	A18	Metals	Nickel	Yes	24.3		mg/kg	21	1.2	1	52
cm	8/14/2002	A21	Metals	Silver	Yes	2.41		mg/kg	1	2.4	1	3.7
cm	8/14/2002	A26	Metals	Zinc	Yes	451		mg/kg	150	3	1	410
cm	8/14/2002	C05	PAHs	2-Methylnaphthalene	Yes	1.31		ug/kg	70	0.019	0	670
cm	8/14/2002	C06	PAHs	Acenaphthene	Yes	1.99		ug/kg	16	0.12	0	500
cm	8/14/2002	C07	PAHs	Acenaphthylene	Yes	1.25		ug/kg	44	0.028	0	640
cm	8/14/2002	C08	PAHs	Anthracene	Yes	5.43		ug/kg	85	0.064	0	1100
cm	8/14/2002	C09	PAHs	Benzo(a)anthracene	Yes	20.7		ug/kg	261	0.079	0	1600
cm	8/14/2002	C10	PAHs	Benzo(a)pyrene	Yes	29		ug/kg	430	0.067	0	1600
cm	8/14/2002	C15	PAHs	Chrysene	Yes	27		ug/kg	384	0.07	0	2800
cm	8/14/2002	C16	PAHs	Dibenzo(a,h)anthracene	Yes	3.7		ug/kg	63	0.059	0	260
cm	8/14/2002	C18	PAHs	Fluoranthene	Yes	55.4		ug/kg	600	0.092	0	5100
cm	8/14/2002	C19	PAHs	Fluorene	Yes	2.78		ug/kg	19	0.15	0	540
cm	8/14/2002	C21	PAHs	Naphthalene	Yes	2.1		ug/kg	160	0.013	0	2100
cm	8/14/2002	C24	PAHs	Pyrene	Yes	52.1		ug/kg	665	0.078	0	2600
cm	8/14/2002	C37	PAHs	Total PAHs	Yes	310		ug/kg	4000	0.078	0	45000
cm	8/14/2002	J05	OC Pesticides	4,4'-DDE	Yes	10		ug/kg	2.2	4.5	1	27
cm	8/14/2002	J43	OC Pesticides	Total DDx	Yes	10		ug/kg	1.6	6.3	1	46
cm	8/5/2003	A03	Metals	Arsenic	No	1	U	mg/kg	8.2	0.12	0	70
cm	8/5/2003	A07	Metals	Cadmium	No	0.4	U	mg/kg	1.2	0.33	0	9.6
cm	8/5/2003	A09	Metals	Chromium	Yes	2.88		mg/kg	81	0.036	0	370
cm	8/5/2003	A11	Metals	Copper	Yes	7.28		mg/kg	34	0.21	0	270
cm	8/5/2003	A13	Metals	Lead	Yes	5.23		mg/kg	47	0.11	0	218
cm	8/5/2003	A16	Metals	Mercury	No	10	U	ug/kg	150	0.067	0	710
cm	8/5/2003	A18	Metals	Nickel	Yes	2.56		mg/kg	21	0.12	0	52
cm	8/5/2003	A21	Metals	Silver	No	0.4	U	mg/kg	1	0.4	0	3.7
cm	8/5/2003	A26	Metals	Zinc	Yes	21.4		mg/kg	150	0.14	0	410
cm	8/5/2003	C05	PAHs	2-Methylnaphthalene	Yes	0.11		ug/kg	70	0.0016	0	670
cm	8/5/2003	C06	PAHs	Acenaphthene	No	0.07	U	ug/kg	16	0.0044	0	500
cm	8/5/2003	C07	PAHs	Acenaphthylene	No	0.07	U	ug/kg	44	0.0016	0	640
cm	8/5/2003	C08	PAHs	Anthracene	Yes	0.04		ug/kg	85	0.00047	0	1100
cm	8/5/2003	C09	PAHs	Benzo(a)anthracene	Yes	0.71		ug/kg	261	0.0027	0	1600
cm	8/5/2003	C10	PAHs	Benzo(a)pyrene	Yes	0.84		ug/kg	430	0.002	0	1600
cm	8/5/2003	C15	PAHs	Chrysene	Yes	0.72		ug/kg	384	0.0019	0	2800
cm	8/5/2003	C16	PAHs	Dibenzo(a,h)anthracene	Yes	0.14		ug/kg	63	0.0022	0	260
cm	8/5/2003	C18	PAHs	Fluoranthene	Yes	1.44		ug/kg	600	0.0024	0	5100

Depth_Unit	Sample_Date	Sort	Chemical_Group	Chemical	Detected	Result	Qual	Units	ERL	Value/ERL	ERL EF ≥ 1	ERM
cm	8/5/2003	C19	PAHs	Fluorene	Yes	0.07		ug/kg	19	0.0037	0	540
cm	8/5/2003	C21	PAHs	Naphthalene	Yes	0.26		ug/kg	160	0.0016	0	2100
cm	8/5/2003	C24	PAHs	Pyrene	Yes	1.02		ug/kg	665	0.0015	0	2600
cm	8/5/2003	C37	PAHs	Total PAHs	Yes	8.6		ug/kg	4000	0.0022	0	45000
cm	8/5/2003	J05	OC Pesticides	4,4'-DDE	No	1.6	U	ug/kg	2.2	0.73	0	27
cm	8/5/2003	J43	OC Pesticides	Total DDx	No	1.6	U	ug/kg	1.6	1	1	46
cm	8/3/2004	A03	Metals	Arsenic	Yes	10.1		mg/kg	8.2	1.2	1	70
cm	8/3/2004	A07	Metals	Cadmium	Yes	1.45		mg/kg	1.2	1.2	1	9.6
cm	8/3/2004	A09	Metals	Chromium	Yes	41.8		mg/kg	81	0.52	0	370
cm	8/3/2004	A11	Metals	Copper	Yes	52.5		mg/kg	34	1.5	1	270
cm	8/3/2004	A13	Metals	Lead	Yes	64		mg/kg	47	1.4	1	218
cm	8/3/2004	A16	Metals	Mercury	Yes	520		ug/kg	150	3.5	1	710
cm	8/3/2004	A18	Metals	Nickel	Yes	16.8		mg/kg	21	0.8	0	52
cm	8/3/2004	A21	Metals	Silver	No	0.4	U	mg/kg	1	0.4	0	3.7
cm	8/3/2004	A26	Metals	Zinc	Yes	123		mg/kg	150	0.82	0	410
cm	8/3/2004	C05	PAHs	2-Methylnaphthalene	Yes	18.5		ug/kg	70	0.26	0	670
cm	8/3/2004	C06	PAHs	Acenaphthene	Yes	7.6		ug/kg	16	0.48	0	500
cm	8/3/2004	C07	PAHs	Acenaphthylene	Yes	9.4		ug/kg	44	0.21	0	640
cm	8/3/2004	C08	PAHs	Anthracene	Yes	26.5		ug/kg	85	0.31	0	1100
cm	8/3/2004	C09	PAHs	Benzo(a)anthracene	Yes	69.3		ug/kg	261	0.27	0	1600
cm	8/3/2004	C10	PAHs	Benzo(a)pyrene	Yes	90.4		ug/kg	430	0.21	0	1600
cm	8/3/2004	C15	PAHs	Chrysene	Yes	63.4		ug/kg	384	0.17	0	2800
cm	8/3/2004	C16	PAHs	Dibenzo(a,h)anthracene	Yes	12.1		ug/kg	63	0.19	0	260
cm	8/3/2004	C18	PAHs	Fluoranthene	Yes	130		ug/kg	600	0.22	0	5100
cm	8/3/2004	C19	PAHs	Fluorene	Yes	11.6		ug/kg	19	0.61	0	540
cm	8/3/2004	C21	PAHs	Naphthalene	Yes	28.1		ug/kg	160	0.18	0	2100
cm	8/3/2004	C24	PAHs	Pyrene	Yes	127		ug/kg	665	0.19	0	2600
cm	8/3/2004	C37	PAHs	Total PAHs	Yes	900		ug/kg	4000	0.23	0	45000
cm	8/3/2004	J05	OC Pesticides	4,4'-DDE	Yes	2.9		ug/kg	2.2	1.3	1	27
cm	8/3/2004	J43	OC Pesticides	Total DDx	Yes	7.9		ug/kg	1.6	4.9	1	46
cm	8/4/1998	A03	Metals	Arsenic	Yes	12		mg/kg	8.2	1.5	1	70
cm	8/4/1998	A07	Metals	Cadmium	Yes	1		mg/kg	1.2	0.83	0	9.6
cm	8/4/1998	A09	Metals	Chromium	Yes	66		mg/kg	81	0.81	0	370
cm	8/4/1998	A11	Metals	Copper	Yes	88		mg/kg	34	2.6	1	270
cm	8/4/1998	A13	Metals	Lead	Yes	83		mg/kg	47	1.8	1	218
cm	8/4/1998	A16	Metals	Mercury	Yes	640		ug/kg	150	4.3	1	710
cm	8/4/1998	A18	Metals	Nickel	Yes	26		mg/kg	21	1.2	1	52
cm	8/4/1998	A21	Metals	Silver	Yes	2		mg/kg	1	2	1	3.7
cm	8/4/1998	A26	Metals	Zinc	Yes	173		mg/kg	150	1.2	1	410
cm	8/4/1998	C05	PAHs	2-Methylnaphthalene	Yes	44		ug/kg	70	0.63	0	670
cm	8/4/1998	C06	PAHs	Acenaphthene	No	0	U	ug/kg	16	0	0	500
cm	8/4/1998	C07	PAHs	Acenaphthylene	No	0	U	ug/kg	44	0	0	640
cm	8/4/1998	C08	PAHs	Anthracene	No	0	U	ug/kg	85	0	0	1100
cm	8/4/1998	C09	PAHs	Benzo(a)anthracene	Yes	260		ug/kg	261	1	1	1600
cm	8/4/1998	C10	PAHs	Benzo(a)pyrene	No	0	U	ug/kg	430	0	0	1600
cm	8/4/1998	C15	PAHs	Chrysene	Yes	330		ug/kg	384	0.86	0	2800
cm	8/4/1998	C16	PAHs	Dibenzo(a,h)anthracene	No	0	U	ug/kg	63	0	0	260
cm	8/4/1998	C18	PAHs	Fluoranthene	Yes	660		ug/kg	600	1.1	1	5100
cm	8/4/1998	C19	PAHs	Fluorene	No	0	U	ug/kg	19	0	0	540

Depth_Unit	Sample_Date	Sort	Chemical_Group	Chemical	Detected	Result	Qual	Units	ERL	Value/ERL	ERL EF ≥ 1	ERM
cm	8/4/1998	C21	PAHs	Naphthalene	Yes	70		ug/kg	160	0.44	0	2100
cm	8/4/1998	C23	PAHs	Phenanthrene	Yes	280		ug/kg	240	1.2	1	1500
cm	8/4/1998	C24	PAHs	Pyrene	Yes	540		ug/kg	665	0.81	0	2600
cm	8/4/1998	C37	PAHs	Total PAHs	Yes	2600		ug/kg	4000	0.65	0	45000
cm	8/4/1998	J05	OC Pesticides	4,4'-DDE	Yes	6.5		ug/kg	2.2	3	1	27
cm	8/4/1998	J43	OC Pesticides	Total DDx	Yes	6.5		ug/kg	1.6	4.1	1	46
cm	8/5/1998	A03	Metals	Arsenic	Yes	13		mg/kg	8.2	1.6	1	70
cm	8/5/1998	A07	Metals	Cadmium	Yes	0.8		mg/kg	1.2	0.67	0	9.6
cm	8/5/1998	A09	Metals	Chromium	Yes	65		mg/kg	81	0.8	0	370
cm	8/5/1998	A11	Metals	Copper	Yes	69		mg/kg	34	2	1	270
cm	8/5/1998	A13	Metals	Lead	Yes	82		mg/kg	47	1.7	1	218
cm	8/5/1998	A16	Metals	Mercury	Yes	620		ug/kg	150	4.1	1	710
cm	8/5/1998	A18	Metals	Nickel	Yes	26		mg/kg	21	1.2	1	52
cm	8/5/1998	A21	Metals	Silver	Yes	1.6		mg/kg	1	1.6	1	3.7
cm	8/5/1998	A26	Metals	Zinc	Yes	169		mg/kg	150	1.1	1	410
cm	8/5/1998	C05	PAHs	2-Methylnaphthalene	Yes	73		ug/kg	70	1	1	670
cm	8/5/1998	C06	PAHs	Acenaphthene	Yes	58		ug/kg	16	3.6	1	500
cm	8/5/1998	C07	PAHs	Acenaphthylene	Yes	95		ug/kg	44	2.2	1	640
cm	8/5/1998	C08	PAHs	Anthracene	Yes	220		ug/kg	85	2.6	1	1100
cm	8/5/1998	C09	PAHs	Benzo(a)anthracene	Yes	390		ug/kg	261	1.5	1	1600
cm	8/5/1998	C10	PAHs	Benzo(a)pyrene	Yes	440		ug/kg	430	1	1	1600
cm	8/5/1998	C15	PAHs	Chrysene	Yes	480		ug/kg	384	1.3	1	2800
cm	8/5/1998	C16	PAHs	Dibenzo(a,h)anthracene	No	0	U	ug/kg	63	0	0	260
cm	8/5/1998	C18	PAHs	Fluoranthene	Yes	1100		ug/kg	600	1.8	1	5100
cm	8/5/1998	C19	PAHs	Fluorene	No	0	U	ug/kg	19	0	0	540
cm	8/5/1998	C21	PAHs	Naphthalene	Yes	85		ug/kg	160	0.53	0	2100
cm	8/5/1998	C23	PAHs	Phenanthrene	Yes	470		ug/kg	240	2	1	1500
cm	8/5/1998	C24	PAHs	Pyrene	Yes	870		ug/kg	665	1.3	1	2600
cm	8/5/1998	C37	PAHs	Total PAHs	Yes	5000		ug/kg	4000	1.3	1	45000
cm	8/5/1998	J05	OC Pesticides	4,4'-DDE	Yes	10.1		ug/kg	2.2	4.6	1	27
cm	8/5/1998	J43	OC Pesticides	Total DDx	Yes	19		ug/kg	1.6	12	1	46
cm	8/7/1998	A03	Metals	Arsenic	Yes	9		mg/kg	8.2	1.1	1	70
cm	8/7/1998	A07	Metals	Cadmium	No	0	U	mg/kg	1.2	0	0	9.6
cm	8/7/1998	A09	Metals	Chromium	Yes	43		mg/kg	81	0.53	0	370
cm	8/7/1998	A11	Metals	Copper	Yes	36		mg/kg	34	1.1	1	270
cm	8/7/1998	A13	Metals	Lead	Yes	53		mg/kg	47	1.1	1	218
cm	8/7/1998	A16	Metals	Mercury	Yes	320		ug/kg	150	2.1	1	710
cm	8/7/1998	A18	Metals	Nickel	Yes	17		mg/kg	21	0.81	0	52
cm	8/7/1998	A21	Metals	Silver	Yes	0.8		mg/kg	1	0.8	0	3.7
cm	8/7/1998	A26	Metals	Zinc	Yes	91		mg/kg	150	0.61	0	410
cm	8/7/1998	C05	PAHs	2-Methylnaphthalene	No	0	U	ug/kg	70	0	0	670
cm	8/7/1998	C06	PAHs	Acenaphthene	No	0	U	ug/kg	16	0	0	500
cm	8/7/1998	C07	PAHs	Acenaphthylene	No	0	U	ug/kg	44	0	0	640
cm	8/7/1998	C08	PAHs	Anthracene	Yes	51		ug/kg	85	0.6	0	1100
cm	8/7/1998	C09	PAHs	Benzo(a)anthracene	Yes	110		ug/kg	261	0.42	0	1600
cm	8/7/1998	C10	PAHs	Benzo(a)pyrene	No	0	U	ug/kg	430	0	0	1600
cm	8/7/1998	C15	PAHs	Chrysene	Yes	120		ug/kg	384	0.31	0	2800
cm	8/7/1998	C16	PAHs	Dibenzo(a,h)anthracene	No	0	U	ug/kg	63	0	0	260
cm	8/7/1998	C18	PAHs	Fluoranthene	Yes	200		ug/kg	600	0.33	0	5100

Depth_Unit	Sample_Date	Sort	Chemical_Group	Chemical	Detected	Result	Qual	Units	ERL	Value/ERL	ERL EF ≥ 1	ERM
cm	8/7/1998	C19	PAHs	Fluorene	No	0	U	ug/kg	19	0	0	540
cm	8/7/1998	C21	PAHs	Naphthalene	Yes	54		ug/kg	160	0.34	0	2100
cm	8/7/1998	C23	PAHs	Phenanthrene	Yes	120		ug/kg	240	0.5	0	1500
cm	8/7/1998	C24	PAHs	Pyrene	Yes	200		ug/kg	665	0.3	0	2600
cm	8/7/1998	C37	PAHs	Total PAHs	Yes	1200		ug/kg	4000	0.3	0	45000
cm	8/7/1998	J05	OC Pesticides	4,4'-DDE	Yes	6.7		ug/kg	2.2	3	1	27
cm	8/7/1998	J43	OC Pesticides	Total DDx	Yes	6.7		ug/kg	1.6	4.2	1	46
cm	8/8/1998	A03	Metals	Arsenic	Yes	2		mg/kg	8.2	0.24	0	70
cm	8/8/1998	A07	Metals	Cadmium	No	0	U	mg/kg	1.2	0	0	9.6
cm	8/8/1998	A09	Metals	Chromium	Yes	9		mg/kg	81	0.11	0	370
cm	8/8/1998	A11	Metals	Copper	Yes	4		mg/kg	34	0.12	0	270
cm	8/8/1998	A13	Metals	Lead	Yes	11		mg/kg	47	0.23	0	218
cm	8/8/1998	A16	Metals	Mercury	No	0	U	ug/kg	150	0	0	710
cm	8/8/1998	A18	Metals	Nickel	Yes	3		mg/kg	21	0.14	0	52
cm	8/8/1998	A21	Metals	Silver	No	0	U	mg/kg	1	0	0	3.7
cm	8/8/1998	A26	Metals	Zinc	Yes	23		mg/kg	150	0.15	0	410
cm	8/8/1998	C05	PAHs	2-Methylnaphthalene	No	0	U	ug/kg	70	0	0	670
cm	8/8/1998	C06	PAHs	Acenaphthene	No	0	U	ug/kg	16	0	0	500
cm	8/8/1998	C07	PAHs	Acenaphthylene	No	0	U	ug/kg	44	0	0	640
cm	8/8/1998	C08	PAHs	Anthracene	No	0	U	ug/kg	85	0	0	1100
cm	8/8/1998	C09	PAHs	Benzo(a)anthracene	No	0	U	ug/kg	261	0	0	1600
cm	8/8/1998	C10	PAHs	Benzo(a)pyrene	No	0	U	ug/kg	430	0	0	1600
cm	8/8/1998	C15	PAHs	Chrysene	No	0	U	ug/kg	384	0	0	2800
cm	8/8/1998	C16	PAHs	Dibenzo(a,h)anthracene	No	0	U	ug/kg	63	0	0	260
cm	8/8/1998	C18	PAHs	Fluoranthene	No	0	U	ug/kg	600	0	0	5100
cm	8/8/1998	C19	PAHs	Fluorene	No	0	U	ug/kg	19	0	0	540
cm	8/8/1998	C21	PAHs	Naphthalene	No	0	U	ug/kg	160	0	0	2100
cm	8/8/1998	C23	PAHs	Phenanthrene	No	0	U	ug/kg	240	0	0	1500
cm	8/8/1998	C24	PAHs	Pyrene	No	0	U	ug/kg	665	0	0	2600
cm	8/8/1998	C37	PAHs	Total PAHs	No	0	U	ug/kg	4000	0	0	45000
cm	8/8/1998	J05	OC Pesticides	4,4'-DDE	No	0	U	ug/kg	2.2	0	0	27
cm	8/8/1998	J43	OC Pesticides	Total DDx	No	0	U	ug/kg	1.6	0	0	46
cm	8/3/1998	A03	Metals	Arsenic	Yes	10		mg/kg	8.2	1.2	1	70
cm	8/3/1998	A07	Metals	Cadmium	No	0	U	mg/kg	1.2	0	0	9.6
cm	8/3/1998	A09	Metals	Chromium	Yes	52		mg/kg	81	0.64	0	370
cm	8/3/1998	A11	Metals	Copper	Yes	46		mg/kg	34	1.4	1	270
cm	8/3/1998	A13	Metals	Lead	Yes	59		mg/kg	47	1.3	1	218
cm	8/3/1998	A16	Metals	Mercury	Yes	490		ug/kg	150	3.3	1	710
cm	8/3/1998	A18	Metals	Nickel	Yes	18		mg/kg	21	0.86	0	52
cm	8/3/1998	A21	Metals	Silver	Yes	1.1		mg/kg	1	1.1	1	3.7
cm	8/3/1998	A26	Metals	Zinc	Yes	117		mg/kg	150	0.78	0	410
cm	8/3/1998	C05	PAHs	2-Methylnaphthalene	No	0	U	ug/kg	70	0	0	670
cm	8/3/1998	C06	PAHs	Acenaphthene	No	0	U	ug/kg	16	0	0	500
cm	8/3/1998	C07	PAHs	Acenaphthylene	No	0	U	ug/kg	44	0	0	640
cm	8/3/1998	C08	PAHs	Anthracene	Yes	75		ug/kg	85	0.88	0	1100
cm	8/3/1998	C09	PAHs	Benzo(a)anthracene	No	0	U	ug/kg	261	0	0	1600
cm	8/3/1998	C10	PAHs	Benzo(a)pyrene	No	0	U	ug/kg	430	0	0	1600
cm	8/3/1998	C15	PAHs	Chrysene	Yes	160		ug/kg	384	0.42	0	2800
cm	8/3/1998	C16	PAHs	Dibenzo(a,h)anthracene	No	0	U	ug/kg	63	0	0	260

Depth_Unit	Sample_Date	Sort	Chemical_Group	Chemical	Detected	Result	Qual	Units	ERL	Value/ERL	ERL EF ≥ 1	ERM
cm	8/3/1998	C18	PAHs	Fluoranthene	Yes	270		ug/kg	600	0.45	0	5100
cm	8/3/1998	C19	PAHs	Fluorene	No	0	U	ug/kg	19	0	0	540
cm	8/3/1998	C21	PAHs	Naphthalene	Yes	67		ug/kg	160	0.42	0	2100
cm	8/3/1998	C23	PAHs	Phenanthrene	Yes	150		ug/kg	240	0.63	0	1500
cm	8/3/1998	C24	PAHs	Pyrene	Yes	240		ug/kg	665	0.36	0	2600
cm	8/3/1998	C37	PAHs	Total PAHs	Yes	1200		ug/kg	4000	0.3	0	45000
cm	8/3/1998	J05	OC Pesticides	4,4'-DDE	Yes	6.1		ug/kg	2.2	2.8	1	27
cm	8/3/1998	J43	OC Pesticides	Total DDx	Yes	6.1		ug/kg	1.6	3.8	1	46
cm	8/1/1998	A03	Metals	Arsenic	Yes	9		mg/kg	8.2	1.1	1	70
cm	8/1/1998	A07	Metals	Cadmium	No	0	U	mg/kg	1.2	0	0	9.6
cm	8/1/1998	A09	Metals	Chromium	Yes	45		mg/kg	81	0.56	0	370
cm	8/1/1998	A11	Metals	Copper	Yes	39		mg/kg	34	1.1	1	270
cm	8/1/1998	A13	Metals	Lead	Yes	50		mg/kg	47	1.1	1	218
cm	8/1/1998	A16	Metals	Mercury	Yes	500		ug/kg	150	3.3	1	710
cm	8/1/1998	A18	Metals	Nickel	Yes	16		mg/kg	21	0.76	0	52
cm	8/1/1998	A21	Metals	Silver	Yes	1		mg/kg	1	1	1	3.7
cm	8/1/1998	A26	Metals	Zinc	Yes	114		mg/kg	150	0.76	0	410
cm	8/1/1998	C05	PAHs	2-Methylnaphthalene	Yes	31		ug/kg	70	0.44	0	670
cm	8/1/1998	C06	PAHs	Acenaphthene	No	0	U	ug/kg	16	0	0	500
cm	8/1/1998	C07	PAHs	Acenaphthylene	Yes	50		ug/kg	44	1.1	1	640
cm	8/1/1998	C08	PAHs	Anthracene	Yes	90		ug/kg	85	1.1	1	1100
cm	8/1/1998	C09	PAHs	Benzo(a)anthracene	Yes	150		ug/kg	261	0.57	0	1600
cm	8/1/1998	C10	PAHs	Benzo(a)pyrene	Yes	190		ug/kg	430	0.44	0	1600
cm	8/1/1998	C15	PAHs	Chrysene	Yes	180		ug/kg	384	0.47	0	2800
cm	8/1/1998	C16	PAHs	Dibenzo(a,h)anthracene	No	0	U	ug/kg	63	0	0	260
cm	8/1/1998	C18	PAHs	Fluoranthene	Yes	310		ug/kg	600	0.52	0	5100
cm	8/1/1998	C19	PAHs	Fluorene	No	0	U	ug/kg	19	0	0	540
cm	8/1/1998	C21	PAHs	Naphthalene	Yes	54		ug/kg	160	0.34	0	2100
cm	8/1/1998	C23	PAHs	Phenanthrene	Yes	150		ug/kg	240	0.63	0	1500
cm	8/1/1998	C24	PAHs	Pyrene	Yes	290		ug/kg	665	0.44	0	2600
cm	8/1/1998	C37	PAHs	Total PAHs	Yes	1800		ug/kg	4000	0.45	0	45000
cm	8/1/1998	J05	OC Pesticides	4,4'-DDE	Yes	3.7		ug/kg	2.2	1.7	1	27
cm	8/1/1998	J43	OC Pesticides	Total DDx	Yes	3.7		ug/kg	1.6	2.3	1	46
cm	8/1/1998	A03	Metals	Arsenic	Yes	8		mg/kg	8.2	0.98	0	70
cm	8/1/1998	A07	Metals	Cadmium	No	0	U	mg/kg	1.2	0	0	9.6
cm	8/1/1998	A09	Metals	Chromium	Yes	36		mg/kg	81	0.44	0	370
cm	8/1/1998	A11	Metals	Copper	Yes	28		mg/kg	34	0.82	0	270
cm	8/1/1998	A13	Metals	Lead	Yes	37		mg/kg	47	0.79	0	218
cm	8/1/1998	A16	Metals	Mercury	Yes	380		ug/kg	150	2.5	1	710
cm	8/1/1998	A18	Metals	Nickel	Yes	13		mg/kg	21	0.62	0	52
cm	8/1/1998	A21	Metals	Silver	Yes	0.7		mg/kg	1	0.7	0	3.7
cm	8/1/1998	A26	Metals	Zinc	Yes	77		mg/kg	150	0.51	0	410
cm	8/1/1998	C05	PAHs	2-Methylnaphthalene	No	0	U	ug/kg	70	0	0	670
cm	8/1/1998	C06	PAHs	Acenaphthene	No	0	U	ug/kg	16	0	0	500
cm	8/1/1998	C07	PAHs	Acenaphthylene	No	0	U	ug/kg	44	0	0	640
cm	8/1/1998	C08	PAHs	Anthracene	Yes	52		ug/kg	85	0.61	0	1100
cm	8/1/1998	C09	PAHs	Benzo(a)anthracene	Yes	110		ug/kg	261	0.42	0	1600
cm	8/1/1998	C10	PAHs	Benzo(a)pyrene	Yes	130		ug/kg	430	0.3	0	1600
cm	8/1/1998	C15	PAHs	Chrysene	Yes	120		ug/kg	384	0.31	0	2800

Depth_Unit	Sample_Date	Sort	Chemical_Group	Chemical	Detected	Result	Qual	Units	ERL	Value/ERL	ERL EF ≥ 1	ERM
cm	8/1/1998	C16	PAHs	Dibenzo(a,h)anthracene	No	0	U	ug/kg	63	0	0	260
cm	8/1/1998	C18	PAHs	Fluoranthene	Yes	250		ug/kg	600	0.42	0	5100
cm	8/1/1998	C19	PAHs	Fluorene	No	0	U	ug/kg	19	0	0	540
cm	8/1/1998	C21	PAHs	Naphthalene	Yes	43		ug/kg	160	0.27	0	2100
cm	8/1/1998	C23	PAHs	Phenanthrene	Yes	120		ug/kg	240	0.5	0	1500
cm	8/1/1998	C24	PAHs	Pyrene	Yes	200		ug/kg	665	0.3	0	2600
cm	8/1/1998	C37	PAHs	Total PAHs	Yes	1200		ug/kg	4000	0.3	0	45000
cm	8/1/1998	J05	OC Pesticides	4,4'-DDE	No	0	U	ug/kg	2.2	0	0	27
cm	8/1/1998	J43	OC Pesticides	Total DDx	No	0	U	ug/kg	1.6	0	0	46
cm	8/1/1998	A03	Metals	Arsenic	No	0	U	mg/kg	8.2	0	0	70
cm	8/1/1998	A07	Metals	Cadmium	No	0	U	mg/kg	1.2	0	0	9.6
cm	8/1/1998	A09	Metals	Chromium	Yes	4		mg/kg	81	0.049	0	370
cm	8/1/1998	A11	Metals	Copper	Yes	3		mg/kg	34	0.088	0	270
cm	8/1/1998	A13	Metals	Lead	Yes	4		mg/kg	47	0.085	0	218
cm	8/1/1998	A16	Metals	Mercury	No	0	U	ug/kg	150	0	0	710
cm	8/1/1998	A18	Metals	Nickel	No	0	U	mg/kg	21	0	0	52
cm	8/1/1998	A21	Metals	Silver	No	0	U	mg/kg	1	0	0	3.7
cm	8/1/1998	A26	Metals	Zinc	No	0	U	mg/kg	150	0	0	410
cm	8/1/1998	C05	PAHs	2-Methylnaphthalene	Yes	8		ug/kg	70	0.11	0	670
cm	8/1/1998	C06	PAHs	Acenaphthene	No	0	U	ug/kg	16	0	0	500
cm	8/1/1998	C07	PAHs	Acenaphthylene	No	0	U	ug/kg	44	0	0	640
cm	8/1/1998	C08	PAHs	Anthracene	No	0	U	ug/kg	85	0	0	1100
cm	8/1/1998	C09	PAHs	Benzo(a)anthracene	Yes	77		ug/kg	261	0.3	0	1600
cm	8/1/1998	C10	PAHs	Benzo(a)pyrene	Yes	69		ug/kg	430	0.16	0	1600
cm	8/1/1998	C15	PAHs	Chrysene	Yes	72		ug/kg	384	0.19	0	2800
cm	8/1/1998	C16	PAHs	Dibenzo(a,h)anthracene	No	0	U	ug/kg	63	0	0	260
cm	8/1/1998	C18	PAHs	Fluoranthene	Yes	68		ug/kg	600	0.11	0	5100
cm	8/1/1998	C19	PAHs	Fluorene	No	0	U	ug/kg	19	0	0	540
cm	8/1/1998	C21	PAHs	Naphthalene	No	0	U	ug/kg	160	0	0	2100
cm	8/1/1998	C23	PAHs	Phenanthrene	No	0	U	ug/kg	240	0	0	1500
cm	8/1/1998	C24	PAHs	Pyrene	Yes	130		ug/kg	665	0.2	0	2600
cm	8/1/1998	C37	PAHs	Total PAHs	Yes	520		ug/kg	4000	0.13	0	45000
cm	8/1/1998	J05	OC Pesticides	4,4'-DDE	No	0	U	ug/kg	2.2	0	0	27
cm	8/1/1998	J43	OC Pesticides	Total DDx	No	0	U	ug/kg	1.6	0	0	46
cm	7/17/1998	A03	Metals	Arsenic	Yes	1		mg/kg	8.2	0.12	0	70
cm	7/17/1998	A07	Metals	Cadmium	No	0	U	mg/kg	1.2	0	0	9.6
cm	7/17/1998	A09	Metals	Chromium	Yes	4		mg/kg	81	0.049	0	370
cm	7/17/1998	A11	Metals	Copper	No	0	U	mg/kg	34	0	0	270
cm	7/17/1998	A13	Metals	Lead	Yes	4		mg/kg	47	0.085	0	218
cm	7/17/1998	A16	Metals	Mercury	No	0	U	ug/kg	150	0	0	710
cm	7/17/1998	A18	Metals	Nickel	Yes	3		mg/kg	21	0.14	0	52
cm	7/17/1998	A21	Metals	Silver	No	0	U	mg/kg	1	0	0	3.7
cm	7/17/1998	A26	Metals	Zinc	No	0	U	mg/kg	150	0	0	410
cm	7/17/1998	C05	PAHs	2-Methylnaphthalene	No	0	U	ug/kg	70	0	0	670
cm	7/17/1998	C06	PAHs	Acenaphthene	No	0	U	ug/kg	16	0	0	500
cm	7/17/1998	C07	PAHs	Acenaphthylene	No	0	U	ug/kg	44	0	0	640
cm	7/17/1998	C08	PAHs	Anthracene	No	0	U	ug/kg	85	0	0	1100
cm	7/17/1998	C09	PAHs	Benzo(a)anthracene	Yes	29		ug/kg	261	0.11	0	1600
cm	7/17/1998	C10	PAHs	Benzo(a)pyrene	No	0	U	ug/kg	430	0	0	1600

Depth_Unit	Sample_Date	Sort	Chemical_Group	Chemical	Detected	Result	Qual	Units	ERL	Value/ERL	ERL EF ≥ 1	ERM
cm	7/17/1998	C15	PAHs	Chrysene	Yes	16		ug/kg	384	0.042	0	2800
cm	7/17/1998	C16	PAHs	Dibenzo(a,h)anthracene	No	0	U	ug/kg	63	0	0	260
cm	7/17/1998	C18	PAHs	Fluoranthene	Yes	29		ug/kg	600	0.048	0	5100
cm	7/17/1998	C19	PAHs	Fluorene	No	0	U	ug/kg	19	0	0	540
cm	7/17/1998	C21	PAHs	Naphthalene	No	0	U	ug/kg	160	0	0	2100
cm	7/17/1998	C23	PAHs	Phenanthrene	No	0	U	ug/kg	240	0	0	1500
cm	7/17/1998	C24	PAHs	Pyrene	Yes	36		ug/kg	665	0.054	0	2600
cm	7/17/1998	C37	PAHs	Total PAHs	Yes	110		ug/kg	4000	0.028	0	45000
cm	7/17/1998	J05	OC Pesticides	4,4'-DDE	Yes	1.3		ug/kg	2.2	0.59	0	27
cm	7/17/1998	J43	OC Pesticides	Total DDx	Yes	1.3		ug/kg	1.6	0.81	0	46
cm	7/17/1998	A03	Metals	Arsenic	No	0	U	mg/kg	8.2	0	0	70
cm	7/17/1998	A07	Metals	Cadmium	No	0	U	mg/kg	1.2	0	0	9.6
cm	7/17/1998	A09	Metals	Chromium	Yes	3		mg/kg	81	0.037	0	370
cm	7/17/1998	A11	Metals	Copper	No	0	U	mg/kg	34	0	0	270
cm	7/17/1998	A13	Metals	Lead	Yes	2		mg/kg	47	0.043	0	218
cm	7/17/1998	A16	Metals	Mercury	No	0	U	ug/kg	150	0	0	710
cm	7/17/1998	A18	Metals	Nickel	Yes	2		mg/kg	21	0.095	0	52
cm	7/17/1998	A21	Metals	Silver	No	0	U	mg/kg	1	0	0	3.7
cm	7/17/1998	A26	Metals	Zinc	No	0	U	mg/kg	150	0	0	410
cm	7/17/1998	C05	PAHs	2-Methylnaphthalene	No	0	U	ug/kg	70	0	0	670
cm	7/17/1998	C06	PAHs	Acenaphthene	No	0	U	ug/kg	16	0	0	500
cm	7/17/1998	C07	PAHs	Acenaphthylene	No	0	U	ug/kg	44	0	0	640
cm	7/17/1998	C08	PAHs	Anthracene	No	0	U	ug/kg	85	0	0	1100
cm	7/17/1998	C09	PAHs	Benzo(a)anthracene	No	0	U	ug/kg	261	0	0	1600
cm	7/17/1998	C10	PAHs	Benzo(a)pyrene	No	0	U	ug/kg	430	0	0	1600
cm	7/17/1998	C15	PAHs	Chrysene	No	0	U	ug/kg	384	0	0	2800
cm	7/17/1998	C16	PAHs	Dibenzo(a,h)anthracene	No	0	U	ug/kg	63	0	0	260
cm	7/17/1998	C18	PAHs	Fluoranthene	No	0	U	ug/kg	600	0	0	5100
cm	7/17/1998	C19	PAHs	Fluorene	No	0	U	ug/kg	19	0	0	540
cm	7/17/1998	C21	PAHs	Naphthalene	No	0	U	ug/kg	160	0	0	2100
cm	7/17/1998	C23	PAHs	Phenanthrene	No	0	U	ug/kg	240	0	0	1500
cm	7/17/1998	C24	PAHs	Pyrene	No	0	U	ug/kg	665	0	0	2600
cm	7/17/1998	C37	PAHs	Total PAHs	No	0	U	ug/kg	4000	0	0	45000
cm	7/17/1998	J05	OC Pesticides	4,4'-DDE	No	0	U	ug/kg	2.2	0	0	27
cm	7/17/1998	J43	OC Pesticides	Total DDx	No	0	U	ug/kg	1.6	0	0	46
cm	8/6/1998	A03	Metals	Arsenic	Yes	11		mg/kg	8.2	1.3	1	70
cm	8/6/1998	A07	Metals	Cadmium	No	0	U	mg/kg	1.2	0	0	9.6
cm	8/6/1998	A09	Metals	Chromium	Yes	57		mg/kg	81	0.7	0	370
cm	8/6/1998	A11	Metals	Copper	Yes	61		mg/kg	34	1.8	1	270
cm	8/6/1998	A13	Metals	Lead	Yes	71		mg/kg	47	1.5	1	218
cm	8/6/1998	A16	Metals	Mercury	Yes	520		ug/kg	150	3.5	1	710
cm	8/6/1998	A18	Metals	Nickel	Yes	21		mg/kg	21	1	1	52
cm	8/6/1998	A21	Metals	Silver	Yes	1.3		mg/kg	1	1.3	1	3.7
cm	8/6/1998	A26	Metals	Zinc	Yes	118		mg/kg	150	0.79	0	410
cm	8/6/1998	C05	PAHs	2-Methylnaphthalene	Yes	37		ug/kg	70	0.53	0	670
cm	8/6/1998	C06	PAHs	Acenaphthene	No	0	U	ug/kg	16	0	0	500
cm	8/6/1998	C07	PAHs	Acenaphthylene	No	0	U	ug/kg	44	0	0	640
cm	8/6/1998	C08	PAHs	Anthracene	Yes	130		ug/kg	85	1.5	1	1100
cm	8/6/1998	C09	PAHs	Benzo(a)anthracene	Yes	210		ug/kg	261	0.8	0	1600

Depth_Unit	Sample_Date	Sort	Chemical_Group	Chemical	Detected	Result	Qual	Units	ERL	Value/ERL	ERL EF ≥ 1	ERM
cm	8/6/1998	C10	PAHs	Benzo(a)pyrene	No	0	U	ug/kg	430	0	0	1600
cm	8/6/1998	C15	PAHs	Chrysene	Yes	290		ug/kg	384	0.76	0	2800
cm	8/6/1998	C16	PAHs	Dibenzo(a,h)anthracene	No	0	U	ug/kg	63	0	0	260
cm	8/6/1998	C18	PAHs	Fluoranthene	Yes	320		ug/kg	600	0.53	0	5100
cm	8/6/1998	C19	PAHs	Fluorene	No	0	U	ug/kg	19	0	0	540
cm	8/6/1998	C21	PAHs	Naphthalene	Yes	52		ug/kg	160	0.33	0	2100
cm	8/6/1998	C23	PAHs	Phenanthrene	Yes	150		ug/kg	240	0.63	0	1500
cm	8/6/1998	C24	PAHs	Pyrene	Yes	350		ug/kg	665	0.53	0	2600
cm	8/6/1998	C37	PAHs	Total PAHs	Yes	2100		ug/kg	4000	0.53	0	45000
cm	8/6/1998	J05	OC Pesticides	4,4'-DDE	No	0	U	ug/kg	2.2	0	0	27
cm	8/6/1998	J43	OC Pesticides	Total DDx	No	0	U	ug/kg	1.6	0	0	46
cm	8/4/1998	A03	Metals	Arsenic	Yes	12		mg/kg	8.2	1.5	1	70
cm	8/4/1998	A07	Metals	Cadmium	Yes	1.1		mg/kg	1.2	0.92	0	9.6
cm	8/4/1998	A09	Metals	Chromium	Yes	73		mg/kg	81	0.9	0	370
cm	8/4/1998	A11	Metals	Copper	Yes	94		mg/kg	34	2.8	1	270
cm	8/4/1998	A13	Metals	Lead	Yes	88		mg/kg	47	1.9	1	218
cm	8/4/1998	A16	Metals	Mercury	Yes	610		ug/kg	150	4.1	1	710
cm	8/4/1998	A18	Metals	Nickel	Yes	27		mg/kg	21	1.3	1	52
cm	8/4/1998	A21	Metals	Silver	Yes	2.3		mg/kg	1	2.3	1	3.7
cm	8/4/1998	A26	Metals	Zinc	Yes	181		mg/kg	150	1.2	1	410
cm	8/4/1998	C05	PAHs	2-Methylnaphthalene	No	0	U	ug/kg	70	0	0	670
cm	8/4/1998	C06	PAHs	Acenaphthene	No	0	U	ug/kg	16	0	0	500
cm	8/4/1998	C07	PAHs	Acenaphthylene	No	0	U	ug/kg	44	0	0	640
cm	8/4/1998	C08	PAHs	Anthracene	No	0	U	ug/kg	85	0	0	1100
cm	8/4/1998	C09	PAHs	Benzo(a)anthracene	Yes	250		ug/kg	261	0.96	0	1600
cm	8/4/1998	C10	PAHs	Benzo(a)pyrene	No	0	U	ug/kg	430	0	0	1600
cm	8/4/1998	C15	PAHs	Chrysene	Yes	330		ug/kg	384	0.86	0	2800
cm	8/4/1998	C16	PAHs	Dibenzo(a,h)anthracene	No	0	U	ug/kg	63	0	0	260
cm	8/4/1998	C18	PAHs	Fluoranthene	No	0	U	ug/kg	600	0	0	5100
cm	8/4/1998	C19	PAHs	Fluorene	No	0	U	ug/kg	19	0	0	540
cm	8/4/1998	C21	PAHs	Naphthalene	Yes	80		ug/kg	160	0.5	0	2100
cm	8/4/1998	C23	PAHs	Phenanthrene	Yes	250		ug/kg	240	1	1	1500
cm	8/4/1998	C24	PAHs	Pyrene	Yes	290		ug/kg	665	0.44	0	2600
cm	8/4/1998	C37	PAHs	Total PAHs	Yes	1800		ug/kg	4000	0.45	0	45000
cm	8/4/1998	J05	OC Pesticides	4,4'-DDE	No	0	U	ug/kg	2.2	0	0	27
cm	8/4/1998	J43	OC Pesticides	Total DDx	No	0	U	ug/kg	1.6	0	0	46
cm	8/3/1998	A03	Metals	Arsenic	Yes	15		mg/kg	8.2	1.8	1	70
cm	8/3/1998	A07	Metals	Cadmium	Yes	0.6		mg/kg	1.2	0.5	0	9.6
cm	8/3/1998	A09	Metals	Chromium	Yes	68		mg/kg	81	0.84	0	370
cm	8/3/1998	A11	Metals	Copper	Yes	62		mg/kg	34	1.8	1	270
cm	8/3/1998	A13	Metals	Lead	Yes	74		mg/kg	47	1.6	1	218
cm	8/3/1998	A16	Metals	Mercury	Yes	750		ug/kg	150	5	1	710
cm	8/3/1998	A18	Metals	Nickel	Yes	25		mg/kg	21	1.2	1	52
cm	8/3/1998	A21	Metals	Silver	Yes	1.6		mg/kg	1	1.6	1	3.7
cm	8/3/1998	A26	Metals	Zinc	Yes	168		mg/kg	150	1.1	1	410
cm	8/3/1998	C05	PAHs	2-Methylnaphthalene	Yes	56		ug/kg	70	0.8	0	670
cm	8/3/1998	C06	PAHs	Acenaphthene	No	0	U	ug/kg	16	0	0	500
cm	8/3/1998	C07	PAHs	Acenaphthylene	Yes	72		ug/kg	44	1.6	1	640
cm	8/3/1998	C08	PAHs	Anthracene	Yes	130		ug/kg	85	1.5	1	1100

Depth_Unit	Sample_Date	Sort	Chemical_Group	Chemical	Detected	Result	Qual	Units	ERL	Value/ERL	ERL EF ≥ 1	ERM
cm	8/3/1998	C09	PAHs	Benzo(a)anthracene	Yes	220		ug/kg	261	0.84	0	1600
cm	8/3/1998	C10	PAHs	Benzo(a)pyrene	Yes	330		ug/kg	430	0.77	0	1600
cm	8/3/1998	C15	PAHs	Chrysene	Yes	280		ug/kg	384	0.73	0	2800
cm	8/3/1998	C16	PAHs	Dibenzo(a,h)anthracene	No	0	U	ug/kg	63	0	0	260
cm	8/3/1998	C18	PAHs	Fluoranthene	Yes	520		ug/kg	600	0.87	0	5100
cm	8/3/1998	C19	PAHs	Fluorene	No	0	U	ug/kg	19	0	0	540
cm	8/3/1998	C21	PAHs	Naphthalene	Yes	84		ug/kg	160	0.53	0	2100
cm	8/3/1998	C23	PAHs	Phenanthrene	Yes	290		ug/kg	240	1.2	1	1500
cm	8/3/1998	C24	PAHs	Pyrene	Yes	490		ug/kg	665	0.74	0	2600
cm	8/3/1998	C37	PAHs	Total PAHs	Yes	3200		ug/kg	4000	0.8	0	45000
cm	8/3/1998	J05	OC Pesticides	4,4'-DDE	No	0	U	ug/kg	2.2	0	0	27
cm	8/3/1998	J43	OC Pesticides	Total DDx	No	0	U	ug/kg	1.6	0	0	46
cm	8/1/1998	A03	Metals	Arsenic	Yes	1		mg/kg	8.2	0.12	0	70
cm	8/1/1998	A07	Metals	Cadmium	No	0	U	mg/kg	1.2	0	0	9.6
cm	8/1/1998	A09	Metals	Chromium	Yes	4		mg/kg	81	0.049	0	370
cm	8/1/1998	A11	Metals	Copper	No	0	U	mg/kg	34	0	0	270
cm	8/1/1998	A13	Metals	Lead	Yes	4		mg/kg	47	0.085	0	218
cm	8/1/1998	A16	Metals	Mercury	No	0	U	ug/kg	150	0	0	710
cm	8/1/1998	A18	Metals	Nickel	No	0	U	mg/kg	21	0	0	52
cm	8/1/1998	A21	Metals	Silver	No	0	U	mg/kg	1	0	0	3.7
cm	8/1/1998	A26	Metals	Zinc	No	0	U	mg/kg	150	0	0	410
cm	8/1/1998	C05	PAHs	2-Methylnaphthalene	No	0	U	ug/kg	70	0	0	670
cm	8/1/1998	C06	PAHs	Acenaphthene	No	0	U	ug/kg	16	0	0	500
cm	8/1/1998	C07	PAHs	Acenaphthylene	No	0	U	ug/kg	44	0	0	640
cm	8/1/1998	C08	PAHs	Anthracene	No	0	U	ug/kg	85	0	0	1100
cm	8/1/1998	C09	PAHs	Benzo(a)anthracene	No	0	U	ug/kg	261	0	0	1600
cm	8/1/1998	C10	PAHs	Benzo(a)pyrene	No	0	U	ug/kg	430	0	0	1600
cm	8/1/1998	C15	PAHs	Chrysene	No	0	U	ug/kg	384	0	0	2800
cm	8/1/1998	C16	PAHs	Dibenzo(a,h)anthracene	No	0	U	ug/kg	63	0	0	260
cm	8/1/1998	C18	PAHs	Fluoranthene	No	0	U	ug/kg	600	0	0	5100
cm	8/1/1998	C19	PAHs	Fluorene	No	0	U	ug/kg	19	0	0	540
cm	8/1/1998	C21	PAHs	Naphthalene	No	0	U	ug/kg	160	0	0	2100
cm	8/1/1998	C23	PAHs	Phenanthrene	No	0	U	ug/kg	240	0	0	1500
cm	8/1/1998	C24	PAHs	Pyrene	No	0	U	ug/kg	665	0	0	2600
cm	8/1/1998	C37	PAHs	Total PAHs	No	0	U	ug/kg	4000	0	0	45000
cm	8/1/1998	J05	OC Pesticides	4,4'-DDE	No	0	U	ug/kg	2.2	0	0	27
cm	8/1/1998	J43	OC Pesticides	Total DDx	No	0	U	ug/kg	1.6	0	0	46
cm	8/5/1998	A03	Metals	Arsenic	Yes	8		mg/kg	8.2	0.98	0	70
cm	8/5/1998	A07	Metals	Cadmium	Yes	0.6		mg/kg	1.2	0.5	0	9.6
cm	8/5/1998	A09	Metals	Chromium	Yes	46		mg/kg	81	0.57	0	370
cm	8/5/1998	A11	Metals	Copper	Yes	60		mg/kg	34	1.8	1	270
cm	8/5/1998	A13	Metals	Lead	Yes	73		mg/kg	47	1.6	1	218
cm	8/5/1998	A16	Metals	Mercury	Yes	500		ug/kg	150	3.3	1	710
cm	8/5/1998	A18	Metals	Nickel	Yes	17		mg/kg	21	0.81	0	52
cm	8/5/1998	A21	Metals	Silver	Yes	1.1		mg/kg	1	1.1	1	3.7
cm	8/5/1998	A26	Metals	Zinc	Yes	116		mg/kg	150	0.77	0	410
cm	8/5/1998	C05	PAHs	2-Methylnaphthalene	No	0	U	ug/kg	70	0	0	670
cm	8/5/1998	C06	PAHs	Acenaphthene	No	0	U	ug/kg	16	0	0	500
cm	8/5/1998	C07	PAHs	Acenaphthylene	Yes	190		ug/kg	44	4.3	1	640

Depth_Unit	Sample_Date	Sort	Chemical_Group	Chemical	Detected	Result	Qual	Units	ERL	Value/ERL	ERL EF ≥ 1	ERM
cm	8/5/1998	C08	PAHs	Anthracene	Yes	300		ug/kg	85	3.5	1	1100
cm	8/5/1998	C09	PAHs	Benzo(a)anthracene	Yes	810		ug/kg	261	3.1	1	1600
cm	8/5/1998	C10	PAHs	Benzo(a)pyrene	Yes	1100		ug/kg	430	2.6	1	1600
cm	8/5/1998	C15	PAHs	Chrysene	Yes	940		ug/kg	384	2.4	1	2800
cm	8/5/1998	C16	PAHs	Dibenzo(a,h)anthracene	Yes	160		ug/kg	63	2.5	1	260
cm	8/5/1998	C18	PAHs	Fluoranthene	Yes	1100		ug/kg	600	1.8	1	5100
cm	8/5/1998	C19	PAHs	Fluorene	No	0	U	ug/kg	19	0	0	540
cm	8/5/1998	C21	PAHs	Naphthalene	No	0	U	ug/kg	160	0	0	2100
cm	8/5/1998	C23	PAHs	Phenanthrene	Yes	390		ug/kg	240	1.6	1	1500
cm	8/5/1998	C24	PAHs	Pyrene	Yes	1700		ug/kg	665	2.6	1	2600
cm	8/5/1998	C37	PAHs	Total PAHs	Yes	9300		ug/kg	4000	2.3	1	45000
cm	8/5/1998	J05	OC Pesticides	4,4'-DDE	No	0	U	ug/kg	2.2	0	0	27
cm	8/5/1998	J43	OC Pesticides	Total DDx	No	0	U	ug/kg	1.6	0	0	46
cm	8/6/1998	A03	Metals	Arsenic	Yes	15		mg/kg	8.2	1.8	1	70
cm	8/6/1998	A07	Metals	Cadmium	Yes	0.8		mg/kg	1.2	0.67	0	9.6
cm	8/6/1998	A09	Metals	Chromium	Yes	60		mg/kg	81	0.74	0	370
cm	8/6/1998	A11	Metals	Copper	Yes	102		mg/kg	34	3	1	270
cm	8/6/1998	A13	Metals	Lead	Yes	117		mg/kg	47	2.5	1	218
cm	8/6/1998	A16	Metals	Mercury	Yes	500		ug/kg	150	3.3	1	710
cm	8/6/1998	A18	Metals	Nickel	Yes	27		mg/kg	21	1.3	1	52
cm	8/6/1998	A21	Metals	Silver	Yes	2.2		mg/kg	1	2.2	1	3.7
cm	8/6/1998	A26	Metals	Zinc	Yes	218		mg/kg	150	1.5	1	410
cm	8/6/1998	C05	PAHs	2-Methylnaphthalene	Yes	54		ug/kg	70	0.77	0	670
cm	8/6/1998	C06	PAHs	Acenaphthene	No	0	U	ug/kg	16	0	0	500
cm	8/6/1998	C07	PAHs	Acenaphthylene	Yes	93		ug/kg	44	2.1	1	640
cm	8/6/1998	C08	PAHs	Anthracene	Yes	130		ug/kg	85	1.5	1	1100
cm	8/6/1998	C09	PAHs	Benzo(a)anthracene	Yes	290		ug/kg	261	1.1	1	1600
cm	8/6/1998	C10	PAHs	Benzo(a)pyrene	No	0	U	ug/kg	430	0	0	1600
cm	8/6/1998	C15	PAHs	Chrysene	Yes	380		ug/kg	384	0.99	0	2800
cm	8/6/1998	C16	PAHs	Dibenzo(a,h)anthracene	No	0	U	ug/kg	63	0	0	260
cm	8/6/1998	C18	PAHs	Fluoranthene	Yes	620		ug/kg	600	1	1	5100
cm	8/6/1998	C19	PAHs	Fluorene	No	0	U	ug/kg	19	0	0	540
cm	8/6/1998	C21	PAHs	Naphthalene	Yes	80		ug/kg	160	0.5	0	2100
cm	8/6/1998	C23	PAHs	Phenanthrene	Yes	210		ug/kg	240	0.88	0	1500
cm	8/6/1998	C24	PAHs	Pyrene	Yes	640		ug/kg	665	0.96	0	2600
cm	8/6/1998	C37	PAHs	Total PAHs	Yes	3700		ug/kg	4000	0.93	0	45000
cm	8/6/1998	J05	OC Pesticides	4,4'-DDE	Yes	14.6		ug/kg	2.2	6.6	1	27
cm	8/6/1998	J43	OC Pesticides	Total DDx	Yes	15		ug/kg	1.6	9.4	1	46
cm	8/5/1998	A03	Metals	Arsenic	Yes	12		mg/kg	8.2	1.5	1	70
cm	8/5/1998	A07	Metals	Cadmium	No	0	U	mg/kg	1.2	0	0	9.6
cm	8/5/1998	A09	Metals	Chromium	Yes	57		mg/kg	81	0.7	0	370
cm	8/5/1998	A11	Metals	Copper	Yes	60		mg/kg	34	1.8	1	270
cm	8/5/1998	A13	Metals	Lead	Yes	76		mg/kg	47	1.6	1	218
cm	8/5/1998	A16	Metals	Mercury	Yes	470		ug/kg	150	3.1	1	710
cm	8/5/1998	A18	Metals	Nickel	Yes	22		mg/kg	21	1	1	52
cm	8/5/1998	A21	Metals	Silver	Yes	1.4		mg/kg	1	1.4	1	3.7
cm	8/5/1998	A26	Metals	Zinc	Yes	122		mg/kg	150	0.81	0	410
cm	8/5/1998	C05	PAHs	2-Methylnaphthalene	No	0	U	ug/kg	70	0	0	670
cm	8/5/1998	C06	PAHs	Acenaphthene	Yes	42		ug/kg	16	2.6	1	500

Depth_Unit	Sample_Date	Sort	Chemical_Group	Chemical	Detected	Result	Qual	Units	ERL	Value/ERL	ERL EF ≥ 1	ERM
cm	8/5/1998	C07	PAHs	Acenaphthylene	Yes	92		ug/kg	44	2.1	1	640
cm	8/5/1998	C08	PAHs	Anthracene	Yes	190		ug/kg	85	2.2	1	1100
cm	8/5/1998	C09	PAHs	Benzo(a)anthracene	Yes	390		ug/kg	261	1.5	1	1600
cm	8/5/1998	C10	PAHs	Benzo(a)pyrene	Yes	440		ug/kg	430	1	1	1600
cm	8/5/1998	C15	PAHs	Chrysene	Yes	450		ug/kg	384	1.2	1	2800
cm	8/5/1998	C16	PAHs	Dibenzo(a,h)anthracene	No	0	U	ug/kg	63	0	0	260
cm	8/5/1998	C18	PAHs	Fluoranthene	Yes	880		ug/kg	600	1.5	1	5100
cm	8/5/1998	C19	PAHs	Fluorene	Yes	78		ug/kg	19	4.1	1	540
cm	8/5/1998	C21	PAHs	Naphthalene	Yes	80		ug/kg	160	0.5	0	2100
cm	8/5/1998	C23	PAHs	Phenanthrene	Yes	370		ug/kg	240	1.5	1	1500
cm	8/5/1998	C24	PAHs	Pyrene	Yes	800		ug/kg	665	1.2	1	2600
cm	8/5/1998	C37	PAHs	Total PAHs	Yes	4900		ug/kg	4000	1.2	1	45000
cm	8/5/1998	J05	OC Pesticides	4,4'-DDE	Yes	7.1		ug/kg	2.2	3.2	1	27
cm	8/5/1998	J43	OC Pesticides	Total DDx	Yes	7.1		ug/kg	1.6	4.4	1	46
cm	8/8/1998	A03	Metals	Arsenic	Yes	2		mg/kg	8.2	0.24	0	70
cm	8/8/1998	A07	Metals	Cadmium	No	0	U	mg/kg	1.2	0	0	9.6
cm	8/8/1998	A09	Metals	Chromium	Yes	12		mg/kg	81	0.15	0	370
cm	8/8/1998	A11	Metals	Copper	Yes	8		mg/kg	34	0.24	0	270
cm	8/8/1998	A13	Metals	Lead	Yes	13		mg/kg	47	0.28	0	218
cm	8/8/1998	A16	Metals	Mercury	Yes	100		ug/kg	150	0.67	0	710
cm	8/8/1998	A18	Metals	Nickel	Yes	5		mg/kg	21	0.24	0	52
cm	8/8/1998	A21	Metals	Silver	No	0	U	mg/kg	1	0	0	3.7
cm	8/8/1998	A26	Metals	Zinc	Yes	32		mg/kg	150	0.21	0	410
cm	8/8/1998	C05	PAHs	2-Methylnaphthalene	No	0	U	ug/kg	70	0	0	670
cm	8/8/1998	C06	PAHs	Acenaphthene	No	0	U	ug/kg	16	0	0	500
cm	8/8/1998	C07	PAHs	Acenaphthylene	No	0	U	ug/kg	44	0	0	640
cm	8/8/1998	C08	PAHs	Anthracene	No	0	U	ug/kg	85	0	0	1100
cm	8/8/1998	C09	PAHs	Benzo(a)anthracene	No	0	U	ug/kg	261	0	0	1600
cm	8/8/1998	C10	PAHs	Benzo(a)pyrene	No	0	U	ug/kg	430	0	0	1600
cm	8/8/1998	C15	PAHs	Chrysene	Yes	40		ug/kg	384	0.1	0	2800
cm	8/8/1998	C16	PAHs	Dibenzo(a,h)anthracene	No	0	U	ug/kg	63	0	0	260
cm	8/8/1998	C18	PAHs	Fluoranthene	Yes	83		ug/kg	600	0.14	0	5100
cm	8/8/1998	C19	PAHs	Fluorene	No	0	U	ug/kg	19	0	0	540
cm	8/8/1998	C21	PAHs	Naphthalene	No	0	U	ug/kg	160	0	0	2100
cm	8/8/1998	C23	PAHs	Phenanthrene	Yes	40		ug/kg	240	0.17	0	1500
cm	8/8/1998	C24	PAHs	Pyrene	Yes	80		ug/kg	665	0.12	0	2600
cm	8/8/1998	C37	PAHs	Total PAHs	Yes	280		ug/kg	4000	0.07	0	45000
cm	8/8/1998	J05	OC Pesticides	4,4'-DDE	Yes	1.7		ug/kg	2.2	0.77	0	27
cm	8/8/1998	J43	OC Pesticides	Total DDx	Yes	1.7		ug/kg	1.6	1.1	1	46
cm	8/8/1998	A03	Metals	Arsenic	Yes	3		mg/kg	8.2	0.37	0	70
cm	8/8/1998	A07	Metals	Cadmium	No	0	U	mg/kg	1.2	0	0	9.6
cm	8/8/1998	A09	Metals	Chromium	Yes	11		mg/kg	81	0.14	0	370
cm	8/8/1998	A11	Metals	Copper	Yes	6		mg/kg	34	0.18	0	270
cm	8/8/1998	A13	Metals	Lead	Yes	10		mg/kg	47	0.21	0	218
cm	8/8/1998	A16	Metals	Mercury	Yes	70		ug/kg	150	0.47	0	710
cm	8/8/1998	A18	Metals	Nickel	Yes	4		mg/kg	21	0.19	0	52
cm	8/8/1998	A21	Metals	Silver	No	0	U	mg/kg	1	0	0	3.7
cm	8/8/1998	A26	Metals	Zinc	Yes	30		mg/kg	150	0.2	0	410
cm	8/8/1998	C05	PAHs	2-Methylnaphthalene	No	0	U	ug/kg	70	0	0	670

Depth_Unit	Sample_Date	Sort	Chemical_Group	Chemical	Detected	Result	Qual	Units	ERL	Value/ERL	ERL EF ≥ 1	ERM
cm	8/8/1998	C06	PAHs	Acenaphthene	No	0	U	ug/kg	16	0	0	500
cm	8/8/1998	C07	PAHs	Acenaphthylene	No	0	U	ug/kg	44	0	0	640
cm	8/8/1998	C08	PAHs	Anthracene	No	0	U	ug/kg	85	0	0	1100
cm	8/8/1998	C09	PAHs	Benzo(a)anthracene	No	0	U	ug/kg	261	0	0	1600
cm	8/8/1998	C10	PAHs	Benzo(a)pyrene	No	0	U	ug/kg	430	0	0	1600
cm	8/8/1998	C15	PAHs	Chrysene	No	0	U	ug/kg	384	0	0	2800
cm	8/8/1998	C16	PAHs	Dibenzo(a,h)anthracene	No	0	U	ug/kg	63	0	0	260
cm	8/8/1998	C18	PAHs	Fluoranthene	No	0	U	ug/kg	600	0	0	5100
cm	8/8/1998	C19	PAHs	Fluorene	No	0	U	ug/kg	19	0	0	540
cm	8/8/1998	C21	PAHs	Naphthalene	No	0	U	ug/kg	160	0	0	2100
cm	8/8/1998	C23	PAHs	Phenanthrene	No	0	U	ug/kg	240	0	0	1500
cm	8/8/1998	C24	PAHs	Pyrene	Yes	39		ug/kg	665	0.059	0	2600
cm	8/8/1998	C37	PAHs	Total PAHs	Yes	39		ug/kg	4000	0.0098	0	45000
cm	8/8/1998	J05	OC Pesticides	4,4'-DDE	No	0	U	ug/kg	2.2	0	0	27
cm	8/8/1998	J43	OC Pesticides	Total DDx	No	0	U	ug/kg	1.6	0	0	46
cm	8/6/1998	A03	Metals	Arsenic	Yes	1		mg/kg	8.2	0.12	0	70
cm	8/6/1998	A07	Metals	Cadmium	No	0	U	mg/kg	1.2	0	0	9.6
cm	8/6/1998	A09	Metals	Chromium	Yes	5		mg/kg	81	0.062	0	370
cm	8/6/1998	A11	Metals	Copper	No	0	U	mg/kg	34	0	0	270
cm	8/6/1998	A13	Metals	Lead	Yes	5		mg/kg	47	0.11	0	218
cm	8/6/1998	A16	Metals	Mercury	No	0	U	ug/kg	150	0	0	710
cm	8/6/1998	A18	Metals	Nickel	No	0	U	mg/kg	21	0	0	52
cm	8/6/1998	A21	Metals	Silver	No	0	U	mg/kg	1	0	0	3.7
cm	8/6/1998	A26	Metals	Zinc	No	0	U	mg/kg	150	0	0	410
cm	8/6/1998	C05	PAHs	2-Methylnaphthalene	No	0	U	ug/kg	70	0	0	670
cm	8/6/1998	C06	PAHs	Acenaphthene	No	0	U	ug/kg	16	0	0	500
cm	8/6/1998	C07	PAHs	Acenaphthylene	No	0	U	ug/kg	44	0	0	640
cm	8/6/1998	C08	PAHs	Anthracene	No	0	U	ug/kg	85	0	0	1100
cm	8/6/1998	C09	PAHs	Benzo(a)anthracene	No	0	U	ug/kg	261	0	0	1600
cm	8/6/1998	C10	PAHs	Benzo(a)pyrene	No	0	U	ug/kg	430	0	0	1600
cm	8/6/1998	C15	PAHs	Chrysene	No	0	U	ug/kg	384	0	0	2800
cm	8/6/1998	C16	PAHs	Dibenzo(a,h)anthracene	No	0	U	ug/kg	63	0	0	260
cm	8/6/1998	C18	PAHs	Fluoranthene	No	0	U	ug/kg	600	0	0	5100
cm	8/6/1998	C19	PAHs	Fluorene	No	0	U	ug/kg	19	0	0	540
cm	8/6/1998	C21	PAHs	Naphthalene	No	0	U	ug/kg	160	0	0	2100
cm	8/6/1998	C23	PAHs	Phenanthrene	No	0	U	ug/kg	240	0	0	1500
cm	8/6/1998	C24	PAHs	Pyrene	No	0	U	ug/kg	665	0	0	2600
cm	8/6/1998	C37	PAHs	Total PAHs	No	0	U	ug/kg	4000	0	0	45000
cm	8/6/1998	J05	OC Pesticides	4,4'-DDE	No	0	U	ug/kg	2.2	0	0	27
cm	8/6/1998	J43	OC Pesticides	Total DDx	No	0	U	ug/kg	1.6	0	0	46
cm	8/5/1998	A03	Metals	Arsenic	Yes	14		mg/kg	8.2	1.7	1	70
cm	8/5/1998	A07	Metals	Cadmium	Yes	1		mg/kg	1.2	0.83	0	9.6
cm	8/5/1998	A09	Metals	Chromium	Yes	66		mg/kg	81	0.81	0	370
cm	8/5/1998	A11	Metals	Copper	Yes	86		mg/kg	34	2.5	1	270
cm	8/5/1998	A13	Metals	Lead	Yes	94		mg/kg	47	2	1	218
cm	8/5/1998	A16	Metals	Mercury	Yes	660		ug/kg	150	4.4	1	710
cm	8/5/1998	A18	Metals	Nickel	Yes	27		mg/kg	21	1.3	1	52
cm	8/5/1998	A21	Metals	Silver	Yes	2		mg/kg	1	2	1	3.7
cm	8/5/1998	A26	Metals	Zinc	Yes	195		mg/kg	150	1.3	1	410

Depth_Unit	Sample_Date	Sort	Chemical_Group	Chemical	Detected	Result	Qual	Units	ERL	Value/ERL	ERL EF ≥ 1	ERM
cm	8/5/1998	C05	PAHs	2-Methylnaphthalene	No	0	U	ug/kg	70	0	0	670
cm	8/5/1998	C06	PAHs	Acenaphthene	No	0	U	ug/kg	16	0	0	500
cm	8/5/1998	C07	PAHs	Acenaphthylene	Yes	86		ug/kg	44	2	1	640
cm	8/5/1998	C08	PAHs	Anthracene	No	0	U	ug/kg	85	0	0	1100
cm	8/5/1998	C09	PAHs	Benzo(a)anthracene	Yes	290		ug/kg	261	1.1	1	1600
cm	8/5/1998	C10	PAHs	Benzo(a)pyrene	Yes	380		ug/kg	430	0.88	0	1600
cm	8/5/1998	C15	PAHs	Chrysene	Yes	350		ug/kg	384	0.91	0	2800
cm	8/5/1998	C16	PAHs	Dibenzo(a,h)anthracene	No	0	U	ug/kg	63	0	0	260
cm	8/5/1998	C18	PAHs	Fluoranthene	Yes	590		ug/kg	600	0.98	0	5100
cm	8/5/1998	C19	PAHs	Fluorene	No	0	U	ug/kg	19	0	0	540
cm	8/5/1998	C21	PAHs	Naphthalene	Yes	84		ug/kg	160	0.53	0	2100
cm	8/5/1998	C23	PAHs	Phenanthrene	Yes	240		ug/kg	240	1	1	1500
cm	8/5/1998	C24	PAHs	Pyrene	Yes	560		ug/kg	665	0.84	0	2600
cm	8/5/1998	C37	PAHs	Total PAHs	Yes	3300		ug/kg	4000	0.83	0	45000
cm	8/5/1998	J05	OC Pesticides	4,4'-DDE	Yes	11.5		ug/kg	2.2	5.2	1	27
cm	8/5/1998	J43	OC Pesticides	Total DDx	Yes	20		ug/kg	1.6	13	1	46
cm	8/3/1998	A03	Metals	Arsenic	Yes	7		mg/kg	8.2	0.85	0	70
cm	8/3/1998	A07	Metals	Cadmium	No	0	U	mg/kg	1.2	0	0	9.6
cm	8/3/1998	A09	Metals	Chromium	Yes	38		mg/kg	81	0.47	0	370
cm	8/3/1998	A11	Metals	Copper	Yes	41		mg/kg	34	1.2	1	270
cm	8/3/1998	A13	Metals	Lead	Yes	38		mg/kg	47	0.81	0	218
cm	8/3/1998	A16	Metals	Mercury	Yes	340		ug/kg	150	2.3	1	710
cm	8/3/1998	A18	Metals	Nickel	Yes	14		mg/kg	21	0.67	0	52
cm	8/3/1998	A21	Metals	Silver	Yes	0.7		mg/kg	1	0.7	0	3.7
cm	8/3/1998	A26	Metals	Zinc	Yes	81		mg/kg	150	0.54	0	410
cm	8/3/1998	C05	PAHs	2-Methylnaphthalene	No	0	U	ug/kg	70	0	0	670
cm	8/3/1998	C06	PAHs	Acenaphthene	No	0	U	ug/kg	16	0	0	500
cm	8/3/1998	C07	PAHs	Acenaphthylene	No	0	U	ug/kg	44	0	0	640
cm	8/3/1998	C08	PAHs	Anthracene	No	0	U	ug/kg	85	0	0	1100
cm	8/3/1998	C09	PAHs	Benzo(a)anthracene	No	0	U	ug/kg	261	0	0	1600
cm	8/3/1998	C10	PAHs	Benzo(a)pyrene	Yes	130		ug/kg	430	0.3	0	1600
cm	8/3/1998	C15	PAHs	Chrysene	Yes	110		ug/kg	384	0.29	0	2800
cm	8/3/1998	C16	PAHs	Dibenzo(a,h)anthracene	No	0	U	ug/kg	63	0	0	260
cm	8/3/1998	C18	PAHs	Fluoranthene	Yes	200		ug/kg	600	0.33	0	5100
cm	8/3/1998	C19	PAHs	Fluorene	No	0	U	ug/kg	19	0	0	540
cm	8/3/1998	C21	PAHs	Naphthalene	No	0	U	ug/kg	160	0	0	2100
cm	8/3/1998	C23	PAHs	Phenanthrene	Yes	110		ug/kg	240	0.46	0	1500
cm	8/3/1998	C24	PAHs	Pyrene	Yes	190		ug/kg	665	0.29	0	2600
cm	8/3/1998	C37	PAHs	Total PAHs	Yes	1000		ug/kg	4000	0.25	0	45000
cm	8/3/1998	J05	OC Pesticides	4,4'-DDE	No	0	U	ug/kg	2.2	0	0	27
cm	8/3/1998	J43	OC Pesticides	Total DDx	No	0	U	ug/kg	1.6	0	0	46
cm	8/10/1998	A03	Metals	Arsenic	Yes	5		mg/kg	8.2	0.61	0	70
cm	8/10/1998	A07	Metals	Cadmium	No	0	U	mg/kg	1.2	0	0	9.6
cm	8/10/1998	A09	Metals	Chromium	Yes	27		mg/kg	81	0.33	0	370
cm	8/10/1998	A11	Metals	Copper	Yes	23		mg/kg	34	0.68	0	270
cm	8/10/1998	A13	Metals	Lead	Yes	29		mg/kg	47	0.62	0	218
cm	8/10/1998	A16	Metals	Mercury	Yes	210		ug/kg	150	1.4	1	710
cm	8/10/1998	A18	Metals	Nickel	Yes	11		mg/kg	21	0.52	0	52
cm	8/10/1998	A21	Metals	Silver	No	0	U	mg/kg	1	0	0	3.7

Depth_Unit	Sample_Date	Sort	Chemical_Group	Chemical	Detected	Result	Qual	Units	ERL	Value/ERL	ERL EF ≥ 1	ERM
cm	8/10/1998	A26	Metals	Zinc	Yes	61		mg/kg	150	0.41	0	410
cm	8/10/1998	C05	PAHs	2-Methylnaphthalene	No	0	U	ug/kg	70	0	0	670
cm	8/10/1998	C06	PAHs	Acenaphthene	No	0	U	ug/kg	16	0	0	500
cm	8/10/1998	C07	PAHs	Acenaphthylene	No	0	U	ug/kg	44	0	0	640
cm	8/10/1998	C08	PAHs	Anthracene	No	0	U	ug/kg	85	0	0	1100
cm	8/10/1998	C09	PAHs	Benzo(a)anthracene	No	0	U	ug/kg	261	0	0	1600
cm	8/10/1998	C10	PAHs	Benzo(a)pyrene	Yes	52		ug/kg	430	0.12	0	1600
cm	8/10/1998	C15	PAHs	Chrysene	Yes	53		ug/kg	384	0.14	0	2800
cm	8/10/1998	C16	PAHs	Dibenzo(a,h)anthracene	No	0	U	ug/kg	63	0	0	260
cm	8/10/1998	C18	PAHs	Fluoranthene	Yes	100		ug/kg	600	0.17	0	5100
cm	8/10/1998	C19	PAHs	Fluorene	No	0	U	ug/kg	19	0	0	540
cm	8/10/1998	C21	PAHs	Naphthalene	No	0	U	ug/kg	160	0	0	2100
cm	8/10/1998	C23	PAHs	Phenanthrene	Yes	57		ug/kg	240	0.24	0	1500
cm	8/10/1998	C24	PAHs	Pyrene	Yes	100		ug/kg	665	0.15	0	2600
cm	8/10/1998	C37	PAHs	Total PAHs	Yes	430		ug/kg	4000	0.11	0	45000
cm	8/10/1998	J05	OC Pesticides	4,4'-DDE	Yes	2.6		ug/kg	2.2	1.2	1	27
cm	8/10/1998	J43	OC Pesticides	Total DDx	Yes	2.6		ug/kg	1.6	1.6	1	46
cm	8/8/1998	A03	Metals	Arsenic	Yes	2		mg/kg	8.2	0.24	0	70
cm	8/8/1998	A07	Metals	Cadmium	No	0	U	mg/kg	1.2	0	0	9.6
cm	8/8/1998	A09	Metals	Chromium	Yes	15		mg/kg	81	0.19	0	370
cm	8/8/1998	A11	Metals	Copper	Yes	9		mg/kg	34	0.26	0	270
cm	8/8/1998	A13	Metals	Lead	Yes	9		mg/kg	47	0.19	0	218
cm	8/8/1998	A16	Metals	Mercury	Yes	90		ug/kg	150	0.6	0	710
cm	8/8/1998	A18	Metals	Nickel	Yes	8		mg/kg	21	0.38	0	52
cm	8/8/1998	A21	Metals	Silver	No	0	U	mg/kg	1	0	0	3.7
cm	8/8/1998	A26	Metals	Zinc	Yes	31		mg/kg	150	0.21	0	410
cm	8/8/1998	C05	PAHs	2-Methylnaphthalene	No	0	U	ug/kg	70	0	0	670
cm	8/8/1998	C06	PAHs	Acenaphthene	No	0	U	ug/kg	16	0	0	500
cm	8/8/1998	C07	PAHs	Acenaphthylene	No	0	U	ug/kg	44	0	0	640
cm	8/8/1998	C08	PAHs	Anthracene	No	0	U	ug/kg	85	0	0	1100
cm	8/8/1998	C09	PAHs	Benzo(a)anthracene	No	0	U	ug/kg	261	0	0	1600
cm	8/8/1998	C10	PAHs	Benzo(a)pyrene	No	0	U	ug/kg	430	0	0	1600
cm	8/8/1998	C15	PAHs	Chrysene	No	0	U	ug/kg	384	0	0	2800
cm	8/8/1998	C16	PAHs	Dibenzo(a,h)anthracene	No	0	U	ug/kg	63	0	0	260
cm	8/8/1998	C18	PAHs	Fluoranthene	No	0	U	ug/kg	600	0	0	5100
cm	8/8/1998	C19	PAHs	Fluorene	No	0	U	ug/kg	19	0	0	540
cm	8/8/1998	C21	PAHs	Naphthalene	No	0	U	ug/kg	160	0	0	2100
cm	8/8/1998	C23	PAHs	Phenanthrene	No	0	U	ug/kg	240	0	0	1500
cm	8/8/1998	C24	PAHs	Pyrene	No	0	U	ug/kg	665	0	0	2600
cm	8/8/1998	C37	PAHs	Total PAHs	No	0	U	ug/kg	4000	0	0	45000
cm	8/8/1998	J05	OC Pesticides	4,4'-DDE	Yes	1.8		ug/kg	2.2	0.82	0	27
cm	8/8/1998	J43	OC Pesticides	Total DDx	Yes	1.8		ug/kg	1.6	1.1	1	46
cm	8/10/1998	A03	Metals	Arsenic	Yes	1		mg/kg	8.2	0.12	0	70
cm	8/10/1998	A07	Metals	Cadmium	No	0	U	mg/kg	1.2	0	0	9.6
cm	8/10/1998	A09	Metals	Chromium	Yes	5		mg/kg	81	0.062	0	370
cm	8/10/1998	A11	Metals	Copper	Yes	3		mg/kg	34	0.088	0	270
cm	8/10/1998	A13	Metals	Lead	Yes	5		mg/kg	47	0.11	0	218
cm	8/10/1998	A16	Metals	Mercury	No	0	U	ug/kg	150	0	0	710
cm	8/10/1998	A18	Metals	Nickel	Yes	2		mg/kg	21	0.095	0	52

Depth_Unit	Sample_Date	Sort	Chemical_Group	Chemical	Detected	Result	Qual	Units	ERL	Value/ERL	ERL EF ≥ 1	ERM
cm	8/10/1998	A21	Metals	Silver	No	0	U	mg/kg	1	0	0	3.7
cm	8/10/1998	A26	Metals	Zinc	No	0	U	mg/kg	150	0	0	410
cm	8/10/1998	C05	PAHs	2-Methylnaphthalene	No	0	U	ug/kg	70	0	0	670
cm	8/10/1998	C06	PAHs	Acenaphthene	No	0	U	ug/kg	16	0	0	500
cm	8/10/1998	C07	PAHs	Acenaphthylene	No	0	U	ug/kg	44	0	0	640
cm	8/10/1998	C08	PAHs	Anthracene	No	0	U	ug/kg	85	0	0	1100
cm	8/10/1998	C09	PAHs	Benzo(a)anthracene	No	0	U	ug/kg	261	0	0	1600
cm	8/10/1998	C10	PAHs	Benzo(a)pyrene	No	0	U	ug/kg	430	0	0	1600
cm	8/10/1998	C15	PAHs	Chrysene	No	0	U	ug/kg	384	0	0	2800
cm	8/10/1998	C16	PAHs	Dibenzo(a,h)anthracene	No	0	U	ug/kg	63	0	0	260
cm	8/10/1998	C18	PAHs	Fluoranthene	No	0	U	ug/kg	600	0	0	5100
cm	8/10/1998	C19	PAHs	Fluorene	No	0	U	ug/kg	19	0	0	540
cm	8/10/1998	C21	PAHs	Naphthalene	No	0	U	ug/kg	160	0	0	2100
cm	8/10/1998	C23	PAHs	Phenanthrene	No	0	U	ug/kg	240	0	0	1500
cm	8/10/1998	C24	PAHs	Pyrene	No	0	U	ug/kg	665	0	0	2600
cm	8/10/1998	C37	PAHs	Total PAHs	No	0	U	ug/kg	4000	0	0	45000
cm	8/10/1998	J05	OC Pesticides	4,4'-DDE	Yes	1.5		ug/kg	2.2	0.68	0	27
cm	8/10/1998	J43	OC Pesticides	Total DDx	Yes	1.5		ug/kg	1.6	0.94	0	46
cm	8/8/1998	A03	Metals	Arsenic	No	0	U	mg/kg	8.2	0	0	70
cm	8/8/1998	A07	Metals	Cadmium	No	0	U	mg/kg	1.2	0	0	9.6
cm	8/8/1998	A09	Metals	Chromium	Yes	3		mg/kg	81	0.037	0	370
cm	8/8/1998	A11	Metals	Copper	No	0	U	mg/kg	34	0	0	270
cm	8/8/1998	A13	Metals	Lead	Yes	4		mg/kg	47	0.085	0	218
cm	8/8/1998	A16	Metals	Mercury	No	0	U	ug/kg	150	0	0	710
cm	8/8/1998	A18	Metals	Nickel	No	0	U	mg/kg	21	0	0	52
cm	8/8/1998	A21	Metals	Silver	No	0	U	mg/kg	1	0	0	3.7
cm	8/8/1998	A26	Metals	Zinc	No	0	U	mg/kg	150	0	0	410
cm	8/8/1998	C05	PAHs	2-Methylnaphthalene	No	0	U	ug/kg	70	0	0	670
cm	8/8/1998	C06	PAHs	Acenaphthene	No	0	U	ug/kg	16	0	0	500
cm	8/8/1998	C07	PAHs	Acenaphthylene	No	0	U	ug/kg	44	0	0	640
cm	8/8/1998	C08	PAHs	Anthracene	No	0	U	ug/kg	85	0	0	1100
cm	8/8/1998	C09	PAHs	Benzo(a)anthracene	No	0	U	ug/kg	261	0	0	1600
cm	8/8/1998	C10	PAHs	Benzo(a)pyrene	No	0	U	ug/kg	430	0	0	1600
cm	8/8/1998	C15	PAHs	Chrysene	No	0	U	ug/kg	384	0	0	2800
cm	8/8/1998	C16	PAHs	Dibenzo(a,h)anthracene	No	0	U	ug/kg	63	0	0	260
cm	8/8/1998	C18	PAHs	Fluoranthene	No	0	U	ug/kg	600	0	0	5100
cm	8/8/1998	C19	PAHs	Fluorene	No	0	U	ug/kg	19	0	0	540
cm	8/8/1998	C21	PAHs	Naphthalene	No	0	U	ug/kg	160	0	0	2100
cm	8/8/1998	C23	PAHs	Phenanthrene	No	0	U	ug/kg	240	0	0	1500
cm	8/8/1998	C24	PAHs	Pyrene	No	0	U	ug/kg	665	0	0	2600
cm	8/8/1998	C37	PAHs	Total PAHs	No	0	U	ug/kg	4000	0	0	45000
cm	8/8/1998	J05	OC Pesticides	4,4'-DDE	Yes	1.4		ug/kg	2.2	0.64	0	27
cm	8/8/1998	J43	OC Pesticides	Total DDx	Yes	1.4		ug/kg	1.6	0.88	0	46
cm	8/11/1998	A03	Metals	Arsenic	Yes	2		mg/kg	8.2	0.24	0	70
cm	8/11/1998	A07	Metals	Cadmium	No	0	U	mg/kg	1.2	0	0	9.6
cm	8/11/1998	A09	Metals	Chromium	Yes	12		mg/kg	81	0.15	0	370
cm	8/11/1998	A11	Metals	Copper	Yes	4		mg/kg	34	0.12	0	270
cm	8/11/1998	A13	Metals	Lead	Yes	5		mg/kg	47	0.11	0	218
cm	8/11/1998	A16	Metals	Mercury	No	0	U	ug/kg	150	0	0	710

Depth_Unit	Sample_Date	Sort	Chemical_Group	Chemical	Detected	Result	Qual	Units	ERL	Value/ERL	ERL EF ≥ 1	ERM
cm	8/11/1998	A18	Metals	Nickel	Yes	5		mg/kg	21	0.24	0	52
cm	8/11/1998	A21	Metals	Silver	No	0	U	mg/kg	1	0	0	3.7
cm	8/11/1998	A26	Metals	Zinc	No	0	U	mg/kg	150	0	0	410
cm	8/11/1998	C05	PAHs	2-Methylnaphthalene	No	0	U	ug/kg	70	0	0	670
cm	8/11/1998	C06	PAHs	Acenaphthene	No	0	U	ug/kg	16	0	0	500
cm	8/11/1998	C07	PAHs	Acenaphthylene	No	0	U	ug/kg	44	0	0	640
cm	8/11/1998	C08	PAHs	Anthracene	No	0	U	ug/kg	85	0	0	1100
cm	8/11/1998	C09	PAHs	Benzo(a)anthracene	No	0	U	ug/kg	261	0	0	1600
cm	8/11/1998	C10	PAHs	Benzo(a)pyrene	No	0	U	ug/kg	430	0	0	1600
cm	8/11/1998	C15	PAHs	Chrysene	No	0	U	ug/kg	384	0	0	2800
cm	8/11/1998	C16	PAHs	Dibenzo(a,h)anthracene	No	0	U	ug/kg	63	0	0	260
cm	8/11/1998	C18	PAHs	Fluoranthene	No	0	U	ug/kg	600	0	0	5100
cm	8/11/1998	C19	PAHs	Fluorene	No	0	U	ug/kg	19	0	0	540
cm	8/11/1998	C21	PAHs	Naphthalene	No	0	U	ug/kg	160	0	0	2100
cm	8/11/1998	C23	PAHs	Phenanthrene	No	0	U	ug/kg	240	0	0	1500
cm	8/11/1998	C24	PAHs	Pyrene	No	0	U	ug/kg	665	0	0	2600
cm	8/11/1998	C37	PAHs	Total PAHs	No	0	U	ug/kg	4000	0	0	45000
cm	8/11/1998	J05	OC Pesticides	4,4'-DDE	Yes	3		ug/kg	2.2	1.4	1	27
cm	8/11/1998	J43	OC Pesticides	Total DDx	Yes	6.1		ug/kg	1.6	3.8	1	46
cm	8/10/1998	A03	Metals	Arsenic	Yes	10		mg/kg	8.2	1.2	1	70
cm	8/10/1998	A07	Metals	Cadmium	No	0	U	mg/kg	1.2	0	0	9.6
cm	8/10/1998	A09	Metals	Chromium	Yes	47		mg/kg	81	0.58	0	370
cm	8/10/1998	A11	Metals	Copper	Yes	35		mg/kg	34	1	1	270
cm	8/10/1998	A13	Metals	Lead	Yes	50		mg/kg	47	1.1	1	218
cm	8/10/1998	A16	Metals	Mercury	Yes	490		ug/kg	150	3.3	1	710
cm	8/10/1998	A18	Metals	Nickel	Yes	16		mg/kg	21	0.76	0	52
cm	8/10/1998	A21	Metals	Silver	Yes	0.9		mg/kg	1	0.9	0	3.7
cm	8/10/1998	A26	Metals	Zinc	Yes	101		mg/kg	150	0.67	0	410
cm	8/10/1998	C05	PAHs	2-Methylnaphthalene	Yes	46		ug/kg	70	0.66	0	670
cm	8/10/1998	C06	PAHs	Acenaphthene	No	0	U	ug/kg	16	0	0	500
cm	8/10/1998	C07	PAHs	Acenaphthylene	Yes	39		ug/kg	44	0.89	0	640
cm	8/10/1998	C08	PAHs	Anthracene	Yes	97		ug/kg	85	1.1	1	1100
cm	8/10/1998	C09	PAHs	Benzo(a)anthracene	Yes	170		ug/kg	261	0.65	0	1600
cm	8/10/1998	C10	PAHs	Benzo(a)pyrene	Yes	200		ug/kg	430	0.47	0	1600
cm	8/10/1998	C15	PAHs	Chrysene	Yes	180		ug/kg	384	0.47	0	2800
cm	8/10/1998	C16	PAHs	Dibenzo(a,h)anthracene	No	0	U	ug/kg	63	0	0	260
cm	8/10/1998	C18	PAHs	Fluoranthene	Yes	370		ug/kg	600	0.62	0	5100
cm	8/10/1998	C19	PAHs	Fluorene	No	0	U	ug/kg	19	0	0	540
cm	8/10/1998	C21	PAHs	Naphthalene	Yes	62		ug/kg	160	0.39	0	2100
cm	8/10/1998	C23	PAHs	Phenanthrene	Yes	220		ug/kg	240	0.92	0	1500
cm	8/10/1998	C24	PAHs	Pyrene	Yes	340		ug/kg	665	0.51	0	2600
cm	8/10/1998	C37	PAHs	Total PAHs	Yes	2300		ug/kg	4000	0.58	0	45000
cm	8/10/1998	J05	OC Pesticides	4,4'-DDE	Yes	5.8		ug/kg	2.2	2.6	1	27
cm	8/10/1998	J43	OC Pesticides	Total DDx	Yes	5.8		ug/kg	1.6	3.6	1	46
cm	9/14/1993	A03	Metals	Arsenic	Yes	2.7		mg/kg	8.2	0.33	0	70
cm	9/14/1993	A07	Metals	Cadmium	Yes	0.277		mg/kg	1.2	0.23	0	9.6
cm	9/14/1993	A09	Metals	Chromium	Yes	30.2		mg/kg	81	0.37	0	370
cm	9/14/1993	A11	Metals	Copper	Yes	9.8		mg/kg	34	0.29	0	270
cm	9/14/1993	A13	Metals	Lead	Yes	17.1		mg/kg	47	0.36	0	218

Depth_Unit	Sample_Date	Sort	Chemical_Group	Chemical	Detected	Result	Qual	Units	ERL	Value/ERL	ERL EF ≥ 1	ERM
cm	9/14/1993	A16	Metals	Mercury	Yes	54		ug/kg	150	0.36	0	710
cm	9/14/1993	A18	Metals	Nickel	Yes	8.17		mg/kg	21	0.39	0	52
cm	9/14/1993	A21	Metals	Silver	Yes	0.195		mg/kg	1	0.2	0	3.7
cm	9/14/1993	A26	Metals	Zinc	Yes	30		mg/kg	150	0.2	0	410
cm	9/14/1993	C05	PAHs	2-Methylnaphthalene	No	12	U	ug/kg	70	0.17	0	670
cm	9/14/1993	C06	PAHs	Acenaphthene	No	12	U	ug/kg	16	0.75	0	500
cm	9/14/1993	C07	PAHs	Acenaphthylene	No	12	U	ug/kg	44	0.27	0	640
cm	9/14/1993	C08	PAHs	Anthracene	No	12	U	ug/kg	85	0.14	0	1100
cm	9/14/1993	C09	PAHs	Benzo(a)anthracene	Yes	36		ug/kg	261	0.14	0	1600
cm	9/14/1993	C10	PAHs	Benzo(a)pyrene	Yes	31		ug/kg	430	0.072	0	1600
cm	9/14/1993	C15	PAHs	Chrysene	Yes	78		ug/kg	384	0.2	0	2800
cm	9/14/1993	C16	PAHs	Dibenzo(a,h)anthracene	No	12	U	ug/kg	63	0.19	0	260
cm	9/14/1993	C18	PAHs	Fluoranthene	Yes	46		ug/kg	600	0.077	0	5100
cm	9/14/1993	C19	PAHs	Fluorene	No	12	U	ug/kg	19	0.63	0	540
cm	9/14/1993	C21	PAHs	Naphthalene	Yes	28		ug/kg	160	0.18	0	2100
cm	9/14/1993	C23	PAHs	Phenanthrene	Yes	18		ug/kg	240	0.075	0	1500
cm	9/14/1993	C24	PAHs	Pyrene	Yes	63		ug/kg	665	0.095	0	2600
cm	9/14/1993	C37	PAHs	Total PAHs	Yes	420		ug/kg	4000	0.11	0	45000
cm	9/14/1993	J05	OC Pesticides	4,4'-DDE	Yes	0.22		ug/kg	2.2	0.1	0	27
cm	9/14/1993	J43	OC Pesticides	Total DDx	Yes	0.4		ug/kg	1.6	0.25	0	46
cm	9/16/1993	A03	Metals	Arsenic	Yes	1.24		mg/kg	8.2	0.15	0	70
cm	9/16/1993	A07	Metals	Cadmium	Yes	0.234		mg/kg	1.2	0.2	0	9.6
cm	9/16/1993	A09	Metals	Chromium	Yes	26.2		mg/kg	81	0.32	0	370
cm	9/16/1993	A11	Metals	Copper	Yes	4.52		mg/kg	34	0.13	0	270
cm	9/16/1993	A13	Metals	Lead	Yes	16.5		mg/kg	47	0.35	0	218
cm	9/16/1993	A16	Metals	Mercury	Yes	48		ug/kg	150	0.32	0	710
cm	9/16/1993	A18	Metals	Nickel	Yes	5.05		mg/kg	21	0.24	0	52
cm	9/16/1993	A21	Metals	Silver	Yes	0.033		mg/kg	1	0.033	0	3.7
cm	9/16/1993	A26	Metals	Zinc	Yes	36		mg/kg	150	0.24	0	410
cm	9/16/1993	C05	PAHs	2-Methylnaphthalene	No	12	U	ug/kg	70	0.17	0	670
cm	9/16/1993	C06	PAHs	Acenaphthene	No	12	U	ug/kg	16	0.75	0	500
cm	9/16/1993	C07	PAHs	Acenaphthylene	No	12	U	ug/kg	44	0.27	0	640
cm	9/16/1993	C08	PAHs	Anthracene	Yes	14		ug/kg	85	0.16	0	1100
cm	9/16/1993	C09	PAHs	Benzo(a)anthracene	Yes	38		ug/kg	261	0.15	0	1600
cm	9/16/1993	C10	PAHs	Benzo(a)pyrene	Yes	33		ug/kg	430	0.077	0	1600
cm	9/16/1993	C15	PAHs	Chrysene	Yes	38		ug/kg	384	0.099	0	2800
cm	9/16/1993	C16	PAHs	Dibenzo(a,h)anthracene	No	12	U	ug/kg	63	0.19	0	260
cm	9/16/1993	C18	PAHs	Fluoranthene	Yes	64		ug/kg	600	0.11	0	5100
cm	9/16/1993	C19	PAHs	Fluorene	No	12	U	ug/kg	19	0.63	0	540
cm	9/16/1993	C21	PAHs	Naphthalene	Yes	16		ug/kg	160	0.1	0	2100
cm	9/16/1993	C23	PAHs	Phenanthrene	Yes	36		ug/kg	240	0.15	0	1500
cm	9/16/1993	C24	PAHs	Pyrene	Yes	59		ug/kg	665	0.089	0	2600
cm	9/16/1993	C37	PAHs	Total PAHs	Yes	370		ug/kg	4000	0.093	0	45000
cm	9/16/1993	J05	OC Pesticides	4,4'-DDE	Yes	0.17		ug/kg	2.2	0.077	0	27
cm	9/16/1993	J43	OC Pesticides	Total DDx	Yes	0.43		ug/kg	1.6	0.27	0	46
cm	9/14/1993	A03	Metals	Arsenic	Yes	5.85		mg/kg	8.2	0.71	0	70
cm	9/14/1993	A07	Metals	Cadmium	Yes	1.63		mg/kg	1.2	1.4	1	9.6
cm	9/14/1993	A09	Metals	Chromium	Yes	66.8		mg/kg	81	0.82	0	370
cm	9/14/1993	A11	Metals	Copper	Yes	79.7		mg/kg	34	2.3	1	270

Depth_Unit	Sample_Date	Sort	Chemical_Group	Chemical	Detected	Result	Qual	Units	ERL	Value/ERL	ERL EF ≥ 1	ERM
cm	9/14/1993	A13	Metals	Lead	Yes	62.7		mg/kg	47	1.3	1	218
cm	9/14/1993	A16	Metals	Mercury	Yes	354		ug/kg	150	2.4	1	710
cm	9/14/1993	A18	Metals	Nickel	Yes	17.9		mg/kg	21	0.85	0	52
cm	9/14/1993	A21	Metals	Silver	Yes	2.24		mg/kg	1	2.2	1	3.7
cm	9/14/1993	A26	Metals	Zinc	Yes	148		mg/kg	150	0.99	0	410
cm	9/14/1993	C05	PAHs	2-Methylnaphthalene	Yes	30		ug/kg	70	0.43	0	670
cm	9/14/1993	C06	PAHs	Acenaphthene	Yes	18		ug/kg	16	1.1	1	500
cm	9/14/1993	C07	PAHs	Acenaphthylene	Yes	55		ug/kg	44	1.3	1	640
cm	9/14/1993	C08	PAHs	Anthracene	Yes	150		ug/kg	85	1.8	1	1100
cm	9/14/1993	C09	PAHs	Benzo(a)anthracene	Yes	260		ug/kg	261	1	1	1600
cm	9/14/1993	C10	PAHs	Benzo(a)pyrene	Yes	240		ug/kg	430	0.56	0	1600
cm	9/14/1993	C15	PAHs	Chrysene	Yes	310		ug/kg	384	0.81	0	2800
cm	9/14/1993	C16	PAHs	Dibenzo(a,h)anthracene	No	12	U	ug/kg	63	0.19	0	260
cm	9/14/1993	C18	PAHs	Fluoranthene	Yes	650		ug/kg	600	1.1	1	5100
cm	9/14/1993	C19	PAHs	Fluorene	Yes	38		ug/kg	19	2	1	540
cm	9/14/1993	C21	PAHs	Naphthalene	Yes	64		ug/kg	160	0.4	0	2100
cm	9/14/1993	C23	PAHs	Phenanthrene	Yes	170		ug/kg	240	0.71	0	1500
cm	9/14/1993	C24	PAHs	Pyrene	Yes	520		ug/kg	665	0.78	0	2600
cm	9/14/1993	C37	PAHs	Total PAHs	Yes	3100		ug/kg	4000	0.78	0	45000
cm	9/14/1993	J05	OC Pesticides	4,4'-DDE	Yes	5.1		ug/kg	2.2	2.3	1	27
cm	9/14/1993	J43	OC Pesticides	Total DDx	Yes	9.5		ug/kg	1.6	5.9	1	46
cm	9/24/1993	A03	Metals	Arsenic	Yes	6.08		mg/kg	8.2	0.74	0	70
cm	9/24/1993	A07	Metals	Cadmium	Yes	8.79		mg/kg	1.2	7.3	1	9.6
cm	9/24/1993	A09	Metals	Chromium	Yes	109		mg/kg	81	1.3	1	370
cm	9/24/1993	A11	Metals	Copper	Yes	589		mg/kg	34	17	1	270
cm	9/24/1993	A13	Metals	Lead	Yes	651		mg/kg	47	14	1	218
cm	9/24/1993	A16	Metals	Mercury	Yes	2150		ug/kg	150	14	1	710
cm	9/24/1993	A18	Metals	Nickel	Yes	181		mg/kg	21	8.6	1	52
cm	9/24/1993	A21	Metals	Silver	Yes	4.32		mg/kg	1	4.3	1	3.7
cm	9/24/1993	A26	Metals	Zinc	Yes	1280		mg/kg	150	8.5	1	410
cm	9/24/1993	C05	PAHs	2-Methylnaphthalene	Yes	2100		ug/kg	70	30	1	670
cm	9/24/1993	C06	PAHs	Acenaphthene	Yes	830		ug/kg	16	52	1	500
cm	9/24/1993	C07	PAHs	Acenaphthylene	Yes	590		ug/kg	44	13	1	640
cm	9/24/1993	C08	PAHs	Anthracene	Yes	2500		ug/kg	85	29	1	1100
cm	9/24/1993	C09	PAHs	Benzo(a)anthracene	Yes	3200		ug/kg	261	12	1	1600
cm	9/24/1993	C10	PAHs	Benzo(a)pyrene	Yes	3000		ug/kg	430	7	1	1600
cm	9/24/1993	C15	PAHs	Chrysene	Yes	4700		ug/kg	384	12	1	2800
cm	9/24/1993	C16	PAHs	Dibenzo(a,h)anthracene	No	12	U	ug/kg	63	0.19	0	260
cm	9/24/1993	C18	PAHs	Fluoranthene	Yes	8300		ug/kg	600	14	1	5100
cm	9/24/1993	C19	PAHs	Fluorene	Yes	1500		ug/kg	19	79	1	540
cm	9/24/1993	C21	PAHs	Naphthalene	Yes	1600		ug/kg	160	10	1	2100
cm	9/24/1993	C23	PAHs	Phenanthrene	Yes	7100		ug/kg	240	30	1	1500
cm	9/24/1993	C24	PAHs	Pyrene	Yes	7600		ug/kg	665	11	1	2600
cm	9/24/1993	C37	PAHs	Total PAHs	Yes	52000		ug/kg	4000	13	1	45000
cm	9/24/1993	J05	OC Pesticides	4,4'-DDE	No	2	U	ug/kg	2.2	0.91	0	27
cm	9/24/1993	J43	OC Pesticides	Total DDx	Yes	40		ug/kg	1.6	25	1	46
cm	9/15/1993	A03	Metals	Arsenic	Yes	10.3		mg/kg	8.2	1.3	1	70
cm	9/15/1993	A07	Metals	Cadmium	Yes	2.36		mg/kg	1.2	2	1	9.6
cm	9/15/1993	A09	Metals	Chromium	Yes	69.4		mg/kg	81	0.86	0	370

Depth_Unit	Sample_Date	Sort	Chemical_Group	Chemical	Detected	Result	Qual	Units	ERL	Value/ERL	ERL EF ≥ 1	ERM
cm	9/15/1993	A11	Metals	Copper	Yes	88.7		mg/kg	34	2.6	1	270
cm	9/15/1993	A13	Metals	Lead	Yes	77.9		mg/kg	47	1.7	1	218
cm	9/15/1993	A16	Metals	Mercury	Yes	375		ug/kg	150	2.5	1	710
cm	9/15/1993	A18	Metals	Nickel	Yes	21.3		mg/kg	21	1	1	52
cm	9/15/1993	A21	Metals	Silver	Yes	2.45		mg/kg	1	2.5	1	3.7
cm	9/15/1993	A26	Metals	Zinc	Yes	212		mg/kg	150	1.4	1	410
cm	9/15/1993	C05	PAHs	2-Methylnaphthalene	Yes	45		ug/kg	70	0.64	0	670
cm	9/15/1993	C06	PAHs	Acenaphthene	Yes	36		ug/kg	16	2.3	1	500
cm	9/15/1993	C07	PAHs	Acenaphthylene	No	12	U	ug/kg	44	0.27	0	640
cm	9/15/1993	C08	PAHs	Anthracene	Yes	110		ug/kg	85	1.3	1	1100
cm	9/15/1993	C09	PAHs	Benzo(a)anthracene	Yes	210		ug/kg	261	0.8	0	1600
cm	9/15/1993	C10	PAHs	Benzo(a)pyrene	Yes	270		ug/kg	430	0.63	0	1600
cm	9/15/1993	C15	PAHs	Chrysene	Yes	320		ug/kg	384	0.83	0	2800
cm	9/15/1993	C16	PAHs	Dibenzo(a,h)anthracene	No	12	U	ug/kg	63	0.19	0	260
cm	9/15/1993	C18	PAHs	Fluoranthene	Yes	640		ug/kg	600	1.1	1	5100
cm	9/15/1993	C19	PAHs	Fluorene	Yes	72		ug/kg	19	3.8	1	540
cm	9/15/1993	C21	PAHs	Naphthalene	Yes	84		ug/kg	160	0.53	0	2100
cm	9/15/1993	C23	PAHs	Phenanthrene	Yes	320		ug/kg	240	1.3	1	1500
cm	9/15/1993	C24	PAHs	Pyrene	Yes	550		ug/kg	665	0.83	0	2600
cm	9/15/1993	C37	PAHs	Total PAHs	Yes	3300		ug/kg	4000	0.83	0	45000
cm	9/15/1993	J05	OC Pesticides	4,4'-DDE	Yes	3.74		ug/kg	2.2	1.7	1	27
cm	9/15/1993	J43	OC Pesticides	Total DDx	Yes	8.3		ug/kg	1.6	5.2	1	46
cm	9/15/1993	A03	Metals	Arsenic	Yes	11.6		mg/kg	8.2	1.4	1	70
cm	9/15/1993	A07	Metals	Cadmium	Yes	2.07		mg/kg	1.2	1.7	1	9.6
cm	9/15/1993	A09	Metals	Chromium	Yes	87.9		mg/kg	81	1.1	1	370
cm	9/15/1993	A11	Metals	Copper	Yes	86.8		mg/kg	34	2.6	1	270
cm	9/15/1993	A13	Metals	Lead	Yes	107		mg/kg	47	2.3	1	218
cm	9/15/1993	A16	Metals	Mercury	Yes	666		ug/kg	150	4.4	1	710
cm	9/15/1993	A18	Metals	Nickel	Yes	23.2		mg/kg	21	1.1	1	52
cm	9/15/1993	A21	Metals	Silver	Yes	2.57		mg/kg	1	2.6	1	3.7
cm	9/15/1993	A26	Metals	Zinc	Yes	225		mg/kg	150	1.5	1	410
cm	9/15/1993	C05	PAHs	2-Methylnaphthalene	Yes	54		ug/kg	70	0.77	0	670
cm	9/15/1993	C06	PAHs	Acenaphthene	Yes	42		ug/kg	16	2.6	1	500
cm	9/15/1993	C07	PAHs	Acenaphthylene	Yes	100		ug/kg	44	2.3	1	640
cm	9/15/1993	C08	PAHs	Anthracene	Yes	220		ug/kg	85	2.6	1	1100
cm	9/15/1993	C09	PAHs	Benzo(a)anthracene	Yes	350		ug/kg	261	1.3	1	1600
cm	9/15/1993	C10	PAHs	Benzo(a)pyrene	Yes	370		ug/kg	430	0.86	0	1600
cm	9/15/1993	C15	PAHs	Chrysene	Yes	440		ug/kg	384	1.1	1	2800
cm	9/15/1993	C16	PAHs	Dibenzo(a,h)anthracene	No	12	U	ug/kg	63	0.19	0	260
cm	9/15/1993	C18	PAHs	Fluoranthene	Yes	880		ug/kg	600	1.5	1	5100
cm	9/15/1993	C19	PAHs	Fluorene	Yes	86		ug/kg	19	4.5	1	540
cm	9/15/1993	C21	PAHs	Naphthalene	Yes	94		ug/kg	160	0.59	0	2100
cm	9/15/1993	C23	PAHs	Phenanthrene	Yes	330		ug/kg	240	1.4	1	1500
cm	9/15/1993	C24	PAHs	Pyrene	Yes	770		ug/kg	665	1.2	1	2600
cm	9/15/1993	C37	PAHs	Total PAHs	Yes	4700		ug/kg	4000	1.2	1	45000
cm	9/15/1993	J05	OC Pesticides	4,4'-DDE	Yes	5.39		ug/kg	2.2	2.5	1	27
cm	9/15/1993	J43	OC Pesticides	Total DDx	Yes	13		ug/kg	1.6	8.1	1	46
cm	9/17/1993	A03	Metals	Arsenic	Yes	2.47		mg/kg	8.2	0.3	0	70
cm	9/17/1993	A07	Metals	Cadmium	Yes	0.317		mg/kg	1.2	0.26	0	9.6

Depth_Unit	Sample_Date	Sort	Chemical_Group	Chemical	Detected	Result	Qual	Units	ERL	Value/ERL	ERL EF ≥ 1	ERM
cm	9/17/1993	A09	Metals	Chromium	Yes	40		mg/kg	81	0.49	0	370
cm	9/17/1993	A11	Metals	Copper	Yes	8.14		mg/kg	34	0.24	0	270
cm	9/17/1993	A13	Metals	Lead	Yes	22.4		mg/kg	47	0.48	0	218
cm	9/17/1993	A16	Metals	Mercury	Yes	117		ug/kg	150	0.78	0	710
cm	9/17/1993	A18	Metals	Nickel	Yes	6.55		mg/kg	21	0.31	0	52
cm	9/17/1993	A21	Metals	Silver	Yes	0.239		mg/kg	1	0.24	0	3.7
cm	9/17/1993	A26	Metals	Zinc	Yes	46		mg/kg	150	0.31	0	410
cm	9/17/1993	C05	PAHs	2-Methylnaphthalene	No	12	U	ug/kg	70	0.17	0	670
cm	9/17/1993	C06	PAHs	Acenaphthene	No	12	U	ug/kg	16	0.75	0	500
cm	9/17/1993	C07	PAHs	Acenaphthylene	No	12	U	ug/kg	44	0.27	0	640
cm	9/17/1993	C08	PAHs	Anthracene	Yes	19		ug/kg	85	0.22	0	1100
cm	9/17/1993	C09	PAHs	Benzo(a)anthracene	Yes	47		ug/kg	261	0.18	0	1600
cm	9/17/1993	C10	PAHs	Benzo(a)pyrene	Yes	52		ug/kg	430	0.12	0	1600
cm	9/17/1993	C15	PAHs	Chrysene	Yes	52		ug/kg	384	0.14	0	2800
cm	9/17/1993	C16	PAHs	Dibenzo(a,h)anthracene	No	12	U	ug/kg	63	0.19	0	260
cm	9/17/1993	C18	PAHs	Fluoranthene	Yes	71		ug/kg	600	0.12	0	5100
cm	9/17/1993	C19	PAHs	Fluorene	No	12	U	ug/kg	19	0.63	0	540
cm	9/17/1993	C21	PAHs	Naphthalene	Yes	14		ug/kg	160	0.088	0	2100
cm	9/17/1993	C23	PAHs	Phenanthrene	Yes	35		ug/kg	240	0.15	0	1500
cm	9/17/1993	C24	PAHs	Pyrene	Yes	76		ug/kg	665	0.11	0	2600
cm	9/17/1993	C37	PAHs	Total PAHs	Yes	520		ug/kg	4000	0.13	0	45000
cm	9/17/1993	J05	OC Pesticides	4,4'-DDE	Yes	0.17		ug/kg	2.2	0.077	0	27
cm	9/17/1993	J43	OC Pesticides	Total DDx	Yes	0.44		ug/kg	1.6	0.28	0	46
cm	9/16/1993	A03	Metals	Arsenic	Yes	1.61		mg/kg	8.2	0.2	0	70
cm	9/16/1993	A07	Metals	Cadmium	Yes	0.422		mg/kg	1.2	0.35	0	9.6
cm	9/16/1993	A09	Metals	Chromium	Yes	21.7		mg/kg	81	0.27	0	370
cm	9/16/1993	A11	Metals	Copper	Yes	5.97		mg/kg	34	0.18	0	270
cm	9/16/1993	A13	Metals	Lead	Yes	19.9		mg/kg	47	0.42	0	218
cm	9/16/1993	A16	Metals	Mercury	Yes	111		ug/kg	150	0.74	0	710
cm	9/16/1993	A18	Metals	Nickel	Yes	4.23		mg/kg	21	0.2	0	52
cm	9/16/1993	A21	Metals	Silver	Yes	0.182		mg/kg	1	0.18	0	3.7
cm	9/16/1993	A26	Metals	Zinc	Yes	39		mg/kg	150	0.26	0	410
cm	9/16/1993	C05	PAHs	2-Methylnaphthalene	No	12	U	ug/kg	70	0.17	0	670
cm	9/16/1993	C06	PAHs	Acenaphthene	No	12	U	ug/kg	16	0.75	0	500
cm	9/16/1993	C07	PAHs	Acenaphthylene	No	12	U	ug/kg	44	0.27	0	640
cm	9/16/1993	C08	PAHs	Anthracene	No	12	U	ug/kg	85	0.14	0	1100
cm	9/16/1993	C09	PAHs	Benzo(a)anthracene	Yes	18		ug/kg	261	0.069	0	1600
cm	9/16/1993	C10	PAHs	Benzo(a)pyrene	Yes	16		ug/kg	430	0.037	0	1600
cm	9/16/1993	C15	PAHs	Chrysene	Yes	19		ug/kg	384	0.049	0	2800
cm	9/16/1993	C16	PAHs	Dibenzo(a,h)anthracene	No	12	U	ug/kg	63	0.19	0	260
cm	9/16/1993	C18	PAHs	Fluoranthene	Yes	36		ug/kg	600	0.06	0	5100
cm	9/16/1993	C19	PAHs	Fluorene	No	12	U	ug/kg	19	0.63	0	540
cm	9/16/1993	C21	PAHs	Naphthalene	Yes	17		ug/kg	160	0.11	0	2100
cm	9/16/1993	C23	PAHs	Phenanthrene	Yes	32		ug/kg	240	0.13	0	1500
cm	9/16/1993	C24	PAHs	Pyrene	Yes	38		ug/kg	665	0.057	0	2600
cm	9/16/1993	C37	PAHs	Total PAHs	Yes	220		ug/kg	4000	0.055	0	45000
cm	9/16/1993	J05	OC Pesticides	4,4'-DDE	Yes	0.14		ug/kg	2.2	0.064	0	27
cm	9/16/1993	J43	OC Pesticides	Total DDx	Yes	0.32		ug/kg	1.6	0.2	0	46
cm	9/17/1993	A03	Metals	Arsenic	Yes	1.34		mg/kg	8.2	0.16	0	70

Depth_Unit	Sample_Date	Sort	Chemical_Group	Chemical	Detected	Result	Qual	Units	ERL	Value/ERL	ERL EF ≥ 1	ERM
cm	9/17/1993	A07	Metals	Cadmium	Yes	0.257		mg/kg	1.2	0.21	0	9.6
cm	9/17/1993	A09	Metals	Chromium	Yes	35.5		mg/kg	81	0.44	0	370
cm	9/17/1993	A11	Metals	Copper	Yes	4.98		mg/kg	34	0.15	0	270
cm	9/17/1993	A13	Metals	Lead	Yes	18.2		mg/kg	47	0.39	0	218
cm	9/17/1993	A16	Metals	Mercury	Yes	63		ug/kg	150	0.42	0	710
cm	9/17/1993	A18	Metals	Nickel	Yes	8.75		mg/kg	21	0.42	0	52
cm	9/17/1993	A21	Metals	Silver	Yes	0.115		mg/kg	1	0.12	0	3.7
cm	9/17/1993	A26	Metals	Zinc	Yes	38		mg/kg	150	0.25	0	410
cm	9/17/1993	C05	PAHs	2-Methylnaphthalene	No	12	U	ug/kg	70	0.17	0	670
cm	9/17/1993	C06	PAHs	Acenaphthene	No	12	U	ug/kg	16	0.75	0	500
cm	9/17/1993	C07	PAHs	Acenaphthylene	No	12	U	ug/kg	44	0.27	0	640
cm	9/17/1993	C08	PAHs	Anthracene	No	12	U	ug/kg	85	0.14	0	1100
cm	9/17/1993	C09	PAHs	Benzo(a)anthracene	No	12	U	ug/kg	261	0.046	0	1600
cm	9/17/1993	C10	PAHs	Benzo(a)pyrene	No	12	U	ug/kg	430	0.028	0	1600
cm	9/17/1993	C15	PAHs	Chrysene	No	12	U	ug/kg	384	0.031	0	2800
cm	9/17/1993	C16	PAHs	Dibenzo(a,h)anthracene	No	12	U	ug/kg	63	0.19	0	260
cm	9/17/1993	C18	PAHs	Fluoranthene	Yes	14		ug/kg	600	0.023	0	5100
cm	9/17/1993	C19	PAHs	Fluorene	No	12	U	ug/kg	19	0.63	0	540
cm	9/17/1993	C21	PAHs	Naphthalene	Yes	14		ug/kg	160	0.088	0	2100
cm	9/17/1993	C23	PAHs	Phenanthrene	No	12	U	ug/kg	240	0.05	0	1500
cm	9/17/1993	C24	PAHs	Pyrene	Yes	12		ug/kg	665	0.018	0	2600
cm	9/17/1993	C37	PAHs	Total PAHs	Yes	64		ug/kg	4000	0.016	0	45000
cm	9/17/1993	J05	OC Pesticides	4,4'-DDE	Yes	0.11		ug/kg	2.2	0.05	0	27
cm	9/17/1993	J43	OC Pesticides	Total DDx	Yes	0.29		ug/kg	1.6	0.18	0	46
cm	9/13/1993	A03	Metals	Arsenic	Yes	5		mg/kg	8.2	0.61	0	70
cm	9/13/1993	A07	Metals	Cadmium	Yes	0.67		mg/kg	1.2	0.56	0	9.6
cm	9/13/1993	A09	Metals	Chromium	Yes	62.1		mg/kg	81	0.77	0	370
cm	9/13/1993	A11	Metals	Copper	Yes	37		mg/kg	34	1.1	1	270
cm	9/13/1993	A13	Metals	Lead	Yes	51.6		mg/kg	47	1.1	1	218
cm	9/13/1993	A16	Metals	Mercury	Yes	343		ug/kg	150	2.3	1	710
cm	9/13/1993	A18	Metals	Nickel	Yes	12.1		mg/kg	21	0.58	0	52
cm	9/13/1993	A21	Metals	Silver	Yes	1.21		mg/kg	1	1.2	1	3.7
cm	9/13/1993	A26	Metals	Zinc	Yes	98		mg/kg	150	0.65	0	410
cm	9/13/1993	C05	PAHs	2-Methylnaphthalene	Yes	26		ug/kg	70	0.37	0	670
cm	9/13/1993	C06	PAHs	Acenaphthene	No	12	U	ug/kg	16	0.75	0	500
cm	9/13/1993	C07	PAHs	Acenaphthylene	Yes	31		ug/kg	44	0.7	0	640
cm	9/13/1993	C08	PAHs	Anthracene	Yes	57		ug/kg	85	0.67	0	1100
cm	9/13/1993	C09	PAHs	Benzo(a)anthracene	Yes	97		ug/kg	261	0.37	0	1600
cm	9/13/1993	C10	PAHs	Benzo(a)pyrene	Yes	120		ug/kg	430	0.28	0	1600
cm	9/13/1993	C15	PAHs	Chrysene	Yes	120		ug/kg	384	0.31	0	2800
cm	9/13/1993	C16	PAHs	Dibenzo(a,h)anthracene	Yes	16		ug/kg	63	0.25	0	260
cm	9/13/1993	C18	PAHs	Fluoranthene	Yes	190		ug/kg	600	0.32	0	5100
cm	9/13/1993	C19	PAHs	Fluorene	Yes	22		ug/kg	19	1.2	1	540
cm	9/13/1993	C21	PAHs	Naphthalene	Yes	62		ug/kg	160	0.39	0	2100
cm	9/13/1993	C23	PAHs	Phenanthrene	Yes	100		ug/kg	240	0.42	0	1500
cm	9/13/1993	C24	PAHs	Pyrene	Yes	180		ug/kg	665	0.27	0	2600
cm	9/13/1993	C37	PAHs	Total PAHs	Yes	1400		ug/kg	4000	0.35	0	45000
cm	9/13/1993	J05	OC Pesticides	4,4'-DDE	Yes	0.86		ug/kg	2.2	0.39	0	27
cm	9/13/1993	J43	OC Pesticides	Total DDx	Yes	1.9		ug/kg	1.6	1.2	1	46

Depth_Unit	Sample_Date	Sort	Chemical_Group	Chemical	Detected	Result	Qual	Units	ERL	Value/ERL	ERL EF ≥ 1	ERM
cm	9/8/1993	A03	Metals	Arsenic	Yes	4.2		mg/kg	8.2	0.51	0	70
cm	9/8/1993	A07	Metals	Cadmium	Yes	0.422		mg/kg	1.2	0.35	0	9.6
cm	9/8/1993	A09	Metals	Chromium	Yes	40.3		mg/kg	81	0.5	0	370
cm	9/8/1993	A11	Metals	Copper	Yes	25		mg/kg	34	0.74	0	270
cm	9/8/1993	A13	Metals	Lead	Yes	39.2		mg/kg	47	0.83	0	218
cm	9/8/1993	A16	Metals	Mercury	Yes	409		ug/kg	150	2.7	1	710
cm	9/8/1993	A18	Metals	Nickel	Yes	11.3		mg/kg	21	0.54	0	52
cm	9/8/1993	A21	Metals	Silver	Yes	0.834		mg/kg	1	0.83	0	3.7
cm	9/8/1993	A26	Metals	Zinc	Yes	67		mg/kg	150	0.45	0	410
cm	9/8/1993	C05	PAHs	2-Methylnaphthalene	Yes	23		ug/kg	70	0.33	0	670
cm	9/8/1993	C06	PAHs	Acenaphthene	Yes	12		ug/kg	16	0.75	0	500
cm	9/8/1993	C07	PAHs	Acenaphthylene	Yes	35		ug/kg	44	0.8	0	640
cm	9/8/1993	C08	PAHs	Anthracene	Yes	56		ug/kg	85	0.66	0	1100
cm	9/8/1993	C09	PAHs	Benzo(a)anthracene	Yes	100		ug/kg	261	0.38	0	1600
cm	9/8/1993	C10	PAHs	Benzo(a)pyrene	Yes	110		ug/kg	430	0.26	0	1600
cm	9/8/1993	C15	PAHs	Chrysene	Yes	130		ug/kg	384	0.34	0	2800
cm	9/8/1993	C16	PAHs	Dibenzo(a,h)anthracene	Yes	20		ug/kg	63	0.32	0	260
cm	9/8/1993	C18	PAHs	Fluoranthene	Yes	190		ug/kg	600	0.32	0	5100
cm	9/8/1993	C19	PAHs	Fluorene	Yes	23		ug/kg	19	1.2	1	540
cm	9/8/1993	C21	PAHs	Naphthalene	Yes	52		ug/kg	160	0.33	0	2100
cm	9/8/1993	C23	PAHs	Phenanthrene	Yes	100		ug/kg	240	0.42	0	1500
cm	9/8/1993	C24	PAHs	Pyrene	Yes	190		ug/kg	665	0.29	0	2600
cm	9/8/1993	C37	PAHs	Total PAHs	Yes	1400		ug/kg	4000	0.35	0	45000
cm	9/8/1993	J05	OC Pesticides	4,4'-DDE	Yes	1.46		ug/kg	2.2	0.66	0	27
cm	9/8/1993	J43	OC Pesticides	Total DDx	Yes	3.3		ug/kg	1.6	2.1	1	46
cm	9/9/1993	A03	Metals	Arsenic	Yes	9.72		mg/kg	8.2	1.2	1	70
cm	9/9/1993	A07	Metals	Cadmium	Yes	0.71		mg/kg	1.2	0.59	0	9.6
cm	9/9/1993	A09	Metals	Chromium	Yes	76.9		mg/kg	81	0.95	0	370
cm	9/9/1993	A11	Metals	Copper	Yes	49.2		mg/kg	34	1.4	1	270
cm	9/9/1993	A13	Metals	Lead	Yes	74.1		mg/kg	47	1.6	1	218
cm	9/9/1993	A16	Metals	Mercury	Yes	481		ug/kg	150	3.2	1	710
cm	9/9/1993	A18	Metals	Nickel	Yes	15.9		mg/kg	21	0.76	0	52
cm	9/9/1993	A21	Metals	Silver	Yes	1.74		mg/kg	1	1.7	1	3.7
cm	9/9/1993	A26	Metals	Zinc	Yes	124		mg/kg	150	0.83	0	410
cm	9/9/1993	C05	PAHs	2-Methylnaphthalene	Yes	37		ug/kg	70	0.53	0	670
cm	9/9/1993	C06	PAHs	Acenaphthene	Yes	22		ug/kg	16	1.4	1	500
cm	9/9/1993	C07	PAHs	Acenaphthylene	Yes	48		ug/kg	44	1.1	1	640
cm	9/9/1993	C08	PAHs	Anthracene	Yes	92		ug/kg	85	1.1	1	1100
cm	9/9/1993	C09	PAHs	Benzo(a)anthracene	Yes	140		ug/kg	261	0.54	0	1600
cm	9/9/1993	C10	PAHs	Benzo(a)pyrene	Yes	160		ug/kg	430	0.37	0	1600
cm	9/9/1993	C15	PAHs	Chrysene	Yes	180		ug/kg	384	0.47	0	2800
cm	9/9/1993	C16	PAHs	Dibenzo(a,h)anthracene	Yes	29		ug/kg	63	0.46	0	260
cm	9/9/1993	C18	PAHs	Fluoranthene	Yes	370		ug/kg	600	0.62	0	5100
cm	9/9/1993	C19	PAHs	Fluorene	Yes	39		ug/kg	19	2.1	1	540
cm	9/9/1993	C21	PAHs	Naphthalene	Yes	71		ug/kg	160	0.44	0	2100
cm	9/9/1993	C23	PAHs	Phenanthrene	Yes	200		ug/kg	240	0.83	0	1500
cm	9/9/1993	C24	PAHs	Pyrene	Yes	330		ug/kg	665	0.5	0	2600
cm	9/9/1993	C37	PAHs	Total PAHs	Yes	2300		ug/kg	4000	0.58	0	45000
cm	9/9/1993	J05	OC Pesticides	4,4'-DDE	Yes	2.18		ug/kg	2.2	0.99	0	27

Depth_Unit	Sample_Date	Sort	Chemical_Group	Chemical	Detected	Result	Qual	Units	ERL	Value/ERL	ERL EF ≥ 1	ERM
cm	9/9/1993	J43	OC Pesticides	Total DDx	Yes	5.2		ug/kg	1.6	3.3	1	46
cm	9/17/1993	A03	Metals	Arsenic	Yes	0.73		mg/kg	8.2	0.089	0	70
cm	9/17/1993	A07	Metals	Cadmium	Yes	0.043		mg/kg	1.2	0.036	0	9.6
cm	9/17/1993	A09	Metals	Chromium	Yes	11.7		mg/kg	81	0.14	0	370
cm	9/17/1993	A11	Metals	Copper	Yes	3.33		mg/kg	34	0.098	0	270
cm	9/17/1993	A13	Metals	Lead	Yes	10.2		mg/kg	47	0.22	0	218
cm	9/17/1993	A16	Metals	Mercury	Yes	35		ug/kg	150	0.23	0	710
cm	9/17/1993	A18	Metals	Nickel	Yes	2.15		mg/kg	21	0.1	0	52
cm	9/17/1993	A21	Metals	Silver	Yes	0.116		mg/kg	1	0.12	0	3.7
cm	9/17/1993	A26	Metals	Zinc	Yes	11		mg/kg	150	0.073	0	410
cm	9/17/1993	C05	PAHs	2-Methylnaphthalene	No	12	U	ug/kg	70	0.17	0	670
cm	9/17/1993	C06	PAHs	Acenaphthene	No	12	U	ug/kg	16	0.75	0	500
cm	9/17/1993	C07	PAHs	Acenaphthylene	Yes	58		ug/kg	44	1.3	1	640
cm	9/17/1993	C08	PAHs	Anthracene	Yes	44		ug/kg	85	0.52	0	1100
cm	9/17/1993	C09	PAHs	Benzo(a)anthracene	Yes	130		ug/kg	261	0.5	0	1600
cm	9/17/1993	C10	PAHs	Benzo(a)pyrene	Yes	110		ug/kg	430	0.26	0	1600
cm	9/17/1993	C15	PAHs	Chrysene	Yes	130		ug/kg	384	0.34	0	2800
cm	9/17/1993	C16	PAHs	Dibenzo(a,h)anthracene	Yes	14		ug/kg	63	0.22	0	260
cm	9/17/1993	C18	PAHs	Fluoranthene	Yes	140		ug/kg	600	0.23	0	5100
cm	9/17/1993	C19	PAHs	Fluorene	No	12	U	ug/kg	19	0.63	0	540
cm	9/17/1993	C21	PAHs	Naphthalene	Yes	24		ug/kg	160	0.15	0	2100
cm	9/17/1993	C23	PAHs	Phenanthrene	Yes	66		ug/kg	240	0.28	0	1500
cm	9/17/1993	C24	PAHs	Pyrene	Yes	250		ug/kg	665	0.38	0	2600
cm	9/17/1993	C37	PAHs	Total PAHs	Yes	1200		ug/kg	4000	0.3	0	45000
cm	9/17/1993	J05	OC Pesticides	4,4'-DDE	Yes	0.17		ug/kg	2.2	0.077	0	27
cm	9/17/1993	J43	OC Pesticides	Total DDx	Yes	0.58		ug/kg	1.6	0.36	0	46
cm	9/9/1993	A03	Metals	Arsenic	Yes	4.64		mg/kg	8.2	0.57	0	70
cm	9/9/1993	A07	Metals	Cadmium	Yes	0.374		mg/kg	1.2	0.31	0	9.6
cm	9/9/1993	A09	Metals	Chromium	Yes	39.6		mg/kg	81	0.49	0	370
cm	9/9/1993	A11	Metals	Copper	Yes	23.5		mg/kg	34	0.69	0	270
cm	9/9/1993	A13	Metals	Lead	Yes	35.2		mg/kg	47	0.75	0	218
cm	9/9/1993	A16	Metals	Mercury	Yes	243		ug/kg	150	1.6	1	710
cm	9/9/1993	A18	Metals	Nickel	Yes	11.1		mg/kg	21	0.53	0	52
cm	9/9/1993	A21	Metals	Silver	Yes	0.761		mg/kg	1	0.76	0	3.7
cm	9/9/1993	A26	Metals	Zinc	Yes	65		mg/kg	150	0.43	0	410
cm	9/9/1993	C05	PAHs	2-Methylnaphthalene	Yes	24		ug/kg	70	0.34	0	670
cm	9/9/1993	C06	PAHs	Acenaphthene	Yes	44		ug/kg	16	2.8	1	500
cm	9/9/1993	C07	PAHs	Acenaphthylene	Yes	30		ug/kg	44	0.68	0	640
cm	9/9/1993	C08	PAHs	Anthracene	Yes	200		ug/kg	85	2.4	1	1100
cm	9/9/1993	C09	PAHs	Benzo(a)anthracene	Yes	220		ug/kg	261	0.84	0	1600
cm	9/9/1993	C10	PAHs	Benzo(a)pyrene	Yes	140		ug/kg	430	0.33	0	1600
cm	9/9/1993	C15	PAHs	Chrysene	Yes	230		ug/kg	384	0.6	0	2800
cm	9/9/1993	C16	PAHs	Dibenzo(a,h)anthracene	Yes	14		ug/kg	63	0.22	0	260
cm	9/9/1993	C18	PAHs	Fluoranthene	Yes	750		ug/kg	600	1.3	1	5100
cm	9/9/1993	C19	PAHs	Fluorene	Yes	93		ug/kg	19	4.9	1	540
cm	9/9/1993	C21	PAHs	Naphthalene	Yes	50		ug/kg	160	0.31	0	2100
cm	9/9/1993	C23	PAHs	Phenanthrene	Yes	490		ug/kg	240	2	1	1500
cm	9/9/1993	C24	PAHs	Pyrene	Yes	490		ug/kg	665	0.74	0	2600
cm	9/9/1993	C37	PAHs	Total PAHs	Yes	3100		ug/kg	4000	0.78	0	45000

Depth_Unit	Sample_Date	Sort	Chemical_Group	Chemical	Detected	Result	Qual	Units	ERL	Value/ERL	ERL EF ≥ 1	ERM
cm	9/9/1993	J05	OC Pesticides	4,4'-DDE	Yes	1.62		ug/kg	2.2	0.74	0	27
cm	9/9/1993	J43	OC Pesticides	Total DDx	Yes	4.4		ug/kg	1.6	2.8	1	46
cm	9/9/1994	A03	Metals	Arsenic	Yes	14.8		mg/kg	8.2	1.8	1	70
cm	9/9/1994	A07	Metals	Cadmium	Yes	2.93		mg/kg	1.2	2.4	1	9.6
cm	9/9/1994	A09	Metals	Chromium	Yes	114		mg/kg	81	1.4	1	370
cm	9/9/1994	A11	Metals	Copper	Yes	175		mg/kg	34	5.1	1	270
cm	9/9/1994	A13	Metals	Lead	Yes	127		mg/kg	47	2.7	1	218
cm	9/9/1994	A16	Metals	Mercury	Yes	650		ug/kg	150	4.3	1	710
cm	9/9/1994	A18	Metals	Nickel	Yes	33.3		mg/kg	21	1.6	1	52
cm	9/9/1994	A21	Metals	Silver	Yes	4.67		mg/kg	1	4.7	1	3.7
cm	9/9/1994	A26	Metals	Zinc	Yes	344		mg/kg	150	2.3	1	410
cm	9/9/1994	C05	PAHs	2-Methylnaphthalene	Yes	64		ug/kg	70	0.91	0	670
cm	9/9/1994	C06	PAHs	Acenaphthene	Yes	36		ug/kg	16	2.3	1	500
cm	9/9/1994	C07	PAHs	Acenaphthylene	Yes	96		ug/kg	44	2.2	1	640
cm	9/9/1994	C08	PAHs	Anthracene	Yes	200		ug/kg	85	2.4	1	1100
cm	9/9/1994	C09	PAHs	Benzo(a)anthracene	Yes	410		ug/kg	261	1.6	1	1600
cm	9/9/1994	C10	PAHs	Benzo(a)pyrene	Yes	370		ug/kg	430	0.86	0	1600
cm	9/9/1994	C15	PAHs	Chrysene	Yes	480		ug/kg	384	1.3	1	2800
cm	9/9/1994	C16	PAHs	Dibenzo(a,h)anthracene	Yes	100		ug/kg	63	1.6	1	260
cm	9/9/1994	C18	PAHs	Fluoranthene	Yes	870		ug/kg	600	1.5	1	5100
cm	9/9/1994	C19	PAHs	Fluorene	Yes	55		ug/kg	19	2.9	1	540
cm	9/9/1994	C21	PAHs	Naphthalene	Yes	110		ug/kg	160	0.69	0	2100
cm	9/9/1994	C23	PAHs	Phenanthrene	Yes	230		ug/kg	240	0.96	0	1500
cm	9/9/1994	C24	PAHs	Pyrene	Yes	750		ug/kg	665	1.1	1	2600
cm	9/9/1994	C37	PAHs	Total PAHs	Yes	5500		ug/kg	4000	1.4	1	45000
cm	9/9/1994	J05	OC Pesticides	4,4'-DDE	Yes	10.2		ug/kg	2.2	4.6	1	27
cm	9/9/1994	J43	OC Pesticides	Total DDx	Yes	20		ug/kg	1.6	13	1	46
cm	9/12/1994	A03	Metals	Arsenic	Yes	9.44		mg/kg	8.2	1.2	1	70
cm	9/12/1994	A07	Metals	Cadmium	Yes	1.56		mg/kg	1.2	1.3	1	9.6
cm	9/12/1994	A09	Metals	Chromium	Yes	72.7		mg/kg	81	0.9	0	370
cm	9/12/1994	A11	Metals	Copper	Yes	84.8		mg/kg	34	2.5	1	270
cm	9/12/1994	A13	Metals	Lead	Yes	76.5		mg/kg	47	1.6	1	218
cm	9/12/1994	A16	Metals	Mercury	Yes	256		ug/kg	150	1.7	1	710
cm	9/12/1994	A18	Metals	Nickel	Yes	25.1		mg/kg	21	1.2	1	52
cm	9/12/1994	A21	Metals	Silver	Yes	2.31		mg/kg	1	2.3	1	3.7
cm	9/12/1994	A26	Metals	Zinc	Yes	225		mg/kg	150	1.5	1	410
cm	9/12/1994	C05	PAHs	2-Methylnaphthalene	Yes	49		ug/kg	70	0.7	0	670
cm	9/12/1994	C06	PAHs	Acenaphthene	Yes	38		ug/kg	16	2.4	1	500
cm	9/12/1994	C07	PAHs	Acenaphthylene	Yes	57		ug/kg	44	1.3	1	640
cm	9/12/1994	C08	PAHs	Anthracene	Yes	160		ug/kg	85	1.9	1	1100
cm	9/12/1994	C09	PAHs	Benzo(a)anthracene	Yes	380		ug/kg	261	1.5	1	1600
cm	9/12/1994	C10	PAHs	Benzo(a)pyrene	Yes	470		ug/kg	430	1.1	1	1600
cm	9/12/1994	C15	PAHs	Chrysene	Yes	530		ug/kg	384	1.4	1	2800
cm	9/12/1994	C16	PAHs	Dibenzo(a,h)anthracene	No	30	U	ug/kg	63	0.48	0	260
cm	9/12/1994	C18	PAHs	Fluoranthene	Yes	1100		ug/kg	600	1.8	1	5100
cm	9/12/1994	C19	PAHs	Fluorene	Yes	66		ug/kg	19	3.5	1	540
cm	9/12/1994	C21	PAHs	Naphthalene	Yes	89		ug/kg	160	0.56	0	2100
cm	9/12/1994	C23	PAHs	Phenanthrene	Yes	310		ug/kg	240	1.3	1	1500
cm	9/12/1994	C24	PAHs	Pyrene	Yes	930		ug/kg	665	1.4	1	2600

Depth_Unit	Sample_Date	Sort	Chemical_Group	Chemical	Detected	Result	Qual	Units	ERL	Value/ERL	ERL EF ≥ 1	ERM
cm	9/12/1994	C37	PAHs	Total PAHs	Yes	5800		ug/kg	4000	1.5	1	45000
cm	9/12/1994	J05	OC Pesticides	4,4'-DDE	Yes	11.7		ug/kg	2.2	5.3	1	27
cm	9/12/1994	J43	OC Pesticides	Total DDx	Yes	25		ug/kg	1.6	16	1	46
cm	9/12/1994	A03	Metals	Arsenic	Yes	3.6		mg/kg	8.2	0.44	0	70
cm	9/12/1994	A07	Metals	Cadmium	Yes	0.569		mg/kg	1.2	0.47	0	9.6
cm	9/12/1994	A09	Metals	Chromium	Yes	41.5		mg/kg	81	0.51	0	370
cm	9/12/1994	A11	Metals	Copper	Yes	24.7		mg/kg	34	0.73	0	270
cm	9/12/1994	A13	Metals	Lead	Yes	29.6		mg/kg	47	0.63	0	218
cm	9/12/1994	A16	Metals	Mercury	Yes	141		ug/kg	150	0.94	0	710
cm	9/12/1994	A18	Metals	Nickel	Yes	9.8		mg/kg	21	0.47	0	52
cm	9/12/1994	A21	Metals	Silver	Yes	0.755		mg/kg	1	0.76	0	3.7
cm	9/12/1994	A26	Metals	Zinc	Yes	83		mg/kg	150	0.55	0	410
cm	9/12/1994	C05	PAHs	2-Methylnaphthalene	Yes	8.1		ug/kg	70	0.12	0	670
cm	9/12/1994	C06	PAHs	Acenaphthene	No	24	U	ug/kg	16	1.5	1	500
cm	9/12/1994	C07	PAHs	Acenaphthylene	Yes	9.7		ug/kg	44	0.22	0	640
cm	9/12/1994	C08	PAHs	Anthracene	Yes	14		ug/kg	85	0.16	0	1100
cm	9/12/1994	C09	PAHs	Benzo(a)anthracene	Yes	29		ug/kg	261	0.11	0	1600
cm	9/12/1994	C10	PAHs	Benzo(a)pyrene	Yes	30		ug/kg	430	0.07	0	1600
cm	9/12/1994	C15	PAHs	Chrysene	Yes	33		ug/kg	384	0.086	0	2800
cm	9/12/1994	C16	PAHs	Dibenzo(a,h)anthracene	No	24	U	ug/kg	63	0.38	0	260
cm	9/12/1994	C18	PAHs	Fluoranthene	Yes	59		ug/kg	600	0.098	0	5100
cm	9/12/1994	C19	PAHs	Fluorene	Yes	6.5		ug/kg	19	0.34	0	540
cm	9/12/1994	C21	PAHs	Naphthalene	Yes	32		ug/kg	160	0.2	0	2100
cm	9/12/1994	C23	PAHs	Phenanthrene	Yes	33		ug/kg	240	0.14	0	1500
cm	9/12/1994	C24	PAHs	Pyrene	Yes	56		ug/kg	665	0.084	0	2600
cm	9/12/1994	C37	PAHs	Total PAHs	Yes	470		ug/kg	4000	0.12	0	45000
cm	9/12/1994	J05	OC Pesticides	4,4'-DDE	Yes	0.92		ug/kg	2.2	0.42	0	27
cm	9/12/1994	J43	OC Pesticides	Total DDx	Yes	2		ug/kg	1.6	1.3	1	46
cm	9/6/1994	A03	Metals	Arsenic	Yes	12.1		mg/kg	8.2	1.5	1	70
cm	9/6/1994	A07	Metals	Cadmium	Yes	0.687		mg/kg	1.2	0.57	0	9.6
cm	9/6/1994	A09	Metals	Chromium	Yes	102		mg/kg	81	1.3	1	370
cm	9/6/1994	A11	Metals	Copper	Yes	81.5		mg/kg	34	2.4	1	270
cm	9/6/1994	A13	Metals	Lead	Yes	97.7		mg/kg	47	2.1	1	218
cm	9/6/1994	A16	Metals	Mercury	Yes	545		ug/kg	150	3.6	1	710
cm	9/6/1994	A18	Metals	Nickel	Yes	27.7		mg/kg	21	1.3	1	52
cm	9/6/1994	A21	Metals	Silver	Yes	2.73		mg/kg	1	2.7	1	3.7
cm	9/6/1994	A26	Metals	Zinc	Yes	180		mg/kg	150	1.2	1	410
cm	9/6/1994	C05	PAHs	2-Methylnaphthalene	Yes	49		ug/kg	70	0.7	0	670
cm	9/6/1994	C06	PAHs	Acenaphthene	Yes	31		ug/kg	16	1.9	1	500
cm	9/6/1994	C07	PAHs	Acenaphthylene	Yes	59		ug/kg	44	1.3	1	640
cm	9/6/1994	C08	PAHs	Anthracene	Yes	87		ug/kg	85	1	1	1100
cm	9/6/1994	C09	PAHs	Benzo(a)anthracene	Yes	190		ug/kg	261	0.73	0	1600
cm	9/6/1994	C10	PAHs	Benzo(a)pyrene	Yes	190		ug/kg	430	0.44	0	1600
cm	9/6/1994	C15	PAHs	Chrysene	Yes	230		ug/kg	384	0.6	0	2800
cm	9/6/1994	C16	PAHs	Dibenzo(a,h)anthracene	Yes	45		ug/kg	63	0.71	0	260
cm	9/6/1994	C18	PAHs	Fluoranthene	Yes	300		ug/kg	600	0.5	0	5100
cm	9/6/1994	C19	PAHs	Fluorene	Yes	26		ug/kg	19	1.4	1	540
cm	9/6/1994	C21	PAHs	Naphthalene	Yes	95		ug/kg	160	0.59	0	2100
cm	9/6/1994	C23	PAHs	Phenanthrene	Yes	140		ug/kg	240	0.58	0	1500

Depth_Unit	Sample_Date	Sort	Chemical_Group	Chemical	Detected	Result	Qual	Units	ERL	Value/ERL	ERL EF ≥ 1	ERM
cm	9/6/1994	C24	PAHs	Pyrene	Yes	280		ug/kg	665	0.42	0	2600
cm	9/6/1994	C37	PAHs	Total PAHs	Yes	2500		ug/kg	4000	0.63	0	45000
cm	9/6/1994	J05	OC Pesticides	4,4'-DDE	Yes	4.75		ug/kg	2.2	2.2	1	27
cm	9/6/1994	J43	OC Pesticides	Total DDx	Yes	11		ug/kg	1.6	6.9	1	46
cm	9/8/1994	A03	Metals	Arsenic	Yes	2.19		mg/kg	8.2	0.27	0	70
cm	9/8/1994	A07	Metals	Cadmium	Yes	0.111		mg/kg	1.2	0.093	0	9.6
cm	9/8/1994	A09	Metals	Chromium	Yes	21		mg/kg	81	0.26	0	370
cm	9/8/1994	A11	Metals	Copper	Yes	4		mg/kg	34	0.12	0	270
cm	9/8/1994	A13	Metals	Lead	Yes	14.4		mg/kg	47	0.31	0	218
cm	9/8/1994	A16	Metals	Mercury	Yes	38		ug/kg	150	0.25	0	710
cm	9/8/1994	A18	Metals	Nickel	Yes	3.6		mg/kg	21	0.17	0	52
cm	9/8/1994	A21	Metals	Silver	Yes	0.119		mg/kg	1	0.12	0	3.7
cm	9/8/1994	A26	Metals	Zinc	Yes	30		mg/kg	150	0.2	0	410
cm	9/8/1994	C05	PAHs	2-Methylnaphthalene	No	12	U	ug/kg	70	0.17	0	670
cm	9/8/1994	C06	PAHs	Acenaphthene	No	12	U	ug/kg	16	0.75	0	500
cm	9/8/1994	C07	PAHs	Acenaphthylene	No	12	U	ug/kg	44	0.27	0	640
cm	9/8/1994	C08	PAHs	Anthracene	No	12	U	ug/kg	85	0.14	0	1100
cm	9/8/1994	C09	PAHs	Benzo(a)anthracene	No	12	U	ug/kg	261	0.046	0	1600
cm	9/8/1994	C10	PAHs	Benzo(a)pyrene	No	12	U	ug/kg	430	0.028	0	1600
cm	9/8/1994	C15	PAHs	Chrysene	No	12	U	ug/kg	384	0.031	0	2800
cm	9/8/1994	C16	PAHs	Dibenzo(a,h)anthracene	No	12	U	ug/kg	63	0.19	0	260
cm	9/8/1994	C18	PAHs	Fluoranthene	Yes	4.4		ug/kg	600	0.0073	0	5100
cm	9/8/1994	C19	PAHs	Fluorene	No	12	U	ug/kg	19	0.63	0	540
cm	9/8/1994	C21	PAHs	Naphthalene	No	12	U	ug/kg	160	0.075	0	2100
cm	9/8/1994	C23	PAHs	Phenanthrene	No	12	U	ug/kg	240	0.05	0	1500
cm	9/8/1994	C24	PAHs	Pyrene	No	12	U	ug/kg	665	0.018	0	2600
cm	9/8/1994	C37	PAHs	Total PAHs	Yes	28		ug/kg	4000	0.007	0	45000
cm	9/8/1994	J05	OC Pesticides	4,4'-DDE	Yes	0.07		ug/kg	2.2	0.032	0	27
cm	9/8/1994	J43	OC Pesticides	Total DDx	Yes	0.16		ug/kg	1.6	0.1	0	46
cm	9/9/1994	A03	Metals	Arsenic	Yes	1.35		mg/kg	8.2	0.16	0	70
cm	9/9/1994	A07	Metals	Cadmium	Yes	0.041		mg/kg	1.2	0.034	0	9.6
cm	9/9/1994	A09	Metals	Chromium	Yes	31.9		mg/kg	81	0.39	0	370
cm	9/9/1994	A11	Metals	Copper	Yes	5		mg/kg	34	0.15	0	270
cm	9/9/1994	A13	Metals	Lead	Yes	6.85		mg/kg	47	0.15	0	218
cm	9/9/1994	A16	Metals	Mercury	Yes	67		ug/kg	150	0.45	0	710
cm	9/9/1994	A18	Metals	Nickel	Yes	3.4		mg/kg	21	0.16	0	52
cm	9/9/1994	A21	Metals	Silver	Yes	0.056		mg/kg	1	0.056	0	3.7
cm	9/9/1994	A26	Metals	Zinc	Yes	15		mg/kg	150	0.1	0	410
cm	9/9/1994	C05	PAHs	2-Methylnaphthalene	No	12	U	ug/kg	70	0.17	0	670
cm	9/9/1994	C06	PAHs	Acenaphthene	Yes	5.5		ug/kg	16	0.34	0	500
cm	9/9/1994	C07	PAHs	Acenaphthylene	Yes	37		ug/kg	44	0.84	0	640
cm	9/9/1994	C08	PAHs	Anthracene	Yes	56		ug/kg	85	0.66	0	1100
cm	9/9/1994	C09	PAHs	Benzo(a)anthracene	Yes	100		ug/kg	261	0.38	0	1600
cm	9/9/1994	C10	PAHs	Benzo(a)pyrene	Yes	57		ug/kg	430	0.13	0	1600
cm	9/9/1994	C15	PAHs	Chrysene	Yes	110		ug/kg	384	0.29	0	2800
cm	9/9/1994	C16	PAHs	Dibenzo(a,h)anthracene	Yes	34		ug/kg	63	0.54	0	260
cm	9/9/1994	C18	PAHs	Fluoranthene	Yes	260		ug/kg	600	0.43	0	5100
cm	9/9/1994	C19	PAHs	Fluorene	Yes	8.7		ug/kg	19	0.46	0	540
cm	9/9/1994	C21	PAHs	Naphthalene	No	12	U	ug/kg	160	0.075	0	2100

Depth_Unit	Sample_Date	Sort	Chemical_Group	Chemical	Detected	Result	Qual	Units	ERL	Value/ERL	ERL EF ≥ 1	ERM
cm	9/9/1994	C23	PAHs	Phenanthrene	Yes	91		ug/kg	240	0.38	0	1500
cm	9/9/1994	C24	PAHs	Pyrene	Yes	220		ug/kg	665	0.33	0	2600
cm	9/9/1994	C37	PAHs	Total PAHs	Yes	1300		ug/kg	4000	0.33	0	45000
cm	9/9/1994	J05	OC Pesticides	4,4'-DDE	Yes	0.09		ug/kg	2.2	0.041	0	27
cm	9/9/1994	J43	OC Pesticides	Total DDx	Yes	0.17		ug/kg	1.6	0.11	0	46
cm	9/8/1994	A03	Metals	Arsenic	Yes	11.2		mg/kg	8.2	1.4	1	70
cm	9/8/1994	A07	Metals	Cadmium	Yes	1.16		mg/kg	1.2	0.97	0	9.6
cm	9/8/1994	A09	Metals	Chromium	Yes	94.2		mg/kg	81	1.2	1	370
cm	9/8/1994	A11	Metals	Copper	Yes	93.5		mg/kg	34	2.8	1	270
cm	9/8/1994	A13	Metals	Lead	Yes	96.2		mg/kg	47	2	1	218
cm	9/8/1994	A16	Metals	Mercury	Yes	410		ug/kg	150	2.7	1	710
cm	9/8/1994	A18	Metals	Nickel	Yes	27.1		mg/kg	21	1.3	1	52
cm	9/8/1994	A21	Metals	Silver	Yes	2.63		mg/kg	1	2.6	1	3.7
cm	9/8/1994	A26	Metals	Zinc	Yes	199		mg/kg	150	1.3	1	410
cm	9/8/1994	C05	PAHs	2-Methylnaphthalene	Yes	58		ug/kg	70	0.83	0	670
cm	9/8/1994	C06	PAHs	Acenaphthene	Yes	41		ug/kg	16	2.6	1	500
cm	9/8/1994	C07	PAHs	Acenaphthylene	Yes	99		ug/kg	44	2.3	1	640
cm	9/8/1994	C08	PAHs	Anthracene	Yes	160		ug/kg	85	1.9	1	1100
cm	9/8/1994	C09	PAHs	Benzo(a)anthracene	Yes	330		ug/kg	261	1.3	1	1600
cm	9/8/1994	C10	PAHs	Benzo(a)pyrene	Yes	290		ug/kg	430	0.67	0	1600
cm	9/8/1994	C15	PAHs	Chrysene	Yes	440		ug/kg	384	1.1	1	2800
cm	9/8/1994	C16	PAHs	Dibenzo(a,h)anthracene	Yes	68		ug/kg	63	1.1	1	260
cm	9/8/1994	C18	PAHs	Fluoranthene	Yes	680		ug/kg	600	1.1	1	5100
cm	9/8/1994	C19	PAHs	Fluorene	Yes	49		ug/kg	19	2.6	1	540
cm	9/8/1994	C21	PAHs	Naphthalene	Yes	90		ug/kg	160	0.56	0	2100
cm	9/8/1994	C23	PAHs	Phenanthrene	Yes	250		ug/kg	240	1	1	1500
cm	9/8/1994	C24	PAHs	Pyrene	Yes	580		ug/kg	665	0.87	0	2600
cm	9/8/1994	C37	PAHs	Total PAHs	Yes	4400		ug/kg	4000	1.1	1	45000
cm	9/8/1994	J05	OC Pesticides	4,4'-DDE	Yes	5.93		ug/kg	2.2	2.7	1	27
cm	9/8/1994	J43	OC Pesticides	Total DDx	Yes	13		ug/kg	1.6	8.1	1	46
cm	9/8/1994	A03	Metals	Arsenic	Yes	2.41		mg/kg	8.2	0.29	0	70
cm	9/8/1994	A07	Metals	Cadmium	Yes	0.232		mg/kg	1.2	0.19	0	9.6
cm	9/8/1994	A09	Metals	Chromium	Yes	27		mg/kg	81	0.33	0	370
cm	9/8/1994	A11	Metals	Copper	Yes	7		mg/kg	34	0.21	0	270
cm	9/8/1994	A13	Metals	Lead	Yes	15.6		mg/kg	47	0.33	0	218
cm	9/8/1994	A16	Metals	Mercury	Yes	69		ug/kg	150	0.46	0	710
cm	9/8/1994	A18	Metals	Nickel	Yes	4.4		mg/kg	21	0.21	0	52
cm	9/8/1994	A21	Metals	Silver	Yes	0.328		mg/kg	1	0.33	0	3.7
cm	9/8/1994	A26	Metals	Zinc	Yes	45		mg/kg	150	0.3	0	410
cm	9/8/1994	C05	PAHs	2-Methylnaphthalene	No	12	U	ug/kg	70	0.17	0	670
cm	9/8/1994	C06	PAHs	Acenaphthene	No	12	U	ug/kg	16	0.75	0	500
cm	9/8/1994	C07	PAHs	Acenaphthylene	No	12	U	ug/kg	44	0.27	0	640
cm	9/8/1994	C08	PAHs	Anthracene	No	12	U	ug/kg	85	0.14	0	1100
cm	9/8/1994	C09	PAHs	Benzo(a)anthracene	Yes	5.2		ug/kg	261	0.02	0	1600
cm	9/8/1994	C10	PAHs	Benzo(a)pyrene	Yes	4		ug/kg	430	0.0093	0	1600
cm	9/8/1994	C15	PAHs	Chrysene	Yes	4.4		ug/kg	384	0.011	0	2800
cm	9/8/1994	C16	PAHs	Dibenzo(a,h)anthracene	No	12	U	ug/kg	63	0.19	0	260
cm	9/8/1994	C18	PAHs	Fluoranthene	Yes	10		ug/kg	600	0.017	0	5100
cm	9/8/1994	C19	PAHs	Fluorene	No	12	U	ug/kg	19	0.63	0	540

Depth_Unit	Sample_Date	Sort	Chemical_Group	Chemical	Detected	Result	Qual	Units	ERL	Value/ERL	ERL EF ≥ 1	ERM
cm	9/8/1994	C21	PAHs	Naphthalene	No	12	U	ug/kg	160	0.075	0	2100
cm	9/8/1994	C23	PAHs	Phenanthrene	No	12	U	ug/kg	240	0.05	0	1500
cm	9/8/1994	C24	PAHs	Pyrene	Yes	8.4		ug/kg	665	0.013	0	2600
cm	9/8/1994	C37	PAHs	Total PAHs	Yes	42		ug/kg	4000	0.011	0	45000
cm	9/8/1994	J05	OC Pesticides	4,4'-DDE	Yes	0.11		ug/kg	2.2	0.05	0	27
cm	9/8/1994	J43	OC Pesticides	Total DDx	Yes	0.24		ug/kg	1.6	0.15	0	46
cm	9/6/1994	A03	Metals	Arsenic	Yes	1.89		mg/kg	8.2	0.23	0	70
cm	9/6/1994	A07	Metals	Cadmium	Yes	0.218		mg/kg	1.2	0.18	0	9.6
cm	9/6/1994	A09	Metals	Chromium	Yes	31.1		mg/kg	81	0.38	0	370
cm	9/6/1994	A11	Metals	Copper	Yes	4.4		mg/kg	34	0.13	0	270
cm	9/6/1994	A13	Metals	Lead	Yes	10.3		mg/kg	47	0.22	0	218
cm	9/6/1994	A16	Metals	Mercury	Yes	80		ug/kg	150	0.53	0	710
cm	9/6/1994	A18	Metals	Nickel	Yes	3.2		mg/kg	21	0.15	0	52
cm	9/6/1994	A21	Metals	Silver	Yes	0.16		mg/kg	1	0.16	0	3.7
cm	9/6/1994	A26	Metals	Zinc	Yes	33		mg/kg	150	0.22	0	410
cm	9/6/1994	C05	PAHs	2-Methylnaphthalene	No	12	U	ug/kg	70	0.17	0	670
cm	9/6/1994	C06	PAHs	Acenaphthene	No	12	U	ug/kg	16	0.75	0	500
cm	9/6/1994	C07	PAHs	Acenaphthylene	No	12	U	ug/kg	44	0.27	0	640
cm	9/6/1994	C08	PAHs	Anthracene	No	12	U	ug/kg	85	0.14	0	1100
cm	9/6/1994	C09	PAHs	Benzo(a)anthracene	Yes	10		ug/kg	261	0.038	0	1600
cm	9/6/1994	C10	PAHs	Benzo(a)pyrene	Yes	7.2		ug/kg	430	0.017	0	1600
cm	9/6/1994	C15	PAHs	Chrysene	Yes	8.8		ug/kg	384	0.023	0	2800
cm	9/6/1994	C16	PAHs	Dibenzo(a,h)anthracene	No	12	U	ug/kg	63	0.19	0	260
cm	9/6/1994	C18	PAHs	Fluoranthene	Yes	17		ug/kg	600	0.028	0	5100
cm	9/6/1994	C19	PAHs	Fluorene	No	12	U	ug/kg	19	0.63	0	540
cm	9/6/1994	C21	PAHs	Naphthalene	No	12	U	ug/kg	160	0.075	0	2100
cm	9/6/1994	C23	PAHs	Phenanthrene	Yes	13		ug/kg	240	0.054	0	1500
cm	9/6/1994	C24	PAHs	Pyrene	Yes	16		ug/kg	665	0.024	0	2600
cm	9/6/1994	C37	PAHs	Total PAHs	Yes	90		ug/kg	4000	0.023	0	45000
cm	9/6/1994	J05	OC Pesticides	4,4'-DDE	Yes	0.21		ug/kg	2.2	0.095	0	27
cm	9/6/1994	J43	OC Pesticides	Total DDx	Yes	0.45		ug/kg	1.6	0.28	0	46
cm	9/8/1994	A03	Metals	Arsenic	Yes	2.63		mg/kg	8.2	0.32	0	70
cm	9/8/1994	A07	Metals	Cadmium	Yes	0.131		mg/kg	1.2	0.11	0	9.6
cm	9/8/1994	A09	Metals	Chromium	Yes	34.3		mg/kg	81	0.42	0	370
cm	9/8/1994	A11	Metals	Copper	Yes	6.6		mg/kg	34	0.19	0	270
cm	9/8/1994	A13	Metals	Lead	Yes	16		mg/kg	47	0.34	0	218
cm	9/8/1994	A16	Metals	Mercury	Yes	82		ug/kg	150	0.55	0	710
cm	9/8/1994	A18	Metals	Nickel	Yes	4.3		mg/kg	21	0.2	0	52
cm	9/8/1994	A21	Metals	Silver	Yes	0.241		mg/kg	1	0.24	0	3.7
cm	9/8/1994	A26	Metals	Zinc	Yes	30		mg/kg	150	0.2	0	410
cm	9/8/1994	C05	PAHs	2-Methylnaphthalene	Yes	4		ug/kg	70	0.057	0	670
cm	9/8/1994	C06	PAHs	Acenaphthene	Yes	4		ug/kg	16	0.25	0	500
cm	9/8/1994	C07	PAHs	Acenaphthylene	Yes	5.2		ug/kg	44	0.12	0	640
cm	9/8/1994	C08	PAHs	Anthracene	Yes	12		ug/kg	85	0.14	0	1100
cm	9/8/1994	C09	PAHs	Benzo(a)anthracene	Yes	27		ug/kg	261	0.1	0	1600
cm	9/8/1994	C10	PAHs	Benzo(a)pyrene	Yes	24		ug/kg	430	0.056	0	1600
cm	9/8/1994	C15	PAHs	Chrysene	Yes	31		ug/kg	384	0.081	0	2800
cm	9/8/1994	C16	PAHs	Dibenzo(a,h)anthracene	Yes	16		ug/kg	63	0.25	0	260
cm	9/8/1994	C18	PAHs	Fluoranthene	Yes	51		ug/kg	600	0.085	0	5100

Depth_Unit	Sample_Date	Sort	Chemical_Group	Chemical	Detected	Result	Qual	Units	ERL	Value/ERL	ERL EF ≥ 1	ERM
cm	9/8/1994	C19	PAHs	Fluorene	Yes	5.2		ug/kg	19	0.27	0	540
cm	9/8/1994	C21	PAHs	Naphthalene	No	12	U	ug/kg	160	0.075	0	2100
cm	9/8/1994	C23	PAHs	Phenanthrene	Yes	37		ug/kg	240	0.15	0	1500
cm	9/8/1994	C24	PAHs	Pyrene	Yes	47		ug/kg	665	0.071	0	2600
cm	9/8/1994	C37	PAHs	Total PAHs	Yes	380		ug/kg	4000	0.095	0	45000
cm	9/8/1994	J05	OC Pesticides	4,4'-DDE	Yes	0.54		ug/kg	2.2	0.25	0	27
cm	9/8/1994	J43	OC Pesticides	Total DDx	Yes	1.3		ug/kg	1.6	0.81	0	46
cm	9/6/1994	A03	Metals	Arsenic	Yes	2.88		mg/kg	8.2	0.35	0	70
cm	9/6/1994	A07	Metals	Cadmium	No	0.018	U	mg/kg	1.2	0.015	0	9.6
cm	9/6/1994	A09	Metals	Chromium	Yes	48		mg/kg	81	0.59	0	370
cm	9/6/1994	A11	Metals	Copper	Yes	3.7		mg/kg	34	0.11	0	270
cm	9/6/1994	A13	Metals	Lead	Yes	7.49		mg/kg	47	0.16	0	218
cm	9/6/1994	A16	Metals	Mercury	Yes	40		ug/kg	150	0.27	0	710
cm	9/6/1994	A18	Metals	Nickel	Yes	5.2		mg/kg	21	0.25	0	52
cm	9/6/1994	A21	Metals	Silver	Yes	0.031		mg/kg	1	0.031	0	3.7
cm	9/6/1994	A26	Metals	Zinc	Yes	15		mg/kg	150	0.1	0	410
cm	9/6/1994	C05	PAHs	2-Methylnaphthalene	No	12	U	ug/kg	70	0.17	0	670
cm	9/6/1994	C06	PAHs	Acenaphthene	No	12	U	ug/kg	16	0.75	0	500
cm	9/6/1994	C07	PAHs	Acenaphthylene	No	12	U	ug/kg	44	0.27	0	640
cm	9/6/1994	C08	PAHs	Anthracene	No	12	U	ug/kg	85	0.14	0	1100
cm	9/6/1994	C09	PAHs	Benzo(a)anthracene	Yes	6.8		ug/kg	261	0.026	0	1600
cm	9/6/1994	C10	PAHs	Benzo(a)pyrene	Yes	5.6		ug/kg	430	0.013	0	1600
cm	9/6/1994	C15	PAHs	Chrysene	Yes	7.2		ug/kg	384	0.019	0	2800
cm	9/6/1994	C16	PAHs	Dibenzo(a,h)anthracene	No	12	U	ug/kg	63	0.19	0	260
cm	9/6/1994	C18	PAHs	Fluoranthene	Yes	11		ug/kg	600	0.018	0	5100
cm	9/6/1994	C19	PAHs	Fluorene	No	12	U	ug/kg	19	0.63	0	540
cm	9/6/1994	C21	PAHs	Naphthalene	No	12	U	ug/kg	160	0.075	0	2100
cm	9/6/1994	C23	PAHs	Phenanthrene	No	12	U	ug/kg	240	0.05	0	1500
cm	9/6/1994	C24	PAHs	Pyrene	Yes	9.9		ug/kg	665	0.015	0	2600
cm	9/6/1994	C37	PAHs	Total PAHs	Yes	53		ug/kg	4000	0.013	0	45000
cm	9/6/1994	J05	OC Pesticides	4,4'-DDE	Yes	0.19		ug/kg	2.2	0.086	0	27
cm	9/6/1994	J43	OC Pesticides	Total DDx	Yes	0.34		ug/kg	1.6	0.21	0	46
cm	9/14/1994	A03	Metals	Arsenic	Yes	6.5		mg/kg	8.2	0.79	0	70
cm	9/14/1994	A07	Metals	Cadmium	Yes	0.354		mg/kg	1.2	0.3	0	9.6
cm	9/14/1994	A09	Metals	Chromium	Yes	46.8		mg/kg	81	0.58	0	370
cm	9/14/1994	A11	Metals	Copper	Yes	33		mg/kg	34	0.97	0	270
cm	9/14/1994	A13	Metals	Lead	Yes	55.6		mg/kg	47	1.2	1	218
cm	9/14/1994	A16	Metals	Mercury	Yes	88		ug/kg	150	0.59	0	710
cm	9/14/1994	A18	Metals	Nickel	Yes	15.2		mg/kg	21	0.72	0	52
cm	9/14/1994	A21	Metals	Silver	Yes	0.758		mg/kg	1	0.76	0	3.7
cm	9/14/1994	A26	Metals	Zinc	Yes	128		mg/kg	150	0.85	0	410
cm	9/14/1994	C05	PAHs	2-Methylnaphthalene	Yes	13		ug/kg	70	0.19	0	670
cm	9/14/1994	C06	PAHs	Acenaphthene	No	24	U	ug/kg	16	1.5	1	500
cm	9/14/1994	C07	PAHs	Acenaphthylene	Yes	18		ug/kg	44	0.41	0	640
cm	9/14/1994	C08	PAHs	Anthracene	Yes	24		ug/kg	85	0.28	0	1100
cm	9/14/1994	C09	PAHs	Benzo(a)anthracene	Yes	50		ug/kg	261	0.19	0	1600
cm	9/14/1994	C10	PAHs	Benzo(a)pyrene	Yes	68		ug/kg	430	0.16	0	1600
cm	9/14/1994	C15	PAHs	Chrysene	Yes	68		ug/kg	384	0.18	0	2800
cm	9/14/1994	C16	PAHs	Dibenzo(a,h)anthracene	No	24	U	ug/kg	63	0.38	0	260

Depth_Unit	Sample_Date	Sort	Chemical_Group	Chemical	Detected	Result	Qual	Units	ERL	Value/ERL	ERL EF ≥ 1	ERM
cm	9/14/1994	C18	PAHs	Fluoranthene	Yes	100		ug/kg	600	0.17	0	5100
cm	9/14/1994	C19	PAHs	Fluorene	No	24	U	ug/kg	19	1.3	1	540
cm	9/14/1994	C21	PAHs	Naphthalene	Yes	35		ug/kg	160	0.22	0	2100
cm	9/14/1994	C23	PAHs	Phenanthrene	Yes	46		ug/kg	240	0.19	0	1500
cm	9/14/1994	C24	PAHs	Pyrene	Yes	100		ug/kg	665	0.15	0	2600
cm	9/14/1994	C37	PAHs	Total PAHs	Yes	910		ug/kg	4000	0.23	0	45000
cm	9/14/1994	J05	OC Pesticides	4,4'-DDE	Yes	1.67		ug/kg	2.2	0.76	0	27
cm	9/14/1994	J43	OC Pesticides	Total DDx	Yes	3.4		ug/kg	1.6	2.1	1	46
cm	9/12/1994	A03	Metals	Arsenic	Yes	2.08		mg/kg	8.2	0.25	0	70
cm	9/12/1994	A07	Metals	Cadmium	Yes	0.069		mg/kg	1.2	0.058	0	9.6
cm	9/12/1994	A09	Metals	Chromium	Yes	28.8		mg/kg	81	0.36	0	370
cm	9/12/1994	A11	Metals	Copper	Yes	2.8		mg/kg	34	0.082	0	270
cm	9/12/1994	A13	Metals	Lead	Yes	9.73		mg/kg	47	0.21	0	218
cm	9/12/1994	A16	Metals	Mercury	Yes	35		ug/kg	150	0.23	0	710
cm	9/12/1994	A18	Metals	Nickel	Yes	4.1		mg/kg	21	0.2	0	52
cm	9/12/1994	A21	Metals	Silver	Yes	0.075		mg/kg	1	0.075	0	3.7
cm	9/12/1994	A26	Metals	Zinc	Yes	20		mg/kg	150	0.13	0	410
cm	9/12/1994	C05	PAHs	2-Methylnaphthalene	No	12	U	ug/kg	70	0.17	0	670
cm	9/12/1994	C06	PAHs	Acenaphthene	No	12	U	ug/kg	16	0.75	0	500
cm	9/12/1994	C07	PAHs	Acenaphthylene	No	12	U	ug/kg	44	0.27	0	640
cm	9/12/1994	C08	PAHs	Anthracene	No	12	U	ug/kg	85	0.14	0	1100
cm	9/12/1994	C09	PAHs	Benzo(a)anthracene	No	12	U	ug/kg	261	0.046	0	1600
cm	9/12/1994	C10	PAHs	Benzo(a)pyrene	No	12	U	ug/kg	430	0.028	0	1600
cm	9/12/1994	C15	PAHs	Chrysene	No	12	U	ug/kg	384	0.031	0	2800
cm	9/12/1994	C16	PAHs	Dibenzo(a,h)anthracene	No	12	U	ug/kg	63	0.19	0	260
cm	9/12/1994	C18	PAHs	Fluoranthene	Yes	2.8		ug/kg	600	0.0047	0	5100
cm	9/12/1994	C19	PAHs	Fluorene	No	12	U	ug/kg	19	0.63	0	540
cm	9/12/1994	C21	PAHs	Naphthalene	No	12	U	ug/kg	160	0.075	0	2100
cm	9/12/1994	C23	PAHs	Phenanthrene	Yes	3.5		ug/kg	240	0.015	0	1500
cm	9/12/1994	C24	PAHs	Pyrene	Yes	3.2		ug/kg	665	0.0048	0	2600
cm	9/12/1994	C37	PAHs	Total PAHs	Yes	34		ug/kg	4000	0.0085	0	45000
cm	9/12/1994	J05	OC Pesticides	4,4'-DDE	Yes	0.1		ug/kg	2.2	0.045	0	27
cm	9/12/1994	J43	OC Pesticides	Total DDx	Yes	0.21		ug/kg	1.6	0.13	0	46
cm	9/13/1994	A03	Metals	Arsenic	Yes	1.38		mg/kg	8.2	0.17	0	70
cm	9/13/1994	A07	Metals	Cadmium	Yes	0.045		mg/kg	1.2	0.038	0	9.6
cm	9/13/1994	A09	Metals	Chromium	Yes	16		mg/kg	81	0.2	0	370
cm	9/13/1994	A11	Metals	Copper	Yes	2.4		mg/kg	34	0.071	0	270
cm	9/13/1994	A13	Metals	Lead	Yes	6.71		mg/kg	47	0.14	0	218
cm	9/13/1994	A16	Metals	Mercury	Yes	30		ug/kg	150	0.2	0	710
cm	9/13/1994	A18	Metals	Nickel	Yes	3.5		mg/kg	21	0.17	0	52
cm	9/13/1994	A21	Metals	Silver	Yes	0.069		mg/kg	1	0.069	0	3.7
cm	9/13/1994	A26	Metals	Zinc	Yes	13		mg/kg	150	0.087	0	410
cm	9/13/1994	C05	PAHs	2-Methylnaphthalene	No	12	U	ug/kg	70	0.17	0	670
cm	9/13/1994	C06	PAHs	Acenaphthene	No	12	U	ug/kg	16	0.75	0	500
cm	9/13/1994	C07	PAHs	Acenaphthylene	No	12	U	ug/kg	44	0.27	0	640
cm	9/13/1994	C08	PAHs	Anthracene	Yes	15		ug/kg	85	0.18	0	1100
cm	9/13/1994	C09	PAHs	Benzo(a)anthracene	Yes	69		ug/kg	261	0.26	0	1600
cm	9/13/1994	C10	PAHs	Benzo(a)pyrene	Yes	31		ug/kg	430	0.072	0	1600
cm	9/13/1994	C15	PAHs	Chrysene	Yes	70		ug/kg	384	0.18	0	2800

Depth_Unit	Sample_Date	Sort	Chemical_Group	Chemical	Detected	Result	Qual	Units	ERL	Value/ERL	ERL EF ≥ 1	ERM
cm	9/13/1994	C16	PAHs	Dibenzo(a,h)anthracene	No	12	U	ug/kg	63	0.19	0	260
cm	9/13/1994	C18	PAHs	Fluoranthene	Yes	120		ug/kg	600	0.2	0	5100
cm	9/13/1994	C19	PAHs	Fluorene	No	12	U	ug/kg	19	0.63	0	540
cm	9/13/1994	C21	PAHs	Naphthalene	No	12	U	ug/kg	160	0.075	0	2100
cm	9/13/1994	C23	PAHs	Phenanthrene	Yes	17		ug/kg	240	0.071	0	1500
cm	9/13/1994	C24	PAHs	Pyrene	Yes	110		ug/kg	665	0.17	0	2600
cm	9/13/1994	C37	PAHs	Total PAHs	Yes	580		ug/kg	4000	0.15	0	45000
cm	9/13/1994	J05	OC Pesticides	4,4'-DDE	Yes	0.07		ug/kg	2.2	0.032	0	27
cm	9/13/1994	J43	OC Pesticides	Total DDx	Yes	0.17		ug/kg	1.6	0.11	0	46
cm	31-Jul-03	A03	Metals	Arsenic	Yes	1.3		mg/kg	8.2	0.16	0	70
cm	31-Jul-03	A07	Metals	Cadmium	No	0.12	U	mg/kg	1.2	0.1	0	9.6
cm	31-Jul-03	A09	Metals	Chromium	Yes	8.8		mg/kg	81	0.11	0	370
cm	31-Jul-03	A11	Metals	Copper	Yes	2.2		mg/kg	34	0.065	0	270
cm	31-Jul-03	A13	Metals	Lead	Yes	7.9		mg/kg	47	0.17	0	218
cm	31-Jul-03	A18	Metals	Nickel	Yes	3		mg/kg	21	0.14	0	52
cm	31-Jul-03	A21	Metals	Silver	Yes	0.052		mg/kg	1	0.052	0	3.7
cm	31-Jul-03	A26	Metals	Zinc	Yes	23.1		mg/kg	150	0.15	0	410
cm	31-Jul-03	C05	PAHs	2-Methylnaphthalene	No	10	U	ug/kg	70	0.14	0	670
cm	31-Jul-03	C06	PAHs	Acenaphthene	No	10	U	ug/kg	16	0.63	0	500
cm	31-Jul-03	C07	PAHs	Acenaphthylene	No	10	U	ug/kg	44	0.23	0	640
cm	31-Jul-03	C08	PAHs	Anthracene	No	10	U	ug/kg	85	0.12	0	1100
cm	31-Jul-03	C09	PAHs	Benzo(a)anthracene	No	10	U	ug/kg	261	0.038	0	1600
cm	31-Jul-03	C10	PAHs	Benzo(a)pyrene	No	10	U	ug/kg	430	0.023	0	1600
cm	31-Jul-03	C15	PAHs	Chrysene	No	10	U	ug/kg	384	0.026	0	2800
cm	31-Jul-03	C16	PAHs	Dibenzo(a,h)anthracene	No	10	U	ug/kg	63	0.16	0	260
cm	31-Jul-03	C18	PAHs	Fluoranthene	Yes	12		ug/kg	600	0.02	0	5100
cm	31-Jul-03	C19	PAHs	Fluorene	No	10	U	ug/kg	19	0.53	0	540
cm	31-Jul-03	C21	PAHs	Naphthalene	No	10	U	ug/kg	160	0.063	0	2100
cm	31-Jul-03	C23	PAHs	Phenanthrene	No	10	U	ug/kg	240	0.042	0	1500
cm	31-Jul-03	C24	PAHs	Pyrene	No	10	U	ug/kg	665	0.015	0	2600
cm	31-Jul-03	C37	PAHs	Total PAHs	Yes	12		ug/kg	4000	0.003	0	45000
cm	31-Jul-03	J05	OC Pesticides	4,4'-DDE	Yes	0.49	J	ug/kg	2.2	0.22	0	27
cm	31-Jul-03	J43	OC Pesticides	Total DDx	Yes	0.99	J	ug/kg	1.6	0.62	0	46
cm	08-Aug-03	A03	Metals	Arsenic	Yes	9.2		mg/kg	8.2	1.1	1	70
cm	08-Aug-03	A07	Metals	Cadmium	Yes	2		mg/kg	1.2	1.7	1	9.6
cm	08-Aug-03	A09	Metals	Chromium	Yes	66.5		mg/kg	81	0.82	0	370
cm	08-Aug-03	A11	Metals	Copper	Yes	80.3		mg/kg	34	2.4	1	270
cm	08-Aug-03	A13	Metals	Lead	Yes	83.4		mg/kg	47	1.8	1	218
cm	08-Aug-03	A18	Metals	Nickel	Yes	24.1		mg/kg	21	1.1	1	52
cm	08-Aug-03	A21	Metals	Silver	Yes	2.4		mg/kg	1	2.4	1	3.7
cm	08-Aug-03	A26	Metals	Zinc	Yes	186		mg/kg	150	1.2	1	410
cm	08-Aug-03	C05	PAHs	2-Methylnaphthalene	Yes	19		ug/kg	70	0.27	0	670
cm	08-Aug-03	C06	PAHs	Acenaphthene	No	10	U	ug/kg	16	0.63	0	500
cm	08-Aug-03	C07	PAHs	Acenaphthylene	Yes	18		ug/kg	44	0.41	0	640
cm	08-Aug-03	C08	PAHs	Anthracene	Yes	36		ug/kg	85	0.42	0	1100
cm	08-Aug-03	C09	PAHs	Benzo(a)anthracene	Yes	120		ug/kg	261	0.46	0	1600
cm	08-Aug-03	C10	PAHs	Benzo(a)pyrene	Yes	88		ug/kg	430	0.2	0	1600
cm	08-Aug-03	C15	PAHs	Chrysene	Yes	110		ug/kg	384	0.29	0	2800
cm	08-Aug-03	C16	PAHs	Dibenzo(a,h)anthracene	No	10	U	ug/kg	63	0.16	0	260

Depth_Unit	Sample_Date	Sort	Chemical_Group	Chemical	Detected	Result	Qual	Units	ERL	Value/ERL	ERL EF ≥ 1	ERM
cm	08-Aug-03	C18	PAHs	Fluoranthene	Yes	160		ug/kg	600	0.27	0	5100
cm	08-Aug-03	C19	PAHs	Fluorene	Yes	14		ug/kg	19	0.74	0	540
cm	08-Aug-03	C21	PAHs	Naphthalene	Yes	11		ug/kg	160	0.069	0	2100
cm	08-Aug-03	C23	PAHs	Phenanthrene	Yes	74		ug/kg	240	0.31	0	1500
cm	08-Aug-03	C24	PAHs	Pyrene	Yes	250		ug/kg	665	0.38	0	2600
cm	08-Aug-03	C37	PAHs	Total PAHs	Yes	1100		ug/kg	4000	0.28	0	45000
cm	08-Aug-03	J05	OC Pesticides	4,4'-DDE	Yes	3	J	ug/kg	2.2	1.4	1	27
cm	08-Aug-03	J43	OC Pesticides	Total DDx	Yes	3	J	ug/kg	1.6	1.9	1	46
cm	07-Aug-03	A03	Metals	Arsenic	Yes	9.5		mg/kg	8.2	1.2	1	70
cm	07-Aug-03	A07	Metals	Cadmium	Yes	1.7		mg/kg	1.2	1.4	1	9.6
cm	07-Aug-03	A09	Metals	Chromium	Yes	71		mg/kg	81	0.88	0	370
cm	07-Aug-03	A11	Metals	Copper	Yes	36.8		mg/kg	34	1.1	1	270
cm	07-Aug-03	A13	Metals	Lead	Yes	70.4		mg/kg	47	1.5	1	218
cm	07-Aug-03	A18	Metals	Nickel	Yes	21		mg/kg	21	1	1	52
cm	07-Aug-03	A21	Metals	Silver	Yes	1.2		mg/kg	1	1.2	1	3.7
cm	07-Aug-03	A26	Metals	Zinc	Yes	115		mg/kg	150	0.77	0	410
cm	07-Aug-03	C05	PAHs	2-Methylnaphthalene	Yes	16		ug/kg	70	0.23	0	670
cm	07-Aug-03	C06	PAHs	Acenaphthene	Yes	12		ug/kg	16	0.75	0	500
cm	07-Aug-03	C07	PAHs	Acenaphthylene	Yes	17		ug/kg	44	0.39	0	640
cm	07-Aug-03	C08	PAHs	Anthracene	Yes	41		ug/kg	85	0.48	0	1100
cm	07-Aug-03	C09	PAHs	Benzo(a)anthracene	Yes	130		ug/kg	261	0.5	0	1600
cm	07-Aug-03	C10	PAHs	Benzo(a)pyrene	Yes	100		ug/kg	430	0.23	0	1600
cm	07-Aug-03	C15	PAHs	Chrysene	Yes	140		ug/kg	384	0.36	0	2800
cm	07-Aug-03	C16	PAHs	Dibenzo(a,h)anthracene	No	10	U	ug/kg	63	0.16	0	260
cm	07-Aug-03	C18	PAHs	Fluoranthene	Yes	170		ug/kg	600	0.28	0	5100
cm	07-Aug-03	C19	PAHs	Fluorene	Yes	12		ug/kg	19	0.63	0	540
cm	07-Aug-03	C21	PAHs	Naphthalene	Yes	18		ug/kg	160	0.11	0	2100
cm	07-Aug-03	C23	PAHs	Phenanthrene	Yes	84		ug/kg	240	0.35	0	1500
cm	07-Aug-03	C24	PAHs	Pyrene	Yes	260		ug/kg	665	0.39	0	2600
cm	07-Aug-03	C37	PAHs	Total PAHs	Yes	1300		ug/kg	4000	0.33	0	45000
cm	07-Aug-03	J05	OC Pesticides	4,4'-DDE	Yes	1.6	J	ug/kg	2.2	0.73	0	27
cm	07-Aug-03	J43	OC Pesticides	Total DDx	Yes	2.8	J	ug/kg	1.6	1.8	1	46
cm	05-Aug-03	A03	Metals	Arsenic	Yes	8.3		mg/kg	8.2	1	1	70
cm	05-Aug-03	A07	Metals	Cadmium	Yes	1.4		mg/kg	1.2	1.2	1	9.6
cm	05-Aug-03	A09	Metals	Chromium	Yes	61.4		mg/kg	81	0.76	0	370
cm	05-Aug-03	A11	Metals	Copper	Yes	57.2		mg/kg	34	1.7	1	270
cm	05-Aug-03	A13	Metals	Lead	Yes	79.4		mg/kg	47	1.7	1	218
cm	05-Aug-03	A18	Metals	Nickel	Yes	19.3		mg/kg	21	0.92	0	52
cm	05-Aug-03	A21	Metals	Silver	Yes	1.3		mg/kg	1	1.3	1	3.7
cm	05-Aug-03	A26	Metals	Zinc	Yes	140		mg/kg	150	0.93	0	410
cm	05-Aug-03	C05	PAHs	2-Methylnaphthalene	Yes	19		ug/kg	70	0.27	0	670
cm	05-Aug-03	C06	PAHs	Acenaphthene	Yes	31		ug/kg	16	1.9	1	500
cm	05-Aug-03	C07	PAHs	Acenaphthylene	Yes	74		ug/kg	44	1.7	1	640
cm	05-Aug-03	C08	PAHs	Anthracene	Yes	110		ug/kg	85	1.3	1	1100
cm	05-Aug-03	C09	PAHs	Benzo(a)anthracene	Yes	430		ug/kg	261	1.6	1	1600
cm	05-Aug-03	C10	PAHs	Benzo(a)pyrene	Yes	420		ug/kg	430	0.98	0	1600
cm	05-Aug-03	C15	PAHs	Chrysene	Yes	360		ug/kg	384	0.94	0	2800
cm	05-Aug-03	C16	PAHs	Dibenzo(a,h)anthracene	Yes	59		ug/kg	63	0.94	0	260
cm	05-Aug-03	C18	PAHs	Fluoranthene	Yes	1100	J	ug/kg	600	1.8	1	5100

Depth_Unit	Sample_Date	Sort	Chemical_Group	Chemical	Detected	Result	Qual	Units	ERL	Value/ERL	ERL EF ≥ 1	ERM
cm	05-Aug-03	C19	PAHs	Fluorene	Yes	45		ug/kg	19	2.4	1	540
cm	05-Aug-03	C21	PAHs	Naphthalene	Yes	26		ug/kg	160	0.16	0	2100
cm	05-Aug-03	C23	PAHs	Phenanthrene	Yes	160		ug/kg	240	0.67	0	1500
cm	05-Aug-03	C24	PAHs	Pyrene	Yes	480		ug/kg	665	0.72	0	2600
cm	05-Aug-03	C37	PAHs	Total PAHs	Yes	4300	J	ug/kg	4000	1.1	1	45000
cm	05-Aug-03	J05	OC Pesticides	4,4'-DDE	Yes	2.9	J	ug/kg	2.2	1.3	1	27
cm	05-Aug-03	J43	OC Pesticides	Total DDx	Yes	8.6	J	ug/kg	1.6	5.4	1	46
cm	11-Aug-03	A03	Metals	Arsenic	Yes	16.7		mg/kg	8.2	2	1	70
cm	11-Aug-03	A07	Metals	Cadmium	Yes	2.3		mg/kg	1.2	1.9	1	9.6
cm	11-Aug-03	A09	Metals	Chromium	Yes	87		mg/kg	81	1.1	1	370
cm	11-Aug-03	A11	Metals	Copper	Yes	108		mg/kg	34	3.2	1	270
cm	11-Aug-03	A13	Metals	Lead	Yes	155		mg/kg	47	3.3	1	218
cm	11-Aug-03	A18	Metals	Nickel	Yes	33		mg/kg	21	1.6	1	52
cm	11-Aug-03	A21	Metals	Silver	Yes	2.7		mg/kg	1	2.7	1	3.7
cm	11-Aug-03	A26	Metals	Zinc	Yes	267		mg/kg	150	1.8	1	410
cm	11-Aug-03	C05	PAHs	2-Methylnaphthalene	Yes	21		ug/kg	70	0.3	0	670
cm	11-Aug-03	C06	PAHs	Acenaphthene	No	10	U	ug/kg	16	0.63	0	500
cm	11-Aug-03	C07	PAHs	Acenaphthylene	Yes	27		ug/kg	44	0.61	0	640
cm	11-Aug-03	C08	PAHs	Anthracene	Yes	36		ug/kg	85	0.42	0	1100
cm	11-Aug-03	C09	PAHs	Benzo(a)anthracene	Yes	260		ug/kg	261	1	1	1600
cm	11-Aug-03	C10	PAHs	Benzo(a)pyrene	Yes	240		ug/kg	430	0.56	0	1600
cm	11-Aug-03	C15	PAHs	Chrysene	Yes	250		ug/kg	384	0.65	0	2800
cm	11-Aug-03	C16	PAHs	Dibenzo(a,h)anthracene	No	10	U	ug/kg	63	0.16	0	260
cm	11-Aug-03	C18	PAHs	Fluoranthene	Yes	580	J	ug/kg	600	0.97	0	5100
cm	11-Aug-03	C19	PAHs	Fluorene	Yes	19		ug/kg	19	1	1	540
cm	11-Aug-03	C21	PAHs	Naphthalene	Yes	17		ug/kg	160	0.11	0	2100
cm	11-Aug-03	C23	PAHs	Phenanthrene	Yes	94		ug/kg	240	0.39	0	1500
cm	11-Aug-03	C24	PAHs	Pyrene	Yes	510	J	ug/kg	665	0.77	0	2600
cm	11-Aug-03	C37	PAHs	Total PAHs	Yes	2800	J	ug/kg	4000	0.7	0	45000
cm	11-Aug-03	J05	OC Pesticides	4,4'-DDE	Yes	13		ug/kg	2.2	5.9	1	27
cm	11-Aug-03	J43	OC Pesticides	Total DDx	Yes	45	J	ug/kg	1.6	28	1	46
cm	05-Aug-03	A03	Metals	Arsenic	Yes	12.3		mg/kg	8.2	1.5	1	70
cm	05-Aug-03	A07	Metals	Cadmium	Yes	2		mg/kg	1.2	1.7	1	9.6
cm	05-Aug-03	A09	Metals	Chromium	Yes	84.7		mg/kg	81	1	1	370
cm	05-Aug-03	A11	Metals	Copper	Yes	72.2		mg/kg	34	2.1	1	270
cm	05-Aug-03	A13	Metals	Lead	Yes	102		mg/kg	47	2.2	1	218
cm	05-Aug-03	A18	Metals	Nickel	Yes	27.8		mg/kg	21	1.3	1	52
cm	05-Aug-03	A21	Metals	Silver	Yes	2		mg/kg	1	2	1	3.7
cm	05-Aug-03	A26	Metals	Zinc	Yes	182		mg/kg	150	1.2	1	410
cm	05-Aug-03	C05	PAHs	2-Methylnaphthalene	Yes	16		ug/kg	70	0.23	0	670
cm	05-Aug-03	C06	PAHs	Acenaphthene	Yes	11		ug/kg	16	0.69	0	500
cm	05-Aug-03	C07	PAHs	Acenaphthylene	Yes	20		ug/kg	44	0.45	0	640
cm	05-Aug-03	C08	PAHs	Anthracene	Yes	58		ug/kg	85	0.68	0	1100
cm	05-Aug-03	C09	PAHs	Benzo(a)anthracene	Yes	160		ug/kg	261	0.61	0	1600
cm	05-Aug-03	C10	PAHs	Benzo(a)pyrene	Yes	140		ug/kg	430	0.33	0	1600
cm	05-Aug-03	C15	PAHs	Chrysene	Yes	170		ug/kg	384	0.44	0	2800
cm	05-Aug-03	C16	PAHs	Dibenzo(a,h)anthracene	No	10	U	ug/kg	63	0.16	0	260
cm	05-Aug-03	C18	PAHs	Fluoranthene	Yes	240		ug/kg	600	0.4	0	5100
cm	05-Aug-03	C19	PAHs	Fluorene	Yes	19		ug/kg	19	1	1	540

Depth_Unit	Sample_Date	Sort	Chemical_Group	Chemical	Detected	Result	Qual	Units	ERL	Value/ERL	ERL EF ≥ 1	ERM
cm	05-Aug-03	C21	PAHs	Naphthalene	Yes	17		ug/kg	160	0.11	0	2100
cm	05-Aug-03	C23	PAHs	Phenanthrene	Yes	87		ug/kg	240	0.36	0	1500
cm	05-Aug-03	C24	PAHs	Pyrene	Yes	250		ug/kg	665	0.38	0	2600
cm	05-Aug-03	C37	PAHs	Total PAHs	Yes	1500		ug/kg	4000	0.38	0	45000
cm	05-Aug-03	J05	OC Pesticides	4,4'-DDE	Yes	2.7	J	ug/kg	2.2	1.2	1	27
cm	05-Aug-03	J43	OC Pesticides	Total DDx	Yes	2.7	J	ug/kg	1.6	1.7	1	46
cm	12-Aug-03	A03	Metals	Arsenic	Yes	5		mg/kg	8.2	0.61	0	70
cm	12-Aug-03	A07	Metals	Cadmium	Yes	1.3		mg/kg	1.2	1.1	1	9.6
cm	12-Aug-03	A09	Metals	Chromium	Yes	47.1		mg/kg	81	0.58	0	370
cm	12-Aug-03	A11	Metals	Copper	Yes	25.7		mg/kg	34	0.76	0	270
cm	12-Aug-03	A13	Metals	Lead	Yes	40.1		mg/kg	47	0.85	0	218
cm	12-Aug-03	A18	Metals	Nickel	Yes	17		mg/kg	21	0.81	0	52
cm	12-Aug-03	A21	Metals	Silver	Yes	0.77		mg/kg	1	0.77	0	3.7
cm	12-Aug-03	A26	Metals	Zinc	Yes	86.9		mg/kg	150	0.58	0	410
cm	12-Aug-03	C05	PAHs	2-Methylnaphthalene	No	10	U	ug/kg	70	0.14	0	670
cm	12-Aug-03	C06	PAHs	Acenaphthene	No	10	U	ug/kg	16	0.63	0	500
cm	12-Aug-03	C07	PAHs	Acenaphthylene	Yes	12		ug/kg	44	0.27	0	640
cm	12-Aug-03	C08	PAHs	Anthracene	Yes	24		ug/kg	85	0.28	0	1100
cm	12-Aug-03	C09	PAHs	Benzo(a)anthracene	Yes	100		ug/kg	261	0.38	0	1600
cm	12-Aug-03	C10	PAHs	Benzo(a)pyrene	Yes	69		ug/kg	430	0.16	0	1600
cm	12-Aug-03	C15	PAHs	Chrysene	Yes	96		ug/kg	384	0.25	0	2800
cm	12-Aug-03	C16	PAHs	Dibenzo(a,h)anthracene	No	10	U	ug/kg	63	0.16	0	260
cm	12-Aug-03	C18	PAHs	Fluoranthene	Yes	170		ug/kg	600	0.28	0	5100
cm	12-Aug-03	C19	PAHs	Fluorene	Yes	10		ug/kg	19	0.53	0	540
cm	12-Aug-03	C21	PAHs	Naphthalene	No	10	U	ug/kg	160	0.063	0	2100
cm	12-Aug-03	C23	PAHs	Phenanthrene	Yes	70		ug/kg	240	0.29	0	1500
cm	12-Aug-03	C24	PAHs	Pyrene	Yes	180		ug/kg	665	0.27	0	2600
cm	12-Aug-03	C37	PAHs	Total PAHs	Yes	910		ug/kg	4000	0.23	0	45000
cm	12-Aug-03	J05	OC Pesticides	4,4'-DDE	Yes	1.7	J	ug/kg	2.2	0.77	0	27
cm	12-Aug-03	J43	OC Pesticides	Total DDx	Yes	7.4	J	ug/kg	1.6	4.6	1	46
cm	11-Aug-03	A03	Metals	Arsenic	Yes	15.5		mg/kg	8.2	1.9	1	70
cm	11-Aug-03	A07	Metals	Cadmium	Yes	2.7		mg/kg	1.2	2.3	1	9.6
cm	11-Aug-03	A09	Metals	Chromium	Yes	99		mg/kg	81	1.2	1	370
cm	11-Aug-03	A11	Metals	Copper	Yes	104		mg/kg	34	3.1	1	270
cm	11-Aug-03	A13	Metals	Lead	Yes	137		mg/kg	47	2.9	1	218
cm	11-Aug-03	A18	Metals	Nickel	Yes	36.3		mg/kg	21	1.7	1	52
cm	11-Aug-03	A21	Metals	Silver	Yes	2.6		mg/kg	1	2.6	1	3.7
cm	11-Aug-03	A26	Metals	Zinc	Yes	280		mg/kg	150	1.9	1	410
cm	11-Aug-03	C05	PAHs	2-Methylnaphthalene	Yes	10		ug/kg	70	0.14	0	670
cm	11-Aug-03	C06	PAHs	Acenaphthene	No	10	U	ug/kg	16	0.63	0	500
cm	11-Aug-03	C07	PAHs	Acenaphthylene	Yes	10		ug/kg	44	0.23	0	640
cm	11-Aug-03	C08	PAHs	Anthracene	Yes	20		ug/kg	85	0.24	0	1100
cm	11-Aug-03	C09	PAHs	Benzo(a)anthracene	Yes	56		ug/kg	261	0.21	0	1600
cm	11-Aug-03	C10	PAHs	Benzo(a)pyrene	Yes	42		ug/kg	430	0.098	0	1600
cm	11-Aug-03	C15	PAHs	Chrysene	Yes	60		ug/kg	384	0.16	0	2800
cm	11-Aug-03	C16	PAHs	Dibenzo(a,h)anthracene	No	10	U	ug/kg	63	0.16	0	260
cm	11-Aug-03	C18	PAHs	Fluoranthene	Yes	110		ug/kg	600	0.18	0	5100
cm	11-Aug-03	C19	PAHs	Fluorene	No	10	U	ug/kg	19	0.53	0	540
cm	11-Aug-03	C21	PAHs	Naphthalene	Yes	11		ug/kg	160	0.069	0	2100

Depth_Unit	Sample_Date	Sort	Chemical_Group	Chemical	Detected	Result	Qual	Units	ERL	Value/ERL	ERL EF ≥ 1	ERM
cm	11-Aug-03	C23	PAHs	Phenanthrene	Yes	43		ug/kg	240	0.18	0	1500
cm	11-Aug-03	C24	PAHs	Pyrene	Yes	110		ug/kg	665	0.17	0	2600
cm	11-Aug-03	C37	PAHs	Total PAHs	Yes	590		ug/kg	4000	0.15	0	45000
cm	11-Aug-03	J05	OC Pesticides	4,4'-DDE	Yes	9.2		ug/kg	2.2	4.2	1	27
cm	11-Aug-03	J43	OC Pesticides	Total DDx	Yes	17		ug/kg	1.6	11	1	46
cm	14-Aug-03	A03	Metals	Arsenic	Yes	2.2		mg/kg	8.2	0.27	0	70
cm	14-Aug-03	A07	Metals	Cadmium	Yes	0.36		mg/kg	1.2	0.3	0	9.6
cm	14-Aug-03	A09	Metals	Chromium	Yes	17.7		mg/kg	81	0.22	0	370
cm	14-Aug-03	A11	Metals	Copper	Yes	6.3		mg/kg	34	0.19	0	270
cm	14-Aug-03	A13	Metals	Lead	Yes	18.5		mg/kg	47	0.39	0	218
cm	14-Aug-03	A18	Metals	Nickel	Yes	4.7		mg/kg	21	0.22	0	52
cm	14-Aug-03	A21	Metals	Silver	Yes	0.16		mg/kg	1	0.16	0	3.7
cm	14-Aug-03	A26	Metals	Zinc	Yes	28.7		mg/kg	150	0.19	0	410
cm	14-Aug-03	C05	PAHs	2-Methylnaphthalene	No	10	U	ug/kg	70	0.14	0	670
cm	14-Aug-03	C06	PAHs	Acenaphthene	No	10	U	ug/kg	16	0.63	0	500
cm	14-Aug-03	C07	PAHs	Acenaphthylene	No	10	U	ug/kg	44	0.23	0	640
cm	14-Aug-03	C08	PAHs	Anthracene	No	10	U	ug/kg	85	0.12	0	1100
cm	14-Aug-03	C09	PAHs	Benzo(a)anthracene	Yes	29		ug/kg	261	0.11	0	1600
cm	14-Aug-03	C10	PAHs	Benzo(a)pyrene	Yes	30		ug/kg	430	0.07	0	1600
cm	14-Aug-03	C15	PAHs	Chrysene	Yes	24		ug/kg	384	0.063	0	2800
cm	14-Aug-03	C16	PAHs	Dibenzo(a,h)anthracene	No	10	U	ug/kg	63	0.16	0	260
cm	14-Aug-03	C18	PAHs	Fluoranthene	Yes	37		ug/kg	600	0.062	0	5100
cm	14-Aug-03	C19	PAHs	Fluorene	No	10	U	ug/kg	19	0.53	0	540
cm	14-Aug-03	C21	PAHs	Naphthalene	No	10	U	ug/kg	160	0.063	0	2100
cm	14-Aug-03	C23	PAHs	Phenanthrene	No	10	U	ug/kg	240	0.042	0	1500
cm	14-Aug-03	C24	PAHs	Pyrene	Yes	28		ug/kg	665	0.042	0	2600
cm	14-Aug-03	C37	PAHs	Total PAHs	Yes	230		ug/kg	4000	0.058	0	45000
cm	14-Aug-03	J05	OC Pesticides	4,4'-DDE	No	0.5	U	ug/kg	2.2	0.23	0	27
cm	14-Aug-03	J43	OC Pesticides	Total DDx	No	0.5	U	ug/kg	1.6	0.31	0	46
cm	08-Aug-03	A03	Metals	Arsenic	Yes	7.3		mg/kg	8.2	0.89	0	70
cm	08-Aug-03	A07	Metals	Cadmium	Yes	1.1		mg/kg	1.2	0.92	0	9.6
cm	08-Aug-03	A09	Metals	Chromium	Yes	64.9		mg/kg	81	0.8	0	370
cm	08-Aug-03	A11	Metals	Copper	Yes	41.6		mg/kg	34	1.2	1	270
cm	08-Aug-03	A13	Metals	Lead	Yes	59.8		mg/kg	47	1.3	1	218
cm	08-Aug-03	A18	Metals	Nickel	Yes	21		mg/kg	21	1	1	52
cm	08-Aug-03	A21	Metals	Silver	Yes	1.2		mg/kg	1	1.2	1	3.7
cm	08-Aug-03	A26	Metals	Zinc	Yes	112		mg/kg	150	0.75	0	410
cm	08-Aug-03	C05	PAHs	2-Methylnaphthalene	Yes	46		ug/kg	70	0.66	0	670
cm	08-Aug-03	C06	PAHs	Acenaphthene	Yes	23		ug/kg	16	1.4	1	500
cm	08-Aug-03	C07	PAHs	Acenaphthylene	Yes	36		ug/kg	44	0.82	0	640
cm	08-Aug-03	C08	PAHs	Anthracene	Yes	86		ug/kg	85	1	1	1100
cm	08-Aug-03	C09	PAHs	Benzo(a)anthracene	Yes	360		ug/kg	261	1.4	1	1600
cm	08-Aug-03	C10	PAHs	Benzo(a)pyrene	Yes	290		ug/kg	430	0.67	0	1600
cm	08-Aug-03	C15	PAHs	Chrysene	Yes	360		ug/kg	384	0.94	0	2800
cm	08-Aug-03	C16	PAHs	Dibenzo(a,h)anthracene	No	10	U	ug/kg	63	0.16	0	260
cm	08-Aug-03	C18	PAHs	Fluoranthene	Yes	430		ug/kg	600	0.72	0	5100
cm	08-Aug-03	C19	PAHs	Fluorene	Yes	38		ug/kg	19	2	1	540
cm	08-Aug-03	C21	PAHs	Naphthalene	Yes	44		ug/kg	160	0.28	0	2100
cm	08-Aug-03	C23	PAHs	Phenanthrene	Yes	200		ug/kg	240	0.83	0	1500

Depth_Unit	Sample_Date	Sort	Chemical_Group	Chemical	Detected	Result	Qual	Units	ERL	Value/ERL	ERL EF ≥ 1	ERM
cm	08-Aug-03	C24	PAHs	Pyrene	Yes	670	J	ug/kg	665	1	1	2600
cm	08-Aug-03	C37	PAHs	Total PAHs	Yes	3500	J	ug/kg	4000	0.88	0	45000
cm	08-Aug-03	J05	OC Pesticides	4,4'-DDE	Yes	1.8	J	ug/kg	2.2	0.82	0	27
cm	08-Aug-03	J43	OC Pesticides	Total DDx	Yes	1.8	J	ug/kg	1.6	1.1	1	46
cm	13-Aug-03	A03	Metals	Arsenic	Yes	1.8		mg/kg	8.2	0.22	0	70
cm	13-Aug-03	A07	Metals	Cadmium	Yes	0.16		mg/kg	1.2	0.13	0	9.6
cm	13-Aug-03	A09	Metals	Chromium	Yes	13.7		mg/kg	81	0.17	0	370
cm	13-Aug-03	A11	Metals	Copper	Yes	5		mg/kg	34	0.15	0	270
cm	13-Aug-03	A13	Metals	Lead	Yes	14.5		mg/kg	47	0.31	0	218
cm	13-Aug-03	A18	Metals	Nickel	Yes	4		mg/kg	21	0.19	0	52
cm	13-Aug-03	A21	Metals	Silver	Yes	0.15		mg/kg	1	0.15	0	3.7
cm	13-Aug-03	A26	Metals	Zinc	Yes	25.6		mg/kg	150	0.17	0	410
cm	13-Aug-03	C05	PAHs	2-Methylnaphthalene	No	10	U	ug/kg	70	0.14	0	670
cm	13-Aug-03	C06	PAHs	Acenaphthene	No	10	U	ug/kg	16	0.63	0	500
cm	13-Aug-03	C07	PAHs	Acenaphthylene	No	10	U	ug/kg	44	0.23	0	640
cm	13-Aug-03	C08	PAHs	Anthracene	No	10	U	ug/kg	85	0.12	0	1100
cm	13-Aug-03	C09	PAHs	Benzo(a)anthracene	No	10	U	ug/kg	261	0.038	0	1600
cm	13-Aug-03	C10	PAHs	Benzo(a)pyrene	No	10	U	ug/kg	430	0.023	0	1600
cm	13-Aug-03	C15	PAHs	Chrysene	No	10	U	ug/kg	384	0.026	0	2800
cm	13-Aug-03	C16	PAHs	Dibenzo(a,h)anthracene	No	10	U	ug/kg	63	0.16	0	260
cm	13-Aug-03	C18	PAHs	Fluoranthene	Yes	16		ug/kg	600	0.027	0	5100
cm	13-Aug-03	C19	PAHs	Fluorene	No	10	U	ug/kg	19	0.53	0	540
cm	13-Aug-03	C21	PAHs	Naphthalene	No	10	U	ug/kg	160	0.063	0	2100
cm	13-Aug-03	C23	PAHs	Phenanthrene	No	10	U	ug/kg	240	0.042	0	1500
cm	13-Aug-03	C24	PAHs	Pyrene	Yes	12		ug/kg	665	0.018	0	2600
cm	13-Aug-03	C37	PAHs	Total PAHs	Yes	40		ug/kg	4000	0.01	0	45000
cm	13-Aug-03	J05	OC Pesticides	4,4'-DDE	No	0.5	U	ug/kg	2.2	0.23	0	27
cm	13-Aug-03	J43	OC Pesticides	Total DDx	No	0.5	U	ug/kg	1.6	0.31	0	46
cm	05-Aug-03	A03	Metals	Arsenic	Yes	1.3		mg/kg	8.2	0.16	0	70
cm	05-Aug-03	A07	Metals	Cadmium	Yes	0.2		mg/kg	1.2	0.17	0	9.6
cm	05-Aug-03	A09	Metals	Chromium	Yes	13.3		mg/kg	81	0.16	0	370
cm	05-Aug-03	A11	Metals	Copper	Yes	2.5		mg/kg	34	0.074	0	270
cm	05-Aug-03	A13	Metals	Lead	Yes	8.7		mg/kg	47	0.19	0	218
cm	05-Aug-03	A18	Metals	Nickel	Yes	3.2		mg/kg	21	0.15	0	52
cm	05-Aug-03	A21	Metals	Silver	Yes	0.065		mg/kg	1	0.065	0	3.7
cm	05-Aug-03	A26	Metals	Zinc	Yes	14.2		mg/kg	150	0.095	0	410
cm	05-Aug-03	C05	PAHs	2-Methylnaphthalene	No	10	U	ug/kg	70	0.14	0	670
cm	05-Aug-03	C06	PAHs	Acenaphthene	No	10	U	ug/kg	16	0.63	0	500
cm	05-Aug-03	C07	PAHs	Acenaphthylene	No	10	U	ug/kg	44	0.23	0	640
cm	05-Aug-03	C08	PAHs	Anthracene	No	10	U	ug/kg	85	0.12	0	1100
cm	05-Aug-03	C09	PAHs	Benzo(a)anthracene	No	10	U	ug/kg	261	0.038	0	1600
cm	05-Aug-03	C10	PAHs	Benzo(a)pyrene	No	10	U	ug/kg	430	0.023	0	1600
cm	05-Aug-03	C15	PAHs	Chrysene	No	10	U	ug/kg	384	0.026	0	2800
cm	05-Aug-03	C16	PAHs	Dibenzo(a,h)anthracene	No	10	U	ug/kg	63	0.16	0	260
cm	05-Aug-03	C18	PAHs	Fluoranthene	No	10	U	ug/kg	600	0.017	0	5100
cm	05-Aug-03	C19	PAHs	Fluorene	No	10	U	ug/kg	19	0.53	0	540
cm	05-Aug-03	C21	PAHs	Naphthalene	No	10	U	ug/kg	160	0.063	0	2100
cm	05-Aug-03	C23	PAHs	Phenanthrene	No	10	U	ug/kg	240	0.042	0	1500
cm	05-Aug-03	C24	PAHs	Pyrene	No	10	U	ug/kg	665	0.015	0	2600

Depth_Unit	Sample_Date	Sort	Chemical_Group	Chemical	Detected	Result	Qual	Units	ERL	Value/ERL	ERL EF ≥ 1	ERM
cm	05-Aug-03	C37	PAHs	Total PAHs	No	10	U	ug/kg	4000	0.0025	0	45000
cm	05-Aug-03	J05	OC Pesticides	4,4'-DDE	Yes	0.77	J	ug/kg	2.2	0.35	0	27
cm	05-Aug-03	J43	OC Pesticides	Total DDx	Yes	0.77	J	ug/kg	1.6	0.48	0	46
cm	07-Aug-03	A03	Metals	Arsenic	Yes	2.4		mg/kg	8.2	0.29	0	70
cm	07-Aug-03	A07	Metals	Cadmium	Yes	0.21		mg/kg	1.2	0.18	0	9.6
cm	07-Aug-03	A09	Metals	Chromium	Yes	18.8		mg/kg	81	0.23	0	370
cm	07-Aug-03	A11	Metals	Copper	Yes	5.2		mg/kg	34	0.15	0	270
cm	07-Aug-03	A13	Metals	Lead	Yes	16		mg/kg	47	0.34	0	218
cm	07-Aug-03	A18	Metals	Nickel	Yes	5.2		mg/kg	21	0.25	0	52
cm	07-Aug-03	A21	Metals	Silver	Yes	0.14		mg/kg	1	0.14	0	3.7
cm	07-Aug-03	A26	Metals	Zinc	Yes	24.3		mg/kg	150	0.16	0	410
cm	07-Aug-03	C05	PAHs	2-Methylnaphthalene	No	10	U	ug/kg	70	0.14	0	670
cm	07-Aug-03	C06	PAHs	Acenaphthene	No	10	U	ug/kg	16	0.63	0	500
cm	07-Aug-03	C07	PAHs	Acenaphthylene	No	10	U	ug/kg	44	0.23	0	640
cm	07-Aug-03	C08	PAHs	Anthracene	No	10	U	ug/kg	85	0.12	0	1100
cm	07-Aug-03	C09	PAHs	Benzo(a)anthracene	No	10	U	ug/kg	261	0.038	0	1600
cm	07-Aug-03	C10	PAHs	Benzo(a)pyrene	No	10	U	ug/kg	430	0.023	0	1600
cm	07-Aug-03	C15	PAHs	Chrysene	No	10	U	ug/kg	384	0.026	0	2800
cm	07-Aug-03	C16	PAHs	Dibenzo(a,h)anthracene	No	10	U	ug/kg	63	0.16	0	260
cm	07-Aug-03	C18	PAHs	Fluoranthene	No	10	U	ug/kg	600	0.017	0	5100
cm	07-Aug-03	C19	PAHs	Fluorene	No	10	U	ug/kg	19	0.53	0	540
cm	07-Aug-03	C21	PAHs	Naphthalene	No	10	U	ug/kg	160	0.063	0	2100
cm	07-Aug-03	C23	PAHs	Phenanthrene	No	10	U	ug/kg	240	0.042	0	1500
cm	07-Aug-03	C24	PAHs	Pyrene	No	10	U	ug/kg	665	0.015	0	2600
cm	07-Aug-03	C37	PAHs	Total PAHs	No	10	U	ug/kg	4000	0.0025	0	45000
cm	07-Aug-03	J05	OC Pesticides	4,4'-DDE	Yes	0.76	J	ug/kg	2.2	0.35	0	27
cm	07-Aug-03	J43	OC Pesticides	Total DDx	Yes	3.1	J	ug/kg	1.6	1.9	1	46
cm	06-Aug-03	A03	Metals	Arsenic	Yes	11.9		mg/kg	8.2	1.5	1	70
cm	06-Aug-03	A07	Metals	Cadmium	Yes	1.5		mg/kg	1.2	1.3	1	9.6
cm	06-Aug-03	A09	Metals	Chromium	Yes	78.2		mg/kg	81	0.97	0	370
cm	06-Aug-03	A11	Metals	Copper	Yes	53.3		mg/kg	34	1.6	1	270
cm	06-Aug-03	A13	Metals	Lead	Yes	82		mg/kg	47	1.7	1	218
cm	06-Aug-03	A18	Metals	Nickel	Yes	24.9		mg/kg	21	1.2	1	52
cm	06-Aug-03	A21	Metals	Silver	Yes	1.7		mg/kg	1	1.7	1	3.7
cm	06-Aug-03	A26	Metals	Zinc	Yes	145		mg/kg	150	0.97	0	410
cm	06-Aug-03	C05	PAHs	2-Methylnaphthalene	Yes	27		ug/kg	70	0.39	0	670
cm	06-Aug-03	C06	PAHs	Acenaphthene	Yes	15		ug/kg	16	0.94	0	500
cm	06-Aug-03	C07	PAHs	Acenaphthylene	Yes	27		ug/kg	44	0.61	0	640
cm	06-Aug-03	C08	PAHs	Anthracene	Yes	68		ug/kg	85	0.8	0	1100
cm	06-Aug-03	C09	PAHs	Benzo(a)anthracene	Yes	130		ug/kg	261	0.5	0	1600
cm	06-Aug-03	C10	PAHs	Benzo(a)pyrene	Yes	130		ug/kg	430	0.3	0	1600
cm	06-Aug-03	C15	PAHs	Chrysene	Yes	140		ug/kg	384	0.36	0	2800
cm	06-Aug-03	C16	PAHs	Dibenzo(a,h)anthracene	No	10	U	ug/kg	63	0.16	0	260
cm	06-Aug-03	C18	PAHs	Fluoranthene	Yes	270		ug/kg	600	0.45	0	5100
cm	06-Aug-03	C19	PAHs	Fluorene	Yes	24		ug/kg	19	1.3	1	540
cm	06-Aug-03	C21	PAHs	Naphthalene	Yes	26		ug/kg	160	0.16	0	2100
cm	06-Aug-03	C23	PAHs	Phenanthrene	Yes	110		ug/kg	240	0.46	0	1500
cm	06-Aug-03	C24	PAHs	Pyrene	Yes	170		ug/kg	665	0.26	0	2600
cm	06-Aug-03	C37	PAHs	Total PAHs	Yes	1500		ug/kg	4000	0.38	0	45000

Depth_Unit	Sample_Date	Sort	Chemical_Group	Chemical	Detected	Result	Qual	Units	ERL	Value/ERL	ERL EF ≥ 1	ERM
cm	06-Aug-03	J05	OC Pesticides	4,4'-DDE	Yes	2.6	J	ug/kg	2.2	1.2	1	27
cm	06-Aug-03	J43	OC Pesticides	Total DDx	Yes	2.6	J	ug/kg	1.6	1.6	1	46
cm	06-Aug-03	A03	Metals	Arsenic	Yes	9.2		mg/kg	8.2	1.1	1	70
cm	06-Aug-03	A07	Metals	Cadmium	Yes	1.4		mg/kg	1.2	1.2	1	9.6
cm	06-Aug-03	A09	Metals	Chromium	Yes	66.1		mg/kg	81	0.82	0	370
cm	06-Aug-03	A11	Metals	Copper	Yes	43.5		mg/kg	34	1.3	1	270
cm	06-Aug-03	A13	Metals	Lead	Yes	67.7		mg/kg	47	1.4	1	218
cm	06-Aug-03	A18	Metals	Nickel	Yes	21.5		mg/kg	21	1	1	52
cm	06-Aug-03	A21	Metals	Silver	Yes	1.4		mg/kg	1	1.4	1	3.7
cm	06-Aug-03	A26	Metals	Zinc	Yes	122		mg/kg	150	0.81	0	410
cm	06-Aug-03	C05	PAHs	2-Methylnaphthalene	Yes	19		ug/kg	70	0.27	0	670
cm	06-Aug-03	C06	PAHs	Acenaphthene	Yes	14		ug/kg	16	0.88	0	500
cm	06-Aug-03	C07	PAHs	Acenaphthylene	Yes	21		ug/kg	44	0.48	0	640
cm	06-Aug-03	C08	PAHs	Anthracene	Yes	60		ug/kg	85	0.71	0	1100
cm	06-Aug-03	C09	PAHs	Benzo(a)anthracene	Yes	120		ug/kg	261	0.46	0	1600
cm	06-Aug-03	C10	PAHs	Benzo(a)pyrene	Yes	97		ug/kg	430	0.23	0	1600
cm	06-Aug-03	C15	PAHs	Chrysene	Yes	130		ug/kg	384	0.34	0	2800
cm	06-Aug-03	C16	PAHs	Dibenzo(a,h)anthracene	No	10	U	ug/kg	63	0.16	0	260
cm	06-Aug-03	C18	PAHs	Fluoranthene	Yes	310		ug/kg	600	0.52	0	5100
cm	06-Aug-03	C19	PAHs	Fluorene	Yes	21		ug/kg	19	1.1	1	540
cm	06-Aug-03	C21	PAHs	Naphthalene	Yes	22		ug/kg	160	0.14	0	2100
cm	06-Aug-03	C23	PAHs	Phenanthrene	Yes	110		ug/kg	240	0.46	0	1500
cm	06-Aug-03	C24	PAHs	Pyrene	Yes	190		ug/kg	665	0.29	0	2600
cm	06-Aug-03	C37	PAHs	Total PAHs	Yes	1400		ug/kg	4000	0.35	0	45000
cm	06-Aug-03	J05	OC Pesticides	4,4'-DDE	Yes	2.5	J	ug/kg	2.2	1.1	1	27
cm	06-Aug-03	J43	OC Pesticides	Total DDx	Yes	2.5	J	ug/kg	1.6	1.6	1	46
cm	07-Aug-03	A03	Metals	Arsenic	Yes	1.8		mg/kg	8.2	0.22	0	70
cm	07-Aug-03	A07	Metals	Cadmium	No	0.12	U	mg/kg	1.2	0.1	0	9.6
cm	07-Aug-03	A09	Metals	Chromium	Yes	14		mg/kg	81	0.17	0	370
cm	07-Aug-03	A11	Metals	Copper	Yes	3.9		mg/kg	34	0.11	0	270
cm	07-Aug-03	A13	Metals	Lead	Yes	13.6		mg/kg	47	0.29	0	218
cm	07-Aug-03	A18	Metals	Nickel	Yes	3.8		mg/kg	21	0.18	0	52
cm	07-Aug-03	A21	Metals	Silver	Yes	0.099		mg/kg	1	0.099	0	3.7
cm	07-Aug-03	A26	Metals	Zinc	Yes	19.8		mg/kg	150	0.13	0	410
cm	07-Aug-03	C05	PAHs	2-Methylnaphthalene	No	10	U	ug/kg	70	0.14	0	670
cm	07-Aug-03	C06	PAHs	Acenaphthene	No	10	U	ug/kg	16	0.63	0	500
cm	07-Aug-03	C07	PAHs	Acenaphthylene	No	10	U	ug/kg	44	0.23	0	640
cm	07-Aug-03	C08	PAHs	Anthracene	No	10	U	ug/kg	85	0.12	0	1100
cm	07-Aug-03	C09	PAHs	Benzo(a)anthracene	No	10	U	ug/kg	261	0.038	0	1600
cm	07-Aug-03	C10	PAHs	Benzo(a)pyrene	No	10	U	ug/kg	430	0.023	0	1600
cm	07-Aug-03	C15	PAHs	Chrysene	No	10	U	ug/kg	384	0.026	0	2800
cm	07-Aug-03	C16	PAHs	Dibenzo(a,h)anthracene	No	10	U	ug/kg	63	0.16	0	260
cm	07-Aug-03	C18	PAHs	Fluoranthene	Yes	15		ug/kg	600	0.025	0	5100
cm	07-Aug-03	C19	PAHs	Fluorene	No	10	U	ug/kg	19	0.53	0	540
cm	07-Aug-03	C21	PAHs	Naphthalene	No	10	U	ug/kg	160	0.063	0	2100
cm	07-Aug-03	C23	PAHs	Phenanthrene	No	10	U	ug/kg	240	0.042	0	1500
cm	07-Aug-03	C24	PAHs	Pyrene	No	10	U	ug/kg	665	0.015	0	2600
cm	07-Aug-03	C37	PAHs	Total PAHs	Yes	15		ug/kg	4000	0.0038	0	45000
cm	07-Aug-03	J05	OC Pesticides	4,4'-DDE	No	0.5	U	ug/kg	2.2	0.23	0	27

Depth_Unit	Sample_Date	Sort	Chemical_Group	Chemical	Detected	Result	Qual	Units	ERL	Value/ERL	ERL EF ≥ 1	ERM
cm	07-Aug-03	J43	OC Pesticides	Total DDx	No	0.5	U	ug/kg	1.6	0.31	0	46
cm	07-Aug-03	A03	Metals	Arsenic	Yes	2.2		mg/kg	8.2	0.27	0	70
cm	07-Aug-03	A07	Metals	Cadmium	Yes	0.24		mg/kg	1.2	0.2	0	9.6
cm	07-Aug-03	A09	Metals	Chromium	Yes	18.2		mg/kg	81	0.22	0	370
cm	07-Aug-03	A11	Metals	Copper	Yes	4.6		mg/kg	34	0.14	0	270
cm	07-Aug-03	A13	Metals	Lead	Yes	15.6		mg/kg	47	0.33	0	218
cm	07-Aug-03	A18	Metals	Nickel	Yes	4.4		mg/kg	21	0.21	0	52
cm	07-Aug-03	A21	Metals	Silver	Yes	0.12		mg/kg	1	0.12	0	3.7
cm	07-Aug-03	A26	Metals	Zinc	Yes	24.1		mg/kg	150	0.16	0	410
cm	07-Aug-03	C05	PAHs	2-Methylnaphthalene	No	10	U	ug/kg	70	0.14	0	670
cm	07-Aug-03	C06	PAHs	Acenaphthene	No	10	U	ug/kg	16	0.63	0	500
cm	07-Aug-03	C07	PAHs	Acenaphthylene	No	10	U	ug/kg	44	0.23	0	640
cm	07-Aug-03	C08	PAHs	Anthracene	No	10	U	ug/kg	85	0.12	0	1100
cm	07-Aug-03	C09	PAHs	Benzo(a)anthracene	No	10	U	ug/kg	261	0.038	0	1600
cm	07-Aug-03	C10	PAHs	Benzo(a)pyrene	No	10	U	ug/kg	430	0.023	0	1600
cm	07-Aug-03	C15	PAHs	Chrysene	No	10	U	ug/kg	384	0.026	0	2800
cm	07-Aug-03	C16	PAHs	Dibenzo(a,h)anthracene	No	10	U	ug/kg	63	0.16	0	260
cm	07-Aug-03	C18	PAHs	Fluoranthene	No	10	U	ug/kg	600	0.017	0	5100
cm	07-Aug-03	C19	PAHs	Fluorene	No	10	U	ug/kg	19	0.53	0	540
cm	07-Aug-03	C21	PAHs	Naphthalene	No	10	U	ug/kg	160	0.063	0	2100
cm	07-Aug-03	C23	PAHs	Phenanthrene	No	10	U	ug/kg	240	0.042	0	1500
cm	07-Aug-03	C24	PAHs	Pyrene	No	10	U	ug/kg	665	0.015	0	2600
cm	07-Aug-03	C37	PAHs	Total PAHs	No	10	U	ug/kg	4000	0.0025	0	45000
cm	07-Aug-03	J05	OC Pesticides	4,4'-DDE	No	0.5	U	ug/kg	2.2	0.23	0	27
cm	07-Aug-03	J43	OC Pesticides	Total DDx	No	0.5	U	ug/kg	1.6	0.31	0	46
cm	08-Aug-03	A03	Metals	Arsenic	Yes	2.6		mg/kg	8.2	0.32	0	70
cm	08-Aug-03	A07	Metals	Cadmium	Yes	0.8		mg/kg	1.2	0.67	0	9.6
cm	08-Aug-03	A09	Metals	Chromium	Yes	45.1		mg/kg	81	0.56	0	370
cm	08-Aug-03	A11	Metals	Copper	Yes	40		mg/kg	34	1.2	1	270
cm	08-Aug-03	A13	Metals	Lead	Yes	42.2		mg/kg	47	0.9	0	218
cm	08-Aug-03	A18	Metals	Nickel	Yes	14.1		mg/kg	21	0.67	0	52
cm	08-Aug-03	A21	Metals	Silver	Yes	0.71		mg/kg	1	0.71	0	3.7
cm	08-Aug-03	A26	Metals	Zinc	Yes	90	J	mg/kg	150	0.6	0	410
cm	08-Aug-03	C05	PAHs	2-Methylnaphthalene	No	10	U	ug/kg	70	0.14	0	670
cm	08-Aug-03	C06	PAHs	Acenaphthene	No	10	U	ug/kg	16	0.63	0	500
cm	08-Aug-03	C07	PAHs	Acenaphthylene	No	10	U	ug/kg	44	0.23	0	640
cm	08-Aug-03	C08	PAHs	Anthracene	Yes	27		ug/kg	85	0.32	0	1100
cm	08-Aug-03	C09	PAHs	Benzo(a)anthracene	Yes	110		ug/kg	261	0.42	0	1600
cm	08-Aug-03	C10	PAHs	Benzo(a)pyrene	Yes	110		ug/kg	430	0.26	0	1600
cm	08-Aug-03	C15	PAHs	Chrysene	Yes	110		ug/kg	384	0.29	0	2800
cm	08-Aug-03	C16	PAHs	Dibenzo(a,h)anthracene	No	10	U	ug/kg	63	0.16	0	260
cm	08-Aug-03	C18	PAHs	Fluoranthene	Yes	280		ug/kg	600	0.47	0	5100
cm	08-Aug-03	C19	PAHs	Fluorene	No	10	U	ug/kg	19	0.53	0	540
cm	08-Aug-03	C21	PAHs	Naphthalene	No	10	U	ug/kg	160	0.063	0	2100
cm	08-Aug-03	C23	PAHs	Phenanthrene	Yes	57		ug/kg	240	0.24	0	1500
cm	08-Aug-03	C24	PAHs	Pyrene	Yes	160		ug/kg	665	0.24	0	2600
cm	08-Aug-03	C37	PAHs	Total PAHs	Yes	1200		ug/kg	4000	0.3	0	45000
cm	08-Aug-03	J05	OC Pesticides	4,4'-DDE	Yes	2.7	J	ug/kg	2.2	1.2	1	27
cm	08-Aug-03	J43	OC Pesticides	Total DDx	Yes	11	J	ug/kg	1.6	6.9	1	46

Depth_Unit	Sample_Date	Sort	Chemical_Group	Chemical	Detected	Result	Qual	Units	ERL	Value/ERL	ERL EF ≥ 1	ERM
cm	11-Aug-03	A03	Metals	Arsenic	Yes	15.8		mg/kg	8.2	1.9	1	70
cm	11-Aug-03	A07	Metals	Cadmium	Yes	2		mg/kg	1.2	1.7	1	9.6
cm	11-Aug-03	A09	Metals	Chromium	Yes	88.9		mg/kg	81	1.1	1	370
cm	11-Aug-03	A11	Metals	Copper	Yes	85		mg/kg	34	2.5	1	270
cm	11-Aug-03	A13	Metals	Lead	Yes	125		mg/kg	47	2.7	1	218
cm	11-Aug-03	A18	Metals	Nickel	Yes	31		mg/kg	21	1.5	1	52
cm	11-Aug-03	A21	Metals	Silver	Yes	2.3		mg/kg	1	2.3	1	3.7
cm	11-Aug-03	A26	Metals	Zinc	Yes	217	J	mg/kg	150	1.4	1	410
cm	11-Aug-03	C05	PAHs	2-Methylnaphthalene	Yes	22		ug/kg	70	0.31	0	670
cm	11-Aug-03	C06	PAHs	Acenaphthene	Yes	14		ug/kg	16	0.88	0	500
cm	11-Aug-03	C07	PAHs	Acenaphthylene	Yes	29		ug/kg	44	0.66	0	640
cm	11-Aug-03	C08	PAHs	Anthracene	Yes	62		ug/kg	85	0.73	0	1100
cm	11-Aug-03	C09	PAHs	Benzo(a)anthracene	Yes	170		ug/kg	261	0.65	0	1600
cm	11-Aug-03	C10	PAHs	Benzo(a)pyrene	Yes	130		ug/kg	430	0.3	0	1600
cm	11-Aug-03	C15	PAHs	Chrysene	Yes	190		ug/kg	384	0.49	0	2800
cm	11-Aug-03	C16	PAHs	Dibenzo(a,h)anthracene	No	10	U	ug/kg	63	0.16	0	260
cm	11-Aug-03	C18	PAHs	Fluoranthene	Yes	300		ug/kg	600	0.5	0	5100
cm	11-Aug-03	C19	PAHs	Fluorene	Yes	19		ug/kg	19	1	1	540
cm	11-Aug-03	C21	PAHs	Naphthalene	Yes	22		ug/kg	160	0.14	0	2100
cm	11-Aug-03	C23	PAHs	Phenanthrene	Yes	110		ug/kg	240	0.46	0	1500
cm	11-Aug-03	C24	PAHs	Pyrene	Yes	290		ug/kg	665	0.44	0	2600
cm	11-Aug-03	C37	PAHs	Total PAHs	Yes	1800		ug/kg	4000	0.45	0	45000
cm	11-Aug-03	J05	OC Pesticides	4,4'-DDE	Yes	2.6		ug/kg	2.2	1.2	1	27
cm	11-Aug-03	J43	OC Pesticides	Total DDx	Yes	9	J	ug/kg	1.6	5.6	1	46
cm	13-Aug-03	A03	Metals	Arsenic	Yes	4.7		mg/kg	8.2	0.57	0	70
cm	13-Aug-03	A07	Metals	Cadmium	Yes	0.64		mg/kg	1.2	0.53	0	9.6
cm	13-Aug-03	A09	Metals	Chromium	Yes	34.7		mg/kg	81	0.43	0	370
cm	13-Aug-03	A11	Metals	Copper	Yes	21.5		mg/kg	34	0.63	0	270
cm	13-Aug-03	A13	Metals	Lead	Yes	38.2		mg/kg	47	0.81	0	218
cm	13-Aug-03	A18	Metals	Nickel	Yes	10.3		mg/kg	21	0.49	0	52
cm	13-Aug-03	A21	Metals	Silver	Yes	0.58		mg/kg	1	0.58	0	3.7
cm	13-Aug-03	A26	Metals	Zinc	Yes	64	J	mg/kg	150	0.43	0	410
cm	13-Aug-03	C05	PAHs	2-Methylnaphthalene	No	10	U	ug/kg	70	0.14	0	670
cm	13-Aug-03	C06	PAHs	Acenaphthene	No	10	U	ug/kg	16	0.63	0	500
cm	13-Aug-03	C07	PAHs	Acenaphthylene	Yes	14		ug/kg	44	0.32	0	640
cm	13-Aug-03	C08	PAHs	Anthracene	Yes	42		ug/kg	85	0.49	0	1100
cm	13-Aug-03	C09	PAHs	Benzo(a)anthracene	Yes	92		ug/kg	261	0.35	0	1600
cm	13-Aug-03	C10	PAHs	Benzo(a)pyrene	Yes	74		ug/kg	430	0.17	0	1600
cm	13-Aug-03	C15	PAHs	Chrysene	Yes	120		ug/kg	384	0.31	0	2800
cm	13-Aug-03	C16	PAHs	Dibenzo(a,h)anthracene	No	10	U	ug/kg	63	0.16	0	260
cm	13-Aug-03	C18	PAHs	Fluoranthene	Yes	130		ug/kg	600	0.22	0	5100
cm	13-Aug-03	C19	PAHs	Fluorene	Yes	19		ug/kg	19	1	1	540
cm	13-Aug-03	C21	PAHs	Naphthalene	No	10	U	ug/kg	160	0.063	0	2100
cm	13-Aug-03	C23	PAHs	Phenanthrene	Yes	88		ug/kg	240	0.37	0	1500
cm	13-Aug-03	C24	PAHs	Pyrene	Yes	130		ug/kg	665	0.2	0	2600
cm	13-Aug-03	C37	PAHs	Total PAHs	Yes	900		ug/kg	4000	0.23	0	45000
cm	13-Aug-03	J05	OC Pesticides	4,4'-DDE	Yes	1.3	J	ug/kg	2.2	0.59	0	27
cm	13-Aug-03	J43	OC Pesticides	Total DDx	Yes	2.6	J	ug/kg	1.6	1.6	1	46
cm	12-Aug-03	A03	Metals	Arsenic	Yes	11.7		mg/kg	8.2	1.4	1	70

Depth_Unit	Sample_Date	Sort	Chemical_Group	Chemical	Detected	Result	Qual	Units	ERL	Value/ERL	ERL EF ≥ 1	ERM
cm	12-Aug-03	A07	Metals	Cadmium	Yes	1.8		mg/kg	1.2	1.5	1	9.6
cm	12-Aug-03	A09	Metals	Chromium	Yes	83.6		mg/kg	81	1	1	370
cm	12-Aug-03	A11	Metals	Copper	Yes	59.8		mg/kg	34	1.8	1	270
cm	12-Aug-03	A13	Metals	Lead	Yes	89.3		mg/kg	47	1.9	1	218
cm	12-Aug-03	A18	Metals	Nickel	Yes	26.6		mg/kg	21	1.3	1	52
cm	12-Aug-03	A21	Metals	Silver	Yes	1.9		mg/kg	1	1.9	1	3.7
cm	12-Aug-03	A26	Metals	Zinc	Yes	156	J	mg/kg	150	1	1	410
cm	12-Aug-03	C05	PAHs	2-Methylnaphthalene	Yes	19		ug/kg	70	0.27	0	670
cm	12-Aug-03	C06	PAHs	Acenaphthene	No	10	U	ug/kg	16	0.63	0	500
cm	12-Aug-03	C07	PAHs	Acenaphthylene	Yes	19		ug/kg	44	0.43	0	640
cm	12-Aug-03	C08	PAHs	Anthracene	Yes	40		ug/kg	85	0.47	0	1100
cm	12-Aug-03	C09	PAHs	Benzo(a)anthracene	Yes	110		ug/kg	261	0.42	0	1600
cm	12-Aug-03	C10	PAHs	Benzo(a)pyrene	Yes	96		ug/kg	430	0.22	0	1600
cm	12-Aug-03	C15	PAHs	Chrysene	Yes	120		ug/kg	384	0.31	0	2800
cm	12-Aug-03	C16	PAHs	Dibenzo(a,h)anthracene	No	10	U	ug/kg	63	0.16	0	260
cm	12-Aug-03	C18	PAHs	Fluoranthene	Yes	200		ug/kg	600	0.33	0	5100
cm	12-Aug-03	C19	PAHs	Fluorene	Yes	14		ug/kg	19	0.74	0	540
cm	12-Aug-03	C21	PAHs	Naphthalene	Yes	19		ug/kg	160	0.12	0	2100
cm	12-Aug-03	C23	PAHs	Phenanthrene	Yes	85		ug/kg	240	0.35	0	1500
cm	12-Aug-03	C24	PAHs	Pyrene	Yes	180		ug/kg	665	0.27	0	2600
cm	12-Aug-03	C37	PAHs	Total PAHs	Yes	1200		ug/kg	4000	0.3	0	45000
cm	12-Aug-03	J05	OC Pesticides	4,4'-DDE	Yes	3.1	J	ug/kg	2.2	1.4	1	27
cm	12-Aug-03	J43	OC Pesticides	Total DDx	Yes	14	J	ug/kg	1.6	8.8	1	46
cm	12-Aug-03	A03	Metals	Arsenic	Yes	3.2		mg/kg	8.2	0.39	0	70
cm	12-Aug-03	A07	Metals	Cadmium	Yes	0.43		mg/kg	1.2	0.36	0	9.6
cm	12-Aug-03	A09	Metals	Chromium	Yes	26.9		mg/kg	81	0.33	0	370
cm	12-Aug-03	A11	Metals	Copper	Yes	11.9		mg/kg	34	0.35	0	270
cm	12-Aug-03	A13	Metals	Lead	Yes	27.4		mg/kg	47	0.58	0	218
cm	12-Aug-03	A18	Metals	Nickel	Yes	7.3		mg/kg	21	0.35	0	52
cm	12-Aug-03	A21	Metals	Silver	Yes	0.35		mg/kg	1	0.35	0	3.7
cm	12-Aug-03	A26	Metals	Zinc	Yes	44.7	J	mg/kg	150	0.3	0	410
cm	12-Aug-03	C05	PAHs	2-Methylnaphthalene	No	10	U	ug/kg	70	0.14	0	670
cm	12-Aug-03	C06	PAHs	Acenaphthene	No	10	U	ug/kg	16	0.63	0	500
cm	12-Aug-03	C07	PAHs	Acenaphthylene	No	10	U	ug/kg	44	0.23	0	640
cm	12-Aug-03	C08	PAHs	Anthracene	Yes	21		ug/kg	85	0.25	0	1100
cm	12-Aug-03	C09	PAHs	Benzo(a)anthracene	Yes	43		ug/kg	261	0.16	0	1600
cm	12-Aug-03	C10	PAHs	Benzo(a)pyrene	Yes	34		ug/kg	430	0.079	0	1600
cm	12-Aug-03	C15	PAHs	Chrysene	Yes	43		ug/kg	384	0.11	0	2800
cm	12-Aug-03	C16	PAHs	Dibenzo(a,h)anthracene	No	10	U	ug/kg	63	0.16	0	260
cm	12-Aug-03	C18	PAHs	Fluoranthene	Yes	79		ug/kg	600	0.13	0	5100
cm	12-Aug-03	C19	PAHs	Fluorene	No	10	U	ug/kg	19	0.53	0	540
cm	12-Aug-03	C21	PAHs	Naphthalene	No	10	U	ug/kg	160	0.063	0	2100
cm	12-Aug-03	C23	PAHs	Phenanthrene	Yes	45		ug/kg	240	0.19	0	1500
cm	12-Aug-03	C24	PAHs	Pyrene	Yes	75		ug/kg	665	0.11	0	2600
cm	12-Aug-03	C37	PAHs	Total PAHs	Yes	440		ug/kg	4000	0.11	0	45000
cm	12-Aug-03	J05	OC Pesticides	4,4'-DDE	Yes	1.3	J	ug/kg	2.2	0.59	0	27
cm	12-Aug-03	J43	OC Pesticides	Total DDx	Yes	2.8	J	ug/kg	1.6	1.8	1	46
cm	14-Aug-03	A03	Metals	Arsenic	Yes	11.1		mg/kg	8.2	1.4	1	70
cm	14-Aug-03	A07	Metals	Cadmium	Yes	1.6		mg/kg	1.2	1.3	1	9.6

Depth_Unit	Sample_Date	Sort	Chemical_Group	Chemical	Detected	Result	Qual	Units	ERL	Value/ERL	ERL EF ≥ 1	ERM
cm	14-Aug-03	A09	Metals	Chromium	Yes	85.9		mg/kg	81	1.1	1	370
cm	14-Aug-03	A11	Metals	Copper	Yes	72.1		mg/kg	34	2.1	1	270
cm	14-Aug-03	A13	Metals	Lead	Yes	97.2		mg/kg	47	2.1	1	218
cm	14-Aug-03	A18	Metals	Nickel	Yes	27.5		mg/kg	21	1.3	1	52
cm	14-Aug-03	A21	Metals	Silver	Yes	2.1		mg/kg	1	2.1	1	3.7
cm	14-Aug-03	A26	Metals	Zinc	Yes	168	J	mg/kg	150	1.1	1	410
cm	14-Aug-03	C05	PAHs	2-Methylnaphthalene	Yes	20		ug/kg	70	0.29	0	670
cm	14-Aug-03	C06	PAHs	Acenaphthene	Yes	13		ug/kg	16	0.81	0	500
cm	14-Aug-03	C07	PAHs	Acenaphthylene	Yes	19		ug/kg	44	0.43	0	640
cm	14-Aug-03	C08	PAHs	Anthracene	Yes	46		ug/kg	85	0.54	0	1100
cm	14-Aug-03	C09	PAHs	Benzo(a)anthracene	Yes	130		ug/kg	261	0.5	0	1600
cm	14-Aug-03	C10	PAHs	Benzo(a)pyrene	Yes	100		ug/kg	430	0.23	0	1600
cm	14-Aug-03	C15	PAHs	Chrysene	Yes	150		ug/kg	384	0.39	0	2800
cm	14-Aug-03	C16	PAHs	Dibenzo(a,h)anthracene	No	10	U	ug/kg	63	0.16	0	260
cm	14-Aug-03	C18	PAHs	Fluoranthene	Yes	230		ug/kg	600	0.38	0	5100
cm	14-Aug-03	C19	PAHs	Fluorene	Yes	19		ug/kg	19	1	1	540
cm	14-Aug-03	C21	PAHs	Naphthalene	Yes	15		ug/kg	160	0.094	0	2100
cm	14-Aug-03	C23	PAHs	Phenanthrene	Yes	95		ug/kg	240	0.4	0	1500
cm	14-Aug-03	C24	PAHs	Pyrene	Yes	200		ug/kg	665	0.3	0	2600
cm	14-Aug-03	C37	PAHs	Total PAHs	Yes	1300		ug/kg	4000	0.33	0	45000
cm	14-Aug-03	J05	OC Pesticides	4,4'-DDE	Yes	4	J	ug/kg	2.2	1.8	1	27
cm	14-Aug-03	J43	OC Pesticides	Total DDx	Yes	11	J	ug/kg	1.6	6.9	1	46
cm	14-Aug-03	A03	Metals	Arsenic	Yes	20.7		mg/kg	8.2	2.5	1	70
cm	14-Aug-03	A07	Metals	Cadmium	Yes	4.8		mg/kg	1.2	4	1	9.6
cm	14-Aug-03	A09	Metals	Chromium	Yes	126		mg/kg	81	1.6	1	370
cm	14-Aug-03	A11	Metals	Copper	Yes	322		mg/kg	34	9.5	1	270
cm	14-Aug-03	A13	Metals	Lead	Yes	347		mg/kg	47	7.4	1	218
cm	14-Aug-03	A18	Metals	Nickel	Yes	52		mg/kg	21	2.5	1	52
cm	14-Aug-03	A21	Metals	Silver	Yes	3		mg/kg	1	3	1	3.7
cm	14-Aug-03	A26	Metals	Zinc	Yes	705	J	mg/kg	150	4.7	1	410
cm	14-Aug-03	C05	PAHs	2-Methylnaphthalene	Yes	80		ug/kg	70	1.1	1	670
cm	14-Aug-03	C06	PAHs	Acenaphthene	Yes	130		ug/kg	16	8.1	1	500
cm	14-Aug-03	C07	PAHs	Acenaphthylene	Yes	98		ug/kg	44	2.2	1	640
cm	14-Aug-03	C08	PAHs	Anthracene	Yes	400		ug/kg	85	4.7	1	1100
cm	14-Aug-03	C09	PAHs	Benzo(a)anthracene	Yes	1000	J	ug/kg	261	3.8	1	1600
cm	14-Aug-03	C10	PAHs	Benzo(a)pyrene	Yes	820	J	ug/kg	430	1.9	1	1600
cm	14-Aug-03	C15	PAHs	Chrysene	Yes	700	J	ug/kg	384	1.8	1	2800
cm	14-Aug-03	C16	PAHs	Dibenzo(a,h)anthracene	No	10	U	ug/kg	63	0.16	0	260
cm	14-Aug-03	C18	PAHs	Fluoranthene	Yes	930	J	ug/kg	600	1.6	1	5100
cm	14-Aug-03	C19	PAHs	Fluorene	Yes	190		ug/kg	19	10	1	540
cm	14-Aug-03	C21	PAHs	Naphthalene	Yes	110		ug/kg	160	0.69	0	2100
cm	14-Aug-03	C23	PAHs	Phenanthrene	Yes	790	J	ug/kg	240	3.3	1	1500
cm	14-Aug-03	C24	PAHs	Pyrene	Yes	1400	J	ug/kg	665	2.1	1	2600
cm	14-Aug-03	C37	PAHs	Total PAHs	Yes	9100	J	ug/kg	4000	2.3	1	45000
cm	14-Aug-03	J05	OC Pesticides	4,4'-DDE	Yes	16	J	ug/kg	2.2	7.3	1	27
cm	14-Aug-03	J43	OC Pesticides	Total DDx	Yes	41	J	ug/kg	1.6	26	1	46
cm	08-Sep-03	A03	Metals	Arsenic	Yes	8.8		mg/kg	8.2	1.1	1	70
cm	08-Sep-03	A07	Metals	Cadmium	Yes	1.7		mg/kg	1.2	1.4	1	9.6
cm	08-Sep-03	A09	Metals	Chromium	Yes	66.5		mg/kg	81	0.82	0	370

Depth_Unit	Sample_Date	Sort	Chemical_Group	Chemical	Detected	Result	Qual	Units	ERL	Value/ERL	ERL EF ≥ 1	ERM
cm	08-Sep-03	A11	Metals	Copper	Yes	80.5		mg/kg	34	2.4	1	270
cm	08-Sep-03	A13	Metals	Lead	Yes	124		mg/kg	47	2.6	1	218
cm	08-Sep-03	A18	Metals	Nickel	Yes	24		mg/kg	21	1.1	1	52
cm	08-Sep-03	A21	Metals	Silver	Yes	1.6		mg/kg	1	1.6	1	3.7
cm	08-Sep-03	A26	Metals	Zinc	Yes	210	J	mg/kg	150	1.4	1	410
cm	08-Sep-03	C05	PAHs	2-Methylnaphthalene	Yes	25		ug/kg	70	0.36	0	670
cm	08-Sep-03	C06	PAHs	Acenaphthene	Yes	28		ug/kg	16	1.8	1	500
cm	08-Sep-03	C07	PAHs	Acenaphthylene	Yes	36		ug/kg	44	0.82	0	640
cm	08-Sep-03	C08	PAHs	Anthracene	Yes	93		ug/kg	85	1.1	1	1100
cm	08-Sep-03	C09	PAHs	Benzo(a)anthracene	Yes	230		ug/kg	261	0.88	0	1600
cm	08-Sep-03	C10	PAHs	Benzo(a)pyrene	Yes	200		ug/kg	430	0.47	0	1600
cm	08-Sep-03	C15	PAHs	Chrysene	Yes	260		ug/kg	384	0.68	0	2800
cm	08-Sep-03	C16	PAHs	Dibenzo(a,h)anthracene	No	10	U	ug/kg	63	0.16	0	260
cm	08-Sep-03	C18	PAHs	Fluoranthene	Yes	350		ug/kg	600	0.58	0	5100
cm	08-Sep-03	C19	PAHs	Fluorene	Yes	31		ug/kg	19	1.6	1	540
cm	08-Sep-03	C21	PAHs	Naphthalene	Yes	23		ug/kg	160	0.14	0	2100
cm	08-Sep-03	C23	PAHs	Phenanthrene	Yes	170		ug/kg	240	0.71	0	1500
cm	08-Sep-03	C24	PAHs	Pyrene	Yes	330		ug/kg	665	0.5	0	2600
cm	08-Sep-03	C37	PAHs	Total PAHs	Yes	2300		ug/kg	4000	0.58	0	45000
cm	08-Sep-03	J05	OC Pesticides	4,4'-DDE	No	0.5	U	ug/kg	2.2	0.23	0	27
cm	08-Sep-03	J43	OC Pesticides	Total DDx	Yes	9	J	ug/kg	1.6	5.6	1	46
cm	09-Sep-03	A03	Metals	Arsenic	Yes	1.1		mg/kg	8.2	0.13	0	70
cm	09-Sep-03	A07	Metals	Cadmium	No	0.12	U	mg/kg	1.2	0.1	0	9.6
cm	09-Sep-03	A09	Metals	Chromium	Yes	9		mg/kg	81	0.11	0	370
cm	09-Sep-03	A11	Metals	Copper	Yes	4.8		mg/kg	34	0.14	0	270
cm	09-Sep-03	A13	Metals	Lead	Yes	11.7		mg/kg	47	0.25	0	218
cm	09-Sep-03	A18	Metals	Nickel	Yes	3.7		mg/kg	21	0.18	0	52
cm	09-Sep-03	A21	Metals	Silver	Yes	0.11		mg/kg	1	0.11	0	3.7
cm	09-Sep-03	A26	Metals	Zinc	Yes	22.9	J	mg/kg	150	0.15	0	410
cm	09-Sep-03	C05	PAHs	2-Methylnaphthalene	No	10	U	ug/kg	70	0.14	0	670
cm	09-Sep-03	C06	PAHs	Acenaphthene	Yes	14		ug/kg	16	0.88	0	500
cm	09-Sep-03	C07	PAHs	Acenaphthylene	Yes	19		ug/kg	44	0.43	0	640
cm	09-Sep-03	C08	PAHs	Anthracene	Yes	70		ug/kg	85	0.82	0	1100
cm	09-Sep-03	C09	PAHs	Benzo(a)anthracene	Yes	150		ug/kg	261	0.57	0	1600
cm	09-Sep-03	C10	PAHs	Benzo(a)pyrene	Yes	130		ug/kg	430	0.3	0	1600
cm	09-Sep-03	C15	PAHs	Chrysene	Yes	130		ug/kg	384	0.34	0	2800
cm	09-Sep-03	C16	PAHs	Dibenzo(a,h)anthracene	No	10	U	ug/kg	63	0.16	0	260
cm	09-Sep-03	C18	PAHs	Fluoranthene	Yes	270		ug/kg	600	0.45	0	5100
cm	09-Sep-03	C19	PAHs	Fluorene	Yes	27		ug/kg	19	1.4	1	540
cm	09-Sep-03	C21	PAHs	Naphthalene	No	10	U	ug/kg	160	0.063	0	2100
cm	09-Sep-03	C23	PAHs	Phenanthrene	Yes	190		ug/kg	240	0.79	0	1500
cm	09-Sep-03	C24	PAHs	Pyrene	Yes	260		ug/kg	665	0.39	0	2600
cm	09-Sep-03	C37	PAHs	Total PAHs	Yes	1600		ug/kg	4000	0.4	0	45000
cm	09-Sep-03	J05	OC Pesticides	4,4'-DDE	Yes	0.86	J	ug/kg	2.2	0.39	0	27
cm	09-Sep-03	J43	OC Pesticides	Total DDx	Yes	1.2	J	ug/kg	1.6	0.75	0	46
cm	15-Sep-03	A03	Metals	Arsenic	Yes	1.6		mg/kg	8.2	0.2	0	70
cm	15-Sep-03	A07	Metals	Cadmium	No	0.12	U	mg/kg	1.2	0.1	0	9.6
cm	15-Sep-03	A09	Metals	Chromium	Yes	12.7		mg/kg	81	0.16	0	370
cm	15-Sep-03	A11	Metals	Copper	Yes	2.8		mg/kg	34	0.082	0	270

Depth_Unit	Sample_Date	Sort	Chemical_Group	Chemical	Detected	Result	Qual	Units	ERL	Value/ERL	ERL EF ≥ 1	ERM
cm	15-Sep-03	A13	Metals	Lead	Yes	7.8		mg/kg	47	0.17	0	218
cm	15-Sep-03	A18	Metals	Nickel	Yes	3		mg/kg	21	0.14	0	52
cm	15-Sep-03	A21	Metals	Silver	Yes	0.044		mg/kg	1	0.044	0	3.7
cm	15-Sep-03	A26	Metals	Zinc	Yes	11.4	J	mg/kg	150	0.076	0	410
cm	15-Sep-03	C05	PAHs	2-Methylnaphthalene	No	10	U	ug/kg	70	0.14	0	670
cm	15-Sep-03	C06	PAHs	Acenaphthene	No	10	U	ug/kg	16	0.63	0	500
cm	15-Sep-03	C07	PAHs	Acenaphthylene	No	10	U	ug/kg	44	0.23	0	640
cm	15-Sep-03	C08	PAHs	Anthracene	No	10	U	ug/kg	85	0.12	0	1100
cm	15-Sep-03	C09	PAHs	Benzo(a)anthracene	No	10	U	ug/kg	261	0.038	0	1600
cm	15-Sep-03	C10	PAHs	Benzo(a)pyrene	No	10	U	ug/kg	430	0.023	0	1600
cm	15-Sep-03	C15	PAHs	Chrysene	No	10	U	ug/kg	384	0.026	0	2800
cm	15-Sep-03	C16	PAHs	Dibenzo(a,h)anthracene	No	10	U	ug/kg	63	0.16	0	260
cm	15-Sep-03	C18	PAHs	Fluoranthene	No	10	U	ug/kg	600	0.017	0	5100
cm	15-Sep-03	C19	PAHs	Fluorene	No	10	U	ug/kg	19	0.53	0	540
cm	15-Sep-03	C21	PAHs	Naphthalene	No	10	U	ug/kg	160	0.063	0	2100
cm	15-Sep-03	C23	PAHs	Phenanthrene	No	10	U	ug/kg	240	0.042	0	1500
cm	15-Sep-03	C24	PAHs	Pyrene	No	10	U	ug/kg	665	0.015	0	2600
cm	15-Sep-03	C37	PAHs	Total PAHs	No	10	U	ug/kg	4000	0.0025	0	45000
cm	15-Sep-03	J05	OC Pesticides	4,4'-DDE	No	0.5	U	ug/kg	2.2	0.23	0	27
cm	15-Sep-03	J43	OC Pesticides	Total DDx	No	0.5	U	ug/kg	1.6	0.31	0	46
cm	09-Sep-03	A03	Metals	Arsenic	Yes	1.3		mg/kg	8.2	0.16	0	70
cm	09-Sep-03	A07	Metals	Cadmium	No	0.12	U	mg/kg	1.2	0.1	0	9.6
cm	09-Sep-03	A09	Metals	Chromium	Yes	7.9		mg/kg	81	0.098	0	370
cm	09-Sep-03	A11	Metals	Copper	Yes	2.1		mg/kg	34	0.062	0	270
cm	09-Sep-03	A13	Metals	Lead	Yes	8.7		mg/kg	47	0.19	0	218
cm	09-Sep-03	A18	Metals	Nickel	Yes	2.3		mg/kg	21	0.11	0	52
cm	09-Sep-03	A21	Metals	Silver	Yes	0.038		mg/kg	1	0.038	0	3.7
cm	09-Sep-03	A26	Metals	Zinc	Yes	8.9	J	mg/kg	150	0.059	0	410
cm	09-Sep-03	C05	PAHs	2-Methylnaphthalene	No	10	U	ug/kg	70	0.14	0	670
cm	09-Sep-03	C06	PAHs	Acenaphthene	No	10	U	ug/kg	16	0.63	0	500
cm	09-Sep-03	C07	PAHs	Acenaphthylene	No	10	U	ug/kg	44	0.23	0	640
cm	09-Sep-03	C08	PAHs	Anthracene	No	10	U	ug/kg	85	0.12	0	1100
cm	09-Sep-03	C09	PAHs	Benzo(a)anthracene	No	10	U	ug/kg	261	0.038	0	1600
cm	09-Sep-03	C10	PAHs	Benzo(a)pyrene	No	10	U	ug/kg	430	0.023	0	1600
cm	09-Sep-03	C15	PAHs	Chrysene	No	10	U	ug/kg	384	0.026	0	2800
cm	09-Sep-03	C16	PAHs	Dibenzo(a,h)anthracene	No	10	U	ug/kg	63	0.16	0	260
cm	09-Sep-03	C18	PAHs	Fluoranthene	No	10	U	ug/kg	600	0.017	0	5100
cm	09-Sep-03	C19	PAHs	Fluorene	No	10	U	ug/kg	19	0.53	0	540
cm	09-Sep-03	C21	PAHs	Naphthalene	No	10	U	ug/kg	160	0.063	0	2100
cm	09-Sep-03	C23	PAHs	Phenanthrene	No	10	U	ug/kg	240	0.042	0	1500
cm	09-Sep-03	C24	PAHs	Pyrene	No	10	U	ug/kg	665	0.015	0	2600
cm	09-Sep-03	C37	PAHs	Total PAHs	No	10	U	ug/kg	4000	0.0025	0	45000
cm	09-Sep-03	J05	OC Pesticides	4,4'-DDE	No	0.5	U	ug/kg	2.2	0.23	0	27
cm	09-Sep-03	J43	OC Pesticides	Total DDx	No	0.5	U	ug/kg	1.6	0.31	0	46
cm	10/12/1999	A03	Metals	Arsenic	Yes	32.8	M	mg/kg	8.2	4	1	70
cm	10/12/1999	A07	Metals	Cadmium	Yes	2.4	BM	mg/kg	1.2	2	1	9.6
cm	10/12/1999	A09	Metals	Chromium	Yes	64.4	NJH	mg/kg	81	0.8	0	370
cm	10/12/1999	A11	Metals	Copper	Yes	28.1	NJH	mg/kg	34	0.83	0	270
cm	10/12/1999	A13	Metals	Lead	Yes	55.9	NJH	mg/kg	47	1.2	1	218

Depth_Unit	Sample_Date	Sort	Chemical_Group	Chemical	Detected	Result	Qual	Units	ERL	Value/ERL	ERL EF ≥ 1	ERM
cm	10/12/1999	A16	Metals	Mercury	Yes	310	M	ug/kg	150	2.1	1	710
cm	10/12/1999	A18	Metals	Nickel	Yes	29.5	M	mg/kg	21	1.4	1	52
cm	10/12/1999	A21	Metals	Silver	Yes	0.31	BM	mg/kg	1	0.31	0	3.7
cm	10/12/1999	A26	Metals	Zinc	Yes	155	M	mg/kg	150	1	1	410
cm	10/12/1999	C05	PAHs	2-Methylnaphthalene	No	49	UJ	ug/kg	70	0.7	0	670
cm	10/12/1999	C06	PAHs	Acenaphthene	Yes	10.1	M	ug/kg	16	0.63	0	500
cm	10/12/1999	C07	PAHs	Acenaphthylene	Yes	28	J	ug/kg	44	0.64	0	640
cm	10/12/1999	C08	PAHs	Anthracene	Yes	59	J	ug/kg	85	0.69	0	1100
cm	10/12/1999	C09	PAHs	Benzo(a)anthracene	Yes	97	M	ug/kg	261	0.37	0	1600
cm	10/12/1999	C10	PAHs	Benzo(a)pyrene	No	81.6	UJ	ug/kg	430	0.19	0	1600
cm	10/12/1999	C15	PAHs	Chrysene	Yes	134	J	ug/kg	384	0.35	0	2800
cm	10/12/1999	C16	PAHs	Dibenzo(a,h)anthracene	Yes	23.8	NJ	ug/kg	63	0.38	0	260
cm	10/12/1999	C18	PAHs	Fluoranthene	Yes	170	NJ	ug/kg	600	0.28	0	5100
cm	10/12/1999	C19	PAHs	Fluorene	Yes	46.6	M	ug/kg	19	2.5	1	540
cm	10/12/1999	C21	PAHs	Naphthalene	No	85.5	U	ug/kg	160	0.53	0	2100
cm	10/12/1999	C23	PAHs	Phenanthrene	No	97.7	U	ug/kg	240	0.41	0	1500
cm	10/12/1999	C24	PAHs	Pyrene	No	135	U	ug/kg	665	0.2	0	2600
cm	10/12/1999	C37	PAHs	Total PAHs	Yes	770	J	ug/kg	4000	0.19	0	45000
cm	10/12/1999	J05	OC Pesticides	4,4'-DDE	Yes	6.1	GJ	ug/kg	2.2	2.8	1	27
cm	10/14/1999	A03	Metals	Arsenic	Yes	15.2	M	mg/kg	8.2	1.9	1	70
cm	10/14/1999	A07	Metals	Cadmium	Yes	0.87	BM	mg/kg	1.2	0.73	0	9.6
cm	10/14/1999	A09	Metals	Chromium	Yes	72.1	M	mg/kg	81	0.89	0	370
cm	10/14/1999	A11	Metals	Copper	Yes	29.7	M	mg/kg	34	0.87	0	270
cm	10/14/1999	A13	Metals	Lead	Yes	45.9	EJ	mg/kg	47	0.98	0	218
cm	10/14/1999	A16	Metals	Mercury	Yes	300	M	ug/kg	150	2	1	710
cm	10/14/1999	A21	Metals	Silver	Yes	0.6	BM	mg/kg	1	0.6	0	3.7
cm	10/14/1999	C05	PAHs	2-Methylnaphthalene	No	26.3	UM	ug/kg	70	0.38	0	670
cm	10/14/1999	C06	PAHs	Acenaphthene	Yes	6.5	M	ug/kg	16	0.41	0	500
cm	10/14/1999	C07	PAHs	Acenaphthylene	Yes	18.1	J	ug/kg	44	0.41	0	640
cm	10/14/1999	C08	PAHs	Anthracene	Yes	31.1	M	ug/kg	85	0.37	0	1100
cm	10/14/1999	C09	PAHs	Benzo(a)anthracene	Yes	106	M	ug/kg	261	0.41	0	1600
cm	10/14/1999	C10	PAHs	Benzo(a)pyrene	Yes	81	M	ug/kg	430	0.19	0	1600
cm	10/14/1999	C15	PAHs	Chrysene	No	61.3	UJ	ug/kg	384	0.16	0	2800
cm	10/14/1999	C16	PAHs	Dibenzo(a,h)anthracene	Yes	24.1	NJ	ug/kg	63	0.38	0	260
cm	10/14/1999	C18	PAHs	Fluoranthene	Yes	125	NJ	ug/kg	600	0.21	0	5100
cm	10/14/1999	C19	PAHs	Fluorene	Yes	15.7	M	ug/kg	19	0.83	0	540
cm	10/14/1999	C21	PAHs	Naphthalene	No	42.6	UM	ug/kg	160	0.27	0	2100
cm	10/14/1999	C23	PAHs	Phenanthrene	No	59.7	UM	ug/kg	240	0.25	0	1500
cm	10/14/1999	C24	PAHs	Pyrene	No	103	UM	ug/kg	665	0.15	0	2600
cm	10/14/1999	C37	PAHs	Total PAHs	Yes	670	J	ug/kg	4000	0.17	0	45000
cm	10/14/1999	J05	OC Pesticides	4,4'-DDE	Yes	1.96	GM	ug/kg	2.2	0.89	0	27
cm	10/13/1999	A03	Metals	Arsenic	Yes	16.6	M	mg/kg	8.2	2	1	70
cm	10/13/1999	A07	Metals	Cadmium	Yes	0.83	BM	mg/kg	1.2	0.69	0	9.6
cm	10/13/1999	A09	Metals	Chromium	Yes	73.8	M	mg/kg	81	0.91	0	370
cm	10/13/1999	A11	Metals	Copper	Yes	36.8	M	mg/kg	34	1.1	1	270
cm	10/13/1999	A13	Metals	Lead	Yes	48.2	EJ	mg/kg	47	1	1	218
cm	10/13/1999	A16	Metals	Mercury	Yes	390	M	ug/kg	150	2.6	1	710
cm	10/13/1999	A21	Metals	Silver	Yes	0.82	BM	mg/kg	1	0.82	0	3.7
cm	10/13/1999	C05	PAHs	2-Methylnaphthalene	No	33.3	UM	ug/kg	70	0.48	0	670

Depth_Unit	Sample_Date	Sort	Chemical_Group	Chemical	Detected	Result	Qual	Units	ERL	Value/ERL	ERL EF ≥ 1	ERM
cm	10/13/1999	C06	PAHs	Acenaphthene	Yes	8.8	M	ug/kg	16	0.55	0	500
cm	10/13/1999	C07	PAHs	Acenaphthylene	Yes	20.6	J	ug/kg	44	0.47	0	640
cm	10/13/1999	C08	PAHs	Anthracene	Yes	37.5	M	ug/kg	85	0.44	0	1100
cm	10/13/1999	C09	PAHs	Benzo(a)anthracene	Yes	140	M	ug/kg	261	0.54	0	1600
cm	10/13/1999	C10	PAHs	Benzo(a)pyrene	Yes	108	M	ug/kg	430	0.25	0	1600
cm	10/13/1999	C15	PAHs	Chrysene	No	70.1	UJ	ug/kg	384	0.18	0	2800
cm	10/13/1999	C16	PAHs	Dibenzo(a,h)anthracene	Yes	33.4	J	ug/kg	63	0.53	0	260
cm	10/13/1999	C18	PAHs	Fluoranthene	Yes	142	NJ	ug/kg	600	0.24	0	5100
cm	10/13/1999	C19	PAHs	Fluorene	No	15.6	UM	ug/kg	19	0.82	0	540
cm	10/13/1999	C21	PAHs	Naphthalene	No	49.2	UM	ug/kg	160	0.31	0	2100
cm	10/13/1999	C23	PAHs	Phenanthrene	No	75.8	UM	ug/kg	240	0.32	0	1500
cm	10/13/1999	C24	PAHs	Pyrene	No	137	UM	ug/kg	665	0.21	0	2600
cm	10/13/1999	C37	PAHs	Total PAHs	Yes	950	J	ug/kg	4000	0.24	0	45000
cm	10/13/1999	J05	OC Pesticides	4,4'-DDE	Yes	1.56	GM	ug/kg	2.2	0.71	0	27
cm	8/11/1990	A07	Metals	Cadmium	Yes	0.203		mg/kg	1.2	0.17	0	9.6
cm	8/11/1990	A09	Metals	Chromium	Yes	56.7		mg/kg	81	0.7	0	370
cm	8/11/1990	A11	Metals	Copper	Yes	17.2		mg/kg	34	0.51	0	270
cm	8/11/1990	A13	Metals	Lead	Yes	31.2		mg/kg	47	0.66	0	218
cm	8/11/1990	A16	Metals	Mercury	Yes	160		ug/kg	150	1.1	1	710
cm	8/11/1990	A18	Metals	Nickel	Yes	19.3		mg/kg	21	0.92	0	52
cm	8/11/1990	A21	Metals	Silver	No	1	U	mg/kg	1	1	1	3.7
cm	8/11/1990	A26	Metals	Zinc	Yes	106		mg/kg	150	0.71	0	410
cm	8/11/1990	A07	Metals	Cadmium	Yes	0.46		mg/kg	1.2	0.38	0	9.6
cm	8/11/1990	A09	Metals	Chromium	Yes	90.8		mg/kg	81	1.1	1	370
cm	8/11/1990	A11	Metals	Copper	Yes	29.5		mg/kg	34	0.87	0	270
cm	8/11/1990	A13	Metals	Lead	Yes	26.8		mg/kg	47	0.57	0	218
cm	8/11/1990	A16	Metals	Mercury	Yes	161		ug/kg	150	1.1	1	710
cm	8/11/1990	A18	Metals	Nickel	Yes	30.9		mg/kg	21	1.5	1	52
cm	8/11/1990	A26	Metals	Zinc	Yes	156		mg/kg	150	1	1	410
cm	8/11/1990	C05	PAHs	2-Methylnaphthalene	No	6	U	ug/kg	70	0.086	0	670
cm	8/11/1990	C07	PAHs	Acenaphthylene	No	3	U	ug/kg	44	0.068	0	640
cm	8/11/1990	C09	PAHs	Benzo(a)anthracene	Yes	12		ug/kg	261	0.046	0	1600
cm	8/11/1990	C10	PAHs	Benzo(a)pyrene	No	9	U	ug/kg	430	0.021	0	1600
cm	8/11/1990	C18	PAHs	Fluoranthene	Yes	54		ug/kg	600	0.09	0	5100
cm	8/11/1990	C21	PAHs	Naphthalene	Yes	24		ug/kg	160	0.15	0	2100
cm	8/11/1990	C23	PAHs	Phenanthrene	Yes	21		ug/kg	240	0.088	0	1500
cm	8/11/1990	C24	PAHs	Pyrene	Yes	57		ug/kg	665	0.086	0	2600
cm	8/11/1990	J05	OC Pesticides	4,4'-DDE	Yes	1.56		ug/kg	2.2	0.71	0	27
cm	7/24/1991	A03	Metals	Arsenic	Yes	7.22		mg/kg	8.2	0.88	0	70
cm	7/24/1991	A07	Metals	Cadmium	Yes	0.344		mg/kg	1.2	0.29	0	9.6
cm	7/24/1991	A09	Metals	Chromium	Yes	45.9		mg/kg	81	0.57	0	370
cm	7/24/1991	A11	Metals	Copper	Yes	15.3		mg/kg	34	0.45	0	270
cm	7/24/1991	A13	Metals	Lead	Yes	38.6		mg/kg	47	0.82	0	218
cm	7/24/1991	A16	Metals	Mercury	Yes	166		ug/kg	150	1.1	1	710
cm	7/24/1991	A18	Metals	Nickel	Yes	15.9		mg/kg	21	0.76	0	52
cm	7/24/1991	A21	Metals	Silver	Yes	0.0814		mg/kg	1	0.081	0	3.7
cm	7/24/1991	A26	Metals	Zinc	Yes	68.3		mg/kg	150	0.46	0	410
cm	7/24/1991	C05	PAHs	2-Methylnaphthalene	Yes	21		ug/kg	70	0.3	0	670
cm	7/24/1991	C06	PAHs	Acenaphthene	No	5.5	U	ug/kg	16	0.34	0	500

Depth_Unit	Sample_Date	Sort	Chemical_Group	Chemical	Detected	Result	Qual	Units	ERL	Value/ERL	ERL EF ≥ 1	ERM
cm	7/24/1991	C07	PAHs	Acenaphthylene	No	3.88	U	ug/kg	44	0.088	0	640
cm	7/24/1991	C08	PAHs	Anthracene	Yes	17.2		ug/kg	85	0.2	0	1100
cm	7/24/1991	C09	PAHs	Benzo(a)anthracene	Yes	36.3		ug/kg	261	0.14	0	1600
cm	7/24/1991	C15	PAHs	Chrysene	Yes	50.5		ug/kg	384	0.13	0	2800
cm	7/24/1991	C18	PAHs	Fluoranthene	Yes	80.2		ug/kg	600	0.13	0	5100
cm	7/24/1991	C21	PAHs	Naphthalene	Yes	23.9		ug/kg	160	0.15	0	2100
cm	7/24/1991	C23	PAHs	Phenanthrene	Yes	41.3		ug/kg	240	0.17	0	1500
cm	7/24/1991	C24	PAHs	Pyrene	Yes	88.2		ug/kg	665	0.13	0	2600
cm	7/24/1991	A03	Metals	Arsenic	Yes	9.09		mg/kg	8.2	1.1	1	70
cm	7/24/1991	A07	Metals	Cadmium	Yes	0.218		mg/kg	1.2	0.18	0	9.6
cm	7/24/1991	A11	Metals	Copper	Yes	20.4		mg/kg	34	0.6	0	270
cm	7/24/1991	A16	Metals	Mercury	Yes	206		ug/kg	150	1.4	1	710
cm	7/24/1991	A18	Metals	Nickel	Yes	21.7		mg/kg	21	1	1	52
cm	7/24/1991	A21	Metals	Silver	Yes	0.249		mg/kg	1	0.25	0	3.7
cm	7/24/1991	A26	Metals	Zinc	Yes	91.2		mg/kg	150	0.61	0	410
cm	7/24/1991	C05	PAHs	2-Methylnaphthalene	Yes	19.7		ug/kg	70	0.28	0	670
cm	7/24/1991	C08	PAHs	Anthracene	Yes	25.7		ug/kg	85	0.3	0	1100
cm	7/24/1991	C09	PAHs	Benzo(a)anthracene	Yes	65		ug/kg	261	0.25	0	1600
cm	7/24/1991	C10	PAHs	Benzo(a)pyrene	Yes	69.6		ug/kg	430	0.16	0	1600
cm	7/24/1991	C18	PAHs	Fluoranthene	Yes	125		ug/kg	600	0.21	0	5100
cm	7/24/1991	C19	PAHs	Fluorene	Yes	18.5		ug/kg	19	0.97	0	540
cm	7/24/1991	C23	PAHs	Phenanthrene	Yes	62.5		ug/kg	240	0.26	0	1500
cm	7/24/1991	C24	PAHs	Pyrene	Yes	134		ug/kg	665	0.2	0	2600
cm	9/7/2000	A03	Metals	Arsenic	Yes	2	J	mg/kg	8.2	0.24	0	70
cm	9/7/2000	A07	Metals	Cadmium	Yes	0.07	J	mg/kg	1.2	0.058	0	9.6
cm	9/7/2000	A09	Metals	Chromium	Yes	31		mg/kg	81	0.38	0	370
cm	9/7/2000	A11	Metals	Copper	Yes	5	J	mg/kg	34	0.15	0	270
cm	9/7/2000	A13	Metals	Lead	Yes	11.3		mg/kg	47	0.24	0	218
cm	9/7/2000	A16	Metals	Mercury	Yes	20	J	ug/kg	150	0.13	0	710
cm	9/7/2000	A18	Metals	Nickel	Yes	10		mg/kg	21	0.48	0	52
cm	9/7/2000	A21	Metals	Silver	Yes	0.2	J	mg/kg	1	0.2	0	3.7
cm	9/7/2000	A26	Metals	Zinc	Yes	41		mg/kg	150	0.27	0	410
cm	9/7/2000	C05	PAHs	2-Methylnaphthalene	Yes	1.1	J	ug/kg	70	0.016	0	670
cm	9/7/2000	C06	PAHs	Acenaphthene	Yes	1.2		ug/kg	16	0.075	0	500
cm	9/7/2000	C07	PAHs	Acenaphthylene	Yes	13		ug/kg	44	0.3	0	640
cm	9/7/2000	C08	PAHs	Anthracene	Yes	29		ug/kg	85	0.34	0	1100
cm	9/7/2000	C09	PAHs	Benzo(a)anthracene	Yes	82		ug/kg	261	0.31	0	1600
cm	9/7/2000	C10	PAHs	Benzo(a)pyrene	Yes	81		ug/kg	430	0.19	0	1600
cm	9/7/2000	C15	PAHs	Chrysene	Yes	86		ug/kg	384	0.22	0	2800
cm	9/7/2000	C16	PAHs	Dibenzo(a,h)anthracene	Yes	11		ug/kg	63	0.17	0	260
cm	9/7/2000	C18	PAHs	Fluoranthene	Yes	200		ug/kg	600	0.33	0	5100
cm	9/7/2000	C19	PAHs	Fluorene	Yes	5.6		ug/kg	19	0.29	0	540
cm	9/7/2000	C21	PAHs	Naphthalene	Yes	1.8	J	ug/kg	160	0.011	0	2100
cm	9/7/2000	C24	PAHs	Pyrene	Yes	160		ug/kg	665	0.24	0	2600
cm	9/7/2000	C37	PAHs	Total PAHs	Yes	960		ug/kg	4000	0.24	0	45000
cm	9/7/2000	J05	OC Pesticides	4,4'-DDE	Yes	0.44	J	ug/kg	2.2	0.2	0	27
cm	9/7/2000	J43	OC Pesticides	Total DDx	Yes	0.88		ug/kg	1.6	0.55	0	46
cm	10/29/2003	A03	Metals	Arsenic	Yes	6.6		mg/kg	8.2	0.8	0	70
cm	10/29/2003	A07	Metals	Cadmium	Yes	0.95		mg/kg	1.2	0.79	0	9.6

Depth_Unit	Sample_Date	Sort	Chemical_Group	Chemical	Detected	Result	Qual	Units	ERL	Value/ERL	ERL EF ≥ 1	ERM
cm	10/29/2003	A09	Metals	Chromium	Yes	34.9		mg/kg	81	0.43	0	370
cm	10/29/2003	A11	Metals	Copper	Yes	7.3		mg/kg	34	0.21	0	270
cm	10/29/2003	A13	Metals	Lead	Yes	13.5		mg/kg	47	0.29	0	218
cm	10/29/2003	A16	Metals	Mercury	Yes	42		ug/kg	150	0.28	0	710
cm	10/29/2003	A18	Metals	Nickel	Yes	13.4		mg/kg	21	0.64	0	52
cm	10/29/2003	A21	Metals	Silver	Yes	0.14	CH-C	mg/kg	1	0.14	0	3.7
cm	10/29/2003	A26	Metals	Zinc	Yes	44.1		mg/kg	150	0.29	0	410
cm	10/29/2003	C05	PAHs	2-Methylnaphthalene	No	10	U	ug/kg	70	0.14	0	670
cm	10/29/2003	C06	PAHs	Acenaphthene	No	10	U	ug/kg	16	0.63	0	500
cm	10/29/2003	C07	PAHs	Acenaphthylene	No	10	U	ug/kg	44	0.23	0	640
cm	10/29/2003	C08	PAHs	Anthracene	No	10	U	ug/kg	85	0.12	0	1100
cm	10/29/2003	C09	PAHs	Benzo(a)anthracene	Yes	20		ug/kg	261	0.077	0	1600
cm	10/29/2003	C10	PAHs	Benzo(a)pyrene	Yes	16		ug/kg	430	0.037	0	1600
cm	10/29/2003	C15	PAHs	Chrysene	Yes	16		ug/kg	384	0.042	0	2800
cm	10/29/2003	C16	PAHs	Dibenzo(a,h)anthracene	No	10	U	ug/kg	63	0.16	0	260
cm	10/29/2003	C18	PAHs	Fluoranthene	Yes	37		ug/kg	600	0.062	0	5100
cm	10/29/2003	C19	PAHs	Fluorene	No	10	U	ug/kg	19	0.53	0	540
cm	10/29/2003	C21	PAHs	Naphthalene	No	10	U	ug/kg	160	0.063	0	2100
cm	10/29/2003	C24	PAHs	Pyrene	Yes	36		ug/kg	665	0.054	0	2600
cm	10/29/2003	C37	PAHs	Total PAHs	Yes	170		ug/kg	4000	0.043	0	45000
cm	10/29/2003	J05	OC Pesticides	4,4'-DDE	Yes	0.32	CH-C	ug/kg	2.2	0.15	0	27
cm	10/29/2003	J43	OC Pesticides	Total DDx	Yes	0.32	J	ug/kg	1.6	0.2	0	46
cm	8/27/2004	A03	Metals	Arsenic	Yes	10.9		mg/kg	8.2	1.3	1	70
cm	8/27/2004	A07	Metals	Cadmium	Yes	2.8		mg/kg	1.2	2.3	1	9.6
cm	8/27/2004	A09	Metals	Chromium	Yes	67.5		mg/kg	81	0.83	0	370
cm	8/27/2004	A11	Metals	Copper	Yes	17.5		mg/kg	34	0.51	0	270
cm	8/27/2004	A13	Metals	Lead	Yes	35.5		mg/kg	47	0.76	0	218
cm	8/27/2004	A16	Metals	Mercury	Yes	220		ug/kg	150	1.5	1	710
cm	8/27/2004	A18	Metals	Nickel	Yes	24.1		mg/kg	21	1.1	1	52
cm	8/27/2004	A21	Metals	Silver	Yes	0.63		mg/kg	1	0.63	0	3.7
cm	8/27/2004	A26	Metals	Zinc	Yes	103		mg/kg	150	0.69	0	410
cm	8/27/2004	C05	PAHs	2-Methylnaphthalene	No	10	U	ug/kg	70	0.14	0	670
cm	8/27/2004	C06	PAHs	Acenaphthene	No	10	U	ug/kg	16	0.63	0	500
cm	8/27/2004	C07	PAHs	Acenaphthylene	No	10	U	ug/kg	44	0.23	0	640
cm	8/27/2004	C08	PAHs	Anthracene	No	10	U	ug/kg	85	0.12	0	1100
cm	8/27/2004	C09	PAHs	Benzo(a)anthracene	Yes	20		ug/kg	261	0.077	0	1600
cm	8/27/2004	C10	PAHs	Benzo(a)pyrene	Yes	18		ug/kg	430	0.042	0	1600
cm	8/27/2004	C15	PAHs	Chrysene	Yes	19		ug/kg	384	0.049	0	2800
cm	8/27/2004	C16	PAHs	Dibenzo(a,h)anthracene	No	10	U	ug/kg	63	0.16	0	260
cm	8/27/2004	C18	PAHs	Fluoranthene	Yes	28		ug/kg	600	0.047	0	5100
cm	8/27/2004	C19	PAHs	Fluorene	No	10	U	ug/kg	19	0.53	0	540
cm	8/27/2004	C21	PAHs	Naphthalene	No	10	U	ug/kg	160	0.063	0	2100
cm	8/27/2004	C24	PAHs	Pyrene	Yes	25		ug/kg	665	0.038	0	2600
cm	8/27/2004	C37	PAHs	Total PAHs	Yes	160		ug/kg	4000	0.04	0	45000
cm	8/27/2004	J05	OC Pesticides	4,4'-DDE	Yes	1.1		ug/kg	2.2	0.5	0	27
cm	8/27/2004	J43	OC Pesticides	Total DDx	Yes	2.3		ug/kg	1.6	1.4	1	46
cm	7/9/2004	A03	Metals	Arsenic	Yes	16.4		mg/kg	8.2	2	1	70
cm	7/9/2004	A07	Metals	Cadmium	Yes	1.2		mg/kg	1.2	1	1	9.6
cm	7/9/2004	A09	Metals	Chromium	Yes	69.4		mg/kg	81	0.86	0	370

Depth_Unit	Sample_Date	Sort	Chemical_Group	Chemical	Detected	Result	Qual	Units	ERL	Value/ERL	ERL EF ≥ 1	ERM
cm	7/9/2004	A11	Metals	Copper	Yes	17.3		mg/kg	34	0.51	0	270
cm	7/9/2004	A13	Metals	Lead	Yes	40.9		mg/kg	47	0.87	0	218
cm	7/9/2004	A16	Metals	Mercury	Yes	180		ug/kg	150	1.2	1	710
cm	7/9/2004	A18	Metals	Nickel	Yes	26.1		mg/kg	21	1.2	1	52
cm	7/9/2004	A21	Metals	Silver	Yes	0.4		mg/kg	1	0.4	0	3.7
cm	7/9/2004	A26	Metals	Zinc	Yes	117		mg/kg	150	0.78	0	410
cm	7/9/2004	C05	PAHs	2-Methylnaphthalene	No	10	U	ug/kg	70	0.14	0	670
cm	7/9/2004	C06	PAHs	Acenaphthene	No	10	U	ug/kg	16	0.63	0	500
cm	7/9/2004	C07	PAHs	Acenaphthylene	No	10	U	ug/kg	44	0.23	0	640
cm	7/9/2004	C08	PAHs	Anthracene	No	10	U	ug/kg	85	0.12	0	1100
cm	7/9/2004	C09	PAHs	Benzo(a)anthracene	No	10	U	ug/kg	261	0.038	0	1600
cm	7/9/2004	C10	PAHs	Benzo(a)pyrene	No	10	U	ug/kg	430	0.023	0	1600
cm	7/9/2004	C15	PAHs	Chrysene	No	10	U	ug/kg	384	0.026	0	2800
cm	7/9/2004	C16	PAHs	Dibenzo(a,h)anthracene	No	10	U	ug/kg	63	0.16	0	260
cm	7/9/2004	C18	PAHs	Fluoranthene	Yes	11		ug/kg	600	0.018	0	5100
cm	7/9/2004	C19	PAHs	Fluorene	No	10	U	ug/kg	19	0.53	0	540
cm	7/9/2004	C21	PAHs	Naphthalene	No	10	U	ug/kg	160	0.063	0	2100
cm	7/9/2004	C24	PAHs	Pyrene	Yes	12		ug/kg	665	0.018	0	2600
cm	7/9/2004	C37	PAHs	Total PAHs	Yes	23		ug/kg	4000	0.0058	0	45000
cm	7/9/2004	J05	OC Pesticides	4,4'-DDE	No	0.21	U	ug/kg	2.2	0.095	0	27
cm	7/9/2004	J43	OC Pesticides	Total DDx	No	0.92	U	ug/kg	1.6	0.58	0	46
cm	9/13/2005	A03	Metals	Arsenic	Yes	12.7		mg/kg	8.2	1.5	1	70
cm	9/13/2005	A07	Metals	Cadmium	Yes	0.98		mg/kg	1.2	0.82	0	9.6
cm	9/13/2005	A09	Metals	Chromium	Yes	78.4		mg/kg	81	0.97	0	370
cm	9/13/2005	A11	Metals	Copper	Yes	26.7		mg/kg	34	0.79	0	270
cm	9/13/2005	A13	Metals	Lead	Yes	37.3		mg/kg	47	0.79	0	218
cm	9/13/2005	A16	Metals	Mercury	Yes	260		ug/kg	150	1.7	1	710
cm	9/13/2005	A18	Metals	Nickel	Yes	29.7		mg/kg	21	1.4	1	52
cm	9/13/2005	A21	Metals	Silver	Yes	0.5		mg/kg	1	0.5	0	3.7
cm	9/13/2005	A26	Metals	Zinc	Yes	108	CH-C	mg/kg	150	0.72	0	410
cm	9/13/2005	C05	PAHs	2-Methylnaphthalene	No	0.85	U	ug/kg	70	0.012	0	670
cm	9/13/2005	C06	PAHs	Acenaphthene	No	1.2	U	ug/kg	16	0.075	0	500
cm	9/13/2005	C07	PAHs	Acenaphthylene	No	0.6	U	ug/kg	44	0.014	0	640
cm	9/13/2005	C08	PAHs	Anthracene	No	0.6	U	ug/kg	85	0.0071	0	1100
cm	9/13/2005	C09	PAHs	Benzo(a)anthracene	Yes	12		ug/kg	261	0.046	0	1600
cm	9/13/2005	C10	PAHs	Benzo(a)pyrene	No	0.6	U	ug/kg	430	0.0014	0	1600
cm	9/13/2005	C15	PAHs	Chrysene	Yes	18		ug/kg	384	0.047	0	2800
cm	9/13/2005	C16	PAHs	Dibenzo(a,h)anthracene	No	1.9	U	ug/kg	63	0.03	0	260
cm	9/13/2005	C18	PAHs	Fluoranthene	Yes	32		ug/kg	600	0.053	0	5100
cm	9/13/2005	C19	PAHs	Fluorene	No	1.5	U	ug/kg	19	0.079	0	540
cm	9/13/2005	C21	PAHs	Naphthalene	No	0.6	U	ug/kg	160	0.0038	0	2100
cm	9/13/2005	C24	PAHs	Pyrene	Yes	32		ug/kg	665	0.048	0	2600
cm	9/13/2005	C37	PAHs	Total PAHs	Yes	94		ug/kg	4000	0.024	0	45000
cm	9/13/2005	J05	OC Pesticides	4,4'-DDE	No	0.27	U	ug/kg	2.2	0.12	0	27
cm	9/13/2005	J43	OC Pesticides	Total DDx	No	0.34	U	ug/kg	1.6	0.21	0	46
cm	8/8/2006	A03	Metals	Arsenic	Yes	7.58		mg/kg	8.2	0.92	0	70
cm	8/8/2006	A07	Metals	Cadmium	Yes	0.175		mg/kg	1.2	0.15	0	9.6
cm	8/8/2006	A09	Metals	Chromium	Yes	50.9		mg/kg	81	0.63	0	370
cm	8/8/2006	A11	Metals	Copper	Yes	14.2		mg/kg	34	0.42	0	270

Depth_Unit	Sample_Date	Sort	Chemical_Group	Chemical	Detected	Result	Qual	Units	ERL	Value/ERL	ERL EF ≥ 1	ERM
cm	8/8/2006	A13	Metals	Lead	Yes	20.9		mg/kg	47	0.44	0	218
cm	8/8/2006	A16	Metals	Mercury	Yes	157		ug/kg	150	1	1	710
cm	8/8/2006	A18	Metals	Nickel	Yes	17.1		mg/kg	21	0.81	0	52
cm	8/8/2006	A21	Metals	Silver	Yes	1.39		mg/kg	1	1.4	1	3.7
cm	8/8/2006	A26	Metals	Zinc	Yes	74.2		mg/kg	150	0.49	0	410
cm	8/8/2006	C05	PAHs	2-Methylnaphthalene	Yes	2.6		ug/kg	70	0.037	0	670
cm	8/8/2006	C06	PAHs	Acenaphthene	Yes	1.3		ug/kg	16	0.081	0	500
cm	8/8/2006	C07	PAHs	Acenaphthylene	Yes	2.9		ug/kg	44	0.066	0	640
cm	8/8/2006	C08	PAHs	Anthracene	Yes	6.4		ug/kg	85	0.075	0	1100
cm	8/8/2006	C09	PAHs	Benzo(a)anthracene	Yes	18.5		ug/kg	261	0.071	0	1600
cm	8/8/2006	C10	PAHs	Benzo(a)pyrene	Yes	21.1		ug/kg	430	0.049	0	1600
cm	8/8/2006	C15	PAHs	Chrysene	Yes	23.3		ug/kg	384	0.061	0	2800
cm	8/8/2006	C16	PAHs	Dibenzo(a,h)anthracene	Yes	4.8		ug/kg	63	0.076	0	260
cm	8/8/2006	C18	PAHs	Fluoranthene	Yes	32		ug/kg	600	0.053	0	5100
cm	8/8/2006	C19	PAHs	Fluorene	Yes	2.6		ug/kg	19	0.14	0	540
cm	8/8/2006	C21	PAHs	Naphthalene	Yes	2.7		ug/kg	160	0.017	0	2100
cm	8/8/2006	C24	PAHs	Pyrene	Yes	24.8		ug/kg	665	0.037	0	2600
cm	8/8/2006	C37	PAHs	Total PAHs	Yes	210		ug/kg	4000	0.053	0	45000
cm	8/8/2006	J05	OC Pesticides	4,4'-DDE	No	1	U	ug/kg	2.2	0.45	0	27
cm	8/8/2006	J43	OC Pesticides	Total DDx	No	1	U	ug/kg	1.6	0.63	0	46
cm	7/14/2006	A03	Metals	Arsenic	Yes	7.8	CH-C	mg/kg	8.2	0.95	0	70
cm	7/14/2006	A07	Metals	Cadmium	Yes	1.4	CH-C	mg/kg	1.2	1.2	1	9.6
cm	7/14/2006	A09	Metals	Chromium	Yes	49	CH-C	mg/kg	81	0.6	0	370
cm	7/14/2006	A11	Metals	Copper	Yes	11.6	CH-C	mg/kg	34	0.34	0	270
cm	7/14/2006	A13	Metals	Lead	Yes	28.4	CH-C	mg/kg	47	0.6	0	218
cm	7/14/2006	A16	Metals	Mercury	Yes	180		ug/kg	150	1.2	1	710
cm	7/14/2006	A18	Metals	Nickel	Yes	18.2	CH-C	mg/kg	21	0.87	0	52
cm	7/14/2006	A21	Metals	Silver	Yes	0.44	CH-C	mg/kg	1	0.44	0	3.7
cm	7/14/2006	A26	Metals	Zinc	Yes	71.1	CH-C	mg/kg	150	0.47	0	410
cm	7/14/2006	C05	PAHs	2-Methylnaphthalene	No	0.85	U	ug/kg	70	0.012	0	670
cm	7/14/2006	C06	PAHs	Acenaphthene	No	1.2	U	ug/kg	16	0.075	0	500
cm	7/14/2006	C07	PAHs	Acenaphthylene	No	0.6	U	ug/kg	44	0.014	0	640
cm	7/14/2006	C08	PAHs	Anthracene	Yes	8	CH-C	ug/kg	85	0.094	0	1100
cm	7/14/2006	C09	PAHs	Benzo(a)anthracene	Yes	22		ug/kg	261	0.084	0	1600
cm	7/14/2006	C10	PAHs	Benzo(a)pyrene	Yes	18		ug/kg	430	0.042	0	1600
cm	7/14/2006	C15	PAHs	Chrysene	Yes	22		ug/kg	384	0.057	0	2800
cm	7/14/2006	C16	PAHs	Dibenzo(a,h)anthracene	No	1.9	U	ug/kg	63	0.03	0	260
cm	7/14/2006	C18	PAHs	Fluoranthene	Yes	40		ug/kg	600	0.067	0	5100
cm	7/14/2006	C19	PAHs	Fluorene	No	1.5	U	ug/kg	19	0.079	0	540
cm	7/14/2006	C21	PAHs	Naphthalene	No	0.6	U	ug/kg	160	0.0038	0	2100
cm	7/14/2006	C24	PAHs	Pyrene	Yes	26		ug/kg	665	0.039	0	2600
cm	7/14/2006	C37	PAHs	Total PAHs	Yes	170	J	ug/kg	4000	0.043	0	45000
cm	7/14/2006	J05	OC Pesticides	4,4'-DDE	No	0.27	U	ug/kg	2.2	0.12	0	27
cm	7/14/2006	J43	OC Pesticides	Total DDx	Yes	0.88	J	ug/kg	1.6	0.55	0	46
cm	7/14/2006	A03	Metals	Arsenic	Yes	2.4	CH-C	mg/kg	8.2	0.29	0	70
cm	7/14/2006	A07	Metals	Cadmium	Yes	1.1	CH-C	mg/kg	1.2	0.92	0	9.6
cm	7/14/2006	A09	Metals	Chromium	Yes	24.3	CH-C	mg/kg	81	0.3	0	370
cm	7/14/2006	A11	Metals	Copper	Yes	1.1	CH-C	mg/kg	34	0.032	0	270
cm	7/14/2006	A13	Metals	Lead	Yes	12.6	CH-C	mg/kg	47	0.27	0	218

Depth_Unit	Sample_Date	Sort	Chemical_Group	Chemical	Detected	Result	Qual	Units	ERL	Value/ERL	ERL EF ≥ 1	ERM
cm	7/14/2006	A16	Metals	Mercury	Yes	13	CH-C	ug/kg	150	0.087	0	710
cm	7/14/2006	A18	Metals	Nickel	Yes	6.9	CH-C	mg/kg	21	0.33	0	52
cm	7/14/2006	A21	Metals	Silver	Yes	0.18	CH-C	mg/kg	1	0.18	0	3.7
cm	7/14/2006	A26	Metals	Zinc	Yes	32.3	CH-C	mg/kg	150	0.22	0	410
cm	7/14/2006	C05	PAHs	2-Methylnaphthalene	No	0.85	U	ug/kg	70	0.012	0	670
cm	7/14/2006	C06	PAHs	Acenaphthene	No	1.2	U	ug/kg	16	0.075	0	500
cm	7/14/2006	C07	PAHs	Acenaphthylene	No	0.6	U	ug/kg	44	0.014	0	640
cm	7/14/2006	C08	PAHs	Anthracene	No	0.6	U	ug/kg	85	0.0071	0	1100
cm	7/14/2006	C09	PAHs	Benzo(a)anthracene	No	1.1	U	ug/kg	261	0.0042	0	1600
cm	7/14/2006	C10	PAHs	Benzo(a)pyrene	No	0.6	U	ug/kg	430	0.0014	0	1600
cm	7/14/2006	C15	PAHs	Chrysene	No	0.6	U	ug/kg	384	0.0016	0	2800
cm	7/14/2006	C16	PAHs	Dibenzo(a,h)anthracene	No	1.9	U	ug/kg	63	0.03	0	260
cm	7/14/2006	C18	PAHs	Fluoranthene	No	0.85	U	ug/kg	600	0.0014	0	5100
cm	7/14/2006	C19	PAHs	Fluorene	No	1.5	U	ug/kg	19	0.079	0	540
cm	7/14/2006	C21	PAHs	Naphthalene	No	0.6	U	ug/kg	160	0.0038	0	2100
cm	7/14/2006	C24	PAHs	Pyrene	No	1.7	U	ug/kg	665	0.0026	0	2600
cm	7/14/2006	C37	PAHs	Total PAHs	No	2	U	ug/kg	4000	0.0005	0	45000
cm	7/14/2006	J05	OC Pesticides	4,4'-DDE	No	0.27	U	ug/kg	2.2	0.12	0	27
cm	7/14/2006	J43	OC Pesticides	Total DDx	No	0.34	U	ug/kg	1.6	0.21	0	46
cm	9/7/2000	A03	Metals	Arsenic	Yes	10		mg/kg	8.2	1.2	1	70
cm	9/7/2000	A07	Metals	Cadmium	Yes	0.29	J	mg/kg	1.2	0.24	0	9.6
cm	9/7/2000	A09	Metals	Chromium	Yes	73		mg/kg	81	0.9	0	370
cm	9/7/2000	A11	Metals	Copper	Yes	20		mg/kg	34	0.59	0	270
cm	9/7/2000	A13	Metals	Lead	Yes	28.7		mg/kg	47	0.61	0	218
cm	9/7/2000	A16	Metals	Mercury	Yes	170		ug/kg	150	1.1	1	710
cm	9/7/2000	A18	Metals	Nickel	Yes	26		mg/kg	21	1.2	1	52
cm	9/7/2000	A21	Metals	Silver	Yes	0.8		mg/kg	1	0.8	0	3.7
cm	9/7/2000	A26	Metals	Zinc	Yes	111		mg/kg	150	0.74	0	410
cm	9/7/2000	C05	PAHs	2-Methylnaphthalene	Yes	6		ug/kg	70	0.086	0	670
cm	9/7/2000	C06	PAHs	Acenaphthene	Yes	2		ug/kg	16	0.13	0	500
cm	9/7/2000	C07	PAHs	Acenaphthylene	Yes	7		ug/kg	44	0.16	0	640
cm	9/7/2000	C08	PAHs	Anthracene	Yes	16		ug/kg	85	0.19	0	1100
cm	9/7/2000	C09	PAHs	Benzo(a)anthracene	Yes	43		ug/kg	261	0.16	0	1600
cm	9/7/2000	C10	PAHs	Benzo(a)pyrene	Yes	48		ug/kg	430	0.11	0	1600
cm	9/7/2000	C15	PAHs	Chrysene	Yes	48		ug/kg	384	0.13	0	2800
cm	9/7/2000	C16	PAHs	Dibenzo(a,h)anthracene	Yes	7.2		ug/kg	63	0.11	0	260
cm	9/7/2000	C18	PAHs	Fluoranthene	Yes	77		ug/kg	600	0.13	0	5100
cm	9/7/2000	C19	PAHs	Fluorene	Yes	4.4		ug/kg	19	0.23	0	540
cm	9/7/2000	C21	PAHs	Naphthalene	Yes	7.9		ug/kg	160	0.049	0	2100
cm	9/7/2000	C24	PAHs	Pyrene	Yes	81		ug/kg	665	0.12	0	2600
cm	9/7/2000	C37	PAHs	Total PAHs	Yes	510		ug/kg	4000	0.13	0	45000
cm	9/7/2000	J05	OC Pesticides	4,4'-DDE	Yes	1.8		ug/kg	2.2	0.82	0	27
cm	9/7/2000	J43	OC Pesticides	Total DDx	Yes	3		ug/kg	1.6	1.9	1	46
cm	8/8/2001	A03	Metals	Arsenic	No	1	U	mg/kg	8.2	0.12	0	70
cm	8/8/2001	A07	Metals	Cadmium	No	0.02	U	mg/kg	1.2	0.017	0	9.6
cm	8/8/2001	A09	Metals	Chromium	Yes	2		mg/kg	81	0.025	0	370
cm	8/8/2001	A11	Metals	Copper	Yes	1	J	mg/kg	34	0.029	0	270
cm	8/8/2001	A13	Metals	Lead	Yes	2.4		mg/kg	47	0.051	0	218
cm	8/8/2001	A16	Metals	Mercury	No	20	U	ug/kg	150	0.13	0	710

Depth_Unit	Sample_Date	Sort	Chemical_Group	Chemical	Detected	Result	Qual	Units	ERL	Value/ERL	ERL EF ≥ 1	ERM
cm	8/8/2001	A18	Metals	Nickel	Yes	1	J	mg/kg	21	0.048	0	52
cm	8/8/2001	A21	Metals	Silver	No	0.1	U	mg/kg	1	0.1	0	3.7
cm	8/8/2001	A26	Metals	Zinc	Yes	5		mg/kg	150	0.033	0	410
cm	8/8/2001	C05	PAHs	2-Methylnaphthalene	Yes	0.21	J	ug/kg	70	0.003	0	670
cm	8/8/2001	C06	PAHs	Acenaphthene	Yes	0.042	J	ug/kg	16	0.0026	0	500
cm	8/8/2001	C07	PAHs	Acenaphthylene	Yes	0.04	J	ug/kg	44	0.00091	0	640
cm	8/8/2001	C08	PAHs	Anthracene	Yes	0.049	J	ug/kg	85	0.00058	0	1100
cm	8/8/2001	C09	PAHs	Benzo(a)anthracene	No	0.69	U	ug/kg	261	0.0026	0	1600
cm	8/8/2001	C10	PAHs	Benzo(a)pyrene	Yes	0.1	J	ug/kg	430	0.00023	0	1600
cm	8/8/2001	C15	PAHs	Chrysene	No	0.56	U	ug/kg	384	0.0015	0	2800
cm	8/8/2001	C16	PAHs	Dibenzo(a,h)anthracene	No	0.7	U	ug/kg	63	0.011	0	260
cm	8/8/2001	C18	PAHs	Fluoranthene	Yes	0.28	J	ug/kg	600	0.00047	0	5100
cm	8/8/2001	C19	PAHs	Fluorene	Yes	0.082	J	ug/kg	19	0.0043	0	540
cm	8/8/2001	C21	PAHs	Naphthalene	Yes	0.37	J	ug/kg	160	0.0023	0	2100
cm	8/8/2001	C24	PAHs	Pyrene	Yes	0.21	J	ug/kg	665	0.00032	0	2600
cm	8/8/2001	C37	PAHs	Total PAHs	Yes	1.7		ug/kg	4000	0.00043	0	45000
cm	8/8/2001	J05	OC Pesticides	4,4'-DDE	Yes	0.007	J	ug/kg	2.2	0.0032	0	27
cm	8/8/2001	J43	OC Pesticides	Total DDx	Yes	0.031		ug/kg	1.6	0.019	0	46
cm	7/19/2001	A03	Metals	Arsenic	Yes	17		mg/kg	8.2	2.1	1	70
cm	7/19/2001	A07	Metals	Cadmium	Yes	0.2		mg/kg	1.2	0.17	0	9.6
cm	7/19/2001	A09	Metals	Chromium	Yes	93		mg/kg	81	1.1	1	370
cm	7/19/2001	A11	Metals	Copper	Yes	16		mg/kg	34	0.47	0	270
cm	7/19/2001	A13	Metals	Lead	Yes	14		mg/kg	47	0.3	0	218
cm	7/19/2001	A16	Metals	Mercury	Yes	40		ug/kg	150	0.27	0	710
cm	7/19/2001	A18	Metals	Nickel	Yes	36		mg/kg	21	1.7	1	52
cm	7/19/2001	A21	Metals	Silver	Yes	0.4		mg/kg	1	0.4	0	3.7
cm	7/19/2001	A26	Metals	Zinc	Yes	103		mg/kg	150	0.69	0	410
cm	7/19/2001	C05	PAHs	2-Methylnaphthalene	Yes	0.5	J	ug/kg	70	0.0071	0	670
cm	7/19/2001	C06	PAHs	Acenaphthene	Yes	0.22	J	ug/kg	16	0.014	0	500
cm	7/19/2001	C07	PAHs	Acenaphthylene	Yes	0.23	J	ug/kg	44	0.0052	0	640
cm	7/19/2001	C08	PAHs	Anthracene	Yes	0.69	J	ug/kg	85	0.0081	0	1100
cm	7/19/2001	C09	PAHs	Benzo(a)anthracene	Yes	1.5		ug/kg	261	0.0057	0	1600
cm	7/19/2001	C10	PAHs	Benzo(a)pyrene	Yes	0.94	J	ug/kg	430	0.0022	0	1600
cm	7/19/2001	C15	PAHs	Chrysene	Yes	1.9		ug/kg	384	0.0049	0	2800
cm	7/19/2001	C16	PAHs	Dibenzo(a,h)anthracene	Yes	0.17	J	ug/kg	63	0.0027	0	260
cm	7/19/2001	C18	PAHs	Fluoranthene	Yes	3.8		ug/kg	600	0.0063	0	5100
cm	7/19/2001	C19	PAHs	Fluorene	Yes	1.5		ug/kg	19	0.079	0	540
cm	7/19/2001	C21	PAHs	Naphthalene	Yes	1.2	J	ug/kg	160	0.0075	0	2100
cm	7/19/2001	C24	PAHs	Pyrene	Yes	3.4		ug/kg	665	0.0051	0	2600
cm	7/19/2001	C37	PAHs	Total PAHs	Yes	21		ug/kg	4000	0.0053	0	45000
cm	7/19/2001	J05	OC Pesticides	4,4'-DDE	Yes	0.099	J	ug/kg	2.2	0.045	0	27
cm	7/19/2001	J43	OC Pesticides	Total DDx	Yes	0.37		ug/kg	1.6	0.23	0	46
cm	10/11/2001	A03	Metals	Arsenic	Yes	10		mg/kg	8.2	1.2	1	70
cm	10/11/2001	A07	Metals	Cadmium	Yes	0.3		mg/kg	1.2	0.25	0	9.6
cm	10/11/2001	A09	Metals	Chromium	Yes	77		mg/kg	81	0.95	0	370
cm	10/11/2001	A11	Metals	Copper	Yes	23		mg/kg	34	0.68	0	270
cm	10/11/2001	A13	Metals	Lead	Yes	37.2		mg/kg	47	0.79	0	218
cm	10/11/2001	A16	Metals	Mercury	Yes	240		ug/kg	150	1.6	1	710
cm	10/11/2001	A18	Metals	Nickel	Yes	27		mg/kg	21	1.3	1	52

Depth_Unit	Sample_Date	Sort	Chemical_Group	Chemical	Detected	Result	Qual	Units	ERL	Value/ERL	ERL EF ≥ 1	ERM
cm	10/11/2001	A21	Metals	Silver	Yes	0.8		mg/kg	1	0.8	0	3.7
cm	10/11/2001	A26	Metals	Zinc	Yes	115		mg/kg	150	0.77	0	410
cm	10/11/2001	C05	PAHs	2-Methylnaphthalene	Yes	5.2		ug/kg	70	0.074	0	670
cm	10/11/2001	C06	PAHs	Acenaphthene	Yes	2.5		ug/kg	16	0.16	0	500
cm	10/11/2001	C07	PAHs	Acenaphthylene	Yes	10		ug/kg	44	0.23	0	640
cm	10/11/2001	C08	PAHs	Anthracene	Yes	17		ug/kg	85	0.2	0	1100
cm	10/11/2001	C09	PAHs	Benzo(a)anthracene	Yes	51		ug/kg	261	0.2	0	1600
cm	10/11/2001	C10	PAHs	Benzo(a)pyrene	Yes	60		ug/kg	430	0.14	0	1600
cm	10/11/2001	C15	PAHs	Chrysene	Yes	52		ug/kg	384	0.14	0	2800
cm	10/11/2001	C16	PAHs	Dibenzo(a,h)anthracene	Yes	8		ug/kg	63	0.13	0	260
cm	10/11/2001	C18	PAHs	Fluoranthene	Yes	83		ug/kg	600	0.14	0	5100
cm	10/11/2001	C19	PAHs	Fluorene	Yes	5		ug/kg	19	0.26	0	540
cm	10/11/2001	C21	PAHs	Naphthalene	Yes	7.3		ug/kg	160	0.046	0	2100
cm	10/11/2001	C24	PAHs	Pyrene	Yes	85		ug/kg	665	0.13	0	2600
cm	10/11/2001	C37	PAHs	Total PAHs	Yes	570		ug/kg	4000	0.14	0	45000
cm	10/11/2001	J05	OC Pesticides	4,4'-DDE	Yes	2.2		ug/kg	2.2	1	1	27
cm	10/11/2001	J43	OC Pesticides	Total DDx	Yes	4.9		ug/kg	1.6	3.1	1	46
cm	10/12/2001	A03	Metals	Arsenic	Yes	12		mg/kg	8.2	1.5	1	70
cm	10/12/2001	A07	Metals	Cadmium	Yes	0.1		mg/kg	1.2	0.083	0	9.6
cm	10/12/2001	A09	Metals	Chromium	Yes	82		mg/kg	81	1	1	370
cm	10/12/2001	A11	Metals	Copper	Yes	15		mg/kg	34	0.44	0	270
cm	10/12/2001	A13	Metals	Lead	Yes	19.5		mg/kg	47	0.41	0	218
cm	10/12/2001	A16	Metals	Mercury	Yes	50		ug/kg	150	0.33	0	710
cm	10/12/2001	A18	Metals	Nickel	Yes	32		mg/kg	21	1.5	1	52
cm	10/12/2001	A21	Metals	Silver	Yes	0.3		mg/kg	1	0.3	0	3.7
cm	10/12/2001	A26	Metals	Zinc	Yes	78		mg/kg	150	0.52	0	410
cm	10/12/2001	C05	PAHs	2-Methylnaphthalene	Yes	29		ug/kg	70	0.41	0	670
cm	10/12/2001	C06	PAHs	Acenaphthene	Yes	3.7		ug/kg	16	0.23	0	500
cm	10/12/2001	C07	PAHs	Acenaphthylene	Yes	1.6	J	ug/kg	44	0.036	0	640
cm	10/12/2001	C08	PAHs	Anthracene	Yes	2.4		ug/kg	85	0.028	0	1100
cm	10/12/2001	C09	PAHs	Benzo(a)anthracene	Yes	4.2		ug/kg	261	0.016	0	1600
cm	10/12/2001	C10	PAHs	Benzo(a)pyrene	Yes	3.2	J	ug/kg	430	0.0074	0	1600
cm	10/12/2001	C15	PAHs	Chrysene	Yes	5		ug/kg	384	0.013	0	2800
cm	10/12/2001	C16	PAHs	Dibenzo(a,h)anthracene	Yes	0.61	J	ug/kg	63	0.0097	0	260
cm	10/12/2001	C18	PAHs	Fluoranthene	Yes	13		ug/kg	600	0.022	0	5100
cm	10/12/2001	C19	PAHs	Fluorene	Yes	3.6		ug/kg	19	0.19	0	540
cm	10/12/2001	C21	PAHs	Naphthalene	Yes	68		ug/kg	160	0.43	0	2100
cm	10/12/2001	C24	PAHs	Pyrene	Yes	9.6		ug/kg	665	0.014	0	2600
cm	10/12/2001	C37	PAHs	Total PAHs	Yes	130		ug/kg	4000	0.033	0	45000
cm	10/12/2001	J05	OC Pesticides	4,4'-DDE	Yes	0.46	J	ug/kg	2.2	0.21	0	27
cm	10/12/2001	J43	OC Pesticides	Total DDx	Yes	0.46		ug/kg	1.6	0.29	0	46
cm	10/18/2001	A03	Metals	Arsenic	Yes	6		mg/kg	8.2	0.73	0	70
cm	10/18/2001	A07	Metals	Cadmium	Yes	0.05		mg/kg	1.2	0.042	0	9.6
cm	10/18/2001	A09	Metals	Chromium	Yes	31		mg/kg	81	0.38	0	370
cm	10/18/2001	A11	Metals	Copper	Yes	8		mg/kg	34	0.24	0	270
cm	10/18/2001	A13	Metals	Lead	Yes	19.4		mg/kg	47	0.41	0	218
cm	10/18/2001	A16	Metals	Mercury	Yes	70		ug/kg	150	0.47	0	710
cm	10/18/2001	A18	Metals	Nickel	Yes	12		mg/kg	21	0.57	0	52
cm	10/18/2001	A21	Metals	Silver	Yes	0.3		mg/kg	1	0.3	0	3.7

Depth_Unit	Sample_Date	Sort	Chemical_Group	Chemical	Detected	Result	Qual	Units	ERL	Value/ERL	ERL EF ≥ 1	ERM
cm	10/18/2001	A26	Metals	Zinc	Yes	60		mg/kg	150	0.4	0	410
cm	10/18/2001	C05	PAHs	2-Methylnaphthalene	Yes	9.9		ug/kg	70	0.14	0	670
cm	10/18/2001	C06	PAHs	Acenaphthene	Yes	1.2		ug/kg	16	0.075	0	500
cm	10/18/2001	C07	PAHs	Acenaphthylene	Yes	4.1		ug/kg	44	0.093	0	640
cm	10/18/2001	C08	PAHs	Anthracene	Yes	5.9		ug/kg	85	0.069	0	1100
cm	10/18/2001	C09	PAHs	Benzo(a)anthracene	Yes	16		ug/kg	261	0.061	0	1600
cm	10/18/2001	C10	PAHs	Benzo(a)pyrene	Yes	19		ug/kg	430	0.044	0	1600
cm	10/18/2001	C15	PAHs	Chrysene	Yes	23		ug/kg	384	0.06	0	2800
cm	10/18/2001	C16	PAHs	Dibenzo(a,h)anthracene	Yes	3.1		ug/kg	63	0.049	0	260
cm	10/18/2001	C18	PAHs	Fluoranthene	Yes	45		ug/kg	600	0.075	0	5100
cm	10/18/2001	C19	PAHs	Fluorene	Yes	2.3		ug/kg	19	0.12	0	540
cm	10/18/2001	C21	PAHs	Naphthalene	Yes	22		ug/kg	160	0.14	0	2100
cm	10/18/2001	C24	PAHs	Pyrene	Yes	43		ug/kg	665	0.065	0	2600
cm	10/18/2001	C37	PAHs	Total PAHs	Yes	250		ug/kg	4000	0.063	0	45000
cm	10/18/2001	J05	OC Pesticides	4,4'-DDE	Yes	1.1		ug/kg	2.2	0.5	0	27
cm	10/18/2001	J43	OC Pesticides	Total DDx	Yes	2.6		ug/kg	1.6	1.6	1	46
cm	9/23/2002	A03	Metals	Arsenic	Yes	3	J	mg/kg	8.2	0.37	0	70
cm	9/23/2002	A07	Metals	Cadmium	Yes	2.4		mg/kg	1.2	2	1	9.6
cm	9/23/2002	A09	Metals	Chromium	Yes	33.5		mg/kg	81	0.41	0	370
cm	9/23/2002	A11	Metals	Copper	Yes	5.6		mg/kg	34	0.16	0	270
cm	9/23/2002	A13	Metals	Lead	Yes	15.6		mg/kg	47	0.33	0	218
cm	9/23/2002	A16	Metals	Mercury	Yes	40		ug/kg	150	0.27	0	710
cm	9/23/2002	A18	Metals	Nickel	Yes	11		mg/kg	21	0.52	0	52
cm	9/23/2002	A21	Metals	Silver	Yes	0.24	J	mg/kg	1	0.24	0	3.7
cm	9/23/2002	A26	Metals	Zinc	Yes	38.1		mg/kg	150	0.25	0	410
cm	9/23/2002	C05	PAHs	2-Methylnaphthalene	No	0.85	U	ug/kg	70	0.012	0	670
cm	9/23/2002	C06	PAHs	Acenaphthene	No	1.2	U	ug/kg	16	0.075	0	500
cm	9/23/2002	C07	PAHs	Acenaphthylene	No	0.6	U	ug/kg	44	0.014	0	640
cm	9/23/2002	C08	PAHs	Anthracene	No	0.6	U	ug/kg	85	0.0071	0	1100
cm	9/23/2002	C09	PAHs	Benzo(a)anthracene	No	1.1	U	ug/kg	261	0.0042	0	1600
cm	9/23/2002	C10	PAHs	Benzo(a)pyrene	No	0.6	U	ug/kg	430	0.0014	0	1600
cm	9/23/2002	C15	PAHs	Chrysene	No	0.6	U	ug/kg	384	0.0016	0	2800
cm	9/23/2002	C16	PAHs	Dibenzo(a,h)anthracene	No	1.9	U	ug/kg	63	0.03	0	260
cm	9/23/2002	C18	PAHs	Fluoranthene	Yes	10		ug/kg	600	0.017	0	5100
cm	9/23/2002	C19	PAHs	Fluorene	No	1.5	U	ug/kg	19	0.079	0	540
cm	9/23/2002	C21	PAHs	Naphthalene	No	0.6	U	ug/kg	160	0.0038	0	2100
cm	9/23/2002	C24	PAHs	Pyrene	No	1.7	U	ug/kg	665	0.0026	0	2600
cm	9/23/2002	C37	PAHs	Total PAHs	Yes	10		ug/kg	4000	0.0025	0	45000
cm	9/23/2002	J05	OC Pesticides	4,4'-DDE	No	0.21	U	ug/kg	2.2	0.095	0	27
cm	9/23/2002	J43	OC Pesticides	Total DDx	No	0.92		ug/kg	1.6	0.58	0	46
cm	9/3/2002	A03	Metals	Arsenic	Yes	13.9		mg/kg	8.2	1.7	1	70
cm	9/3/2002	A07	Metals	Cadmium	Yes	1.6		mg/kg	1.2	1.3	1	9.6
cm	9/3/2002	A09	Metals	Chromium	Yes	65.9		mg/kg	81	0.81	0	370
cm	9/3/2002	A11	Metals	Copper	Yes	16.7		mg/kg	34	0.49	0	270
cm	9/3/2002	A13	Metals	Lead	Yes	42.8		mg/kg	47	0.91	0	218
cm	9/3/2002	A16	Metals	Mercury	Yes	150		ug/kg	150	1	1	710
cm	9/3/2002	A18	Metals	Nickel	Yes	24.8		mg/kg	21	1.2	1	52
cm	9/3/2002	A21	Metals	Silver	Yes	0.41		mg/kg	1	0.41	0	3.7
cm	9/3/2002	A26	Metals	Zinc	Yes	115		mg/kg	150	0.77	0	410

Depth_Unit	Sample_Date	Sort	Chemical_Group	Chemical	Detected	Result	Qual	Units	ERL	Value/ERL	ERL EF ≥ 1	ERM
cm	9/3/2002	C05	PAHs	2-Methylnaphthalene	No	0.85	U	ug/kg	70	0.012	0	670
cm	9/3/2002	C06	PAHs	Acenaphthene	No	1.2	U	ug/kg	16	0.075	0	500
cm	9/3/2002	C07	PAHs	Acenaphthylene	Yes	15		ug/kg	44	0.34	0	640
cm	9/3/2002	C08	PAHs	Anthracene	Yes	21		ug/kg	85	0.25	0	1100
cm	9/3/2002	C09	PAHs	Benzo(a)anthracene	Yes	47		ug/kg	261	0.18	0	1600
cm	9/3/2002	C10	PAHs	Benzo(a)pyrene	Yes	43		ug/kg	430	0.1	0	1600
cm	9/3/2002	C15	PAHs	Chrysene	Yes	63		ug/kg	384	0.16	0	2800
cm	9/3/2002	C16	PAHs	Dibenzo(a,h)anthracene	No	1.9	U	ug/kg	63	0.03	0	260
cm	9/3/2002	C18	PAHs	Fluoranthene	Yes	78		ug/kg	600	0.13	0	5100
cm	9/3/2002	C19	PAHs	Fluorene	No	1.5	U	ug/kg	19	0.079	0	540
cm	9/3/2002	C21	PAHs	Naphthalene	No	0.6	U	ug/kg	160	0.0038	0	2100
cm	9/3/2002	C24	PAHs	Pyrene	Yes	100		ug/kg	665	0.15	0	2600
cm	9/3/2002	C37	PAHs	Total PAHs	Yes	520		ug/kg	4000	0.13	0	45000
cm	9/3/2002	J05	OC Pesticides	4,4'-DDE	Yes	1.1	J	ug/kg	2.2	0.5	0	27
cm	9/3/2002	J43	OC Pesticides	Total DDx	Yes	2.7		ug/kg	1.6	1.7	1	46
cm	8/15/2002	A03	Metals	Arsenic	Yes	7.5		mg/kg	8.2	0.91	0	70
cm	8/15/2002	A07	Metals	Cadmium	Yes	0.2		mg/kg	1.2	0.17	0	9.6
cm	8/15/2002	A16	Metals	Mercury	Yes	110		ug/kg	150	0.73	0	710
cm	8/15/2002	A21	Metals	Silver	Yes	0.27		mg/kg	1	0.27	0	3.7
cm	8/15/2002	C05	PAHs	2-Methylnaphthalene	No	7	U	ug/kg	70	0.1	0	670
cm	8/15/2002	C06	PAHs	Acenaphthene	No	7	U	ug/kg	16	0.44	0	500
cm	8/15/2002	C07	PAHs	Acenaphthylene	No	7	U	ug/kg	44	0.16	0	640
cm	8/15/2002	C08	PAHs	Anthracene	No	7	U	ug/kg	85	0.082	0	1100
cm	8/15/2002	C09	PAHs	Benzo(a)anthracene	No	7	U	ug/kg	261	0.027	0	1600
cm	8/15/2002	C10	PAHs	Benzo(a)pyrene	No	7	U	ug/kg	430	0.016	0	1600
cm	8/15/2002	C15	PAHs	Chrysene	No	7	U	ug/kg	384	0.018	0	2800
cm	8/15/2002	C16	PAHs	Dibenzo(a,h)anthracene	No	7	U	ug/kg	63	0.11	0	260
cm	8/15/2002	C18	PAHs	Fluoranthene	Yes	20		ug/kg	600	0.033	0	5100
cm	8/15/2002	C19	PAHs	Fluorene	No	7	U	ug/kg	19	0.37	0	540
cm	8/15/2002	C21	PAHs	Naphthalene	No	7	U	ug/kg	160	0.044	0	2100
cm	8/15/2002	C24	PAHs	Pyrene	Yes	14		ug/kg	665	0.021	0	2600
cm	8/15/2002	C37	PAHs	Total PAHs	Yes	48		ug/kg	4000	0.012	0	45000
cm	8/15/2002	J05	OC Pesticides	4,4'-DDE	No	0.17	U	ug/kg	2.2	0.077	0	27
cm	8/15/2002	J43	OC Pesticides	Total DDx	No	0.17		ug/kg	1.6	0.11	0	46
cm	8/5/2010	A03	Metals	Arsenic	Yes	0.4		mg/kg	8.2	0.049	0	70
cm	8/5/2010	A07	Metals	Cadmium	No	0.025	U	mg/kg	1.2	0.021	0	9.6
cm	8/5/2010	A09	Metals	Chromium	Yes	7.1		mg/kg	81	0.088	0	370
cm	8/5/2010	A11	Metals	Copper	Yes	1.6		mg/kg	34	0.047	0	270
cm	8/5/2010	A13	Metals	Lead	Yes	4.6		mg/kg	47	0.098	0	218
cm	8/5/2010	A16	Metals	Mercury	No	10	U	ug/kg	150	0.067	0	710
cm	8/5/2010	A18	Metals	Nickel	Yes	1.7		mg/kg	21	0.081	0	52
cm	8/5/2010	A21	Metals	Silver	No	0.025	U	mg/kg	1	0.025	0	3.7
cm	8/5/2010	A26	Metals	Zinc	Yes	5.9		mg/kg	150	0.039	0	410
cm	8/5/2010	C05	PAHs	2-Methylnaphthalene	No	1	U	ug/kg	70	0.014	0	670
cm	8/5/2010	C06	PAHs	Acenaphthene	No	1	U	ug/kg	16	0.063	0	500
cm	8/5/2010	C07	PAHs	Acenaphthylene	No	1	U	ug/kg	44	0.023	0	640
cm	8/5/2010	C08	PAHs	Anthracene	No	1	U	ug/kg	85	0.012	0	1100
cm	8/5/2010	C09	PAHs	Benzo(a)anthracene	No	1	U	ug/kg	261	0.0038	0	1600
cm	8/5/2010	C10	PAHs	Benzo(a)pyrene	No	1	U	ug/kg	430	0.0023	0	1600

Depth_Unit	Sample_Date	Sort	Chemical_Group	Chemical	Detected	Result	Qual	Units	ERL	Value/ERL	ERL EF ≥ 1	ERM
cm	8/5/2010	C15	PAHs	Chrysene	No	1	U	ug/kg	384	0.0026	0	2800
cm	8/5/2010	C16	PAHs	Dibenzo(a,h)anthracene	No	1	U	ug/kg	63	0.016	0	260
cm	8/5/2010	C18	PAHs	Fluoranthene	No	1	U	ug/kg	600	0.0017	0	5100
cm	8/5/2010	C19	PAHs	Fluorene	No	1	U	ug/kg	19	0.053	0	540
cm	8/5/2010	C21	PAHs	Naphthalene	No	1	U	ug/kg	160	0.0063	0	2100
cm	8/5/2010	C23	PAHs	Phenanthrene	No	1	U	ug/kg	240	0.0042	0	1500
cm	8/5/2010	C24	PAHs	Pyrene	No	1	U	ug/kg	665	0.0015	0	2600
cm	8/5/2010	C37	PAHs	Total PAHs	No	1	U	ug/kg	4000	0.00025	0	45000
cm	8/5/2010	J05	OC Pesticides	4,4'-DDE	No	1	U	ug/kg	2.2	0.45	0	27
cm	8/5/2010	J43	OC Pesticides	Total DDx	No	1	U	ug/kg	1.6	0.63	0	46

e conditions for SQT analyses in the BERA.
-low and effect range-high sediment quality
that are contaminated.

Value/ERM	ERM EF ≥ 1
0.016	0
0.01	0
0.011	0
0.007	0
0.024	0
0.038	0
0.033	0
0.057	0
0.03	0
0.006	0
0.002	0
0.0016	0
0.00091	0
0.0013	0
0.0019	0
0.00071	0
0.023	0
0.00078	0
0.0019	0
0.0033	0
0.002	0
0.0015	0
0.00044	0
0.011	0
0.0041	0
0.007	0
0.099	0
0.23	0
0.086	0
0.11	0
0.18	0
0.37	0
0.26	0
0.32	0
0.2	0
0.22	0
0.31	0
0.13	0
0.37	0
0.54	0
0.5	0
0.51	0
0.79	0
0.72	0
0.023	0
0.03	0
0.045	0
0.024	0
0.11	0

Value/ERM	ERM EF ≥ 1
0.21	0
0.085	0
0.12	0
0.1	0
0.068	0
0.0071	0
0.21	0
0.067	0
0.47	0
0.5	0
0.014	0
0.1	0
0.0027	0
0.0037	0
0.0092	0
0.14	0
0.019	0
0.27	0
0.017	0
0.0018	0
0.0014	0
0.00036	0
0.00052	0
0.00069	0
0.00086	0
0.00029	0
0.00096	0
0.00071	0
0.0029	0
0.00047	0
0.00088	0
0.0004	0
0.037	0
0.022	0
0.014	0
0.1	0
0.014	0
0.015	0
0.023	0
0.07	0
0.058	0
0.27	0
0.034	0
0.00022	0
0.00014	0
0.000078	0
0.00022	0
0.00036	0
0.0005	0

Value/ERM	ERM EF ≥ 1
0.00019	0
0.0038	0
0.00022	0
0.00019	0
0.000076	0
0.00049	0
0.00016	0
0.037	0
0.014	0
0.042	0
0.0038	0
0.0039	0
0.012	0
0.07	0
0.0083	0
0.18	0
0.012	0
0.00043	0
0.00014	0
0.0016	0
0.000055	0
0.000094	0
0.000075	0
0.000039	0
0.0038	0
0.0002	0
0.0002	0
0.0002	0
0.00021	0
0.000069	0
0.037	0
0.022	0
0.14	0
0.19	0
0.11	0
0.33	0
0.35	0
0.59	0
0.33	0
0.52	0
0.48	0
0.0014	0
0.00088	0
0.00069	0
0.002	0
0.0065	0
0.0081	0
0.0027	0
0.0061	0

Value/ERM	ERM EF ≥ 1
0.0049	0
0.0016	0
0.00054	0
0.0089	0
0.0029	0
0.15	0
0.24	0
0.17	0
0.31	0
0.15	0
0.73	0
0.89	0
0.83	0
0.47	0
0.65	0
1.1	1
0.002	0
0.004	0
0.002	0
0.0049	0
0.013	0
0.018	0
0.0096	0
0.014	0
0.011	0
0.0051	0
0.001	0
0.02	0
0.0069	0
0.37	0
0.22	0
0.014	0
0.042	0
0.0078	0
0.027	0
0.024	0
0.014	0
0.049	0
0.11	0
0.052	0
0.00016	0
0.00014	0
0.00011	0
0.000036	0
0.00044	0
0.00053	0
0.00026	0
0.00054	0
0.00028	0

Value/ERM	ERM EF ≥ 1
0.00013	0
0.00012	0
0.00039	0
0.00019	0
0.059	0
0.035	0
0.14	0
0.15	0
0.11	0
0.19	0
0.29	0
0.73	0
0.32	0
0.11	0
0.3	0
0.028	0
0.015	0
0.015	0
0.024	0
0.043	0
0.057	0
0.023	0
0.047	0
0.025	0
0.021	0
0.013	0
0.049	0
0.02	0
0.11	0
0.17	0
0.17	0
0.1	0
0.18	0
0.33	0
0.38	0
0.9	0
0.5	0
0.54	0
0.42	0
0.066	0
0	0
0	0
0	0
0.16	0
0	0
0.12	0
0	0
0.13	0
0	0

Value/ERM	ERM EF ≥ 1
0.033	0
0.19	0
0.21	0
0.058	0
0.24	0
0.14	0
0.19	0
0.083	0
0.18	0
0.26	0
0.38	0
0.87	0
0.5	0
0.43	0
0.41	0
0.11	0
0.12	0
0.15	0
0.2	0
0.24	0
0.28	0
0.17	0
0	0
0.22	0
0	0
0.04	0
0.31	0
0.33	0
0.11	0
0.37	0
0.41	0
0.13	0
0	0
0.12	0
0.13	0
0.24	0
0.45	0
0.33	0
0.22	0
0.22	0
0	0
0	0
0	0
0.046	0
0.069	0
0	0
0.043	0
0	0
0.039	0

Value/ERM	ERM EF ≥ 1
0	0
0.026	0
0.08	0
0.077	0
0.027	0
0.25	0
0.15	0
0.029	0
0	0
0.024	0
0.015	0
0.05	0
0	0
0.058	0
0	0
0.056	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0.14	0
0	0
0.14	0
0.17	0
0.27	0
0.69	0
0.35	0
0.3	0
0.29	0
0	0
0	0
0	0
0.068	0
0	0
0	0
0.057	0
0	0

Value/ERM	ERM EF ≥ 1
0.053	0
0	0
0.032	0
0.1	0
0.092	0
0.027	0
0.23	0
0.13	0
0.13	0
0	0
0.12	0
0.14	0
0.23	0
0.7	0
0.31	0
0.27	0
0.28	0
0.046	0
0	0
0.078	0
0.082	0
0.094	0
0.12	0
0.064	0
0	0
0.061	0
0	0
0.026	0
0.1	0
0.11	0
0.04	0
0.14	0
0.08	0
0.11	0
0	0
0.097	0
0.1	0
0.17	0
0.54	0
0.25	0
0.19	0
0.19	0
0	0
0	0
0	0
0.047	0
0.069	0
0.081	0
0.043	0

Value/ERM	ERM EF ≥ 1
0	0
0.049	0
0	0
0.02	0
0.08	0
0.077	0
0.027	0
0	0
0	0
0	0
0	0
0.011	0
0.011	0
0.018	0
0	0
0	0
0	0
0	0
0.012	0
0	0
0	0
0	0
0.048	0
0.043	0
0.026	0
0	0
0.013	0
0	0
0	0
0	0
0.05	0
0.012	0
0	0
0	0
0.014	0
0	0
0.011	0
0	0
0.018	0
0	0
0.058	0
0	0
0	0
0	0
0	0
0	0
0	0
0.018	0
0	0

Value/ERM	ERM EF ≥ 1
0.0057	0
0	0
0.0057	0
0	0
0	0
0	0
0.014	0
0.0024	0
0.048	0
0.028	0
0	0
0	0
0.0081	0
0	0
0.0092	0
0	0
0.038	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0.16	0
0	0
0.15	0
0.23	0
0.33	0
0.73	0
0.4	0
0.35	0
0.29	0
0.055	0
0	0
0	0
0.12	0
0.13	0

Value/ERM	ERM EF ≥ 1
0	0
0.1	0
0	0
0.063	0
0	0
0.025	0
0.1	0
0.13	0
0.047	0
0	0
0	0
0.17	0
0.11	0
0.2	0
0.35	0
0.4	0
0.86	0
0.52	0
0.62	0
0.44	0
0	0
0	0
0	0
0	0
0.16	0
0	0
0.12	0
0	0
0	0
0	0
0.038	0
0.17	0
0.11	0
0.04	0
0	0
0	0
0.21	0
0.063	0
0.18	0
0.23	0
0.34	0
1.1	1
0.48	0
0.43	0
0.41	0
0.084	0
0	0
0.11	0
0.12	0

Value/ERM	ERM EF ≥ 1
0.14	0
0.21	0
0.1	0
0	0
0.1	0
0	0
0.04	0
0.19	0
0.19	0
0.071	0
0	0
0	0
0.014	0
0	0
0.011	0
0	0
0.018	0
0	0
0	0
0

Value/ERM	ERM EF ≥ 1
0.27	0
0.51	0
0.69	0
0.34	0
0.62	0
0.22	0
0	0
0	0
0.26	0
0.65	0
0.21	0
0	0
0	0
0.21	0
0.083	0
0.16	0
0.38	0
0.54	0
0.7	0
0.52	0
0.59	0
0.53	0
0.081	0
0	0
0.15	0
0.12	0
0.18	0
0	0
0.14	0
0	0
0.12	0
0	0
0.038	0
0.14	0
0.25	0
0.082	0
0.54	0
0.33	0
0.17	0
0	0
0.15	0
0.22	0
0.35	0
0.66	0
0.42	0
0.38	0
0.3	0
0	0
0.084	0

Value/ERM	ERM EF ≥ 1
0.14	0
0.17	0
0.24	0
0.28	0
0.16	0
0	0
0.17	0
0.14	0
0.038	0
0.25	0
0.31	0
0.11	0
0.26	0
0.15	0
0.029	0
0	0
0.032	0
0.03	0
0.06	0
0.14	0
0.096	0
0	0
0.078	0
0	0
0	0
0	0
0	0
0	0
0	0
0.014	0
0	0
0.016	0
0	0
0	0
0.027	0
0.031	0
0.0062	0
0.063	0
0.037	0
0.043	0
0	0
0.03	0
0.022	0
0.046	0
0.099	0
0.077	0
0	0
0.073	0
0	0

Value/ERM	ERM EF ≥ 1
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0.015	0
0.00087	0
0	0
0	0
0.014	0
0	0
0.014	0
0	0
0.023	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0.2	0
0.1	0
0.18	0
0.32	0
0.43	0
0.93	0
0.52	0
0.54	0
0.48	0

Value/ERM	ERM EF ≥ 1
0	0
0	0
0.13	0
0	0
0.18	0
0.24	0
0.13	0
0	0
0.12	0
0	0
0.04	0
0.16	0
0.22	0
0.073	0
0.43	0
0.43	0
0.1	0
0	0
0.1	0
0.15	0
0.17	0
0.48	0
0.27	0
0.19	0
0.2	0
0	0
0	0
0	0
0	0
0	0
0.081	0
0.039	0
0	0
0.039	0
0	0
0	0
0.073	0
0.073	0
0.022	0
0	0
0	0
0.071	0
0	0
0.073	0
0.085	0
0.13	0
0.3	0
0.21	0
0	0

Value/ERM	ERM EF ≥ 1
0.15	0
0	0
0	0
0	0
0	0
0	0
0.033	0
0.019	0
0	0
0.02	0
0	0
0	0
0.038	0
0.038	0
0.0096	0
0.096	0
0.057	0
0.029	0
0	0
0.041	0
0.033	0
0.041	0
0.13	0
0.15	0
0	0
0.076	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0.067	0
0.039	0
0.014	0
0	0
0.014	0
0.011	0
0.023	0
0	0
0.038	0

Value/ERM	ERM EF ≥ 1
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0.056	0
0.033	0
0	0
0	0
0.0081	0
0	0
0.018	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0.052	0
0.03	0
0.029	0
0	0
0.032	0
0.015	0
0.023	0
0	0

Value/ERM	ERM EF ≥ 1
0.096	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0.11	0
0.13	0
0.14	0
0	0
0.13	0
0.13	0
0.23	0
0.69	0
0.31	0
0.24	0
0.25	0
0.069	0
0	0
0.061	0
0.088	0
0.11	0
0.13	0
0.064	0
0	0
0.073	0
0	0
0.03	0
0.15	0
0.13	0
0.051	0
0.21	0
0.13	0
0.039	0
0.029	0
0.082	0
0.036	0
0.078	0

Value/ERM	ERM EF ≥ 1
0.076	0
0.16	0
0.053	0
0.073	0
0.018	0
0.024	0
0.019	0
0.011	0
0.023	0
0.019	0
0.028	0
0.046	0
0.009	0
0.022	0
0.013	0
0.012	0
0.024	0
0.0093	0
0.0081	0
0.0087	0
0.018	0
0.024	0
0.071	0
0.017	0
0.076	0
0.068	0
0.097	0
0.0089	0
0.088	0
0.018	0
0.024	0
0.019	0
0.013	0
0.024	0
0.021	0
0.014	0
0.046	0
0.013	0
0.022	0
0.0076	0
0.024	0
0.023	0
0.0082	0
0.0063	0
0.0093	0
0.084	0
0.17	0
0.18	0
0.3	0

Value/ERM	ERM EF ≥ 1
0.29	0
0.5	0
0.34	0
0.61	0
0.36	0
0.045	0
0.036	0
0.086	0
0.14	0
0.16	0
0.15	0
0.11	0
0.046	0
0.13	0
0.07	0
0.03	0
0.11	0
0.2	0
0.069	0
0.19	0
0.21	0
0.087	0
0.92	0
0.29	0
2.2	1
3	1
3	1
3.5	1
1.2	1
3.1	1
3.1	1
1.7	1
0.92	0
2.3	1
2	1
1.9	1
1.7	1
0.046	0
1.6	1
2.8	1
0.76	0
4.7	1
2.9	1
1.2	1
0.074	0
0.87	0
0.15	0
0.25	0
0.19	0

Value/ERM	ERM EF ≥ 1
0.33	0
0.36	0
0.53	0
0.41	0
0.66	0
0.52	0
0.067	0
0.072	0
0.019	0
0.1	0
0.13	0
0.17	0
0.11	0
0.046	0
0.13	0
0.13	0
0.04	0
0.21	0
0.21	0
0.073	0
0.14	0
0.18	0
0.17	0
0.22	0
0.24	0
0.32	0
0.49	0
0.94	0
0.45	0
0.69	0
0.55	0
0.081	0
0.084	0
0.16	0
0.2	0
0.22	0
0.23	0
0.16	0
0.046	0
0.17	0
0.16	0
0.045	0
0.22	0
0.3	0
0.1	0
0.2	0
0.28	0
0.035	0
0.033	0

Value/ERM	ERM EF ≥ 1
0.11	0
0.03	0
0.1	0
0.16	0
0.13	0
0.065	0
0.11	0
0.018	0
0.024	0
0.019	0
0.017	0
0.029	0
0.033	0
0.019	0
0.046	0
0.014	0
0.022	0
0.0067	0
0.023	0
0.029	0
0.012	0
0.0063	0
0.0096	0
0.023	0
0.044	0
0.059	0
0.022	0
0.091	0
0.16	0
0.081	0
0.049	0
0.095	0
0.018	0
0.024	0
0.019	0
0.011	0
0.011	0
0.01	0
0.0068	0
0.046	0
0.0071	0
0.022	0
0.0081	0
0.021	0
0.015	0
0.0049	0
0.0052	0
0.007	0
0.019	0

Value/ERM	ERM EF ≥ 1
0.027	0
0.096	0
0.018	0
0.083	0
0.089	0
0.17	0
0.031	0
0.093	0
0.018	0
0.024	0
0.019	0
0.011	0
0.0075	0
0.0075	0
0.0043	0
0.046	0
0.0027	0
0.022	0
0.0067	0
0.008	0
0.0046	0
0.0014	0
0.0041	0
0.0063	0
0.071	0
0.07	0
0.17	0
0.14	0
0.24	0
0.48	0
0.23	0
0.33	0
0.24	0
0.039	0
0.024	0
0.048	0
0.052	0
0.061	0
0.075	0
0.043	0
0.062	0
0.037	0
0.041	0
0.03	0
0.067	0
0.069	0
0.031	0
0.032	0
0.041	0

Value/ERM	ERM EF ≥ 1
0.06	0
0.044	0
0.11	0
0.093	0
0.18	0
0.58	0
0.22	0
0.23	0
0.16	0
0.034	0
0.024	0
0.055	0
0.051	0
0.063	0
0.069	0
0.046	0
0.077	0
0.037	0
0.043	0
0.025	0
0.067	0
0.073	0
0.031	0
0.054	0
0.072	0
0.14	0
0.074	0
0.21	0
0.18	0
0.34	0
0.68	0
0.31	0
0.47	0
0.3	0
0.055	0
0.044	0
0.075	0
0.084	0
0.088	0
0.1	0
0.064	0
0.11	0
0.073	0
0.072	0
0.034	0
0.13	0
0.13	0
0.051	0
0.081	0

Value/ERM	ERM EF ≥ 1
0.11	0
0.01	0
0.0045	0
0.032	0
0.012	0
0.047	0
0.049	0
0.041	0
0.031	0
0.027	0
0.018	0
0.024	0
0.091	0
0.04	0
0.081	0
0.069	0
0.046	0
0.054	0
0.027	0
0.022	0
0.011	0
0.044	0
0.096	0
0.027	0
0.0063	0
0.013	0
0.066	0
0.039	0
0.11	0
0.087	0
0.16	0
0.34	0
0.21	0
0.21	0
0.16	0
0.036	0
0.088	0
0.047	0
0.18	0
0.14	0
0.088	0
0.082	0
0.054	0
0.15	0
0.17	0
0.024	0
0.33	0
0.19	0
0.069	0

Value/ERM	ERM EF ≥ 1
0.06	0
0.096	0
0.21	0
0.31	0
0.31	0
0.65	0
0.58	0
0.92	0
0.64	0
1.3	1
0.84	0
0.096	0
0.072	0
0.15	0
0.18	0
0.26	0
0.23	0
0.17	0
0.38	0
0.17	0
0.1	0
0.052	0
0.15	0
0.29	0
0.12	0
0.38	0
0.43	0
0.13	0
0.16	0
0.2	0
0.31	0
0.35	0
0.36	0
0.48	0
0.62	0
0.55	0
0.073	0
0.076	0
0.089	0
0.15	0
0.24	0
0.29	0
0.19	0
0.12	0
0.22	0
0.12	0
0.042	0
0.21	0
0.36	0

Value/ERM	ERM EF ≥ 1
0.13	0
0.43	0
0.54	0
0.051	0
0.059	0
0.11	0
0.091	0
0.14	0
0.2	0
0.19	0
0.2	0
0.2	0
0.012	0
0.048	0
0.015	0
0.013	0
0.018	0
0.019	0
0.012	0
0.092	0
0.012	0
0.012	0
0.015	0
0.022	0
0.022	0
0.01	0
0.034	0
0.043	0
0.17	0
0.072	0
0.28	0
0.3	0
0.45	0
0.77	0
0.53	0
0.74	0
0.44	0
0.073	0
0.062	0
0.092	0
0.079	0
0.12	0
0.12	0
0.082	0
0.17	0
0.059	0
0.048	0
0.045	0
0.093	0

Value/ERM	ERM EF ≥ 1
0.11	0
0.056	0
0.18	0
0.24	0
0.031	0
0.012	0
0.057	0
0.015	0
0.066	0
0.054	0
0.069	0
0.032	0
0.073	0
0.018	0
0.024	0
0.019	0
0.011	0
0.0075	0
0.0075	0
0.0043	0
0.046	0
0.00086	0
0.022	0
0.0057	0
0.008	0
0.0046	0
0.00062	0
0.0026	0
0.0035	0
0.019	0
0.0043	0
0.086	0
0.019	0
0.031	0
0.094	0
0.065	0
0.015	0
0.037	0
0.018	0
0.011	0
0.058	0
0.051	0
0.063	0
0.036	0
0.039	0
0.13	0
0.051	0
0.016	0
0.0057	0

Value/ERM	ERM EF ≥ 1
0.061	0
0.085	0
0.029	0
0.0033	0
0.0037	0
0.16	0
0.12	0
0.25	0
0.35	0
0.44	0
0.58	0
0.52	0
0.71	0
0.49	0
0.087	0
0.082	0
0.15	0
0.15	0
0.21	0
0.18	0
0.16	0
0.26	0
0.13	0
0.091	0
0.043	0
0.17	0
0.22	0
0.098	0
0.22	0
0.28	0
0.034	0
0.024	0
0.073	0
0.026	0
0.072	0
0.097	0
0.085	0
0.089	0
0.11	0
0.018	0
0.024	0
0.019	0
0.011	0
0.0033	0
0.0025	0
0.0016	0
0.046	0
0.002	0
0.022	0

Value/ERM	ERM EF ≥ 1
0.0057	0
0.008	0
0.0032	0
0.00093	0
0.0041	0
0.0052	0
0.027	0
0.023	0
0.084	0
0.016	0
0.047	0
0.11	0
0.062	0
0.043	0
0.08	0
0.018	0
0.024	0
0.019	0
0.011	0
0.0063	0
0.0045	0
0.0031	0
0.046	0
0.0033	0
0.022	0
0.0057	0
0.0087	0
0.0062	0
0.002	0
0.0078	0
0.0098	0
0.038	0
0.014	0
0.093	0
0.024	0
0.073	0
0.12	0
0.083	0
0.065	0
0.073	0
0.006	0
0.008	0
0.0081	0
0.011	0
0.017	0
0.015	0
0.011	0
0.062	0
0.01	0

Value/ERM	ERM EF ≥ 1
0.0096	0
0.0057	0
0.025	0
0.018	0
0.0084	0
0.02	0
0.028	0
0.041	0
0.0019	0
0.13	0
0.014	0
0.034	0
0.056	0
0.1	0
0.0084	0
0.037	0
0.018	0
0.024	0
0.019	0
0.011	0
0.0043	0
0.0035	0
0.0026	0
0.046	0
0.0022	0
0.022	0
0.0057	0
0.008	0
0.0038	0
0.0012	0
0.007	0
0.0074	0
0.093	0
0.037	0
0.13	0
0.12	0
0.26	0
0.12	0
0.29	0
0.2	0
0.31	0
0.019	0
0.048	0
0.028	0
0.022	0
0.031	0
0.043	0
0.024	0
0.092	0

Value/ERM	ERM EF ≥ 1
0.02	0
0.044	0
0.017	0
0.031	0
0.038	0
0.02	0
0.062	0
0.074	0
0.03	0
0.0072	0
0.078	0
0.01	0
0.045	0
0.049	0
0.079	0
0.02	0
0.049	0
0.018	0
0.024	0
0.019	0
0.011	0
0.0075	0
0.0075	0
0.0043	0
0.046	0
0.00055	0
0.022	0
0.0057	0
0.0023	0
0.0012	0
0.00076	0
0.0037	0
0.0046	0
0.02	0
0.0047	0
0.043	0
0.0089	0
0.031	0
0.042	0
0.067	0
0.019	0
0.032	0
0.018	0
0.024	0
0.019	0
0.014	0
0.043	0
0.019	0
0.025	0

Value/ERM	ERM EF ≥ 1
0.046	0
0.024	0
0.022	0
0.0057	0
0.011	0
0.042	0
0.013	0
0.0026	0
0.0037	0
0.019	0
0.013	0
0.024	0
0.0081	0
0.036	0
0.058	0
0.014	0
0.056	0
0.015	0
0.02	0
0.016	0
0.0091	0
0.0063	0
0.0063	0
0.0036	0
0.038	0
0.0024	0
0.019	0
0.0048	0
0.0067	0
0.0038	0
0.00027	0
0.018	0
0.022	0
0.13	0
0.21	0
0.18	0
0.3	0
0.38	0
0.46	0
0.65	0
0.45	0
0.028	0
0.02	0
0.028	0
0.033	0
0.075	0
0.055	0
0.039	0
0.038	0

Value/ERM	ERM EF ≥ 1
0.031	0
0.026	0
0.0052	0
0.049	0
0.096	0
0.024	0
0.11	0
0.065	0
0.14	0
0.18	0
0.19	0
0.14	0
0.32	0
0.4	0
0.32	0
0.28	0
0.024	0
0.024	0
0.027	0
0.037	0
0.081	0
0.063	0
0.05	0
0.038	0
0.033	0
0.022	0
0.0086	0
0.056	0
0.1	0
0.029	0
0.059	0
0.061	0
0.12	0
0.15	0
0.17	0
0.21	0
0.36	0
0.37	0
0.35	0
0.34	0
0.028	0
0.062	0
0.12	0
0.1	0
0.27	0
0.26	0
0.13	0
0.23	0
0.22	0

Value/ERM	ERM EF ≥ 1
0.083	0
0.012	0
0.11	0
0.18	0
0.096	0
0.11	0
0.19	0
0.24	0
0.24	0
0.24	0
0.4	0
0.71	0
0.63	0
0.73	0
0.65	0
0.031	0
0.02	0
0.042	0
0.033	0
0.16	0
0.15	0
0.089	0
0.038	0
0.11	0
0.035	0
0.0081	0
0.063	0
0.2	0
0.062	0
0.48	0
0.98	0
0.18	0
0.21	0
0.23	0
0.27	0
0.47	0
0.53	0
0.54	0
0.44	0
0.024	0
0.022	0
0.031	0
0.053	0
0.1	0
0.088	0
0.061	0
0.038	0
0.047	0
0.035	0

Value/ERM	ERM EF ≥ 1
0.0081	0
0.058	0
0.096	0
0.033	0
0.1	0
0.059	0
0.071	0
0.14	0
0.13	0
0.095	0
0.18	0
0.33	0
0.21	0
0.21	0
0.015	0
0.02	0
0.019	0
0.022	0
0.063	0
0.043	0
0.034	0
0.038	0
0.033	0
0.019	0
0.0048	0
0.047	0
0.069	0
0.02	0
0.063	0
0.16	0
0.22	0
0.28	0
0.27	0
0.39	0
0.63	0
0.7	0
0.7	0
0.68	0
0.015	0
0.02	0
0.016	0
0.018	0
0.035	0
0.026	0
0.021	0
0.038	0
0.022	0
0.019	0
0.0052	0

Value/ERM	ERM EF ≥ 1
0.029	0
0.042	0
0.013	0
0.34	0
0.37	0
0.031	0
0.038	0
0.048	0
0.023	0
0.085	0
0.09	0
0.043	0
0.07	0
0.015	0
0.02	0
0.016	0
0.0091	0
0.018	0
0.019	0
0.0086	0
0.038	0
0.0073	0
0.019	0
0.0048	0
0.0067	0
0.011	0
0.0051	0
0.019	0
0.011	0
0.1	0
0.11	0
0.18	0
0.15	0
0.27	0
0.4	0
0.32	0
0.27	0
0.069	0
0.046	0
0.056	0
0.078	0
0.23	0
0.18	0
0.13	0
0.038	0
0.084	0
0.07	0
0.021	0
0.13	0

Value/ERM	ERM EF ≥ 1
0.26	0
0.078	0
0.067	0
0.039	0
0.026	0
0.017	0
0.037	0
0.019	0
0.067	0
0.077	0
0.041	0
0.062	0
0.015	0
0.02	0
0.016	0
0.0091	0
0.0063	0
0.0063	0
0.0036	0
0.038	0
0.0031	0
0.019	0
0.0048	0
0.0067	0
0.0046	0
0.00089	0
0.019	0
0.011	0
0.019	0
0.021	0
0.036	0
0.0093	0
0.04	0
0.062	0
0.018	0
0.035	0
0.015	0
0.02	0
0.016	0
0.0091	0
0.0063	0
0.0063	0
0.0036	0
0.038	0
0.002	0
0.019	0
0.0048	0
0.0067	0
0.0038	0

Value/ERM	ERM EF ≥ 1
0.00022	0
0.029	0
0.017	0
0.034	0
0.022	0
0.051	0
0.019	0
0.073	0
0.1	0
0.038	0
0.059	0
0.015	0
0.02	0
0.016	0
0.0091	0
0.0063	0
0.0063	0
0.0036	0
0.038	0
0.002	0
0.019	0
0.0048	0
0.0067	0
0.0038	0
0.00022	0
0.028	0
0.067	0
0.17	0
0.16	0
0.21	0
0.2	0
0.38	0
0.48	0
0.46	0
0.35	0
0.04	0
0.03	0
0.042	0
0.062	0
0.081	0
0.081	0
0.05	0
0.038	0
0.053	0
0.044	0
0.012	0
0.073	0
0.065	0
0.033	0

Value/ERM	ERM EF ≥ 1
0.096	0
0.057	0
0.13	0
0.15	0
0.18	0
0.16	0
0.31	0
0.41	0
0.38	0
0.3	0
0.028	0
0.028	0
0.033	0
0.055	0
0.075	0
0.061	0
0.046	0
0.038	0
0.061	0
0.039	0
0.01	0
0.073	0
0.073	0
0.031	0
0.093	0
0.054	0
0.026	0
0.013	0
0.038	0
0.014	0
0.062	0
0.073	0
0.027	0
0.048	0
0.015	0
0.02	0
0.016	0
0.0091	0
0.0063	0
0.0063	0
0.0036	0
0.038	0
0.0029	0
0.019	0
0.0048	0
0.0067	0
0.0038	0
0.00033	0
0.019	0

Value/ERM	ERM EF ≥ 1
0.011	0
0.031	0
0.025	0
0.049	0
0.017	0
0.072	0
0.085	0
0.032	0
0.059	0
0.015	0
0.02	0
0.016	0
0.0091	0
0.0063	0
0.0063	0
0.0036	0
0.038	0
0.002	0
0.019	0
0.0048	0
0.0067	0
0.0038	0
0.00022	0
0.019	0
0.011	0
0.037	0
0.083	0
0.12	0
0.15	0
0.19	0
0.27	0
0.19	0
0.22	0
0.015	0
0.02	0
0.016	0
0.025	0
0.069	0
0.069	0
0.039	0
0.038	0
0.055	0
0.019	0
0.0048	0
0.038	0
0.062	0
0.027	0
0.1	0
0.24	0

Value/ERM	ERM EF ≥ 1
0.23	0
0.21	0
0.24	0
0.31	0
0.57	0
0.6	0
0.62	0
0.53	0
0.033	0
0.028	0
0.045	0
0.056	0
0.11	0
0.081	0
0.068	0
0.038	0
0.059	0
0.035	0
0.01	0
0.073	0
0.11	0
0.04	0
0.096	0
0.2	0
0.067	0
0.067	0
0.094	0
0.08	0
0.18	0
0.2	0
0.16	0
0.16	0
0.015	0
0.02	0
0.022	0
0.038	0
0.058	0
0.046	0
0.043	0
0.038	0
0.025	0
0.035	0
0.0048	0
0.059	0
0.05	0
0.02	0
0.048	0
0.057	0
0.17	0

Value/ERM	ERM EF ≥ 1
0.19	0
0.23	0
0.22	0
0.41	0
0.51	0
0.51	0
0.38	0
0.028	0
0.02	0
0.03	0
0.036	0
0.069	0
0.06	0
0.043	0
0.038	0
0.039	0
0.026	0
0.009	0
0.057	0
0.069	0
0.027	0
0.11	0
0.3	0
0.046	0
0.045	0
0.073	0
0.044	0
0.13	0
0.14	0
0.095	0
0.11	0
0.015	0
0.02	0
0.016	0
0.019	0
0.027	0
0.021	0
0.015	0
0.038	0
0.015	0
0.019	0
0.0048	0
0.03	0
0.029	0
0.0098	0
0.048	0
0.061	0
0.16	0
0.17	0

Value/ERM	ERM EF ≥ 1
0.23	0
0.27	0
0.45	0
0.53	0
0.57	0
0.41	0
0.03	0
0.026	0
0.03	0
0.042	0
0.081	0
0.063	0
0.054	0
0.038	0
0.045	0
0.035	0
0.0071	0
0.063	0
0.077	0
0.029	0
0.15	0
0.24	0
0.3	0
0.5	0
0.34	0
1.2	1
1.6	1
1	1
0.81	0
1.7	1
0.12	0
0.26	0
0.15	0
0.36	0
0.63	0
0.51	0
0.25	0
0.038	0
0.18	0
0.35	0
0.052	0
0.53	0
0.54	0
0.2	0
0.59	0
0.89	0
0.13	0
0.18	0
0.18	0

Value/ERM	ERM EF ≥ 1
0.3	0
0.57	0
0.46	0
0.43	0
0.51	0
0.037	0
0.056	0
0.056	0
0.085	0
0.14	0
0.13	0
0.093	0
0.038	0
0.069	0
0.057	0
0.011	0
0.11	0
0.13	0
0.051	0
0.019	0
0.2	0
0.016	0
0.013	0
0.024	0
0.018	0
0.054	0
0.071	0
0.03	0
0.056	0
0.015	0
0.028	0
0.03	0
0.064	0
0.094	0
0.081	0
0.046	0
0.038	0
0.053	0
0.05	0
0.0048	0
0.13	0
0.1	0
0.036	0
0.032	0
0.026	0
0.023	0
0.013	0
0.034	0
0.01	0

Value/ERM	ERM EF ≥ 1
0.036	0
0.058	0
0.012	0
0.028	0
0.015	0
0.02	0
0.016	0
0.0091	0
0.0063	0
0.0063	0
0.0036	0
0.038	0
0.002	0
0.019	0
0.0048	0
0.0067	0
0.0038	0
0.00022	0
0.019	0
0.011	0
0.019	0
0.013	0
0.021	0
0.0078	0
0.04	0
0.044	0
0.01	0
0.022	0
0.015	0
0.02	0
0.016	0
0.0091	0
0.0063	0
0.0063	0
0.0036	0
0.038	0
0.002	0
0.019	0
0.0048	0
0.0067	0
0.0038	0
0.00022	0
0.019	0
0.011	0
0.47	0
0.25	0
0.17	0
0.1	0
0.26	0

Value/ERM	ERM EF ≥ 1
0.44	0
0.57	0
0.084	0
0.38	0
0.073	0
0.02	0
0.044	0
0.054	0
0.061	0
0.051	0
0.048	0
0.092	0
0.033	0
0.086	0
0.041	0
0.065	0
0.052	0
0.017	0
0.23	0
0.22	0
0.091	0
0.19	0
0.11	0
0.21	0
0.42	0
0.16	0
0.039	0
0.013	0
0.028	0
0.028	0
0.066	0
0.051	0
0.022	0
0.093	0
0.025	0
0.029	0
0.02	0
0.04	0
0.04	0
0.015	0
0.073	0
0.24	0
0.086	0
0.2	0
0.14	0
0.22	0
0.55	0
0.22	0
0.05	0

Value/ERM	ERM EF ≥ 1
0.018	0
0.032	0
0.034	0
0.088	0
0.068	0
0.025	0
0.13	0
0.028	0
0.029	0
0.023	0
0.051	0
0.053	0
0.021	0
0.058	0
0.021	0
0.15	0
0.064	0
0.14	0
0.23	0
0.37	0
0.27	0
0.26	0
0.048	0
0.25	0
0.11	0
0.12	0
0.23	0
0.59	0
0.38	0
0.009	0
0.0047	0
0.0075	0
0.0056	0
0.011	0
0.011	0
0.014	0
0.022	0
0.058	0
0.1	0
0.036	0
0.12	0
0.057	0
0.18	0
0.23	0
0.31	0
0.022	0
0.17	0
0.031	0
0.011	0

Value/ERM	ERM EF ≥ 1
0.0061	0
0.016	0
0.023	0
0.018	0
0.016	0
0.011	0
0.028	0
0.034	0
0.13	0
0.023	0
0.076	0
0.29	0
0.42	0
0.067	0
0.22	0
0.029	0
0.023	0
0.041	0
0.044	0
0.025	0
0.034	0
0.042	0
0.052	0
0.029	0
0.0073	0
0.084	0
0.019	0
0.052	0
0.028	0
0.19	0
0.054	0
0.1	0
0.0016	0
0.0024	0
0.02	0
0.026	0
0.051	0
0.051	0
0.031	0
0.042	0
0.039	0
0.01	0
0.00086	0
0.062	0
0.021	0
0.016	0
0.019	0
0.094	0
0.099	0

Value/ERM	ERM EF ≥ 1
0.094	0
0.027	0
0.062	0
0.059	0
0.26	0
0.038	0
0.11	0
0.015	0
0.02	0
0.016	0
0.0091	0
0.013	0
0.01	0
0.0057	0
0.038	0
0.0073	0
0.019	0
0.0048	0
0.014	0
0.0038	0
0.012	0
0.007	0
0.16	0
0.29	0
0.18	0
0.065	0
0.16	0
0.31	0
0.46	0
0.17	0
0.25	0
0.015	0
0.02	0
0.016	0
0.0091	0
0.013	0
0.011	0
0.0068	0
0.038	0
0.0055	0
0.019	0
0.0048	0
0.0096	0
0.0036	0
0.041	0
0.05	0
0.23	0
0.13	0
0.19	0

Value/ERM	ERM EF ≥ 1
0.064	0
0.19	0
0.25	0
0.5	0
0.11	0
0.29	0
0.015	0
0.02	0
0.016	0
0.0091	0
0.0063	0
0.0063	0
0.0036	0
0.038	0
0.0022	0
0.019	0
0.0048	0
0.0046	0
0.00051	0
0.0078	0
0.02	0
0.18	0
0.1	0
0.21	0
0.099	0
0.17	0
0.37	0
0.57	0
0.14	0
0.26	0
0.0013	0
0.0024	0
0.00094	0
0.00055	0
0.0075	0
0.00038	0
0.0064	0
0.0073	0
0.0063	0
0.0028	0
0.00029	0
0.012	0
0.0021	0
0.01	0
0.0074	0
0.11	0
0.018	0
0.14	0
0.053	0

Value/ERM	ERM EF ≥ 1
0.096	0
0.22	0
0.33	0
0.38	0
0.18	0
0.0039	0
0.0026	0
0.0045	0
0.0058	0
0.012	0
0.013	0
0.0083	0
0.018	0
0.0063	0
0.0048	0
0.0013	0
0.0095	0
0.0047	0
0.037	0
0.022	0
0.11	0
0.15	0
0.13	0
0.043	0
0.13	0
0.25	0
0.35	0
0.12	0
0.17	0
0.0013	0
0.0024	0
0.00094	0
0.0073	0
0.014	0
0.011	0
0.0079	0
0.0073	0
0.0078	0
0.0028	0
0.00029	0
0.01	0
0.0038	0
0.01	0
0.019	0
0.034	0
0.11	0
0.066	0
0.0041	0
0.058	0

Value/ERM	ERM EF ≥ 1
0.018	0
0.13	0
0.049	0
0.079	0
0.0013	0
0.0024	0
0.00094	0
0.00055	0
0.00069	0
0.00038	0
0.00021	0
0.0073	0
0.00017	0
0.0028	0
0.00029	0
0.00065	0
0.000044	0
0.01	0
0.0074	0
0.14	0
0.03	0
0.2	0
0.074	0
0.13	0
0.24	0
0.5	0
0.22	0
0.27	0
0.009	0
0.004	0
0.011	0
0.015	0
0.027	0
0.03	0
0.017	0
0.028	0
0.015	0
0.0081	0
0.0038	0
0.031	0
0.011	0
0.067	0
0.065	0
0.014	0
0.0021	0
0.0054	0
0.0037	0
0.011	0
0.028	0

Value/ERM	ERM EF ≥ 1
0.019	0
0.027	0
0.012	0
0.00031	0
0.000084	0
0.000063	0
0.000045	0
0.00043	0
0.000063	0
0.0002	0
0.0027	0
0.000055	0
0.00015	0
0.00018	0
0.000081	0
0.000038	0
0.00026	0
0.00067	0
0.24	0
0.021	0
0.25	0
0.059	0
0.064	0
0.056	0
0.69	0
0.11	0
0.25	0
0.00075	0
0.00044	0
0.00036	0
0.00063	0
0.00094	0
0.00059	0
0.00068	0
0.00065	0
0.00075	0
0.0028	0
0.00057	0
0.0013	0
0.00047	0
0.0037	0
0.008	0
0.14	0
0.031	0
0.21	0
0.085	0
0.17	0
0.34	0
0.52	0

Value/ERM	ERM EF ≥ 1
0.22	0
0.28	0
0.0078	0
0.005	0
0.016	0
0.015	0
0.032	0
0.038	0
0.019	0
0.031	0
0.016	0
0.0093	0
0.0035	0
0.033	0
0.013	0
0.081	0
0.11	0
0.17	0
0.01	0
0.22	0
0.056	0
0.089	0
0.07	0
0.62	0
0.081	0
0.19	0
0.043	0
0.0074	0
0.0025	0
0.0022	0
0.0026	0
0.002	0
0.0018	0
0.0023	0
0.0025	0
0.0067	0
0.032	0
0.0037	0
0.0029	0
0.017	0
0.01	0
0.086	0
0.0052	0
0.084	0
0.03	0
0.089	0
0.099	0
0.23	0
0.081	0

Value/ERM	ERM EF ≥ 1
0.15	0
0.015	0
0.0024	0
0.0064	0
0.0054	0
0.01	0
0.012	0
0.0082	0
0.012	0
0.0088	0
0.0043	0
0.01	0
0.017	0
0.0056	0
0.041	0
0.057	0
0.043	0
0.25	0
0.091	0
0.021	0
0.072	0
0.056	0
0.21	0
0.065	0
0.093	0
0.0013	0
0.0024	0
0.00094	0
0.00055	0
0.00069	0
0.00038	0
0.00021	0
0.0073	0
0.002	0
0.0028	0
0.00029	0
0.00065	0
0.00022	0
0.0078	0
0.02	0
0.2	0
0.17	0
0.18	0
0.062	0
0.2	0
0.21	0
0.48	0
0.11	0
0.28	0

Value/ERM	ERM EF ≥ 1
0.0013	0
0.0024	0
0.023	0
0.019	0
0.029	0
0.027	0
0.023	0
0.0073	0
0.015	0
0.0028	0
0.00029	0
0.038	0
0.012	0
0.041	0
0.059	0
0.11	0
0.021	0
0.15	0
0.073	0
0.01	0
0.014	0
0.011	0
0.0064	0
0.0044	0
0.0044	0
0.0025	0
0.027	0
0.0039	0
0.013	0
0.0033	0
0.0054	0
0.0011	0
0.0063	0
0.0037	0
0.0057	0
0.0026	0
0.019	0
0.0059	0
0.021	0
0.014	0
0.033	0
0.0068	0
0.014	0
0.0015	0
0.002	0
0.0016	0
0.00091	0
0.00063	0
0.00063	0

Value/ERM	ERM EF ≥ 1
0.00036	0
0.0038	0
0.0002	0
0.0019	0
0.00048	0
0.00067	0
0.00038	0
0.000022	0
0.037	0
0.022	0

Table B3-3. Summation of estuarine, regional reference ERL EFs and ERM EFs ≥1, result of chemical screen

Area of Interest	Location	Sum ERL EF ≥ 1	Sum ERM EF ≥ 1	Pass Chemical Screen?
Jamaica Bay	2200_26_JB002	0	0	Yes
Jamaica Bay	2200_26_JB006	0	0	Yes
Jamaica Bay	2200_26_JB008	13	0	No
Jamaica Bay	2200_26_JB012	22	17	No
Jamaica Bay	2200_26_JB015	15	0	No
Jamaica Bay	2200_26_JB018	21	0	No
Jamaica Bay	2200_26_JB022	0	0	Yes
Jamaica Bay	2200_26_JB026	0	0	Yes
Jamaica Bay	2200_26_JB031	0	0	Yes
Jamaica Bay	2200_26_JB033	6	0	No
Jamaica Bay	2200_26_JB039	3	0	Yes
Jamaica Bay	2200_26_JB041	10	0	No
Jamaica Bay	2200_26_JB042	1	0	Yes
Jamaica Bay	2200_26_JB043	7	0	No
Jamaica Bay	2200_27_JB101	21	1	No
Jamaica Bay	2200_27_JB103	21	0	No
Jamaica Bay	2200_27_JB104	2	0	Yes
Jamaica Bay	2200_27_JB106	14	0	No
Jamaica Bay	2200_27_JB108	0	0	Yes
Jamaica Bay	2200_27_JB110	0	0	Yes
Jamaica Bay	2200_27_JB111	20	0	No
Jamaica Bay	2200_27_JB112	0	0	Yes
Jamaica Bay	2200_27_JB113	0	0	Yes
Jamaica Bay	2200_27_JB114	0	0	Yes
Jamaica Bay	2200_27_JB115	0	0	Yes
Jamaica Bay	2200_27_JB117	4	0	No
Jamaica Bay	2200_27_JB119	0	0	Yes
Jamaica Bay	2200_27_JB120	0	0	Yes
Jamaica Bay	2200_46_JBA11	0	0	Yes
Jamaica Bay	2200_56_JB008	12	0	No
Jamaica Bay	2200_56_JB018	20	0	No
Jamaica Bay	2200_56_JB026	6	0	No
Jamaica Bay	2200_56_JB031	0	0	Yes
Jamaica Bay	2200_56_JB033	7	0	No
Jamaica Bay	2200_56_JB039	9	0	No
Jamaica Bay	2200_56_JB041	1	0	Yes
Jamaica Bay	2200_56_JB042	0	0	Yes
Jamaica Bay	2200_56_JB043	0	0	Yes
Jamaica Bay	2200_56_JB201	0	0	Yes
Jamaica Bay	2200_56_JB202	7	0	No
Jamaica Bay	2200_56_JB203	8	0	No
Jamaica Bay	2200_56_JB204	10	1	No
Jamaica Bay	2200_56_JB205	0	0	Yes
Jamaica Bay	2200_56_JB206	14	0	No
Jamaica Bay	2200_56_JB207	13	0	No
Jamaica Bay	2200_56_JB209	19	0	No
Jamaica Bay	2200_56_JB210	1	0	Yes
Jamaica Bay	2200_56_JB211	0	0	Yes

Table B3-3. Summation of estuarine, regional reference ERL EFs and ERM EFs ≥1, result of chemical screen

Area of Interest	Location	Sum ERL EF ≥ 1	Sum ERM EF ≥ 1	Pass Chemical Screen?
Jamaica Bay	2200_56_JB212	0	0	Yes
Jamaica Bay	2200_56_JB213	12	0	No
Jamaica Bay	2200_56_JB214	2	0	Yes
Jamaica Bay	2200_56_JB215	3	0	Yes
Jamaica Bay	2200_56_JB216	1	0	Yes
Jamaica Bay	2200_56_JB217	0	0	Yes
Jamaica Bay	2200_56_JB219	0	0	Yes
Jamaica Bay	2200_56_JB222	2	0	Yes
Jamaica Bay	2200_56_JB223	7	0	No
Jamaica Bay	2300_M0_NY-0029-A	1	0	Yes
Jamaica Bay	2300_M1_NY-0032-A	1	0	Yes
Jamaica Bay	2300_M2_NY-0029-A	0	0	Yes
Jamaica Bay	2300_M2_NY-0235-A	9	0	No
Jamaica Bay	2300_M2_NY-0239-A	10	1	No
Jamaica Bay	2300_M3_NY03-0236	1	0	Yes
Jamaica Bay	2300_M4_NY04-0234	7	0	No
Jamaica Bay	2300_M5_NY05-0002	3	0	Yes
Jamaica Bay	2300_M5_NY05-0010	11	0	No
Jamaica Bay	JB301	0	0	Yes
Jamaica Bay	JB303	9	0	No
Jamaica Bay	JB305	7	0	No
Jamaica Bay	JB306	14	0	No
Jamaica Bay	JB307	12	0	No
Jamaica Bay	JB309	11	0	No
Jamaica Bay	JB310	2	0	Yes
Jamaica Bay	JB313	10	0	No
Jamaica Bay	JB315	0	0	Yes
Jamaica Bay	JB316	10	0	No
Jamaica Bay	JB317	0	0	Yes
Jamaica Bay	JB319	0	0	Yes
Jamaica Bay	JB322	1	0	Yes
Jamaica Bay	JB323	9	0	No
Jamaica Bay	JB354	9	0	No
Jamaica Bay	JB358	0	0	Yes
Jamaica Bay	JB359	0	0	Yes
Jamaica Bay	JB361	3	0	Yes
Jamaica Bay	JB364	11	0	No
Jamaica Bay	JB366	2	0	Yes
Jamaica Bay	JB367	10	0	No
Jamaica Bay	JB368	1	0	Yes
Jamaica Bay	JB371	11	0	No
Jamaica Bay	JB372	22	4	No
Jamaica Bay	JB374	11	0	No
Jamaica Bay	JB380	1	0	Yes
Jamaica Bay	JB381	0	0	Yes
Jamaica Bay	JB386	0	0	Yes
Mullica River and Great Bay	2300_13_90-118	2	0	Yes
Mullica River and Great Bay	2300_13_90-120	4	0	No

Table B3-3. Summation of estuarine, regional reference ERL EFs and ERM EFs ≥1, result of chemical screen

Area of Interest	Location	Sum ERL EF ≥ 1	Sum ERM EF ≥ 1	Pass Chemical Screen?
Mullica River and Great Bay	2300_14_91-348	1	0	Yes
Mullica River and Great Bay	2300_14_91-349	3	0	Yes
Mullica River and Great Bay	2300_L3_NJ03-0038	0	0	Yes
Mullica River and Great Bay	2300_L4_NJ04-0427	5	0	No
Mullica River and Great Bay	2300_L4_NJ04-0429	4	0	No
Mullica River and Great Bay	2300_L5_NJ05-0059	3	0	Yes
Mullica River and Great Bay	2300_L6_NJ06-0015	2	0	Yes
Mullica River and Great Bay	2300_L6_NJ06-0027	2	0	Yes
Mullica River and Great Bay	2300_L6_NJ06-0035	0	0	Yes
Mullica River and Great Bay	MR9921SDM-TSI	8	0	No
Mullica River and Great Bay	MR9922SDM-TSI	2	0	Yes
Mullica River and Great Bay	MR9923SDM-TSI	4	0	No
Mullica River and Great Bay	NCCA10-2622	0	0	Yes
Mullica River and Great Bay	NJ00-0035	4	0	No
Mullica River and Great Bay	NJ00-0037	0	0	Yes
Mullica River and Great Bay	NJ01-0036	0	0	Yes
Mullica River and Great Bay	NJ01-0038	3	0	Yes
Mullica River and Great Bay	NJ01-0116	5	0	No
Mullica River and Great Bay	NJ01-0118	3	0	Yes
Mullica River and Great Bay	NJ01-0122	1	0	Yes
Mullica River and Great Bay	NJ02-0227	1	0	Yes
Mullica River and Great Bay	NJ02-0229	5	0	No
Mullica River and Great Bay	NJ02-0230	0	0	Yes

ERL -- effect range-low
ERM -- effect range-median
EF -- exceedance factor
Note: chemical screen -- no more than 3 ERL EF ≥ 1 and no ERM EF ≥ 1

Table B3-3 presents the summary of the chemical concentration screen of regional sediment samples (from Jamaica Bay and Mullica River and Great Bay). The purpose of the chemical screen is to identify samples that are contaminated. "Contaminated" samples are defined as those exceeding more than 3 effect range-low and/or any effect range-median sediment quality guidelines for any chemical within a sample. Samples that pass the sediment screening step summarized in Table B3-3 are further evaluated in Table B3-4. Samples that did not pass the sediment screening step were removed entirely from consideration in subsequent LPRSA SQT analyses.

Table B3-4a. Toxicity screen of regional reference *A. abdita* survival data, result of reference data screens

Area of Interest	Location	*A. abdita* survival (% of control)	Pass Toxicity Screen? (≥80% survival)	Extreme Toxicity Value?*	Full SQT Data Available?	Pass Chemistry Screen (Table B3-3)?	Acceptable Reference Location, LOE Approach	Acceptable Reference Location, Quantiative Uncertainty Analysis
Jamaica Bay	2200_26_JB002	0.96	Yes	No	Yes	Yes	Yes	Yes
Jamaica Bay	2200_26_JB006	0.91	Yes	No	Yes	Yes	Yes	Yes
Jamaica Bay	2200_26_JB008	0.53	No	No	Yes	No	**No**	**No**
Jamaica Bay	2200_26_JB012	0	No	Yes	Yes	No	**No**	**No**
Jamaica Bay	2200_26_JB015	0.38	No	No	Yes	No	**No**	**No**
Jamaica Bay	2200_26_JB018	0.81	Yes	No	Yes	No	**No**	**No**
Jamaica Bay	2200_26_JB022	1.04	Yes	No	Yes	Yes	Yes	Yes
Jamaica Bay	2200_26_JB026	1.08	Yes	No	Yes	Yes	Yes	Yes
Jamaica Bay	2200_26_JB031	0.92	Yes	No	Yes	Yes	Yes	Yes
Jamaica Bay	2200_26_JB033	0.94	Yes	No	Yes	No	**No**	**No**
Jamaica Bay	2200_26_JB039	0.38	No	No	Yes	Yes	**No**	Yes
Jamaica Bay	2200_26_JB041	0.69	No	No	Yes	No	**No**	**No**
Jamaica Bay	2200_26_JB042	1.03	Yes	No	Yes	Yes	Yes	Yes
Jamaica Bay	2200_26_JB043	0.74	No	No	Yes	No	**No**	**No**
Jamaica Bay	2200_27_JB101	0.98	Yes	No	Yes	No	**No**	**No**
Jamaica Bay	2200_27_JB103	0.93	Yes	No	Yes	No	**No**	**No**
Jamaica Bay	2200_27_JB104	0.8	Yes	No	Yes	Yes	Yes	Yes
Jamaica Bay	2200_27_JB106	0.92	Yes	No	Yes	No	**No**	**No**
Jamaica Bay	2200_27_JB108	0.96	Yes	No	Yes	Yes	Yes	Yes
Jamaica Bay	2200_27_JB110	0.99	Yes	No	Yes	Yes	Yes	Yes
Jamaica Bay	2200_27_JB111	0.97	Yes	No	Yes	No	**No**	**No**
Jamaica Bay	2200_27_JB112	0.98	Yes	No	Yes	Yes	Yes	Yes
Jamaica Bay	2200_27_JB113	0.95	Yes	No	Yes	Yes	Yes	Yes
Jamaica Bay	2200_27_JB114	0.97	Yes	No	Yes	Yes	Yes	Yes
Jamaica Bay	2200_27_JB115	0.94	Yes	No	Yes	Yes	Yes	Yes
Jamaica Bay	2200_27_JB117	1.00	Yes	No	Yes	No	**No**	**No**
Jamaica Bay	2200_27_JB119	0.98	Yes	No	Yes	Yes	Yes	Yes
Jamaica Bay	2200_27_JB120	1.00	Yes	No	Yes	Yes	Yes	Yes
Jamaica Bay	2200_46_JBA11	0.9796	Yes	No	No	Yes	**No**	Yes
Jamaica Bay	2200_56_JB008	0.62	No	No	Yes	No	**No**	**No**
Jamaica Bay	2200_56_JB018	0.33	No	No	Yes	No	**No**	**No**
Jamaica Bay	2200_56_JB026	0	No	Yes	Yes	No	**No**	**No**
Jamaica Bay	2200_56_JB031	0.96	Yes	No	Yes	Yes	Yes	Yes
Jamaica Bay	2200_56_JB033	0	No	Yes	Yes	No	**No**	**No**
Jamaica Bay	2200_56_JB039	1.00	Yes	No	Yes	No	**No**	**No**
Jamaica Bay	2200_56_JB041	0.93	Yes	No	Yes	Yes	Yes	Yes
Jamaica Bay	2200_56_JB042	1.01	Yes	No	Yes	Yes	Yes	Yes
Jamaica Bay	2200_56_JB043	0.89	Yes	No	Yes	Yes	Yes	Yes
Jamaica Bay	2200_56_JB201	0.93	Yes	No	Yes	Yes	Yes	Yes
Jamaica Bay	2200_56_JB202	1.00	Yes	No	Yes	No	**No**	**No**
Jamaica Bay	2200_56_JB203	0.92	Yes	No	Yes	No	**No**	**No**
Jamaica Bay	2200_56_JB204	0.77	No	No	Yes	No	**No**	**No**
Jamaica Bay	2200_56_JB205	0.86	Yes	No	Yes	Yes	Yes	Yes
Jamaica Bay	2200_56_JB206	0.97	Yes	No	Yes	No	**No**	**No**

Table B3-4b. Thres

Statistic
25th percentile
75th percentile
Interquartile range
Lower limit

Note: toxicity test values are
Best professional judgment is
Lower limit for Jamaica Bay is

Table B3-4a. Toxicity screen of regional reference *A. abdita* survival data, result of reference data screens

Area of Interest	Location	*A. abdita* survival (% of control)	Pass Toxicity Screen? (≥80% survival)	Extreme Toxicity Value?*	Full SQT Data Available?	Pass Chemistry Screen (Table B3-3)?	Acceptable Reference Location, LOE Approach	Acceptable Reference Location, Quantiative Uncertainty Analysis
Jamaica Bay	2200_56_JB207	0.98	Yes	No	Yes	No	**No**	**No**
Jamaica Bay	2200_56_JB209	1.02	Yes	No	Yes	No	**No**	**No**
Jamaica Bay	2200_56_JB210	0.88	Yes	No	Yes	Yes	Yes	Yes
Jamaica Bay	2200_56_JB211	0.73	No	No	Yes	Yes	**No**	Yes
Jamaica Bay	2200_56_JB212	1.00	Yes	No	Yes	Yes	Yes	Yes
Jamaica Bay	2200_56_JB213	0.95	Yes	No	Yes	No	**No**	**No**
Jamaica Bay	2200_56_JB214	0.94	Yes	No	Yes	Yes	Yes	Yes
Jamaica Bay	2200_56_JB215	0.39	No	No	Yes	Yes	**No**	Yes
Jamaica Bay	2200_56_JB216	0.04	No	Yes	Yes	Yes	**No**	**No**
Jamaica Bay	2200_56_JB217	1.00	Yes	No	Yes	Yes	Yes	Yes
Jamaica Bay	2200_56_JB219	1.01	Yes	No	Yes	Yes	Yes	Yes
Jamaica Bay	2200_56_JB222	0.94	Yes	No	Yes	Yes	Yes	Yes
Jamaica Bay	2200_56_JB223	0.14	No	Yes	Yes	No	**No**	**No**
Jamaica Bay	2300_M0_NY-0029-A	0.957	Yes	No	Yes	Yes	Yes	Yes
Jamaica Bay	2300_M1_NY-0032-A	0.989	Yes	No	Yes	Yes	Yes	Yes
Jamaica Bay	2300_M2_NY-0029-A	0.902	Yes	No	Yes	Yes	Yes	Yes
Jamaica Bay	2300_M2_NY-0235-A	0.904	Yes	No	Yes	No	**No**	**No**
Jamaica Bay	2300_M2_NY-0239-A	0.787	No	No	Yes	No	**No**	**No**
Jamaica Bay	2300_M3_NY03-0236	0.867	Yes	No	Yes	Yes	Yes	Yes
Jamaica Bay	2300_M4_NY04-0234	0.948	Yes	No	Yes	No	**No**	**No**
Jamaica Bay	2300_M5_NY05-0002	0.596	No	No	No	Yes	**No**	Yes
Jamaica Bay	2300_M5_NY05-0010	1	Yes	No	No	No	**No**	**No**
Jamaica Bay	JB301	0.725	No	No	Yes	Yes	**No**	Yes
Jamaica Bay	JB303	1.01	No	No	Yes	No	**No**	**No**
Jamaica Bay	JB305	1.00	No	No	Yes	No	**No**	**No**
Jamaica Bay	JB306	1.01	No	No	Yes	No	**No**	**No**
Jamaica Bay	JB307	1.01	No	No	Yes	No	**No**	**No**
Jamaica Bay	JB309	0.0330	No	Yes	Yes	No	**No**	**No**
Jamaica Bay	JB310	0.0330	No	Yes	Yes	Yes	**No**	**No**
Jamaica Bay	JB313	0.813	No	No	Yes	No	**No**	**No**
Jamaica Bay	JB315	0.110	No	Yes	Yes	Yes	**No**	**No**
Jamaica Bay	JB316	0.110	No	Yes	Yes	No	**No**	**No**
Jamaica Bay	JB317	0.912	Yes	No	Yes	Yes	Yes	Yes
Jamaica Bay	JB319	0.900	Yes	No	Yes	Yes	Yes	Yes
Jamaica Bay	JB322	0.811	Yes	No	Yes	Yes	Yes	Yes
Jamaica Bay	JB323	0.411	No	No	Yes	No	**No**	**No**
Jamaica Bay	JB354	0.211	No	Yes	Yes	No	**No**	**No**
Jamaica Bay	JB358	0.544	No	No	Yes	Yes	**No**	Yes
Jamaica Bay	JB359	0.744	No	No	Yes	Yes	**No**	Yes
Jamaica Bay	JB361	0.611	No	No	Yes	Yes	**No**	Yes
Jamaica Bay	JB364	0.822	No	No	Yes	No	**No**	**No**
Jamaica Bay	JB366	0.0111	No	Yes	Yes	Yes	**No**	**No**
Jamaica Bay	JB367	0.0667	No	Yes	Yes	No	**No**	**No**
Jamaica Bay	JB368	0.681	No	No	Yes	Yes	**No**	Yes

Table B3-4b. Thres

Statistic

Table B3-4a. Toxicity screen of regional reference *A. abdita* survival data, result of reference data screens

Area of Interest	Location	*A. abdita* survival (% of control)	Pass Toxicity Screen? (≥80% survival)	Extreme Toxicity Value?*	Full SQT Data Available?	Pass Chemistry Screen (Table B3-3)?	Acceptable Reference Location, LOE Approach	Acceptable Reference Location, Quantiative Uncertainty Analysis
Jamaica Bay	JB371	0.135	No	Yes	Yes	No	**No**	**No**
Jamaica Bay	JB372	0.802	No	No	Yes	No	**No**	**No**
Jamaica Bay	JB374	0.729	No	No	Yes	No	**No**	**No**
Jamaica Bay	JB380	0.785	No	No	Yes	Yes	**No**	Yes
Jamaica Bay	JB381	0.698	No	No	Yes	Yes	**No**	Yes
Jamaica Bay	JB386	0.891	Yes	No	Yes	Yes	Yes	Yes
Mullica River and Great Bay	2300_13_90-118	0.6	No	No	No	Yes	**No**	Yes
Mullica River and Great Bay	2300_13_90-120	0.69	No	No	No	No	**No**	**No**
Mullica River and Great Bay	2300_14_91-348	0.957	Yes	No	No	Yes	**No**	Yes
Mullica River and Great Bay	2300_14_91-349	0.894	Yes	No	No	Yes	**No**	Yes
Mullica River and Great Bay	2300_L3_NJ03-0038	0.88	Yes	No	Yes	Yes	Yes	Yes
Mullica River and Great Bay	2300_L4_NJ04-0427	0.901	Yes	No	Yes	No	**No**	**No**
Mullica River and Great Bay	2300_L4_NJ04-0429	0.957	Yes	No	Yes	No	**No**	**No**
Mullica River and Great Bay	2300_L5_NJ05-0059	0.929	Yes	No	Yes	Yes	Yes	Yes
Mullica River and Great Bay	2300_L6_NJ06-0015	1	Yes	No	Yes	Yes	Yes	Yes
Mullica River and Great Bay	2300_L6_NJ06-0027	0.948	Yes	No	Yes	Yes	Yes	Yes
Mullica River and Great Bay	2300_L6_NJ06-0035	1	Yes	No	Yes	Yes	Yes	Yes
Mullica River and Great Bay	MR9921SDM-TSI	1.07	Yes	No	No	No	**No**	**No**
Mullica River and Great Bay	MR9922SDM-TSI	1.03	Yes	No	No	Yes	**No**	Yes
Mullica River and Great Bay	MR9923SDM-TSI	1.03	Yes	No	No	No	**No**	**No**
Mullica River and Great Bay	NCCA10-2622	0.859	Yes	No	Yes	Yes	Yes	Yes
Mullica River and Great Bay	NJ00-0035	0.989	Yes	No	Yes	No	**No**	**No**
Mullica River and Great Bay	NJ00-0037	0.777	No	No	No	Yes	**No**	Yes
Mullica River and Great Bay	NJ01-0036	0.989	Yes	No	Yes	Yes	Yes	Yes
Mullica River and Great Bay	NJ01-0038	1.01	Yes	No	Yes	Yes	Yes	Yes
Mullica River and Great Bay	NJ01-0116	0.922	Yes	No	Yes	No	**No**	**No**
Mullica River and Great Bay	NJ01-0118	0.844	Yes	No	Yes	Yes	Yes	Yes
Mullica River and Great Bay	NJ01-0122	0.979	Yes	No	Yes	Yes	Yes	Yes
Mullica River and Great Bay	NJ02-0227	1	Yes	No	Yes	Yes	Yes	Yes
Mullica River and Great Bay	NJ02-0229	0.915	Yes	No	Yes	No	**No**	**No**
Mullica River and Great Bay	NJ02-0230	1.07	Yes	No	Yes	Yes	Yes	Yes

SQT -- sediment quality triad

* Extreme values are determined using best professional judgment and the 3* IQR outlier method;
samples excluded on the basis of judgment had survival between 1.1 and 11% of the negative control, which, though potentially relevant to an urban reference area, does not comport with the purposes of e

Note: Samples passing the toxicity screen (for LOE Approach) have *A. abdita* survival ≥80% of the negative control result

Samples were removed from further analysis if any of the three SQT LOEs (i.e., sediment chemistry, sediment toxicity, or benthic community metric data) could not be evaluated

The "toxicity screen" only applies to the LOE screening approach; extreme values were removed as part of the quantitative analysis of uncertainty

Bold values indicate samples removed from further analysis

Table B3-4b. Thres

Statistic

Table B3-4 presents the sediment toxicity test screening step conducted in the LPRSA BERA. Per USEPA guidance, control-normalized *Ampelisca abdita* survival less characterize reference conditions for SQT analyses. In the quantitative analysis of uncertainty, also presented in the BERA (Section 6.1.3.1), there is discussion of th alternative approach is presented in Table B3-4; extreme low toxicity values were identified using a common outlier identification method (typically shown visually

Table B3-4a. Toxicity screen of regional reference *A. abdita* survival data, result of reference data screens

Area of Interest	Location	*A. abdita* survival (% of control)	Pass Toxicity Screen? (≥80% survival)	Extreme Toxicity Value?*	Full SQT Data Available?	Pass Chemistry Screen (Table B3-3)?	Acceptable Reference Location, LOE Approach	Acceptable Reference Location, Quantiative Uncertainty Analysis

Table B3-4b. Thres

Statistic

alternative approach is presented in Table B3-4. extreme low toxicity values were identified using a common outlier identification method (typically shown visually associated samples were screened out of subsequent analyses. Table B3-4b presents the calculated thresholds defining extreme values. Three additional reference judgment (JB310, JB315, and JB366); *A. abidita* survival in these samples ranged from 1.1% to 11% of the negative control, and those values were not classified as "

holds for "extreme" estuarine reference toxicity values, quantiative uncertainty analysis

Jamaica Bay *A. abdita* Survival Threshold (% of control)	Mullica River and Great Bay *A. abdita* Survival Threshold (% of control)
0.683	0.894
0.977	1.00
0.294	0.106
-0.198	**0.576**

considered extreme if they are less than the lower limit
s also used to identify samples with extreme low toxicity
s below 0%, so no outlier can be identified using the 3* IQR method

holds for "extreme" estuarine reference toxicity values, quantiative uncertainty analysis

Jamaica Bay *A. abdita* Survival Threshold (% of control)	Mullica River and Great Bay *A. abdita* Survival Threshold (% of control)

holds for "extreme" estuarine reference toxicity values, quantiative uncertainty analysis

Jamaica Bay *A. abdita* Survival Threshold (% of control)	Mullica River and Great Bay *A. abdita* Survival Threshold (% of control)

than 80% is considered unacceptable for use in the BERA to
e uncertainty associated with the toxicity test screening step. An
in boxplot graphs) as well as best professional judgment, and

holds for "extreme" estuarine reference toxicity values, quantiative uncertainty analysis

Jamaica Bay *A. abdita* Survival Threshold (% of control)	Mullica River and Great Bay *A. abdita* Survival Threshold (% of control)

in boxplot graphs) as well as best professional judgment, and
samples were excluded on the grounds of best professional
"extreme" using the 3 * IQR outlier approach. The result of the

Table B3-5a. Calculation of Jamaica Bay reference envelope thresholds

Location ID	Abundance (per m^2)	Taxa Richness	Shannon-Wiener H'	Pielou's J'	Swartz's Dominance Index	*A. abdita* survival (% of control)
2200_26_JB002	2875	18	2.17	0.750	5	0.96
2200_26_JB006	35500	35	1.61	0.455	2.5	0.91
2200_26_JB022	25113	23.5	1.53	0.485	2.5	1.04
2200_26_JB026	37663	42.5	2.38	0.636	5.5	1.08
2200_26_JB031	44825	28.5	1.56	0.467	2	0.92
2200_26_JB042	6075	25	1.94	0.601	4	1.03
2200_27_JB104	5663	7.5	0.80	0.382	1.5	0.8
2200_27_JB108	6888	20	1.54	0.515	2.5	0.96
2200_27_JB110	32713	21	1.46	0.484	2.5	0.99
2200_27_JB112	22488	29	1.85	0.551	4.5	0.98
2200_27_JB113	33125	27.5	1.40	0.421	2	0.95
2200_27_JB114	67788	34	2.25	0.637	6	0.97
2200_27_JB115	21500	41	2.76	0.754	8	0.94
2200_27_JB119	14050	21.5	1.57	0.512	2.5	0.98
2200_27_JB120	20375	22	1.41	0.453	2.5	1
2200_56_JB031	15325	25	2.00	0.621	4.5	0.96
2200_56_JB041	146750	44	1.52	0.401	3	0.93
2200_56_JB042	7425	26.5	1.98	0.608	4	1.01
2200_56_JB043	22588	47	2.42	0.628	7	0.89
2200_56_JB201	1513	13.5	2.05	0.792	4.5	0.93
2200_56_JB205	963	11	1.87	0.813	4.5	0.86
2200_56_JB210	6563	20.5	1.66	0.550	3	0.88
2200_56_JB212	675	6.5	1.00	0.539	1.5	1
2200_56_JB214	60675	24	0.71	0.232	1	0.94
2200_56_JB217	7625	20.5	1.85	0.612	4	1
2200_56_JB219	850	10.5	1.96	0.855	5	1.01
2200_56_JB222	6700	12	0.92	0.398	1	0.94
2300_M0_NY-0029-A	660	17	0.92	0.744	6	0.957
2300_M1_NY-0032-A	18830	48	0.90	0.536	4	0.989
2300_M2_NY-0029-A	675	7	0.52	0.614	2	0.902
2300_M3_NY03-0236	11900	28	1.08	0.745	6	0.867
JB317	19990	34	2.46	0.697	7	0.912
JB319	480	8.5	1.78	0.856	4	0.900
JB322	21300	30.5	2.07	0.608	4.5	0.811
JB386	410	8	1.75	0.850	4	0.891
Envelope Thresholds						
5th percentile	606	7.35	0.774	0.393	1.4	0.845

Table B3-5b. Calculation of Jamaica Bay reference

Location ID	Abundance (per m^2)	Taxa Richness	Shannon-Wiener H'	Pielou's J'
2200_26_JB002	2875	18	2.17	0.750
2200_26_JB006	35500	35	1.61	0.455
2200_26_JB022	25113	23.5	1.53	0.485
2200_26_JB026	37663	42.5	2.38	0.636
2200_26_JB031	44825	28.5	1.56	0.467
2200_26_JB039	282150	44	2.04	0.540
2200_26_JB042	6075	25	1.94	0.601
2200_27_JB104	5663	7.5	0.799	0.382
2200_27_JB108	6888	20	1.54	0.515
2200_27_JB110	32713	21	1.46	0.484
2200_27_JB112	22488	29	1.85	0.551
2200_27_JB113	33125	27.5	1.40	0.421
2200_27_JB114	67788	34	2.25	0.637
2200_27_JB115	21500	41	2.76	0.754
2200_27_JB119	14050	21.5	1.57	0.512
2200_27_JB120	20375	22	1.41	0.453
2200_56_JB031	15325	25	2.00	0.621
2200_56_JB041	146750	44	1.52	0.401
2200_56_JB042	7425	26.5	1.98	0.608
2200_56_JB043	22588	47	2.42	0.628
2200_56_JB201	1513	13.5	2.05	0.792
2200_56_JB205	963	11	1.87	0.813
2200_56_JB210	6563	20.5	1.66	0.550
2200_56_JB211	3913	20	2.01	0.672
2200_56_JB212	675	6.5	1.00	0.539
2200_56_JB214	60675	24	0.714	0.232
2200_56_JB215	73825	36	1.52	0.430
2200_56_JB217	7625	20.5	1.85	0.612
2200_56_JB219	850	10.5	1.96	0.855
2200_56_JB222	6700	12	0.917	0.398
2300_M0_NY-0029-A	660	17	0.915	0.744
2300_M1_NY-0032-A	18830	48	0.900	0.536
2300_M2_NY-0029-A	675	7	0.519	0.614
2300_M3_NY03-0236	11900	28	1.08	0.745
JB301	1980	17	1.83	0.656
JB317	19990	34	2.46	0.697
JB319	480	8.5	1.78	0.856
JB322	21300	30.5	2.07	0.608
JB358	820	9	1.54	0.853
JB359	7320	25.5	2.20	0.676
JB361	20940	12	1.44	0.578
JB368	94200	21.5	1.47	0.482
JB380	18970	24	1.69	0.532
JB381	110	3.5	1.10	0.875
JB386	410	8	1.75	0.850
Envelope Thresholds				
5th percentile	516	7.10	0.820	0.399

95th percentile	62809	na	na	na	na	na

na -- not applicable

Note: 95th percentile values are only relevant for abundance (and Hilsenhoff Biotic Index in freshwater datasets)

Thresholds are based on acceptable SQT locations from Jamaica Bay, LOE approach (Table B3-4)

95th percentile	90125	na	na	na

na -- not applicable

Note: 95th percentile values are only relevant for abundance (and Hilsenhoff Bioti

Thresholds are based on acceptable SQT locations from Jamaica Bay, quantitati

Table B3-5c. Calculation of Mulilca River and Great Bay reference envelope thresholds

Location ID	Abundance (per m2)	Taxa Richness	Shannon-Wiener H'	Pielou's J'	Swartz's Dominance Index	A. abdita survival (% of control)
2300_L3_NJ03-0038	2000	14	2.13	0.805	5	0.88
2300_L5_NJ05-0059	22075	22	1.14	0.369	2	0.929
2300_L6_NJ06-0015	7100	39	2.79	0.762	9	1
2300_L6_NJ06-0027	3800	30	3.01	0.884	11	0.948
2300_L6_NJ06-0035	4725	30	2.61	0.767	7	1
NCCA10-2622	2525	8	0.92	0.441	2	0.859
NJ01-0036	1470	17	2.01	0.708	4	0.989
NJ01-0038	1675	11	1.68	0.702	3	1.01
NJ01-0118	8050	37	2.93	0.811	10	0.844
NJ01-0122	9950	14	1.68	0.636	3	0.979
NJ02-0227	51375	34	1.01	0.287	2	1
NJ02-0230	46100	42	1.51	0.403	3	1.07
Envelope Thresholds						
5th percentile	1583	9.65	0.969	0.332	2	0.852
95th percentile	48474	na	na	na	na	na

na -- not applicable

Note: 95th percentile values are only relevant for abundance (and Hilsenhoff Biotic Index in freshwater datasets)

Thresholds are based on acceptable SQT locations from Mullica River and Great Bay, LOE approach (Table B3-4)

This dataset does not differ from the quantiative analyis of uncertainty approach (Table B3-5d)

Table B3-5d. Calculation of Mullica River and Grea

Location ID	Abundance (per m^2)	Taxa Richness	Shannon-Wiener H'	Pielou's J'
2300_L3_NJ03-0038	2000	14	2.13	0.805
2300_L5_NJ05-0059	22075	22	1.14	0.369
2300_L6_NJ06-0015	7100	39	2.79	0.762
2300_L6_NJ06-0027	3800	30	3.01	0.884
2300_L6_NJ06-0035	4725	30	2.61	0.767
NCCA10-2622	2525	8	0.92	0.441
NJ01-0036	1470	17	2.01	0.708
NJ01-0038	1675	11	1.68	0.702
NJ01-0118	8050	37	2.93	0.811
NJ01-0122	9950	14	1.68	0.636
NJ02-0227	51375	34	1.01	0.287
NJ02-0230	46100	42	1.51	0.403
Envelope Thresholds				
5th percentile	1583	9.65	0.969	0.332
95th percentile	48474	na	na	na

na -- not applicable

Note: 95th percentile values are only relevant for abundance (and Hilsenhoff Bioti

Thresholds are based on acceptable SQT locations from Mullica River and Great

This dataset does not differ from the LOE approach (Table B3-5c)

Table B3-5 presents sediment toxicity and benthic community metric data for acceptable regional reference datasets. Tables B3-5a and B3-5c present the acceptable Jamaica Great Bay datasets based on USEPA's preferred method, and Tables B3-5b and B3-5d present analogous datasets based on the alternative approach for the quantiative analys to the raw datasets, "envelope thresholds" are calculated for each toxicity test endpoint or benthic metric. These values quantitatively define the "reference condition". In the thresholds are directly compared to LPRSA toxicity and benthic metric data on a sample-by-sample basis. Values exceeding relevant 95th percentiles or falling below relevant through B3-9) are said to be "outside" of the reference condition and therefore impacted to some degree. In the weight of evidence analysis (Tables B8 and B9), LPRSA excee thresholds are combined to infer chemical risk.

It is important to note that *Chironomus dilutus* and *Hyalella azteca* toxicity test results were not available from regional estuarine reference areas, so envelope thresholds wer toxicity endpoints. There were many LPRSA locations classified as "freshwater" based on interstitial salinity (<5 ppt) that were within the upper and fluvial estuarine LPRSA (RM and *H. azteca* toxicity tests were conducted in sediments from those LPRSA locations. The comparison of toxicity data from those locations in Tables B3-6 through B3-9 are ba envelope threshold values calculated in Table B4 (Table B4-4), based on urban freshwater data from above Dundee Dam. Insufficient non-urban freshwater reference data are

envelope thresholds, quantitative analysis of uncertainty

Swartz's Dominance Index	*A. abdita* survival (% of control)
5	0.960
2.5	0.910
2.5	1.04
5.5	1.08
2	0.920
4	0.380
4	1.03
1.5	0.800
2.5	0.960
2.5	0.990
4.5	0.980
2	0.950
6	0.970
8	0.940
2.5	0.980
2.5	1.00
4.5	0.960
3	0.930
4	1.01
7	0.890
4.5	0.930
4.5	0.860
3	0.880
4	0.730
1.5	1.00
1	0.940
2	0.390
4	1.00
5	1.01
1	0.940
6	0.957
4	0.989
2	0.902
6	0.867
3	0.725
7	0.912
4	0.900
4.5	0.811
3	0.544
5.5	0.744
2.5	0.611
2.5	0.681
3	0.785
2.5	0.698
4	0.891
1.5	0.558

na	na

c Index in freshwater datasets)
ve analysis of uncertainty (Table B3-4)

t Bay reference envelope thresholds, quantitative analysis of uncertainty

Swartz's Dominance Index	*A. abdita* survival (% of control)
5	0.88
2	0.929
9	1
11	0.948
7	1
2	0.859
4	0.989
3	1.01
10	0.844
3	0.979
2	1
3	1.07
2	0.852
na	na

c Index in freshwater datasets)
Bay, quantitative analysis of uncertainty (Table B3-4)

Bay and Mullica River and
sis of uncertainty. In addition
e BERA, the envelope
5th percentiles (Tables B3-6
dances of the envelope

re not calculated for those
M 0 to RM 13), and *C. dilutus*
sed on the reference
e currently available from the

Table B3-6. Comparison of LPRSA benthic community metric and toxicity data (Upper Estuary and Fluvial Estuary Benthic Salinity Zo

Location ID	Approx. RM	Toxicity Test Type	Benthic Salinity Zone	LPRSA Benthic Community Metric Data										
				Abundance (per m^2)	Taxa Richness	Shannon-Weiner H'	Pielou's J'	Swartz's Dominance Index	*C. dilutus* survival (% of control)*	*C. dilutus* biomass (% of control)*	*H. azteca* survival (% of control)*	*H. azteca* biomass (% of control)*	*A. abdita* survival (% of control)	Abundance (per m^2)
Thresholds			**5th percentile**	606	7.35	0.774	0.393	1.35	0.827	0.778	0.758	0.362	0.845	
			95th percentile	62809	na	na	na	na	na	na	na	na	na	
LPRT01A	0.0	Estuarine	Upper Estuary	1090	8	1.06	0.507	2.00			0.88	0.82	0.874	0
LPRT01D	0.3	Estuarine	Upper Estuary	2050	12.3	1.63	0.65	3.00			0.81	0.70	0.579	0
LPRT01C	0.4	Estuarine	Upper Estuary	2740	16	2.01	0.727	4.67			0.41	0.26	0.918	0
LPRT01B	0.4	Estuarine	Upper Estuary	177	4.67	1.13	0.7	2.33			0.89	0.72	0.947	1
LPRT01E	0.5	Estuarine	Upper Estuary	4120	13.3	1.62	0.627	2.67			0.25	0.19	0.847	0
LPRT01F	0.6	Estuarine	Upper Estuary	357	7	1.06	0.537	2.00			0.95	0.69	0.853	1
LPRT01G	0.8	Estuarine	Upper Estuary	973	10.7	1.42	0.6	2.33			0.89	0.65	0.968	0
LPRT02A	1.0	Estuarine	Upper Estuary	603	10.7	1.65	0.71	3.67			0.87	0.56	0.895	1
LPRT02D	1.2	Estuarine	Upper Estuary	830	11	2.06	0.87	5.33			0.82	0.57	0.949	0
LPRT02B	1.3	Estuarine	Upper Estuary	127	6.67	1.68	0.887	4.00			0.72	0.60	0.695	1
LPRT02C	1.3	Estuarine	Upper Estuary	630	7.67	1.67	0.823	3.67			0.95	0.68	0.918	0
LPRT02E	1.5	Estuarine	Upper Estuary	155	5.5	1.42	0.83	3.50			0.83	0.68	0.779	1
LPRT02F	1.6	Estuarine	Upper Estuary	240	9.33	1.73	0.807	4.00			0.91	0.61	0.832	1
LPRT03A	2.0	Estuarine	Upper Estuary	320	2.67	0.427	0.43	1.33			0.83	0.84	0.611	1
LPRT03B	2.2	Estuarine	Upper Estuary	773	6.33	1.45	0.803	3.00			0.88	0.83	0.937	0
LPRT03C	2.3	Estuarine	Upper Estuary	1840	6.67	0.81	0.41	2.00			0.56	0.43	0.867	0
LPRT03D	2.7	Estuarine	Upper Estuary	460	8.33	1.64	0.773	3.33			0.85	0.64	0.874	1
LPRT03E	2.8	Estuarine	Upper Estuary	593	7.67	1.17	0.69	2.00			0.87	0.95	0.895	1
LPRT03F	2.8	Estuarine	Upper Estuary	693	8.67	1.49	0.697	3.00			0.73	0.43	0.837	0
LPRT04A	3.4	Estuarine	Upper Estuary	1120	8.67	1.56	0.737	3.00			0.99	0.96	0.821	0
LPRT04B	3.5	Estuarine	Upper Estuary	523	6.33	1.41	0.79	2.67			0.88	0.71	0.232	1
LPRT04C	3.7	Estuarine	Upper Estuary	107	4.67	1.08	0.89	3.00			0.36	0.17	0.153	1
LPRT04D	3.8	Estuarine	Upper Estuary	1220	5.33	0.507	0.297	1.00			0.69	0.51	0.714	0
LPRT04E	3.8	Estuarine	Upper Estuary	1170	6	1.07	0.607	2.33			0.62	0.35	0.827	0
LPRT04F	3.9	Freshwater	Upper Estuary	333	4.67	1.09	0.757	2.33	0.83	0.82	0.87	0.44		1
LPRT05A	4.1	Estuarine	Fluvial Estuary	3300	10.7	1.28	0.547	2.00			0.07	0.03	0.367	0
LPRT05B	4.2	Estuarine	Fluvial Estuary	543	6.67	1.17	0.677	2.33			0.16	0.06	0.878	1
LPRT05C	4.2	Freshwater	Fluvial Estuary	2940	10.3	1.33	0.57	2.33	0.96	0.70	0.53	0.19		0
LPRT05D	4.3	Freshwater	Fluvial Estuary	227	6	1.08	0.603	2.67	0.89	0.71	0.68	0.32		1
LPRT05E	4.7	Freshwater	Fluvial Estuary	200	3.67	1.08	0.85	2.00	0.96	0.71	0.70	0.45		1
LPRT05F	4.9	Freshwater	Fluvial Estuary	147	3.33	0.737	0.74	2.00	1.04	0.65	0.34	0.16		1
LPRT06A	5.0	Freshwater	Fluvial Estuary	5180	6.67	0.757	0.4	1.33	0.94	0.59	0.88	0.39		0
LPRT06B	5.1	Freshwater	Fluvial Estuary	3380	4.33	0.147	0.1	1.00	0.83	0.66	0.65	0.21		0
LPRT06C	5.5	Estuarine	Fluvial Estuary	3200	9	1.31	0.597	2.67			0.52	0.26	0.878	0
LPRT06D	5.6	Freshwater	Fluvial Estuary	7010	8.33	1.13	0.533	2.00	0.90	0.62	0.64	0.19		0
LPRT06E	5.8	Freshwater	Fluvial Estuary	2490	7.33	1.21	0.603	2.33	0.90	0.74	0.81	0.37		0
LPRT06F	5.9	Freshwater	Fluvial Estuary	927	2.33	0.547	0.727	1.67	0.88	0.61	0.90	0.58		0
LPRT07A	6.1	Freshwater	Fluvial Estuary	3270	7.67	1.05	0.513	2.00	0.96	0.90	0.67	0.31		0
LPRT07B	6.5	Freshwater	Fluvial Estuary	3200	7.67	0.933	0.467	1.67	0.96	0.65	0.22	0.07		0
LPRT07C	6.6	Freshwater	Fluvial Estuary	597	4.67	0.703	0.473	1.33	1.00	0.52	0.72	0.36		1
LPRT07D	6.8	Freshwater	Fluvial Estuary	1630	5.33	0.44	0.26	1.00	0.89	0.75	0.66	0.35		0
LPRT07E	6.8	Freshwater	Fluvial Estuary	3740	6.67	0.383	0.217	1.00	0.85	0.59	0.75	0.42		0
LPRT08A	7.0	Freshwater	Fluvial Estuary	253	4.33	0.863	0.657	1.67	0.97	0.76	0.51	0.22		1
LPRT08B	7.3	Freshwater	Fluvial Estuary	340	3	0.773	0.703	2.00	1.00	0.68	0.63	0.40		1

LPRT08C	7.4	Freshwater	Fluvial Estuary	3410	11.7	1.3	0.533	2.33	1.01	0.60	0.36	0.23	0
LPRT08D	7.5	Freshwater	Fluvial Estuary	843	5.67	1.1	0.677	2.00	0.73	0.84	0.77	0.43	0
LPRT08E	7.8	Freshwater	Fluvial Estuary	650	5.67	1.22	0.723	2.33	1.06	0.94	0.69	0.47	0
LPRT09B	8.1	Freshwater	Fluvial Estuary	533	3.67	0.877	0.717	2.00	0.86	0.80	0.71	0.73	1
LPRT09H	8.3	Freshwater	Fluvial Estuary	1330	7.33	0.98	0.503	1.67	0.84	0.79	0.81	0.50	0
LPRT09A	8.5	Freshwater	Fluvial Estuary	1300	9.33	1.14	0.51	2.00	0.94	0.58	0.37	0.13	0
LPRT09C	8.6	Freshwater	Fluvial Estuary	11300	10.3	1.08	0.473	2.00	0.88	0.69	0.68	0.60	0
LPRT09D	8.7	Freshwater	Fluvial Estuary	8250	10	0.713	0.313	1.00	1.00	0.83	0.79	0.44	0
LPRT09E	8.7	Freshwater	Fluvial Estuary	6180	9.33	1.04	0.46	2.00	0.97	0.76	0.60	0.33	0
LPRT09F	8.8	Freshwater	Fluvial Estuary	5380	8.67	0.647	0.3	1.00	0.92	0.91	0.43	0.21	0
LPRT09G	8.8	Freshwater	Fluvial Estuary	1090	4.67	0.967	0.627	2.00	0.93	0.98	1.03	0.64	0
LPRT10A	9.1	Freshwater	Fluvial Estuary	11100	9.67	0.81	0.357	1.33	0.79	0.35	0.65	0.41	0
LPRT10B	9.2	Freshwater	Fluvial Estuary	7210	14.7	1.22	0.453	1.67	0.16	0.05	0.19	0.09	0
LPRT10C	9.6	Freshwater	Fluvial Estuary	10200	13.3	0.877	0.337	1.00	0.99	0.36	0.69	0.52	0
LPRT10D	9.7	Freshwater	Fluvial Estuary	5030	13.7	1.49	0.593	3.00	0.80	0.57	1.02	0.92	0
LPRT10E	9.8	Freshwater	Fluvial Estuary	14000	14	1.38	0.523	2.33	0.99	0.73	0.37	0.26	0
LPRT11A	10.6	Freshwater	Fluvial Estuary	4280	14	1.48	0.57	2.33	0.80	0.52	0.93	0.76	0
LPRT11B	10.6	Freshwater	Fluvial Estuary	4610	13.3	1.65	0.647	3.00	0.47	0.20	0.65	0.37	0
LPRT11C	10.7	Freshwater	Fluvial Estuary	6100	13.7	1.28	0.497	2.33	0.83	0.77	0.65	0.51	0
LPRT11D	10.8	Freshwater	Fluvial Estuary	16500	16	1.48	0.54	2.67	0.88	0.56	0.79	0.61	0
LPRT11E	10.9	Freshwater	Fluvial Estuary	5160	9.67	0.927	0.467	1.67	0.92	0.46	0.90	0.52	0
LPRT11F	11.0	Freshwater	Fluvial Estuary	6050	16	1.62	0.587	3.33	0.95	0.46	0.53	0.43	0
LPRT11G	11.0	Freshwater	Fluvial Estuary	3170	7	0.84	0.44	1.67	0.72	0.12	0.16	0.06	0
LPRT12A	11.2	Freshwater	Fluvial Estuary	3610	11	1.05	0.447	1.67	0.95	0.56	0.68	0.32	0
LPRT12B	11.3	Freshwater	Fluvial Estuary	8180	13	1.34	0.52	2.67	0.97	0.38	0.84	0.48	0
LPRT12C	11.5	Freshwater	Fluvial Estuary	9870	15.3	1.26	0.463	2.33	0.80	0.29	0.59	0.27	0
LPRT12D	11.6	Freshwater	Fluvial Estuary	5860	11	1.07	0.443	1.67	1.01	0.49	0.59	0.26	0
LPRT12E	11.7	Freshwater	Fluvial Estuary	5050	9	1.35	0.617	2.67	0.91	0.25	0.53	0.27	0
LPRT13A	12.1	Freshwater	Fluvial Estuary	2600	11.3	1.28	0.54	2.00	0.87	0.51	0.56	0.30	0
LPRT13B	12.3	Freshwater	Fluvial Estuary	5790	11.7	1.33	0.547	2.00	0.94	0.52	0.91	0.48	0
LPRT13C	12.4	Freshwater	Fluvial Estuary	4630	9	1.07	0.49	2.00	1.00	0.63	0.85	0.41	0
LPRT13D	12.5	Freshwater	Fluvial Estuary	680	7.67	1.43	0.727	3.33	0.94	0.38	0.93	0.52	0
LPRT13E	12.6	Freshwater	Fluvial Estuary	12500	11.3	1.23	0.503	2.33	0.96	0.73	0.91	0.46	0
LPRT13F	12.8	Freshwater	Fluvial Estuary	2840	11	1.54	0.643	3.00	0.95	1.04	0.82	0.54	0
LPRT13G	12.8	Freshwater	Fluvial Estuary	2690	8	1.15	0.57	2.00	0.99	0.66	0.94	0.53	0

na -- not applicable

Note: exceedances of reference envelope thresholds are binary; values of 0 and 1 correspond to no exceedance and yes exceedance

* *H. azteca* and *C. dilutus* toxicity test endpoint reference envelope thresholds are based on data from above Dundee Dam (Table B4-5)

All other LPRSA metrics and toxicity test endpoint data are compared to the reference envelope thresholds for Jamaica Bay data (Table B3-5)

Table B3-6 presents the comparison of LPRSA SQT data to envelope threshold values for the Jamaica Bay dataset (LOE approach) (Table B3-5a). If LPRSA values exceed reference envelope thresholds, then a weight is given to the sample for the impacted endpoint. Weights are then summed across all endpoints within each line of evid toxicity endpoints or benthic community metrics). Sum weights then go into the weight of evidence (Tables B8 and B9) for characterizing chemical risks in the LPRSA. T threshold values for Chironomus dilutus and Hyalella azteca endpoints are calculated in Table B4-4, based on urban freshwater data from above Dundee Dam. Thresh endpoints could not be calculated based on Jamaica Bay data.

nes) to reference envelope thresholds*

LPRSA Data Exceeds Reference Envelope?									LOE Summary	
Taxa Richness	Shannon-Weiner H'	Pielou's J'	Swartz's Dominance Index	*C. dilutus* survival (% of control)*	*C. dilutus* biomass (% of control)*	*H. azteca* survival (% of control)*	*H. azteca* biomass (% of control)*	*A. abdita* survival (% of control)	Benthic Community LOE	Sediment Toxicity LOE
0	0	0	0			0	0	0	0.000	0.000
0	0	0	0			0	0	1	0.000	0.333
0	0	0	0			1	1	0	0.000	0.667
1	0	0	0			0	0	0	0.400	0.000
0	0	0	0			1	1	0	0.000	0.667
1	0	0	0			0	0	0	0.400	0.000
0	0	0	0			0	0	0	0.000	0.000
0	0	0	0			0	0	0	0.200	0.000
0	0	0	0			0	0	0	0.000	0.000
1	0	0	0			1	0	1	0.400	0.667
0	0	0	0			0	0	0	0.000	0.000
1	0	0	0			0	0	1	0.400	0.333
0	0	0	0			0	0	1	0.200	0.333
1	1	0	1			0	0	1	0.800	0.333
1	0	0	0			0	0	0	0.200	0.000
1	0	0	0			1	0	0	0.200	0.333
0	0	0	0			0	0	0	0.200	0.000
0	0	0	0			0	0	0	0.200	0.000
0	0	0	0			1	0	1	0.000	0.667
0	0	0	0			0	0	1	0.000	0.333
1	0	0	0			0	0	1	0.400	0.333
1	0	0	0			1	1	1	0.400	1.000
1	1	1	1			1	0	1	0.800	0.667
1	0	0	0			1	1	1	0.200	1.000
1	0	0	0	0	0	0	0		0.400	0.000
0	0	0	0			1	1	1	0.000	1.000
1	0	0	0			1	1	0	0.400	0.667
0	0	0	0	0	1	1	1		0.000	0.750
1	0	0	0	0	1	1	1		0.400	0.750
1	0	0	0	0	1	1	0		0.400	0.500
1	1	0	0	0	1	1	1		0.600	0.750
1	1	0	1	0	1	0	0		0.600	0.250
1	1	1	1	0	1	1	1		0.800	0.750
0	0	0	0			1	1	0	0.000	0.667
0	0	0	0	0	1	1	1		0.000	0.750
1	0	0	0	0	1	0	0		0.200	0.250
1	1	0	0	0	1	0	0		0.400	0.250
0	0	0	0	0	0	1	1		0.000	0.500
0	0	0	0	0	1	1	1		0.000	0.750
1	1	0	1	0	1	1	1		0.800	0.750
1	1	1	1	0	1	1	1		0.800	0.750
1	1	1	1	0	1	1	0		0.800	0.500
1	0	0	0	0	1	1	1		0.400	0.750
1	1	0	0	0	1	1	0		0.600	0.500

0	0	0	0	0	1	1	1	0.000	0.750
1	0	0	0	1	0	0	0	0.200	0.250
1	0	0	0	0	0	1	0	0.200	0.250
1	0	0	0	0	0	1	0	0.400	0.250
1	0	0	0	0	0	0	0	0.200	0.000
0	0	0	0	0	1	1	1	0.000	0.750
0	0	0	0	0	1	1	0	0.000	0.500
0	1	1	1	0	0	0	0	0.600	0.000
0	0	0	0	0	1	1	1	0.000	0.750
0	1	1	1	0	0	1	1	0.600	0.500
1	0	0	0	0	0	0	0	0.200	0.000
0	0	1	1	1	1	1	0	0.400	0.750
0	0	0	0	1	1	1	1	0.000	1.00
0	0	1	1	0	1	1	0	0.400	0.500
0	0	0	0	1	1	0	0	0.000	0.500
0	0	0	0	0	1	1	1	0.000	0.750
0	0	0	0	1	1	0	0	0.000	0.500
0	0	0	0	1	1	1	0	0.000	0.750
0	0	0	0	0	1	1	0	0.000	0.500
0	0	0	0	0	1	0	0	0.000	0.250
0	0	0	0	0	1	0	0	0.000	0.250
0	0	0	0	0	1	1	0	0.000	0.500
1	0	0	0	1	1	1	1	0.200	1.00
0	0	0	0	0	1	1	1	0.000	0.750
0	0	0	0	0	1	0	0	0.000	0.250
0	0	0	0	1	1	1	1	0.000	1.00
0	0	0	0	0	1	1	1	0.000	0.750
0	0	0	0	0	1	1	1	0.000	0.750
0	0	0	0	0	1	1	1	0.000	0.750
0	0	0	0	0	1	0	0	0.000	0.250
0	0	0	0	0	1	0	0	0.000	0.250
0	0	0	0	0	1	0	0	0.000	0.250
0	0	0	0	0	1	0	0	0.000	0.250
0	0	0	0	0	0	0	0	0.000	0.000
0	0	0	0	0	1	0	0	0.000	0.250

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Table B3-7. Comparison of LPRSA benthic community metric and toxicity data (Upper Estuary and Transitional Benthic Salinity Zones

Location ID	Approx. RM	Toxicity Test Type	Benthic Salinity Zone	LPRSA Benthic Community Metric Data										
				Abundance (per m^2)	Taxa Richness	Shannon-Weiner H'	Pielou's J'	Swartz's Dominance Index	*C. dilutus* survival (% of control)*	*C. dilutus* biomass (% of control)*	*H. azteca* survival (% of control)*	*H. azteca* biomass (% of control)*	*A. abdita* survival (% of control)	Abundance (per m^2)
Thresholds			**5th percentile**	516	7.10	0.820	0.399	1.50	0.721	0.668	0.598	0.263	0.558	
			95th percentile	90125	na	na	na	na	na	na	na	na	na	
LPRT01A	0.0	Estuarine	Upper Estuary	1090	8	1.06	0.507	2.00			0.88	0.82	0.874	0
LPRT01D	0.3	Estuarine	Upper Estuary	2050	12.3	1.63	0.65	3.00			0.81	0.70	0.579	0
LPRT01C	0.4	Estuarine	Upper Estuary	2740	16	2.01	0.727	4.67			0.41	0.26	0.918	0
LPRT01B	0.4	Estuarine	Upper Estuary	177	4.67	1.13	0.7	2.33			0.89	0.72	0.947	1
LPRT01E	0.5	Estuarine	Upper Estuary	4120	13.3	1.62	0.627	2.67			0.25	0.19	0.847	0
LPRT01F	0.6	Estuarine	Upper Estuary	357	7	1.06	0.537	2.00			0.95	0.69	0.853	1
LPRT01G	0.8	Estuarine	Upper Estuary	973	10.7	1.42	0.6	2.33			0.89	0.65	0.968	0
LPRT02A	1.0	Estuarine	Upper Estuary	603	10.7	1.65	0.71	3.67			0.87	0.56	0.895	0
LPRT02D	1.2	Estuarine	Upper Estuary	830	11	2.06	0.87	5.33			0.82	0.57	0.949	0
LPRT02B	1.3	Estuarine	Upper Estuary	127	6.67	1.68	0.887	4.00			0.72	0.60	0.695	1
LPRT02C	1.3	Estuarine	Upper Estuary	630	7.67	1.67	0.823	3.67			0.95	0.68	0.918	0
LPRT02E	1.5	Estuarine	Upper Estuary	155	5.5	1.42	0.83	3.50			0.83	0.68	0.779	1
LPRT02F	1.6	Estuarine	Upper Estuary	240	9.33	1.73	0.807	4.00			0.91	0.61	0.832	1
LPRT03A	2.0	Estuarine	Upper Estuary	320	2.67	0.427	0.43	1.33			0.83	0.84	0.611	1
LPRT03B	2.2	Estuarine	Upper Estuary	773	6.33	1.45	0.803	3.00			0.88	0.83	0.937	0
LPRT03C	2.3	Estuarine	Upper Estuary	1840	6.67	0.81	0.41	2.00			0.56	0.43	0.867	0
LPRT03D	2.7	Estuarine	Upper Estuary	460	8.33	1.64	0.773	3.33			0.85	0.64	0.874	1
LPRT03E	2.8	Estuarine	Upper Estuary	593	7.67	1.17	0.69	2.00			0.87	0.95	0.895	0
LPRT03F	2.8	Estuarine	Upper Estuary	693	8.67	1.49	0.697	3.00			0.73	0.43	0.837	0
LPRT04A	3.4	Estuarine	Upper Estuary	1120	8.67	1.56	0.737	3.00			0.99	0.96	0.821	0
LPRT04B	3.5	Estuarine	Upper Estuary	523	6.33	1.41	0.79	2.67			0.88	0.71	0.232	0
LPRT04C	3.7	Estuarine	Upper Estuary	107	4.67	1.08	0.89	3.00			0.36	0.17	0.153	1
LPRT04D	3.8	Estuarine	Upper Estuary	1220	5.33	0.507	0.297	1.00			0.69	0.51	0.714	0
LPRT04E	3.8	Estuarine	Upper Estuary	1170	6	1.07	0.607	2.33			0.62	0.35	0.827	0
LPRT04F	3.9	Freshwater	Upper Estuary	333	4.67	1.09	0.757	2.33	0.83	0.82	0.87	0.44		1
LPRT05A	4.1	Estuarine	Fluvial Estuary	3300	10.7	1.28	0.547	2.00			0.07	0.03	0.367	0
LPRT05B	4.2	Estuarine	Fluvial Estuary	543	6.67	1.17	0.677	2.33			0.16	0.06	0.878	0
LPRT05C	4.2	Freshwater	Fluvial Estuary	2940	10.3	1.33	0.57	2.33	0.96	0.70	0.53	0.19		0
LPRT05D	4.3	Freshwater	Fluvial Estuary	227	6	1.08	0.603	2.67	0.89	0.71	0.68	0.32		1
LPRT05E	4.7	Freshwater	Fluvial Estuary	200	3.67	1.08	0.85	2.00	0.96	0.71	0.70	0.45		1
LPRT05F	4.9	Freshwater	Fluvial Estuary	147	3.33	0.737	0.74	2.00	1.04	0.65	0.34	0.16		1
LPRT06A	5.0	Freshwater	Fluvial Estuary	5180	6.67	0.757	0.4	1.33	0.94	0.59	0.88	0.39		0
LPRT06B	5.1	Freshwater	Fluvial Estuary	3380	4.33	0.147	0.1	1.00	0.83	0.66	0.65	0.21		0
LPRT06C	5.5	Estuarine	Fluvial Estuary	3200	9	1.31	0.597	2.67			0.52	0.26	0.878	0
LPRT06D	5.6	Freshwater	Fluvial Estuary	7010	8.33	1.13	0.533	2.00	0.90	0.62	0.64	0.19		0
LPRT06E	5.8	Freshwater	Fluvial Estuary	2490	7.33	1.21	0.603	2.33	0.90	0.74	0.81	0.37		0
LPRT06F	5.9	Freshwater	Fluvial Estuary	927	2.33	0.547	0.727	1.67	0.88	0.61	0.90	0.58		0
LPRT07A	6.1	Freshwater	Fluvial Estuary	3270	7.67	1.05	0.513	2.00	0.96	0.90	0.67	0.31		0
LPRT07B	6.5	Freshwater	Fluvial Estuary	3200	7.67	0.933	0.467	1.67	0.96	0.65	0.22	0.07		0
LPRT07C	6.6	Freshwater	Fluvial Estuary	597	4.67	0.703	0.473	1.33	1.00	0.52	0.72	0.36		0
LPRT07D	6.8	Freshwater	Fluvial Estuary	1630	5.33	0.44	0.26	1.00	0.89	0.75	0.66	0.35		0
LPRT07E	6.8	Freshwater	Fluvial Estuary	3740	6.67	0.383	0.217	1.00	0.85	0.59	0.75	0.42		0
LPRT08A	7.0	Freshwater	Fluvial Estuary	253	4.33	0.863	0.657	1.67	0.97	0.76	0.51	0.22		1
LPRT08B	7.3	Freshwater	Fluvial Estuary	340	3	0.773	0.703	2.00	1.00	0.68	0.63	0.40		1

Table B3-7. Comparison of LPRSA benthic community metric and toxicity data (Upper Estuary and Transitional Benthic Salinity Zones

Location ID	Approx. RM	Toxicity Test Type	Benthic Salinity Zone	LPRSA Benthic Community Metric Data										
				Abundance (per m^2)	Taxa Richness	Shannon-Weiner H'	Pielou's J'	Swartz's Dominance Index	*C. dilutus* survival (% of control)*	*C. dilutus* biomass (% of control)*	*H. azteca* survival (% of control)*	*H. azteca* biomass (% of control)*	*A. abdita* survival (% of control)	Abundance (per m^2)
Thresholds			**5th percentile**	516	7.10	0.820	0.399	1.50	0.721	0.668	0.598	0.263	0.558	
			95th percentile	90125	na	na	na	na	na	na	na	na	na	
LPRT08C	7.4	Freshwater	Fluvial Estuary	3410	11.7	1.3	0.533	2.33	1.01	0.60	0.36	0.23		0
LPRT08D	7.5	Freshwater	Fluvial Estuary	843	5.67	1.1	0.677	2.00	0.73	0.84	0.77	0.43		0
LPRT08E	7.8	Freshwater	Fluvial Estuary	650	5.67	1.22	0.723	2.33	1.06	0.94	0.69	0.47		0
LPRT09B	8.1	Freshwater	Fluvial Estuary	533	3.67	0.877	0.717	2.00	0.86	0.80	0.71	0.73		0
LPRT09H	8.3	Freshwater	Fluvial Estuary	1330	7.33	0.98	0.503	1.67	0.84	0.79	0.81	0.50		0
LPRT09A	8.5	Freshwater	Fluvial Estuary	1300	9.33	1.14	0.51	2.00	0.94	0.58	0.37	0.13		0
LPRT09C	8.6	Freshwater	Fluvial Estuary	11300	10.3	1.08	0.473	2.00	0.88	0.69	0.68	0.60		0
LPRT09D	8.7	Freshwater	Fluvial Estuary	8250	10	0.713	0.313	1.00	1.00	0.83	0.79	0.44		0
LPRT09E	8.7	Freshwater	Fluvial Estuary	6180	9.33	1.04	0.46	2.00	0.97	0.76	0.60	0.33		0
LPRT09F	8.8	Freshwater	Fluvial Estuary	5380	8.67	0.647	0.3	1.00	0.92	0.91	0.43	0.21		0
LPRT09G	8.8	Freshwater	Fluvial Estuary	1090	4.67	0.967	0.627	2.00	0.93	0.98	1.03	0.64		0
LPRT10A	9.1	Freshwater	Fluvial Estuary	11100	9.67	0.81	0.357	1.33	0.79	0.35	0.65	0.41		0
LPRT10B	9.2	Freshwater	Fluvial Estuary	7210	14.7	1.22	0.453	1.67	0.16	0.05	0.19	0.09		0
LPRT10C	9.6	Freshwater	Fluvial Estuary	10200	13.3	0.877	0.337	1.00	0.99	0.36	0.69	0.52		0
LPRT10D	9.7	Freshwater	Fluvial Estuary	5030	13.7	1.49	0.593	3.00	0.80	0.57	1.02	0.92		0
LPRT10E	9.8	Freshwater	Fluvial Estuary	14000	14	1.38	0.523	2.33	0.99	0.73	0.37	0.26		0
LPRT11A	10.6	Freshwater	Fluvial Estuary	4280	14	1.48	0.57	2.33	0.80	0.52	0.93	0.76		0
LPRT11B	10.6	Freshwater	Fluvial Estuary	4610	13.3	1.65	0.647	3.00	0.47	0.20	0.65	0.37		0
LPRT11C	10.7	Freshwater	Fluvial Estuary	6100	13.7	1.28	0.497	2.33	0.83	0.77	0.65	0.51		0
LPRT11D	10.8	Freshwater	Fluvial Estuary	16500	16	1.48	0.54	2.67	0.88	0.56	0.79	0.61		0
LPRT11E	10.9	Freshwater	Fluvial Estuary	5160	9.67	0.927	0.467	1.67	0.92	0.46	0.90	0.52		0
LPRT11F	11.0	Freshwater	Fluvial Estuary	6050	16	1.62	0.587	3.33	0.95	0.46	0.53	0.43		0
LPRT11G	11.0	Freshwater	Fluvial Estuary	3170	7	0.84	0.44	1.67	0.72	0.12	0.16	0.06		0
LPRT12A	11.2	Freshwater	Fluvial Estuary	3610	11	1.05	0.447	1.67	0.95	0.56	0.68	0.32		0
LPRT12B	11.3	Freshwater	Fluvial Estuary	8180	13	1.34	0.52	2.67	0.97	0.38	0.84	0.48		0
LPRT12C	11.5	Freshwater	Fluvial Estuary	9870	15.3	1.26	0.463	2.33	0.80	0.29	0.59	0.27		0
LPRT12D	11.6	Freshwater	Fluvial Estuary	5860	11	1.07	0.443	1.67	1.01	0.49	0.59	0.26		0
LPRT12E	11.7	Freshwater	Fluvial Estuary	5050	9	1.35	0.617	2.67	0.91	0.25	0.53	0.27		0
LPRT13A	12.1	Freshwater	Fluvial Estuary	2600	11.3	1.28	0.54	2.00	0.87	0.51	0.56	0.30		0
LPRT13B	12.3	Freshwater	Fluvial Estuary	5790	11.7	1.33	0.547	2.00	0.94	0.52	0.91	0.48		0
LPRT13C	12.4	Freshwater	Fluvial Estuary	4630	9	1.07	0.49	2.00	1.00	0.63	0.85	0.41		0
LPRT13D	12.5	Freshwater	Fluvial Estuary	680	7.67	1.43	0.727	3.33	0.94	0.38	0.93	0.52		0
LPRT13E	12.6	Freshwater	Fluvial Estuary	12500	11.3	1.23	0.503	2.33	0.96	0.73	0.91	0.46		0
LPRT13F	12.8	Freshwater	Fluvial Estuary	2840	11	1.54	0.643	3.00	0.95	1.04	0.82	0.54		0
LPRT13G	12.8	Freshwater	Fluvial Estuary	2690	8	1.15	0.57	2.00	0.99	0.66	0.94	0.53		0

na -- not applicable

Note: exceedances of reference envelope thresholds are binary; values of 0 and 1 correspond to no exceedance and yes exceedance

* *H. azteca* and *C. dilutus* toxicity test endpoint reference envelope thresholds are based on data from above Dundee Dam (Table B4-5)

All other LPRSA metrics and toxicity test endpoint data are compared to the reference envelope thresholds for Jamaica Bay data (Table B3-5)

Table B3-7 presents the comparison of LPRSA SQT data to alternative envelope threshold values for the Jamaica Bay dataset (qualitative analysis of uncertainty approach) (Table B3-5b). If LPRSA values exceed the associated reference envelope thresholds, then a weight is given to the sample for the impacted endpoint.

Table B3-7. Comparison of LPRSA benthic community metric and toxicity data (Upper Estuary and Transitional Benthic Salinity Zones

Location ID	Approx. RM	Toxicity Test Type	Benthic Salinity Zone	LPRSA Benthic Community Metric Data										
				Abundance (per m^2)	Taxa Richness	Shannon-Weiner H'	Pielou's J'	Swartz's Dominance Index	*C. dilutus* survival (% of control)*	*C. dilutus* biomass (% of control)*	*H. azteca* survival (% of control)*	*H. azteca* biomass (% of control)*	*A. abdita* survival (% of control)	Abundance (per m^2)
Thresholds			**5th percentile**	516	7.10	0.820	0.399	1.50	0.721	0.668	0.598	0.263	0.558	
			95th percentile	90125	na	na	na	na	na	na	na	na	na	

Weights are then summed across all endpoints within each line of evidence (sediment toxicity endpoints or benthic community metrics). Sum weights then go into weight of evidence (Tables B8 and B9) for characterizing chemical risks in the LPRSA.The envelope threshold values for *Chironomus dilutus* and *Hyalella azteca* endpoints are calculated in Table B4-4, based on urban freshwater data from above Dundee Dam. Thresholds for those endpoints could not be calculated based on

s) to reference envelope thresholds, quantitative analysis of uncertainty*

LPRSA Data Exceeds Reference Envelope?									LOE Summary	
Taxa Richness	Shannon-Weiner H'	Pielou's J'	Swartz's Dominance Index	*C. dilutus* survival (% of control)*	*C. dilutus* biomass (% of control)*	*H. azteca* survival (% of control)*	*H. azteca* biomass (% of control)*	*A. abdita* survival (% of control)	Benthic Community LOE	Sediment Toxicity LOE
0	0	0	0			0	0	0	0.000	0.000
0	0	0	0			0	0	0	0.000	0.000
0	0	0	0			1	1	0	0.000	0.667
1	0	0	0			0	0	0	0.400	0.000
0	0	0	0			1	1	0	0.000	0.667
1	0	0	0			0	0	0	0.400	0.000
0	0	0	0			0	0	0	0.000	0.000
0	0	0	0			0	0	0	0.000	0.000
0	0	0	0			0	0	0	0.000	0.000
1	0	0	0			0	0	0	0.400	0.000
0	0	0	0			0	0	0	0.000	0.000
1	0	0	0			0	0	0	0.400	0.000
0	0	0	0			0	0	0	0.200	0.000
1	1	0	1			0	0	0	0.800	0.000
1	0	0	0			0	0	0	0.200	0.000
1	1	0	0			1	0	0	0.400	0.333
0	0	0	0			0	0	0	0.200	0.000
0	0	0	0			0	0	0	0.000	0.000
0	0	0	0			0	0	0	0.000	0.000
0	0	0	0			0	0	0	0.000	0.000
1	0	0	0			0	0	1	0.200	0.333
1	0	0	0			1	1	1	0.400	1.000
1	1	1	1			0	0	0	0.800	0.000
1	0	0	0			0	0	0	0.200	0.000
1	0	0	0	0	0	0	0		0.400	0.000
0	0	0	0			1	1	1	0.000	1.000
1	0	0	0			1	1	0	0.200	0.667
0	0	0	0	0	0	1	1		0.000	0.500
1	0	0	0	0	0	0	0		0.400	0.000
1	0	0	0	0	0	0	0		0.400	0.000
1	1	0	0	0	1	1	1		0.600	0.750
1	1	0	1	0	1	0	0		0.600	0.250
1	1	1	1	0	1	0	1		0.800	0.500
0	0	0	0			1	1	0	0.000	0.667
0	0	0	0	0	1	0	1		0.000	0.500
0	0	0	0	0	0	0	0		0.000	0.000
1	1	0	0	0	1	0	0		0.400	0.250
0	0	0	0	0	0	0	0		0.000	0.000
0	0	0	0	0	1	1	1		0.000	0.750
1	1	0	1	0	1	0	0		0.600	0.250
1	1	1	1	0	0	0	0		0.800	0.000
1	1	1	1	0	1	0	0		0.800	0.250
1	0	0	0	0	0	1	1		0.400	0.500
1	1	0	0	0	0	0	0		0.600	0.000

;) to reference envelope thresholds, quantitative analysis of uncertainty*

LPRSA Data Exceeds Reference Envelope?									LOE Summary	
Taxa Richness	Shannon-Weiner H'	Pielou's J'	Swartz's Dominance Index	*C. dilutus* survival (% of control)*	*C. dilutus* biomass (% of control)*	*H. azteca* survival (% of control)*	*H. azteca* biomass (% of control)*	*A. abdita* survival (% of control)	Benthic Community LOE	Sediment Toxicity LOE
0	0	0	0	0	1	1	1		0.000	0.750
1	0	0	0	0	0	0	0		0.200	0.000
1	0	0	0	0	0	0	0		0.200	0.000
1	0	0	0	0	0	0	0		0.200	0.000
0	0	0	0	0	0	0	0		0.000	0.000
0	0	0	0	0	1	1	1		0.000	0.750
0	0	0	0	0	0	0	0		0.000	0.000
0	1	1	1	0	0	0	0		0.600	0.000
0	0	0	0	0	0	1	0		0.000	0.250
0	1	1	1	0	0	1	1		0.600	0.500
1	0	0	0	0	0	0	0		0.200	0.000
0	1	1	1	0	1	0	0		0.600	0.250
0	0	0	0	1	1	1	1		0.000	1.00
0	0	1	1	0	1	0	0		0.400	0.250
0	0	0	0	0	1	0	0		0.000	0.250
0	0	0	0	0	0	1	1		0.000	0.500
0	0	0	0	0	1	0	0		0.000	0.250
0	0	0	0	1	1	0	0		0.000	0.500
0	0	0	0	0	0	0	0		0.000	0.000
0	0	0	0	0	1	0	0		0.000	0.250
0	0	0	0	0	1	0	0		0.000	0.250
0	0	0	0	0	1	1	0		0.000	0.500
1	0	0	0	0	1	1	1		0.200	0.750
0	0	0	0	0	1	0	0		0.000	0.250
0	0	0	0	0	1	0	0		0.000	0.250
0	0	0	0	0	1	1	0		0.000	0.500
0	0	0	0	0	1	1	1		0.000	0.750
0	0	0	0	0	1	1	0		0.000	0.500
0	0	0	0	0	1	1	0		0.000	0.500
0	0	0	0	0	1	0	0		0.000	0.250
0	0	0	0	0	1	0	0		0.000	0.250
0	0	0	0	0	1	0	0		0.000	0.250
0	0	0	0	0	0	0	0		0.000	0.000
0	0	0	0	0	0	0	0		0.000	0.000
0	0	0	0	0	1	0	0		0.000	0.250

s) to reference envelope thresholds, quantitative analysis of uncertainty*

LPRSA Data Exceeds Reference Envelope?									LOE Summary	
Taxa Richness	Shannon-Weiner H'	Pielou's J'	Swartz's Dominance Index	*C. dilutus* survival (% of control)*	*C. dilutus* biomass (% of control)*	*H. azteca* survival (% of control)*	*H. azteca* biomass (% of control)*	*A. abdita* survival (% of control)	Benthic Community LOE	Sediment Toxicity LOE

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Table B3-8. Comparison of LPRSA benthic community metric and toxicity data (Upper Estuary and Fluvial Estuary Benthic Salinity Zo

Location ID	Approx. RM	Toxicity Test Type	Benthic Salinity Zone	LPRSA Benthic Community Metric Data										
				Abundance (per m2)	Taxa Richness	Shannon-Weiner H'	Pielou's J'	Swartz's Dominance Index	C. dilutus survival (% of control)*	C. dilutus biomass (% of control)*	H. azteca survival (% of control)*	H. azteca biomass (% of control)*	A. abdita survival (% of control)	Abundance (per m2)
Thresholds			**5th percentile**	1583	9.7	0.969	0.332	2	0.827	0.778	0.758	0.362	0.852	
			95th percentile	48474	na	na	na	na	na	na	na	na	na	
LPRT01A	0.0	Estuarine	Upper Estuary	1090	8	1.06	0.507	2.00			0.88	0.82	0.874	1
LPRT01D	0.3	Estuarine	Upper Estuary	2050	12.3	1.63	0.65	3.00			0.81	0.70	0.579	0
LPRT01C	0.4	Estuarine	Upper Estuary	2740	16	2.01	0.727	4.67			0.41	0.26	0.918	0
LPRT01B	0.4	Estuarine	Upper Estuary	177	4.67	1.13	0.7	2.33			0.89	0.72	0.947	1
LPRT01E	0.5	Estuarine	Upper Estuary	4120	13.3	1.62	0.627	2.67			0.25	0.19	0.847	0
LPRT01F	0.6	Estuarine	Upper Estuary	357	7	1.06	0.537	2.00			0.95	0.69	0.853	1
LPRT01G	0.8	Estuarine	Upper Estuary	973	10.7	1.42	0.6	2.33			0.89	0.65	0.968	1
LPRT02A	1.0	Estuarine	Upper Estuary	603	10.7	1.65	0.71	3.67			0.87	0.56	0.895	1
LPRT02D	1.2	Estuarine	Upper Estuary	830	11	2.06	0.87	5.33			0.82	0.57	0.949	1
LPRT02B	1.3	Estuarine	Upper Estuary	127	6.67	1.68	0.887	4.00			0.72	0.60	0.695	1
LPRT02C	1.3	Estuarine	Upper Estuary	630	7.67	1.67	0.823	3.67			0.95	0.68	0.918	1
LPRT02E	1.5	Estuarine	Upper Estuary	155	5.5	1.42	0.83	3.50			0.83	0.68	0.779	1
LPRT02F	1.6	Estuarine	Upper Estuary	240	9.33	1.73	0.807	4.00			0.91	0.61	0.832	1
LPRT03A	2.0	Estuarine	Upper Estuary	320	2.67	0.427	0.43	1.33			0.83	0.84	0.611	1
LPRT03B	2.2	Estuarine	Upper Estuary	773	6.33	1.45	0.803	3.00			0.88	0.83	0.937	1
LPRT03C	2.3	Estuarine	Upper Estuary	1840	6.67	0.81	0.41	2.00			0.56	0.43	0.867	0
LPRT03D	2.7	Estuarine	Upper Estuary	460	8.33	1.64	0.773	3.33			0.85	0.64	0.874	1
LPRT03E	2.8	Estuarine	Upper Estuary	593	7.67	1.17	0.69	2.00			0.87	0.95	0.895	1
LPRT03F	2.8	Estuarine	Upper Estuary	693	8.67	1.49	0.697	3.00			0.73	0.43	0.837	1
LPRT04A	3.4	Estuarine	Upper Estuary	1120	8.67	1.56	0.737	3.00			0.99	0.96	0.821	1
LPRT04B	3.5	Estuarine	Upper Estuary	523	6.33	1.41	0.79	2.67			0.88	0.71	0.232	1
LPRT04C	3.7	Estuarine	Upper Estuary	107	4.67	1.08	0.89	3.00			0.36	0.17	0.153	1
LPRT04D	3.8	Estuarine	Upper Estuary	1220	5.33	0.507	0.297	1.00			0.69	0.51	0.714	1
LPRT04E	3.8	Estuarine	Upper Estuary	1170	6	1.07	0.607	2.33			0.62	0.35	0.827	1
LPRT04F	3.9	Freshwater	Upper Estuary	333	4.67	1.09	0.757	2.33	0.83	0.82	0.87	0.44		1
LPRT05A	4.1	Estuarine	Fluvial Estuary	3300	10.7	1.28	0.547	2.00			0.07	0.03	0.367	0
LPRT05B	4.2	Estuarine	Fluvial Estuary	543	6.67	1.17	0.677	2.33			0.16	0.06	0.878	1
LPRT05C	4.2	Freshwater	Fluvial Estuary	2940	10.3	1.33	0.57	2.33	0.96	0.70	0.53	0.19		0
LPRT05D	4.3	Freshwater	Fluvial Estuary	227	6	1.08	0.603	2.67	0.89	0.71	0.68	0.32		1
LPRT05E	4.7	Freshwater	Fluvial Estuary	200	3.67	1.08	0.85	2.00	0.96	0.71	0.70	0.45		1
LPRT05F	4.9	Freshwater	Fluvial Estuary	147	3.33	0.737	0.74	2.00	1.04	0.65	0.34	0.16		1
LPRT06A	5.0	Freshwater	Fluvial Estuary	5180	6.67	0.757	0.4	1.33	0.94	0.59	0.88	0.39		0
LPRT06B	5.1	Freshwater	Fluvial Estuary	3380	4.33	0.147	0.1	1.00	0.83	0.66	0.65	0.21		0
LPRT06C	5.5	Estuarine	Fluvial Estuary	3200	9	1.31	0.597	2.67			0.52	0.26	0.878	0
LPRT06D	5.6	Freshwater	Fluvial Estuary	7010	8.33	1.13	0.533	2.00	0.90	0.62	0.64	0.19		0
LPRT06E	5.8	Freshwater	Fluvial Estuary	2490	7.33	1.21	0.603	2.33	0.90	0.74	0.81	0.37		0
LPRT06F	5.9	Freshwater	Fluvial Estuary	927	2.33	0.547	0.727	1.67	0.88	0.61	0.90	0.58		1
LPRT07A	6.1	Freshwater	Fluvial Estuary	3270	7.67	1.05	0.513	2.00	0.96	0.90	0.67	0.31		0
LPRT07B	6.5	Freshwater	Fluvial Estuary	3200	7.67	0.933	0.467	1.67	0.96	0.65	0.22	0.07		0
LPRT07C	6.6	Freshwater	Fluvial Estuary	597	4.67	0.703	0.473	1.33	1.00	0.52	0.72	0.36		1
LPRT07D	6.8	Freshwater	Fluvial Estuary	1630	5.33	0.44	0.26	1.00	0.89	0.75	0.66	0.35		0
LPRT07E	6.8	Freshwater	Fluvial Estuary	3740	6.67	0.383	0.217	1.00	0.85	0.59	0.75	0.42		0
LPRT08A	7.0	Freshwater	Fluvial Estuary	253	4.33	0.863	0.657	1.67	0.97	0.76	0.51	0.22		1
LPRT08B	7.3	Freshwater	Fluvial Estuary	340	3	0.773	0.703	2.00	1.00	0.68	0.63	0.40		1

Table B3-8. Comparison of LPRSA benthic community metric and toxicity data (Upper Estuary and Fluvial Estuary Benthic Salinity Zo

Location ID	Approx. RM	Toxicity Test Type	Benthic Salinity Zone	LPRSA Benthic Community Metric Data										
				Abundance (per m2)	Taxa Richness	Shannon-Weiner H'	Pielou's J'	Swartz's Dominance Index	C. dilutus survival (% of control)*	C. dilutus biomass (% of control)*	H. azteca survival (% of control)*	H. azteca biomass (% of control)*	A. abdita survival (% of control)	Abundance (per m2)
Thresholds			**5th percentile**	1583	9.7	0.969	0.332	2	0.827	0.778	0.758	0.362	0.852	
			95th percentile	48474	na	na	na	na	na	na	na	na	na	
LPRT08C	7.4	Freshwater	Fluvial Estuary	3410	11.7	1.3	0.533	2.33	1.01	0.60	0.36	0.23		0
LPRT08D	7.5	Freshwater	Fluvial Estuary	843	5.67	1.1	0.677	2.00	0.73	0.84	0.77	0.43		1
LPRT08E	7.8	Freshwater	Fluvial Estuary	650	5.67	1.22	0.723	2.33	1.06	0.94	0.69	0.47		1
LPRT09B	8.1	Freshwater	Fluvial Estuary	533	3.67	0.877	0.717	2.00	0.86	0.80	0.71	0.73		1
LPRT09H	8.3	Freshwater	Fluvial Estuary	1330	7.33	0.98	0.503	1.67	0.84	0.79	0.81	0.50		1
LPRT09A	8.5	Freshwater	Fluvial Estuary	1300	9.33	1.14	0.51	2.00	0.94	0.58	0.37	0.13		1
LPRT09C	8.6	Freshwater	Fluvial Estuary	11300	10.3	1.08	0.473	2.00	0.88	0.69	0.68	0.60		0
LPRT09D	8.7	Freshwater	Fluvial Estuary	8250	10	0.713	0.313	1.00	1.00	0.83	0.79	0.44		0
LPRT09E	8.7	Freshwater	Fluvial Estuary	6180	9.33	1.04	0.46	2.00	0.97	0.76	0.60	0.33		0
LPRT09F	8.8	Freshwater	Fluvial Estuary	5380	8.67	0.647	0.3	1.00	0.92	0.91	0.43	0.21		0
LPRT09G	8.8	Freshwater	Fluvial Estuary	1090	4.67	0.967	0.627	2.00	0.93	0.98	1.03	0.64		1
LPRT10A	9.1	Freshwater	Fluvial Estuary	11100	9.67	0.81	0.357	1.33	0.79	0.35	0.65	0.41		0
LPRT10B	9.2	Freshwater	Fluvial Estuary	7210	14.7	1.22	0.453	1.67	0.16	0.05	0.19	0.09		0
LPRT10C	9.6	Freshwater	Fluvial Estuary	10200	13.3	0.877	0.337	1.00	0.99	0.36	0.69	0.52		0
LPRT10D	9.7	Freshwater	Fluvial Estuary	5030	13.7	1.49	0.593	3.00	0.80	0.57	1.02	0.92		0
LPRT10E	9.8	Freshwater	Fluvial Estuary	14000	14	1.38	0.523	2.33	0.99	0.73	0.37	0.26		0
LPRT11A	10.6	Freshwater	Fluvial Estuary	4280	14	1.48	0.57	2.33	0.80	0.52	0.93	0.76		0
LPRT11B	10.6	Freshwater	Fluvial Estuary	4610	13.3	1.65	0.647	3.00	0.47	0.20	0.65	0.37		0
LPRT11C	10.7	Freshwater	Fluvial Estuary	6100	13.7	1.28	0.497	2.33	0.83	0.77	0.65	0.51		0
LPRT11D	10.8	Freshwater	Fluvial Estuary	16500	16	1.48	0.54	2.67	0.88	0.56	0.79	0.61		0
LPRT11E	10.9	Freshwater	Fluvial Estuary	5160	9.67	0.927	0.467	1.67	0.92	0.46	0.90	0.52		0
LPRT11F	11.0	Freshwater	Fluvial Estuary	6050	16	1.62	0.587	3.33	0.95	0.46	0.53	0.43		0
LPRT11G	11.0	Freshwater	Fluvial Estuary	3170	7	0.84	0.44	1.67	0.72	0.12	0.16	0.06		0
LPRT12A	11.2	Freshwater	Fluvial Estuary	3610	11	1.05	0.447	1.67	0.95	0.56	0.68	0.32		0
LPRT12B	11.3	Freshwater	Fluvial Estuary	8180	13	1.34	0.52	2.67	0.97	0.38	0.84	0.48		0
LPRT12C	11.5	Freshwater	Fluvial Estuary	9870	15.3	1.26	0.463	2.33	0.80	0.29	0.59	0.27		0
LPRT12D	11.6	Freshwater	Fluvial Estuary	5860	11	1.07	0.443	1.67	1.01	0.49	0.59	0.26		0
LPRT12E	11.7	Freshwater	Fluvial Estuary	5050	9	1.35	0.617	2.67	0.91	0.25	0.53	0.27		0
LPRT13A	12.1	Freshwater	Fluvial Estuary	2600	11.3	1.28	0.54	2.00	0.87	0.51	0.56	0.30		0
LPRT13B	12.3	Freshwater	Fluvial Estuary	5790	11.7	1.33	0.547	2.00	0.94	0.52	0.91	0.48		0
LPRT13C	12.4	Freshwater	Fluvial Estuary	4630	9	1.07	0.49	2.00	1.00	0.63	0.85	0.41		0
LPRT13D	12.5	Freshwater	Fluvial Estuary	680	7.67	1.43	0.727	3.33	0.94	0.38	0.93	0.52		1
LPRT13E	12.6	Freshwater	Fluvial Estuary	12500	11.3	1.23	0.503	2.33	0.96	0.73	0.91	0.46		0
LPRT13F	12.8	Freshwater	Fluvial Estuary	2840	11	1.54	0.643	3.00	0.95	1.04	0.82	0.54		0
LPRT13G	12.8	Freshwater	Fluvial Estuary	2690	8	1.15	0.57	2.00	0.99	0.66	0.94	0.53		0

na -- not applicable

Note: exceedances of reference envelope thresholds are binary; values of 0 and 1 correspond to no exceedance and yes exceedance

* *H. azteca* and *C. dilutus* toxicity test endpoint reference envelope thresholds are based on data from above Dundee Dam (Table B4-5)

All other LPRSA metrics and toxicity test endpoint data are compared to the reference envelope thresholds for Mullica River and Great Bay data (Table B3-5)

Table B3-8 presents the comparison of LPRSA SQT data to envelope threshold values for the Mullica River and Great Bay dataset (LOE approach) (Table B3-5c). If LPRS values exceed the associated reference envelope thresholds, then a weight is given to the sample for the impacted endpoint. Weights are then summed across all endpoints within each line of evidence (sediment toxicity endpoints or benthic community metrics). Sum weights then go into the weight of evidence (Tables B8 and B

Table B3-8. Comparison of LPRSA benthic community metric and toxicity data (Upper Estuary and Fluvial Estuary Benthic Salinity Zo

Location ID	Approx. RM	Toxicity Test Type	Benthic Salinity Zone	LPRSA Benthic Community Metric Data										
				Abundance (per m2)	Taxa Richness	Shannon-Weiner H'	Pielou's J'	Swartz's Dominance Index	C. dilutus survival (% of control)*	C. dilutus biomass (% of control)*	H. azteca survival (% of control)*	H. azteca biomass (% of control)*	A. abdita survival (% of control)	Abundance (per m2)
Thresholds			**5th percentile**	1583	9.7	0.969	0.332	2	0.827	0.778	0.758	0.362	0.852	
			95th percentile	48474	na	na	na	na	na	na	na	na	na	

endpoints within each line of evidence (sediment toxicity endpoints or benthic community metrics). Sum weights then go into the weight of evidence (Tables B8 and B
for characterizing chemical risks in the LPRSA. The envelope threshold values for *Chironomus dilutus* and *Hyalella azteca* endpoints are calculated in Table B4-4, based

nes) to Mullica River and Great Bay (estuarine) envelope thresholds*

LPRSA Data Exceeds Reference Envelope?									LOE Summary	
Taxa Richness	Shannon-Weiner H'	Pielou's J'	Swartz's Dominance Index	C. dilutus survival (% of control)*	C. dilutus biomass (% of control)*	H. azteca survival (% of control)*	H. azteca biomass (% of control)*	A. abdita survival (% of control)	Benthic Community LOE	Sediment Toxicity LOE
1	0	0	0			0	0	0	0.400	0.000
0	0	0	0			0	0	1	0.000	0.333
0	0	0	0			1	1	0	0.000	0.667
1	0	0	0			0	0	0	0.400	0.000
0	0	0	0			1	1	1	0.000	1.00
1	0	0	0			0	0	0	0.400	0.000
0	0	0	0			0	0	0	0.200	0.000
0	0	0	0			0	0	0	0.200	0.000
0	0	0	0			0	0	0	0.200	0.000
1	0	0	0			1	0	1	0.400	0.667
1	0	0	0			0	0	0	0.400	0.000
1	0	0	0			0	0	1	0.400	0.333
1	0	0	0			0	0	1	0.400	0.333
1	1	0	1			0	0	1	0.800	0.333
1	0	0	0			0	0	0	0.400	0.000
1	1	0	0			1	0	0	0.400	0.333
1	0	0	0			0	0	0	0.400	0.000
1	0	0	0			0	0	0	0.400	0.000
1	0	0	0			1	0	1	0.400	0.667
1	0	0	0			0	0	1	0.400	0.333
1	0	0	0			0	0	1	0.400	0.333
1	0	0	0			1	1	1	0.400	1.00
1	1	1	1			1	0	1	1.00	0.667
1	0	0	0			1	1	1	0.400	1.00
1	0	0	0	0	0	0	0		0.400	0.000
0	0	0	0			1	1	1	0.000	1.00
1	0	0	0			1	1	0	0.400	0.667
0	0	0	0	0	1	1	1		0.000	0.750
1	0	0	0	0	1	1	1		0.400	0.750
1	0	0	0	0	1	1	0		0.400	0.500
1	1	0	0	0	1	1	1		0.600	0.750
1	1	0	1	0	1	0	0		0.600	0.250
1	1	1	1	0	1	1	1		0.800	0.750
1	0	0	0			1	1	0	0.200	0.667
1	0	0	0	0	1	1	1		0.200	0.750
1	0	0	0	0	1	0	0		0.200	0.250
1	1	0	1	0	1	0	0		0.800	0.250
1	0	0	0	0	0	1	1		0.200	0.500
1	1	0	1	0	1	1	1		0.600	0.750
1	1	0	1	0	1	1	1		0.800	0.750
1	1	1	1	0	1	1	1		0.800	0.750
1	1	1	1	0	1	1	0		0.800	0.500
1	1	0	1	0	1	1	1		0.800	0.750
1	1	0	0	0	1	1	0		0.600	0.500

nes) to Mullica River and Great Bay (estuarine) envelope thresholds*

LPRSA Data Exceeds Reference Envelope?									LOE Summary	
Taxa Richness	Shannon-Weiner H'	Pielou's J'	Swartz's Dominance Index	C. dilutus survival (% of control)*	C. dilutus biomass (% of control)*	H. azteca survival (% of control)*	H. azteca biomass (% of control)*	A. abdita survival (% of control)	Benthic Community LOE	Sediment Toxicity LOE
0	0	0	0	0	1	1	1		0.000	0.750
1	0	0	0	1	0	0	0		0.400	0.250
1	0	0	0	0	0	1	0		0.400	0.250
1	1	0	0	0	0	1	0		0.600	0.250
1	0	0	1	0	0	0	0		0.600	0.000
1	0	0	0	0	1	1	1		0.400	0.750
0	0	0	0	0	1	1	0		0.000	0.500
0	1	1	1	0	0	0	0		0.600	0.000
1	0	0	0	0	1	1	1		0.200	0.750
1	1	1	1	0	0	1	1		0.800	0.500
1	1	0	0	0	0	0	0		0.600	0.000
0	1	0	1	1	1	1	0		0.400	0.750
0	0	0	1	1	1	1	1		0.200	1.00
0	1	0	1	0	1	1	0		0.400	0.500
0	0	0	0	1	1	0	0		0.000	0.500
0	0	0	0	0	1	1	1		0.000	0.750
0	0	0	0	1	1	0	0		0.000	0.500
0	0	0	0	1	1	1	0		0.000	0.750
0	0	0	0	0	1	1	0		0.000	0.500
0	0	0	0	0	1	0	0		0.000	0.250
0	1	0	1	0	1	0	0		0.400	0.250
0	0	0	0	0	1	1	0		0.000	0.500
1	1	0	1	1	1	1	1		0.600	1.00
0	0	0	1	0	1	1	1		0.200	0.750
0	0	0	0	0	1	0	0		0.000	0.250
0	0	0	0	1	1	1	1		0.000	1.00
0	0	0	1	0	1	1	1		0.200	0.750
1	0	0	0	0	1	1	1		0.200	0.750
0	0	0	0	0	1	1	1		0.000	0.750
0	0	0	0	0	1	0	0		0.000	0.250
1	0	0	0	0	1	0	0		0.200	0.250
1	0	0	0	0	1	0	0		0.400	0.250
0	0	0	0	0	1	0	0		0.000	0.250
0	0	0	0	0	0	0	0		0.000	0.000
1	0	0	0	0	1	0	0		0.200	0.250

nes) to Mullica River and Great Bay (estuarine) envelope thresholds*

LPRSA Data Exceeds Reference Envelope?									LOE Summary	
Taxa Richness	Shannon-Weiner H'	Pielou's J'	Swartz's Dominance Index	C. dilutus survival (% of control)*	C. dilutus biomass (% of control)*	H. azteca survival (% of control)*	H. azteca biomass (% of control)*	A. abdita survival (% of control)	Benthic Community LOE	Sediment Toxicity LOE

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on

Table B3-9. Comparison of LPRSA benthic community metric and toxicity data (Upper Estuary and Fluvial Estuary Benthic Salinity Zones) to Mulli

Location ID	Approx. RM	Toxicity Test Type	Benthic Salinity Zone	LPRSA Benthic Community Metric Data										
				Abundance (per m2)	Taxa Richness	Shannon-Weiner H'	Pielou's J'	Swartz's Dominance Index	C. dilutus survival (% of control)*	C. dilutus biomass (% of control)*	H. azteca survival (% of control)*	H. azteca biomass (% of control)*	A. abdita survival (% of control)	Abundance (per m2)
Thresholds			**5th percentile**	1583	9.7	0.969	0.332	2	0.721	0.668	0.60	0.263	0.852	
			95th percentile	48474	na	na	na	na	na	na	na	na	na	
LPRT01A	0.0	Estuarine	Upper Estuary	1090	8	1.06	0.507	2.00			0.88	0.82	0.874	1
LPRT01D	0.3	Estuarine	Upper Estuary	2050	12.3	1.63	0.65	3.00			0.81	0.70	0.579	0
LPRT01C	0.4	Estuarine	Upper Estuary	2740	16	2.01	0.727	4.67			0.41	0.26	0.918	0
LPRT01B	0.4	Estuarine	Upper Estuary	177	4.67	1.13	0.7	2.33			0.89	0.72	0.947	1
LPRT01E	0.5	Estuarine	Upper Estuary	4120	13.3	1.62	0.627	2.67			0.25	0.19	0.847	0
LPRT01F	0.6	Estuarine	Upper Estuary	357	7	1.06	0.537	2.00			0.95	0.69	0.853	1
LPRT01G	0.8	Estuarine	Upper Estuary	973	10.7	1.42	0.6	2.33			0.89	0.65	0.968	1
LPRT02A	1.0	Estuarine	Upper Estuary	603	10.7	1.65	0.71	3.67			0.87	0.56	0.895	1
LPRT02D	1.2	Estuarine	Upper Estuary	830	11	2.06	0.87	5.33			0.82	0.57	0.949	1
LPRT02B	1.3	Estuarine	Upper Estuary	127	6.67	1.68	0.887	4.00			0.72	0.60	0.695	1
LPRT02C	1.3	Estuarine	Upper Estuary	630	7.67	1.67	0.823	3.67			0.95	0.68	0.918	1
LPRT02E	1.5	Estuarine	Upper Estuary	155	5.5	1.42	0.83	3.50			0.83	0.68	0.779	1
LPRT02F	1.6	Estuarine	Upper Estuary	240	9.33	1.73	0.807	4.00			0.91	0.61	0.832	1
LPRT03A	2.0	Estuarine	Upper Estuary	320	2.67	0.427	0.43	1.33			0.83	0.84	0.611	1
LPRT03B	2.2	Estuarine	Upper Estuary	773	6.33	1.45	0.803	3.00			0.88	0.83	0.937	1
LPRT03C	2.3	Estuarine	Upper Estuary	1840	6.67	0.81	0.41	2.00			0.56	0.43	0.867	0
LPRT03D	2.7	Estuarine	Upper Estuary	460	8.33	1.64	0.773	3.33			0.85	0.64	0.874	1
LPRT03E	2.8	Estuarine	Upper Estuary	593	7.67	1.17	0.69	2.00			0.87	0.95	0.895	1
LPRT03F	2.8	Estuarine	Upper Estuary	693	8.67	1.49	0.697	3.00			0.73	0.43	0.837	1
LPRT04A	3.4	Estuarine	Upper Estuary	1120	8.67	1.56	0.737	3.00			0.99	0.96	0.821	1
LPRT04B	3.5	Estuarine	Upper Estuary	523	6.33	1.41	0.79	2.67			0.88	0.71	0.232	1
LPRT04C	3.7	Estuarine	Upper Estuary	107	4.67	1.08	0.89	3.00			0.36	0.17	0.153	1
LPRT04D	3.8	Estuarine	Upper Estuary	1220	5.33	0.507	0.297	1.00			0.69	0.51	0.714	1
LPRT04E	3.8	Estuarine	Upper Estuary	1170	6	1.07	0.607	2.33			0.62	0.35	0.827	1
LPRT04F	3.9	Freshwater	Upper Estuary	333	4.67	1.09	0.757	2.33	0.83	0.82	0.87	0.44		1
LPRT05A	4.1	Estuarine	Fluvial Estuary	3300	10.7	1.28	0.547	2.00			0.07	0.03	0.367	0
LPRT05B	4.2	Estuarine	Fluvial Estuary	543	6.67	1.17	0.677	2.33			0.16	0.06	0.878	1
LPRT05C	4.2	Freshwater	Fluvial Estuary	2940	10.3	1.33	0.57	2.33	0.96	0.70	0.53	0.19		0
LPRT05D	4.3	Freshwater	Fluvial Estuary	227	6	1.08	0.603	2.67	0.89	0.71	0.68	0.32		1
LPRT05E	4.7	Freshwater	Fluvial Estuary	200	3.67	1.08	0.85	2.00	0.96	0.71	0.70	0.45		1
LPRT05F	4.9	Freshwater	Fluvial Estuary	147	3.33	0.737	0.74	2.00	1.04	0.65	0.34	0.16		1
LPRT06A	5.0	Freshwater	Fluvial Estuary	5180	6.67	0.757	0.4	1.33	0.94	0.59	0.88	0.39		0
LPRT06B	5.1	Freshwater	Fluvial Estuary	3380	4.33	0.147	0.1	1.00	0.83	0.66	0.65	0.21		0
LPRT06C	5.5	Estuarine	Fluvial Estuary	3200	9	1.31	0.597	2.67			0.52	0.26	0.878	0
LPRT06D	5.6	Freshwater	Fluvial Estuary	7010	8.33	1.13	0.533	2.00	0.90	0.62	0.64	0.19		0
LPRT06E	5.8	Freshwater	Fluvial Estuary	2490	7.33	1.21	0.603	2.33	0.90	0.74	0.81	0.37		0
LPRT06F	5.9	Freshwater	Fluvial Estuary	927	2.33	0.547	0.727	1.67	0.88	0.61	0.90	0.58		1
LPRT07A	6.1	Freshwater	Fluvial Estuary	3270	7.67	1.05	0.513	2.00	0.96	0.90	0.67	0.31		0
LPRT07B	6.5	Freshwater	Fluvial Estuary	3200	7.67	0.933	0.467	1.67	0.96	0.65	0.22	0.07		0
LPRT07C	6.6	Freshwater	Fluvial Estuary	597	4.67	0.703	0.473	1.33	1.00	0.52	0.72	0.36		1
LPRT07D	6.8	Freshwater	Fluvial Estuary	1630	5.33	0.44	0.26	1.00	0.89	0.75	0.66	0.35		0
LPRT07E	6.8	Freshwater	Fluvial Estuary	3740	6.67	0.383	0.217	1.00	0.85	0.59	0.75	0.42		0
LPRT08A	7.0	Freshwater	Fluvial Estuary	253	4.33	0.863	0.657	1.67	0.97	0.76	0.51	0.22		1
LPRT08B	7.3	Freshwater	Fluvial Estuary	340	3	0.773	0.703	2.00	1.00	0.68	0.63	0.40		1

LPRT08C	7.4	Freshwater	Fluvial Estuary	3410	11.7	1.3	0.533	2.33	1.01	0.60	0.36	0.23	0
LPRT08D	7.5	Freshwater	Fluvial Estuary	843	5.67	1.1	0.677	2.00	0.73	0.84	0.77	0.43	1
LPRT08E	7.8	Freshwater	Fluvial Estuary	650	5.67	1.22	0.723	2.33	1.06	0.94	0.69	0.47	1
LPRT09B	8.1	Freshwater	Fluvial Estuary	533	3.67	0.877	0.717	2.00	0.86	0.80	0.71	0.73	1
LPRT09H	8.3	Freshwater	Fluvial Estuary	1330	7.33	0.98	0.503	1.67	0.84	0.79	0.81	0.50	1
LPRT09A	8.5	Freshwater	Fluvial Estuary	1300	9.33	1.14	0.51	2.00	0.94	0.58	0.37	0.13	1
LPRT09C	8.6	Freshwater	Fluvial Estuary	11300	10.3	1.08	0.473	2.00	0.88	0.69	0.68	0.60	0
LPRT09D	8.7	Freshwater	Fluvial Estuary	8250	10	0.713	0.313	1.00	1.00	0.83	0.79	0.44	0
LPRT09E	8.7	Freshwater	Fluvial Estuary	6180	9.33	1.04	0.46	2.00	0.97	0.76	0.60	0.33	0
LPRT09F	8.8	Freshwater	Fluvial Estuary	5380	8.67	0.647	0.3	1.00	0.92	0.91	0.43	0.21	0
LPRT09G	8.8	Freshwater	Fluvial Estuary	1090	4.67	0.967	0.627	2.00	0.93	0.98	1.03	0.64	1
LPRT10A	9.1	Freshwater	Fluvial Estuary	11100	9.67	0.81	0.357	1.33	0.79	0.35	0.65	0.41	0
LPRT10B	9.2	Freshwater	Fluvial Estuary	7210	14.7	1.22	0.453	1.67	0.16	0.05	0.19	0.09	0
LPRT10C	9.6	Freshwater	Fluvial Estuary	10200	13.3	0.877	0.337	1.00	0.99	0.36	0.69	0.52	0
LPRT10D	9.7	Freshwater	Fluvial Estuary	5030	13.7	1.49	0.593	3.00	0.80	0.57	1.02	0.92	0
LPRT10E	9.8	Freshwater	Fluvial Estuary	14000	14	1.38	0.523	2.33	0.99	0.73	0.37	0.26	0
LPRT11A	10.6	Freshwater	Fluvial Estuary	4280	14	1.48	0.57	2.33	0.80	0.52	0.93	0.76	0
LPRT11B	10.6	Freshwater	Fluvial Estuary	4610	13.3	1.65	0.647	3.00	0.47	0.20	0.65	0.37	0
LPRT11C	10.7	Freshwater	Fluvial Estuary	6100	13.7	1.28	0.497	2.33	0.83	0.77	0.65	0.51	0
LPRT11D	10.8	Freshwater	Fluvial Estuary	16500	16	1.48	0.54	2.67	0.88	0.56	0.79	0.61	0
LPRT11E	10.9	Freshwater	Fluvial Estuary	5160	9.67	0.927	0.467	1.67	0.92	0.46	0.90	0.52	0
LPRT11F	11.0	Freshwater	Fluvial Estuary	6050	16	1.62	0.587	3.33	0.95	0.46	0.53	0.43	0
LPRT11G	11.0	Freshwater	Fluvial Estuary	3170	7	0.84	0.44	1.67	0.72	0.12	0.16	0.06	0
LPRT12A	11.2	Freshwater	Fluvial Estuary	3610	11	1.05	0.447	1.67	0.95	0.56	0.68	0.32	0
LPRT12B	11.3	Freshwater	Fluvial Estuary	8180	13	1.34	0.52	2.67	0.97	0.38	0.84	0.48	0
LPRT12C	11.5	Freshwater	Fluvial Estuary	9870	15.3	1.26	0.463	2.33	0.80	0.29	0.59	0.27	0
LPRT12D	11.6	Freshwater	Fluvial Estuary	5860	11	1.07	0.443	1.67	1.01	0.49	0.59	0.26	0
LPRT12E	11.7	Freshwater	Fluvial Estuary	5050	9	1.35	0.617	2.67	0.91	0.25	0.53	0.27	0
LPRT13A	12.1	Freshwater	Fluvial Estuary	2600	11.3	1.28	0.54	2.00	0.87	0.51	0.56	0.30	0
LPRT13B	12.3	Freshwater	Fluvial Estuary	5790	11.7	1.33	0.547	2.00	0.94	0.52	0.91	0.48	0
LPRT13C	12.4	Freshwater	Fluvial Estuary	4630	9	1.07	0.49	2.00	1.00	0.63	0.85	0.41	0
LPRT13D	12.5	Freshwater	Fluvial Estuary	680	7.67	1.43	0.727	3.33	0.94	0.38	0.93	0.52	1
LPRT13E	12.6	Freshwater	Fluvial Estuary	12500	11.3	1.23	0.503	2.33	0.96	0.73	0.91	0.46	0
LPRT13F	12.8	Freshwater	Fluvial Estuary	2840	11	1.54	0.643	3.00	0.95	1.04	0.82	0.54	0
LPRT13G	12.8	Freshwater	Fluvial Estuary	2690	8	1.15	0.57	2.00	0.99	0.66	0.94	0.53	0

na -- not applicable

Note: exceedances of reference envelope thresholds are binary; values of 0 and 1 correspond to no exceedance and yes exceedance

* *H. azteca* and *C. dilutus* toxicity test endpoint reference envelope thresholds are based on data from above Dundee Dam (Table B4-5)

All other LPRSA metrics and toxicity test endpoint data are compared to the reference envelope thresholds for Mullica River and Great Bay data (Table B3-5)

Table B3-9 presents the comparison of LPRSA SQT data to envelope threshold values for the Mullica River and Great Bay dataset (quantiative analysis of uncertainty ap 5d). If LPRSA values exceed the associated reference envelope thresholds, then a weight is given to the sample for the impacted endpoint. Weights are then summed a within each line of evidence (sediment toxicity endpoints or benthic community metrics). Sum weights then go into the weight of evidence (Tables B8 and B9) for chara risks in the LPRSA. The envelope threshold values for *Chironomus dilutus* and *Hyalella azteca* endpoints are calculated in Table B4-4, based on urban freshwater data fr Dam. Thresholds for those endpoints could not be calculated based on Mullica River and Great Bay data.

ica River and Great Bay (estuarine) envelope thresholds, quantitative analysis of uncertainty*

LPRSA Data Exceeds Reference Envelope?									LOE Summary	
Taxa Richness	Shannon-Weiner H'	Pielou's J'	Swartz's Dominance Index	C. dilutus survival (% of control)*	C. dilutus biomass (% of control)*	H. azteca survival (% of control)*	H. azteca biomass (% of control)*	A. abdita survival (% of control)	Benthic Community LOE	Sediment Toxicity LOE
1	0	0	0			0	0	0	0.400	0.000
0	0	0	0			0	0	1	0.000	0.333
0	0	0	0			1	1	0	0.000	0.667
1	0	0	0			0	0	0	0.400	0.000
0	0	0	0			1	1	1	0.000	1.000
1	0	0	0			0	0	0	0.400	0.000
0	0	0	0			0	0	0	0.200	0.000
0	0	0	0			0	0	0	0.200	0.000
0	0	0	0			0	0	0	0.200	0.000
1	0	0	0			0	0	1	0.400	0.333
1	0	0	0			0	0	0	0.400	0.000
1	0	0	0			0	0	1	0.400	0.333
1	0	0	0			0	0	1	0.400	0.333
1	1	0	1			0	0	1	0.800	0.333
1	0	0	0			0	0	0	0.400	0.000
1	1	0	0			1	0	0	0.400	0.333
1	0	0	0			0	0	0	0.400	0.000
1	0	0	0			0	0	0	0.400	0.000
1	0	0	0			0	0	1	0.400	0.333
1	0	0	0			0	0	1	0.400	0.333
1	0	0	0			0	0	1	0.400	0.333
1	0	0	0			1	1	1	0.400	1.000
1	1	1	1			0	0	1	1.000	0.333
1	0	0	0			0	0	1	0.400	0.333
1	0	0	0	0	0	0	0		0.400	0.000
0	0	0	0			1	1	1	0.000	1.000
1	0	0	0			1	1	0	0.400	0.667
0	0	0	0	0	0	1	1		0.000	0.500
1	0	0	0	0	0	0	0		0.400	0.000
1	0	0	0	0	0	0	0		0.400	0.000
1	1	0	0	0	1	1	1		0.600	0.750
1	1	0	1	0	1	0	0		0.600	0.250
1	1	1	1	0	1	0	1		0.800	0.500
1	0	0	0			1	1	0	0.200	0.667
1	0	0	0	0	1	0	1		0.200	0.500
1	0	0	0	0	0	0	0		0.200	0.000
1	1	0	1	0	1	0	0		0.800	0.250
1	0	0	0	0	0	0	0		0.200	0.000
1	1	0	1	0	1	1	1		0.600	0.750
1	1	0	1	0	1	0	0		0.800	0.250
1	1	1	1	0	0	0	0		0.800	0.000
1	1	1	1	0	1	0	0		0.800	0.250
1	1	0	1	0	0	1	1		0.800	0.500
1	1	0	0	0	0	0	0		0.600	0.000

0	0	0	0	0	1	1	1	0.000	0.750
1	0	0	0	0	0	0	0	0.400	0.000
1	0	0	0	0	0	0	0	0.400	0.000
1	1	0	0	0	0	0	0	0.600	0.000
1	0	0	1	0	0	0	0	0.600	0.000
1	0	0	0	0	1	1	1	0.400	0.750
0	0	0	0	0	0	0	0	0.000	0.000
0	1	1	1	0	0	0	0	0.600	0.000
1	0	0	0	0	0	1	0	0.200	0.250
1	1	1	1	0	0	1	1	0.800	0.500
1	1	0	0	0	0	0	0	0.600	0.000
0	1	0	1	0	1	0	0	0.400	0.250
0	0	0	1	1	1	1	1	0.200	1.000
0	1	0	1	0	1	0	0	0.400	0.250
0	0	0	0	0	1	0	0	0.000	0.250
0	0	0	0	0	0	1	1	0.000	0.500
0	0	0	0	0	1	0	0	0.000	0.250
0	0	0	0	1	1	0	0	0.000	0.500
0	0	0	0	0	0	0	0	0.000	0.000
0	0	0	0	0	1	0	0	0.000	0.250
0	1	0	1	0	1	0	0	0.400	0.250
0	0	0	0	0	1	1	0	0.000	0.500
1	1	0	1	0	1	1	1	0.600	0.750
0	0	0	1	0	1	0	0	0.200	0.250
0	0	0	0	0	1	0	0	0.000	0.250
0	0	0	0	0	1	1	0	0.000	0.500
0	0	0	1	0	1	1	1	0.200	0.750
1	0	0	0	0	1	1	0	0.200	0.500
0	0	0	0	0	1	1	0	0.000	0.500
0	0	0	0	0	1	0	0	0.000	0.250
1	0	0	0	0	1	0	0	0.200	0.250
1	0	0	0	0	1	0	0	0.400	0.250
0	0	0	0	0	0	0	0	0.000	0.000
0	0	0	0	0	0	0	0	0.000	0.000
1	0	0	0	0	1	0	0	0.200	0.250

proach) (Table B3-
cross all endpoints
acterizing chemical
om above Dundee

Table B4-1. Benthic metric and toxicity data from freshwater reference areas

Area of Interest	Study	Location ID	X	Y	Latitude	Longitude	*A. abdita* survival (% of control)	*C. dilutus* survival (% of control)	*C. dilutus* biomass (% of control)	*H. azteca* survival (% of control)	*H. azteca* biomass (% of control)	Abundance (per m^2)	Taxa Richness	Shannon-Weiner H'	Pielou's J'	Swartz's Dominance Index	Hilsenhoff Biotic Index	Notes
Above Dundee Dam	Windward (in prep; submitted to EPA 2013)	UPRT18H	594662	747963				0.96	0.775	0.94	0.471	11500	19	2.01	0.683	4.33	9.41	
Above Dundee Dam	Windward (in prep; submitted to EPA 2013)	UPRT18I	594567	747742				0.72	0.643	0.81	0.316	20600	21.7	2.26	0.737	5.67	8.64	
Above Dundee Dam	Windward (in prep; submitted to EPA 2013)	UPRT18J	594284	748072				0.91	0.747	1.00	0.539	16800	15.7	1.47	0.537	2	9.69	
Above Dundee Dam	Windward (in prep; submitted to EPA 2013)	UPRT18K	594500	749655				0.88	0.687	0.83	0.498	16100	22	1.99	0.647	4	8.85	
Above Dundee Dam	Windward (in prep; submitted to EPA 2013)	UPRT19J	594891	750287				0.04	nd*	0	0	1030	8.33	1.27	0.633	2.33	9.62	
Above Dundee Dam	Windward (in prep; submitted to EPA 2013)	UPRT19K	594853	750827				0.76	0.643	0.99	0.618	11800	33	2.67	0.76	9	8.53	
Above Dundee Dam	Windward (in prep; submitted to EPA 2013)	UPRT19L	593691	752156				0.80	0.692	0.72	0.414	14300	25.7	2.35	0.723	6.67	8.19	
Above Dundee Dam	Windward (in prep; submitted to EPA 2013)	UPRT19M	593521	753134				0.82	0.736	0.49	0.264	15200	24	2.39	0.75	6.33	8.25	
Above Dundee Dam	Windward (in prep; submitted to EPA 2013)	UPRT20A	593933	754562				0.81	0.758	0.67	0.261	9950	18.7	2.13	0.727	5.33	8.39	
Above Dundee Dam	Windward (in prep; submitted to EPA 2013)	UPRT20B	593792	754732				0.82	0.813	0.83	0.434	19500	23	1.94	0.617	4.33	8.94	
Above Dundee Dam	Windward (in prep; submitted to EPA 2013)	UPRT20C	593704	755904				0.92	0.852	0.84	0.546	3820	12.3	1.55	0.623	3	9.56	
Above Dundee Dam	Windward (in prep; submitted to EPA 2013)	UPRT20D	593934	756211				0.81	0.637	0.82	0.432	15100	32.3	2.56	0.737	7	8.7	
Above Dundee Dam	Windward (in prep; submitted to EPA 2013)	UPRT20E	593573	757471				0.87	0.742	0.73	0.404	5500	23	2.65	0.86	8.33	7.86	
Above Dundee Dam	Windward (in prep; submitted to EPA 2013)	UPRT20F	593318	757805				0.55	0.358	0.01	0.00156	9180	29.7	2.75	0.813	9.67	7.99	
Above Dundee Dam	Windward (in prep; submitted to EPA 2013)	UPRT20G	593713	758634				0.87	0.819	0.76	0.355	16100	19	2.13	0.727	5.67	8.82	
Above Dundee Dam	Windward (in prep; submitted to EPA 2013)	UPRT21A	594215	759390				0.91	0.791	0.77	0.389	11200	21	2.19	0.72	4.33	8.28	
Above Dundee Dam	Windward (in prep; submitted to EPA 2013)	UPRT21B	594304	759819				0.81	0.912	0.21	0.0871	18400	18	1.56	0.54	2.67	9.48	
Above Dundee Dam	Windward (in prep; submitted to EPA 2013)	UPRT21C	594388	760379				0.74	0.681	0.87	0.488	11500	32.3	2.73	0.79	9.33	7.95	
Above Dundee Dam	Windward (in prep; submitted to EPA 2013)	UPRT21D	593893	760965				0.72	0.725	0.70	0.314	13400	21.3	2.18	0.717	5	8.08	
Above Dundee Dam	Windward (in prep; submitted to EPA 2013)	UPRT21E	593432	761295				0.86	0.714	0.64	0.284	6390	16.7	1.79	0.643	3.67	8.69	
Above Dundee Dam	Windward (in prep; submitted to EPA 2013)	UPRT21F	592798	761474				0.90	1.03	0.81	0.454	14000	26.7	2.27	0.697	6	8.4	
Above Dundee Dam	Windward (in prep; submitted to EPA 2013)	UPRT21G	591953	761465				0.85	0.709	0.70	0.452	2070	13.7	2.01	0.773	4.33	7.64	
Above Dundee Dam	Windward (in prep; submitted to EPA 2013)	UPRT22A	591076	763069				0.71	0.637	0.89	0.518	3490	17.7	1.76	0.617	4	6.84	
Above Dundee Dam	Windward (in prep; submitted to EPA 2013)	UPRT22B	590985	763326				0.83	0.742	0.66	0.473	5880	25.3	2.16	0.667	5	7.02	
Mullica River	NJ Department of Environmental Protection	AN05600300			39.7859167	-74.8601944						2975	35	3.08	0.87	13	7.35	No chemistry/toxicity data
Mullica River	NJ Department of Environmental Protection	AN05600395			39.7859167	-74.8601944						2400	35	3.22	0.90	15	6.22	No chemistry/toxicity data
Mullica River	NJ Department of Environmental Protection	AN05601104			39.7859167	-74.8601944						2675	23	2.48	0.79	8	6.44	No chemistry/toxicity data
Mullica River	NJ Department of Environmental Protection	AN05610300			39.7762778	-74.79875						2550	19	2.64	0.90	9	5.93	No chemistry/toxicity data
Mullica River	NJ Department of Environmental Protection	AN05610395			39.7762778	-74.79875						2275	19	2.35	0.80	6	7.06	No chemistry/toxicity data
Mullica River	NJ Department of Environmental Protection	AN05610705			39.7762778	-74.79875						2900	11	1.58	0.66	3	7.39	No chemistry/toxicity data
Mullica River	NJ Department of Environmental Protection	AN05620300			39.7430556	-74.7571111						2525	26	2.63	0.81	8	5.89	No chemistry/toxicity data
Mullica River	NJ Department of Environmental Protection	AN05620395			39.7430556	-74.7571111						2650	22	2.37	0.77	7	3.81	No chemistry/toxicity data
Mullica River	NJ Department of Environmental Protection	AN05620705			39.7430556	-74.7571111						1900	20	2.01	0.67	6	7.33	No chemistry/toxicity data
Mullica River	NJ Department of Environmental Protection	AN05640200			39.6592542	-74.6585881						450	6	1.35	0.75	3	6.53	No chemistry/toxicity data
Mullica River	NJ Department of Environmental Protection	AN05640295			39.6592542	-74.6585881						2500	17	1.80	0.63	5	6.00	No chemistry/toxicity data
Mullica River	NJ Department of Environmental Protection	AN05640406			39.6592542	-74.6585881						2500	36	3.08	0.86	15	5.68	No chemistry/toxicity data
Mullica River	NCA Program New Jersey Atlantic Coast 2000	NJ00-0041			39.612	-74.589	0.851					4825	15	1.93	0.713	4	6.79	Toxicity data not comparable to LPRSA
Mullica River	NCA Program New Jersey Atlantic Coast 2001	NJ01-0120			39.62	-74.63	0.895					5825	19	2.05	0.695	5	8.77	Toxicity data not comparable to LPRSA
Mullica River	NCA Program New Jersey Atlantic Coast 2002	NJ02-0232			39.629	-74.643	0.872					3900	14	1.53	0.581	3	6.97	Toxicity data not comparable to LPRSA
Mullica River	NCA Program New Jersey Atlantic Coast 2004	NJ04-0432			39.62	-74.631	0.796											No benthic community data
Mullica River	NCA Program New Jersey Atlantic Coast 2006	NJ06-0046			39.612	-74.589	0.418					3625	10	1.90	0.824	4	8.61	Toxicity data not comparable to LPRSA

Table B4-1 presents the available regional reference data from above Dundee Dam and Mullica River, which are used to quantify reference conditions for SQT analyses in the BERA. Specifically, Table B4-1 provides sample information, benthic invertebrate community metric data and sediment toxicity test data. The data in Table B4-1 have not been screened for sediment chemical contamination or excessive toxicity. The Mullica River freshwater data are ultimately screened out; most samples do not have full SQT results, and what is left (n = 4 samples) is insufficient to reasonably characterize a reference conditions (i.e., 5th or 95th percentile envelope threshold values).

(Table B3)

Table B4-2. Chemistry screen of SQT stations above Dundee Dam

Location ID	Mean PEC Quotient	Pass Chemical Screen (mean PEC quotient <0.5)?
UPRT18H	0.23	Yes
UPRT18I	1	No
UPRT18J	0.65	No
UPRT18K	0.51	No
UPRT19J	18	No
UPRT19K	0.68	No
UPRT19L	0.2	Yes
UPRT19M	0.14	Yes
UPRT20A	0.28	Yes
UPRT20B	0.21	Yes
UPRT20C	1.9	No
UPRT20D	1.7	No
UPRT20E	0.2	Yes
UPRT20F	8	No
UPRT20G	0.13	Yes
UPRT21A	0.19	Yes
UPRT21B	0.86	No
UPRT21C	0.32	Yes
UPRT21D	0.076	Yes
UPRT21E	0.39	Yes
UPRT21F	0.41	Yes
UPRT21G	0.3	Yes
UPRT22A	0.097	Yes
UPRT22B	0.21	Yes

PEC = probable effects concentration

Table B4-2 presents the chemical screen of chemistry data from sediments collected above Dundee Dam for SQT analysis. Samples were acceptable if the mean probable effect concentration quotient value for all applicable analytes was less than 0.5. Values passing this chemical screen were further evaluated in Table B4-3.

Table B4-3a. Toxicity screen for SQT stations from above Dundee Dam (that pass the chemistry screen)

Location ID	*C. dilutus* Survival (% of control)*	*H. azteca* Survival (% of control)*	Extreme *C. dilutus* Survival Value?	Extreme *H. azteca* Survival Value?	Acceptable Reference Location, LOE Approach	Acceptable Reference Location, Quantitative Uncertainty Analysis
UPRT18H	0.96	0.94	No	No	Yes	Yes
UPRT19L	0.80	0.72	No	No	No	Yes
UPRT19M	0.82	0.49	No	No	No	Yes
UPRT20A	0.81	0.67	No	No	No	Yes
UPRT20B	0.82	0.83	No	No	Yes	Yes
UPRT20E	0.87	0.73	No	No	No	Yes
UPRT20G	0.87	0.76	No	No	Yes	Yes
UPRT21A	0.91	0.77	No	No	Yes	Yes
UPRT21C	0.74	0.87	No	No	No	Yes
UPRT21D	0.72	0.70	No	No	No	Yes
UPRT21E	0.86	0.64	No	No	No	Yes
UPRT21F	0.90	0.81	No	No	Yes	Yes
UPRT21G	0.85	0.70	No	No	No	Yes
UPRT22A	0.71	0.89	No	No	No	Yes
UPRT22B	0.83	0.66	No	No	No	Yes

* Acceptability criterion of ≥75% of control survival applies to both *C. dilutus* and *H. azteca*

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Table B4-3b. Thresholds for "extreme" freshwater reference toxicity values

Statistic	*C. dilutus* Survival Threshold (% of control)	*H. azteca* Survival Threshold (% of control)
25th percentile	0.801	0.683
75th percentile	0.867	0.82
Interquartile range	0.199	0.417
Upper limit	**1.07**	**1.24**
Lower limit	**0.602**	**0.267**

Note: toxicity test results are considered exreme if they are less than the lower limit or greater than the upper limit

Table B4-3 presents the sediment toxicity test screening step conducted in the LPRSA BERA. Per USEPA guidance, control-normalized *Chironomus dilutus* and *Hyalella azteca* survival less than 75% is considered unacceptable for use in the BERA to characterize reference conditions for SQT analyses. In the quantitative analysis of uncertainty, also presented in the BERA (Section 6.1.3.1), there is discussion of the uncertainty associated with the toxicity test screening step. An alternative approach is presented in Table B4-3: extreme values were identified using a common outlier identification method (typically shown visually in boxplot graphs), and associated samples were screened out of subsequent analyses. Table B4-3b presents the calculated thresholds defining extreme values, and the result of the screen of extreme values is presented in Table B4-3a (alongside the results of USEPA's preferred screening approach). The "LOE approach" refers to the result based on USEPA's preferred screening methods.

Table B4-4a. Toxicity test endpoint and benthic community metric envelope thresholds for area above Dundee Dam

Location ID	*C. dilutus* survival (% of control)	*C. dilutus* biomass (% of control)	*H. azteca* survival (% of control)	*H. azteca* biomass (% of control)	Abundance (per m^2)	Taxa Richness	Shannon-Weiner H'	Pielou's J'	Swartz's Dominance Index	Hilsenhoff Biotic Index
UPRT18H	0.96	0.775	0.94	0.471	11500	19	2.01	0.683	4.33	9.41
UPRT20B	0.82	0.813	0.83	0.434	19500	23	1.94	0.617	4.33	8.94
UPRT20G	0.87	0.819	0.76	0.355	16100	19	2.13	0.727	5.67	8.82
UPRT21A	0.91	0.791	0.77	0.389	11200	21	2.19	0.720	4.33	8.28
UPRT21F	0.90	1.027	0.81	0.454	14000	27	2.27	0.697	6.00	8.40
5th percentile threshold	0.83	0.778	0.76	0.362	11260	19	1.95	0.630	4.33	na
95th percentile threshold	na	na	na	na	18820	na	na	na	na	9.32

na -- not applicable

Table B4-4b. Toxicity test endpoint and benthic community metric envelope thresholds for area above Dundee Dam, quantitative analysis of uncerta

Location ID	*C. dilutus* survival (% of control)	*C. dilutus* biomass (% of control)	*H. azteca* survival (% of control)	*H. azteca* biomass (% of control)	Abundance (per m^2)	Taxa Richness	Shannon-Weiner H'	Pielou's J'	Swartz's Dominance Index	Hilsenhoff Biotic Index
UPRT18H	0.96	0.775	0.94	0.471	11500	19	2.01	0.683	4.33	9.41
UPRT19L	0.80	0.692	0.72	0.414	14300	25.7	2.35	0.723	6.67	8.19
UPRT19M	0.82	0.736	0.49	0.264	15200	24	2.39	0.75	6.33	8.25
UPRT20A	0.81	0.758	0.67	0.261	9950	18.7	2.13	0.727	5.33	8.39
UPRT20B	0.82	0.813	0.83	0.434	19500	23	1.94	0.617	4.33	8.94
UPRT20E	0.87	0.742	0.73	0.404	5500	23	2.65	0.86	8.33	7.86
UPRT20G	0.87	0.819	0.76	0.355	16100	19	2.13	0.727	5.67	8.82
UPRT21A	0.91	0.791	0.77	0.389	11200	21	2.19	0.72	4.33	8.28
UPRT21C	0.74	0.681	0.87	0.488	11500	32.3	2.73	0.79	9.33	7.95
UPRT21D	0.72	0.725	0.70	0.314	13400	21.3	2.18	0.717	5	8.08
UPRT21E	0.86	0.714	0.64	0.284	6390	16.7	1.79	0.643	3.67	8.69
UPRT21F	0.90	1.027	0.81	0.454	14000	26.7	2.27	0.697	6	8.4
UPRT21G	0.85	0.709	0.70	0.452	2070	13.7	2.01	0.773	4.33	7.64
UPRT22A	0.71	0.637	0.89	0.518	3490	17.7	1.76	0.617	4	6.84
UPRT22B	0.83	0.742	0.66	0.473	5880	25.3	2.16	0.667	5	7.02
5th percentile threshold	0.72	0.668	0.60	0.263	3064	15.8	1.78	0.62	3.90	na
95th percentile threshold	na	na	na	na	17120	na	na	na	na	9.08

Table B4-4 presents sediment toxicity and benthic community metric data for acceptable reference data from above Dundee Dam. Tables B4-4a and B4-4b present the acceptable data based on USEPA's preferred screening methods and the alternative approach for the quantiative analysis of uncertainty, respectively. In addition to the raw datasets, "envelope thresholds" are calculated for each toxicity test endpoint or benthic metric. These values quantitatively define the "reference condition". In the BERA, the envelope thresholds are directly compared to LPRSA toxicity and benthic metric data on a sample-by-sample basis. Values exceeding relevant 95th percentiles or falling below relevant 5th percentiles (Tables B4-5 and B4-6) are said to be "outside" of the reference condition and therefore impacted to some degree. In the weight of evidence analysis (Tables B8 and B9), LPRSA exceedances of the envelope thresholds are combined to infer chemical risk. Note that the envelope thresholds for *C. dilutus* and *H. azteca* endpoints are also used to evaluate toxic impacts

Table B4-5. Comparison of LPRSA benthic community metric and toxicity data to reference envelope thresholds for stations above Dundee Dam

			LPRSA Benthic Community Metric and Sediment Toxicity Data										LPRSA Data Outside of Reference Envelope? (1 = outside envelope; 0 = within envelope)										LOE Results	
Location ID	Toxicity Type	Benthic Salinity Zone	Abundance (per m^2)	Taxa Richness	Shannon-Weiner H'	Pielou's J'	Swartz's Dominance Index	Hilsenhoff Biotic Index	*C. dilutus* survival (% of control)	*C. dilutus* biomass (% of control)	*H. azteca* survival (% of control)	*H. azteca* biomass (% of control)	Abundance (per m^2)	Taxa Richness	Shannon-Weiner H'	Pielou's J'	Swartz's Dominance Index	Hilsenhoff Biotic Index	*C. dilutus* survival (% of control)	*C. dilutus* biomass (% of control)	*H. azteca* survival (% of control)	*H. azteca* biomass (% of control)	Benthic Community LOE	Sediment Toxicity LOE
	5th percentile threshold		11260	19	1.95	0.630	4.33	na	0.827	0.778	0.758	0.362												
	95th percentile threshold		18820	na	na	na	na	9.32	na	na	na	na												
LPRT14A	Freshwater	Tidal Freshwater	5820	13	1.47	0.577	2.33	9.73	0.921	0.445	0.441	0.273	1	1	1	1	1	1	0	1	1	1	1.00	0.750
LPRT14B	Freshwater	Tidal Freshwater	11500	14	1.63	0.62	3.67	9.17	0.987	0.483	0.456	0.161	0	1	1	1	1	0	0	1	1	1	0.667	0.750
LPRT14C	Freshwater	Tidal Freshwater	10300	15.7	1.5	0.543	3.00	9.33	0.921	0.613	0.853	0.523	1	1	1	1	1	1	0	1	0	0	1.00	0.250
LPRT14D	Freshwater	Tidal Freshwater	7980	17	1.73	0.61	3.67	9.01	0.803	0.373	0.633	0.268	1	1	1	1	1	0	1	1	1	1	0.833	1.000
LPRT14E	Freshwater	Tidal Freshwater	4520	14.7	1.57	0.587	2.67	8.33	0.961	0.507	0.529	0.214	1	1	1	1	1	0	0	1	1	1	0.833	0.750
LPRT14F	Freshwater	Tidal Freshwater	8440	19	1.96	0.677	5.00	9.08	0.921	0.681	0.882	0.482	1	0	0	0	0	0	0	1	0	0	0.167	0.250
LPRT15A	Freshwater	Tidal Freshwater	30600	18.7	1.61	0.55	2.67	8.73	1	0.541	0.588	0.359	1	1	1	1	1	0	0	1	1	1	0.833	0.750
LPRT15B	Freshwater	Tidal Freshwater	4970	17	1.67	0.597	3.00	9.49	1.014	0.495	0.78	0.55	1	1	1	1	1	1	0	1	0	0	1.00	0.250
LPRT15C	Freshwater	Tidal Freshwater	2060	11.7	1.55	0.637	3.33	9.22	0.935	0.431	0.809	0.46	1	1	1	0	1	0	0	1	0	0	0.667	0.250
LPRT15D	Freshwater	Tidal Freshwater	8170	20.7	1.89	0.627	4.33	8.89	0.789	0.359	0.735	0.445	1	0	1	1	0	0	1	1	1	0	0.500	0.750
LPRT15E	Freshwater	Tidal Freshwater	4100	15.7	2	0.73	5.33	9.04	0.974	0.464	0.898	0.594	1	1	0	0	0	0	0	1	0	0	0.333	0.250
LPRT15F	Freshwater	Tidal Freshwater	4180	15.3	1.61	0.593	3.33	9.42	0.921	0.438	0.956	0.635	1	1	1	1	1	1	0	1	0	0	1.00	0.250
LPRT16A	Freshwater	Tidal Freshwater	12800	22.7	1.58	0.507	2.67	9.2	0.737	0.538	0.785	0.542	0	0	1	1	1	0	1	1	0	0	0.500	0.500
LPRT16C	Freshwater	Tidal Freshwater	5180	13.7	1.74	0.707	3.67	9.26	0.882	0.791	0.971	1.052	1	1	1	0	1	0	0	0	0	0	0.667	0.000
LPRT16D	Freshwater	Tidal Freshwater	8670	17.3	1.8	0.633	4.00	8.55	0.961	1.012	0.868	0.634	1	1	1	0	1	0	0	0	0	0	0.667	0.000
LPRT16E	Freshwater	Tidal Freshwater	1990	8	1.32	0.64	2.67	9.09	0.842	0.895	0.927	1.025	1	1	1	0	1	0	0	0	0	0	0.667	0.000
LPRT17D	Freshwater	Tidal Freshwater	9000	17.7	1.44	0.51	2.33	9.44	0.961	0.516	1.045	0.702	1	1	1	1	1	1	0	1	0	0	1.00	0.250
LPRT17A	Freshwater	Tidal Freshwater	2770	11.3	1.41	0.583	2.00	9.64	0.789	0.434	0.986	0.649	1	1	1	1	1	1	1	1	0	0	1.00	0.500

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Table B4-5 presents the comparison of LPRSA SQT data to envelope threshold values for the above Dundee Dam dataset (LOE approach) (Table B4-4a). If LPRSA values exceed the associated reference envelope thresholds, then a weight is given to the sample for the impacted endpoint. Weights are then summed across all endpoints within each line of evidence (sediment toxicity endpoints or benthic community metrics). Sum weights then go into the weight of evidence (Tables B8 and B9) for characterizing chemical risks in

Table B4-6. Comparison of LPRSA benthic community metric and toxicity data to reference envelope thresholds for stations above Dundee Dam, quantiative analysis of uncertainty

			LPRSA Benthic Community Metric and Sediment Toxicity Data										LPRSA Data Outside of Reference Envelope? (1 = outside envelope; 0 = within envelope)										LOE Results	
Location ID	Toxicity Type	Benthic Salinity Zone	Abundance (per m^2)	Taxa Richness	Shannon-Weiner H'	Pielou's J'	Swartz's Dominance Index	Hilsenhoff Biotic Index	*C. dilutus* survival (% of control)	*C. dilutus* biomass (% of control)	*H. azteca* survival (% of control)	*H. azteca* biomass (% of control)	Abundance (per m^2)	Taxa Richness	Shannon-Weiner H'	Pielou's J'	Swartz's Dominance Index	Hilsenhoff Biotic Index	*C. dilutus* survival (% of control)	*C. dilutus* biomass (% of control)	*H. azteca* survival (% of control)	*H. azteca* biomass (% of control)	Benthic Community LOE	Sediment Toxicity LOE
	5th percentile threshold		3064	15.8	1.78	0.62	3.90	na	0.72	0.668	0.60	0.263												
	95th percentile threshold		17120	na	na	na	na	9.08	na	na	na	na												
LPRT14A	Freshwater	Tidal Freshwater	5820	13	1.47	0.577	2.33	9.73	0.921	0.445	0.441	0.273	0	1	1	1	1	1	0	1	1	0	0.833	0.500
LPRT14B	Freshwater	Tidal Freshwater	11500	14	1.63	0.62	3.67	9.17	0.987	0.483	0.456	0.161	0	1	1	0	1	1	0	1	1	1	0.667	0.750
LPRT14C	Freshwater	Tidal Freshwater	10300	15.7	1.5	0.543	3.00	9.33	0.921	0.613	0.853	0.523	0	1	1	1	1	1	0	1	0	0	0.833	0.250
LPRT14D	Freshwater	Tidal Freshwater	7980	17	1.73	0.61	3.67	9.01	0.803	0.373	0.633	0.268	0	0	1	1	1	0	0	1	0	0	0.500	0.250
LPRT14E	Freshwater	Tidal Freshwater	4520	14.7	1.57	0.587	2.67	8.33	0.961	0.507	0.529	0.214	0	1	1	1	1	0	0	1	1	1	0.667	0.750
LPRT14F	Freshwater	Tidal Freshwater	8440	19	1.96	0.677	5.00	9.08	0.921	0.681	0.882	0.482	0	0	0	0	0	0	0	0	0	0	0.000	0.000
LPRT15A	Freshwater	Tidal Freshwater	30600	18.7	1.61	0.55	2.67	8.73	1	0.541	0.588	0.359	1	0	1	1	1	0	0	1	1	0	0.667	0.500
LPRT15B	Freshwater	Tidal Freshwater	4970	17	1.67	0.597	3.00	9.49	1.014	0.495	0.78	0.55	0	0	1	1	1	1	0	1	0	0	0.667	0.250
LPRT15C	Freshwater	Tidal Freshwater	2060	11.7	1.55	0.637	3.33	9.22	0.935	0.431	0.809	0.46	1	1	1	0	1	1	0	1	0	0	0.833	0.250
LPRT15D	Freshwater	Tidal Freshwater	8170	20.7	1.89	0.627	4.33	8.89	0.789	0.359	0.735	0.445	0	0	0	0	0	0	0	1	0	0	0.000	0.250
LPRT15E	Freshwater	Tidal Freshwater	4100	15.7	2	0.73	5.33	9.04	0.974	0.464	0.898	0.594	0	1	0	0	0	0	0	1	0	0	0.167	0.250
LPRT15F	Freshwater	Tidal Freshwater	4180	15.3	1.61	0.593	3.33	9.42	0.921	0.438	0.956	0.635	0	1	1	1	1	1	0	1	0	0	0.833	0.250
LPRT16A	Freshwater	Tidal Freshwater	12800	22.7	1.58	0.507	2.67	9.2	0.737	0.538	0.785	0.542	0	0	1	1	1	1	0	1	0	0	0.667	0.250
LPRT16C	Freshwater	Tidal Freshwater	5180	13.7	1.74	0.707	3.67	9.26	0.882	0.791	0.971	1.052	0	1	1	0	1	1	0	0	0	0	0.667	0.000
LPRT16D	Freshwater	Tidal Freshwater	8670	17.3	1.8	0.633	4.00	8.55	0.961	1.012	0.868	0.634	0	0	0	0	0	0	0	0	0	0	0.000	0.000
LPRT16E	Freshwater	Tidal Freshwater	1990	8	1.32	0.64	2.67	9.09	0.842	0.895	0.927	1.025	1	1	1	0	1	1	0	0	0	0	0.833	0.000
LPRT17D	Freshwater	Tidal Freshwater	9000	17.7	1.44	0.51	2.33	9.44	0.961	0.516	1.045	0.702	0	0	1	1	1	1	0	1	0	0	0.667	0.250
LPRT17A	Freshwater	Tidal Freshwater	2770	11.3	1.41	0.583	2.00	9.64	0.789	0.434	0.986	0.649	1	1	1	1	1	1	0	1	0	0	1.00	0.250

LOE -- line of evidence

Note: no benthic community data is available for LPRT16B; it has been excluded from this table.

Table B4-6 presents the comparison of LPRSA SQT data to envelope threshold values for the above Dundee Dam dataset (quantiative analysis of uncertainty approach) (Table B4-4b). If LPRSA values exceed the associated reference envelope thresholds, then a weight is given to the sample for the impacted endpoint. Weights are then summed across all endpoints within each line of evidence (sediment toxicity endpoints or benthic community metrics). Sum weights then go into the weight of evidence (Tables B8 and B9) for characterizing

Table B5-1. Results of comparisons between LPRSA sediment toxicity test results and negative control results

Location ID	Laboratory Test Batch	Endpoint	Test Method*	Test p-value	Significant (p<0.05)?
LPRT01A	2	*A. abdita* 10-d survival	rankit t-test, equal variance	0.019	Yes
LPRT01B	2	*A. abdita* 10-d survival	rankit t-test, equal variance	0.18	No
LPRT01C	7	*A. abdita* 10-d survival	rankit t-test, equal variance	0.079	No
LPRT01D	2	*A. abdita* 10-d survival	rankit t-test, equal variance	0.013	Yes
LPRT01E	7	*A. abdita* 10-d survival	rankit t-test, equal variance	0.017	Yes
LPRT01F	2	*A. abdita* 10-d survival	rankit t-test, equal variance	0.023	Yes
LPRT01G	2	*A. abdita* 10-d survival	rankit t-test, equal variance	0.34	No
LPRT02A	2	*A. abdita* 10-d survival	rankit t-test, equal variance	0.026	Yes
LPRT02B	2	*A. abdita* 10-d survival	rankit t-test, equal variance	0.016	Yes
LPRT02C	7	*A. abdita* 10-d survival	rankit t-test, equal variance	0.02	Yes
LPRT02D	7	*A. abdita* 10-d survival	rankit t-test, equal variance	0.11	No
LPRT02E	2	*A. abdita* 10-d survival	rankit t-test, equal variance	0.016	Yes
LPRT02F	2	*A. abdita* 10-d survival	rankit t-test, equal variance	0.084	No
LPRT03A	2	*A. abdita* 10-d survival	rankit t-test, equal variance	0.013	Yes
LPRT03B	2	*A. abdita* 10-d survival	rankit t-test, equal variance	0.12	No
LPRT03C	7	*A. abdita* 10-d survival	rankit t-test, equal variance	0.017	Yes
LPRT03D	2	*A. abdita* 10-d survival	rankit t-test, equal variance	0.031	Yes
LPRT03E	2	*A. abdita* 10-d survival	rankit t-test, equal variance	0.023	Yes
LPRT03F	7	*A. abdita* 10-d survival	rankit t-test, equal variance	0.015	Yes
LPRT04A	2	*A. abdita* 10-d survival	rankit t-test, equal variance	0.016	Yes
LPRT04B	2	*A. abdita* 10-d survival	rankit t-test, equal variance	0.013	Yes
LPRT04C	7	*A. abdita* 10-d survival	rankit t-test, equal variance	0.014	Yes
LPRT04D	7	*A. abdita* 10-d survival	rankit t-test, equal variance	0.014	Yes
LPRT04E	7	*A. abdita* 10-d survival	rankit t-test, equal variance	0.21	No
LPRT05A	7	*A. abdita* 10-d survival	rankit t-test, equal variance	0.014	Yes
LPRT05B	7	*A. abdita* 10-d survival	rankit t-test, equal variance	0.015	Yes
LPRT06C	7	*A. abdita* 10-d survival	rankit t-test, equal variance	0.017	Yes
LPRT04F	6	*C. dilutus* 10-d biomass	rankit t-test, equal variance	0.0046	Yes
LPRT05C	6	*C. dilutus* 10-d biomass	t-test, equal variance	0.00000077	Yes
LPRT05D	6	*C. dilutus* 10-d biomass	rankit t-test, equal variance	0.000021	Yes
LPRT05E	5	*C. dilutus* 10-d biomass	t-test, unequal variance	0.019	Yes
LPRT05F	6	*C. dilutus* 10-d biomass	rankit t-test, unequal equivalence	0.0000016	Yes
LPRT06A	6	*C. dilutus* 10-d biomass	rankit t-test, equal variance	0.0000056	Yes
LPRT06B	6	*C. dilutus* 10-d biomass	rankit t-test, unequal equivalence	0.0000013	Yes
LPRT06D	6	*C. dilutus* 10-d biomass	t-test, equal variance	0.0000015	Yes
LPRT06E	6	*C. dilutus* 10-d biomass	t-test, equal variance	0.000011	Yes
LPRT06F	5	*C. dilutus* 10-d biomass	rankit t-test, unequal equivalence	0.0011	Yes
LPRT07A	5	*C. dilutus* 10-d biomass	rankit t-test, unequal equivalence	0.67	No
LPRT07B	6	*C. dilutus* 10-d biomass	t-test, equal variance	0.000000057	Yes
LPRT07C	5	*C. dilutus* 10-d biomass	t-test, unequal variance	0.00011	Yes
LPRT07D	5	*C. dilutus* 10-d biomass	t-test, unequal variance	0.055	No
LPRT07E	5	*C. dilutus* 10-d biomass	rankit t-test, equal variance	0.00069	Yes
LPRT08A	5	*C. dilutus* 10-d biomass	rankit t-test, equal variance	0.055	No
LPRT08B	5	*C. dilutus* 10-d biomass	rankit t-test, unequal equivalence	0.017	Yes
LPRT08C	5	*C. dilutus* 10-d biomass	t-test, unequal variance	0.0012	Yes
LPRT08D	6	*C. dilutus* 10-d biomass	t-test, equal variance	0.025	Yes
LPRT08E	6	*C. dilutus* 10-d biomass	rankit t-test, equal variance	0.023	Yes
LPRT09A	6	*C. dilutus* 10-d biomass	rankit t-test, unequal equivalence	0.0000011	Yes
LPRT09B	4	*C. dilutus* 10-d biomass	rankit t-test, unequal equivalence	0.0000086	Yes

Table B5-1. Results of comparisons between LPRSA sediment toxicity test results and negative control results

Location ID	Laboratory Test Batch	Endpoint	Test Method*	Test p-value	Significant (p<0.05)?
LPRT09C	4	*C. dilutus* 10-d biomass	rankit t-test, equal variance	0.00000047	Yes
LPRT09D	5	*C. dilutus* 10-d biomass	t-test, unequal variance	0.2	No
LPRT09E	5	*C. dilutus* 10-d biomass	t-test, unequal variance	0.051	No
LPRT09F	5	*C. dilutus* 10-d biomass	rankit t-test, unequal equivalence	0.57	No
LPRT09G	5	*C. dilutus* 10-d biomass	t-test, equal variance	0.16	No
LPRT09H	6	*C. dilutus* 10-d biomass	t-test, equal variance	0.00031	Yes
LPRT10A	4	*C. dilutus* 10-d biomass	rankit t-test, equal variance	0.00000047	Yes
LPRT10B	4	*C. dilutus* 10-d biomass	rankit t-test, equal variance	0.00000047	Yes
LPRT10C	4	*C. dilutus* 10-d biomass	rankit t-test, unequal equivalence	0.00000076	Yes
LPRT10D	4	*C. dilutus* 10-d biomass	rankit t-test, equal variance	0.00000047	Yes
LPRT10E	5	*C. dilutus* 10-d biomass	t-test, unequal variance	0.029	Yes
LPRT11A	4	*C. dilutus* 10-d biomass	rankit t-test, equal variance	0.00000047	Yes
LPRT11B	4	*C. dilutus* 10-d biomass	rankit t-test, equal variance	0.00000047	Yes
LPRT11C	4	*C. dilutus* 10-d biomass	rankit t-test, equal variance	0.00000061	Yes
LPRT11D	4	*C. dilutus* 10-d biomass	rankit t-test, equal variance	0.00000047	Yes
LPRT11E	4	*C. dilutus* 10-d biomass	rankit t-test, unequal equivalence	0.00000076	Yes
LPRT11F	4	*C. dilutus* 10-d biomass	rankit t-test, equal variance	0.00000047	Yes
LPRT11G	4	*C. dilutus* 10-d biomass	rankit t-test, unequal equivalence	0.00000076	Yes
LPRT12A	3	*C. dilutus* 10-d biomass	rankit t-test, equal variance	0.0000013	Yes
LPRT12B	3	*C. dilutus* 10-d biomass	t-test, unequal variance	1.2E-15	Yes
LPRT12C	3	*C. dilutus* 10-d biomass	rankit t-test, equal variance	0.0000013	Yes
LPRT12D	3	*C. dilutus* 10-d biomass	rankit t-test, equal variance	0.0000013	Yes
LPRT12E	3	*C. dilutus* 10-d biomass	rankit t-test, unequal equivalence	0.00000076	Yes
LPRT13A	3	*C. dilutus* 10-d biomass	rankit t-test, equal variance	0.0000018	Yes
LPRT13B	1	*C. dilutus* 10-d biomass	rankit t-test, unequal equivalence	0.00000073	Yes
LPRT13C	1	*C. dilutus* 10-d biomass	rankit t-test, equal variance	0.0000022	Yes
LPRT13D	3	*C. dilutus* 10-d biomass	t-test, unequal variance	4.2E-16	Yes
LPRT13E	1	*C. dilutus* 10-d biomass	t-test, unequal variance	0.000018	Yes
LPRT13F	1	*C. dilutus* 10-d biomass	rankit t-test, equal variance	0.89	No
LPRT13G	1	*C. dilutus* 10-d biomass	t-test, unequal variance	2.5E-12	Yes
LPRT14A	3	*C. dilutus* 10-d biomass	rankit t-test, unequal equivalence	0.00000076	Yes
LPRT14B	3	*C. dilutus* 10-d biomass	rankit t-test, equal variance	0.0000013	Yes
LPRT14C	3	*C. dilutus* 10-d biomass	rankit t-test, equal variance	0.0000013	Yes
LPRT14D	3	*C. dilutus* 10-d biomass	rankit t-test, equal variance	0.0000013	Yes
LPRT14E	3	*C. dilutus* 10-d biomass	t-test, equal variance	9.9E-16	Yes
LPRT14F	3	*C. dilutus* 10-d biomass	rankit t-test, equal variance	0.0000017	Yes
LPRT15A	3	*C. dilutus* 10-d biomass	rankit t-test, equal variance	0.0000013	Yes
LPRT15B	4	*C. dilutus* 10-d biomass	rankit t-test, equal variance	0.00000047	Yes
LPRT15C	3	*C. dilutus* 10-d biomass	rankit t-test, equal variance	0.0000013	Yes
LPRT15D	3	*C. dilutus* 10-d biomass	rankit t-test, equal variance	0.0000013	Yes
LPRT15E	3	*C. dilutus* 10-d biomass	t-test, equal variance	9.2E-19	Yes
LPRT15F	3	*C. dilutus* 10-d biomass	t-test, equal variance	3.2E-19	Yes
LPRT16A	4	*C. dilutus* 10-d biomass	rankit t-test, equal variance	0.00000047	Yes
LPRT16B	4	*C. dilutus* 10-d biomass	rankit t-test, equal variance	0.00000047	Yes
LPRT16C	4	*C. dilutus* 10-d biomass	rankit t-test, equal variance	0.0000018	Yes
LPRT16D	4	*C. dilutus* 10-d biomass	rankit t-test, unequal equivalence	0.57	No
LPRT16E	4	*C. dilutus* 10-d biomass	rankit t-test, unequal equivalence	0.068	No
LPRT17A	3	*C. dilutus* 10-d biomass	t-test, unequal variance	0.000000035	Yes
LPRT17D	3	*C. dilutus* 10-d biomass	rankit t-test, equal variance	0.0000013	Yes

Table B5-1. Results of comparisons between LPRSA sediment toxicity test results and negative control results

Location ID	Laboratory Test Batch	Endpoint	Test Method*	Test p-value	Significant (p<0.05)?
LPRT04F	6	*C. dilutus* 10-d survival	t-test, equal variance	0.017	Yes
LPRT05C	6	*C. dilutus* 10-d survival	t-test, equal variance	0.27	No
LPRT05D	6	*C. dilutus* 10-d survival	t-test, equal variance	0.07	No
LPRT05E	5	*C. dilutus* 10-d survival	rankit t-test, equal variance	0.15	No
LPRT05F	6	*C. dilutus* 10-d survival	rankit t-test, equal variance	0.75	No
LPRT06A	6	*C. dilutus* 10-d survival	t-test, equal variance	0.21	No
LPRT06B	6	*C. dilutus* 10-d survival	rankit t-test, equal variance	0.0098	Yes
LPRT06D	6	*C. dilutus* 10-d survival	t-test, equal variance	0.19	No
LPRT06E	6	*C. dilutus* 10-d survival	rankit t-test, equal variance	0.13	No
LPRT06F	5	*C. dilutus* 10-d survival	rankit t-test, equal variance	0.034	Yes
LPRT07A	5	*C. dilutus* 10-d survival	rankit t-test, equal variance	0.079	No
LPRT07B	6	*C. dilutus* 10-d survival	t-test, equal variance	0.27	No
LPRT07C	5	*C. dilutus* 10-d survival	rankit t-test, equal variance	0.4	No
LPRT07D	5	*C. dilutus* 10-d survival	rankit t-test, equal variance	0.1	No
LPRT07E	5	*C. dilutus* 10-d survival	rankit t-test, equal variance	0.031	Yes
LPRT08A	5	*C. dilutus* 10-d survival	rankit t-test, equal variance	0.25	No
LPRT08B	5	*C. dilutus* 10-d survival	rankit t-test, equal variance	0.5	No
LPRT08C	5	*C. dilutus* 10-d survival	rankit t-test, equal variance	0.63	No
LPRT08D	6	*C. dilutus* 10-d survival	t-test, equal variance	0.011	Yes
LPRT08E	6	*C. dilutus* 10-d survival	t-test, equal variance	0.82	No
LPRT09A	6	*C. dilutus* 10-d survival	rankit t-test, equal variance	0.18	No
LPRT09B	4	*C. dilutus* 10-d survival	rankit t-test, equal variance	0.0021	Yes
LPRT09C	4	*C. dilutus* 10-d survival	rankit t-test, equal variance	0.014	Yes
LPRT09D	5	*C. dilutus* 10-d survival	rankit t-test, equal variance	0.4	No
LPRT09E	5	*C. dilutus* 10-d survival	rankit t-test, equal variance	0.3	No
LPRT09F	5	*C. dilutus* 10-d survival	rankit t-test, equal variance	0.034	Yes
LPRT09G	5	*C. dilutus* 10-d survival	rankit t-test, equal variance	0.037	Yes
LPRT09H	6	*C. dilutus* 10-d survival	t-test, equal variance	0.014	Yes
LPRT10A	4	*C. dilutus* 10-d survival	rankit t-test, equal variance	0.00062	Yes
LPRT10B	4	*C. dilutus* 10-d survival	rankit t-test, equal variance	0.00023	Yes
LPRT10C	4	*C. dilutus* 10-d survival	rankit t-test, equal variance	0.26	No
LPRT10D	4	*C. dilutus* 10-d survival	rankit t-test, equal variance	0.00097	Yes
LPRT10E	5	*C. dilutus* 10-d survival	rankit t-test, equal variance	0.27	No
LPRT11A	4	*C. dilutus* 10-d survival	rankit t-test, equal variance	0.00055	Yes
LPRT11B	4	*C. dilutus* 10-d survival	rankit t-test, unequal equivalence	0.00048	Yes
LPRT11C	4	*C. dilutus* 10-d survival	rankit t-test, equal variance	0.011	Yes
LPRT11D	4	*C. dilutus* 10-d survival	rankit t-test, equal variance	0.078	No
LPRT11E	4	*C. dilutus* 10-d survival	rankit t-test, equal variance	0.055	No
LPRT11F	4	*C. dilutus* 10-d survival	rankit t-test, equal variance	0.15	No
LPRT11G	4	*C. dilutus* 10-d survival	rankit t-test, equal variance	0.00046	Yes
LPRT12A	3	*C. dilutus* 10-d survival	rankit t-test, equal variance	0.63	No
LPRT12B	3	*C. dilutus* 10-d survival	rankit t-test, equal variance	0.45	No
LPRT12C	3	*C. dilutus* 10-d survival	rankit t-test, equal variance	0.0029	Yes
LPRT12D	3	*C. dilutus* 10-d survival	rankit t-test, equal variance	0.68	No
LPRT12E	3	*C. dilutus* 10-d survival	rankit t-test, equal variance	0.0077	Yes
LPRT13A	3	*C. dilutus* 10-d survival	rankit t-test, equal variance	0.028	Yes
LPRT13B	1	*C. dilutus* 10-d survival	rankit t-test, equal variance	0.041	Yes
LPRT13C	1	*C. dilutus* 10-d survival	rankit t-test, equal variance	0.39	No
LPRT13D	3	*C. dilutus* 10-d survival	rankit t-test, equal variance	0.2	No

Table B5-1. Results of comparisons between LPRSA sediment toxicity test results and negative control results

Location ID	Laboratory Test Batch	Endpoint	Test Method*	Test p-value	Significant (p<0.05)?
LPRT13E	1	*C. dilutus* 10-d survival	rankit t-test, equal variance	0.1	No
LPRT13F	1	*C. dilutus* 10-d survival	rankit t-test, equal variance	0.087	No
LPRT13G	1	*C. dilutus* 10-d survival	rankit t-test, equal variance	0.24	No
LPRT14A	3	*C. dilutus* 10-d survival	rankit t-test, unequal equivalence	0.099	No
LPRT14B	3	*C. dilutus* 10-d survival	rankit t-test, equal variance	0.32	No
LPRT14C	3	*C. dilutus* 10-d survival	rankit t-test, equal variance	0.11	No
LPRT14D	3	*C. dilutus* 10-d survival	rankit t-test, equal variance	0.091	No
LPRT14E	3	*C. dilutus* 10-d survival	rankit t-test, equal variance	0.14	No
LPRT14F	3	*C. dilutus* 10-d survival	rankit t-test, equal variance	0.11	No
LPRT15A	3	*C. dilutus* 10-d survival	rankit t-test, equal variance	0.63	No
LPRT15B	4	*C. dilutus* 10-d survival	rankit t-test, equal variance	0.64	No
LPRT15C	3	*C. dilutus* 10-d survival	rankit t-test, equal variance	0.22	No
LPRT15D	3	*C. dilutus* 10-d survival	rankit t-test, equal variance	0.022	Yes
LPRT15E	3	*C. dilutus* 10-d survival	rankit t-test, equal variance	0.17	No
LPRT15F	3	*C. dilutus* 10-d survival	rankit t-test, equal variance	0.11	No
LPRT16A	4	*C. dilutus* 10-d survival	rankit t-test, unequal equivalence	0.0066	Yes
LPRT16B	4	*C. dilutus* 10-d survival	rankit t-test, equal variance	0.0016	Yes
LPRT16C	4	*C. dilutus* 10-d survival	rankit t-test, equal variance	0.075	No
LPRT16D	4	*C. dilutus* 10-d survival	rankit t-test, equal variance	0.24	No
LPRT16E	4	*C. dilutus* 10-d survival	rankit t-test, equal variance	0.0089	Yes
LPRT17A	3	*C. dilutus* 10-d survival	rankit t-test, equal variance	0.091	No
LPRT17D	3	*C. dilutus* 10-d survival	rankit t-test, unequal equivalence	0.067	No
LPRT01A	2	*H. azteca* 28-d biomass	t-test, equal variance	0.025	Yes
LPRT01B	2	*H. azteca* 28-d biomass	rankit t-test, equal variance	0.0027	Yes
LPRT01C	7	*H. azteca* 28-d biomass	t-test, equal variance	0.0000043	Yes
LPRT01D	2	*H. azteca* 28-d biomass	t-test, equal variance	0.012	Yes
LPRT01E	7	*H. azteca* 28-d biomass	rankit t-test, equal variance	0.0008	Yes
LPRT01F	2	*H. azteca* 28-d biomass	t-test, equal variance	0.00013	Yes
LPRT01G	2	*H. azteca* 28-d biomass	t-test, equal variance	0.000068	Yes
LPRT02A	2	*H. azteca* 28-d biomass	t-test, equal variance	0.0000056	Yes
LPRT02B	2	*H. azteca* 28-d biomass	rankit t-test, equal variance	0.0025	Yes
LPRT02C	7	*H. azteca* 28-d biomass	t-test, equal variance	0.0037	Yes
LPRT02D	7	*H. azteca* 28-d biomass	t-test, equal variance	0.00017	Yes
LPRT02E	2	*H. azteca* 28-d biomass	t-test, equal variance	0.00041	Yes
LPRT02F	2	*H. azteca* 28-d biomass	t-test, equal variance	0.00051	Yes
LPRT03A	2	*H. azteca* 28-d biomass	t-test, equal variance	0.036	Yes
LPRT03B	2	*H. azteca* 28-d biomass	t-test, equal variance	0.042	Yes
LPRT03C	7	*H. azteca* 28-d biomass	t-test, equal variance	0.000032	Yes
LPRT03D	2	*H. azteca* 28-d biomass	rankit t-test, equal variance	0.0022	Yes
LPRT03E	2	*H. azteca* 28-d biomass	t-test, equal variance	0.3	No
LPRT03F	7	*H. azteca* 28-d biomass	t-test, equal variance	0.0000051	Yes
LPRT04A	2	*H. azteca* 28-d biomass	t-test, equal variance	0.3	No
LPRT04B	2	*H. azteca* 28-d biomass	t-test, equal variance	0.0014	Yes
LPRT04C	7	*H. azteca* 28-d biomass	t-test, equal variance	0.00000004	Yes
LPRT04D	7	*H. azteca* 28-d biomass	t-test, equal variance	0.0001	Yes
LPRT04E	7	*H. azteca* 28-d biomass	t-test, equal variance	0.0000018	Yes
LPRT04F	6	*H. azteca* 28-d biomass	t-test, equal variance	8.5E-11	Yes
LPRT05A	7	*H. azteca* 28-d biomass	rankit t-test, unequal equivalence	0.00039	Yes
LPRT05B	7	*H. azteca* 28-d biomass	t-test, equal variance	3.7E-09	Yes

Table B5-1. Results of comparisons between LPRSA sediment toxicity test results and negative control results

Location ID	Laboratory Test Batch	Endpoint	Test Method*	Test p-value	Significant (p<0.05)?
LPRT05C	6	*H. azteca* 28-d biomass	t-test, equal variance	1.7E-12	Yes
LPRT05D	6	*H. azteca* 28-d biomass	t-test, equal variance	4.3E-10	Yes
LPRT05E	5	*H. azteca* 28-d biomass	t-test, equal variance	0.000013	Yes
LPRT05F	6	*H. azteca* 28-d biomass	t-test, equal variance	1.6E-14	Yes
LPRT06A	6	*H. azteca* 28-d biomass	t-test, equal variance	6.9E-10	Yes
LPRT06B	6	*H. azteca* 28-d biomass	t-test, equal variance	8.4E-14	Yes
LPRT06C	7	*H. azteca* 28-d biomass	t-test, equal variance	0.00000019	Yes
LPRT06D	6	*H. azteca* 28-d biomass	t-test, equal variance	4.7E-12	Yes
LPRT06E	6	*H. azteca* 28-d biomass	t-test, equal variance	1E-11	Yes
LPRT06F	5	*H. azteca* 28-d biomass	t-test, equal variance	0.00004	Yes
LPRT07A	5	*H. azteca* 28-d biomass	t-test, equal variance	0.000000091	Yes
LPRT07B	6	*H. azteca* 28-d biomass	t-test, equal variance	8E-15	Yes
LPRT07C	5	*H. azteca* 28-d biomass	t-test, equal variance	0.00000033	Yes
LPRT07D	5	*H. azteca* 28-d biomass	t-test, equal variance	0.00000024	Yes
LPRT07E	5	*H. azteca* 28-d biomass	t-test, equal variance	0.0000055	Yes
LPRT08A	5	*H. azteca* 28-d biomass	t-test, unequal variance	0.00000021	Yes
LPRT08B	5	*H. azteca* 28-d biomass	t-test, equal variance	0.000002	Yes
LPRT08C	5	*H. azteca* 28-d biomass	t-test, equal variance	0.000000078	Yes
LPRT08D	6	*H. azteca* 28-d biomass	t-test, equal variance	0.000000011	Yes
LPRT08E	6	*H. azteca* 28-d biomass	t-test, equal variance	0.000000033	Yes
LPRT09A	6	*H. azteca* 28-d biomass	t-test, equal variance	4.2E-14	Yes
LPRT09B	4	*H. azteca* 28-d biomass	t-test, unequal variance	0.0082	Yes
LPRT09C	4	*H. azteca* 28-d biomass	t-test, equal variance	0.000091	Yes
LPRT09D	5	*H. azteca* 28-d biomass	t-test, equal variance	0.0000022	Yes
LPRT09E	5	*H. azteca* 28-d biomass	t-test, equal variance	0.0000002	Yes
LPRT09F	5	*H. azteca* 28-d biomass	t-test, equal variance	0.000000049	Yes
LPRT09G	5	*H. azteca* 28-d biomass	t-test, equal variance	0.00013	Yes
LPRT09H	6	*H. azteca* 28-d biomass	rankit t-test, equal variance	0.0014	Yes
LPRT10A	4	*H. azteca* 28-d biomass	t-test, equal variance	0.0000026	Yes
LPRT10B	4	*H. azteca* 28-d biomass	t-test, equal variance	3.5E-12	Yes
LPRT10C	4	*H. azteca* 28-d biomass	t-test, unequal variance	0.00085	Yes
LPRT10D	4	*H. azteca* 28-d biomass	t-test, equal variance	0.2	No
LPRT10E	5	*H. azteca* 28-d biomass	t-test, equal variance	0.00000023	Yes
LPRT11A	4	*H. azteca* 28-d biomass	t-test, equal variance	0.0024	Yes
LPRT11B	4	*H. azteca* 28-d biomass	t-test, equal variance	1.5E-09	Yes
LPRT11C	4	*H. azteca* 28-d biomass	t-test, equal variance	0.000012	Yes
LPRT11D	4	*H. azteca* 28-d biomass	t-test, equal variance	0.00057	Yes
LPRT11E	4	*H. azteca* 28-d biomass	t-test, unequal variance	0.00056	Yes
LPRT11F	4	*H. azteca* 28-d biomass	t-test, equal variance	0.000009	Yes
LPRT11G	4	*H. azteca* 28-d biomass	t-test, equal variance	4.3E-12	Yes
LPRT12A	3	*H. azteca* 28-d biomass	t-test, equal variance	9.9E-09	Yes
LPRT12B	3	*H. azteca* 28-d biomass	t-test, equal variance	0.00000047	Yes
LPRT12C	3	*H. azteca* 28-d biomass	t-test, equal variance	9.9E-09	Yes
LPRT12D	3	*H. azteca* 28-d biomass	t-test, equal variance	4.5E-09	Yes
LPRT12E	3	*H. azteca* 28-d biomass	t-test, equal variance	0.000000039	Yes
LPRT13A	3	*H. azteca* 28-d biomass	t-test, equal variance	0.00000022	Yes
LPRT13B	1	*H. azteca* 28-d biomass	t-test, equal variance	0.000061	Yes
LPRT13C	1	*H. azteca* 28-d biomass	t-test, unequal variance	0.00012	Yes
LPRT13D	3	*H. azteca* 28-d biomass	t-test, equal variance	0.00000034	Yes

Table B5-1. Results of comparisons between LPRSA sediment toxicity test results and negative control results

Location ID	Laboratory Test Batch	Endpoint	Test Method*	Test p-value	Significant (p<0.05)?
LPRT13E	1	*H. azteca* 28-d biomass	t-test, equal variance	0.00009	Yes
LPRT13F	1	*H. azteca* 28-d biomass	t-test, equal variance	0.00015	Yes
LPRT13G	1	*H. azteca* 28-d biomass	t-test, equal variance	0.00018	Yes
LPRT14A	3	*H. azteca* 28-d biomass	t-test, equal variance	0.00000004	Yes
LPRT14B	3	*H. azteca* 28-d biomass	t-test, equal variance	3.2E-09	Yes
LPRT14C	3	*H. azteca* 28-d biomass	t-test, equal variance	0.0000021	Yes
LPRT14D	3	*H. azteca* 28-d biomass	t-test, equal variance	3.4E-09	Yes
LPRT14E	3	*H. azteca* 28-d biomass	t-test, equal variance	0.000000009	Yes
LPRT14F	3	*H. azteca* 28-d biomass	t-test, equal variance	0.0000025	Yes
LPRT15A	3	*H. azteca* 28-d biomass	t-test, equal variance	0.0000004	Yes
LPRT15B	4	*H. azteca* 28-d biomass	t-test, equal variance	0.000047	Yes
LPRT15C	3	*H. azteca* 28-d biomass	t-test, equal variance	0.0000024	Yes
LPRT15D	3	*H. azteca* 28-d biomass	t-test, equal variance	0.00000028	Yes
LPRT15E	3	*H. azteca* 28-d biomass	t-test, equal variance	0.000012	Yes
LPRT15F	3	*H. azteca* 28-d biomass	t-test, equal variance	0.000065	Yes
LPRT16A	4	*H. azteca* 28-d biomass	t-test, equal variance	0.0000046	Yes
LPRT16B	4	*H. azteca* 28-d biomass	t-test, equal variance	0.98	No
LPRT16C	4	*H. azteca* 28-d biomass	t-test, unequal variance	0.67	No
LPRT16D	4	*H. azteca* 28-d biomass	t-test, equal variance	0.000039	Yes
LPRT16E	4	*H. azteca* 28-d biomass	rankit t-test, equal variance	0.76	No
LPRT17A	3	*H. azteca* 28-d biomass	t-test, equal variance	0.00048	Yes
LPRT17D	3	*H. azteca* 28-d biomass	t-test, equal variance	0.000072	Yes
LPRT01A	2	*H. azteca* 28-d survival	rankit t-test, equal variance	0.014	Yes
LPRT01B	2	*H. azteca* 28-d survival	rankit t-test, equal variance	0.17	No
LPRT01C	7	*H. azteca* 28-d survival	rankit t-test, unequal equivalence	0.0013	Yes
LPRT01D	2	*H. azteca* 28-d survival	rankit t-test, equal variance	0.039	Yes
LPRT01E	7	*H. azteca* 28-d survival	rankit t-test, equal variance	0.00021	Yes
LPRT01F	2	*H. azteca* 28-d survival	rankit t-test, equal variance	0.18	No
LPRT01G	2	*H. azteca* 28-d survival	rankit t-test, equal variance	0.014	Yes
LPRT02A	2	*H. azteca* 28-d survival	rankit t-test, equal variance	0.06	No
LPRT02B	2	*H. azteca* 28-d survival	rankit t-test, equal variance	0.012	Yes
LPRT02C	7	*H. azteca* 28-d survival	rankit t-test, equal variance	0.2	No
LPRT02D	7	*H. azteca* 28-d survival	rankit t-test, equal variance	0.0089	Yes
LPRT02E	2	*H. azteca* 28-d survival	rankit t-test, equal variance	0.0062	Yes
LPRT02F	2	*H. azteca* 28-d survival	rankit t-test, equal variance	0.083	No
LPRT03A	2	*H. azteca* 28-d survival	rankit t-test, equal variance	0.033	Yes
LPRT03B	2	*H. azteca* 28-d survival	rankit t-test, equal variance	0.014	Yes
LPRT03C	7	*H. azteca* 28-d survival	rankit t-test, equal variance	0.00023	Yes
LPRT03D	2	*H. azteca* 28-d survival	rankit t-test, equal variance	0.095	No
LPRT03E	2	*H. azteca* 28-d survival	rankit t-test, equal variance	0.083	No
LPRT03F	7	*H. azteca* 28-d survival	rankit t-test, equal variance	0.0006	Yes
LPRT04A	2	*H. azteca* 28-d survival	rankit t-test, equal variance	0.33	No
LPRT04B	2	*H. azteca* 28-d survival	rankit t-test, equal variance	0.039	Yes
LPRT04C	7	*H. azteca* 28-d survival	rankit t-test, equal variance	0.00018	Yes
LPRT04D	7	*H. azteca* 28-d survival	rankit t-test, equal variance	0.00065	Yes
LPRT04E	7	*H. azteca* 28-d survival	rankit t-test, equal variance	0.00029	Yes
LPRT04F	6	*H. azteca* 28-d survival	t-test, equal variance	0.016	Yes
LPRT05A	7	*H. azteca* 28-d survival	rankit t-test, equal variance	0.00017	Yes
LPRT05B	7	*H. azteca* 28-d survival	rankit t-test, equal variance	0.00017	Yes

Table B5-1. Results of comparisons between LPRSA sediment toxicity test results and negative control results

Location ID	Laboratory Test Batch	Endpoint	Test Method*	Test p-value	Significant (p<0.05)?
LPRT05C	6	*H. azteca* 28-d survival	t-test, unequal variance	0.000026	Yes
LPRT05D	6	*H. azteca* 28-d survival	t-test, equal variance	0.000043	Yes
LPRT05E	5	*H. azteca* 28-d survival	t-test, equal variance	0.0034	Yes
LPRT05F	6	*H. azteca* 28-d survival	rankit t-test, equal variance	0.0012	Yes
LPRT06A	6	*H. azteca* 28-d survival	t-test, unequal variance	0.081	No
LPRT06B	6	*H. azteca* 28-d survival	t-test, equal variance	0.000012	Yes
LPRT06C	7	*H. azteca* 28-d survival	rankit t-test, equal variance	0.00021	Yes
LPRT06D	6	*H. azteca* 28-d survival	t-test, equal variance	0.00016	Yes
LPRT06E	6	*H. azteca* 28-d survival	t-test, equal variance	0.011	Yes
LPRT06F	5	*H. azteca* 28-d survival	t-test, equal variance	0.082	No
LPRT07A	5	*H. azteca* 28-d survival	t-test, equal variance	0.0044	Yes
LPRT07B	6	*H. azteca* 28-d survival	rankit t-test, equal variance	0.0012	Yes
LPRT07C	5	*H. azteca* 28-d survival	t-test, equal variance	0.0029	Yes
LPRT07D	5	*H. azteca* 28-d survival	t-test, equal variance	0.00042	Yes
LPRT07E	5	*H. azteca* 28-d survival	t-test, equal variance	0.012	Yes
LPRT08A	5	*H. azteca* 28-d survival	t-test, equal variance	0.00011	Yes
LPRT08B	5	*H. azteca* 28-d survival	t-test, equal variance	0.00013	Yes
LPRT08C	5	*H. azteca* 28-d survival	t-test, equal variance	0.000014	Yes
LPRT08D	6	*H. azteca* 28-d survival	rankit t-test, equal variance	0.004	Yes
LPRT08E	6	*H. azteca* 28-d survival	t-test, equal variance	0.0048	Yes
LPRT09A	6	*H. azteca* 28-d survival	t-test, equal variance	0.000000011	Yes
LPRT09B	4	*H. azteca* 28-d survival	t-test, equal variance	0.00094	Yes
LPRT09C	4	*H. azteca* 28-d survival	t-test, equal variance	0.00057	Yes
LPRT09D	5	*H. azteca* 28-d survival	t-test, equal variance	0.026	Yes
LPRT09E	5	*H. azteca* 28-d survival	t-test, equal variance	0.0002	Yes
LPRT09F	5	*H. azteca* 28-d survival	t-test, equal variance	0.0000096	Yes
LPRT09G	5	*H. azteca* 28-d survival	t-test, equal variance	0.65	No
LPRT09H	6	*H. azteca* 28-d survival	rankit t-test, equal variance	0.008	Yes
LPRT10A	4	*H. azteca* 28-d survival	t-test, equal variance	0.0048	Yes
LPRT10B	4	*H. azteca* 28-d survival	t-test, equal variance	1.8E-09	Yes
LPRT10C	4	*H. azteca* 28-d survival	t-test, equal variance	0.014	Yes
LPRT10D	4	*H. azteca* 28-d survival	t-test, equal variance	0.57	No
LPRT10E	5	*H. azteca* 28-d survival	t-test, equal variance	0.0000054	Yes
LPRT11A	4	*H. azteca* 28-d survival	t-test, equal variance	0.15	No
LPRT11B	4	*H. azteca* 28-d survival	t-test, equal variance	0.000032	Yes
LPRT11C	4	*H. azteca* 28-d survival	rankit t-test, equal variance	0.0025	Yes
LPRT11D	4	*H. azteca* 28-d survival	t-test, equal variance	0.034	Yes
LPRT11E	4	*H. azteca* 28-d survival	rankit t-test, unequal equivalence	0.37	No
LPRT11F	4	*H. azteca* 28-d survival	t-test, equal variance	0.00029	Yes
LPRT11G	4	*H. azteca* 28-d survival	t-test, equal variance	0.000000016	Yes
LPRT12A	3	*H. azteca* 28-d survival	rankit t-test, equal variance	0.0036	Yes
LPRT12B	3	*H. azteca* 28-d survival	rankit t-test, equal variance	0.04	Yes
LPRT12C	3	*H. azteca* 28-d survival	rankit t-test, equal variance	0.0041	Yes
LPRT12D	3	*H. azteca* 28-d survival	rankit t-test, equal variance	0.0031	Yes
LPRT12E	3	*H. azteca* 28-d survival	rankit t-test, equal variance	0.0029	Yes
LPRT13A	3	*H. azteca* 28-d survival	rankit t-test, equal variance	0.0041	Yes
LPRT13B	1	*H. azteca* 28-d survival	rankit t-test, equal variance	0.16	No
LPRT13C	1	*H. azteca* 28-d survival	rankit t-test, equal variance	0.055	No
LPRT13D	3	*H. azteca* 28-d survival	rankit t-test, equal variance	0.31	No

Table B5-1. Results of comparisons between LPRSA sediment toxicity test results and negative control results

Location ID	Laboratory Test Batch	Endpoint	Test Method*	Test p-value	Significant (p<0.05)?
LPRT13E	1	*H. azteca* 28-d survival	t-test, equal variance	0.21	No
LPRT13F	1	*H. azteca* 28-d survival	t-test, equal variance	0.039	Yes
LPRT13G	1	*H. azteca* 28-d survival	t-test, equal variance	0.3	No
LPRT14A	3	*H. azteca* 28-d survival	rankit t-test, equal variance	0.0023	Yes
LPRT14B	3	*H. azteca* 28-d survival	rankit t-test, equal variance	0.0022	Yes
LPRT14C	3	*H. azteca* 28-d survival	rankit t-test, unequal equivalence	0.036	Yes
LPRT14D	3	*H. azteca* 28-d survival	rankit t-test, equal variance	0.0054	Yes
LPRT14E	3	*H. azteca* 28-d survival	rankit t-test, equal variance	0.0031	Yes
LPRT14F	3	*H. azteca* 28-d survival	rankit t-test, equal variance	0.14	No
LPRT15A	3	*H. azteca* 28-d survival	rankit t-test, equal variance	0.0041	Yes
LPRT15B	4	*H. azteca* 28-d survival	t-test, unequal variance	0.051	No
LPRT15C	3	*H. azteca* 28-d survival	rankit t-test, equal variance	0.062	No
LPRT15D	3	*H. azteca* 28-d survival	rankit t-test, equal variance	0.0065	Yes
LPRT15E	3	*H. azteca* 28-d survival	rankit t-test, equal variance	0.12	No
LPRT15F	3	*H. azteca* 28-d survival	rankit t-test, equal variance	0.44	No
LPRT16A	4	*H. azteca* 28-d survival	t-test, equal variance	0.0055	Yes
LPRT16B	4	*H. azteca* 28-d survival	t-test, equal variance	0.24	No
LPRT16C	4	*H. azteca* 28-d survival	t-test, equal variance	0.38	No
LPRT16D	4	*H. azteca* 28-d survival	t-test, equal variance	0.033	Yes
LPRT16E	4	*H. azteca* 28-d survival	rankit t-test, equal variance	0.42	No
LPRT17A	3	*H. azteca* 28-d survival	rankit t-test, equal variance	0.47	No
LPRT17D	3	*H. azteca* 28-d survival	rankit t-test, unequal equivalence	0.69	No

* Test methods for conducting t-tests:

Parametric t-tests were used for normal datasets (Shapiro-Wilk test, $p \geq 0.05$), and rankit t-tests were used for non-normal datasets (Shapiro-Wilk test, $p < 0.05$).
The decision to use equal or unequal variance t-tests (i.e., Welch's test) was made using the Levene test (alpha = 0.05)
Levene test p-values < 0.05 indicated that unequal variance should be used, and p-values ≥ 0.05 indicated that equal variance should be used

Table B5-1 provides the results of tests comparing raw sediment toxicity test results from LPRSA sediment samples to toxicity test results from batch-specific negative control samples.

Table B5-2a. Sediment toxicity test results with calculated MSDs, quantitative analysis of uncertainty

		C. dilutus 10-day test															
		Biomass (larval, mg)							Survival (%)								
Bioassay Batch	Location ID	Mean	Standard Deviation	Mean (percent of control)	Variance	df	MSD	MSD/C	Mean	Standard Deviation	Mean (percent of control)	Variance	df	MSD	MSD/C	Mean	Standard Deviation
							90th percentile MSD:	0.293						90th percentile MSD/C:	0.26		
2	LPRT01A															0.558	0.126
2	LPRT01B															0.485	0.0979
7	LPRT01C															0.171	0.152
2	LPRT01D															0.474	0.205
7	LPRT01E															0.123	0.161
2	LPRT01F															0.468	0.0752
2	LPRT01G															0.439	0.0867
2	LPRT02A															0.377	0.0836
2	LPRT02B															0.404	0.209
7	LPRT02C															0.448	0.135
7	LPRT02D															0.374	0.107
2	LPRT02E															0.463	0.106
2	LPRT02F															0.411	0.155
2	LPRT03A															0.572	0.12
2	LPRT03B															0.563	0.147
7	LPRT03C															0.281	0.134
2	LPRT03D															0.435	0.174
2	LPRT03E															0.645	0.15
7	LPRT03F															0.285	0.0818
2	LPRT04A															0.65	0.108
2	LPRT04B															0.48	0.121
7	LPRT04C															0.112	0.0705
7	LPRT04D															0.339	0.123
7	LPRT04E															0.233	0.092
6	LPRT04F	1.6	0.224	0.821	0.050	14	0.329	0.169	73	13	0.83	169	14	17	0.19	0.246	0.039
7	LPRT05A															0.017	0.0277
7	LPRT05B															0.0393	0.0464
6	LPRT05C	1.37	0.17	0.703	0.029	12	0.303	0.155	84	11	0.95	121	14	16	0.18	0.104	0.0454
6	LPRT05D	1.39	0.169	0.713	0.029	12	0.302	0.155	78	13	0.89	169	14	17	0.19	0.176	0.0647
5	LPRT05E	1.42	0.13	0.706	0.017	8	0.585	0.291	90	9.3	0.96	86	14	13	0.14	0.323	0.128
6	LPRT05F	1.27	0.116	0.651	0.013	9	0.284	0.146	91	9.9	1.0	98	13	15	0.17	0.0896	0.021
6	LPRT06A	1.15	0.243	0.59	0.059	14	0.341	0.175	83	12	0.94	144	14	17	0.19	0.215	0.0589
6	LPRT06B	1.28	0.154	0.656	0.024	11	0.295	0.151	73	8.9	0.83	79	12	15	0.17	0.119	0.0258
7	LPRT06C															0.168	0.0776
6	LPRT06D	1.21	0.366	0.621	0.134	13	0.428	0.220	79	24	0.90	576	11	26	0.30	0.108	0.0505
6	LPRT06E	1.44	0.216	0.738	0.047	13	0.324	0.166	79	14	0.90	196	14	18	0.20	0.207	0.036
5	LPRT06F	1.22	0.196	0.607	0.038	9	0.593	0.295	83	13	0.88	169	14	16	0.17	0.417	0.0869
5	LPRT07A	1.81	0.0965	0.9	0.009	7	0.578	0.288	90	5.3	0.96	28	10	12	0.12	0.22	0.0744
6	LPRT07B	1.26	0.206	0.646	0.042	13	0.319	0.163	84	11	0.95	121	14	16	0.18	0.0409	0.0253
5	LPRT07C	1.05	0.159	0.522	0.025	8	0.583	0.290	94	7.4	1.0	55	12	12	0.13	0.259	0.0817
5	LPRT07D	1.5	0.203	0.746	0.041	9	0.595	0.296	84	17	0.89	289	12	19	0.20	0.251	0.0797
5	LPRT07E	1.19	0.383	0.592	0.147	12	0.651	0.324	80	15	0.85	225	13	17	0.19	0.298	0.123
5	LPRT08A	1.52	0.252	0.756	0.064	10	0.606	0.301	91	9.9	0.97	98	14	14	0.15	0.156	0.067

5	LPRT08B	1.37	0.183	0.682	0.033	8	0.589	0.293	94	11	1.0	121	14	14	0.15	0.286	0.107
5	LPRT08C	1.2	0.207	0.597	0.043	9	0.597	0.297	95	11	1.0	121	14	14	0.15	0.161	0.102
6	LPRT08D	1.63	0.392	0.836	0.154	12	0.448	0.230	64	23	0.73	529	11	25	0.28	0.24	0.0711
6	LPRT08E	1.84	0.116	0.944	0.013	9	0.284	0.146	93	7.1	1.06	50	11	14	0.16	0.262	0.0726
6	LPRT09A	1.13	0.146	0.579	0.021	11	0.294	0.151	83	8.9	0.94	79	12	15	0.17	0.0699	0.0302
4	LPRT09B	1.38	0.242	0.802	0.059	9	0.251	0.146	81	8.3	0.85	69	13	13	0.14	0.462	0.154
4	LPRT09C	1.19	0.0976	0.692	0.010	14	0.130	0.076	84	13	0.88	169	14	16	0.17	0.383	0.122
5	LPRT09D	1.67	0.139	0.831	0.019	8	0.587	0.292	94	7.4	1.0	55	12	12	0.13	0.314	0.0917
5	LPRT09E	1.52	0.169	0.756	0.029	8	0.585	0.291	91	11	0.97	121	14	14	0.15	0.235	0.0842
5	LPRT09F	1.82	0.394	0.905	0.155	12	0.657	0.327	86	9.2	0.91	85	14	13	0.14	0.151	0.0967
5	LPRT09G	1.96	0.387	0.975	0.150	12	0.653	0.325	88	7.1	0.94	50	12	12	0.13	0.455	0.0843
6	LPRT09H	1.53	0.207	0.785	0.043	13	0.319	0.164	74	9.2	0.84	85	13	15	0.17	0.278	0.0702
4	LPRT10A	0.594	0.127	0.345	0.016	13	0.151	0.088	75	14	0.79	196	13	17	0.18	0.263	0.128
4	LPRT10B	0.081	0.0787	0.047	0.006	13	0.119	0.069	15	14	0.16	196	13	17	0.18	0.0574	0.0276
4	LPRT10C	0.624	0.487	0.363	0.237	8	0.490	0.285	94	7.4	0.99	55	12	12	0.13	0.333	0.182
4	LPRT10D	0.986	0.128	0.573	0.016	13	0.152	0.088	76	14	0.80	196	13	17	0.18	0.585	0.154
5	LPRT10E	1.46	0.141	0.726	0.020	8	0.587	0.292	93	7.1	0.99	50	12	12	0.13	0.183	0.115
4	LPRT11A	0.898	0.151	0.522	0.023	12	0.170	0.099	76	11	0.80	121	14	14	0.15	0.485	0.105
4	LPRT11B	0.35	0.159	0.203	0.025	12	0.177	0.103	45	24	0.47	576	10	25	0.27	0.238	0.0434
4	LPRT11C	1.33	0.21	0.773	0.044	10	0.221	0.129	79	15	0.83	225	13	17	0.18	0.323	0.122
4	LPRT11D	0.958	0.13	0.557	0.017	13	0.153	0.089	84	18	0.88	324	12	20	0.21	0.386	0.157
4	LPRT11E	0.798	0.182	0.464	0.033	11	0.198	0.115	88	13	0.93	169	14	16	0.17	0.333	0.171
4	LPRT11F	0.788	0.0906	0.458	0.008	14	0.126	0.073	90	12	0.95	144	14	15	0.16	0.272	0.144
4	LPRT11G	0.213	0.0374	0.124	0.001	9	0.104	0.060	69	16	0.73	256	12	18	0.19	0.0386	0.0372
3	LPRT12A	0.688	0.197	0.559	0.039	12	0.220	0.179	90	21	0.95	441	8	21	0.22	0.206	0.0557
3	LPRT12B	0.468	0.0425	0.38	0.002	9	0.128	0.104	93	10	0.98	100	11	11	0.11	0.306	0.0666
3	LPRT12C	0.361	0.0851	0.293	0.007	12	0.142	0.115	76	7.4	0.8	55	13	8.5	0.090	0.173	0.0704
3	LPRT12D	0.602	0.0878	0.489	0.008	13	0.143	0.117	96	5.2	1.0	27	14	6.9	0.073	0.166	0.0611
3	LPRT12E	0.313	0.0371	0.254	0.001	8	0.127	0.103	86	5.2	0.91	27	14	6.9	0.073	0.175	0.0901
3	LPRT13A	0.629	0.223	0.511	0.050	11	0.241	0.196	83	13	0.87	169	9	13	0.14	0.193	0.109
1	LPRT13B	0.419	0.0305	0.52	0.001	9	0.078	0.097	90	9.3	0.94	86	13	11	0.12	0.422	0.1
1	LPRT13C	0.505	0.0402	0.627	0.002	11	0.081	0.101	96	5.2	1.0	27	13	8.5	0.088	0.357	0.052
3	LPRT13D	0.468	0.049	0.38	0.002	9	0.129	0.105	89	9.9	0.94	98	11	11	0.11	0.332	0.0433
1	LPRT13E	0.591	0.154	0.734	0.024	10	0.163	0.203	93	7.1	0.97	50	14	10	0.10	0.4	0.147
1	LPRT13F	0.835	0.0634	1.037	0.004	14	0.092	0.114	91	8.3	0.95	69	14	10	0.11	0.469	0.0888
1	LPRT13G	0.531	0.0361	0.66	0.001	10	0.079	0.099	95	5.3	0.99	28	13	8.5	0.089	0.463	0.114
3	LPRT14A	0.547	0.173	0.445	0.030	13	0.200	0.163	88	12	0.93	144	10	13	0.13	0.175	0.0907
3	LPRT14B	0.594	0.096	0.483	0.009	13	0.147	0.120	94	5.2	0.99	27	14	6.9	0.073	0.103	0.0802
3	LPRT14C	0.754	0.128	0.613	0.016	14	0.167	0.136	88	10	0.93	100	11	11	0.11	0.335	0.0747
3	LPRT14D	0.459	0.159	0.373	0.025	13	0.189	0.154	76	27	0.8	729	8	27	0.29	0.172	0.0536
3	LPRT14E	0.623	0.113	0.507	0.013	14	0.157	0.128	91	6.4	0.96	41	14	7.8	0.082	0.137	0.0831
3	LPRT14F	0.838	0.178	0.681	0.032	13	0.204	0.166	88	10	0.93	100	11	11	0.11	0.309	0.092
3	LPRT15A	0.665	0.0791	0.541	0.006	12	0.140	0.114	95	7.6	1.0	58	13	8.7	0.092	0.23	0.103
4	LPRT15B	0.852	0.066	0.495	0.004	12	0.112	0.065	96	11	1.0	121	14	14	0.15	0.35	0.131
3	LPRT15C	0.53	0.111	0.431	0.012	14	0.156	0.127	89	11	0.94	121	10	12	0.12	0.295	0.0993
3	LPRT15D	0.442	0.16	0.359	0.026	13	0.190	0.154	75	28	0.79	784	8	28	0.30	0.285	0.0694
3	LPRT15E	0.571	0.0663	0.464	0.004	11	0.135	0.109	93	4.6	0.98	21	14	6.6	0.069	0.381	0.073
3	LPRT15F	0.539	0.0694	0.438	0.005	11	0.136	0.111	88	10	0.93	100	11	11	0.11	0.407	0.0858
4	LPRT16A	0.926	0.199	0.538	0.040	10	0.212	0.123	70	23	0.74	529	10	24	0.26	0.345	0.0725
4	LPRT16B	1.14	0.0875	0.663	0.008	14	0.124	0.072	75	14	0.79	196	13	17	0.18	0.728	0.077
4	LPRT16C	1.36	0.368	0.791	0.135	8	0.371	0.215	84	26	0.88	676	9	27	0.29	0.669	0.188
4	LPRT16D	1.74	0.286	1.012	0.082	9	0.294	0.171	91	12	0.96	144	14	15	0.16	0.403	0.0939
4	LPRT16E	1.54	0.351	0.895	0.123	8	0.355	0.206	80	19	0.84	361	11	21	0.22	0.652	0.219

3	LPRT17A	0.533	0.32	0.433	0.102	9	0.330	0.268	75	29	0.79	841	7	29	0.31	0.416	0.121
3	LPRT17D	0.635	0.111	0.516	0.012	14	0.156	0.127	91	3.5	0.96	12	12	6.0	0.063	0.45	0.0476

MSD -- minimum significant difference MSD/C -- control-normalized MSD df -- degrees of freedom
Note: MSD calculation based on Zar (1996)
90th percentile MSDs based on control-normalized MSDs
Reference cited: Zar, J. H. (1996). Biostatistical analysis. Upper Saddle River, NJ, Prentice Hall.

Table B5-2 provides the result of a 1-90th percentile minimum significant difference (MSD)-based analysis of LPRSA toxicity test results compared to batch-specific LPRSA data and mean of negative control data that would result in a significant difference, given the level of variability in both datasets and respective sample size percentile value (of control-normalized MSDs) is selected as representing the majority of MSD values. The 1-90th percentile MSD therefore corresponds to a thres difference between the means of site and control toxicity results. These values are calculated from values in Table B5-2a according to Phillips et al. (2001) (modifie are summarized in Table B5-2b. The comparison of LPRSA data to 1-90th percentile MSD values are provided Table B5-2c (with values falling below the 1-90th per

H. azteca 28-d test												*A. abdita* 10-d test					
Biomass (mg)					Survival (%)							Survival (%)					
Mean (percent of control)	Variance	df	MSD	MSD/C	Mean	Standard Deviation	Mean (percent of control)	Variance	df	MSD	MSD/C	Mean	Standard Deviation	Prop. Control	Variance	df	MSD
	90th percentile MSD/C:			0.274				90th percentile MSD/C:			0.30				90th percentile MSD/C:		
0.823	0.0159	13	0.148	0.219	81	9.9	0.87	98	14	12	0.13	83	4.5	0.87	20.25	12	7.9
0.715	0.00958	14	0.129	0.190	83	18	0.89	324	10	19	0.21	90	7.9	0.95	62.41	14	9.9
0.259	0.0231	14	0.190	0.289	38	32	0.42	1024	11	34	0.38	90	7.9	0.92	62.41	9	8.1
0.699	0.0420	10	0.218	0.321	75	28	0.81	784	8	29	0.31	55	26	0.58	676	8	26
0.186	0.0259	14	0.197	0.298	23	31	0.25	961	11	34	0.37	83	8.4	0.85	70.56	8	8.6
0.69	0.00566	13	0.115	0.169	88	10	0.95	100	14	13	0.13	81	8.9	0.85	79.21	13	11
0.647	0.00752	14	0.121	0.179	83	7.1	0.89	50	13	11	0.11	92	9.1	0.97	82.81	13	11
0.556	0.00699	14	0.120	0.176	80	19	0.86	361	10	20	0.22	85	5	0.89	25	13	8.2
0.596	0.0437	10	0.221	0.326	66	29	0.71	841	8	29	0.32	66	17	0.69	289	9	18
0.679	0.0182	14	0.179	0.271	86	17	0.95	289	14	22	0.25	90	6.1	0.92	37.21	10	6.4
0.567	0.0114	13	0.162	0.245	75	15	0.82	225	14	21	0.23	93	7.6	0.95	57.76	9	7.8
0.683	0.0112	14	0.134	0.198	76	13	0.82	169	12	15	0.16	74	13	0.78	169	11	14
0.606	0.0240	12	0.173	0.255	84	12	0.9	144	13	14	0.15	79	17	0.83	289	9	18
0.844	0.0144	13	0.144	0.213	76	17	0.82	289	11	18	0.20	58	10	0.61	100	13	12
0.83	0.0216	12	0.165	0.244	81	9.9	0.87	98	14	12	0.13	89	7.4	0.94	54.76	14	9.6
0.426	0.0180	14	0.178	0.270	51	22	0.56	484	13	26	0.29	85	9.4	0.87	88.36	8	9.5
0.642	0.0303	11	0.190	0.280	79	29	0.85	841	8	29	0.32	83	7.6	0.87	57.76	14	9.7
0.951	0.0225	12	0.169	0.249	80	16	0.86	256	11	17	0.19	85	3.5	0.89	12.25	10	7.5
0.432	0.00669	11	0.150	0.227	66	15	0.73	225	14	21	0.23	82	7.6	0.84	57.76	9	7.8
0.959	0.0117	14	0.136	0.200	91	6.4	0.98	41	13	10	0.11	78	10	0.82	100	13	12
0.708	0.0146	13	0.145	0.214	81	12	0.87	144	13	14	0.15	22	16	0.23	256	10	17
0.17	0.00497	11	0.146	0.221	33	16	0.36	256	14	22	0.24	15	8.7	0.15	75.69	8	8.9
0.514	0.0151	14	0.171	0.259	63	19	0.69	361	14	24	0.26	70	8.7	0.71	75.69	8	8.9
0.353	0.00846	12	0.154	0.234	56	20	0.62	400	14	25	0.27	81	18	0.83	324	7	18.0
0.44	0.00152	14	0.0508	0.0908	80	13	0.86	169	11	14	0.15						
0.026	0.000767	8	0.137	0.207	6.3	7.4	0.07	55	10	18	0.20	36	19	0.37	361	7	19
0.06	0.00215	9	0.140	0.212	15	14	0.16	196	14	21	0.23	86	4.2	0.88	17.64	12	4.7
0.186	0.00206	14	0.0552	0.0988	49	16	0.53	256	10	17	0.18						
0.315	0.00419	11	0.0708	0.127	63	14	0.68	196	10	15	0.16						
0.45	0.0164	14	0.168	0.235	59	17	0.70	289	14	21	0.24						
0.16	0.000441	11	0.041	0.0738	31	8.3	0.33	69	14	10	0.11						
0.385	0.00347	12	0.0662	0.118	81	20	0.87	400	9	21	0.22						
0.213	0.000666	12	0.0430	0.0770	60	13	0.65	169	11	14	0.15						
0.255	0.00602	11	0.148	0.224	48	20	0.53	400	14	25	0.27	86	6.5	0.88	42.25	9	6.8
0.193	0.00255	13	0.0593	0.106	59	19	0.63	361	9	20	0.21						
0.37	0.00130	14	0.0488	0.0873	75	18	0.81	324	9	19	0.20						
0.582	0.00755	12	0.145	0.203	75	9.3	0.89	86	12	16	0.19						
0.307	0.00554	11	0.140	0.195	56	21	0.67	441	12	24	0.28						
0.073	0.00064	12	0.0428	0.0765	20	12	0.22	144	11	13	0.14						
0.361	0.00667	12	0.143	0.200	60	15	0.71	225	14	19	0.23						
0.35	0.00635	12	0.142	0.199	55	13	0.65	169	14	18	0.21						
0.416	0.0151	14	0.166	0.231	63	19	0.75	361	13	22	0.26						
0.218	0.00449	11	0.137	0.192	43	19	0.51	361	13	22	0.26						

0.399	0.0114	14	0.156	0.217	53	12	0.63	144	14	17	0.20
0.225	0.0104	13	0.153	0.213	30	21	0.36	441	12	24	0.28
0.429	0.00506	11	0.0767	0.137	71	18	0.76	324	9	19	0.20
0.469	0.00527	11	0.0779	0.139	64	26	0.69	676	8	26	0.28
0.125	0.000912	13	0.0453	0.0809	34	13	0.37	169	11	14	0.15
0.726	0.0237	10	0.163	0.256	60	15	0.71	225	13	17	0.21
0.602	0.0149	12	0.135	0.212	58	16	0.68	256	12	18	0.21
0.438	0.00841	13	0.148	0.206	66	18	0.79	324	13	21	0.25
0.328	0.00709	12	0.144	0.201	50	15	0.60	225	14	19	0.23
0.211	0.00935	13	0.150	0.209	36	16	0.43	256	14	20	0.24
0.635	0.00711	12	0.144	0.201	86	11	1.02	121	13	17	0.20
0.497	0.00493	11	0.0759	0.136	75	19	0.81	361	9	20	0.21
0.414	0.0164	11	0.140	0.220	55	26	0.65	676	9	27	0.32
0.09	0.000762	9	0.0771	0.121	16	11	0.19	121	14	14	0.17
0.524	0.0331	9	0.189	0.297	59	29	0.69	841	9	30	0.35
0.92	0.0237	10	0.163	0.256	86	15	1.0	225	13	17	0.21
0.255	0.0132	14	0.161	0.224	31	17	0.37	289	14	21	0.24
0.763	0.0110	13	0.121	0.190	79	10	0.93	100	14	14	0.16
0.374	0.00188	11	0.0814	0.128	55	11	0.65	121	14	14	0.17
0.508	0.0149	12	0.135	0.212	55	21	0.65	441	11	23	0.27
0.607	0.0246	10	0.167	0.262	68	23	0.80	529	10	24	0.29
0.524	0.0292	10	0.179	0.282	76	27	0.89	729	9	28	0.33
0.428	0.0207	10	0.154	0.243	45	23	0.53	529	10	24	0.29
0.061	0.00138	10	0.0792	0.124	14	15	0.16	225	13	17	0.21
0.321	0.00310	11	0.103	0.160	58	12	0.68	144	14	17	0.20
0.477	0.00444	13	0.108	0.168	71	12	0.84	144	14	17	0.20
0.27	0.00496	13	0.109	0.170	50	19	0.59	361	13	22	0.26
0.259	0.00373	12	0.105	0.163	50	15	0.59	225	14	19	0.23
0.273	0.00812	14	0.121	0.189	45	19	0.53	361	13	22	0.26
0.301	0.0119	14	0.134	0.209	48	25	0.56	625	11	27	0.32
0.483	0.0100	10	0.233	0.267	75	13	0.90	169	13	21	0.25
0.409	0.00270	8	0.224	0.257	70	14	0.84	196	13	21	0.26
0.518	0.00187	10	0.099	0.154	79	17	0.93	289	14	21	0.24
0.458	0.0216	12	0.249	0.285	75	19	0.90	361	14	24	0.29
0.537	0.00789	9	0.229	0.262	68	13	0.82	169	13	21	0.25
0.53	0.0130	10	0.237	0.271	78	18	0.94	324	14	24	0.29
0.273	0.00823	14	0.122	0.190	38	19	0.45	361	13	22	0.26
0.161	0.00643	14	0.115	0.179	39	19	0.46	361	13	22	0.26
0.523	0.00558	13	0.112	0.174	73	8.9	0.86	79	12	16	0.18
0.268	0.00287	11	0.102	0.159	54	23	0.64	529	12	25	0.30
0.214	0.00691	14	0.117	0.182	45	20	0.53	400	13	23	0.27
0.482	0.00846	14	0.122	0.191	75	16	0.88	256	14	20	0.23
0.359	0.0106	14	0.130	0.202	50	19	0.59	361	13	22	0.26
0.55	0.0172	11	0.142	0.224	66	27	0.78	729	9	28	0.33
0.46	0.0099	14	0.127	0.198	69	20	0.81	400	13	23	0.27
0.445	0.00482	13	0.109	0.170	63	12	0.74	144	14	17	0.20
0.594	0.00533	13	0.111	0.173	76	13	0.89	169	14	18	0.21
0.635	0.00736	14	0.118	0.185	81	19	0.95	361	13	22	0.26
0.542	0.00526	14	0.0970	0.153	67	12	0.79	144	14	15	0.18
1.145	0.00593	14	0.100	0.157	81	9.9	0.95	98	14	14	0.16
1.052	0.0353	9	0.194	0.305	83	19	0.98	361	11	21	0.24
0.634	0.00882	13	0.112	0.176	74	12	0.87	144	14	15	0.18
1.025	0.0480	9	0.225	0.353	79	19	0.93	361	11	21	0.24

0.649	0.0146	13	0.143	0.223	84	16	0.99	256	14	20	0.23
0.702	0.00227	10	0.100	0.155	89	6.4	1.1	41	10	15	0.17

c negative control test results. The MSD is the minimum difference between the mean of
es. The MSD is calculated for all LPRSA and negative control results, and the 90th
shold below which there is a high probability (90%) of observing a statistically significant
ed to use the MSD calculation of Zar 1996). The calculated 1-90th percentile MSD values
centile MSD being "TRUE", and values above the 1-90th percentile MSD being "FALSE").

MSD/C
0.19
0.084
0.10
0.083
0.28
0.087
0.11
0.11
0.086
0.19
0.065
0.080
0.15
0.19
0.12
0.10
0.10
0.10
0.079
0.080
0.12
0.18
0.090
0.090
0.18
0.19
0.048
0.069

Table B5-2b. Summary of 1-90th Percentile MSD Thresholds

Toxicity Test Endpoint	1 - 90th Percentile MSD/C
C. dilutus 10-d biomass	0.707
H. azteca 28-d biomass	0.726
C. dilutus 10-d survival	0.74
H. azteca 28-d survival	0.70
A. abdita 10-d survival	0.81

MSD -- minimum significant difference
Note: 1-90th percentile MSD value based on control-normalized MSDs

Table B5-2c. LPRSA locations exceeding 1-90th percentile MSD values

Location ID	*C. dilutus* 10-d survival	*C. dilutus* 10-d biomass	*H.azteca* 28-d survival	*H. azteca* 28-d biomass	*A. abdita* 10-d survival
LPRT01A			FALSE	FALSE	FALSE
LPRT01B			FALSE	TRUE	FALSE
LPRT01C			TRUE	TRUE	FALSE
LPRT01D			FALSE	TRUE	TRUE
LPRT01E			TRUE	TRUE	FALSE
LPRT01F			FALSE	TRUE	FALSE
LPRT01G			FALSE	TRUE	FALSE
LPRT02A			FALSE	TRUE	FALSE
LPRT02B			FALSE	TRUE	TRUE
LPRT02C			FALSE	TRUE	FALSE
LPRT02D			FALSE	TRUE	FALSE
LPRT02E			FALSE	TRUE	TRUE
LPRT02F			FALSE	TRUE	FALSE
LPRT03A			FALSE	FALSE	TRUE
LPRT03B			FALSE	FALSE	FALSE
LPRT03C			TRUE	TRUE	FALSE
LPRT03D			FALSE	TRUE	FALSE
LPRT03E			FALSE	FALSE	FALSE
LPRT03F			FALSE	TRUE	FALSE
LPRT04A			FALSE	FALSE	FALSE
LPRT04B			FALSE	TRUE	TRUE
LPRT04C			TRUE	TRUE	TRUE
LPRT04D			TRUE	TRUE	TRUE
LPRT04E			TRUE	TRUE	FALSE
LPRT04F	FALSE	FALSE	FALSE	TRUE	
LPRT05A			TRUE	TRUE	TRUE
LPRT05B			TRUE	TRUE	FALSE
LPRT05C	FALSE	TRUE	TRUE	TRUE	
LPRT05D	FALSE	FALSE	TRUE	TRUE	
LPRT05E	FALSE	TRUE	FALSE	TRUE	
LPRT05F	FALSE	TRUE	TRUE	TRUE	
LPRT06A	FALSE	TRUE	FALSE	TRUE	
LPRT06B	FALSE	TRUE	TRUE	TRUE	
LPRT06C			TRUE	TRUE	FALSE
LPRT06D	FALSE	TRUE	TRUE	TRUE	
LPRT06E	FALSE	FALSE	FALSE	TRUE	
LPRT06F	FALSE	TRUE	FALSE	TRUE	
LPRT07A	FALSE	FALSE	TRUE	TRUE	
LPRT07B	FALSE	TRUE	TRUE	TRUE	
LPRT07C	FALSE	TRUE	FALSE	TRUE	
LPRT07D	FALSE	FALSE	TRUE	TRUE	
LPRT07E	FALSE	TRUE	FALSE	TRUE	
LPRT08A	FALSE	FALSE	TRUE	TRUE	
LPRT08B	FALSE	TRUE	TRUE	TRUE	
LPRT08C	FALSE	TRUE	TRUE	TRUE	
LPRT08D	TRUE	FALSE	FALSE	TRUE	

LPRT08E	FALSE	FALSE	TRUE	TRUE
LPRT09A	FALSE	TRUE	TRUE	TRUE
LPRT09B	FALSE	FALSE	FALSE	TRUE
LPRT09C	FALSE	TRUE	TRUE	TRUE
LPRT09D	FALSE	FALSE	FALSE	TRUE
LPRT09E	FALSE	FALSE	TRUE	TRUE
LPRT09F	FALSE	FALSE	TRUE	TRUE
LPRT09G	FALSE	FALSE	FALSE	TRUE
LPRT09H	FALSE	FALSE	FALSE	TRUE
LPRT10A	FALSE	TRUE	TRUE	TRUE
LPRT10B	TRUE	TRUE	TRUE	TRUE
LPRT10C	FALSE	TRUE	TRUE	TRUE
LPRT10D	FALSE	TRUE	FALSE	FALSE
LPRT10E	FALSE	FALSE	TRUE	TRUE
LPRT11A	FALSE	TRUE	FALSE	FALSE
LPRT11B	TRUE	TRUE	TRUE	TRUE
LPRT11C	FALSE	FALSE	TRUE	TRUE
LPRT11D	FALSE	TRUE	FALSE	TRUE
LPRT11E	FALSE	TRUE	FALSE	TRUE
LPRT11F	FALSE	TRUE	TRUE	TRUE
LPRT11G	TRUE	TRUE	TRUE	TRUE
LPRT12A	FALSE	TRUE	TRUE	TRUE
LPRT12B	FALSE	TRUE	FALSE	TRUE
LPRT12C	FALSE	TRUE	TRUE	TRUE
LPRT12D	FALSE	TRUE	TRUE	TRUE
LPRT12E	FALSE	TRUE	TRUE	TRUE
LPRT13A	FALSE	TRUE	TRUE	TRUE
LPRT13B	FALSE	TRUE	FALSE	TRUE
LPRT13C	FALSE	TRUE	FALSE	TRUE
LPRT13D	FALSE	TRUE	FALSE	TRUE
LPRT13E	FALSE	FALSE	FALSE	TRUE
LPRT13F	FALSE	FALSE	FALSE	TRUE
LPRT13G	FALSE	TRUE	FALSE	TRUE
LPRT14A	FALSE	TRUE	TRUE	TRUE
LPRT14B	FALSE	TRUE	TRUE	TRUE
LPRT14C	FALSE	TRUE	FALSE	TRUE
LPRT14D	FALSE	TRUE	TRUE	TRUE
LPRT14E	FALSE	TRUE	TRUE	TRUE
LPRT14F	FALSE	TRUE	FALSE	TRUE
LPRT15A	FALSE	TRUE	TRUE	TRUE
LPRT15B	FALSE	TRUE	FALSE	TRUE
LPRT15C	FALSE	TRUE	FALSE	TRUE
LPRT15D	FALSE	TRUE	FALSE	TRUE
LPRT15E	FALSE	TRUE	FALSE	TRUE
LPRT15F	FALSE	TRUE	FALSE	TRUE
LPRT16A	TRUE	TRUE	FALSE	TRUE
LPRT16B	FALSE	TRUE	FALSE	FALSE
LPRT16C	FALSE	FALSE	FALSE	FALSE
LPRT16D	FALSE	FALSE	FALSE	TRUE
LPRT16E	FALSE	FALSE	FALSE	FALSE
LPRT17A	FALSE	TRUE	FALSE	TRUE
LPRT17D	FALSE	TRUE	FALSE	TRUE

MSD -- minimum significant difference
Note: values given as TRUE or FALSE; TRUE values indicate LPRSA exceedance of 1-90th percentile MSD

T-test calculations conducted in R version 3.2.2
Levene's test was conducted using the `leveneTest` function from the `car` package
Shapiro-Wilk tests were conducted using `shapiro.test`
T-tests were conducted using `t.test` with the argument `var.equal` set equal to TRUE or FALSE depending on the outcome of the Levene's test
If the Shapiro-Wilk test was significant (i.e., non-normality), then data were converted to rankits using the `pnorm` function with `mean` and `sd` equal to the mean and standard deviation of the original data.

MSD calculations were conducted in both Microsoft Excel using formulas in the literature (Phillips et al. 2001 and Zar 1996)
Full citations are provided in Appendix P.

Table B6-1a. Data used for Mann-Whitney U tests of LPRSA benthic invertebrate data compared to reference area data

Dataset	Toxicity Test Type	Location ID	*C. dilutus* survival (% of control)	*C. dilutus* biomass (% of control)	*H. azteca* survival (% of control)	*H. azteca* biomass (% of control)	*A. abdita* survival (% of control)	Abundance (per m^2)	Taxa Richness	Shannon-Weiner H'	Pielou's J'	Swartz's Dominance Index	Hilsenhoff Biotic Index
LPRSA Upper Estuary	Estuarine	LPRT01A			0.87	0.823	0.87	1090	8	1.06	0.507	2	
LPRSA Upper Estuary	Estuarine	LPRT01B			0.89	0.715	0.95	614	8.22	1.34	0.662	2.67	
LPRSA Upper Estuary	Estuarine	LPRT01C			0.42	0.259	0.92	2740	16	2.01	0.727	4.67	
LPRSA Upper Estuary	Estuarine	LPRT01D			0.81	0.699	0.58	2050	12.3	1.63	0.65	3	
LPRSA Upper Estuary	Estuarine	LPRT01E			0.25	0.186	0.85	2750	13.1	1.71	0.669	3.11	
LPRSA Upper Estuary	Estuarine	LPRT01F			0.95	0.69	0.85	357	7	1.06	0.537	2	
LPRSA Upper Estuary	Estuarine	LPRT01G			0.89	0.647	0.97	973	10.7	1.42	0.6	2.33	
LPRSA Upper Estuary	Estuarine	LPRT02A			0.86	0.556	0.89	709	9.33	1.57	0.718	3.11	
LPRSA Upper Estuary	Estuarine	LPRT02B			0.71	0.596	0.69	127	6.67	1.68	0.887	4	
LPRSA Upper Estuary	Estuarine	LPRT02C			0.95	0.679	0.92	630	7.67	1.67	0.823	3.67	
LPRSA Upper Estuary	Estuarine	LPRT02D			0.82	0.567	0.95	1290	13.1	2.07	0.816	5	
LPRSA Upper Estuary	Estuarine	LPRT02E			0.82	0.683	0.78	155	5.5	1.42	0.83	3.5	
LPRSA Upper Estuary	Estuarine	LPRT02F			0.9	0.606	0.83	240	9.33	1.73	0.807	4	
LPRSA Upper Estuary	Estuarine	LPRT03A			0.82	0.844	0.61	320	2.67	0.427	0.43	1.33	
LPRSA Upper Estuary	Estuarine	LPRT03B			0.87	0.83	0.94	773	6.33	1.45	0.803	3	
LPRSA Upper Estuary	Estuarine	LPRT03C			0.56	0.426	0.87	894	7.33	1.21	0.61	2.56	
LPRSA Upper Estuary	Estuarine	LPRT03D			0.85	0.642	0.87	1370	10.9	1.69	0.728	3.89	
LPRSA Upper Estuary	Estuarine	LPRT03E			0.86	0.951	0.89	593	7.67	1.17	0.69	2	
LPRSA Upper Estuary	Estuarine	LPRT03F			0.73	0.432	0.84	693	8.67	1.49	0.697	3	
LPRSA Upper Estuary	Estuarine	LPRT04A			0.98	0.959	0.82	3420	9.33	1.31	0.599	2.56	
LPRSA Upper Estuary	Estuarine	LPRT04B			0.87	0.708	0.23	523	6.33	1.41	0.79	2.67	
LPRSA Upper Estuary	Estuarine	LPRT04C			0.36	0.17	0.15	721	8.44	1.52	0.778	3.44	
LPRSA Upper Estuary	Estuarine	LPRT04D			0.69	0.514	0.71	1220	5.33	0.507	0.297	1	
LPRSA Upper Estuary	Estuarine	LPRT04E			0.62	0.353	0.83	1170	6	1.07	0.607	2.33	
LPRSA Upper Estuary	Freshwater	LPRT04F	0.83	0.821	0.86	0.44		333	4.67	1.09	0.757	2.33	
LPRSA Fluvial Estuary	Estuarine	LPRT05A			0.069	0.0258	0.37	2280	11.1	1.54	0.64	3	
LPRSA Fluvial Estuary	Estuarine	LPRT05B			0.16	0.0595	0.88	852	9	1.57	0.746	3.56	
LPRSA Fluvial Estuary	Freshwater	LPRT05C	0.95	0.703	0.53	0.186		2940	10.3	1.33	0.57	2.33	
LPRSA Fluvial Estuary	Freshwater	LPRT05D	0.89	0.713	0.68	0.315		227	6	1.08	0.603	2.67	
LPRSA Fluvial Estuary	Freshwater	LPRT05E	0.96	0.706	0.7	0.45		200	3.67	1.08	0.85	2	
LPRSA Fluvial Estuary	Freshwater	LPRT05F	1	0.651	0.33	0.16		147	3.33	0.737	0.74	2	
LPRSA Fluvial Estuary	Freshwater	LPRT06A	0.94	0.59	0.87	0.385		6530	7	0.843	0.463	1.56	
LPRSA Fluvial Estuary	Freshwater	LPRT06B	0.83	0.656	0.65	0.213		3380	4.33	0.147	0.1	1	
LPRSA Fluvial Estuary	Estuarine	LPRT06C			0.53	0.255	0.88	4660	9.89	1.2	0.528	2	
LPRSA Fluvial Estuary	Freshwater	LPRT06D	0.9	0.621	0.63	0.193		7030	8.33	1.13	0.533	2	
LPRSA Fluvial Estuary	Freshwater	LPRT06E	0.9	0.738	0.81	0.37		2490	7.33	1.21	0.603	2.33	
LPRSA Fluvial Estuary	Freshwater	LPRT06F	0.88	0.607	0.89	0.582		927	2.33	0.547	0.727	1.67	
LPRSA Fluvial Estuary	Freshwater	LPRT07A	0.96	0.9	0.67	0.307		5110	9	0.942	0.436	1.78	
LPRSA Fluvial Estuary	Freshwater	LPRT07B	0.95	0.646	0.22	0.0732		3200	7.67	0.933	0.467	1.67	
LPRSA Fluvial Estuary	Freshwater	LPRT07C	1	0.522	0.71	0.361		2680	7.33	0.893	0.469	1.44	
LPRSA Fluvial Estuary	Freshwater	LPRT07D	0.89	0.746	0.65	0.35		1630	5.33	0.44	0.26	1	
LPRSA Fluvial Estuary	Freshwater	LPRT07E	0.85	0.592	0.75	0.416		3740	6.67	0.383	0.217	1	
LPRSA Fluvial Estuary	Freshwater	LPRT08A	0.97	0.756	0.51	0.218		253	4.33	0.863	0.657	1.67	
LPRSA Fluvial Estuary	Freshwater	LPRT08B	1	0.682	0.63	0.399		340	3	0.773	0.703	2	
LPRSA Fluvial Estuary	Freshwater	LPRT08C	1	0.597	0.36	0.225		4030	10.6	1.23	0.534	2.22	
LPRSA Fluvial Estuary	Freshwater	LPRT08D	0.73	0.836	0.76	0.429		843	5.67	1.1	0.677	2	
LPRSA Fluvial Estuary	Freshwater	LPRT08E	1.1	0.944	0.69	0.469		4070	8.11	1.04	0.523	1.78	
LPRSA Fluvial Estuary	Freshwater	LPRT09A	0.94	0.579	0.37	0.125		1300	9.33	1.14	0.51	2	
LPRSA Fluvial Estuary	Freshwater	LPRT09B	0.85	0.802	0.71	0.726		533	3.67	0.877	0.717	2	
LPRSA Fluvial Estuary	Freshwater	LPRT09C	0.88	0.692	0.68	0.602		9890	9.11	1.07	0.55	2	
LPRSA Fluvial Estuary	Freshwater	LPRT09D	1	0.831	0.79	0.438		20300	10.9	0.947	0.399	1.56	
LPRSA Fluvial Estuary	Freshwater	LPRT09E	0.97	0.756	0.6	0.328		6180	9.33	1.04	0.46	2	
LPRSA Fluvial Estuary	Freshwater	LPRT09F	0.91	0.905	0.43	0.211		5380	8.67	0.647	0.3	1	
LPRSA Fluvial Estuary	Freshwater	LPRT09G	0.94	0.975	1	0.635		1090	4.67	0.967	0.627	2	
LPRSA Fluvial Estuary	Freshwater	LPRT09H	0.84	0.785	0.81	0.497		1330	7.33	0.98	0.503	1.67	
LPRSA Fluvial Estuary	Freshwater	LPRT10A	0.79	0.345	0.65	0.414		11100	9.67	0.81	0.357	1.33	
LPRSA Fluvial Estuary	Freshwater	LPRT10B	0.16	0.0471	0.19	0.0903		7210	14.7	1.22	0.453	1.67	
LPRSA Fluvial Estuary	Freshwater	LPRT10C	0.99	0.363	0.69	0.524		24300	12.8	0.968	0.378	1.44	
LPRSA Fluvial Estuary	Freshwater	LPRT10D	0.8	0.573	1	0.92		5030	13.7	1.49	0.593	3	
LPRSA Fluvial Estuary	Freshwater	LPRT10E	0.99	0.726	0.37	0.255		37900	11.8	1.19	0.484	2.33	
LPRSA Fluvial Estuary	Freshwater	LPRT11A	0.8	0.522	0.93	0.763		4280	14	1.48	0.57	2.33	

LPRSA Fluvial Estuary	Freshwater	LPRT11B	0.47	0.203	0.65	0.374		4610	13.3	1.65	0.647	3	
LPRSA Fluvial Estuary	Freshwater	LPRT11C	0.83	0.773	0.65	0.508		6100	13.7	1.28	0.497	2.33	
LPRSA Fluvial Estuary	Freshwater	LPRT11D	0.88	0.557	0.8	0.607		29600	16.2	1.38	0.5	2.56	
LPRSA Fluvial Estuary	Freshwater	LPRT11E	0.93	0.464	0.89	0.524		21200	11.3	1.08	0.462	2.11	
LPRSA Fluvial Estuary	Freshwater	LPRT11F	0.95	0.458	0.53	0.428		6050	16	1.62	0.587	3.33	
LPRSA Fluvial Estuary	Freshwater	LPRT11G	0.73	0.124	0.16	0.0607		3170	7	0.84	0.44	1.67	
LPRSA Fluvial Estuary	Freshwater	LPRT12A	0.95	0.559	0.68	0.321		7270	15.6	1.38	0.51	2.67	
LPRSA Fluvial Estuary	Freshwater	LPRT12B	0.98	0.38	0.84	0.477		8160	13	1.34	0.52	2.67	
LPRSA Fluvial Estuary	Freshwater	LPRT12C	0.8	0.293	0.59	0.27		9850	15.3	1.26	0.463	2.33	
LPRSA Fluvial Estuary	Freshwater	LPRT12D	1	0.489	0.59	0.259		5870	11	1.07	0.443	1.67	
LPRSA Fluvial Estuary	Freshwater	LPRT12E	0.91	0.254	0.53	0.273		20900	9.56	1.23	0.57	2.44	
LPRSA Fluvial Estuary	Freshwater	LPRT13A	0.87	0.511	0.56	0.301		2600	11.3	1.28	0.54	2	
LPRSA Fluvial Estuary	Freshwater	LPRT13B	0.94	0.52	0.9	0.483		5790	11.7	1.33	0.547	2	
LPRSA Fluvial Estuary	Freshwater	LPRT13C	1	0.627	0.84	0.409		4630	9	1.07	0.49	2	
LPRSA Fluvial Estuary	Freshwater	LPRT13D	0.94	0.38	0.93	0.518		680	7.67	1.43	0.727	3.33	
LPRSA Fluvial Estuary	Freshwater	LPRT13E	0.97	0.734	0.9	0.458		23200	12.9	1.4	0.55	2.89	
LPRSA Fluvial Estuary	Freshwater	LPRT13F	0.95	1.04	0.82	0.537		12400	12.9	1.42	0.554	2.67	
LPRSA Fluvial Estuary	Freshwater	LPRT13G	0.99	0.66	0.94	0.53		2690	8	1.15	0.57	2	
LPRSA Tidal Freshwater	Freshwater	LPRT14A	0.445	0.93	0.273	0.45		27600	14.2	1.41	0.543	2.56	9.56
LPRSA Tidal Freshwater	Freshwater	LPRT14B	0.483	0.99	0.161	0.46		11500	14	1.63	0.62	3.67	9.36
LPRSA Tidal Freshwater	Freshwater	LPRT14C	0.613	0.93	0.523	0.86		9120	17.8	1.36	0.468	2.3	9.39
LPRSA Tidal Freshwater	Freshwater	LPRT14D	0.373	0.8	0.268	0.64		7980	17	1.73	0.61	3.67	8.99
LPRSA Tidal Freshwater	Freshwater	LPRT14E	0.507	0.96	0.214	0.53		4520	14.7	1.57	0.587	2.67	8.54
LPRSA Tidal Freshwater	Freshwater	LPRT14F	0.681	0.93	0.482	0.88		8450	19	1.96	0.677	5	8.67
LPRSA Tidal Freshwater	Freshwater	LPRT15A	0.541	1	0.359	0.59		30600	18.7	1.61	0.55	2.67	8.99
LPRSA Tidal Freshwater	Freshwater	LPRT15B	0.495	1	0.55	0.78		21800	14.2	1.34	0.562	2.33	9.64
LPRSA Tidal Freshwater	Freshwater	LPRT15C	0.431	0.94	0.46	0.81		2060	11.7	1.55	0.637	3.33	8.53
LPRSA Tidal Freshwater	Freshwater	LPRT15D	0.359	0.79	0.445	0.74		15700	17.1	1.69	0.6	3.22	9.32
LPRSA Tidal Freshwater	Freshwater	LPRT15E	0.464	0.98	0.594	0.89		7020	18.3	1.85	0.64	4	9.1
LPRSA Tidal Freshwater	Freshwater	LPRT15F	0.438	0.93	0.635	0.95		4180	15.3	1.61	0.593	3.33	8.76
LPRSA Tidal Freshwater	Freshwater	LPRT16A	0.538	0.74	0.525	0.79		12800	22.7	1.58	0.507	2.67	9.19
LPRSA Tidal Freshwater	Freshwater	LPRT16B	0.663	0.79	1.14	0.95							
LPRSA Tidal Freshwater	Freshwater	LPRT16C	0.791	0.88	1.05	0.98		10400	21.2	2.07	0.71	5.33	8.56
LPRSA Tidal Freshwater	Freshwater	LPRT16D	1.01	0.96	0.634	0.87		8680	17.3	1.8	0.633	4	8.06
LPRSA Tidal Freshwater	Freshwater	LPRT16E	0.895	0.84	1.03	0.93		1990	8	1.32	0.64	2.67	8.91
LPRSA Tidal Freshwater	Freshwater	LPRT17A	0.433	0.79	0.649	0.99		2770	11.3	1.41	0.583	2	8.96
LPRSA Tidal Freshwater	Freshwater	LPRT17D	0.516	0.96	0.702	1		3640	9.56	0.901	0.433	1.67	9.45
Above Dundee Dam	Freshwater	UPRT18H	0.96	0.77	0.94	0.47		11500	19	2.01	0.683	4.33	9.41
Above Dundee Dam	Freshwater	UPRT20B	0.82	0.81	0.83	0.43		19500	23	1.94	0.617	4.33	8.94
Above Dundee Dam	Freshwater	UPRT20G	0.87	0.82	0.76	0.36		16100	19	2.13	0.727	5.67	8.82
Above Dundee Dam	Freshwater	UPRT21A	0.91	0.79	0.77	0.39		11200	21	2.19	0.72	4.33	8.28
Above Dundee Dam	Freshwater	UPRT21F	0.90	1.03	0.81	0.45		14000	26.7	2.27	0.697	6	8.4
Jamaica Bay	Estuarine	2200_26_JB002					0.96	2875	18	2.17	0.750	5	
Jamaica Bay	Estuarine	2200_26_JB006					0.91	35500	35	1.61	0.455	2.5	
Jamaica Bay	Estuarine	2200_26_JB022					1.04	25112.5	23.5	1.53	0.485	2.5	
Jamaica Bay	Estuarine	2200_26_JB026					1.08	37662.5	42.5	2.38	0.636	5.5	
Jamaica Bay	Estuarine	2200_26_JB031					0.92	44825	28.5	1.56	0.467	2	
Jamaica Bay	Estuarine	2200_26_JB042					1.03	6075	25	1.94	0.601	4	
Jamaica Bay	Estuarine	2200_27_JB104					0.8	5662.5	7.5	0.799	0.382	1.5	
Jamaica Bay	Estuarine	2200_27_JB108					0.96	6887.5	20	1.54	0.515	2.5	
Jamaica Bay	Estuarine	2200_27_JB110					0.99	32712.5	21	1.46	0.484	2.5	
Jamaica Bay	Estuarine	2200_27_JB112					0.98	22487.5	29	1.85	0.551	4.5	
Jamaica Bay	Estuarine	2200_27_JB113					0.95	33125	27.5	1.40	0.421	2	
Jamaica Bay	Estuarine	2200_27_JB114					0.97	67787.5	34	2.25	0.637	6	
Jamaica Bay	Estuarine	2200_27_JB115					0.94	21500	41	2.76	0.754	8	
Jamaica Bay	Estuarine	2200_27_JB119					0.98	14050	21.5	1.57	0.512	2.5	
Jamaica Bay	Estuarine	2200_27_JB120					1	20375	22	1.41	0.453	2.5	
Jamaica Bay	Estuarine	2200_56_JB031					0.96	15325	25	2.00	0.621	4.5	
Jamaica Bay	Estuarine	2200_56_JB041					0.93	146750	44	1.52	0.401	3	
Jamaica Bay	Estuarine	2200_56_JB042					1.01	7425	26.5	1.98	0.608	4	
Jamaica Bay	Estuarine	2200_56_JB043					0.89	22587.5	47	2.42	0.628	7	
Jamaica Bay	Estuarine	2200_56_JB201					0.93	1512.5	13.5	2.05	0.792	4.5	
Jamaica Bay	Estuarine	2200_56_JB205					0.86	962.5	11	1.87	0.813	4.5	
Jamaica Bay	Estuarine	2200_56_JB210					0.88	6562.5	20.5	1.66	0.550	3	
Jamaica Bay	Estuarine	2200_56_JB212					1	675	6.5	1.00	0.539	1.5	
Jamaica Bay	Estuarine	2200_56_JB214					0.94	60675	24	0.714	0.232	1	

Jamaica Bay	Estuarine	2200_56_JB217	1	7625	20.5	1.85	0.612	4
Jamaica Bay	Estuarine	2200_56_JB219	1.01	850	10.5	1.96	0.855	5
Jamaica Bay	Estuarine	2200_56_JB222	0.94	6700	12	0.917	0.398	1
Jamaica Bay	Estuarine	2300_M0_NY-0029-A	0.957	660	17	0.915	0.744	6
Jamaica Bay	Estuarine	2300_M1_NY-0032-A	0.989	18830	48	0.900	0.536	4
Jamaica Bay	Estuarine	2300_M2_NY-0029-A	0.902	675	7	0.519	0.614	2
Jamaica Bay	Estuarine	2300_M3_NY03-0236	0.867	11900	28	1.08	0.745	6
Jamaica Bay	Estuarine	JB317	0.912	19990	34	2.46	0.697	7
Jamaica Bay	Estuarine	JB319	0.900	480	8.5	1.78	0.856	4
Jamaica Bay	Estuarine	JB322	0.811	21300	30.5	2.07	0.608	4.5
Jamaica Bay	Estuarine	JB386	0.891	410	8	1.75	0.850	4
Mullica River and Great Bay	Estuarine	2300_L3_NJ03-0038	0.88	2000	14	2.13	0.805	5
Mullica River and Great Bay	Estuarine	2300_L5_NJ05-0059	0.929	22075	22	1.14	0.369	2
Mullica River and Great Bay	Estuarine	2300_L6_NJ06-0015	1	7100	39	2.79	0.762	9
Mullica River and Great Bay	Estuarine	2300_L6_NJ06-0027	0.948	3800	30	3.01	0.884	11
Mullica River and Great Bay	Estuarine	2300_L6_NJ06-0035	1	4725	30	2.61	0.767	7
Mullica River and Great Bay	Estuarine	NCCA10-2622	0.859	2525	8	0.918	0.441	2
Mullica River and Great Bay	Estuarine	NJ01-0036	0.989	1470	17	2.01	0.708	4
Mullica River and Great Bay	Estuarine	NJ01-0038	1.01	1675	11	1.68	0.702	3
Mullica River and Great Bay	Estuarine	NJ01-0118	0.844	8050	37	2.93	0.811	10
Mullica River and Great Bay	Estuarine	NJ01-0122	0.979	9950	14	1.68	0.636	3
Mullica River and Great Bay	Estuarine	NJ02-0227	1	51375	34	1.01	0.287	2
Mullica River and Great Bay	Estuarine	NJ02-0230	1.07	46100	42	1.51	0.403	3

Note: Freshwater toxicity test data from the LPRSA were compared to the area above Dundee Dam only;
estuarine LPRSA toxicity test data were compared to both Jamaica Bay or Mullica River and Great Bay (*A. abdita* survival) and the area above Dundee Dam (*H. azteca* endpoints)
Benthic community metrics from the tidal freshwater LPRSA were compared to data from above Dundee Dam, and fluvial and upper estuarine LPRSA metrics were compared to Jamaica Bay and Mullica River Great Bay data

Table B6-1 provides the LPRSA and reference area sediment toxicity and benthic community metric datasets that were used to conduct Mann-Whitney U tests (BERA Appendix P, Sections 2.3.2, 2.3.4.1, 3.2.3.1, and 3.2.5.1) . This type of test compares pairs of datasets; the LPRSA was compared to each reference dataset independently. Table B6-1a provides the reference datasets that were screened according to USEPA's preferred method, and Table B6-1b provides the reference datasets that were screened using the alternative approach presented in the quantitative analysis of uncertainty. The reference data screening steps are provided in Tables B3 (Jamaica Bay and Mullica River and Great

Table B6-1b. Data used for Mann-Whitney U test comparisons of LPRSA benthic invertebrate data to reference area data, quantiative analysis of uncertainty

Dataset	Toxicity Test Type	Location ID	*C. dilutus* survival (% of control)	*C. dilutus* biomass (% of control)	*H. azteca* survival (% of control)	*H. azteca* biomass (% of control)	*A. abdita* survival (% of control)	Abundance (per m^2)	Taxa Richness	Shannon-Weiner H'	Pielou's J'	Swartz's Dominance Index	Hilsenhoff Biotic Index
LPRSA Upper Estuary	Estuarine	LPRT01A			0.87	0.823	0.87	1090	8	1.06	0.507	2	
LPRSA Upper Estuary	Estuarine	LPRT01B			0.89	0.715	0.95	614	8.22	1.34	0.662	2.67	
LPRSA Upper Estuary	Estuarine	LPRT01C			0.42	0.259	0.92	2740	16	2.01	0.727	4.67	
LPRSA Upper Estuary	Estuarine	LPRT01D			0.81	0.699	0.58	2050	12.3	1.63	0.65	3	
LPRSA Upper Estuary	Estuarine	LPRT01E			0.25	0.186	0.85	2750	13.1	1.71	0.669	3.11	
LPRSA Upper Estuary	Estuarine	LPRT01F			0.95	0.69	0.85	357	7	1.06	0.537	2	
LPRSA Upper Estuary	Estuarine	LPRT01G			0.89	0.647	0.97	973	10.7	1.42	0.6	2.33	
LPRSA Upper Estuary	Estuarine	LPRT02A			0.86	0.556	0.89	709	9.33	1.57	0.718	3.11	
LPRSA Upper Estuary	Estuarine	LPRT02B			0.71	0.596	0.69	127	6.67	1.68	0.887	4	
LPRSA Upper Estuary	Estuarine	LPRT02C			0.95	0.679	0.92	630	7.67	1.67	0.823	3.67	
LPRSA Upper Estuary	Estuarine	LPRT02D			0.82	0.567	0.95	1290	13.1	2.07	0.816	5	
LPRSA Upper Estuary	Estuarine	LPRT02E			0.82	0.683	0.78	155	5.5	1.42	0.83	3.5	
LPRSA Upper Estuary	Estuarine	LPRT02F			0.9	0.606	0.83	240	9.33	1.73	0.807	4	
LPRSA Upper Estuary	Estuarine	LPRT03A			0.82	0.844	0.61	320	2.67	0.427	0.43	1.33	
LPRSA Upper Estuary	Estuarine	LPRT03B			0.87	0.83	0.94	773	6.33	1.45	0.803	3	
LPRSA Upper Estuary	Estuarine	LPRT03C			0.56	0.426	0.87	894	7.33	1.21	0.61	2.56	
LPRSA Upper Estuary	Estuarine	LPRT03D			0.85	0.642	0.87	1370	10.9	1.69	0.728	3.89	
LPRSA Upper Estuary	Estuarine	LPRT03E			0.86	0.951	0.89	593	7.67	1.17	0.69	2	
LPRSA Upper Estuary	Estuarine	LPRT03F			0.73	0.432	0.84	693	8.67	1.49	0.697	3	
LPRSA Upper Estuary	Estuarine	LPRT04A			0.98	0.959	0.82	3420	9.33	1.31	0.599	2.56	
LPRSA Upper Estuary	Estuarine	LPRT04B			0.87	0.708	0.23	523	6.33	1.41	0.79	2.67	
LPRSA Upper Estuary	Estuarine	LPRT04C			0.36	0.17	0.15	721	8.44	1.52	0.778	3.44	
LPRSA Upper Estuary	Estuarine	LPRT04D			0.69	0.514	0.71	1220	5.33	0.507	0.297	1	
LPRSA Upper Estuary	Estuarine	LPRT04E			0.62	0.353	0.83	1170	6	1.07	0.607	2.33	
LPRSA Upper Estuary	Freshwater	LPRT04F	0.83	0.821	0.86	0.44		333	4.67	1.09	0.757	2.33	
LPRSA Fluvial Estuary	Estuarine	LPRT05A			0.069	0.0258	0.37	2280	11.1	1.54	0.64	3	
LPRSA Fluvial Estuary	Estuarine	LPRT05B			0.16	0.0595	0.88	852	9	1.57	0.746	3.56	
LPRSA Fluvial Estuary	Freshwater	LPRT05C	0.95	0.703	0.53	0.186		2940	10.3	1.33	0.57	2.33	
LPRSA Fluvial Estuary	Freshwater	LPRT05D	0.89	0.713	0.68	0.315		227	6	1.08	0.603	2.67	
LPRSA Fluvial Estuary	Freshwater	LPRT05E	0.96	0.706	0.7	0.45		200	3.67	1.08	0.85	2	
LPRSA Fluvial Estuary	Freshwater	LPRT05F	1	0.651	0.33	0.16		147	3.33	0.737	0.74	2	
LPRSA Fluvial Estuary	Freshwater	LPRT06A	0.94	0.59	0.87	0.385		6530	7	0.843	0.463	1.56	
LPRSA Fluvial Estuary	Freshwater	LPRT06B	0.83	0.656	0.65	0.213		3380	4.33	0.147	0.1	1	
LPRSA Fluvial Estuary	Estuarine	LPRT06C			0.53	0.255	0.88	4660	9.89	1.2	0.528	2	
LPRSA Fluvial Estuary	Freshwater	LPRT06D	0.9	0.621	0.63	0.193		7030	8.33	1.13	0.533	2	
LPRSA Fluvial Estuary	Freshwater	LPRT06E	0.9	0.738	0.81	0.37		2490	7.33	1.21	0.603	2.33	
LPRSA Fluvial Estuary	Freshwater	LPRT06F	0.88	0.607	0.89	0.582		927	2.33	0.547	0.727	1.67	
LPRSA Fluvial Estuary	Freshwater	LPRT07A	0.96	0.9	0.67	0.307		5110	9	0.942	0.436	1.78	
LPRSA Fluvial Estuary	Freshwater	LPRT07B	0.95	0.646	0.22	0.0732		3200	7.67	0.933	0.467	1.67	
LPRSA Fluvial Estuary	Freshwater	LPRT07C	1	0.522	0.71	0.361		2680	7.33	0.893	0.469	1.44	
LPRSA Fluvial Estuary	Freshwater	LPRT07D	0.89	0.746	0.65	0.35		1630	5.33	0.44	0.26	1	
LPRSA Fluvial Estuary	Freshwater	LPRT07E	0.85	0.592	0.75	0.416		3740	6.67	0.383	0.217	1	
LPRSA Fluvial Estuary	Freshwater	LPRT08A	0.97	0.756	0.51	0.218		253	4.33	0.863	0.657	1.67	
LPRSA Fluvial Estuary	Freshwater	LPRT08B	1	0.682	0.63	0.399		340	3	0.773	0.703	2	
LPRSA Fluvial Estuary	Freshwater	LPRT08C	1	0.597	0.36	0.225		4030	10.6	1.23	0.534	2.22	
LPRSA Fluvial Estuary	Freshwater	LPRT08D	0.73	0.836	0.76	0.429		843	5.67	1.1	0.677	2	
LPRSA Fluvial Estuary	Freshwater	LPRT08E	1.1	0.944	0.69	0.469		4070	8.11	1.04	0.523	1.78	
LPRSA Fluvial Estuary	Freshwater	LPRT09A	0.94	0.579	0.37	0.125		1300	9.33	1.14	0.51	2	
LPRSA Fluvial Estuary	Freshwater	LPRT09B	0.85	0.802	0.71	0.726		533	3.67	0.877	0.717	2	
LPRSA Fluvial Estuary	Freshwater	LPRT09C	0.88	0.692	0.68	0.602		9890	9.11	1.07	0.55	2	
LPRSA Fluvial Estuary	Freshwater	LPRT09D	1	0.831	0.79	0.438		20300	10.9	0.947	0.399	1.56	
LPRSA Fluvial Estuary	Freshwater	LPRT09E	0.97	0.756	0.6	0.328		6180	9.33	1.04	0.46	2	
LPRSA Fluvial Estuary	Freshwater	LPRT09F	0.91	0.905	0.43	0.211		5380	8.67	0.647	0.3	1	
LPRSA Fluvial Estuary	Freshwater	LPRT09G	0.94	0.975	1	0.635		1090	4.67	0.967	0.627	2	
LPRSA Fluvial Estuary	Freshwater	LPRT09H	0.84	0.785	0.81	0.497		1330	7.33	0.98	0.503	1.67	
LPRSA Fluvial Estuary	Freshwater	LPRT10A	0.79	0.345	0.65	0.414		11100	9.67	0.81	0.357	1.33	
LPRSA Fluvial Estuary	Freshwater	LPRT10B	0.16	0.0471	0.19	0.0903		7210	14.7	1.22	0.453	1.67	
LPRSA Fluvial Estuary	Freshwater	LPRT10C	0.99	0.363	0.69	0.524		24300	12.8	0.968	0.378	1.44	
LPRSA Fluvial Estuary	Freshwater	LPRT10D	0.8	0.573	1	0.92		5030	13.7	1.49	0.593	3	
LPRSA Fluvial Estuary	Freshwater	LPRT10E	0.99	0.726	0.37	0.255		37900	11.8	1.19	0.484	2.33	
LPRSA Fluvial Estuary	Freshwater	LPRT11A	0.8	0.522	0.93	0.763		4280	14	1.48	0.57	2.33	

LPRSA Fluvial Estuary	Freshwater	LPRT11B	0.47	0.203	0.65	0.374		4610	13.3	1.65	0.647	3	
LPRSA Fluvial Estuary	Freshwater	LPRT11C	0.83	0.773	0.65	0.508		6100	13.7	1.28	0.497	2.33	
LPRSA Fluvial Estuary	Freshwater	LPRT11D	0.88	0.557	0.8	0.607		29600	16.2	1.38	0.5	2.56	
LPRSA Fluvial Estuary	Freshwater	LPRT11E	0.93	0.464	0.89	0.524		21200	11.3	1.08	0.462	2.11	
LPRSA Fluvial Estuary	Freshwater	LPRT11F	0.95	0.458	0.53	0.428		6050	16	1.62	0.587	3.33	
LPRSA Fluvial Estuary	Freshwater	LPRT11G	0.73	0.124	0.16	0.0607		3170	7	0.84	0.44	1.67	
LPRSA Fluvial Estuary	Freshwater	LPRT12A	0.95	0.559	0.68	0.321		7270	15.6	1.38	0.51	2.67	
LPRSA Fluvial Estuary	Freshwater	LPRT12B	0.98	0.38	0.84	0.477		8160	13	1.34	0.52	2.67	
LPRSA Fluvial Estuary	Freshwater	LPRT12C	0.8	0.293	0.59	0.27		9850	15.3	1.26	0.463	2.33	
LPRSA Fluvial Estuary	Freshwater	LPRT12D	1	0.489	0.59	0.259		5870	11	1.07	0.443	1.67	
LPRSA Fluvial Estuary	Freshwater	LPRT12E	0.91	0.254	0.53	0.273		20900	9.56	1.23	0.57	2.44	
LPRSA Fluvial Estuary	Freshwater	LPRT13A	0.87	0.511	0.56	0.301		2600	11.3	1.28	0.54	2	
LPRSA Fluvial Estuary	Freshwater	LPRT13B	0.94	0.52	0.9	0.483		5790	11.7	1.33	0.547	2	
LPRSA Fluvial Estuary	Freshwater	LPRT13C	1	0.627	0.84	0.409		4630	9	1.07	0.49	2	
LPRSA Fluvial Estuary	Freshwater	LPRT13D	0.94	0.38	0.93	0.518		680	7.67	1.43	0.727	3.33	
LPRSA Fluvial Estuary	Freshwater	LPRT13E	0.97	0.734	0.9	0.458		23200	12.9	1.4	0.55	2.89	
LPRSA Fluvial Estuary	Freshwater	LPRT13F	0.95	1.04	0.82	0.537		12400	12.9	1.42	0.554	2.67	
LPRSA Fluvial Estuary	Freshwater	LPRT13G	0.99	0.66	0.94	0.53		2690	8	1.15	0.57	2	
LPRSA Tidal Freshwater	Freshwater	LPRT14A	0.445	0.93	0.273	0.45		27600	14.2	1.41	0.543	2.56	9.56
LPRSA Tidal Freshwater	Freshwater	LPRT14B	0.483	0.99	0.161	0.46		11500	14	1.63	0.62	3.67	9.36
LPRSA Tidal Freshwater	Freshwater	LPRT14C	0.613	0.93	0.523	0.86		9120	17.8	1.36	0.468	2.3	9.39
LPRSA Tidal Freshwater	Freshwater	LPRT14D	0.373	0.8	0.268	0.64		7980	17	1.73	0.61	3.67	8.99
LPRSA Tidal Freshwater	Freshwater	LPRT14E	0.507	0.96	0.214	0.53		4520	14.7	1.57	0.587	2.67	8.54
LPRSA Tidal Freshwater	Freshwater	LPRT14F	0.681	0.93	0.482	0.88		8450	19	1.96	0.677	5	8.67
LPRSA Tidal Freshwater	Freshwater	LPRT15A	0.541	1	0.359	0.59		30600	18.7	1.61	0.55	2.67	8.99
LPRSA Tidal Freshwater	Freshwater	LPRT15B	0.495	1	0.55	0.78		21800	14.2	1.34	0.562	2.33	9.64
LPRSA Tidal Freshwater	Freshwater	LPRT15C	0.431	0.94	0.46	0.81		2060	11.7	1.55	0.637	3.33	8.53
LPRSA Tidal Freshwater	Freshwater	LPRT15D	0.359	0.79	0.445	0.74		15700	17.1	1.69	0.6	3.22	9.32
LPRSA Tidal Freshwater	Freshwater	LPRT15E	0.464	0.98	0.594	0.89		7020	18.3	1.85	0.64	4	9.1
LPRSA Tidal Freshwater	Freshwater	LPRT15F	0.438	0.93	0.635	0.95		4180	15.3	1.61	0.593	3.33	8.76
LPRSA Tidal Freshwater	Freshwater	LPRT16A	0.538	0.74	0.525	0.79		12800	22.7	1.58	0.507	2.67	9.19
LPRSA Tidal Freshwater	Freshwater	LPRT16B	0.663	0.79	1.14	0.95							
LPRSA Tidal Freshwater	Freshwater	LPRT16C	0.791	0.88	1.05	0.98		10400	21.2	2.07	0.71	5.33	8.56
LPRSA Tidal Freshwater	Freshwater	LPRT16D	1.01	0.96	0.634	0.87		8680	17.3	1.8	0.633	4	8.06
LPRSA Tidal Freshwater	Freshwater	LPRT16E	0.895	0.84	1.03	0.93		1990	8	1.32	0.64	2.67	8.91
LPRSA Tidal Freshwater	Freshwater	LPRT17A	0.433	0.79	0.649	0.99		2770	11.3	1.41	0.583	2	8.96
LPRSA Tidal Freshwater	Freshwater	LPRT17D	0.516	0.96	0.702	1		3640	9.56	0.901	0.433	1.67	9.45
Above Dundee Dam	Freshwater	UPRT18H	0.959	0.775	0.944	0.471		11500	19	2.01	0.683	4.33	9.41
Above Dundee Dam	Freshwater	UPRT19L	0.796	0.692	0.722	0.414		14300	25.7	2.35	0.723	6.67	8.19
Above Dundee Dam	Freshwater	UPRT19M	0.816	0.736	0.489	0.264		15200	24	2.39	0.75	6.33	8.25
Above Dundee Dam	Freshwater	UPRT20A	0.806	0.758	0.667	0.261		9950	18.7	2.13	0.727	5.33	8.39
Above Dundee Dam	Freshwater	UPRT20B	0.816	0.813	0.833	0.434		19500	23	1.94	0.617	4.33	8.94
Above Dundee Dam	Freshwater	UPRT20E	0.867	0.742	0.733	0.404		5500	23	2.65	0.86	8.33	7.86
Above Dundee Dam	Freshwater	UPRT20G	0.867	0.819	0.756	0.355		16100	19	2.13	0.727	5.67	8.82
Above Dundee Dam	Freshwater	UPRT21A	0.908	0.791	0.767	0.389		11200	21	2.19	0.72	4.33	8.28
Above Dundee Dam	Freshwater	UPRT21C	0.745	0.681	0.867	0.488		11500	32.3	2.73	0.79	9.33	7.95
Above Dundee Dam	Freshwater	UPRT21D	0.724	0.725	0.700	0.314		13400	21.3	2.18	0.717	5	8.08
Above Dundee Dam	Freshwater	UPRT21E	0.857	0.714	0.644	0.284		6390	16.7	1.79	0.643	3.67	8.69
Above Dundee Dam	Freshwater	UPRT21F	0.898	1.027	0.811	0.454		14000	26.7	2.27	0.697	6	8.4
Above Dundee Dam	Freshwater	UPRT21G	0.847	0.709	0.700	0.452		2070	13.7	2.01	0.773	4.33	7.64
Above Dundee Dam	Freshwater	UPRT22A	0.714	0.637	0.889	0.518		3490	17.7	1.76	0.617	4	6.84
Above Dundee Dam	Freshwater	UPRT22B	0.827	0.742	0.656	0.473		5880	25.3	2.16	0.667	5	7.02
Jamaica Bay	Estuarine	2200_26_JB002					0.960	2875	18	2.17	0.75	5	
Jamaica Bay	Estuarine	2200_26_JB006					0.910	35500	35	1.61	0.455	2.5	
Jamaica Bay	Estuarine	2200_26_JB022					1.04	25113	23.5	1.53	0.485	2.5	
Jamaica Bay	Estuarine	2200_26_JB026					1.08	37663	42.5	2.38	0.636	5.5	
Jamaica Bay	Estuarine	2200_26_JB031					0.920	44825	28.5	1.56	0.467	2	
Jamaica Bay	Estuarine	2200_26_JB039					0.380	282150	44	2.04	0.54	4	
Jamaica Bay	Estuarine	2200_26_JB042					1.03	6075	25	1.94	0.601	4	
Jamaica Bay	Estuarine	2200_27_JB104					0.800	5663	7.5	0.799	0.382	1.5	
Jamaica Bay	Estuarine	2200_27_JB108					0.960	6888	20	1.54	0.515	2.5	
Jamaica Bay	Estuarine	2200_27_JB110					0.990	32713	21	1.46	0.484	2.5	
Jamaica Bay	Estuarine	2200_27_JB112					0.980	22488	29	1.85	0.551	4.5	
Jamaica Bay	Estuarine	2200_27_JB113					0.950	33125	27.5	1.4	0.421	2	
Jamaica Bay	Estuarine	2200_27_JB114					0.970	67788	34	2.25	0.637	6	
Jamaica Bay	Estuarine	2200_27_JB115					0.940	21500	41	2.76	0.754	8	

Jamaica Bay	Estuarine	2200_27_JB119	0.980	14050	21.5	1.57	0.512	2.5
Jamaica Bay	Estuarine	2200_27_JB120	1.00	20375	22	1.41	0.453	2.5
Jamaica Bay	Estuarine	2200_56_JB031	0.960	15325	25	2	0.621	4.5
Jamaica Bay	Estuarine	2200_56_JB041	0.930	146750	44	1.52	0.401	3
Jamaica Bay	Estuarine	2200_56_JB042	1.01	7425	26.5	1.98	0.608	4
Jamaica Bay	Estuarine	2200_56_JB043	0.890	22588	47	2.42	0.628	7
Jamaica Bay	Estuarine	2200_56_JB201	0.930	1513	13.5	2.05	0.792	4.5
Jamaica Bay	Estuarine	2200_56_JB205	0.860	963	11	1.87	0.813	4.5
Jamaica Bay	Estuarine	2200_56_JB210	0.880	6563	20.5	1.66	0.55	3
Jamaica Bay	Estuarine	2200_56_JB211	0.730	3913	20	2.01	0.672	4
Jamaica Bay	Estuarine	2200_56_JB212	1.00	675	6.5	1	0.539	1.5
Jamaica Bay	Estuarine	2200_56_JB214	0.940	60675	24	0.714	0.232	1
Jamaica Bay	Estuarine	2200_56_JB215	0.390	73825	36	1.52	0.43	2
Jamaica Bay	Estuarine	2200_56_JB217	1.00	7625	20.5	1.85	0.612	4
Jamaica Bay	Estuarine	2200_56_JB219	1.01	850	10.5	1.96	0.855	5
Jamaica Bay	Estuarine	2200_56_JB222	0.940	6700	12	0.917	0.398	1
Jamaica Bay	Estuarine	2300_M0_NY-0029-A	0.957	660	17	0.915	0.744	6
Jamaica Bay	Estuarine	2300_M1_NY-0032-A	0.989	18830	48	0.9	0.536	4
Jamaica Bay	Estuarine	2300_M2_NY-0029-A	0.902	675	7	0.519	0.614	2
Jamaica Bay	Estuarine	2300_M3_NY03-0236	0.867	11900	28	1.08	0.745	6
Jamaica Bay	Estuarine	JB301	0.725	1980	17	1.83	0.656	3
Jamaica Bay	Estuarine	JB317	0.912	19990	34	2.46	0.697	7
Jamaica Bay	Estuarine	JB319	0.900	480	8.5	1.78	0.856	4
Jamaica Bay	Estuarine	JB322	0.811	21300	30.5	2.07	0.608	4.5
Jamaica Bay	Estuarine	JB358	0.544	820	9	1.54	0.853	3
Jamaica Bay	Estuarine	JB359	0.744	7320	25.5	2.20	0.676	5.5
Jamaica Bay	Estuarine	JB361	0.611	20940	12	1.44	0.578	2.5
Jamaica Bay	Estuarine	JB368	0.681	94200	21.5	1.47	0.482	2.5
Jamaica Bay	Estuarine	JB380	0.785	18970	24	1.69	0.532	3
Jamaica Bay	Estuarine	JB381	0.698	110	3.5	1.10	0.875	2.5
Jamaica Bay	Estuarine	JB386	0.891	410	8	1.75	0.850	4
Mullica River and Great Ba	Estuarine	2300_L3_NJ03-0038	0.880	2000	14	2.12513576	0.8052632	5
Mullica River and Great Ba	Estuarine	2300_L5_NJ05-0059	0.929	22075	22	1.13937953	0.36860689	2
Mullica River and Great Ba	Estuarine	2300_L6_NJ06-0015	1.00	7100	39	2.79250283	0.76223716	9
Mullica River and Great Ba	Estuarine	2300_L6_NJ06-0027	0.948	3800	30	3.00713186	0.88413918	11
Mullica River and Great Ba	Estuarine	2300_L6_NJ06-0035	1.00	4725	30	2.60870337	0.76699559	7
Mullica River and Great Ba	Estuarine	NCCA10-2622	0.859	2525	8	0.91783543	0.44138554	2
Mullica River and Great Ba	Estuarine	NJ01-0036	0.989	1470	17	2.00704401	0.70839847	4
Mullica River and Great Ba	Estuarine	NJ01-0038	1.01	1675	11	1.68411795	0.70233174	3
Mullica River and Great Ba	Estuarine	NJ01-0118	0.844	8050	37	2.92697911	0.81059143	10
Mullica River and Great Ba	Estuarine	NJ01-0122	0.979	9950	14	1.67755176	0.63566325	3
Mullica River and Great Ba	Estuarine	NJ02-0227	1.00	51375	34	1.01122565	0.28676184	2
Mullica River and Great Ba	Estuarine	NJ02-0230	1.07	46100	42	1.50615034	0.40296508	3

Note: Freshwater toxicity test data from the LPRSA were compared to the area above Dundee Dam only;
estuarine LPRSA toxicity test data were compared to both Jamaica Bay or Mullica River and Great Bay (*A. abdita* survival) and the area above Dundee Dam (*H. azteca* endpoints)
Benthic community metrics from the tidal freshwater LPRSA were compared to data from above Dundee Dam, and fluvial and upper estuarine LPRSA metrics were compared to Jamaica Bay and Mullica River Great Bay data

Table B6-2a. Results of Mann-Whitney U Tests comparing LPRSA benthic community metric data to reference area datasets

LPRSA Benthic Salinity Zone	Reference Area	Mann-Whitney U Test Result (p-value)*					
		Abundance (per m^2)	Taxa Richness	Shannon-Weiner H'	Pielou's J'	Swartz's Dominance Index	Hilsenhoff Biotic Index
Upper Estuary	Jamaica Bay	**8.74E-07**	**7.65E-08**	**2.07E-02**	9.86E-01	**3.16E-02**	na
Fluvial Estuary	Jamaica Bay	**2.20E-03**	**2.45E-09**	**8.60E-07**	**2.69E-02**	**4.86E-07**	na
Upper Estuary	Mullica River and Great Bay	**1.28E-05**	**1.06E-05**	**2.30E-02**	6.69E-01	6.27E-02	na
Fluvial Estuary	Mullica River and Great Bay	2.35E-01	**7.97E-06**	**1.40E-04**	**4.26E-02**	**7.95E-05**	na
Tidal Freshwater	Above Dundee Dam	8.64E-02	**2.57E-03**	**9.85E-04**	**4.06E-03**	**1.98E-03**	1.40E-01

na -- not applicable
* p-value is based on specific Mann-Whitney U test method applied; abundance was run as a two-tailed test, Hilsenhoff Biotic Index was run as an upper tailed test, and all other metrics were run as lower tailed tests.
Bold values are significant ($p < 0.05$)

Table B6-2b. Results of Mann-Whitney U Tests comparing LPRSA sediment toxicity data to reference area datasets

LPRSA Toxicity Test Type	Reference Area	Mann-Whitney U Test Result (p-value)*				
		C. dilutus survival (% of control)	*C. dilutus* biomass (% of control)	*H. azteca* survival (% of control)	*H. azteca* biomass (% of control)	*A. abdita* survival (% of control)
Estuarine	Jamaica Bay	na	na	na	na	**1.20E-06**
Estuarine	Mullica River and Great Bay	na	na	na	na	1.00
Estuarine	Above Dundee Dam	na	na	4.08E-01	9.27E-01	na
Freshwater	Above Dundee Dam	3.97E-01	5.22E-02	**2.32E-02**	7.28E-01	na

na -- not applicable
* p-values based on lower tailed tests
Bold values are significant ($p < 0.05$)

Table B6-2c. Results of Mann-Whitney U Tests comparing LPRSA benthic community metric data to reference area datasets, quantiative analysis of uncertai

LPRSA Benthic Salinity Zone	Reference Area	Mann-Whitney U Test Result (p-value)*					
		Abundance (per m^2)	Taxa Richness	Shannon-Weiner H'	Pielou's J'	Swartz's Dominance Index	Hilsenhoff Biotic Index
Upper Estuary	Jamaica Bay	**4.14E-07**	**3.95E-08**	**9.45E-03**	9.85E-01	**4.77E-02**	na
Fluvial Estuary	Jamaica Bay	**2.01E-03**	**4.24E-10**	**1.23E-08**	**1.16E-02**	**2.49E-08**	na
Upper Estuary	Mullica River and Great Bay	**1.28E-05**	**1.06E-05**	**2.30E-02**	6.69E-01	6.27E-02	na
Fluvial Estuary	Mullica River and Great Bay	2.35E-01	**7.97E-06**	**1.40E-04**	**4.26E-02**	**7.95E-05**	na
Tidal Freshwater	Above Dundee Dam	4.37E-01	**3.36E-04**	**4.70E-06**	**1.73E-05**	**1.53E-05**	**2.77E-04**

na -- not applicable
* p-value is based on specific Mann-Whitney U test method applied; abundance was run as a two-tailed test, Hilsenhoff Biotic Index was run as an upper tailed test, and all other metrics were run as lower tailed tests.
Bold values are significant ($p < 0.05$)

Table B6-2d. Results of Mann-Whitney U Tests comparing LPRSA sediment toxicity data to reference area datasets, quantiative analysis of uncertainty

LPRSA Toxicity Test Type	Reference Area	Mann-Whitney U Test Result (p-value)*				
		C. dilutus survival (% of control)	*C. dilutus* biomass (% of control)	*H. azteca* survival (% of control)	*H. azteca* biomass (% of control)	*A. abdita* survival (% of control)
Estuarine	Jamaica Bay	na	na	na	na	**1.01E-02**
Estuarine	Mullica River and Great Bay	na	na	na	na	**1.73E-04**
Estuarine	Above Dundee Dam	na	na	7.27E-01	9.89E-01	na
Freshwater	Above Dundee Dam	8.77E-01	2.01E-01	**2.87E-02**	9.07E-01	na

na -- not applicable
* p-values based on lower tailed tests
Bold values are significant ($p < 0.05$)

Table B6-2 provides the results of Mann-Whitney U tests comparing LPRSA and reference area sediment toxicity and benthic community metric datasets (see BERA Appendix P,

Sections 2.3.2, 2.3.4.1, 3.2.3.1, and 3.2.5.1) . Tests were run on LPRSA datasets split by salinity zone, compared with relevant reference area datasets (e.g., estuarine zone datasets compared with estuarine reference datasets). Tables B-6a through B-6d present the p-values from tests; significant results are indicated by $p < 0.05$. Tables B6-2a and B6-2b present the results from tests comparing LPRSA benthic community metric and toxicity test results, respectively, to analogous reference datasets screened according to USEPA's preferred method. Tables B6-2c and B6-2d present similar results for tests comparing LPRSA data to reference datasets screened according to the alternative approach for the quantitative analysis of uncertainty.

Table B7-1a. T20/T50 Screen of LPRSA Sediment Chemistry Data

Location ID	RM	Parameter	Result	Qualifier	Units	T20	T20 EF	T20 EF ≥ 1	T50	T50 EF	T50 EF ≥ 1
LPRT01A	0	Antimony	0.55	J	mg/kg	0.63	0.873	0	2.4	0.2292	0
LPRT01A	0	Arsenic	12	J	mg/kg	7.4	1.6216	1	20	0.6	0
LPRT01A	0	Cadmium	1.1	J	mg/kg	0.38	2.8947	1	1.4	0.7857	0
LPRT01A	0	Chromium	127	J	mg/kg	49	2.5918	1	141	0.9007	0
LPRT01A	0	Copper	122	J	mg/kg	32	3.8125	1	94	1.2979	1
LPRT01A	0	Lead	125	J	mg/kg	30	4.1667	1	94	1.3298	1
LPRT01A	0	Mercury	2000	J	ug/kg	140	14.286	1	480	4.1667	1
LPRT01A	0	Nickel	41.5	J	mg/kg	15	2.7667	1	47	0.883	0
LPRT01A	0	Silver	2.5	J	mg/kg	0.23	10.87	1	1.1	2.2727	1
LPRT01A	0	Zinc	238	J	mg/kg	94	2.5319	1	245	0.9714	0
LPRT01A	0	1-Methylnaphthalene	110	J	ug/kg	21	5.2381	1	94	1.1702	1
LPRT01A	0	1-Methylphenanthrene	160	J	ug/kg	18	8.8889	1	112	1.4286	1
LPRT01A	0	2,6-Dimethylnaphthalene	89	J	ug/kg	25	3.56	1	133	0.6692	0
LPRT01A	0	2-Methylnaphthalene	200	J	ug/kg	21	9.5238	1	128	1.5625	1
LPRT01A	0	Acenaphthene	240	J	ug/kg	19	12.632	1	116	2.069	1
LPRT01A	0	Acenaphthylene	410	J	ug/kg	14	29.286	1	140	2.9286	1
LPRT01A	0	Anthracene	980	J	ug/kg	34	28.824	1	290	3.3793	1
LPRT01A	0	Benzo(a)anthracene	2200	J	ug/kg	61	36.066	1	446	4.9327	1
LPRT01A	0	Benzo(a)pyrene	1800	J	ug/kg	69	26.087	1	520	3.4615	1
LPRT01A	0	Benzo(b/j)fluoranthene	2100	J	ug/kg	130	16.154	1	1107	1.897	1
LPRT01A	0	Benzo(g,h,i)perylene	1300	J	ug/kg	67	19.403	1	497	2.6157	1
LPRT01A	0	Benzo(k)fluoranthene	1000	J	ug/kg	70	14.286	1	537	1.8622	1
LPRT01A	0	Chrysene	2000	J	ug/kg	82	24.39	1	650	3.0769	1
LPRT01A	0	Dibenzo(a,h)anthracene	410	J	ug/kg	19	21.579	1	113	3.6283	1
LPRT01A	0	Fluoranthene	3500	J	ug/kg	119	29.412	1	1034	3.3849	1
LPRT01A	0	Fluorene	190	J	ug/kg	19	10	1	114	1.6667	1
LPRT01A	0	Indeno(1,2,3-cd)pyrene	1500	J	ug/kg	68	22.059	1	488	3.0738	1
LPRT01A	0	Naphthalene	810	J	ug/kg	30	27	1	217	3.7327	1
LPRT01A	0	Perylene	530	J	ug/kg	74	7.1622	1	453	1.17	1
LPRT01A	0	Phenanthrene	1100	J	ug/kg	68	16.176	1	455	2.4176	1
LPRT01A	0	Pyrene	3200	J	ug/kg	125	25.6	1	932	3.4335	1
LPRT01A	0	1,1'-Biphenyl	480	UJ	ug/kg	17	28.235	1	73	6.5753	1
LPRT01A	0	Total PCB Congeners	550	J	ug/kg	35	15.714	1	368	1.4946	1
LPRT01A	0	4,4'-DDD	7.9	J	ug/kg	2.2	3.5909	1	19	0.4158	0
LPRT01A	0	4,4'-DDE	10	J	ug/kg	3.1	3.2258	1	103	0.0971	0
LPRT01A	0	4,4'-DDT	1.2	J	ug/kg	1.7	0.7059	0	11	0.1091	0
LPRT01A	0	Dieldrin	0.92	J	ug/kg	0.83	1.1084	1	2.9	0.3172	0
LPRT01B	0.46	Antimony	0.67	J	mg/kg	0.63	1.0635	1	2.4	0.2792	0
LPRT01B	0.46	Arsenic	13.7	J	mg/kg	7.4	1.8514	1	20	0.685	0
LPRT01B	0.46	Cadmium	2.3	J	mg/kg	0.38	6.0526	1	1.4	1.6429	1
LPRT01B	0.46	Chromium	182	J	mg/kg	49	3.7143	1	141	1.2908	1
LPRT01B	0.46	Copper	184	J	mg/kg	32	5.75	1	94	1.9574	1
LPRT01B	0.46	Lead	180	J	mg/kg	30	6	1	94	1.9149	1
LPRT01B	0.46	Mercury	2900	J	ug/kg	140	20.714	1	480	6.0417	1
LPRT01B	0.46	Nickel	39.3	J	mg/kg	15	2.62	1	47	0.8362	0
LPRT01B	0.46	Silver	4.3	J	mg/kg	0.23	18.696	1	1.1	3.9091	1
LPRT01B	0.46	Zinc	351	J	mg/kg	94	3.734	1	245	1.4327	1
LPRT01B	0.46	1-Methylnaphthalene	85	J	ug/kg	21	4.0476	1	94	0.9043	0
LPRT01B	0.46	1-Methylphenanthrene	110	J	ug/kg	18	6.1111	1	112	0.9821	0
LPRT01B	0.46	2,6-Dimethylnaphthalene	120	J	ug/kg	25	4.8	1	133	0.9023	0
LPRT01B	0.46	2-Methylnaphthalene	180	J	ug/kg	21	8.5714	1	128	1.4063	1
LPRT01B	0.46	Acenaphthene	130	J	ug/kg	19	6.8421	1	116	1.1207	1
LPRT01B	0.46	Acenaphthylene	250	J	ug/kg	14	17.857	1	140	1.7857	1
LPRT01B	0.46	Anthracene	430	J	ug/kg	34	12.647	1	290	1.4828	1
LPRT01B	0.46	Benzo(a)anthracene	1300	J	ug/kg	61	21.311	1	446	2.9148	1
LPRT01B	0.46	Benzo(a)pyrene	1100	J	ug/kg	69	15.942	1	520	2.1154	1
LPRT01B	0.46	Benzo(b/j)fluoranthene	1500	J	ug/kg	130	11.538	1	1107	1.355	1
LPRT01B	0.46	Benzo(g,h,i)perylene	1200	J	ug/kg	67	17.91	1	497	2.4145	1
LPRT01B	0.46	Benzo(k)fluoranthene	710	J	ug/kg	70	10.143	1	537	1.3222	1
LPRT01B	0.46	Chrysene	1300	J	ug/kg	82	15.854	1	650	2	1
LPRT01B	0.46	Dibenzo(a,h)anthracene	240	J	ug/kg	19	12.632	1	113	2.1239	1
LPRT01B	0.46	Fluoranthene	2300	J	ug/kg	119	19.328	1	1034	2.2244	1
LPRT01B	0.46	Fluorene	95	J	ug/kg	19	5	1	114	0.8333	0
LPRT01B	0.46	Indeno(1,2,3-cd)pyrene	1100	J	ug/kg	68	16.176	1	488	2.2541	1
LPRT01B	0.46	Naphthalene	510	J	ug/kg	30	17	1	217	2.3502	1
LPRT01B	0.46	Perylene	400	J	ug/kg	74	5.4054	1	453	0.883	0
LPRT01B	0.46	Phenanthrene	620	J	ug/kg	68	9.1176	1	455	1.3626	1
LPRT01B	0.46	Pyrene	2100	J	ug/kg	125	16.8	1	932	2.2532	1
LPRT01B	0.46	1,1'-Biphenyl	520	UJ	ug/kg	17	30.588	1	73	7.1233	1
LPRT01B	0.46	Total PCB Congeners	1100	J	ug/kg	35	31.429	1	368	2.9891	1
LPRT01B	0.46	4,4'-DDD	13	J	ug/kg	2.2	5.9091	1	19	0.6842	0
LPRT01B	0.46	4,4'-DDE	23	J	ug/kg	3.1	7.4194	1	103	0.2233	0

Table B7-1b. Sediment chemistry LOE

Location ID	No. of Chemicals w/ T20 EF ≥ 1	No. of Chemicals w/ T50 EF ≥ 1	Sediment Chemistry LOE Weight
LPRT01A	35	26	1.0
LPRT01B	36	25	1.0
LPRT01C	35	26	1.0
LPRT01D	37	29	1.0
LPRT01E	35	24	1.0
LPRT01F	36	30	1.0
LPRT01G	37	28	1.0
LPRT02A	37	27	1.0
LPRT02B	37	28	1.0
LPRT02C	36	30	1.0
LPRT02D	36	30	1.0
LPRT02E	36	32	1.0
LPRT02F	37	31	1.0
LPRT03A	37	31	1.0
LPRT03B	36	30	1.0
LPRT03C	36	31	1.0
LPRT03D	37	32	1.0
LPRT03E	37	31	1.0
LPRT03F	36	31	1.0
LPRT04A	24	3	1.0
LPRT04B	37	31	1.0
LPRT04C	37	30	1.0
LPRT04D	36	32	1.0
LPRT04E	37	30	1.0
LPRT04F	36	28	1.0
LPRT05A	37	31	1.0
LPRT05B	37	31	1.0
LPRT05C	35	31	1.0
LPRT05D	37	32	1.0
LPRT05E	36	28	1.0
LPRT05F	36	30	1.0
LPRT06A	37	30	1.0
LPRT06B	37	31	1.0
LPRT06C	36	31	1.0
LPRT06D	36	30	1.0
LPRT06E	36	30	1.0
LPRT06F	36	31	1.0
LPRT07A	33	27	1.0
LPRT07B	36	31	1.0
LPRT07C	37	33	1.0
LPRT07D	37	31	1.0
LPRT07E	37	33	1.0
LPRT08A	37	30	1.0
LPRT08B	36	31	1.0
LPRT08C	37	34	1.0
LPRT08D	35	25	1.0
LPRT08E	30	13	1.0
LPRT09A	36	27	1.0
LPRT09B	31	22	1.0
LPRT09C	33	19	1.0
LPRT09D	36	31	1.0
LPRT09E	36	30	1.0
LPRT09F	36	31	1.0
LPRT09G	27	1	1.0
LPRT09H	27	6	1.0
LPRT10A	36	31	1.0
LPRT10B	36	31	1.0
LPRT10C	35	30	1.0
LPRT10D	28	15	1.0
LPRT10E	36	32	1.0
LPRT11A	30	20	1.0
LPRT11B	36	31	1.0
LPRT11C	33	20	1.0
LPRT11D	34	29	1.0
LPRT11E	36	31	1.0
LPRT11F	35	27	1.0
LPRT11G	37	34	1.0
LPRT12A	36	31	1.0
LPRT12B	36	31	1.0
LPRT12C	36	31	1.0
LPRT12D	36	23	1.0
LPRT12E	37	32	1.0

Table B7-1a. T20/T50 Screen of LPRSA Sediment Chemistry Data

Location ID	RM	Parameter	Result	Qualifier	Units	T20	T20 EF	T20 EF ≥ 1	T50	T50 EF	T50 EF ≥ 1
LPRT01B	0.46	4,4'-DDT	1.8	J	ug/kg	1.7	1.0588	1	11	0.1636	0
LPRT01B	0.46	Dieldrin	0.7	J	ug/kg	0.83	0.8434	0	2.9	0.2414	0
LPRT01C	0.29	Antimony	0.39	J	mg/kg	0.63	0.619	0	2.4	0.1625	0
LPRT01C	0.29	Arsenic	7		mg/kg	7.4	0.9459	0	20	0.35	0
LPRT01C	0.29	Cadmium	1.4	J	mg/kg	0.38	3.6842	1	1.4	1	1
LPRT01C	0.29	Chromium	82.9		mg/kg	49	1.6918	1	141	0.5879	0
LPRT01C	0.29	Copper	99.2		mg/kg	32	3.1	1	94	1.0553	1
LPRT01C	0.29	Lead	97.7	J	mg/kg	30	3.2567	1	94	1.0394	1
LPRT01C	0.29	Mercury	1800		ug/kg	140	12.857	1	480	3.75	1
LPRT01C	0.29	Nickel	22.5		mg/kg	15	1.5	1	47	0.4787	0
LPRT01C	0.29	Silver	1.9		mg/kg	0.23	8.2609	1	1.1	1.7273	1
LPRT01C	0.29	Zinc	203		mg/kg	94	2.1596	1	245	0.8286	0
LPRT01C	0.29	1-Methylnaphthalene	84	J	ug/kg	21	4	1	94	0.8936	0
LPRT01C	0.29	1-Methylphenanthrene	130		ug/kg	18	7.2222	1	112	1.1607	1
LPRT01C	0.29	2,6-Dimethylnaphthalene	94	J	ug/kg	25	3.76	1	133	0.7068	0
LPRT01C	0.29	2-Methylnaphthalene	200		ug/kg	21	9.5238	1	128	1.5625	1
LPRT01C	0.29	Acenaphthene	110	J	ug/kg	19	5.7895	1	116	0.9483	0
LPRT01C	0.29	Acenaphthylene	460		ug/kg	14	32.857	1	140	3.2857	1
LPRT01C	0.29	Anthracene	430	J	ug/kg	34	12.647	1	290	1.4828	1
LPRT01C	0.29	Benzo(a)anthracene	2400		ug/kg	61	39.344	1	446	5.3812	1
LPRT01C	0.29	Benzo(a)pyrene	2800		ug/kg	69	40.58	1	520	5.3846	1
LPRT01C	0.29	Benzo(b/j)fluoranthene	2600		ug/kg	130	20	1	1107	2.3487	1
LPRT01C	0.29	Benzo(g,h,i)perylene	2000		ug/kg	67	29.851	1	497	4.0241	1
LPRT01C	0.29	Benzo(k)fluoranthene	1400		ug/kg	70	20	1	537	2.6071	1
LPRT01C	0.29	Chrysene	2400		ug/kg	82	29.268	1	650	3.6923	1
LPRT01C	0.29	Dibenzo(a,h)anthracene	400	J	ug/kg	19	21.053	1	113	3.5398	1
LPRT01C	0.29	Fluoranthene	3100		ug/kg	119	26.05	1	1034	2.9981	1
LPRT01C	0.29	Fluorene	140	J	ug/kg	19	7.3684	1	114	1.2281	1
LPRT01C	0.29	Indeno(1,2,3-cd)pyrene	1900		ug/kg	68	27.941	1	488	3.8934	1
LPRT01C	0.29	Naphthalene	440	U	ug/kg	30	14.667	1	217	2.0276	1
LPRT01C	0.29	Perylene	630		ug/kg	74	8.5135	1	453	1.3907	1
LPRT01C	0.29	Phenanthrene	830		ug/kg	68	12.206	1	455	1.8242	1
LPRT01C	0.29	Pyrene	2800		ug/kg	125	22.4	1	932	3.0043	1
LPRT01C	0.29	1,1'-Biphenyl	320	U	ug/kg	17	18.824	1	73	4.3836	1
LPRT01C	0.29	Total PCB Congeners	530	J	ug/kg	35	15.143	1	368	1.4402	1
LPRT01C	0.29	4,4'-DDD	17		ug/kg	2.2	7.7273	1	19	0.8947	0
LPRT01C	0.29	4,4'-DDE	23		ug/kg	3.1	7.4194	1	103	0.2233	0
LPRT01C	0.29	4,4'-DDT	14		ug/kg	1.7	8.2353	1	11	1.2727	1
LPRT01C	0.29	Dieldrin	1.9	J	ug/kg	0.83	2.2892	1	2.9	0.6552	0
LPRT01D	0.42	Antimony	0.77	J	mg/kg	0.63	1.2222	1	2.4	0.3208	0
LPRT01D	0.42	Arsenic	7.7	J	mg/kg	7.4	1.0405	1	20	0.385	0
LPRT01D	0.42	Cadmium	1.8	J	mg/kg	0.38	4.7368	1	1.4	1.2857	1
LPRT01D	0.42	Chromium	104	J	mg/kg	49	2.1224	1	141	0.7376	0
LPRT01D	0.42	Copper	123	J	mg/kg	32	3.8438	1	94	1.3085	1
LPRT01D	0.42	Lead	132	J	mg/kg	30	4.4	1	94	1.4043	1
LPRT01D	0.42	Mercury	2300		ug/kg	140	16.429	1	480	4.7917	1
LPRT01D	0.42	Nickel	26.2	J	mg/kg	15	1.7467	1	47	0.5574	0
LPRT01D	0.42	Silver	2.6	J	mg/kg	0.23	11.304	1	1.1	2.3636	1
LPRT01D	0.42	Zinc	280	J	mg/kg	94	2.9787	1	245	1.1429	1
LPRT01D	0.42	1-Methylnaphthalene	96	J	ug/kg	21	4.5714	1	94	1.0213	1
LPRT01D	0.42	1-Methylphenanthrene	160		ug/kg	18	8.8889	1	112	1.4286	1
LPRT01D	0.42	2,6-Dimethylnaphthalene	85	J	ug/kg	25	3.4	1	133	0.6391	0
LPRT01D	0.42	2-Methylnaphthalene	190		ug/kg	21	9.0476	1	128	1.4844	1
LPRT01D	0.42	Acenaphthene	210		ug/kg	19	11.053	1	116	1.8103	1
LPRT01D	0.42	Acenaphthylene	370		ug/kg	14	26.429	1	140	2.6429	1
LPRT01D	0.42	Anthracene	460	J	ug/kg	34	13.529	1	290	1.5862	1
LPRT01D	0.42	Benzo(a)anthracene	1800		ug/kg	61	29.508	1	446	4.0359	1
LPRT01D	0.42	Benzo(a)pyrene	1700		ug/kg	69	24.638	1	520	3.2692	1
LPRT01D	0.42	Benzo(b/j)fluoranthene	2500		ug/kg	130	19.231	1	1107	2.2584	1
LPRT01D	0.42	Benzo(g,h,i)perylene	1900		ug/kg	67	28.358	1	497	3.8229	1
LPRT01D	0.42	Benzo(k)fluoranthene	1100		ug/kg	70	15.714	1	537	2.0484	1
LPRT01D	0.42	Chrysene	1900		ug/kg	82	23.171	1	650	2.9231	1
LPRT01D	0.42	Dibenzo(a,h)anthracene	400	J	ug/kg	19	21.053	1	113	3.5398	1
LPRT01D	0.42	Fluoranthene	3400	J	ug/kg	119	28.571	1	1034	3.2882	1
LPRT01D	0.42	Fluorene	130	J	ug/kg	19	6.8421	1	114	1.1404	1
LPRT01D	0.42	Indeno(1,2,3-cd)pyrene	1900		ug/kg	68	27.941	1	488	3.8934	1
LPRT01D	0.42	Naphthalene	460		ug/kg	30	15.333	1	217	2.1198	1
LPRT01D	0.42	Perylene	500		ug/kg	74	6.7568	1	453	1.1038	1
LPRT01D	0.42	Phenanthrene	1100		ug/kg	68	16.176	1	455	2.4176	1
LPRT01D	0.42	Pyrene	3400	J	ug/kg	125	27.2	1	932	3.6481	1
LPRT01D	0.42	1,1'-Biphenyl	380	UJ	ug/kg	17	22.353	1	73	5.2055	1
LPRT01D	0.42	Total PCB Congeners	660	J	ug/kg	35	18.857	1	368	1.7935	1

Table B7-1b. Sediment chemistry LOE

Location ID	No. of Chemicals w/ T20 EF ≥ 1	No. of Chemicals w/ T50 EF ≥ 1	Sediment Chemistry LOE Weight
LPRT13A	33	27	1.0
LPRT13B	36	29	1.0
LPRT13C	36	31	1.0
LPRT13D	28	2	1.0
LPRT13E	35	28	1.0
LPRT13F	33	23	1.0
LPRT13G	36	29	1.0
LPRT14A	33	22	1.0
LPRT14B	33	26	1.0
LPRT14C	30	23	1.0
LPRT14D	34	24	1.0
LPRT14E	31	22	1.0
LPRT14F	31	23	1.0
LPRT15A	33	23	1.0
LPRT15B	36	29	1.0
LPRT15C	28	20	1.0
LPRT15D	30	17	1.0
LPRT15E	30	21	1.0
LPRT15F	28	22	1.0
LPRT16A	26	9	1.0
LPRT16B	30	21	1.0
LPRT16C	25	11	1.0
LPRT16D	27	21	1.0
LPRT16E	33	24	1.0
LPRT17A	34	27	1.0
LPRT17D	31	24	1.0

LOE -- line of evidence
EF -- Exceedance Factor
Note: If any T50 is exceeded at a LPRSA location, a full weight of 1.0 is assigned
If only the T20 is exceeded, then a value of 0.5 is assigned; otherwise, a weight of 0 is assigned

Table B7-1a. T20/T50 Screen of LPRSA Sediment Chemistry Data

Location ID	RM	Parameter	Result	Qualifier	Units	T20	T20 EF	T20 EF ≥ 1	T50	T50 EF	T50 EF ≥ 1
LPRT01D	0.42	4,4'-DDD	20		ug/kg	2.2	9.0909	1	19	1.0526	1
LPRT01D	0.42	4,4'-DDE	23		ug/kg	3.1	7.4194	1	103	0.2233	0
LPRT01D	0.42	4,4'-DDT	2.6		ug/kg	1.7	1.5294	1	11	0.2364	0
LPRT01D	0.42	Dieldrin	2.8		ug/kg	0.83	3.3735	1	2.9	0.9655	0
LPRT01E	0.56	Antimony	0.56	J	mg/kg	0.63	0.8889	0	2.4	0.2333	0
LPRT01E	0.56	Arsenic	13.5	J	mg/kg	7.4	1.8243	1	20	0.675	0
LPRT01E	0.56	Cadmium	0.77		mg/kg	0.38	2.0263	1	1.4	0.55	0
LPRT01E	0.56	Chromium	67.1		mg/kg	49	1.3694	1	141	0.4759	0
LPRT01E	0.56	Copper	145		mg/kg	32	4.5313	1	94	1.5426	1
LPRT01E	0.56	Lead	87.8		mg/kg	30	2.9267	1	94	0.934	0
LPRT01E	0.56	Mercury	1500		ug/kg	140	10.714	1	480	3.125	1
LPRT01E	0.56	Nickel	16.5		mg/kg	15	1.1	1	47	0.3511	0
LPRT01E	0.56	Silver	0.92		mg/kg	0.23	4	1	1.1	0.8364	0
LPRT01E	0.56	Zinc	177		mg/kg	94	1.883	1	245	0.7224	0
LPRT01E	0.56	1-Methylnaphthalene	150		ug/kg	21	7.1429	1	94	1.5957	1
LPRT01E	0.56	1-Methylphenanthrene	180		ug/kg	18	10	1	112	1.6071	1
LPRT01E	0.56	2,6-Dimethylnaphthalene	140		ug/kg	25	5.6	1	133	1.0526	1
LPRT01E	0.56	2-Methylnaphthalene	260		ug/kg	21	12.381	1	128	2.0313	1
LPRT01E	0.56	Acenaphthene	130	J	ug/kg	19	6.8421	1	116	1.1207	1
LPRT01E	0.56	Acenaphthylene	450		ug/kg	14	32.143	1	140	3.2143	1
LPRT01E	0.56	Anthracene	360	J	ug/kg	34	10.588	1	290	1.2414	1
LPRT01E	0.56	Benzo(a)anthracene	1600		ug/kg	61	26.23	1	446	3.5874	1
LPRT01E	0.56	Benzo(a)pyrene	2900		ug/kg	69	42.029	1	520	5.5769	1
LPRT01E	0.56	Benzo(b/j)fluoranthene	2100		ug/kg	130	16.154	1	1107	1.897	1
LPRT01E	0.56	Benzo(g,h,i)perylene	1600		ug/kg	67	23.881	1	497	3.2193	1
LPRT01E	0.56	Benzo(k)fluoranthene	850		ug/kg	70	12.143	1	537	1.5829	1
LPRT01E	0.56	Chrysene	1900		ug/kg	82	23.171	1	650	2.9231	1
LPRT01E	0.56	Dibenzo(a,h)anthracene	330	J	ug/kg	19	17.368	1	113	2.9204	1
LPRT01E	0.56	Fluoranthene	2000		ug/kg	119	16.807	1	1034	1.9342	1
LPRT01E	0.56	Fluorene	140	J	ug/kg	19	7.3684	1	114	1.2281	1
LPRT01E	0.56	Indeno(1,2,3-cd)pyrene	2200		ug/kg	68	32.353	1	488	4.5082	1
LPRT01E	0.56	Naphthalene	440	U	ug/kg	30	14.667	1	217	2.0276	1
LPRT01E	0.56	Perylene	520		ug/kg	74	7.027	1	453	1.1479	1
LPRT01E	0.56	Phenanthrene	850		ug/kg	68	12.5	1	455	1.8681	1
LPRT01E	0.56	Pyrene	2700		ug/kg	125	21.6	1	932	2.897	1
LPRT01E	0.56	1,1'-Biphenyl	280	U	ug/kg	17	16.471	1	73	3.8356	1
LPRT01E	0.56	Total PCB Congeners	290	J	ug/kg	35	8.2857	1	368	0.788	0
LPRT01E	0.56	4,4'-DDD	9.4		ug/kg	2.2	4.2727	1	19	0.4947	0
LPRT01E	0.56	4,4'-DDE	5.1		ug/kg	3.1	1.6452	1	103	0.0495	0
LPRT01E	0.56	4,4'-DDT	0.48	U	ug/kg	1.7	0.2824	0	11	0.0436	0
LPRT01E	0.56	Dieldrin	0.93	J	ug/kg	0.83	1.1205	1	2.9	0.3207	0
LPRT01F	0.63	Antimony	0.9	J	mg/kg	0.63	1.4286	1	2.4	0.375	0
LPRT01F	0.63	Arsenic	6.8	J	mg/kg	7.4	0.9189	0	20	0.34	0
LPRT01F	0.63	Cadmium	2	J	mg/kg	0.38	5.2632	1	1.4	1.4286	1
LPRT01F	0.63	Chromium	87.3	J	mg/kg	49	1.7816	1	141	0.6191	0
LPRT01F	0.63	Copper	123	J	mg/kg	32	3.8438	1	94	1.3085	1
LPRT01F	0.63	Lead	167	J	mg/kg	30	5.5667	1	94	1.7766	1
LPRT01F	0.63	Mercury	1500		ug/kg	140	10.714	1	480	3.125	1
LPRT01F	0.63	Nickel	24.9	J	mg/kg	15	1.66	1	47	0.5298	0
LPRT01F	0.63	Silver	2.4	J	mg/kg	0.23	10.435	1	1.1	2.1818	1
LPRT01F	0.63	Zinc	386	J	mg/kg	94	4.1064	1	245	1.5755	1
LPRT01F	0.63	1-Methylnaphthalene	98	J	ug/kg	21	4.6667	1	94	1.0426	1
LPRT01F	0.63	1-Methylphenanthrene	270	J	ug/kg	18	15	1	112	2.4107	1
LPRT01F	0.63	2,6-Dimethylnaphthalene	80	J	ug/kg	25	3.2	1	133	0.6015	0
LPRT01F	0.63	2-Methylnaphthalene	160	J	ug/kg	21	7.619	1	128	1.25	1
LPRT01F	0.63	Acenaphthene	190	J	ug/kg	19	10	1	116	1.6379	1
LPRT01F	0.63	Acenaphthylene	400	J	ug/kg	14	28.571	1	140	2.8571	1
LPRT01F	0.63	Anthracene	590	J	ug/kg	34	17.353	1	290	2.0345	1
LPRT01F	0.63	Benzo(a)anthracene	2700	J	ug/kg	61	44.262	1	446	6.0538	1
LPRT01F	0.63	Benzo(a)pyrene	2000	J	ug/kg	69	28.986	1	520	3.8462	1
LPRT01F	0.63	Benzo(b/j)fluoranthene	2800	J	ug/kg	130	21.538	1	1107	2.5294	1
LPRT01F	0.63	Benzo(g,h,i)perylene	2100	J	ug/kg	67	31.343	1	497	4.2254	1
LPRT01F	0.63	Benzo(k)fluoranthene	1200	J	ug/kg	70	17.143	1	537	2.2346	1
LPRT01F	0.63	Chrysene	2500	J	ug/kg	82	30.488	1	650	3.8462	1
LPRT01F	0.63	Dibenzo(a,h)anthracene	430	J	ug/kg	19	22.632	1	113	3.8053	1
LPRT01F	0.63	Fluoranthene	4700	J	ug/kg	119	39.496	1	1034	4.5455	1
LPRT01F	0.63	Fluorene	170	J	ug/kg	19	8.9474	1	114	1.4912	1
LPRT01F	0.63	Indeno(1,2,3-cd)pyrene	2100	J	ug/kg	68	30.882	1	488	4.3033	1
LPRT01F	0.63	Naphthalene	340	J	ug/kg	30	11.333	1	217	1.5668	1
LPRT01F	0.63	Perylene	490	J	ug/kg	74	6.6216	1	453	1.0817	1
LPRT01F	0.63	Phenanthrene	1600	J	ug/kg	68	23.529	1	455	3.5165	1
LPRT01F	0.63	Pyrene	4300	J	ug/kg	125	34.4	1	932	4.6137	1

Table B7-1b. Sediment chemistry LOE

Location ID	No. of Chemicals w/ T20 EF ≥ 1	No. of Chemicals w/ T50 EF ≥ 1	Sediment Chemistry LOE Weight

Table B7-1a. T20/T50 Screen of LPRSA Sediment Chemistry Data

Location ID	RM	Parameter	Result	Qualifier	Units	T20	T20 EF	T20 EF ≥ 1	T50	T50 EF	T50 EF ≥ 1
LPRT01F	0.63	1,1'-Biphenyl	420	UJ	ug/kg	17	24.706	1	73	5.7534	1
LPRT01F	0.63	Total PCB Congeners	620	J	ug/kg	35	17.714	1	368	1.6848	1
LPRT01F	0.63	4,4'-DDD	29	J	ug/kg	2.2	13.182	1	19	1.5263	1
LPRT01F	0.63	4,4'-DDE	29	J	ug/kg	3.1	9.3548	1	103	0.2816	0
LPRT01F	0.63	4,4'-DDT	11	J	ug/kg	1.7	6.4706	1	11	1	0
LPRT01F	0.63	Dieldrin	4.8	J	ug/kg	0.83	5.7831	1	2.9	1.6552	1
LPRT01G	0.86	Antimony	0.92	J	mg/kg	0.63	1.4603	1	2.4	0.3833	0
LPRT01G	0.86	Arsenic	7.5	J	mg/kg	7.4	1.0135	1	20	0.375	0
LPRT01G	0.86	Cadmium	1.7	J	mg/kg	0.38	4.4737	1	1.4	1.2143	1
LPRT01G	0.86	Chromium	95.2	J	mg/kg	49	1.9429	1	141	0.6752	0
LPRT01G	0.86	Copper	119	J	mg/kg	32	3.7188	1	94	1.266	1
LPRT01G	0.86	Lead	138	J	mg/kg	30	4.6	1	94	1.4681	1
LPRT01G	0.86	Mercury	1900	J	ug/kg	140	13.571	1	480	3.9583	1
LPRT01G	0.86	Nickel	25.1	J	mg/kg	15	1.6733	1	47	0.534	0
LPRT01G	0.86	Silver	2.7	J	mg/kg	0.23	11.739	1	1.1	2.4545	1
LPRT01G	0.86	Zinc	306	J	mg/kg	94	3.2553	1	245	1.249	1
LPRT01G	0.86	1-Methylnaphthalene	73	J	ug/kg	21	3.4762	1	94	0.7766	0
LPRT01G	0.86	1-Methylphenanthrene	130	J	ug/kg	18	7.2222	1	112	1.1607	1
LPRT01G	0.86	2,6-Dimethylnaphthalene	58	J	ug/kg	25	2.32	1	133	0.4361	0
LPRT01G	0.86	2-Methylnaphthalene	140	J	ug/kg	21	6.6667	1	128	1.0938	1
LPRT01G	0.86	Acenaphthene	140	J	ug/kg	19	7.3684	1	116	1.2069	1
LPRT01G	0.86	Acenaphthylene	270	J	ug/kg	14	19.286	1	140	1.9286	1
LPRT01G	0.86	Anthracene	390	J	ug/kg	34	11.471	1	290	1.3448	1
LPRT01G	0.86	Benzo(a)anthracene	1600	J	ug/kg	61	26.23	1	446	3.5874	1
LPRT01G	0.86	Benzo(a)pyrene	1400	J	ug/kg	69	20.29	1	520	2.6923	1
LPRT01G	0.86	Benzo(b/j)fluoranthene	2100	J	ug/kg	130	16.154	1	1107	1.897	1
LPRT01G	0.86	Benzo(g,h,i)perylene	1500	J	ug/kg	67	22.388	1	497	3.0181	1
LPRT01G	0.86	Benzo(k)fluoranthene	760	J	ug/kg	70	10.857	1	537	1.4153	1
LPRT01G	0.86	Chrysene	1600	J	ug/kg	82	19.512	1	650	2.4615	1
LPRT01G	0.86	Dibenzo(a,h)anthracene	320	J	ug/kg	19	16.842	1	113	2.8319	1
LPRT01G	0.86	Fluoranthene	3100	J	ug/kg	119	26.05	1	1034	2.9981	1
LPRT01G	0.86	Fluorene	94	J	ug/kg	19	4.9474	1	114	0.8246	0
LPRT01G	0.86	Indeno(1,2,3-cd)pyrene	1400	J	ug/kg	68	20.588	1	488	2.8689	1
LPRT01G	0.86	Naphthalene	380	J	ug/kg	30	12.667	1	217	1.7512	1
LPRT01G	0.86	Perylene	380	J	ug/kg	74	5.1351	1	453	0.8389	0
LPRT01G	0.86	Phenanthrene	830	J	ug/kg	68	12.206	1	455	1.8242	1
LPRT01G	0.86	Pyrene	2600	J	ug/kg	125	20.8	1	932	2.7897	1
LPRT01G	0.86	1,1'-Biphenyl	480	UJ	ug/kg	17	28.235	1	73	6.5753	1
LPRT01G	0.86	Total PCB Congeners	520	J	ug/kg	35	14.857	1	368	1.413	1
LPRT01G	0.86	4,4'-DDD	21	J	ug/kg	2.2	9.5455	1	19	1.1053	1
LPRT01G	0.86	4,4'-DDE	22	J	ug/kg	3.1	7.0968	1	103	0.2136	0
LPRT01G	0.86	4,4'-DDT	95	J	ug/kg	1.7	55.882	1	11	8.6364	1
LPRT01G	0.86	Dieldrin	3.4	J	ug/kg	0.83	4.0964	1	2.9	1.1724	1
LPRT02A	1.01	Antimony	0.91	J	mg/kg	0.63	1.4444	1	2.4	0.3792	0
LPRT02A	1.01	Arsenic	8.2	J	mg/kg	7.4	1.1081	1	20	0.41	0
LPRT02A	1.01	Cadmium	2.7	J	mg/kg	0.38	7.1053	1	1.4	1.9286	1
LPRT02A	1.01	Chromium	87.7	J	mg/kg	49	1.7898	1	141	0.622	0
LPRT02A	1.01	Copper	143	J	mg/kg	32	4.4688	1	94	1.5213	1
LPRT02A	1.01	Lead	181	J	mg/kg	30	6.0333	1	94	1.9255	1
LPRT02A	1.01	Mercury	1600	J	ug/kg	140	11.429	1	480	3.3333	1
LPRT02A	1.01	Nickel	29.2	J	mg/kg	15	1.9467	1	47	0.6213	0
LPRT02A	1.01	Silver	2.5	J	mg/kg	0.23	10.87	1	1.1	2.2727	1
LPRT02A	1.01	Zinc	442	J	mg/kg	94	4.7021	1	245	1.8041	1
LPRT02A	1.01	1-Methylnaphthalene	84	J	ug/kg	21	4	1	94	0.8936	0
LPRT02A	1.01	1-Methylphenanthrene	140	J	ug/kg	18	7.7778	1	112	1.25	1
LPRT02A	1.01	2,6-Dimethylnaphthalene	74	J	ug/kg	25	2.96	1	133	0.5564	0
LPRT02A	1.01	2-Methylnaphthalene	150	J	ug/kg	21	7.1429	1	128	1.1719	1
LPRT02A	1.01	Acenaphthene	260	J	ug/kg	19	13.684	1	116	2.2414	1
LPRT02A	1.01	Acenaphthylene	270	J	ug/kg	14	19.286	1	140	1.9286	1
LPRT02A	1.01	Anthracene	410	J	ug/kg	34	12.059	1	290	1.4138	1
LPRT02A	1.01	Benzo(a)anthracene	2000	J	ug/kg	61	32.787	1	446	4.4843	1
LPRT02A	1.01	Benzo(a)pyrene	1600	J	ug/kg	69	23.188	1	520	3.0769	1
LPRT02A	1.01	Benzo(b/j)fluoranthene	2500	J	ug/kg	130	19.231	1	1107	2.2584	1
LPRT02A	1.01	Benzo(g,h,i)perylene	1800	J	ug/kg	67	26.866	1	497	3.6217	1
LPRT02A	1.01	Benzo(k)fluoranthene	1000	J	ug/kg	70	14.286	1	537	1.8622	1
LPRT02A	1.01	Chrysene	2000	J	ug/kg	82	24.39	1	650	3.0769	1
LPRT02A	1.01	Dibenzo(a,h)anthracene	370	J	ug/kg	19	19.474	1	113	3.2743	1
LPRT02A	1.01	Fluoranthene	4400	J	ug/kg	119	36.975	1	1034	4.2553	1
LPRT02A	1.01	Fluorene	150	J	ug/kg	19	7.8947	1	114	1.3158	1
LPRT02A	1.01	Indeno(1,2,3-cd)pyrene	1700	J	ug/kg	68	25	1	488	3.4836	1
LPRT02A	1.01	Naphthalene	310	J	ug/kg	30	10.333	1	217	1.4286	1
LPRT02A	1.01	Perylene	440	J	ug/kg	74	5.9459	1	453	0.9713	0

Table B7-1b. Sediment chemistry LOE

Location ID	No. of Chemicals w/ T20 EF ≥ 1	No. of Chemicals w/ T50 EF ≥ 1	Sediment Chemistry LOE Weight

Table B7-1a. T20/T50 Screen of LPRSA Sediment Chemistry Data

Location ID	RM	Parameter	Result	Qualifier	Units	T20	T20 EF	T20 EF ≥ 1	T50	T50 EF	T50 EF ≥ 1
LPRT02A	1.01	Phenanthrene	1200	J	ug/kg	68	17.647	1	455	2.6374	1
LPRT02A	1.01	Pyrene	3600	J	ug/kg	125	28.8	1	932	3.8627	1
LPRT02A	1.01	1,1'-Biphenyl	500	UJ	ug/kg	17	29.412	1	73	6.8493	1
LPRT02A	1.01	Total PCB Congeners	720	J	ug/kg	35	20.571	1	368	1.9565	1
LPRT02A	1.01	4,4'-DDD	19	J	ug/kg	2.2	8.6364	1	19	1	0
LPRT02A	1.01	4,4'-DDE	18	J	ug/kg	3.1	5.8065	1	103	0.1748	0
LPRT02A	1.01	4,4'-DDT	8.6	J	ug/kg	1.7	5.0588	1	11	0.7818	0
LPRT02A	1.01	Dieldrin	3.4	J	ug/kg	0.83	4.0964	1	2.9	1.1724	1
LPRT02B	1.24	Antimony	1	J	mg/kg	0.63	1.5873	1	2.4	0.4167	0
LPRT02B	1.24	Arsenic	7.9	J	mg/kg	7.4	1.0676	1	20	0.395	0
LPRT02B	1.24	Cadmium	2.4	J	mg/kg	0.38	6.3158	1	1.4	1.7143	1
LPRT02B	1.24	Chromium	104	J	mg/kg	49	2.1224	1	141	0.7376	0
LPRT02B	1.24	Copper	134	J	mg/kg	32	4.1875	1	94	1.4255	1
LPRT02B	1.24	Lead	244	J	mg/kg	30	8.1333	1	94	2.5957	1
LPRT02B	1.24	Mercury	1600	J	ug/kg	140	11.429	1	480	3.3333	1
LPRT02B	1.24	Nickel	26.2	J	mg/kg	15	1.7467	1	47	0.5574	0
LPRT02B	1.24	Silver	2.6	J	mg/kg	0.23	11.304	1	1.1	2.3636	1
LPRT02B	1.24	Zinc	401	J	mg/kg	94	4.266	1	245	1.6367	1
LPRT02B	1.24	1-Methylnaphthalene	82	J	ug/kg	21	3.9048	1	94	0.8723	0
LPRT02B	1.24	1-Methylphenanthrene	130	J	ug/kg	18	7.2222	1	112	1.1607	1
LPRT02B	1.24	2,6-Dimethylnaphthalene	79	J	ug/kg	25	3.16	1	133	0.594	0
LPRT02B	1.24	2-Methylnaphthalene	160	J	ug/kg	21	7.619	1	128	1.25	1
LPRT02B	1.24	Acenaphthene	180	J	ug/kg	19	9.4737	1	116	1.5517	1
LPRT02B	1.24	Acenaphthylene	390	J	ug/kg	14	27.857	1	140	2.7857	1
LPRT02B	1.24	Anthracene	550	J	ug/kg	34	16.176	1	290	1.8966	1
LPRT02B	1.24	Benzo(a)anthracene	2400	J	ug/kg	61	39.344	1	446	5.3812	1
LPRT02B	1.24	Benzo(a)pyrene	1900	J	ug/kg	69	27.536	1	520	3.6538	1
LPRT02B	1.24	Benzo(b/j)fluoranthene	2700	J	ug/kg	130	20.769	1	1107	2.439	1
LPRT02B	1.24	Benzo(g,h,i)perylene	2000	J	ug/kg	67	29.851	1	497	4.0241	1
LPRT02B	1.24	Benzo(k)fluoranthene	950	J	ug/kg	70	13.571	1	537	1.7691	1
LPRT02B	1.24	Chrysene	2200	J	ug/kg	82	26.829	1	650	3.3846	1
LPRT02B	1.24	Dibenzo(a,h)anthracene	420	J	ug/kg	19	22.105	1	113	3.7168	1
LPRT02B	1.24	Fluoranthene	3600	J	ug/kg	119	30.252	1	1034	3.4816	1
LPRT02B	1.24	Fluorene	110	J	ug/kg	19	5.7895	1	114	0.9649	0
LPRT02B	1.24	Indeno(1,2,3-cd)pyrene	1900	J	ug/kg	68	27.941	1	488	3.8934	1
LPRT02B	1.24	Naphthalene	370	J	ug/kg	30	12.333	1	217	1.7051	1
LPRT02B	1.24	Perylene	460	J	ug/kg	74	6.2162	1	453	1.0155	1
LPRT02B	1.24	Phenanthrene	1300	J	ug/kg	68	19.118	1	455	2.8571	1
LPRT02B	1.24	Pyrene	3800	J	ug/kg	125	30.4	1	932	4.0773	1
LPRT02B	1.24	1,1'-Biphenyl	450	UJ	ug/kg	17	26.471	1	73	6.1644	1
LPRT02B	1.24	Total PCB Congeners	860	J	ug/kg	35	24.571	1	368	2.337	1
LPRT02B	1.24	4,4'-DDD	25	J	ug/kg	2.2	11.364	1	19	1.3158	1
LPRT02B	1.24	4,4'-DDE	24	J	ug/kg	3.1	7.7419	1	103	0.233	0
LPRT02B	1.24	4,4'-DDT	24	J	ug/kg	1.7	14.118	1	11	2.1818	1
LPRT02B	1.24	Dieldrin	2.5	J	ug/kg	0.83	3.012	1	2.9	0.8621	0
LPRT02C	1.25	Antimony	1	J	mg/kg	0.63	1.5873	1	2.4	0.4167	0
LPRT02C	1.25	Arsenic	7.3	J	mg/kg	7.4	0.9865	0	20	0.365	0
LPRT02C	1.25	Cadmium	2.4	J	mg/kg	0.38	6.3158	1	1.4	1.7143	1
LPRT02C	1.25	Chromium	113	J	mg/kg	49	2.3061	1	141	0.8014	0
LPRT02C	1.25	Copper	165	J	mg/kg	32	5.1563	1	94	1.7553	1
LPRT02C	1.25	Lead	176	J	mg/kg	30	5.8667	1	94	1.8723	1
LPRT02C	1.25	Mercury	1800	J	ug/kg	140	12.857	1	480	3.75	1
LPRT02C	1.25	Nickel	24.7	J	mg/kg	15	1.6467	1	47	0.5255	0
LPRT02C	1.25	Silver	2.2	J	mg/kg	0.23	9.5652	1	1.1	2	1
LPRT02C	1.25	Zinc	449	J	mg/kg	94	4.7766	1	245	1.8327	1
LPRT02C	1.25	1-Methylnaphthalene	130	J	ug/kg	21	6.1905	1	94	1.383	1
LPRT02C	1.25	1-Methylphenanthrene	260	J	ug/kg	18	14.444	1	112	2.3214	1
LPRT02C	1.25	2,6-Dimethylnaphthalene	130	J	ug/kg	25	5.2	1	133	0.9774	0
LPRT02C	1.25	2-Methylnaphthalene	290	J	ug/kg	21	13.81	1	128	2.2656	1
LPRT02C	1.25	Acenaphthene	210	J	ug/kg	19	11.053	1	116	1.8103	1
LPRT02C	1.25	Acenaphthylene	500	J	ug/kg	14	35.714	1	140	3.5714	1
LPRT02C	1.25	Anthracene	680	J	ug/kg	34	20	1	290	2.3448	1
LPRT02C	1.25	Benzo(a)anthracene	3100	J	ug/kg	61	50.82	1	446	6.9507	1
LPRT02C	1.25	Benzo(a)pyrene	6000	J	ug/kg	69	86.957	1	520	11.538	1
LPRT02C	1.25	Benzo(b/j)fluoranthene	4500	J	ug/kg	130	34.615	1	1107	4.065	1
LPRT02C	1.25	Benzo(g,h,i)perylene	2600	J	ug/kg	67	38.806	1	497	5.2314	1
LPRT02C	1.25	Benzo(k)fluoranthene	2000	J	ug/kg	70	28.571	1	537	3.7244	1
LPRT02C	1.25	Chrysene	4100	J	ug/kg	82	50	1	650	6.3077	1
LPRT02C	1.25	Dibenzo(a,h)anthracene	510	J	ug/kg	19	26.842	1	113	4.5133	1
LPRT02C	1.25	Fluoranthene	6500	J	ug/kg	119	54.622	1	1034	6.2863	1
LPRT02C	1.25	Fluorene	200	J	ug/kg	19	10.526	1	114	1.7544	1
LPRT02C	1.25	Indeno(1,2,3-cd)pyrene	2800	J	ug/kg	68	41.176	1	488	5.7377	1

Table B7-1b. Sediment chemistry LOE

Location ID	No. of Chemicals w/ T20 EF ≥ 1	No. of Chemicals w/ T50 EF ≥ 1	Sediment Chemistry LOE Weight

Table B7-1a. T20/T50 Screen of LPRSA Sediment Chemistry Data

Location ID	RM	Parameter	Result	Qualifier	Units	T20	T20 EF	T20 EF ≥ 1	T50	T50 EF	T50 EF ≥ 1
LPRT02C	1.25	Naphthalene	510	J	ug/kg	30	17	1	217	2.3502	1
LPRT02C	1.25	Perylene	1100	J	ug/kg	74	14.865	1	453	2.4283	1
LPRT02C	1.25	Phenanthrene	2000	J	ug/kg	68	29.412	1	455	4.3956	1
LPRT02C	1.25	Pyrene	4800	J	ug/kg	125	38.4	1	932	5.1502	1
LPRT02C	1.25	1,1'-Biphenyl	490	UJ	ug/kg	17	28.824	1	73	6.7123	1
LPRT02C	1.25	Total PCB Congeners	880	J	ug/kg	35	25.143	1	368	2.3913	1
LPRT02C	1.25	4,4'-DDD	42	J	ug/kg	2.2	19.091	1	19	2.2105	1
LPRT02C	1.25	4,4'-DDE	26	J	ug/kg	3.1	8.3871	1	103	0.2524	0
LPRT02C	1.25	4,4'-DDT	10	J	ug/kg	1.7	5.8824	1	11	0.9091	0
LPRT02C	1.25	Dieldrin	4.7	J	ug/kg	0.83	5.6627	1	2.9	1.6207	1
LPRT02D	1.21	Antimony	0.58	J	mg/kg	0.63	0.9206	0	2.4	0.2417	0
LPRT02D	1.21	Arsenic	9.6	J	mg/kg	7.4	1.2973	1	20	0.48	0
LPRT02D	1.21	Cadmium	2	J	mg/kg	0.38	5.2632	1	1.4	1.4286	1
LPRT02D	1.21	Chromium	105	J	mg/kg	49	2.1429	1	141	0.7447	0
LPRT02D	1.21	Copper	140	J	mg/kg	32	4.375	1	94	1.4894	1
LPRT02D	1.21	Lead	146	J	mg/kg	30	4.8667	1	94	1.5532	1
LPRT02D	1.21	Mercury	1800	J	ug/kg	140	12.857	1	480	3.75	1
LPRT02D	1.21	Nickel	28.8	J	mg/kg	15	1.92	1	47	0.6128	0
LPRT02D	1.21	Silver	2	J	mg/kg	0.23	8.6957	1	1.1	1.8182	1
LPRT02D	1.21	Zinc	364	J	mg/kg	94	3.8723	1	245	1.4857	1
LPRT02D	1.21	1-Methylnaphthalene	170	J	ug/kg	21	8.0952	1	94	1.8085	1
LPRT02D	1.21	1-Methylphenanthrene	240	J	ug/kg	18	13.333	1	112	2.1429	1
LPRT02D	1.21	2,6-Dimethylnaphthalene	180	J	ug/kg	25	7.2	1	133	1.3534	1
LPRT02D	1.21	2-Methylnaphthalene	320	J	ug/kg	21	15.238	1	128	2.5	1
LPRT02D	1.21	Acenaphthene	410	J	ug/kg	19	21.579	1	116	3.5345	1
LPRT02D	1.21	Acenaphthylene	630	J	ug/kg	14	45	1	140	4.5	1
LPRT02D	1.21	Anthracene	1200	J	ug/kg	34	35.294	1	290	4.1379	1
LPRT02D	1.21	Benzo(a)anthracene	2400	J	ug/kg	61	39.344	1	446	5.3812	1
LPRT02D	1.21	Benzo(a)pyrene	2400	J	ug/kg	69	34.783	1	520	4.6154	1
LPRT02D	1.21	Benzo(b/j)fluoranthene	2800	J	ug/kg	130	21.538	1	1107	2.5294	1
LPRT02D	1.21	Benzo(g,h,i)perylene	2000	J	ug/kg	67	29.851	1	497	4.0241	1
LPRT02D	1.21	Benzo(k)fluoranthene	1300	J	ug/kg	70	18.571	1	537	2.4209	1
LPRT02D	1.21	Chrysene	3800	J	ug/kg	82	46.341	1	650	5.8462	1
LPRT02D	1.21	Dibenzo(a,h)anthracene	400	J	ug/kg	19	21.053	1	113	3.5398	1
LPRT02D	1.21	Fluoranthene	4700	J	ug/kg	119	39.496	1	1034	4.5455	1
LPRT02D	1.21	Fluorene	360	J	ug/kg	19	18.947	1	114	3.1579	1
LPRT02D	1.21	Indeno(1,2,3-cd)pyrene	1700	J	ug/kg	68	25	1	488	3.4836	1
LPRT02D	1.21	Naphthalene	770	J	ug/kg	30	25.667	1	217	3.5484	1
LPRT02D	1.21	Perylene	570	J	ug/kg	74	7.7027	1	453	1.2583	1
LPRT02D	1.21	Phenanthrene	1400	J	ug/kg	68	20.588	1	455	3.0769	1
LPRT02D	1.21	Pyrene	6200	J	ug/kg	125	49.6	1	932	6.6524	1
LPRT02D	1.21	1,1'-Biphenyl	500	UJ	ug/kg	17	29.412	1	73	6.8493	1
LPRT02D	1.21	Total PCB Congeners	810	J	ug/kg	35	23.143	1	368	2.2011	1
LPRT02D	1.21	4,4'-DDD	19	J	ug/kg	2.2	8.6364	1	19	1	0
LPRT02D	1.21	4,4'-DDE	17	J	ug/kg	3.1	5.4839	1	103	0.165	0
LPRT02D	1.21	4,4'-DDT	3.8	J	ug/kg	1.7	2.2353	1	11	0.3455	0
LPRT02D	1.21	Dieldrin	4.7	J	ug/kg	0.83	5.6627	1	2.9	1.6207	1
LPRT02E	1.47	Antimony	1.3	J	mg/kg	0.63	2.0635	1	2.4	0.5417	0
LPRT02E	1.47	Arsenic	7.2	J	mg/kg	7.4	0.973	0	20	0.36	0
LPRT02E	1.47	Cadmium	2.8	J	mg/kg	0.38	7.3684	1	1.4	2	1
LPRT02E	1.47	Chromium	97.5	J	mg/kg	49	1.9898	1	141	0.6915	0
LPRT02E	1.47	Copper	163	J	mg/kg	32	5.0938	1	94	1.734	1
LPRT02E	1.47	Lead	193	J	mg/kg	30	6.4333	1	94	2.0532	1
LPRT02E	1.47	Mercury	1600	J	ug/kg	140	11.429	1	480	3.3333	1
LPRT02E	1.47	Nickel	28	J	mg/kg	15	1.8667	1	47	0.5957	0
LPRT02E	1.47	Silver	4.5	J	mg/kg	0.23	19.565	1	1.1	4.0909	1
LPRT02E	1.47	Zinc	447	J	mg/kg	94	4.7553	1	245	1.8245	1
LPRT02E	1.47	1-Methylnaphthalene	150	J	ug/kg	21	7.1429	1	94	1.5957	1
LPRT02E	1.47	1-Methylphenanthrene	350	J	ug/kg	18	19.444	1	112	3.125	1
LPRT02E	1.47	2,6-Dimethylnaphthalene	210	J	ug/kg	25	8.4	1	133	1.5789	1
LPRT02E	1.47	2-Methylnaphthalene	230	J	ug/kg	21	10.952	1	128	1.7969	1
LPRT02E	1.47	Acenaphthene	450	J	ug/kg	19	23.684	1	116	3.8793	1
LPRT02E	1.47	Acenaphthylene	450	J	ug/kg	14	32.143	1	140	3.2143	1
LPRT02E	1.47	Anthracene	960	J	ug/kg	34	28.235	1	290	3.3103	1
LPRT02E	1.47	Benzo(a)anthracene	3600	J	ug/kg	61	59.016	1	446	8.0717	1
LPRT02E	1.47	Benzo(a)pyrene	2500	J	ug/kg	69	36.232	1	520	4.8077	1
LPRT02E	1.47	Benzo(b/j)fluoranthene	3600	J	ug/kg	130	27.692	1	1107	3.252	1
LPRT02E	1.47	Benzo(g,h,i)perylene	2600	J	ug/kg	67	38.806	1	497	5.2314	1
LPRT02E	1.47	Benzo(k)fluoranthene	1600	J	ug/kg	70	22.857	1	537	2.9795	1
LPRT02E	1.47	Chrysene	4000	J	ug/kg	82	48.78	1	650	6.1538	1
LPRT02E	1.47	Dibenzo(a,h)anthracene	530	J	ug/kg	19	27.895	1	113	4.6903	1
LPRT02E	1.47	Fluoranthene	6200	J	ug/kg	119	52.101	1	1034	5.9961	1

Table B7-1b. Sediment chemistry LOE

Location ID	No. of Chemicals w/ T20 EF ≥ 1	No. of Chemicals w/ T50 EF ≥ 1	Sediment Chemistry LOE Weight

Table B7-1a. T20/T50 Screen of LPRSA Sediment Chemistry Data

Location ID	RM	Parameter	Result	Qualifier	Units	T20	T20 EF	T20 EF ≥ 1	T50	T50 EF	T50 EF ≥ 1
LPRT02E	1.47	Fluorene	240	J	ug/kg	19	12.632	1	114	2.1053	1
LPRT02E	1.47	Indeno(1,2,3-cd)pyrene	2600	J	ug/kg	68	38.235	1	488	5.3279	1
LPRT02E	1.47	Naphthalene	380	J	ug/kg	30	12.667	1	217	1.7512	1
LPRT02E	1.47	Perylene	620	J	ug/kg	74	8.3784	1	453	1.3687	1
LPRT02E	1.47	Phenanthrene	2100	J	ug/kg	68	30.882	1	455	4.6154	1
LPRT02E	1.47	Pyrene	5700	J	ug/kg	125	45.6	1	932	6.1159	1
LPRT02E	1.47	1,1'-Biphenyl	520	UJ	ug/kg	17	30.588	1	73	7.1233	1
LPRT02E	1.47	Total PCB Congeners	780	J	ug/kg	35	22.286	1	368	2.1196	1
LPRT02E	1.47	4,4'-DDD	53	J	ug/kg	2.2	24.091	1	19	2.7895	1
LPRT02E	1.47	4,4'-DDE	39	J	ug/kg	3.1	12.581	1	103	0.3786	0
LPRT02E	1.47	4,4'-DDT	57	J	ug/kg	1.7	33.529	1	11	5.1818	1
LPRT02E	1.47	Dieldrin	5.2	J	ug/kg	0.83	6.2651	1	2.9	1.7931	1
LPRT02F	1.6	Antimony	5.5	J	mg/kg	0.63	8.7302	1	2.4	2.2917	1
LPRT02F	1.6	Arsenic	9.3	J	mg/kg	7.4	1.2568	1	20	0.465	0
LPRT02F	1.6	Cadmium	3.5	J	mg/kg	0.38	9.2105	1	1.4	2.5	1
LPRT02F	1.6	Chromium	115	J	mg/kg	49	2.3469	1	141	0.8156	0
LPRT02F	1.6	Copper	181	J	mg/kg	32	5.6563	1	94	1.9255	1
LPRT02F	1.6	Lead	214	J	mg/kg	30	7.1333	1	94	2.2766	1
LPRT02F	1.6	Mercury	2000	J	ug/kg	140	14.286	1	480	4.1667	1
LPRT02F	1.6	Nickel	32.8	J	mg/kg	15	2.1867	1	47	0.6979	0
LPRT02F	1.6	Silver	3.1	J	mg/kg	0.23	13.478	1	1.1	2.8182	1
LPRT02F	1.6	Zinc	546	J	mg/kg	94	5.8085	1	245	2.2286	1
LPRT02F	1.6	1-Methylnaphthalene	110	J	ug/kg	21	5.2381	1	94	1.1702	1
LPRT02F	1.6	1-Methylphenanthrene	280	J	ug/kg	18	15.556	1	112	2.5	1
LPRT02F	1.6	2,6-Dimethylnaphthalene	130	J	ug/kg	25	5.2	1	133	0.9774	0
LPRT02F	1.6	2-Methylnaphthalene	210	J	ug/kg	21	10	1	128	1.6406	1
LPRT02F	1.6	Acenaphthene	310	J	ug/kg	19	16.316	1	116	2.6724	1
LPRT02F	1.6	Acenaphthylene	420	J	ug/kg	14	30	1	140	3	1
LPRT02F	1.6	Anthracene	680	J	ug/kg	34	20	1	290	2.3448	1
LPRT02F	1.6	Benzo(a)anthracene	2800	J	ug/kg	61	45.902	1	446	6.278	1
LPRT02F	1.6	Benzo(a)pyrene	2300	J	ug/kg	69	33.333	1	520	4.4231	1
LPRT02F	1.6	Benzo(b/j)fluoranthene	3200	J	ug/kg	130	24.615	1	1107	2.8907	1
LPRT02F	1.6	Benzo(g,h,i)perylene	2500	J	ug/kg	67	37.313	1	497	5.0302	1
LPRT02F	1.6	Benzo(k)fluoranthene	1600	J	ug/kg	70	22.857	1	537	2.9795	1
LPRT02F	1.6	Chrysene	3000	J	ug/kg	82	36.585	1	650	4.6154	1
LPRT02F	1.6	Dibenzo(a,h)anthracene	480	J	ug/kg	19	25.263	1	113	4.2478	1
LPRT02F	1.6	Fluoranthene	5400	J	ug/kg	119	45.378	1	1034	5.2224	1
LPRT02F	1.6	Fluorene	170	J	ug/kg	19	8.9474	1	114	1.4912	1
LPRT02F	1.6	Indeno(1,2,3-cd)pyrene	2200	J	ug/kg	68	32.353	1	488	4.5082	1
LPRT02F	1.6	Naphthalene	360	J	ug/kg	30	12	1	217	1.659	1
LPRT02F	1.6	Perylene	540	J	ug/kg	74	7.2973	1	453	1.1921	1
LPRT02F	1.6	Phenanthrene	1700	J	ug/kg	68	25	1	455	3.7363	1
LPRT02F	1.6	Pyrene	4700	J	ug/kg	125	37.6	1	932	5.0429	1
LPRT02F	1.6	1,1'-Biphenyl	650	UJ	ug/kg	17	38.235	1	73	8.9041	1
LPRT02F	1.6	Total PCB Congeners	1200	J	ug/kg	35	34.286	1	368	3.2609	1
LPRT02F	1.6	4,4'-DDD	36	J	ug/kg	2.2	16.364	1	19	1.8947	1
LPRT02F	1.6	4,4'-DDE	25	J	ug/kg	3.1	8.0645	1	103	0.2427	0
LPRT02F	1.6	4,4'-DDT	4.1	J	ug/kg	1.7	2.4118	1	11	0.3727	0
LPRT02F	1.6	Dieldrin	3.8	J	ug/kg	0.83	4.5783	1	2.9	1.3103	1
LPRT03A	2.03	Antimony	0.99	J	mg/kg	0.63	1.5714	1	2.4	0.4125	0
LPRT03A	2.03	Arsenic	10.4	J	mg/kg	7.4	1.4054	1	20	0.52	0
LPRT03A	2.03	Cadmium	2.9	J	mg/kg	0.38	7.6316	1	1.4	2.0714	1
LPRT03A	2.03	Chromium	101	J	mg/kg	49	2.0612	1	141	0.7163	0
LPRT03A	2.03	Copper	143	J	mg/kg	32	4.4688	1	94	1.5213	1
LPRT03A	2.03	Lead	205	J	mg/kg	30	6.8333	1	94	2.1809	1
LPRT03A	2.03	Mercury	1900	J	ug/kg	140	13.571	1	480	3.9583	1
LPRT03A	2.03	Nickel	23.5	J	mg/kg	15	1.5667	1	47	0.5	0
LPRT03A	2.03	Silver	2.5	J	mg/kg	0.23	10.87	1	1.1	2.2727	1
LPRT03A	2.03	Zinc	489	J	mg/kg	94	5.2021	1	245	1.9959	1
LPRT03A	2.03	1-Methylnaphthalene	120	J	ug/kg	21	5.7143	1	94	1.2766	1
LPRT03A	2.03	1-Methylphenanthrene	370	J	ug/kg	18	20.556	1	112	3.3036	1
LPRT03A	2.03	2,6-Dimethylnaphthalene	100	J	ug/kg	25	4	1	133	0.7519	0
LPRT03A	2.03	2-Methylnaphthalene	190	J	ug/kg	21	9.0476	1	128	1.4844	1
LPRT03A	2.03	Acenaphthene	290	J	ug/kg	19	15.263	1	116	2.5	1
LPRT03A	2.03	Acenaphthylene	610	J	ug/kg	14	43.571	1	140	4.3571	1
LPRT03A	2.03	Anthracene	780	J	ug/kg	34	22.941	1	290	2.6897	1
LPRT03A	2.03	Benzo(a)anthracene	3200	J	ug/kg	61	52.459	1	446	7.1749	1
LPRT03A	2.03	Benzo(a)pyrene	2500	J	ug/kg	69	36.232	1	520	4.8077	1
LPRT03A	2.03	Benzo(b/j)fluoranthene	3500	J	ug/kg	130	26.923	1	1107	3.1617	1
LPRT03A	2.03	Benzo(g,h,i)perylene	1800	J	ug/kg	67	26.866	1	497	3.6217	1
LPRT03A	2.03	Benzo(k)fluoranthene	1000	J	ug/kg	70	14.286	1	537	1.8622	1
LPRT03A	2.03	Chrysene	3300	J	ug/kg	82	40.244	1	650	5.0769	1

Table B7-1b. Sediment chemistry LOE

Location ID	No. of Chemicals w/ T20 EF ≥ 1	No. of Chemicals w/ T50 EF ≥ 1	Sediment Chemistry LOE Weight

Table B7-1a. T20/T50 Screen of LPRSA Sediment Chemistry Data

Location ID	RM	Parameter	Result	Qualifier	Units	T20	T20 EF	T20 EF ≥ 1	T50	T50 EF	T50 EF ≥ 1
LPRT03A	2.03	Dibenzo(a,h)anthracene	460	J	ug/kg	19	24.211	1	113	4.0708	1
LPRT03A	2.03	Fluoranthene	5600	J	ug/kg	119	47.059	1	1034	5.4159	1
LPRT03A	2.03	Fluorene	200	J	ug/kg	19	10.526	1	114	1.7544	1
LPRT03A	2.03	Indeno(1,2,3-cd)pyrene	1900	J	ug/kg	68	27.941	1	488	3.8934	1
LPRT03A	2.03	Naphthalene	350	J	ug/kg	30	11.667	1	217	1.6129	1
LPRT03A	2.03	Perylene	550	J	ug/kg	74	7.4324	1	453	1.2141	1
LPRT03A	2.03	Phenanthrene	1600	J	ug/kg	68	23.529	1	455	3.5165	1
LPRT03A	2.03	Pyrene	5000	J	ug/kg	125	40	1	932	5.3648	1
LPRT03A	2.03	1,1'-Biphenyl	680	UJ	ug/kg	17	40	1	73	9.3151	1
LPRT03A	2.03	Total PCB Congeners	1100	J	ug/kg	35	31.429	1	368	2.9891	1
LPRT03A	2.03	4,4'-DDD	40	J	ug/kg	2.2	18.182	1	19	2.1053	1
LPRT03A	2.03	4,4'-DDE	28	J	ug/kg	3.1	9.0323	1	103	0.2718	0
LPRT03A	2.03	4,4'-DDT	87	J	ug/kg	1.7	51.176	1	11	7.9091	1
LPRT03A	2.03	Dieldrin	3	J	ug/kg	0.83	3.6145	1	2.9	1.0345	1
LPRT03B	2.13	Antimony	1.8	J	mg/kg	0.63	2.8571	1	2.4	0.75	0
LPRT03B	2.13	Arsenic	3.5		mg/kg	7.4	0.473	0	20	0.175	0
LPRT03B	2.13	Cadmium	1.4	J	mg/kg	0.38	3.6842	1	1.4	1	1
LPRT03B	2.13	Chromium	52.5	J	mg/kg	49	1.0714	1	141	0.3723	0
LPRT03B	2.13	Copper	92.3	J	mg/kg	32	2.8844	1	94	0.9819	0
LPRT03B	2.13	Lead	161		mg/kg	30	5.3667	1	94	1.7128	1
LPRT03B	2.13	Mercury	660		ug/kg	140	4.7143	1	480	1.375	1
LPRT03B	2.13	Nickel	17.3	J	mg/kg	15	1.1533	1	47	0.3681	0
LPRT03B	2.13	Silver	1.1	J	mg/kg	0.23	4.7826	1	1.1	1	0
LPRT03B	2.13	Zinc	270		mg/kg	94	2.8723	1	245	1.102	1
LPRT03B	2.13	1-Methylnaphthalene	240		ug/kg	21	11.429	1	94	2.5532	1
LPRT03B	2.13	1-Methylphenanthrene	500		ug/kg	18	27.778	1	112	4.4643	1
LPRT03B	2.13	2,6-Dimethylnaphthalene	140		ug/kg	25	5.6	1	133	1.0526	1
LPRT03B	2.13	2-Methylnaphthalene	280		ug/kg	21	13.333	1	128	2.1875	1
LPRT03B	2.13	Acenaphthene	1000		ug/kg	19	52.632	1	116	8.6207	1
LPRT03B	2.13	Acenaphthylene	960		ug/kg	14	68.571	1	140	6.8571	1
LPRT03B	2.13	Anthracene	1300	J	ug/kg	34	38.235	1	290	4.4828	1
LPRT03B	2.13	Benzo(a)anthracene	6400	J	ug/kg	61	104.92	1	446	14.35	1
LPRT03B	2.13	Benzo(a)pyrene	4800		ug/kg	69	69.565	1	520	9.2308	1
LPRT03B	2.13	Benzo(b/j)fluoranthene	5800		ug/kg	130	44.615	1	1107	5.2394	1
LPRT03B	2.13	Benzo(g,h,i)perylene	3800		ug/kg	67	56.716	1	497	7.6459	1
LPRT03B	2.13	Benzo(k)fluoranthene	2200		ug/kg	70	31.429	1	537	4.0968	1
LPRT03B	2.13	Chrysene	5000	J	ug/kg	82	60.976	1	650	7.6923	1
LPRT03B	2.13	Dibenzo(a,h)anthracene	800	J	ug/kg	19	42.105	1	113	7.0796	1
LPRT03B	2.13	Fluoranthene	6900	J	ug/kg	119	57.983	1	1034	6.6731	1
LPRT03B	2.13	Fluorene	390	J	ug/kg	19	20.526	1	114	3.4211	1
LPRT03B	2.13	Indeno(1,2,3-cd)pyrene	3600		ug/kg	68	52.941	1	488	7.377	1
LPRT03B	2.13	Naphthalene	550		ug/kg	30	18.333	1	217	2.5346	1
LPRT03B	2.13	Perylene	980		ug/kg	74	13.243	1	453	2.1634	1
LPRT03B	2.13	Phenanthrene	3400		ug/kg	68	50	1	455	7.4725	1
LPRT03B	2.13	Pyrene	6500	J	ug/kg	125	52	1	932	6.9742	1
LPRT03B	2.13	1,1'-Biphenyl	280	U	ug/kg	17	16.471	1	73	3.8356	1
LPRT03B	2.13	Total PCB Congeners	2000	J	ug/kg	35	57.143	1	368	5.4348	1
LPRT03B	2.13	4,4'-DDD	39		ug/kg	2.2	17.727	1	19	2.0526	1
LPRT03B	2.13	4,4'-DDE	21		ug/kg	3.1	6.7742	1	103	0.2039	0
LPRT03B	2.13	4,4'-DDT	25		ug/kg	1.7	14.706	1	11	2.2727	1
LPRT03B	2.13	Dieldrin	3.4		ug/kg	0.83	4.0964	1	2.9	1.1724	1
LPRT03C	2.37	Antimony	0.85	J	mg/kg	0.63	1.3492	1	2.4	0.3542	0
LPRT03C	2.37	Arsenic	5.2	J	mg/kg	7.4	0.7027	0	20	0.26	0
LPRT03C	2.37	Cadmium	1.9	J	mg/kg	0.38	5	1	1.4	1.3571	1
LPRT03C	2.37	Chromium	82.2	J	mg/kg	49	1.6776	1	141	0.583	0
LPRT03C	2.37	Copper	129	J	mg/kg	32	4.0313	1	94	1.3723	1
LPRT03C	2.37	Lead	163	J	mg/kg	30	5.4333	1	94	1.734	1
LPRT03C	2.37	Mercury	1500	J	ug/kg	140	10.714	1	480	3.125	1
LPRT03C	2.37	Nickel	19.2	J	mg/kg	15	1.28	1	47	0.4085	0
LPRT03C	2.37	Silver	1.8	J	mg/kg	0.23	7.8261	1	1.1	1.6364	1
LPRT03C	2.37	Zinc	370	J	mg/kg	94	3.9362	1	245	1.5102	1
LPRT03C	2.37	1-Methylnaphthalene	220	J	ug/kg	21	10.476	1	94	2.3404	1
LPRT03C	2.37	1-Methylphenanthrene	360	J	ug/kg	18	20	1	112	3.2143	1
LPRT03C	2.37	2,6-Dimethylnaphthalene	200	J	ug/kg	25	8	1	133	1.5038	1
LPRT03C	2.37	2-Methylnaphthalene	360	J	ug/kg	21	17.143	1	128	2.8125	1
LPRT03C	2.37	Acenaphthene	360	J	ug/kg	19	18.947	1	116	3.1034	1
LPRT03C	2.37	Acenaphthylene	830	J	ug/kg	14	59.286	1	140	5.9286	1
LPRT03C	2.37	Anthracene	1300	J	ug/kg	34	38.235	1	290	4.4828	1
LPRT03C	2.37	Benzo(a)anthracene	3100	J	ug/kg	61	50.82	1	446	6.9507	1
LPRT03C	2.37	Benzo(a)pyrene	2700	J	ug/kg	69	39.13	1	520	5.1923	1
LPRT03C	2.37	Benzo(b/j)fluoranthene	3700	J	ug/kg	130	28.462	1	1107	3.3424	1
LPRT03C	2.37	Benzo(g,h,i)perylene	2200	J	ug/kg	67	32.836	1	497	4.4266	1

Table B7-1b. Sediment chemistry LOE

Location ID	No. of Chemicals w/ T20 EF ≥ 1	No. of Chemicals w/ T50 EF ≥ 1	Sediment Chemistry LOE Weight

Table B7-1a. T20/T50 Screen of LPRSA Sediment Chemistry Data

Location ID	RM	Parameter	Result	Qualifier	Units	T20	T20 EF	T20 EF ≥ 1	T50	T50 EF	T50 EF ≥ 1
LPRT03C	2.37	Benzo(k)fluoranthene	1500	J	ug/kg	70	21.429	1	537	2.7933	1
LPRT03C	2.37	Chrysene	4600	J	ug/kg	82	56.098	1	650	7.0769	1
LPRT03C	2.37	Dibenzo(a,h)anthracene	510	J	ug/kg	19	26.842	1	113	4.5133	1
LPRT03C	2.37	Fluoranthene	5600	J	ug/kg	119	47.059	1	1034	5.4159	1
LPRT03C	2.37	Fluorene	360	J	ug/kg	19	18.947	1	114	3.1579	1
LPRT03C	2.37	Indeno(1,2,3-cd)pyrene	2300	J	ug/kg	68	33.824	1	488	4.7131	1
LPRT03C	2.37	Naphthalene	900	J	ug/kg	30	30	1	217	4.1475	1
LPRT03C	2.37	Perylene	600	J	ug/kg	74	8.1081	1	453	1.3245	1
LPRT03C	2.37	Phenanthrene	2000	J	ug/kg	68	29.412	1	455	4.3956	1
LPRT03C	2.37	Pyrene	6500	J	ug/kg	125	52	1	932	6.9742	1
LPRT03C	2.37	1,1'-Biphenyl	470	UJ	ug/kg	17	27.647	1	73	6.4384	1
LPRT03C	2.37	Total PCB Congeners	700	J	ug/kg	35	20	1	368	1.9022	1
LPRT03C	2.37	4,4'-DDD	25	J	ug/kg	2.2	11.364	1	19	1.3158	1
LPRT03C	2.37	4,4'-DDE	26	J	ug/kg	3.1	8.3871	1	103	0.2524	0
LPRT03C	2.37	4,4'-DDT	6.4	J	ug/kg	1.7	3.7647	1	11	0.5818	0
LPRT03C	2.37	Dieldrin	4.5	J	ug/kg	0.83	5.4217	1	2.9	1.5517	1
LPRT03D	2.77	Antimony	1	J	mg/kg	0.63	1.5873	1	2.4	0.4167	0
LPRT03D	2.77	Arsenic	10.3	J	mg/kg	7.4	1.3919	1	20	0.515	0
LPRT03D	2.77	Cadmium	3.4	J	mg/kg	0.38	8.9474	1	1.4	2.4286	1
LPRT03D	2.77	Chromium	110	J	mg/kg	49	2.2449	1	141	0.7801	0
LPRT03D	2.77	Copper	166	J	mg/kg	32	5.1875	1	94	1.766	1
LPRT03D	2.77	Lead	200	J	mg/kg	30	6.6667	1	94	2.1277	1
LPRT03D	2.77	Mercury	2000		ug/kg	140	14.286	1	480	4.1667	1
LPRT03D	2.77	Nickel	29.9	J	mg/kg	15	1.9933	1	47	0.6362	0
LPRT03D	2.77	Silver	3.6	J	mg/kg	0.23	15.652	1	1.1	3.2727	1
LPRT03D	2.77	Zinc	439	J	mg/kg	94	4.6702	1	245	1.7918	1
LPRT03D	2.77	1-Methylnaphthalene	270		ug/kg	21	12.857	1	94	2.8723	1
LPRT03D	2.77	1-Methylphenanthrene	990		ug/kg	18	55	1	112	8.8393	1
LPRT03D	2.77	2,6-Dimethylnaphthalene	190		ug/kg	25	7.6	1	133	1.4286	1
LPRT03D	2.77	2-Methylnaphthalene	440		ug/kg	21	20.952	1	128	3.4375	1
LPRT03D	2.77	Acenaphthene	460		ug/kg	19	24.211	1	116	3.9655	1
LPRT03D	2.77	Acenaphthylene	1100		ug/kg	14	78.571	1	140	7.8571	1
LPRT03D	2.77	Anthracene	1300	J	ug/kg	34	38.235	1	290	4.4828	1
LPRT03D	2.77	Benzo(a)anthracene	5400	J	ug/kg	61	88.525	1	446	12.108	1
LPRT03D	2.77	Benzo(a)pyrene	4300		ug/kg	69	62.319	1	520	8.2692	1
LPRT03D	2.77	Benzo(b/j)fluoranthene	4900		ug/kg	130	37.692	1	1107	4.4264	1
LPRT03D	2.77	Benzo(g,h,i)perylene	4000		ug/kg	67	59.701	1	497	8.0483	1
LPRT03D	2.77	Benzo(k)fluoranthene	1900		ug/kg	70	27.143	1	537	3.5382	1
LPRT03D	2.77	Chrysene	5100	J	ug/kg	82	62.195	1	650	7.8462	1
LPRT03D	2.77	Dibenzo(a,h)anthracene	890	J	ug/kg	19	46.842	1	113	7.8761	1
LPRT03D	2.77	Fluoranthene	6200	J	ug/kg	119	52.101	1	1034	5.9961	1
LPRT03D	2.77	Fluorene	260	J	ug/kg	19	13.684	1	114	2.2807	1
LPRT03D	2.77	Indeno(1,2,3-cd)pyrene	3500		ug/kg	68	51.471	1	488	7.1721	1
LPRT03D	2.77	Naphthalene	820		ug/kg	30	27.333	1	217	3.7788	1
LPRT03D	2.77	Perylene	940		ug/kg	74	12.703	1	453	2.0751	1
LPRT03D	2.77	Phenanthrene	1900		ug/kg	68	27.941	1	455	4.1758	1
LPRT03D	2.77	Pyrene	6600	J	ug/kg	125	52.8	1	932	7.0815	1
LPRT03D	2.77	1,1'-Biphenyl	410	UJ	ug/kg	17	24.118	1	73	5.6164	1
LPRT03D	2.77	Total PCB Congeners	1100	J	ug/kg	35	31.429	1	368	2.9891	1
LPRT03D	2.77	4,4'-DDD	72		ug/kg	2.2	32.727	1	19	3.7895	1
LPRT03D	2.77	4,4'-DDE	38		ug/kg	3.1	12.258	1	103	0.3689	0
LPRT03D	2.77	4,4'-DDT	46		ug/kg	1.7	27.059	1	11	4.1818	1
LPRT03D	2.77	Dieldrin	4.9		ug/kg	0.83	5.9036	1	2.9	1.6897	1
LPRT03E	2.8	Antimony	0.84	J	mg/kg	0.63	1.3333	1	2.4	0.35	0
LPRT03E	2.8	Arsenic	9.1	J	mg/kg	7.4	1.2297	1	20	0.455	0
LPRT03E	2.8	Cadmium	3.4	J	mg/kg	0.38	8.9474	1	1.4	2.4286	1
LPRT03E	2.8	Chromium	111	J	mg/kg	49	2.2653	1	141	0.7872	0
LPRT03E	2.8	Copper	172	J	mg/kg	32	5.375	1	94	1.8298	1
LPRT03E	2.8	Lead	185	J	mg/kg	30	6.1667	1	94	1.9681	1
LPRT03E	2.8	Mercury	2000	J	ug/kg	140	14.286	1	480	4.1667	1
LPRT03E	2.8	Nickel	32.7	J	mg/kg	15	2.18	1	47	0.6957	0
LPRT03E	2.8	Silver	2.7	J	mg/kg	0.23	11.739	1	1.1	2.4545	1
LPRT03E	2.8	Zinc	500	J	mg/kg	94	5.3191	1	245	2.0408	1
LPRT03E	2.8	1-Methylnaphthalene	96	J	ug/kg	21	4.5714	1	94	1.0213	1
LPRT03E	2.8	1-Methylphenanthrene	220	J	ug/kg	18	12.222	1	112	1.9643	1
LPRT03E	2.8	2,6-Dimethylnaphthalene	81	J	ug/kg	25	3.24	1	133	0.609	0
LPRT03E	2.8	2-Methylnaphthalene	180	J	ug/kg	21	8.5714	1	128	1.4063	1
LPRT03E	2.8	Acenaphthene	230	J	ug/kg	19	12.105	1	116	1.9828	1
LPRT03E	2.8	Acenaphthylene	400	J	ug/kg	14	28.571	1	140	2.8571	1
LPRT03E	2.8	Anthracene	490	J	ug/kg	34	14.412	1	290	1.6897	1
LPRT03E	2.8	Benzo(a)anthracene	2300	J	ug/kg	61	37.705	1	446	5.157	1
LPRT03E	2.8	Benzo(a)pyrene	2000	J	ug/kg	69	28.986	1	520	3.8462	1

Table B7-1b. Sediment chemistry LOE

Location ID	No. of Chemicals w/ T20 EF ≥ 1	No. of Chemicals w/ T50 EF ≥ 1	Sediment Chemistry LOE Weight

Table B7-1a. T20/T50 Screen of LPRSA Sediment Chemistry Data

Location ID	RM	Parameter	Result	Qualifier	Units	T20	T20 EF	T20 EF ≥ 1	T50	T50 EF	T50 EF ≥ 1
LPRT03E	2.8	Benzo(b/j)fluoranthene	3000	J	ug/kg	130	23.077	1	1107	2.71	1
LPRT03E	2.8	Benzo(g,h,i)perylene	2400	J	ug/kg	67	35.821	1	497	4.829	1
LPRT03E	2.8	Benzo(k)fluoranthene	1200	J	ug/kg	70	17.143	1	537	2.2346	1
LPRT03E	2.8	Chrysene	2900	J	ug/kg	82	35.366	1	650	4.4615	1
LPRT03E	2.8	Dibenzo(a,h)anthracene	490	J	ug/kg	19	25.789	1	113	4.3363	1
LPRT03E	2.8	Fluoranthene	4800	J	ug/kg	119	40.336	1	1034	4.6422	1
LPRT03E	2.8	Fluorene	150	J	ug/kg	19	7.8947	1	114	1.3158	1
LPRT03E	2.8	Indeno(1,2,3-cd)pyrene	2300	J	ug/kg	68	33.824	1	488	4.7131	1
LPRT03E	2.8	Naphthalene	350	J	ug/kg	30	11.667	1	217	1.6129	1
LPRT03E	2.8	Perylene	490	J	ug/kg	74	6.6216	1	453	1.0817	1
LPRT03E	2.8	Phenanthrene	1300	J	ug/kg	68	19.118	1	455	2.8571	1
LPRT03E	2.8	Pyrene	4100	J	ug/kg	125	32.8	1	932	4.3991	1
LPRT03E	2.8	1,1'-Biphenyl	620	UJ	ug/kg	17	36.471	1	73	8.4932	1
LPRT03E	2.8	Total PCB Congeners	890	J	ug/kg	35	25.429	1	368	2.4185	1
LPRT03E	2.8	4,4'-DDD	35	J	ug/kg	2.2	15.909	1	19	1.8421	1
LPRT03E	2.8	4,4'-DDE	37	J	ug/kg	3.1	11.935	1	103	0.3592	0
LPRT03E	2.8	4,4'-DDT	14	J	ug/kg	1.7	8.2353	1	11	1.2727	1
LPRT03E	2.8	Dieldrin	6.8	J	ug/kg	0.83	8.1928	1	2.9	2.3448	1
LPRT03F	2.83	Antimony	0.73	J	mg/kg	0.63	1.1587	1	2.4	0.3042	0
LPRT03F	2.83	Arsenic	7.3	J	mg/kg	7.4	0.9865	0	20	0.365	0
LPRT03F	2.83	Cadmium	2.8	J	mg/kg	0.38	7.3684	1	1.4	2	1
LPRT03F	2.83	Chromium	88	J	mg/kg	49	1.7959	1	141	0.6241	0
LPRT03F	2.83	Copper	154	J	mg/kg	32	4.8125	1	94	1.6383	1
LPRT03F	2.83	Lead	162	J	mg/kg	30	5.4	1	94	1.7234	1
LPRT03F	2.83	Mercury	1600	J	ug/kg	140	11.429	1	480	3.3333	1
LPRT03F	2.83	Nickel	26.9	J	mg/kg	15	1.7933	1	47	0.5723	0
LPRT03F	2.83	Silver	2.6	J	mg/kg	0.23	11.304	1	1.1	2.3636	1
LPRT03F	2.83	Zinc	409	J	mg/kg	94	4.3511	1	245	1.6694	1
LPRT03F	2.83	1-Methylnaphthalene	180	J	ug/kg	21	8.5714	1	94	1.9149	1
LPRT03F	2.83	1-Methylphenanthrene	270	J	ug/kg	18	15	1	112	2.4107	1
LPRT03F	2.83	2,6-Dimethylnaphthalene	150	J	ug/kg	25	6	1	133	1.1278	1
LPRT03F	2.83	2-Methylnaphthalene	340	J	ug/kg	21	16.19	1	128	2.6563	1
LPRT03F	2.83	Acenaphthene	150	J	ug/kg	19	7.8947	1	116	1.2931	1
LPRT03F	2.83	Acenaphthylene	440	J	ug/kg	14	31.429	1	140	3.1429	1
LPRT03F	2.83	Anthracene	1200	J	ug/kg	34	35.294	1	290	4.1379	1
LPRT03F	2.83	Benzo(a)anthracene	2200	J	ug/kg	61	36.066	1	446	4.9327	1
LPRT03F	2.83	Benzo(a)pyrene	2400	J	ug/kg	69	34.783	1	520	4.6154	1
LPRT03F	2.83	Benzo(b/j)fluoranthene	3400	J	ug/kg	130	26.154	1	1107	3.0714	1
LPRT03F	2.83	Benzo(g,h,i)perylene	2200	J	ug/kg	67	32.836	1	497	4.4266	1
LPRT03F	2.83	Benzo(k)fluoranthene	1700	J	ug/kg	70	24.286	1	537	3.1657	1
LPRT03F	2.83	Chrysene	3800	J	ug/kg	82	46.341	1	650	5.8462	1
LPRT03F	2.83	Dibenzo(a,h)anthracene	24	UJ	ug/kg	19	1.2632	1	113	0.2124	0
LPRT03F	2.83	Fluoranthene	5700	J	ug/kg	119	47.899	1	1034	5.5126	1
LPRT03F	2.83	Fluorene	400	J	ug/kg	19	21.053	1	114	3.5088	1
LPRT03F	2.83	Indeno(1,2,3-cd)pyrene	2000	J	ug/kg	68	29.412	1	488	4.0984	1
LPRT03F	2.83	Naphthalene	670	J	ug/kg	30	22.333	1	217	3.0876	1
LPRT03F	2.83	Perylene	640	J	ug/kg	74	8.6486	1	453	1.4128	1
LPRT03F	2.83	Phenanthrene	1500	J	ug/kg	68	22.059	1	455	3.2967	1
LPRT03F	2.83	Pyrene	7100	J	ug/kg	125	56.8	1	932	7.618	1
LPRT03F	2.83	1,1'-Biphenyl	490	UJ	ug/kg	17	28.824	1	73	6.7123	1
LPRT03F	2.83	Total PCB Congeners	970	J	ug/kg	35	27.714	1	368	2.6359	1
LPRT03F	2.83	4,4'-DDD	60	J	ug/kg	2.2	27.273	1	19	3.1579	1
LPRT03F	2.83	4,4'-DDE	21	J	ug/kg	3.1	6.7742	1	103	0.2039	0
LPRT03F	2.83	4,4'-DDT	24	J	ug/kg	1.7	14.118	1	11	2.1818	1
LPRT03F	2.83	Dieldrin	4.8	J	ug/kg	0.83	5.7831	1	2.9	1.6552	1
LPRT04A	3.39	Antimony	0.21	J	mg/kg	0.63	0.3333	0	2.4	0.0875	0
LPRT04A	3.39	Arsenic	5.7		mg/kg	7.4	0.7703	0	20	0.285	0
LPRT04A	3.39	Cadmium	0.21	J	mg/kg	0.38	0.5526	0	1.4	0.15	0
LPRT04A	3.39	Chromium	41.1	J	mg/kg	49	0.8388	0	141	0.2915	0
LPRT04A	3.39	Copper	25.8	J	mg/kg	32	0.8063	0	94	0.2745	0
LPRT04A	3.39	Lead	42.6		mg/kg	30	1.42	1	94	0.4532	0
LPRT04A	3.39	Mercury	120		ug/kg	140	0.8571	0	480	0.25	0
LPRT04A	3.39	Nickel	19.1	J	mg/kg	15	1.2733	1	47	0.4064	0
LPRT04A	3.39	Silver	0.26	J	mg/kg	0.23	1.1304	1	1.1	0.2364	0
LPRT04A	3.39	Zinc	96.2		mg/kg	94	1.0234	1	245	0.3927	0
LPRT04A	3.39	1-Methylnaphthalene	7.9	J	ug/kg	21	0.3762	0	94	0.084	0
LPRT04A	3.39	1-Methylphenanthrene	21		ug/kg	18	1.1667	1	112	0.1875	0
LPRT04A	3.39	2,6-Dimethylnaphthalene	11		ug/kg	25	0.44	0	133	0.0827	0
LPRT04A	3.39	2-Methylnaphthalene	14		ug/kg	21	0.6667	0	128	0.1094	0
LPRT04A	3.39	Acenaphthene	18		ug/kg	19	0.9474	0	116	0.1552	0
LPRT04A	3.39	Acenaphthylene	18		ug/kg	14	1.2857	1	140	0.1286	0
LPRT04A	3.39	Anthracene	58	J	ug/kg	34	1.7059	1	290	0.2	0

Table B7-1b. Sediment chemistry LOE

Location ID	No. of Chemicals w/ T20 EF ≥ 1	No. of Chemicals w/ T50 EF ≥ 1	Sediment Chemistry LOE Weight

Table B7-1a. T20/T50 Screen of LPRSA Sediment Chemistry Data

Location ID	RM	Parameter	Result	Qualifier	Units	T20	T20 EF	T20 EF ≥ 1	T50	T50 EF	T50 EF ≥ 1
LPRT04A	3.39	Benzo(a)anthracene	170		ug/kg	61	2.7869	1	446	0.3812	0
LPRT04A	3.39	Benzo(a)pyrene	210		ug/kg	69	3.0435	1	520	0.4038	0
LPRT04A	3.39	Benzo(b/j)fluoranthene	230		ug/kg	130	1.7692	1	1107	0.2078	0
LPRT04A	3.39	Benzo(g,h,i)perylene	180		ug/kg	67	2.6866	1	497	0.3622	0
LPRT04A	3.39	Benzo(k)fluoranthene	84		ug/kg	70	1.2	1	537	0.1564	0
LPRT04A	3.39	Chrysene	200		ug/kg	82	2.439	1	650	0.3077	0
LPRT04A	3.39	Dibenzo(a,h)anthracene	32	J	ug/kg	19	1.6842	1	113	0.2832	0
LPRT04A	3.39	Fluoranthene	380	J	ug/kg	119	3.1933	1	1034	0.3675	0
LPRT04A	3.39	Fluorene	19	J	ug/kg	19	1	0	114	0.1667	0
LPRT04A	3.39	Indeno(1,2,3-cd)pyrene	130		ug/kg	68	1.9118	1	488	0.2664	0
LPRT04A	3.39	Naphthalene	23		ug/kg	30	0.7667	0	217	0.106	0
LPRT04A	3.39	Perylene	300		ug/kg	74	4.0541	1	453	0.6623	0
LPRT04A	3.39	Phenanthrene	170	J	ug/kg	68	2.5	1	455	0.3736	0
LPRT04A	3.39	Pyrene	310	J	ug/kg	125	2.48	1	932	0.3326	0
LPRT04A	3.39	1,1'-Biphenyl	340	U	ug/kg	17	20	1	73	4.6575	1
LPRT04A	3.39	Total PCB Congeners	36	J	ug/kg	35	1.0286	1	368	0.0978	0
LPRT04A	3.39	4,4'-DDD	47		ug/kg	2.2	21.364	1	19	2.4737	1
LPRT04A	3.39	4,4'-DDE	7.6		ug/kg	3.1	2.4516	1	103	0.0738	0
LPRT04A	3.39	4,4'-DDT	12		ug/kg	1.7	7.0588	1	11	1.0909	1
LPRT04A	3.39	Dieldrin	0.66	J	ug/kg	0.83	0.7952	0	2.9	0.2276	0
LPRT04B	3.54	Antimony	0.91	J	mg/kg	0.63	1.4444	1	2.4	0.3792	0
LPRT04B	3.54	Arsenic	7.6	J	mg/kg	7.4	1.027	1	20	0.38	0
LPRT04B	3.54	Cadmium	4.3	J	mg/kg	0.38	11.316	1	1.4	3.0714	1
LPRT04B	3.54	Chromium	128	J	mg/kg	49	2.6122	1	141	0.9078	0
LPRT04B	3.54	Copper	165	J	mg/kg	32	5.1563	1	94	1.7553	1
LPRT04B	3.54	Lead	285	J	mg/kg	30	9.5	1	94	3.0319	1
LPRT04B	3.54	Mercury	2800	J	ug/kg	140	20	1	480	5.8333	1
LPRT04B	3.54	Nickel	28.2	J	mg/kg	15	1.88	1	47	0.6	0
LPRT04B	3.54	Silver	4.7	J	mg/kg	0.23	20.435	1	1.1	4.2727	1
LPRT04B	3.54	Zinc	531	J	mg/kg	94	5.6489	1	245	2.1673	1
LPRT04B	3.54	1-Methylnaphthalene	190		ug/kg	21	9.0476	1	94	2.0213	1
LPRT04B	3.54	1-Methylphenanthrene	1900		ug/kg	18	105.56	1	112	16.964	1
LPRT04B	3.54	2,6-Dimethylnaphthalene	270		ug/kg	25	10.8	1	133	2.0301	1
LPRT04B	3.54	2-Methylnaphthalene	400		ug/kg	21	19.048	1	128	3.125	1
LPRT04B	3.54	Acenaphthene	270	J	ug/kg	19	14.211	1	116	2.3276	1
LPRT04B	3.54	Acenaphthylene	1600		ug/kg	14	114.29	1	140	11.429	1
LPRT04B	3.54	Anthracene	1400	J	ug/kg	34	41.176	1	290	4.8276	1
LPRT04B	3.54	Benzo(a)anthracene	4500	J	ug/kg	61	73.77	1	446	10.09	1
LPRT04B	3.54	Benzo(a)pyrene	9500	J	ug/kg	69	137.68	1	520	18.269	1
LPRT04B	3.54	Benzo(b/j)fluoranthene	8400	J	ug/kg	130	64.615	1	1107	7.5881	1
LPRT04B	3.54	Benzo(g,h,i)perylene	3200	J	ug/kg	67	47.761	1	497	6.4386	1
LPRT04B	3.54	Benzo(k)fluoranthene	3400	J	ug/kg	70	48.571	1	537	6.3315	1
LPRT04B	3.54	Chrysene	6600	J	ug/kg	82	80.488	1	650	10.154	1
LPRT04B	3.54	Dibenzo(a,h)anthracene	1100	J	ug/kg	19	57.895	1	113	9.7345	1
LPRT04B	3.54	Fluoranthene	5500	J	ug/kg	119	46.218	1	1034	5.3191	1
LPRT04B	3.54	Fluorene	490	J	ug/kg	19	25.789	1	114	4.2982	1
LPRT04B	3.54	Indeno(1,2,3-cd)pyrene	3500	J	ug/kg	68	51.471	1	488	7.1721	1
LPRT04B	3.54	Naphthalene	610		ug/kg	30	20.333	1	217	2.8111	1
LPRT04B	3.54	Perylene	1500		ug/kg	74	20.27	1	453	3.3113	1
LPRT04B	3.54	Phenanthrene	1800	J	ug/kg	68	26.471	1	455	3.956	1
LPRT04B	3.54	Pyrene	4800	J	ug/kg	125	38.4	1	932	5.1502	1
LPRT04B	3.54	1,1'-Biphenyl	410	UJ	ug/kg	17	24.118	1	73	5.6164	1
LPRT04B	3.54	Total PCB Congeners	2700	J	ug/kg	35	77.143	1	368	7.337	1
LPRT04B	3.54	4,4'-DDD	34		ug/kg	2.2	15.455	1	19	1.7895	1
LPRT04B	3.54	4,4'-DDE	71		ug/kg	3.1	22.903	1	103	0.6893	0
LPRT04B	3.54	4,4'-DDT	8.4		ug/kg	1.7	4.9412	1	11	0.7636	0
LPRT04B	3.54	Dieldrin	9.4		ug/kg	0.83	11.325	1	2.9	3.2414	1
LPRT04C	3.74	Antimony	1.1	J	mg/kg	0.63	1.746	1	2.4	0.4583	0
LPRT04C	3.74	Arsenic	9.5	J	mg/kg	7.4	1.2838	1	20	0.475	0
LPRT04C	3.74	Cadmium	5.3		mg/kg	0.38	13.947	1	1.4	3.7857	1
LPRT04C	3.74	Chromium	296		mg/kg	49	6.0408	1	141	2.0993	1
LPRT04C	3.74	Copper	396		mg/kg	32	12.375	1	94	4.2128	1
LPRT04C	3.74	Lead	173		mg/kg	30	5.7667	1	94	1.8404	1
LPRT04C	3.74	Mercury	3300	J	ug/kg	140	23.571	1	480	6.875	1
LPRT04C	3.74	Nickel	28.5		mg/kg	15	1.9	1	47	0.6064	0
LPRT04C	3.74	Silver	3.2		mg/kg	0.23	13.913	1	1.1	2.9091	1
LPRT04C	3.74	Zinc	693		mg/kg	94	7.3723	1	245	2.8286	1
LPRT04C	3.74	1-Methylnaphthalene	110	J	ug/kg	21	5.2381	1	94	1.1702	1
LPRT04C	3.74	1-Methylphenanthrene	590	J	ug/kg	18	32.778	1	112	5.2679	1
LPRT04C	3.74	2,6-Dimethylnaphthalene	91	J	ug/kg	25	3.64	1	133	0.6842	0
LPRT04C	3.74	2-Methylnaphthalene	180		ug/kg	21	8.5714	1	128	1.4063	1
LPRT04C	3.74	Acenaphthene	190		ug/kg	19	10	1	116	1.6379	1

Table B7-1b. Sediment chemistry LOE

Location ID	No. of Chemicals w/ T20 EF ≥ 1	No. of Chemicals w/ T50 EF ≥ 1	Sediment Chemistry LOE Weight

Table B7-1a. T20/T50 Screen of LPRSA Sediment Chemistry Data

Location ID	RM	Parameter	Result	Qualifier	Units	T20	T20 EF	T20 EF ≥ 1	T50	T50 EF	T50 EF ≥ 1
LPRT04C	3.74	Acenaphthylene	490		ug/kg	14	35	1	140	3.5	1
LPRT04C	3.74	Anthracene	1200	J	ug/kg	34	35.294	1	290	4.1379	1
LPRT04C	3.74	Benzo(a)anthracene	2700	J	ug/kg	61	44.262	1	446	6.0538	1
LPRT04C	3.74	Benzo(a)pyrene	2200	J	ug/kg	69	31.884	1	520	4.2308	1
LPRT04C	3.74	Benzo(b/j)fluoranthene	3000		ug/kg	130	23.077	1	1107	2.71	1
LPRT04C	3.74	Benzo(g,h,i)perylene	1800	J	ug/kg	67	26.866	1	497	3.6217	1
LPRT04C	3.74	Benzo(k)fluoranthene	1100		ug/kg	70	15.714	1	537	2.0484	1
LPRT04C	3.74	Chrysene	4200	J	ug/kg	82	51.22	1	650	6.4615	1
LPRT04C	3.74	Dibenzo(a,h)anthracene	20	UJ	ug/kg	19	1.0526	1	113	0.177	0
LPRT04C	3.74	Fluoranthene	4800	J	ug/kg	119	40.336	1	1034	4.6422	1
LPRT04C	3.74	Fluorene	330	J	ug/kg	19	17.368	1	114	2.8947	1
LPRT04C	3.74	Indeno(1,2,3-cd)pyrene	1700	J	ug/kg	68	25	1	488	3.4836	1
LPRT04C	3.74	Naphthalene	340		ug/kg	30	11.333	1	217	1.5668	1
LPRT04C	3.74	Perylene	520	J	ug/kg	74	7.027	1	453	1.1479	1
LPRT04C	3.74	Phenanthrene	2300	J	ug/kg	68	33.824	1	455	5.0549	1
LPRT04C	3.74	Pyrene	6200	J	ug/kg	125	49.6	1	932	6.6524	1
LPRT04C	3.74	1,1'-Biphenyl	370	U	ug/kg	17	21.765	1	73	5.0685	1
LPRT04C	3.74	Total PCB Congeners	6800	J	ug/kg	35	194.29	1	368	18.478	1
LPRT04C	3.74	4,4'-DDD	23	J	ug/kg	2.2	10.455	1	19	1.2105	1
LPRT04C	3.74	4,4'-DDE	16	J	ug/kg	3.1	5.1613	1	103	0.1553	0
LPRT04C	3.74	4,4'-DDT	4.2	J	ug/kg	1.7	2.4706	1	11	0.3818	0
LPRT04C	3.74	Dieldrin	6.8	J	ug/kg	0.83	8.1928	1	2.9	2.3448	1
LPRT04D	3.82	Antimony	0.67	J	mg/kg	0.63	1.0635	1	2.4	0.2792	0
LPRT04D	3.82	Arsenic	5.3	J	mg/kg	7.4	0.7162	0	20	0.265	0
LPRT04D	3.82	Cadmium	2.5	J	mg/kg	0.38	6.5789	1	1.4	1.7857	1
LPRT04D	3.82	Chromium	67.5	J	mg/kg	49	1.3776	1	141	0.4787	0
LPRT04D	3.82	Copper	133	J	mg/kg	32	4.1563	1	94	1.4149	1
LPRT04D	3.82	Lead	180	J	mg/kg	30	6	1	94	1.9149	1
LPRT04D	3.82	Mercury	1000	J	ug/kg	140	7.1429	1	480	2.0833	1
LPRT04D	3.82	Nickel	21.2	J	mg/kg	15	1.4133	1	47	0.4511	0
LPRT04D	3.82	Silver	1.4	J	mg/kg	0.23	6.087	1	1.1	1.2727	1
LPRT04D	3.82	Zinc	389	J	mg/kg	94	4.1383	1	245	1.5878	1
LPRT04D	3.82	1-Methylnaphthalene	190	J	ug/kg	21	9.0476	1	94	2.0213	1
LPRT04D	3.82	1-Methylphenanthrene	610	J	ug/kg	18	33.889	1	112	5.4464	1
LPRT04D	3.82	2,6-Dimethylnaphthalene	160	J	ug/kg	25	6.4	1	133	1.203	1
LPRT04D	3.82	2-Methylnaphthalene	310	J	ug/kg	21	14.762	1	128	2.4219	1
LPRT04D	3.82	Acenaphthene	400	J	ug/kg	19	21.053	1	116	3.4483	1
LPRT04D	3.82	Acenaphthylene	620	J	ug/kg	14	44.286	1	140	4.4286	1
LPRT04D	3.82	Anthracene	940	J	ug/kg	34	27.647	1	290	3.2414	1
LPRT04D	3.82	Benzo(a)anthracene	6700	J	ug/kg	61	109.84	1	446	15.022	1
LPRT04D	3.82	Benzo(a)pyrene	4700	J	ug/kg	69	68.116	1	520	9.0385	1
LPRT04D	3.82	Benzo(b/j)fluoranthene	5100	J	ug/kg	130	39.231	1	1107	4.607	1
LPRT04D	3.82	Benzo(g,h,i)perylene	1800	J	ug/kg	67	26.866	1	497	3.6217	1
LPRT04D	3.82	Benzo(k)fluoranthene	2200	J	ug/kg	70	31.429	1	537	4.0968	1
LPRT04D	3.82	Chrysene	5900	J	ug/kg	82	71.951	1	650	9.0769	1
LPRT04D	3.82	Dibenzo(a,h)anthracene	350	J	ug/kg	19	18.421	1	113	3.0973	1
LPRT04D	3.82	Fluoranthene	9600	J	ug/kg	119	80.672	1	1034	9.2843	1
LPRT04D	3.82	Fluorene	300	J	ug/kg	19	15.789	1	114	2.6316	1
LPRT04D	3.82	Indeno(1,2,3-cd)pyrene	1800	J	ug/kg	68	26.471	1	488	3.6885	1
LPRT04D	3.82	Naphthalene	440	UJ	ug/kg	30	14.667	1	217	2.0276	1
LPRT04D	3.82	Perylene	840	J	ug/kg	74	11.351	1	453	1.8543	1
LPRT04D	3.82	Phenanthrene	3400	J	ug/kg	68	50	1	455	7.4725	1
LPRT04D	3.82	Pyrene	7200	J	ug/kg	125	57.6	1	932	7.7253	1
LPRT04D	3.82	1,1'-Biphenyl	520	UJ	ug/kg	17	30.588	1	73	7.1233	1
LPRT04D	3.82	Total PCB Congeners	910	J	ug/kg	35	26	1	368	2.4728	1
LPRT04D	3.82	4,4'-DDD	38	J	ug/kg	2.2	17.273	1	19	2	1
LPRT04D	3.82	4,4'-DDE	34	J	ug/kg	3.1	10.968	1	103	0.3301	0
LPRT04D	3.82	4,4'-DDT	15	J	ug/kg	1.7	8.8235	1	11	1.3636	1
LPRT04D	3.82	Dieldrin	4.8	J	ug/kg	0.83	5.7831	1	2.9	1.6552	1
LPRT04E	3.85	Antimony	0.98	J	mg/kg	0.63	1.5556	1	2.4	0.4083	0
LPRT04E	3.85	Arsenic	8.2	J	mg/kg	7.4	1.1081	1	20	0.41	0
LPRT04E	3.85	Cadmium	2.9	J	mg/kg	0.38	7.6316	1	1.4	2.0714	1
LPRT04E	3.85	Chromium	102	J	mg/kg	49	2.0816	1	141	0.7234	0
LPRT04E	3.85	Copper	173	J	mg/kg	32	5.4063	1	94	1.8404	1
LPRT04E	3.85	Lead	205	J	mg/kg	30	6.8333	1	94	2.1809	1
LPRT04E	3.85	Mercury	1600	J	ug/kg	140	11.429	1	480	3.3333	1
LPRT04E	3.85	Nickel	25.3	J	mg/kg	15	1.6867	1	47	0.5383	0
LPRT04E	3.85	Silver	2.5	J	mg/kg	0.23	10.87	1	1.1	2.2727	1
LPRT04E	3.85	Zinc	526	J	mg/kg	94	5.5957	1	245	2.1469	1
LPRT04E	3.85	1-Methylnaphthalene	130	J	ug/kg	21	6.1905	1	94	1.383	1
LPRT04E	3.85	1-Methylphenanthrene	430	J	ug/kg	18	23.889	1	112	3.8393	1
LPRT04E	3.85	2,6-Dimethylnaphthalene	120	J	ug/kg	25	4.8	1	133	0.9023	0

Table B7-1b. Sediment chemistry LOE

Location ID	No. of Chemicals w/ T20 EF ≥ 1	No. of Chemicals w/ T50 EF ≥ 1	Sediment Chemistry LOE Weight

Table B7-1a. T20/T50 Screen of LPRSA Sediment Chemistry Data

Location ID	RM	Parameter	Result	Qualifier	Units	T20	T20 EF	T20 EF ≥ 1	T50	T50 EF	T50 EF ≥ 1
LPRT04E	3.85	2-Methylnaphthalene	210	J	ug/kg	21	10	1	128	1.6406	1
LPRT04E	3.85	Acenaphthene	250	J	ug/kg	19	13.158	1	116	2.1552	1
LPRT04E	3.85	Acenaphthylene	570	J	ug/kg	14	40.714	1	140	4.0714	1
LPRT04E	3.85	Anthracene	690	J	ug/kg	34	20.294	1	290	2.3793	1
LPRT04E	3.85	Benzo(a)anthracene	3700	J	ug/kg	61	60.656	1	446	8.296	1
LPRT04E	3.85	Benzo(a)pyrene	5100	J	ug/kg	69	73.913	1	520	9.8077	1
LPRT04E	3.85	Benzo(b/j)fluoranthene	4300	J	ug/kg	130	33.077	1	1107	3.8844	1
LPRT04E	3.85	Benzo(g,h,i)perylene	2500	J	ug/kg	67	37.313	1	497	5.0302	1
LPRT04E	3.85	Benzo(k)fluoranthene	1800	J	ug/kg	70	25.714	1	537	3.352	1
LPRT04E	3.85	Chrysene	4000	J	ug/kg	82	48.78	1	650	6.1538	1
LPRT04E	3.85	Dibenzo(a,h)anthracene	470	J	ug/kg	19	24.737	1	113	4.1593	1
LPRT04E	3.85	Fluoranthene	4900	J	ug/kg	119	41.176	1	1034	4.7389	1
LPRT04E	3.85	Fluorene	210	J	ug/kg	19	11.053	1	114	1.8421	1
LPRT04E	3.85	Indeno(1,2,3-cd)pyrene	1800	J	ug/kg	68	26.471	1	488	3.6885	1
LPRT04E	3.85	Naphthalene	370	UJ	ug/kg	30	12.333	1	217	1.7051	1
LPRT04E	3.85	Perylene	720	J	ug/kg	74	9.7297	1	453	1.5894	1
LPRT04E	3.85	Phenanthrene	2000	J	ug/kg	68	29.412	1	455	4.3956	1
LPRT04E	3.85	Pyrene	4200	J	ug/kg	125	33.6	1	932	4.5064	1
LPRT04E	3.85	1,1'-Biphenyl	650	UJ	ug/kg	17	38.235	1	73	8.9041	1
LPRT04E	3.85	Total PCB Congeners	1200	J	ug/kg	35	34.286	1	368	3.2609	1
LPRT04E	3.85	4,4'-DDD	32	J	ug/kg	2.2	14.545	1	19	1.6842	1
LPRT04E	3.85	4,4'-DDE	4.3	J	ug/kg	3.1	1.3871	1	103	0.0417	0
LPRT04E	3.85	4,4'-DDT	7.1	J	ug/kg	1.7	4.1765	1	11	0.6455	0
LPRT04E	3.85	Dieldrin	5	J	ug/kg	0.83	6.0241	1	2.9	1.7241	1
LPRT04F	3.95	Antimony	0.74	J	mg/kg	0.63	1.1746	1	2.4	0.3083	0
LPRT04F	3.95	Arsenic	4.7	J	mg/kg	7.4	0.6351	0	20	0.235	0
LPRT04F	3.95	Cadmium	1.1		mg/kg	0.38	2.8947	1	1.4	0.7857	0
LPRT04F	3.95	Chromium	58.8		mg/kg	49	1.2	1	141	0.417	0
LPRT04F	3.95	Copper	90.5		mg/kg	32	2.8281	1	94	0.9628	0
LPRT04F	3.95	Lead	114		mg/kg	30	3.8	1	94	1.2128	1
LPRT04F	3.95	Mercury	840		ug/kg	140	6	1	480	1.75	1
LPRT04F	3.95	Nickel	20.1		mg/kg	15	1.34	1	47	0.4277	0
LPRT04F	3.95	Silver	1.1		mg/kg	0.23	4.7826	1	1.1	1	0
LPRT04F	3.95	Zinc	200		mg/kg	94	2.1277	1	245	0.8163	0
LPRT04F	3.95	1-Methylnaphthalene	470		ug/kg	21	22.381	1	94	5	1
LPRT04F	3.95	1-Methylphenanthrene	5600	J	ug/kg	18	311.11	1	112	50	1
LPRT04F	3.95	2,6-Dimethylnaphthalene	580		ug/kg	25	23.2	1	133	4.3609	1
LPRT04F	3.95	2-Methylnaphthalene	420		ug/kg	21	20	1	128	3.2813	1
LPRT04F	3.95	Acenaphthene	460		ug/kg	19	24.211	1	116	3.9655	1
LPRT04F	3.95	Acenaphthylene	800		ug/kg	14	57.143	1	140	5.7143	1
LPRT04F	3.95	Anthracene	3500		ug/kg	34	102.94	1	290	12.069	1
LPRT04F	3.95	Benzo(a)anthracene	5300	J	ug/kg	61	86.885	1	446	11.883	1
LPRT04F	3.95	Benzo(a)pyrene	5100	J	ug/kg	69	73.913	1	520	9.8077	1
LPRT04F	3.95	Benzo(b/j)fluoranthene	5100		ug/kg	130	39.231	1	1107	4.607	1
LPRT04F	3.95	Benzo(g,h,i)perylene	3400		ug/kg	67	50.746	1	497	6.841	1
LPRT04F	3.95	Benzo(k)fluoranthene	1900		ug/kg	70	27.143	1	537	3.5382	1
LPRT04F	3.95	Chrysene	10000	J	ug/kg	82	121.95	1	650	15.385	1
LPRT04F	3.95	Dibenzo(a,h)anthracene	140	U	ug/kg	19	7.3684	1	113	1.2389	1
LPRT04F	3.95	Fluoranthene	10000	J	ug/kg	119	84.034	1	1034	9.6712	1
LPRT04F	3.95	Fluorene	1000	J	ug/kg	19	52.632	1	114	8.7719	1
LPRT04F	3.95	Indeno(1,2,3-cd)pyrene	2900		ug/kg	68	42.647	1	488	5.9426	1
LPRT04F	3.95	Naphthalene	500		ug/kg	30	16.667	1	217	2.3041	1
LPRT04F	3.95	Perylene	1000	J	ug/kg	74	13.514	1	453	2.2075	1
LPRT04F	3.95	Phenanthrene	6600	J	ug/kg	68	97.059	1	455	14.505	1
LPRT04F	3.95	Pyrene	19000	J	ug/kg	125	152	1	932	20.386	1
LPRT04F	3.95	1,1'-Biphenyl	290	U	ug/kg	17	17.059	1	73	3.9726	1
LPRT04F	3.95	Total PCB Congeners	470	J	ug/kg	35	13.429	1	368	1.2772	1
LPRT04F	3.95	4,4'-DDD	40	J	ug/kg	2.2	18.182	1	19	2.1053	1
LPRT04F	3.95	4,4'-DDE	18	J	ug/kg	3.1	5.8065	1	103	0.1748	0
LPRT04F	3.95	4,4'-DDT	14	J	ug/kg	1.7	8.2353	1	11	1.2727	1
LPRT04F	3.95	Dieldrin	19	J	ug/kg	0.83	22.892	1	2.9	6.5517	1
LPRT05A	4.12	Antimony	2.4	J	mg/kg	0.63	3.8095	1	2.4	1	0
LPRT05A	4.12	Arsenic	15.5	J	mg/kg	7.4	2.0946	1	20	0.775	0
LPRT05A	4.12	Cadmium	2.4	J	mg/kg	0.38	6.3158	1	1.4	1.7143	1
LPRT05A	4.12	Chromium	110	J	mg/kg	49	2.2449	1	141	0.7801	0
LPRT05A	4.12	Copper	280	J	mg/kg	32	8.75	1	94	2.9787	1
LPRT05A	4.12	Lead	281	J	mg/kg	30	9.3667	1	94	2.9894	1
LPRT05A	4.12	Mercury	2600	J	ug/kg	140	18.571	1	480	5.4167	1
LPRT05A	4.12	Nickel	36.1	J	mg/kg	15	2.4067	1	47	0.7681	0
LPRT05A	4.12	Silver	3.7	J	mg/kg	0.23	16.087	1	1.1	3.3636	1
LPRT05A	4.12	Zinc	508	J	mg/kg	94	5.4043	1	245	2.0735	1
LPRT05A	4.12	1-Methylnaphthalene	1800	J	ug/kg	21	85.714	1	94	19.149	1

Table B7-1b. Sediment chemistry LOE

Location ID	No. of Chemicals w/ T20 EF ≥ 1	No. of Chemicals w/ T50 EF ≥ 1	Sediment Chemistry LOE Weight

Table B7-1a. T20/T50 Screen of LPRSA Sediment Chemistry Data

Location ID	RM	Parameter	Result	Qualifier	Units	T20	T20 EF	T20 EF ≥ 1	T50	T50 EF	T50 EF ≥ 1
LPRT05A	4.12	1-Methylphenanthrene	13000	J	ug/kg	18	722.22	1	112	116.07	1
LPRT05A	4.12	2,6-Dimethylnaphthalene	840	J	ug/kg	25	33.6	1	133	6.3158	1
LPRT05A	4.12	2-Methylnaphthalene	3300	J	ug/kg	21	157.14	1	128	25.781	1
LPRT05A	4.12	Acenaphthene	22000	J	ug/kg	19	1157.9	1	116	189.66	1
LPRT05A	4.12	Acenaphthylene	3100	J	ug/kg	14	221.43	1	140	22.143	1
LPRT05A	4.12	Anthracene	19000	J	ug/kg	34	558.82	1	290	65.517	1
LPRT05A	4.12	Benzo(a)anthracene	13000	J	ug/kg	61	213.11	1	446	29.148	1
LPRT05A	4.12	Benzo(a)pyrene	9100	J	ug/kg	69	131.88	1	520	17.5	1
LPRT05A	4.12	Benzo(b/j)fluoranthene	9600	J	ug/kg	130	73.846	1	1107	8.6721	1
LPRT05A	4.12	Benzo(g,h,i)perylene	5900	J	ug/kg	67	88.06	1	497	11.871	1
LPRT05A	4.12	Benzo(k)fluoranthene	3800	J	ug/kg	70	54.286	1	537	7.0764	1
LPRT05A	4.12	Chrysene	19000	J	ug/kg	82	231.71	1	650	29.231	1
LPRT05A	4.12	Dibenzo(a,h)anthracene	57	UJ	ug/kg	19	3	1	113	0.5044	0
LPRT05A	4.12	Fluoranthene	18000	J	ug/kg	119	151.26	1	1034	17.408	1
LPRT05A	4.12	Fluorene	1100	J	ug/kg	19	57.895	1	114	9.6491	1
LPRT05A	4.12	Indeno(1,2,3-cd)pyrene	4800	J	ug/kg	68	70.588	1	488	9.8361	1
LPRT05A	4.12	Naphthalene	5300	J	ug/kg	30	176.67	1	217	24.424	1
LPRT05A	4.12	Perylene	1600	J	ug/kg	74	21.622	1	453	3.532	1
LPRT05A	4.12	Phenanthrene	8700	J	ug/kg	68	127.94	1	455	19.121	1
LPRT05A	4.12	Pyrene	27000	J	ug/kg	125	216	1	932	28.97	1
LPRT05A	4.12	1,1'-Biphenyl	390	J	ug/kg	17	22.941	1	73	5.3425	1
LPRT05A	4.12	Total PCB Congeners	670	J	ug/kg	35	19.143	1	368	1.8207	1
LPRT05A	4.12	4,4'-DDD	22	J	ug/kg	2.2	10	1	19	1.1579	1
LPRT05A	4.12	4,4'-DDE	24	J	ug/kg	3.1	7.7419	1	103	0.233	0
LPRT05A	4.12	4,4'-DDT	13	J	ug/kg	1.7	7.6471	1	11	1.1818	1
LPRT05A	4.12	Dieldrin	5.3	J	ug/kg	0.83	6.3855	1	2.9	1.8276	1
LPRT05B	4.14	Antimony	1.5	J	mg/kg	0.63	2.381	1	2.4	0.625	0
LPRT05B	4.14	Arsenic	11.7	J	mg/kg	7.4	1.5811	1	20	0.585	0
LPRT05B	4.14	Cadmium	3.3	J	mg/kg	0.38	8.6842	1	1.4	2.3571	1
LPRT05B	4.14	Chromium	116	J	mg/kg	49	2.3673	1	141	0.8227	0
LPRT05B	4.14	Copper	195	J	mg/kg	32	6.0938	1	94	2.0745	1
LPRT05B	4.14	Lead	224	J	mg/kg	30	7.4667	1	94	2.383	1
LPRT05B	4.14	Mercury	1900	J	ug/kg	140	13.571	1	480	3.9583	1
LPRT05B	4.14	Nickel	38	J	mg/kg	15	2.5333	1	47	0.8085	0
LPRT05B	4.14	Silver	2.9	J	mg/kg	0.23	12.609	1	1.1	2.6364	1
LPRT05B	4.14	Zinc	488	J	mg/kg	94	5.1915	1	245	1.9918	1
LPRT05B	4.14	1-Methylnaphthalene	180	J	ug/kg	21	8.5714	1	94	1.9149	1
LPRT05B	4.14	1-Methylphenanthrene	520	J	ug/kg	18	28.889	1	112	4.6429	1
LPRT05B	4.14	2,6-Dimethylnaphthalene	160	J	ug/kg	25	6.4	1	133	1.203	1
LPRT05B	4.14	2-Methylnaphthalene	240	J	ug/kg	21	11.429	1	128	1.875	1
LPRT05B	4.14	Acenaphthene	660	J	ug/kg	19	34.737	1	116	5.6897	1
LPRT05B	4.14	Acenaphthylene	510	J	ug/kg	14	36.429	1	140	3.6429	1
LPRT05B	4.14	Anthracene	890	J	ug/kg	34	26.176	1	290	3.069	1
LPRT05B	4.14	Benzo(a)anthracene	4200	J	ug/kg	61	68.852	1	446	9.417	1
LPRT05B	4.14	Benzo(a)pyrene	4300	J	ug/kg	69	62.319	1	520	8.2692	1
LPRT05B	4.14	Benzo(b/j)fluoranthene	5900	J	ug/kg	130	45.385	1	1107	5.3297	1
LPRT05B	4.14	Benzo(g,h,i)perylene	2500	J	ug/kg	67	37.313	1	497	5.0302	1
LPRT05B	4.14	Benzo(k)fluoranthene	2400	J	ug/kg	70	34.286	1	537	4.4693	1
LPRT05B	4.14	Chrysene	4800	J	ug/kg	82	58.537	1	650	7.3846	1
LPRT05B	4.14	Dibenzo(a,h)anthracene	470	J	ug/kg	19	24.737	1	113	4.1593	1
LPRT05B	4.14	Fluoranthene	9300	J	ug/kg	119	78.151	1	1034	8.9942	1
LPRT05B	4.14	Fluorene	360	J	ug/kg	19	18.947	1	114	3.1579	1
LPRT05B	4.14	Indeno(1,2,3-cd)pyrene	2300	J	ug/kg	68	33.824	1	488	4.7131	1
LPRT05B	4.14	Naphthalene	450	UJ	ug/kg	30	15	1	217	2.0737	1
LPRT05B	4.14	Perylene	820	J	ug/kg	74	11.081	1	453	1.8102	1
LPRT05B	4.14	Phenanthrene	3700	J	ug/kg	68	54.412	1	455	8.1319	1
LPRT05B	4.14	Pyrene	7300	J	ug/kg	125	58.4	1	932	7.8326	1
LPRT05B	4.14	1,1'-Biphenyl	720	UJ	ug/kg	17	42.353	1	73	9.863	1
LPRT05B	4.14	Total PCB Congeners	780	J	ug/kg	35	22.286	1	368	2.1196	1
LPRT05B	4.14	4,4'-DDD	31	J	ug/kg	2.2	14.091	1	19	1.6316	1
LPRT05B	4.14	4,4'-DDE	4.4	J	ug/kg	3.1	1.4194	1	103	0.0427	0
LPRT05B	4.14	4,4'-DDT	8.3	J	ug/kg	1.7	4.8824	1	11	0.7545	0
LPRT05B	4.14	Dieldrin	7.8	J	ug/kg	0.83	9.3976	1	2.9	2.6897	1
LPRT05C	4.19	Antimony	0.6	J	mg/kg	0.63	0.9524	0	2.4	0.25	0
LPRT05C	4.19	Arsenic	4.7	J	mg/kg	7.4	0.6351	0	20	0.235	0
LPRT05C	4.19	Cadmium	2.1	J	mg/kg	0.38	5.5263	1	1.4	1.5	1
LPRT05C	4.19	Chromium	68.2	J	mg/kg	49	1.3918	1	141	0.4837	0
LPRT05C	4.19	Copper	123	J	mg/kg	32	3.8438	1	94	1.3085	1
LPRT05C	4.19	Lead	165	J	mg/kg	30	5.5	1	94	1.7553	1
LPRT05C	4.19	Mercury	1600	J	ug/kg	140	11.429	1	480	3.3333	1
LPRT05C	4.19	Nickel	21.3	J	mg/kg	15	1.42	1	47	0.4532	0
LPRT05C	4.19	Silver	1.8	J	mg/kg	0.23	7.8261	1	1.1	1.6364	1

Table B7-1b. Sediment chemistry LOE

Location ID	No. of Chemicals w/ T20 EF ≥ 1	No. of Chemicals w/ T50 EF ≥ 1	Sediment Chemistry LOE Weight

Table B7-1a. T20/T50 Screen of LPRSA Sediment Chemistry Data

Location ID	RM	Parameter	Result	Qualifier	Units	T20	T20 EF	T20 EF ≥ 1	T50	T50 EF	T50 EF ≥ 1
LPRT05C	4.19	Zinc	349	J	mg/kg	94	3.7128	1	245	1.4245	1
LPRT05C	4.19	1-Methylnaphthalene	200	J	ug/kg	21	9.5238	1	94	2.1277	1
LPRT05C	4.19	1-Methylphenanthrene	310	J	ug/kg	18	17.222	1	112	2.7679	1
LPRT05C	4.19	2,6-Dimethylnaphthalene	170	J	ug/kg	25	6.8	1	133	1.2782	1
LPRT05C	4.19	2-Methylnaphthalene	350	J	ug/kg	21	16.667	1	128	2.7344	1
LPRT05C	4.19	Acenaphthene	340	J	ug/kg	19	17.895	1	116	2.931	1
LPRT05C	4.19	Acenaphthylene	560	J	ug/kg	14	40	1	140	4	1
LPRT05C	4.19	Anthracene	660	J	ug/kg	34	19.412	1	290	2.2759	1
LPRT05C	4.19	Benzo(a)anthracene	2700	J	ug/kg	61	44.262	1	446	6.0538	1
LPRT05C	4.19	Benzo(a)pyrene	3000	J	ug/kg	69	43.478	1	520	5.7692	1
LPRT05C	4.19	Benzo(b/j)fluoranthene	4000	J	ug/kg	130	30.769	1	1107	3.6134	1
LPRT05C	4.19	Benzo(g,h,i)perylene	1400	J	ug/kg	67	20.896	1	497	2.8169	1
LPRT05C	4.19	Benzo(k)fluoranthene	1500	J	ug/kg	70	21.429	1	537	2.7933	1
LPRT05C	4.19	Chrysene	3700	J	ug/kg	82	45.122	1	650	5.6923	1
LPRT05C	4.19	Dibenzo(a,h)anthracene	420	J	ug/kg	19	22.105	1	113	3.7168	1
LPRT05C	4.19	Fluoranthene	5500	J	ug/kg	119	46.218	1	1034	5.3191	1
LPRT05C	4.19	Fluorene	230	J	ug/kg	19	12.105	1	114	2.0175	1
LPRT05C	4.19	Indeno(1,2,3-cd)pyrene	1700	J	ug/kg	68	25	1	488	3.4836	1
LPRT05C	4.19	Naphthalene	600	J	ug/kg	30	20	1	217	2.765	1
LPRT05C	4.19	Perylene	570	J	ug/kg	74	7.7027	1	453	1.2583	1
LPRT05C	4.19	Phenanthrene	2400	J	ug/kg	68	35.294	1	455	5.2747	1
LPRT05C	4.19	Pyrene	4000	J	ug/kg	125	32	1	932	4.2918	1
LPRT05C	4.19	1,1'-Biphenyl	420	UJ	ug/kg	17	24.706	1	73	5.7534	1
LPRT05C	4.19	Total PCB Congeners	1000	J	ug/kg	35	28.571	1	368	2.7174	1
LPRT05C	4.19	4,4'-DDD	26	J	ug/kg	2.2	11.818	1	19	1.3684	1
LPRT05C	4.19	4,4'-DDE	26	J	ug/kg	3.1	8.3871	1	103	0.2524	0
LPRT05C	4.19	4,4'-DDT	11	J	ug/kg	1.7	6.4706	1	11	1	0
LPRT05C	4.19	Dieldrin	5	J	ug/kg	0.83	6.0241	1	2.9	1.7241	1
LPRT05D	4.35	Antimony	0.87	J	mg/kg	0.63	1.381	1	2.4	0.3625	0
LPRT05D	4.35	Arsenic	10.1	J	mg/kg	7.4	1.3649	1	20	0.505	0
LPRT05D	4.35	Cadmium	2.8	J	mg/kg	0.38	7.3684	1	1.4	2	1
LPRT05D	4.35	Chromium	129	J	mg/kg	49	2.6327	1	141	0.9149	0
LPRT05D	4.35	Copper	180	J	mg/kg	32	5.625	1	94	1.9149	1
LPRT05D	4.35	Lead	202	J	mg/kg	30	6.7333	1	94	2.1489	1
LPRT05D	4.35	Mercury	2300	J	ug/kg	140	16.429	1	480	4.7917	1
LPRT05D	4.35	Nickel	30.3	J	mg/kg	15	2.02	1	47	0.6447	0
LPRT05D	4.35	Silver	2.7	J	mg/kg	0.23	11.739	1	1.1	2.4545	1
LPRT05D	4.35	Zinc	467	J	mg/kg	94	4.9681	1	245	1.9061	1
LPRT05D	4.35	1-Methylnaphthalene	150	J	ug/kg	21	7.1429	1	94	1.5957	1
LPRT05D	4.35	1-Methylphenanthrene	300	J	ug/kg	18	16.667	1	112	2.6786	1
LPRT05D	4.35	2,6-Dimethylnaphthalene	160	J	ug/kg	25	6.4	1	133	1.203	1
LPRT05D	4.35	2-Methylnaphthalene	270	J	ug/kg	21	12.857	1	128	2.1094	1
LPRT05D	4.35	Acenaphthene	270	J	ug/kg	19	14.211	1	116	2.3276	1
LPRT05D	4.35	Acenaphthylene	410	J	ug/kg	14	29.286	1	140	2.9286	1
LPRT05D	4.35	Anthracene	640	J	ug/kg	34	18.824	1	290	2.2069	1
LPRT05D	4.35	Benzo(a)anthracene	3300	J	ug/kg	61	54.098	1	446	7.3991	1
LPRT05D	4.35	Benzo(a)pyrene	3900	J	ug/kg	69	56.522	1	520	7.5	1
LPRT05D	4.35	Benzo(b/j)fluoranthene	3500	J	ug/kg	130	26.923	1	1107	3.1617	1
LPRT05D	4.35	Benzo(g,h,i)perylene	2600	J	ug/kg	67	38.806	1	497	5.2314	1
LPRT05D	4.35	Benzo(k)fluoranthene	1900	J	ug/kg	70	27.143	1	537	3.5382	1
LPRT05D	4.35	Chrysene	4400	J	ug/kg	82	53.659	1	650	6.7692	1
LPRT05D	4.35	Dibenzo(a,h)anthracene	460	J	ug/kg	19	24.211	1	113	4.0708	1
LPRT05D	4.35	Fluoranthene	6200	J	ug/kg	119	52.101	1	1034	5.9961	1
LPRT05D	4.35	Fluorene	230	J	ug/kg	19	12.105	1	114	2.0175	1
LPRT05D	4.35	Indeno(1,2,3-cd)pyrene	2200	J	ug/kg	68	32.353	1	488	4.5082	1
LPRT05D	4.35	Naphthalene	550	J	ug/kg	30	18.333	1	217	2.5346	1
LPRT05D	4.35	Perylene	820	J	ug/kg	74	11.081	1	453	1.8102	1
LPRT05D	4.35	Phenanthrene	1900	J	ug/kg	68	27.941	1	455	4.1758	1
LPRT05D	4.35	Pyrene	4600	J	ug/kg	125	36.8	1	932	4.9356	1
LPRT05D	4.35	1,1'-Biphenyl	510	UJ	ug/kg	17	30	1	73	6.9863	1
LPRT05D	4.35	Total PCB Congeners	950	J	ug/kg	35	27.143	1	368	2.5815	1
LPRT05D	4.35	4,4'-DDD	43	J	ug/kg	2.2	19.545	1	19	2.2632	1
LPRT05D	4.35	4,4'-DDE	5.8	J	ug/kg	3.1	1.871	1	103	0.0563	0
LPRT05D	4.35	4,4'-DDT	410	J	ug/kg	1.7	241.18	1	11	37.273	1
LPRT05D	4.35	Dieldrin	6.5	J	ug/kg	0.83	7.8313	1	2.9	2.2414	1
LPRT05E	4.79	Antimony	0.73	J	mg/kg	0.63	1.1587	1	2.4	0.3042	0
LPRT05E	4.79	Arsenic	6.1		mg/kg	7.4	0.8243	0	20	0.305	0
LPRT05E	4.79	Cadmium	2.1	J	mg/kg	0.38	5.5263	1	1.4	1.5	1
LPRT05E	4.79	Chromium	75.5	J	mg/kg	49	1.5408	1	141	0.5355	0
LPRT05E	4.79	Copper	128	J	mg/kg	32	4	1	94	1.3617	1
LPRT05E	4.79	Lead	167	J	mg/kg	30	5.5667	1	94	1.7766	1
LPRT05E	4.79	Mercury	1300	J	ug/kg	140	9.2857	1	480	2.7083	1

Table B7-1b. Sediment chemistry LOE

Location ID	No. of Chemicals w/ T20 EF ≥ 1	No. of Chemicals w/ T50 EF ≥ 1	Sediment Chemistry LOE Weight

Table B7-1a. T20/T50 Screen of LPRSA Sediment Chemistry Data

Location ID	RM	Parameter	Result	Qualifier	Units	T20	T20 EF	T20 EF ≥ 1	T50	T50 EF	T50 EF ≥ 1
LPRT05E	4.79	Nickel	22.3	J	mg/kg	15	1.4867	1	47	0.4745	0
LPRT05E	4.79	Silver	2.1	J	mg/kg	0.23	9.1304	1	1.1	1.9091	1
LPRT05E	4.79	Zinc	331	J	mg/kg	94	3.5213	1	245	1.351	1
LPRT05E	4.79	1-Methylnaphthalene	150		ug/kg	21	7.1429	1	94	1.5957	1
LPRT05E	4.79	1-Methylphenanthrene	180	J	ug/kg	18	10	1	112	1.6071	1
LPRT05E	4.79	2,6-Dimethylnaphthalene	110		ug/kg	25	4.4	1	133	0.8271	0
LPRT05E	4.79	2-Methylnaphthalene	230		ug/kg	21	10.952	1	128	1.7969	1
LPRT05E	4.79	Acenaphthene	290	J	ug/kg	19	15.263	1	116	2.5	1
LPRT05E	4.79	Acenaphthylene	300		ug/kg	14	21.429	1	140	2.1429	1
LPRT05E	4.79	Anthracene	400	J	ug/kg	34	11.765	1	290	1.3793	1
LPRT05E	4.79	Benzo(a)anthracene	1500		ug/kg	61	24.59	1	446	3.3632	1
LPRT05E	4.79	Benzo(a)pyrene	2600		ug/kg	69	37.681	1	520	5	1
LPRT05E	4.79	Benzo(b/j)fluoranthene	2400		ug/kg	130	18.462	1	1107	2.168	1
LPRT05E	4.79	Benzo(g,h,i)perylene	1500		ug/kg	67	22.388	1	497	3.0181	1
LPRT05E	4.79	Benzo(k)fluoranthene	1100		ug/kg	70	15.714	1	537	2.0484	1
LPRT05E	4.79	Chrysene	1800		ug/kg	82	21.951	1	650	2.7692	1
LPRT05E	4.79	Dibenzo(a,h)anthracene	430	J	ug/kg	19	22.632	1	113	3.8053	1
LPRT05E	4.79	Fluoranthene	3300		ug/kg	119	27.731	1	1034	3.1915	1
LPRT05E	4.79	Fluorene	250	J	ug/kg	19	13.158	1	114	2.193	1
LPRT05E	4.79	Indeno(1,2,3-cd)pyrene	1200		ug/kg	68	17.647	1	488	2.459	1
LPRT05E	4.79	Naphthalene	440		ug/kg	30	14.667	1	217	2.0276	1
LPRT05E	4.79	Perylene	440		ug/kg	74	5.9459	1	453	0.9713	0
LPRT05E	4.79	Phenanthrene	1100		ug/kg	68	16.176	1	455	2.4176	1
LPRT05E	4.79	Pyrene	2600		ug/kg	125	20.8	1	932	2.7897	1
LPRT05E	4.79	1,1'-Biphenyl	440	UJ	ug/kg	17	25.882	1	73	6.0274	1
LPRT05E	4.79	Total PCB Congeners	650	J	ug/kg	35	18.571	1	368	1.7663	1
LPRT05E	4.79	4,4'-DDD	24		ug/kg	2.2	10.909	1	19	1.2632	1
LPRT05E	4.79	4,4'-DDE	29		ug/kg	3.1	9.3548	1	103	0.2816	0
LPRT05E	4.79	4,4'-DDT	5.6		ug/kg	1.7	3.2941	1	11	0.5091	0
LPRT05E	4.79	Dieldrin	2.5		ug/kg	0.83	3.012	1	2.9	0.8621	0
LPRT05F	4.96	Antimony	1.1	J	mg/kg	0.63	1.746	1	2.4	0.4583	0
LPRT05F	4.96	Arsenic	6.9	J	mg/kg	7.4	0.9324	0	20	0.345	0
LPRT05F	4.96	Cadmium	4.7	J	mg/kg	0.38	12.368	1	1.4	3.3571	1
LPRT05F	4.96	Chromium	113	J	mg/kg	49	2.3061	1	141	0.8014	0
LPRT05F	4.96	Copper	170	J	mg/kg	32	5.3125	1	94	1.8085	1
LPRT05F	4.96	Lead	220	J	mg/kg	30	7.3333	1	94	2.3404	1
LPRT05F	4.96	Mercury	1800	J	ug/kg	140	12.857	1	480	3.75	1
LPRT05F	4.96	Nickel	29.4	J	mg/kg	15	1.96	1	47	0.6255	0
LPRT05F	4.96	Silver	2.6	J	mg/kg	0.23	11.304	1	1.1	2.3636	1
LPRT05F	4.96	Zinc	463	J	mg/kg	94	4.9255	1	245	1.8898	1
LPRT05F	4.96	1-Methylnaphthalene	110	J	ug/kg	21	5.2381	1	94	1.1702	1
LPRT05F	4.96	1-Methylphenanthrene	210	J	ug/kg	18	11.667	1	112	1.875	1
LPRT05F	4.96	2,6-Dimethylnaphthalene	100	J	ug/kg	25	4	1	133	0.7519	0
LPRT05F	4.96	2-Methylnaphthalene	250	J	ug/kg	21	11.905	1	128	1.9531	1
LPRT05F	4.96	Acenaphthene	190	J	ug/kg	19	10	1	116	1.6379	1
LPRT05F	4.96	Acenaphthylene	330	J	ug/kg	14	23.571	1	140	2.3571	1
LPRT05F	4.96	Anthracene	640	J	ug/kg	34	18.824	1	290	2.2069	1
LPRT05F	4.96	Benzo(a)anthracene	3000	J	ug/kg	61	49.18	1	446	6.7265	1
LPRT05F	4.96	Benzo(a)pyrene	2100	J	ug/kg	69	30.435	1	520	4.0385	1
LPRT05F	4.96	Benzo(b/j)fluoranthene	3500	J	ug/kg	130	26.923	1	1107	3.1617	1
LPRT05F	4.96	Benzo(g,h,i)perylene	2300	J	ug/kg	67	34.328	1	497	4.6278	1
LPRT05F	4.96	Benzo(k)fluoranthene	1500	J	ug/kg	70	21.429	1	537	2.7933	1
LPRT05F	4.96	Chrysene	2900	J	ug/kg	82	35.366	1	650	4.4615	1
LPRT05F	4.96	Dibenzo(a,h)anthracene	500	J	ug/kg	19	26.316	1	113	4.4248	1
LPRT05F	4.96	Fluoranthene	4800	J	ug/kg	119	40.336	1	1034	4.6422	1
LPRT05F	4.96	Fluorene	210	J	ug/kg	19	11.053	1	114	1.8421	1
LPRT05F	4.96	Indeno(1,2,3-cd)pyrene	1800	J	ug/kg	68	26.471	1	488	3.6885	1
LPRT05F	4.96	Naphthalene	390	UJ	ug/kg	30	13	1	217	1.7972	1
LPRT05F	4.96	Perylene	560	J	ug/kg	74	7.5676	1	453	1.2362	1
LPRT05F	4.96	Phenanthrene	1800	J	ug/kg	68	26.471	1	455	3.956	1
LPRT05F	4.96	Pyrene	3600	J	ug/kg	125	28.8	1	932	3.8627	1
LPRT05F	4.96	1,1'-Biphenyl	490	UJ	ug/kg	17	28.824	1	73	6.7123	1
LPRT05F	4.96	Total PCB Congeners	1200	J	ug/kg	35	34.286	1	368	3.2609	1
LPRT05F	4.96	4,4'-DDD	29	J	ug/kg	2.2	13.182	1	19	1.5263	1
LPRT05F	4.96	4,4'-DDE	5.6	J	ug/kg	3.1	1.8065	1	103	0.0544	0
LPRT05F	4.96	4,4'-DDT	6.9	J	ug/kg	1.7	4.0588	1	11	0.6273	0
LPRT05F	4.96	Dieldrin	5.7	J	ug/kg	0.83	6.8675	1	2.9	1.9655	1
LPRT06A	5.02	Antimony	0.88	J	mg/kg	0.63	1.3968	1	2.4	0.3667	0
LPRT06A	5.02	Arsenic	9	J	mg/kg	7.4	1.2162	1	20	0.45	0
LPRT06A	5.02	Cadmium	3.4	J	mg/kg	0.38	8.9474	1	1.4	2.4286	1
LPRT06A	5.02	Chromium	130	J	mg/kg	49	2.6531	1	141	0.922	0
LPRT06A	5.02	Copper	205	J	mg/kg	32	6.4063	1	94	2.1809	1

Table B7-1b. Sediment chemistry LOE

Location ID	No. of Chemicals w/ T20 EF ≥ 1	No. of Chemicals w/ T50 EF ≥ 1	Sediment Chemistry LOE Weight

Table B7-1a. T20/T50 Screen of LPRSA Sediment Chemistry Data

Location ID	RM	Parameter	Result	Qualifier	Units	T20	T20 EF	T20 EF ≥ 1	T50	T50 EF	T50 EF ≥ 1
LPRT06A	5.02	Lead	235	J	mg/kg	30	7.8333	1	94	2.5	1
LPRT06A	5.02	Mercury	2300	J	ug/kg	140	16.429	1	480	4.7917	1
LPRT06A	5.02	Nickel	31.1	J	mg/kg	15	2.0733	1	47	0.6617	0
LPRT06A	5.02	Silver	3	J	mg/kg	0.23	13.043	1	1.1	2.7273	1
LPRT06A	5.02	Zinc	583	J	mg/kg	94	6.2021	1	245	2.3796	1
LPRT06A	5.02	1-Methylnaphthalene	120	J	ug/kg	21	5.7143	1	94	1.2766	1
LPRT06A	5.02	1-Methylphenanthrene	230	J	ug/kg	18	12.778	1	112	2.0536	1
LPRT06A	5.02	2,6-Dimethylnaphthalene	130	J	ug/kg	25	5.2	1	133	0.9774	0
LPRT06A	5.02	2-Methylnaphthalene	230	J	ug/kg	21	10.952	1	128	1.7969	1
LPRT06A	5.02	Acenaphthene	200	J	ug/kg	19	10.526	1	116	1.7241	1
LPRT06A	5.02	Acenaphthylene	390	J	ug/kg	14	27.857	1	140	2.7857	1
LPRT06A	5.02	Anthracene	540	J	ug/kg	34	15.882	1	290	1.8621	1
LPRT06A	5.02	Benzo(a)anthracene	2300	J	ug/kg	61	37.705	1	446	5.157	1
LPRT06A	5.02	Benzo(a)pyrene	3800	J	ug/kg	69	55.072	1	520	7.3077	1
LPRT06A	5.02	Benzo(b/j)fluoranthene	3800	J	ug/kg	130	29.231	1	1107	3.4327	1
LPRT06A	5.02	Benzo(g,h,i)perylene	2800	J	ug/kg	67	41.791	1	497	5.6338	1
LPRT06A	5.02	Benzo(k)fluoranthene	1600	J	ug/kg	70	22.857	1	537	2.9795	1
LPRT06A	5.02	Chrysene	2600	J	ug/kg	82	31.707	1	650	4	1
LPRT06A	5.02	Dibenzo(a,h)anthracene	480	J	ug/kg	19	25.263	1	113	4.2478	1
LPRT06A	5.02	Fluoranthene	4300	J	ug/kg	119	36.134	1	1034	4.1586	1
LPRT06A	5.02	Fluorene	240	J	ug/kg	19	12.632	1	114	2.1053	1
LPRT06A	5.02	Indeno(1,2,3-cd)pyrene	2300	J	ug/kg	68	33.824	1	488	4.7131	1
LPRT06A	5.02	Naphthalene	540	J	ug/kg	30	18	1	217	2.4885	1
LPRT06A	5.02	Perylene	720	J	ug/kg	74	9.7297	1	453	1.5894	1
LPRT06A	5.02	Phenanthrene	1400	J	ug/kg	68	20.588	1	455	3.0769	1
LPRT06A	5.02	Pyrene	3400	J	ug/kg	125	27.2	1	932	3.6481	1
LPRT06A	5.02	1,1'-Biphenyl	580	UJ	ug/kg	17	34.118	1	73	7.9452	1
LPRT06A	5.02	Total PCB Congeners	1000	J	ug/kg	35	28.571	1	368	2.7174	1
LPRT06A	5.02	4,4'-DDD	30	J	ug/kg	2.2	13.636	1	19	1.5789	1
LPRT06A	5.02	4,4'-DDE	34	J	ug/kg	3.1	10.968	1	103	0.3301	0
LPRT06A	5.02	4,4'-DDT	10	J	ug/kg	1.7	5.8824	1	11	0.9091	0
LPRT06A	5.02	Dieldrin	5.5	J	ug/kg	0.83	6.6265	1	2.9	1.8966	1
LPRT06B	5.08	Antimony	0.87	J	mg/kg	0.63	1.381	1	2.4	0.3625	0
LPRT06B	5.08	Arsenic	9.2	J	mg/kg	7.4	1.2432	1	20	0.46	0
LPRT06B	5.08	Cadmium	3.3	J	mg/kg	0.38	8.6842	1	1.4	2.3571	1
LPRT06B	5.08	Chromium	127	J	mg/kg	49	2.5918	1	141	0.9007	0
LPRT06B	5.08	Copper	196	J	mg/kg	32	6.125	1	94	2.0851	1
LPRT06B	5.08	Lead	221	J	mg/kg	30	7.3667	1	94	2.3511	1
LPRT06B	5.08	Mercury	2200	J	ug/kg	140	15.714	1	480	4.5833	1
LPRT06B	5.08	Nickel	31.9	J	mg/kg	15	2.1267	1	47	0.6787	0
LPRT06B	5.08	Silver	3	J	mg/kg	0.23	13.043	1	1.1	2.7273	1
LPRT06B	5.08	Zinc	543	J	mg/kg	94	5.7766	1	245	2.2163	1
LPRT06B	5.08	1-Methylnaphthalene	140	J	ug/kg	21	6.6667	1	94	1.4894	1
LPRT06B	5.08	1-Methylphenanthrene	240	J	ug/kg	18	13.333	1	112	2.1429	1
LPRT06B	5.08	2,6-Dimethylnaphthalene	150	J	ug/kg	25	6	1	133	1.1278	1
LPRT06B	5.08	2-Methylnaphthalene	270	J	ug/kg	21	12.857	1	128	2.1094	1
LPRT06B	5.08	Acenaphthene	230	J	ug/kg	19	12.105	1	116	1.9828	1
LPRT06B	5.08	Acenaphthylene	420	J	ug/kg	14	30	1	140	3	1
LPRT06B	5.08	Anthracene	580	J	ug/kg	34	17.059	1	290	2	1
LPRT06B	5.08	Benzo(a)anthracene	2600	J	ug/kg	61	42.623	1	446	5.8296	1
LPRT06B	5.08	Benzo(a)pyrene	3300	J	ug/kg	69	47.826	1	520	6.3462	1
LPRT06B	5.08	Benzo(b/j)fluoranthene	3700	J	ug/kg	130	28.462	1	1107	3.3424	1
LPRT06B	5.08	Benzo(g,h,i)perylene	3100	J	ug/kg	67	46.269	1	497	6.2374	1
LPRT06B	5.08	Benzo(k)fluoranthene	2000	J	ug/kg	70	28.571	1	537	3.7244	1
LPRT06B	5.08	Chrysene	2600	J	ug/kg	82	31.707	1	650	4	1
LPRT06B	5.08	Dibenzo(a,h)anthracene	640	J	ug/kg	19	33.684	1	113	5.6637	1
LPRT06B	5.08	Fluoranthene	4300	J	ug/kg	119	36.134	1	1034	4.1586	1
LPRT06B	5.08	Fluorene	260	J	ug/kg	19	13.684	1	114	2.2807	1
LPRT06B	5.08	Indeno(1,2,3-cd)pyrene	2600	J	ug/kg	68	38.235	1	488	5.3279	1
LPRT06B	5.08	Naphthalene	630	J	ug/kg	30	21	1	217	2.9032	1
LPRT06B	5.08	Perylene	850	J	ug/kg	74	11.486	1	453	1.8764	1
LPRT06B	5.08	Phenanthrene	1400	J	ug/kg	68	20.588	1	455	3.0769	1
LPRT06B	5.08	Pyrene	3500	J	ug/kg	125	28	1	932	3.7554	1
LPRT06B	5.08	1,1'-Biphenyl	590	UJ	ug/kg	17	34.706	1	73	8.0822	1
LPRT06B	5.08	Total PCB Congeners	1000	J	ug/kg	35	28.571	1	368	2.7174	1
LPRT06B	5.08	4,4'-DDD	31	J	ug/kg	2.2	14.091	1	19	1.6316	1
LPRT06B	5.08	4,4'-DDE	35	J	ug/kg	3.1	11.29	1	103	0.3398	0
LPRT06B	5.08	4,4'-DDT	6.9	J	ug/kg	1.7	4.0588	1	11	0.6273	0
LPRT06B	5.08	Dieldrin	6.3	J	ug/kg	0.83	7.5904	1	2.9	2.1724	1
LPRT06C	5.52	Antimony	0.91	J	mg/kg	0.63	1.4444	1	2.4	0.3792	0
LPRT06C	5.52	Arsenic	3.1	J	mg/kg	7.4	0.4189	0	20	0.155	0
LPRT06C	5.52	Cadmium	1.5		mg/kg	0.38	3.9474	1	1.4	1.0714	1

Table B7-1b. Sediment chemistry LOE

Location ID	No. of Chemicals w/ T20 EF ≥ 1	No. of Chemicals w/ T50 EF ≥ 1	Sediment Chemistry LOE Weight

Table B7-1a. T20/T50 Screen of LPRSA Sediment Chemistry Data

Location ID	RM	Parameter	Result	Qualifier	Units	T20	T20 EF	T20 EF ≥ 1	T50	T50 EF	T50 EF ≥ 1
LPRT06C	5.52	Chromium	54.7		mg/kg	49	1.1163	1	141	0.3879	0
LPRT06C	5.52	Copper	95.2		mg/kg	32	2.975	1	94	1.0128	1
LPRT06C	5.52	Lead	192		mg/kg	30	6.4	1	94	2.0426	1
LPRT06C	5.52	Mercury	890		ug/kg	140	6.3571	1	480	1.8542	1
LPRT06C	5.52	Nickel	15.7		mg/kg	15	1.0467	1	47	0.334	0
LPRT06C	5.52	Silver	1.2		mg/kg	0.23	5.2174	1	1.1	1.0909	1
LPRT06C	5.52	Zinc	293		mg/kg	94	3.117	1	245	1.1959	1
LPRT06C	5.52	1-Methylnaphthalene	200	J	ug/kg	21	9.5238	1	94	2.1277	1
LPRT06C	5.52	1-Methylphenanthrene	780	J	ug/kg	18	43.333	1	112	6.9643	1
LPRT06C	5.52	2,6-Dimethylnaphthalene	160	J	ug/kg	25	6.4	1	133	1.203	1
LPRT06C	5.52	2-Methylnaphthalene	310	J	ug/kg	21	14.762	1	128	2.4219	1
LPRT06C	5.52	Acenaphthene	500	J	ug/kg	19	26.316	1	116	4.3103	1
LPRT06C	5.52	Acenaphthylene	850	J	ug/kg	14	60.714	1	140	6.0714	1
LPRT06C	5.52	Anthracene	2100	J	ug/kg	34	61.765	1	290	7.2414	1
LPRT06C	5.52	Benzo(a)anthracene	4700	J	ug/kg	61	77.049	1	446	10.538	1
LPRT06C	5.52	Benzo(a)pyrene	4300	J	ug/kg	69	62.319	1	520	8.2692	1
LPRT06C	5.52	Benzo(b/j)fluoranthene	4900	J	ug/kg	130	37.692	1	1107	4.4264	1
LPRT06C	5.52	Benzo(g,h,i)perylene	2400	J	ug/kg	67	35.821	1	497	4.829	1
LPRT06C	5.52	Benzo(k)fluoranthene	2000	J	ug/kg	70	28.571	1	537	3.7244	1
LPRT06C	5.52	Chrysene	5900	J	ug/kg	82	71.951	1	650	9.0769	1
LPRT06C	5.52	Dibenzo(a,h)anthracene	570	J	ug/kg	19	30	1	113	5.0442	1
LPRT06C	5.52	Fluoranthene	8100	J	ug/kg	119	68.067	1	1034	7.8337	1
LPRT06C	5.52	Fluorene	500	J	ug/kg	19	26.316	1	114	4.386	1
LPRT06C	5.52	Indeno(1,2,3-cd)pyrene	2500	J	ug/kg	68	36.765	1	488	5.123	1
LPRT06C	5.52	Naphthalene	450	J	ug/kg	30	15	1	217	2.0737	1
LPRT06C	5.52	Perylene	800	J	ug/kg	74	10.811	1	453	1.766	1
LPRT06C	5.52	Phenanthrene	3500	J	ug/kg	68	51.471	1	455	7.6923	1
LPRT06C	5.52	Pyrene	11000	J	ug/kg	125	88	1	932	11.803	1
LPRT06C	5.52	1,1'-Biphenyl	360	U	ug/kg	17	21.176	1	73	4.9315	1
LPRT06C	5.52	Total PCB Congeners	570	J	ug/kg	35	16.286	1	368	1.5489	1
LPRT06C	5.52	4,4'-DDD	25	J	ug/kg	2.2	11.364	1	19	1.3158	1
LPRT06C	5.52	4,4'-DDE	20	J	ug/kg	3.1	6.4516	1	103	0.1942	0
LPRT06C	5.52	4,4'-DDT	5.5	J	ug/kg	1.7	3.2353	1	11	0.5	0
LPRT06C	5.52	Dieldrin	4.3	J	ug/kg	0.83	5.1807	1	2.9	1.4828	1
LPRT06D	5.54	Antimony	0.93	J	mg/kg	0.63	1.4762	1	2.4	0.3875	0
LPRT06D	5.54	Arsenic	3.8	J	mg/kg	7.4	0.5135	0	20	0.19	0
LPRT06D	5.54	Cadmium	1.5	J	mg/kg	0.38	3.9474	1	1.4	1.0714	1
LPRT06D	5.54	Chromium	57.3	J	mg/kg	49	1.1694	1	141	0.4064	0
LPRT06D	5.54	Copper	112	J	mg/kg	32	3.5	1	94	1.1915	1
LPRT06D	5.54	Lead	380	J	mg/kg	30	12.667	1	94	4.0426	1
LPRT06D	5.54	Mercury	810		ug/kg	140	5.7857	1	480	1.6875	1
LPRT06D	5.54	Nickel	17.8	J	mg/kg	15	1.1867	1	47	0.3787	0
LPRT06D	5.54	Silver	0.99	J	mg/kg	0.23	4.3043	1	1.1	0.9	0
LPRT06D	5.54	Zinc	288	J	mg/kg	94	3.0638	1	245	1.1755	1
LPRT06D	5.54	1-Methylnaphthalene	170		ug/kg	21	8.0952	1	94	1.8085	1
LPRT06D	5.54	1-Methylphenanthrene	340	J	ug/kg	18	18.889	1	112	3.0357	1
LPRT06D	5.54	2,6-Dimethylnaphthalene	140		ug/kg	25	5.6	1	133	1.0526	1
LPRT06D	5.54	2-Methylnaphthalene	260		ug/kg	21	12.381	1	128	2.0313	1
LPRT06D	5.54	Acenaphthene	480	J	ug/kg	19	25.263	1	116	4.1379	1
LPRT06D	5.54	Acenaphthylene	510		ug/kg	14	36.429	1	140	3.6429	1
LPRT06D	5.54	Anthracene	870	J	ug/kg	34	25.588	1	290	3	1
LPRT06D	5.54	Benzo(a)anthracene	3800		ug/kg	61	62.295	1	446	8.5202	1
LPRT06D	5.54	Benzo(a)pyrene	3600		ug/kg	69	52.174	1	520	6.9231	1
LPRT06D	5.54	Benzo(b/j)fluoranthene	4200		ug/kg	130	32.308	1	1107	3.794	1
LPRT06D	5.54	Benzo(g,h,i)perylene	2400		ug/kg	67	35.821	1	497	4.829	1
LPRT06D	5.54	Benzo(k)fluoranthene	1500		ug/kg	70	21.429	1	537	2.7933	1
LPRT06D	5.54	Chrysene	3400		ug/kg	82	41.463	1	650	5.2308	1
LPRT06D	5.54	Dibenzo(a,h)anthracene	550	J	ug/kg	19	28.947	1	113	4.8673	1
LPRT06D	5.54	Fluoranthene	6800	J	ug/kg	119	57.143	1	1034	6.5764	1
LPRT06D	5.54	Fluorene	370	J	ug/kg	19	19.474	1	114	3.2456	1
LPRT06D	5.54	Indeno(1,2,3-cd)pyrene	3400		ug/kg	68	50	1	488	6.9672	1
LPRT06D	5.54	Naphthalene	440		ug/kg	30	14.667	1	217	2.0276	1
LPRT06D	5.54	Perylene	820		ug/kg	74	11.081	1	453	1.8102	1
LPRT06D	5.54	Phenanthrene	3100		ug/kg	68	45.588	1	455	6.8132	1
LPRT06D	5.54	Pyrene	5100	J	ug/kg	125	40.8	1	932	5.4721	1
LPRT06D	5.54	1,1'-Biphenyl	370	UJ	ug/kg	17	21.765	1	73	5.0685	1
LPRT06D	5.54	Total PCB Congeners	480	J	ug/kg	35	13.714	1	368	1.3043	1
LPRT06D	5.54	4,4'-DDD	28		ug/kg	2.2	12.727	1	19	1.4737	1
LPRT06D	5.54	4,4'-DDE	20		ug/kg	3.1	6.4516	1	103	0.1942	0
LPRT06D	5.54	4,4'-DDT	7.8		ug/kg	1.7	4.5882	1	11	0.7091	0
LPRT06D	5.54	Dieldrin	5.4		ug/kg	0.83	6.506	1	2.9	1.8621	1
LPRT06E	5.79	Antimony	1.6	J	mg/kg	0.63	2.5397	1	2.4	0.6667	0

Table B7-1b. Sediment chemistry LOE

Location ID	No. of Chemicals w/ T20 EF ≥ 1	No. of Chemicals w/ T50 EF ≥ 1	Sediment Chemistry LOE Weight

Table B7-1a. T20/T50 Screen of LPRSA Sediment Chemistry Data

Location ID	RM	Parameter	Result	Qualifier	Units	T20	T20 EF	T20 EF ≥ 1	T50	T50 EF	T50 EF ≥ 1
LPRT06E	5.79	Arsenic	3.8	J	mg/kg	7.4	0.5135	0	20	0.19	0
LPRT06E	5.79	Cadmium	1.7	J	mg/kg	0.38	4.4737	1	1.4	1.2143	1
LPRT06E	5.79	Chromium	51.2	J	mg/kg	49	1.0449	1	141	0.3631	0
LPRT06E	5.79	Copper	115	J	mg/kg	32	3.5938	1	94	1.2234	1
LPRT06E	5.79	Lead	232	J	mg/kg	30	7.7333	1	94	2.4681	1
LPRT06E	5.79	Mercury	950		ug/kg	140	6.7857	1	480	1.9792	1
LPRT06E	5.79	Nickel	16.7	J	mg/kg	15	1.1133	1	47	0.3553	0
LPRT06E	5.79	Silver	1.1	J	mg/kg	0.23	4.7826	1	1.1	1	0
LPRT06E	5.79	Zinc	318	J	mg/kg	94	3.383	1	245	1.298	1
LPRT06E	5.79	1-Methylnaphthalene	190		ug/kg	21	9.0476	1	94	2.0213	1
LPRT06E	5.79	1-Methylphenanthrene	490	J	ug/kg	18	27.222	1	112	4.375	1
LPRT06E	5.79	2,6-Dimethylnaphthalene	150		ug/kg	25	6	1	133	1.1278	1
LPRT06E	5.79	2-Methylnaphthalene	290		ug/kg	21	13.81	1	128	2.2656	1
LPRT06E	5.79	Acenaphthene	760	J	ug/kg	19	40	1	116	6.5517	1
LPRT06E	5.79	Acenaphthylene	430		ug/kg	14	30.714	1	140	3.0714	1
LPRT06E	5.79	Anthracene	990	J	ug/kg	34	29.118	1	290	3.4138	1
LPRT06E	5.79	Benzo(a)anthracene	5600	J	ug/kg	61	91.803	1	446	12.556	1
LPRT06E	5.79	Benzo(a)pyrene	5000	J	ug/kg	69	72.464	1	520	9.6154	1
LPRT06E	5.79	Benzo(b/j)fluoranthene	6800		ug/kg	130	52.308	1	1107	6.1427	1
LPRT06E	5.79	Benzo(g,h,i)perylene	2100	J	ug/kg	67	31.343	1	497	4.2254	1
LPRT06E	5.79	Benzo(k)fluoranthene	2500		ug/kg	70	35.714	1	537	4.6555	1
LPRT06E	5.79	Chrysene	4900		ug/kg	82	59.756	1	650	7.5385	1
LPRT06E	5.79	Dibenzo(a,h)anthracene	490	J	ug/kg	19	25.789	1	113	4.3363	1
LPRT06E	5.79	Fluoranthene	11000	J	ug/kg	119	92.437	1	1034	10.638	1
LPRT06E	5.79	Fluorene	630	J	ug/kg	19	33.158	1	114	5.5263	1
LPRT06E	5.79	Indeno(1,2,3-cd)pyrene	2400	J	ug/kg	68	35.294	1	488	4.918	1
LPRT06E	5.79	Naphthalene	580		ug/kg	30	19.333	1	217	2.6728	1
LPRT06E	5.79	Perylene	1100		ug/kg	74	14.865	1	453	2.4283	1
LPRT06E	5.79	Phenanthrene	5400	J	ug/kg	68	79.412	1	455	11.868	1
LPRT06E	5.79	Pyrene	8000	J	ug/kg	125	64	1	932	8.5837	1
LPRT06E	5.79	1,1'-Biphenyl	370	UJ	ug/kg	17	21.765	1	73	5.0685	1
LPRT06E	5.79	Total PCB Congeners	750	J	ug/kg	35	21.429	1	368	2.038	1
LPRT06E	5.79	4,4'-DDD	28		ug/kg	2.2	12.727	1	19	1.4737	1
LPRT06E	5.79	4,4'-DDE	27		ug/kg	3.1	8.7097	1	103	0.2621	0
LPRT06E	5.79	4,4'-DDT	7.7		ug/kg	1.7	4.5294	1	11	0.7	0
LPRT06E	5.79	Dieldrin	3.4		ug/kg	0.83	4.0964	1	2.9	1.1724	1
LPRT06F	5.99	Antimony	0.75	J	mg/kg	0.63	1.1905	1	2.4	0.3125	0
LPRT06F	5.99	Arsenic	6.6	J	mg/kg	7.4	0.8919	0	20	0.33	0
LPRT06F	5.99	Cadmium	3.3	J	mg/kg	0.38	8.6842	1	1.4	2.3571	1
LPRT06F	5.99	Chromium	99	J	mg/kg	49	2.0204	1	141	0.7021	0
LPRT06F	5.99	Copper	176	J	mg/kg	32	5.5	1	94	1.8723	1
LPRT06F	5.99	Lead	225	J	mg/kg	30	7.5	1	94	2.3936	1
LPRT06F	5.99	Mercury	2300	J	ug/kg	140	16.429	1	480	4.7917	1
LPRT06F	5.99	Nickel	27.7	J	mg/kg	15	1.8467	1	47	0.5894	0
LPRT06F	5.99	Silver	2.8	J	mg/kg	0.23	12.174	1	1.1	2.5455	1
LPRT06F	5.99	Zinc	462	J	mg/kg	94	4.9149	1	245	1.8857	1
LPRT06F	5.99	1-Methylnaphthalene	110	J	ug/kg	21	5.2381	1	94	1.1702	1
LPRT06F	5.99	1-Methylphenanthrene	250	J	ug/kg	18	13.889	1	112	2.2321	1
LPRT06F	5.99	2,6-Dimethylnaphthalene	96	J	ug/kg	25	3.84	1	133	0.7218	0
LPRT06F	5.99	2-Methylnaphthalene	220	J	ug/kg	21	10.476	1	128	1.7188	1
LPRT06F	5.99	Acenaphthene	230	J	ug/kg	19	12.105	1	116	1.9828	1
LPRT06F	5.99	Acenaphthylene	310	J	ug/kg	14	22.143	1	140	2.2143	1
LPRT06F	5.99	Anthracene	510	J	ug/kg	34	15	1	290	1.7586	1
LPRT06F	5.99	Benzo(a)anthracene	2200	J	ug/kg	61	36.066	1	446	4.9327	1
LPRT06F	5.99	Benzo(a)pyrene	3100	J	ug/kg	69	44.928	1	520	5.9615	1
LPRT06F	5.99	Benzo(b/j)fluoranthene	3900	J	ug/kg	130	30	1	1107	3.523	1
LPRT06F	5.99	Benzo(g,h,i)perylene	2500	J	ug/kg	67	37.313	1	497	5.0302	1
LPRT06F	5.99	Benzo(k)fluoranthene	2000	J	ug/kg	70	28.571	1	537	3.7244	1
LPRT06F	5.99	Chrysene	2900	J	ug/kg	82	35.366	1	650	4.4615	1
LPRT06F	5.99	Dibenzo(a,h)anthracene	610	J	ug/kg	19	32.105	1	113	5.3982	1
LPRT06F	5.99	Fluoranthene	4900	J	ug/kg	119	41.176	1	1034	4.7389	1
LPRT06F	5.99	Fluorene	270	J	ug/kg	19	14.211	1	114	2.3684	1
LPRT06F	5.99	Indeno(1,2,3-cd)pyrene	3000	J	ug/kg	68	44.118	1	488	6.1475	1
LPRT06F	5.99	Naphthalene	410	J	ug/kg	30	13.667	1	217	1.8894	1
LPRT06F	5.99	Perylene	790	J	ug/kg	74	10.676	1	453	1.7439	1
LPRT06F	5.99	Phenanthrene	1700	J	ug/kg	68	25	1	455	3.7363	1
LPRT06F	5.99	Pyrene	3600	J	ug/kg	125	28.8	1	932	3.8627	1
LPRT06F	5.99	1,1'-Biphenyl	490	UJ	ug/kg	17	28.824	1	73	6.7123	1
LPRT06F	5.99	Total PCB Congeners	970	J	ug/kg	35	27.714	1	368	2.6359	1
LPRT06F	5.99	4,4'-DDD	31	J	ug/kg	2.2	14.091	1	19	1.6316	1
LPRT06F	5.99	4,4'-DDE	30	J	ug/kg	3.1	9.6774	1	103	0.2913	0
LPRT06F	5.99	4,4'-DDT	13	J	ug/kg	1.7	7.6471	1	11	1.1818	1

Table B7-1b. Sediment chemistry LOE

Location ID	No. of Chemicals w/ T20 EF ≥ 1	No. of Chemicals w/ T50 EF ≥ 1	Sediment Chemistry LOE Weight

Table B7-1a. T20/T50 Screen of LPRSA Sediment Chemistry Data

Location ID	RM	Parameter	Result	Qualifier	Units	T20	T20 EF	T20 EF ≥ 1	T50	T50 EF	T50 EF ≥ 1
LPRT06F	5.99	Dieldrin	4	J	ug/kg	0.83	4.8193	1	2.9	1.3793	1
LPRT07A	6.07	Antimony	0.43	J	mg/kg	0.63	0.6825	0	2.4	0.1792	0
LPRT07A	6.07	Arsenic	3.3		mg/kg	7.4	0.4459	0	20	0.165	0
LPRT07A	6.07	Cadmium	1.5	J	mg/kg	0.38	3.9474	1	1.4	1.0714	1
LPRT07A	6.07	Chromium	40.1		mg/kg	49	0.8184	0	141	0.2844	0
LPRT07A	6.07	Copper	69.4		mg/kg	32	2.1688	1	94	0.7383	0
LPRT07A	6.07	Lead	150	J	mg/kg	30	5	1	94	1.5957	1
LPRT07A	6.07	Mercury	730		ug/kg	140	5.2143	1	480	1.5208	1
LPRT07A	6.07	Nickel	13.9		mg/kg	15	0.9267	0	47	0.2957	0
LPRT07A	6.07	Silver	0.88		mg/kg	0.23	3.8261	1	1.1	0.8	0
LPRT07A	6.07	Zinc	229		mg/kg	94	2.4362	1	245	0.9347	0
LPRT07A	6.07	1-Methylnaphthalene	160		ug/kg	21	7.619	1	94	1.7021	1
LPRT07A	6.07	1-Methylphenanthrene	270	J	ug/kg	18	15	1	112	2.4107	1
LPRT07A	6.07	2,6-Dimethylnaphthalene	220		ug/kg	25	8.8	1	133	1.6541	1
LPRT07A	6.07	2-Methylnaphthalene	290		ug/kg	21	13.81	1	128	2.2656	1
LPRT07A	6.07	Acenaphthene	270	J	ug/kg	19	14.211	1	116	2.3276	1
LPRT07A	6.07	Acenaphthylene	360		ug/kg	14	25.714	1	140	2.5714	1
LPRT07A	6.07	Anthracene	540	J	ug/kg	34	15.882	1	290	1.8621	1
LPRT07A	6.07	Benzo(a)anthracene	2400		ug/kg	61	39.344	1	446	5.3812	1
LPRT07A	6.07	Benzo(a)pyrene	2900		ug/kg	69	42.029	1	520	5.5769	1
LPRT07A	6.07	Benzo(b/j)fluoranthene	3600		ug/kg	130	27.692	1	1107	3.252	1
LPRT07A	6.07	Benzo(g,h,i)perylene	2500		ug/kg	67	37.313	1	497	5.0302	1
LPRT07A	6.07	Benzo(k)fluoranthene	1900		ug/kg	70	27.143	1	537	3.5382	1
LPRT07A	6.07	Chrysene	2900		ug/kg	82	35.366	1	650	4.4615	1
LPRT07A	6.07	Dibenzo(a,h)anthracene	570	J	ug/kg	19	30	1	113	5.0442	1
LPRT07A	6.07	Fluoranthene	4700		ug/kg	119	39.496	1	1034	4.5455	1
LPRT07A	6.07	Fluorene	330	J	ug/kg	19	17.368	1	114	2.8947	1
LPRT07A	6.07	Indeno(1,2,3-cd)pyrene	2700		ug/kg	68	39.706	1	488	5.5328	1
LPRT07A	6.07	Naphthalene	620		ug/kg	30	20.667	1	217	2.8571	1
LPRT07A	6.07	Perylene	800		ug/kg	74	10.811	1	453	1.766	1
LPRT07A	6.07	Phenanthrene	1600		ug/kg	68	23.529	1	455	3.5165	1
LPRT07A	6.07	Pyrene	3700		ug/kg	125	29.6	1	932	3.97	1
LPRT07A	6.07	1,1'-Biphenyl	280	U	ug/kg	17	16.471	1	73	3.8356	1
LPRT07A	6.07	Total PCB Congeners	680	J	ug/kg	35	19.429	1	368	1.8478	1
LPRT07A	6.07	4,4'-DDD	21		ug/kg	2.2	9.5455	1	19	1.1053	1
LPRT07A	6.07	4,4'-DDE	13		ug/kg	3.1	4.1935	1	103	0.1262	0
LPRT07A	6.07	4,4'-DDT	11		ug/kg	1.7	6.4706	1	11	1	0
LPRT07A	6.07	Dieldrin	2.4		ug/kg	0.83	2.8916	1	2.9	0.8276	0
LPRT07B	6.51	Antimony	2.1	J	mg/kg	0.63	3.3333	1	2.4	0.875	0
LPRT07B	6.51	Arsenic	3.7		mg/kg	7.4	0.5	0	20	0.185	0
LPRT07B	6.51	Cadmium	2.2	J	mg/kg	0.38	5.7895	1	1.4	1.5714	1
LPRT07B	6.51	Chromium	89.5		mg/kg	49	1.8265	1	141	0.6348	0
LPRT07B	6.51	Copper	118		mg/kg	32	3.6875	1	94	1.2553	1
LPRT07B	6.51	Lead	181	J	mg/kg	30	6.0333	1	94	1.9255	1
LPRT07B	6.51	Mercury	1200		ug/kg	140	8.5714	1	480	2.5	1
LPRT07B	6.51	Nickel	17.4		mg/kg	15	1.16	1	47	0.3702	0
LPRT07B	6.51	Silver	1.7		mg/kg	0.23	7.3913	1	1.1	1.5455	1
LPRT07B	6.51	Zinc	358		mg/kg	94	3.8085	1	245	1.4612	1
LPRT07B	6.51	1-Methylnaphthalene	210		ug/kg	21	10	1	94	2.234	1
LPRT07B	6.51	1-Methylphenanthrene	460		ug/kg	18	25.556	1	112	4.1071	1
LPRT07B	6.51	2,6-Dimethylnaphthalene	190		ug/kg	25	7.6	1	133	1.4286	1
LPRT07B	6.51	2-Methylnaphthalene	320		ug/kg	21	15.238	1	128	2.5	1
LPRT07B	6.51	Acenaphthene	430	J	ug/kg	19	22.632	1	116	3.7069	1
LPRT07B	6.51	Acenaphthylene	570		ug/kg	14	40.714	1	140	4.0714	1
LPRT07B	6.51	Anthracene	820	J	ug/kg	34	24.118	1	290	2.8276	1
LPRT07B	6.51	Benzo(a)anthracene	5400	J	ug/kg	61	88.525	1	446	12.108	1
LPRT07B	6.51	Benzo(a)pyrene	6200	J	ug/kg	69	89.855	1	520	11.923	1
LPRT07B	6.51	Benzo(b/j)fluoranthene	4900		ug/kg	130	37.692	1	1107	4.4264	1
LPRT07B	6.51	Benzo(g,h,i)perylene	3000		ug/kg	67	44.776	1	497	6.0362	1
LPRT07B	6.51	Benzo(k)fluoranthene	2000		ug/kg	70	28.571	1	537	3.7244	1
LPRT07B	6.51	Chrysene	5200	J	ug/kg	82	63.415	1	650	8	1
LPRT07B	6.51	Dibenzo(a,h)anthracene	520	J	ug/kg	19	27.368	1	113	4.6018	1
LPRT07B	6.51	Fluoranthene	8300	J	ug/kg	119	69.748	1	1034	8.0271	1
LPRT07B	6.51	Fluorene	310	J	ug/kg	19	16.316	1	114	2.7193	1
LPRT07B	6.51	Indeno(1,2,3-cd)pyrene	2400		ug/kg	68	35.294	1	488	4.918	1
LPRT07B	6.51	Naphthalene	450	U	ug/kg	30	15	1	217	2.0737	1
LPRT07B	6.51	Perylene	1100		ug/kg	74	14.865	1	453	2.4283	1
LPRT07B	6.51	Phenanthrene	3200		ug/kg	68	47.059	1	455	7.033	1
LPRT07B	6.51	Pyrene	6700	J	ug/kg	125	53.6	1	932	7.1888	1
LPRT07B	6.51	1,1'-Biphenyl	340	U	ug/kg	17	20	1	73	4.6575	1
LPRT07B	6.51	Total PCB Congeners	1400	J	ug/kg	35	40	1	368	3.8043	1
LPRT07B	6.51	4,4'-DDD	37		ug/kg	2.2	16.818	1	19	1.9474	1

Table B7-1b. Sediment chemistry LOE

Location ID	No. of Chemicals w/ T20 EF ≥ 1	No. of Chemicals w/ T50 EF ≥ 1	Sediment Chemistry LOE Weight

Table B7-1a. T20/T50 Screen of LPRSA Sediment Chemistry Data

Location ID	RM	Parameter	Result	Qualifier	Units	T20	T20 EF	T20 EF ≥ 1	T50	T50 EF	T50 EF ≥ 1
LPRT07B	6.51	4,4'-DDE	22		ug/kg	3.1	7.0968	1	103	0.2136	0
LPRT07B	6.51	4,4'-DDT	5.5		ug/kg	1.7	3.2353	1	11	0.5	0
LPRT07B	6.51	Dieldrin	4		ug/kg	0.83	4.8193	1	2.9	1.3793	1
LPRT07C	6.65	Antimony	1.2	J	mg/kg	0.63	1.9048	1	2.4	0.5	0
LPRT07C	6.65	Arsenic	7.8	J	mg/kg	7.4	1.0541	1	20	0.39	0
LPRT07C	6.65	Cadmium	6.3	J	mg/kg	0.38	16.579	1	1.4	4.5	1
LPRT07C	6.65	Chromium	214	J	mg/kg	49	4.3673	1	141	1.5177	1
LPRT07C	6.65	Copper	247	J	mg/kg	32	7.7188	1	94	2.6277	1
LPRT07C	6.65	Lead	410	J	mg/kg	30	13.667	1	94	4.3617	1
LPRT07C	6.65	Mercury	3600	J	ug/kg	140	25.714	1	480	7.5	1
LPRT07C	6.65	Nickel	44.7	J	mg/kg	15	2.98	1	47	0.9511	0
LPRT07C	6.65	Silver	5	J	mg/kg	0.23	21.739	1	1.1	4.5455	1
LPRT07C	6.65	Zinc	673	J	mg/kg	94	7.1596	1	245	2.7469	1
LPRT07C	6.65	1-Methylnaphthalene	160	J	ug/kg	21	7.619	1	94	1.7021	1
LPRT07C	6.65	1-Methylphenanthrene	480	J	ug/kg	18	26.667	1	112	4.2857	1
LPRT07C	6.65	2,6-Dimethylnaphthalene	370	J	ug/kg	25	14.8	1	133	2.782	1
LPRT07C	6.65	2-Methylnaphthalene	290	J	ug/kg	21	13.81	1	128	2.2656	1
LPRT07C	6.65	Acenaphthene	310	J	ug/kg	19	16.316	1	116	2.6724	1
LPRT07C	6.65	Acenaphthylene	680	J	ug/kg	14	48.571	1	140	4.8571	1
LPRT07C	6.65	Anthracene	1400	J	ug/kg	34	41.176	1	290	4.8276	1
LPRT07C	6.65	Benzo(a)anthracene	3900	J	ug/kg	61	63.934	1	446	8.7444	1
LPRT07C	6.65	Benzo(a)pyrene	2500	J	ug/kg	69	36.232	1	520	4.8077	1
LPRT07C	6.65	Benzo(b/j)fluoranthene	4300	J	ug/kg	130	33.077	1	1107	3.8844	1
LPRT07C	6.65	Benzo(g,h,i)perylene	2400	J	ug/kg	67	35.821	1	497	4.829	1
LPRT07C	6.65	Benzo(k)fluoranthene	1800	J	ug/kg	70	25.714	1	537	3.352	1
LPRT07C	6.65	Chrysene	4200	J	ug/kg	82	51.22	1	650	6.4615	1
LPRT07C	6.65	Dibenzo(a,h)anthracene	670	J	ug/kg	19	35.263	1	113	5.9292	1
LPRT07C	6.65	Fluoranthene	5800	J	ug/kg	119	48.739	1	1034	5.6093	1
LPRT07C	6.65	Fluorene	430	J	ug/kg	19	22.632	1	114	3.7719	1
LPRT07C	6.65	Indeno(1,2,3-cd)pyrene	2400	J	ug/kg	68	35.294	1	488	4.918	1
LPRT07C	6.65	Naphthalene	750	J	ug/kg	30	25	1	217	3.4562	1
LPRT07C	6.65	Perylene	680	J	ug/kg	74	9.1892	1	453	1.5011	1
LPRT07C	6.65	Phenanthrene	2100	J	ug/kg	68	30.882	1	455	4.6154	1
LPRT07C	6.65	Pyrene	7400	J	ug/kg	125	59.2	1	932	7.9399	1
LPRT07C	6.65	1,1'-Biphenyl	920	UJ	ug/kg	17	54.118	1	73	12.603	1
LPRT07C	6.65	Total PCB Congeners	3600	J	ug/kg	35	102.86	1	368	9.7826	1
LPRT07C	6.65	4,4'-DDD	28	J	ug/kg	2.2	12.727	1	19	1.4737	1
LPRT07C	6.65	4,4'-DDE	190	J	ug/kg	3.1	61.29	1	103	1.8447	1
LPRT07C	6.65	4,4'-DDT	8.3	J	ug/kg	1.7	4.8824	1	11	0.7545	0
LPRT07C	6.65	Dieldrin	4.1	J	ug/kg	0.83	4.9398	1	2.9	1.4138	1
LPRT07D	6.83	Antimony	1.2	J	mg/kg	0.63	1.9048	1	2.4	0.5	0
LPRT07D	6.83	Arsenic	8.4	J	mg/kg	7.4	1.1351	1	20	0.42	0
LPRT07D	6.83	Cadmium	3.6	J	mg/kg	0.38	9.4737	1	1.4	2.5714	1
LPRT07D	6.83	Chromium	123	J	mg/kg	49	2.5102	1	141	0.8723	0
LPRT07D	6.83	Copper	174	J	mg/kg	32	5.4375	1	94	1.8511	1
LPRT07D	6.83	Lead	268	J	mg/kg	30	8.9333	1	94	2.8511	1
LPRT07D	6.83	Mercury	1400	J	ug/kg	140	10	1	480	2.9167	1
LPRT07D	6.83	Nickel	32	J	mg/kg	15	2.1333	1	47	0.6809	0
LPRT07D	6.83	Silver	2.6	J	mg/kg	0.23	11.304	1	1.1	2.3636	1
LPRT07D	6.83	Zinc	588	J	mg/kg	94	6.2553	1	245	2.4	1
LPRT07D	6.83	1-Methylnaphthalene	110	J	ug/kg	21	5.2381	1	94	1.1702	1
LPRT07D	6.83	1-Methylphenanthrene	200	J	ug/kg	18	11.111	1	112	1.7857	1
LPRT07D	6.83	2,6-Dimethylnaphthalene	81	J	ug/kg	25	3.24	1	133	0.609	0
LPRT07D	6.83	2-Methylnaphthalene	190	J	ug/kg	21	9.0476	1	128	1.4844	1
LPRT07D	6.83	Acenaphthene	200	J	ug/kg	19	10.526	1	116	1.7241	1
LPRT07D	6.83	Acenaphthylene	400	J	ug/kg	14	28.571	1	140	2.8571	1
LPRT07D	6.83	Anthracene	440	J	ug/kg	34	12.941	1	290	1.5172	1
LPRT07D	6.83	Benzo(a)anthracene	2300	J	ug/kg	61	37.705	1	446	5.157	1
LPRT07D	6.83	Benzo(a)pyrene	2700	J	ug/kg	69	39.13	1	520	5.1923	1
LPRT07D	6.83	Benzo(b/j)fluoranthene	3500	J	ug/kg	130	26.923	1	1107	3.1617	1
LPRT07D	6.83	Benzo(g,h,i)perylene	2800	J	ug/kg	67	41.791	1	497	5.6338	1
LPRT07D	6.83	Benzo(k)fluoranthene	1500	J	ug/kg	70	21.429	1	537	2.7933	1
LPRT07D	6.83	Chrysene	2700	J	ug/kg	82	32.927	1	650	4.1538	1
LPRT07D	6.83	Dibenzo(a,h)anthracene	540	J	ug/kg	19	28.421	1	113	4.7788	1
LPRT07D	6.83	Fluoranthene	4600	J	ug/kg	119	38.655	1	1034	4.4487	1
LPRT07D	6.83	Fluorene	270	J	ug/kg	19	14.211	1	114	2.3684	1
LPRT07D	6.83	Indeno(1,2,3-cd)pyrene	2300	J	ug/kg	68	33.824	1	488	4.7131	1
LPRT07D	6.83	Naphthalene	420	J	ug/kg	30	14	1	217	1.9355	1
LPRT07D	6.83	Perylene	660	J	ug/kg	74	8.9189	1	453	1.457	1
LPRT07D	6.83	Phenanthrene	1600	J	ug/kg	68	23.529	1	455	3.5165	1
LPRT07D	6.83	Pyrene	3600	J	ug/kg	125	28.8	1	932	3.8627	1
LPRT07D	6.83	1,1'-Biphenyl	800	UJ	ug/kg	17	47.059	1	73	10.959	1

Table B7-1b. Sediment chemistry LOE

Location ID	No. of Chemicals w/ T20 EF ≥ 1	No. of Chemicals w/ T50 EF ≥ 1	Sediment Chemistry LOE Weight

Table B7-1a. T20/T50 Screen of LPRSA Sediment Chemistry Data

Location ID	RM	Parameter	Result	Qualifier	Units	T20	T20 EF	T20 EF ≥ 1	T50	T50 EF	T50 EF ≥ 1
LPRT07D	6.83	Total PCB Congeners	940	J	ug/kg	35	26.857	1	368	2.5543	1
LPRT07D	6.83	4,4'-DDD	34	J	ug/kg	2.2	15.455	1	19	1.7895	1
LPRT07D	6.83	4,4'-DDE	34	J	ug/kg	3.1	10.968	1	103	0.3301	0
LPRT07D	6.83	4,4'-DDT	16	J	ug/kg	1.7	9.4118	1	11	1.4545	1
LPRT07D	6.83	Dieldrin	8.2	J	ug/kg	0.83	9.8795	1	2.9	2.8276	1
LPRT07E	6.94	Antimony	0.86	J	mg/kg	0.63	1.3651	1	2.4	0.3583	0
LPRT07E	6.94	Arsenic	8.9	J	mg/kg	7.4	1.2027	1	20	0.445	0
LPRT07E	6.94	Cadmium	4.1	J	mg/kg	0.38	10.789	1	1.4	2.9286	1
LPRT07E	6.94	Chromium	152	J	mg/kg	49	3.102	1	141	1.078	1
LPRT07E	6.94	Copper	225	J	mg/kg	32	7.0313	1	94	2.3936	1
LPRT07E	6.94	Lead	294	J	mg/kg	30	9.8	1	94	3.1277	1
LPRT07E	6.94	Mercury	2600	J	ug/kg	140	18.571	1	480	5.4167	1
LPRT07E	6.94	Nickel	36	J	mg/kg	15	2.4	1	47	0.766	0
LPRT07E	6.94	Silver	2.9	J	mg/kg	0.23	12.609	1	1.1	2.6364	1
LPRT07E	6.94	Zinc	521	J	mg/kg	94	5.5426	1	245	2.1265	1
LPRT07E	6.94	1-Methylnaphthalene	220	J	ug/kg	21	10.476	1	94	2.3404	1
LPRT07E	6.94	1-Methylphenanthrene	320	J	ug/kg	18	17.778	1	112	2.8571	1
LPRT07E	6.94	2,6-Dimethylnaphthalene	150	J	ug/kg	25	6	1	133	1.1278	1
LPRT07E	6.94	2-Methylnaphthalene	320	J	ug/kg	21	15.238	1	128	2.5	1
LPRT07E	6.94	Acenaphthene	390	J	ug/kg	19	20.526	1	116	3.3621	1
LPRT07E	6.94	Acenaphthylene	840	J	ug/kg	14	60	1	140	6	1
LPRT07E	6.94	Anthracene	600	J	ug/kg	34	17.647	1	290	2.069	1
LPRT07E	6.94	Benzo(a)anthracene	3200	J	ug/kg	61	52.459	1	446	7.1749	1
LPRT07E	6.94	Benzo(a)pyrene	4500	J	ug/kg	69	65.217	1	520	8.6538	1
LPRT07E	6.94	Benzo(b/j)fluoranthene	4500	J	ug/kg	130	34.615	1	1107	4.065	1
LPRT07E	6.94	Benzo(g,h,i)perylene	2900	J	ug/kg	67	43.284	1	497	5.835	1
LPRT07E	6.94	Benzo(k)fluoranthene	2100	J	ug/kg	70	30	1	537	3.9106	1
LPRT07E	6.94	Chrysene	3600	J	ug/kg	82	43.902	1	650	5.5385	1
LPRT07E	6.94	Dibenzo(a,h)anthracene	630	J	ug/kg	19	33.158	1	113	5.5752	1
LPRT07E	6.94	Fluoranthene	6400	J	ug/kg	119	53.782	1	1034	6.1896	1
LPRT07E	6.94	Fluorene	310	J	ug/kg	19	16.316	1	114	2.7193	1
LPRT07E	6.94	Indeno(1,2,3-cd)pyrene	3600	J	ug/kg	68	52.941	1	488	7.377	1
LPRT07E	6.94	Naphthalene	750	J	ug/kg	30	25	1	217	3.4562	1
LPRT07E	6.94	Perylene	1000	J	ug/kg	74	13.514	1	453	2.2075	1
LPRT07E	6.94	Phenanthrene	1500	J	ug/kg	68	22.059	1	455	3.2967	1
LPRT07E	6.94	Pyrene	5300	J	ug/kg	125	42.4	1	932	5.6867	1
LPRT07E	6.94	1,1'-Biphenyl	620	UJ	ug/kg	17	36.471	1	73	8.4932	1
LPRT07E	6.94	Total PCB Congeners	1300	J	ug/kg	35	37.143	1	368	3.5326	1
LPRT07E	6.94	4,4'-DDD	80	J	ug/kg	2.2	36.364	1	19	4.2105	1
LPRT07E	6.94	4,4'-DDE	38	J	ug/kg	3.1	12.258	1	103	0.3689	0
LPRT07E	6.94	4,4'-DDT	1100	J	ug/kg	1.7	647.06	1	11	100	1
LPRT07E	6.94	Dieldrin	5.3	J	ug/kg	0.83	6.3855	1	2.9	1.8276	1
LPRT08A	7.05	Antimony	1.9	J	mg/kg	0.63	3.0159	1	2.4	0.7917	0
LPRT08A	7.05	Arsenic	10.8	J	mg/kg	7.4	1.4595	1	20	0.54	0
LPRT08A	7.05	Cadmium	3	J	mg/kg	0.38	7.8947	1	1.4	2.1429	1
LPRT08A	7.05	Chromium	119	J	mg/kg	49	2.4286	1	141	0.844	0
LPRT08A	7.05	Copper	183	J	mg/kg	32	5.7188	1	94	1.9468	1
LPRT08A	7.05	Lead	307	J	mg/kg	30	10.233	1	94	3.266	1
LPRT08A	7.05	Mercury	3700	J	ug/kg	140	26.429	1	480	7.7083	1
LPRT08A	7.05	Nickel	33	J	mg/kg	15	2.2	1	47	0.7021	0
LPRT08A	7.05	Silver	2.6	J	mg/kg	0.23	11.304	1	1.1	2.3636	1
LPRT08A	7.05	Zinc	476	J	mg/kg	94	5.0638	1	245	1.9429	1
LPRT08A	7.05	1-Methylnaphthalene	2100	J	ug/kg	21	100	1	94	22.34	1
LPRT08A	7.05	1-Methylphenanthrene	1500	J	ug/kg	18	83.333	1	112	13.393	1
LPRT08A	7.05	2,6-Dimethylnaphthalene	870	J	ug/kg	25	34.8	1	133	6.5414	1
LPRT08A	7.05	2-Methylnaphthalene	3400	J	ug/kg	21	161.9	1	128	26.563	1
LPRT08A	7.05	Acenaphthene	4200	J	ug/kg	19	221.05	1	116	36.207	1
LPRT08A	7.05	Acenaphthylene	1500	J	ug/kg	14	107.14	1	140	10.714	1
LPRT08A	7.05	Anthracene	2400	J	ug/kg	34	70.588	1	290	8.2759	1
LPRT08A	7.05	Benzo(a)anthracene	8900	J	ug/kg	61	145.9	1	446	19.955	1
LPRT08A	7.05	Benzo(a)pyrene	11000	J	ug/kg	69	159.42	1	520	21.154	1
LPRT08A	7.05	Benzo(b/j)fluoranthene	15000	J	ug/kg	130	115.38	1	1107	13.55	1
LPRT08A	7.05	Benzo(g,h,i)perylene	8200	J	ug/kg	67	122.39	1	497	16.499	1
LPRT08A	7.05	Benzo(k)fluoranthene	4800	J	ug/kg	70	68.571	1	537	8.9385	1
LPRT08A	7.05	Chrysene	12000	J	ug/kg	82	146.34	1	650	18.462	1
LPRT08A	7.05	Dibenzo(a,h)anthracene	1900	J	ug/kg	19	100	1	113	16.814	1
LPRT08A	7.05	Fluoranthene	19000	J	ug/kg	119	159.66	1	1034	18.375	1
LPRT08A	7.05	Fluorene	4200	J	ug/kg	19	221.05	1	114	36.842	1
LPRT08A	7.05	Indeno(1,2,3-cd)pyrene	8900	J	ug/kg	68	130.88	1	488	18.238	1
LPRT08A	7.05	Naphthalene	14000	J	ug/kg	30	466.67	1	217	64.516	1
LPRT08A	7.05	Perylene	2200	J	ug/kg	74	29.73	1	453	4.8565	1
LPRT08A	7.05	Phenanthrene	29000	J	ug/kg	68	426.47	1	455	63.736	1

Table B7-1b. Sediment chemistry LOE

Location ID	No. of Chemicals w/ T20 EF ≥ 1	No. of Chemicals w/ T50 EF ≥ 1	Sediment Chemistry LOE Weight

Table B7-1a. T20/T50 Screen of LPRSA Sediment Chemistry Data

Location ID	RM	Parameter	Result	Qualifier	Units	T20	T20 EF	T20 EF ≥ 1	T50	T50 EF	T50 EF ≥ 1
LPRT08A	7.05	Pyrene	13000	J	ug/kg	125	104	1	932	13.948	1
LPRT08A	7.05	1,1'-Biphenyl	440	UJ	ug/kg	17	25.882	1	73	6.0274	1
LPRT08A	7.05	Total PCB Congeners	840	J	ug/kg	35	24	1	368	2.2826	1
LPRT08A	7.05	4,4'-DDD	18	J	ug/kg	2.2	8.1818	1	19	0.9474	0
LPRT08A	7.05	4,4'-DDE	29	J	ug/kg	3.1	9.3548	1	103	0.2816	0
LPRT08A	7.05	4,4'-DDT	10	J	ug/kg	1.7	5.8824	1	11	0.9091	0
LPRT08A	7.05	Dieldrin	5.2	J	ug/kg	0.83	6.2651	1	2.9	1.7931	1
LPRT08B	7.3	Antimony	0.84	J	mg/kg	0.63	1.3333	1	2.4	0.35	0
LPRT08B	7.3	Arsenic	6.7	J	mg/kg	7.4	0.9054	0	20	0.335	0
LPRT08B	7.3	Cadmium	2.9	J	mg/kg	0.38	7.6316	1	1.4	2.0714	1
LPRT08B	7.3	Chromium	110	J	mg/kg	49	2.2449	1	141	0.7801	0
LPRT08B	7.3	Copper	177	J	mg/kg	32	5.5313	1	94	1.883	1
LPRT08B	7.3	Lead	199	J	mg/kg	30	6.6333	1	94	2.117	1
LPRT08B	7.3	Mercury	2100	J	ug/kg	140	15	1	480	4.375	1
LPRT08B	7.3	Nickel	27.3	J	mg/kg	15	1.82	1	47	0.5809	0
LPRT08B	7.3	Silver	2.9	J	mg/kg	0.23	12.609	1	1.1	2.6364	1
LPRT08B	7.3	Zinc	472	J	mg/kg	94	5.0213	1	245	1.9265	1
LPRT08B	7.3	1-Methylnaphthalene	97	J	ug/kg	21	4.619	1	94	1.0319	1
LPRT08B	7.3	1-Methylphenanthrene	210	J	ug/kg	18	11.667	1	112	1.875	1
LPRT08B	7.3	2,6-Dimethylnaphthalene	84	J	ug/kg	25	3.36	1	133	0.6316	0
LPRT08B	7.3	2-Methylnaphthalene	180	J	ug/kg	21	8.5714	1	128	1.4063	1
LPRT08B	7.3	Acenaphthene	150	J	ug/kg	19	7.8947	1	116	1.2931	1
LPRT08B	7.3	Acenaphthylene	280	J	ug/kg	14	20	1	140	2	1
LPRT08B	7.3	Anthracene	350	J	ug/kg	34	10.294	1	290	1.2069	1
LPRT08B	7.3	Benzo(a)anthracene	1900	J	ug/kg	61	31.148	1	446	4.2601	1
LPRT08B	7.3	Benzo(a)pyrene	2600	J	ug/kg	69	37.681	1	520	5	1
LPRT08B	7.3	Benzo(b/j)fluoranthene	3300	J	ug/kg	130	25.385	1	1107	2.981	1
LPRT08B	7.3	Benzo(g,h,i)perylene	2200	J	ug/kg	67	32.836	1	497	4.4266	1
LPRT08B	7.3	Benzo(k)fluoranthene	1400	J	ug/kg	70	20	1	537	2.6071	1
LPRT08B	7.3	Chrysene	2200	J	ug/kg	82	26.829	1	650	3.3846	1
LPRT08B	7.3	Dibenzo(a,h)anthracene	620	J	ug/kg	19	32.632	1	113	5.4867	1
LPRT08B	7.3	Fluoranthene	3600	J	ug/kg	119	30.252	1	1034	3.4816	1
LPRT08B	7.3	Fluorene	200	J	ug/kg	19	10.526	1	114	1.7544	1
LPRT08B	7.3	Indeno(1,2,3-cd)pyrene	2000	J	ug/kg	68	29.412	1	488	4.0984	1
LPRT08B	7.3	Naphthalene	410	J	ug/kg	30	13.667	1	217	1.8894	1
LPRT08B	7.3	Perylene	590	J	ug/kg	74	7.973	1	453	1.3024	1
LPRT08B	7.3	Phenanthrene	1300	J	ug/kg	68	19.118	1	455	2.8571	1
LPRT08B	7.3	Pyrene	2800	J	ug/kg	125	22.4	1	932	3.0043	1
LPRT08B	7.3	1,1'-Biphenyl	600	UJ	ug/kg	17	35.294	1	73	8.2192	1
LPRT08B	7.3	Total PCB Congeners	830	J	ug/kg	35	23.714	1	368	2.2554	1
LPRT08B	7.3	4,4'-DDD	25	J	ug/kg	2.2	11.364	1	19	1.3158	1
LPRT08B	7.3	4,4'-DDE	36	J	ug/kg	3.1	11.613	1	103	0.3495	0
LPRT08B	7.3	4,4'-DDT	23	J	ug/kg	1.7	13.529	1	11	2.0909	1
LPRT08B	7.3	Dieldrin	6.6	J	ug/kg	0.83	7.9518	1	2.9	2.2759	1
LPRT08C	7.43	Antimony	1.4	J	mg/kg	0.63	2.2222	1	2.4	0.5833	0
LPRT08C	7.43	Arsenic	13.5	J	mg/kg	7.4	1.8243	1	20	0.675	0
LPRT08C	7.43	Cadmium	13.4	J	mg/kg	0.38	35.263	1	1.4	9.5714	1
LPRT08C	7.43	Chromium	279	J	mg/kg	49	5.6939	1	141	1.9787	1
LPRT08C	7.43	Copper	331	J	mg/kg	32	10.344	1	94	3.5213	1
LPRT08C	7.43	Lead	325	J	mg/kg	30	10.833	1	94	3.4574	1
LPRT08C	7.43	Mercury	6200	J	ug/kg	140	44.286	1	480	12.917	1
LPRT08C	7.43	Nickel	44.8	J	mg/kg	15	2.9867	1	47	0.9532	0
LPRT08C	7.43	Silver	6.7	J	mg/kg	0.23	29.13	1	1.1	6.0909	1
LPRT08C	7.43	Zinc	770	J	mg/kg	94	8.1915	1	245	3.1429	1
LPRT08C	7.43	1-Methylnaphthalene	340	J	ug/kg	21	16.19	1	94	3.617	1
LPRT08C	7.43	1-Methylphenanthrene	1000	J	ug/kg	18	55.556	1	112	8.9286	1
LPRT08C	7.43	2,6-Dimethylnaphthalene	460	J	ug/kg	25	18.4	1	133	3.4586	1
LPRT08C	7.43	2-Methylnaphthalene	630	J	ug/kg	21	30	1	128	4.9219	1
LPRT08C	7.43	Acenaphthene	1800	J	ug/kg	19	94.737	1	116	15.517	1
LPRT08C	7.43	Acenaphthylene	530	J	ug/kg	14	37.857	1	140	3.7857	1
LPRT08C	7.43	Anthracene	2800	J	ug/kg	34	82.353	1	290	9.6552	1
LPRT08C	7.43	Benzo(a)anthracene	9400	J	ug/kg	61	154.1	1	446	21.076	1
LPRT08C	7.43	Benzo(a)pyrene	11000	J	ug/kg	69	159.42	1	520	21.154	1
LPRT08C	7.43	Benzo(b/j)fluoranthene	11000	J	ug/kg	130	84.615	1	1107	9.9368	1
LPRT08C	7.43	Benzo(g,h,i)perylene	3900	J	ug/kg	67	58.209	1	497	7.8471	1
LPRT08C	7.43	Benzo(k)fluoranthene	4300	J	ug/kg	70	61.429	1	537	8.0074	1
LPRT08C	7.43	Chrysene	8500	J	ug/kg	82	103.66	1	650	13.077	1
LPRT08C	7.43	Dibenzo(a,h)anthracene	1100	J	ug/kg	19	57.895	1	113	9.7345	1
LPRT08C	7.43	Fluoranthene	17000	J	ug/kg	119	142.86	1	1034	16.441	1
LPRT08C	7.43	Fluorene	1600	J	ug/kg	19	84.211	1	114	14.035	1
LPRT08C	7.43	Indeno(1,2,3-cd)pyrene	5300	J	ug/kg	68	77.941	1	488	10.861	1
LPRT08C	7.43	Naphthalene	950	J	ug/kg	30	31.667	1	217	4.3779	1

Table B7-1b. Sediment chemistry LOE

Location ID	No. of Chemicals w/ T20 EF ≥ 1	No. of Chemicals w/ T50 EF ≥ 1	Sediment Chemistry LOE Weight

Table B7-1a. T20/T50 Screen of LPRSA Sediment Chemistry Data

Location ID	RM	Parameter	Result	Qualifier	Units	T20	T20 EF	T20 EF ≥ 1	T50	T50 EF	T50 EF ≥ 1
LPRT08C	7.43	Perylene	2100	J	ug/kg	74	28.378	1	453	4.6358	1
LPRT08C	7.43	Phenanthrene	10000	J	ug/kg	68	147.06	1	455	21.978	1
LPRT08C	7.43	Pyrene	13000	J	ug/kg	125	104	1	932	13.948	1
LPRT08C	7.43	1,1'-Biphenyl	470	UJ	ug/kg	17	27.647	1	73	6.4384	1
LPRT08C	7.43	Total PCB Congeners	1800	J	ug/kg	35	51.429	1	368	4.8913	1
LPRT08C	7.43	4,4'-DDD	200	J	ug/kg	2.2	90.909	1	19	10.526	1
LPRT08C	7.43	4,4'-DDE	370	J	ug/kg	3.1	119.35	1	103	3.5922	1
LPRT08C	7.43	4,4'-DDT	26	J	ug/kg	1.7	15.294	1	11	2.3636	1
LPRT08C	7.43	Dieldrin	5.1	J	ug/kg	0.83	6.1446	1	2.9	1.7586	1
LPRT08D	7.47	Antimony	0.67	J	mg/kg	0.63	1.0635	1	2.4	0.2792	0
LPRT08D	7.47	Arsenic	2		mg/kg	7.4	0.2703	0	20	0.1	0
LPRT08D	7.47	Cadmium	0.66	J	mg/kg	0.38	1.7368	1	1.4	0.4714	0
LPRT08D	7.47	Chromium	32		mg/kg	49	0.6531	0	141	0.227	0
LPRT08D	7.47	Copper	62.3		mg/kg	32	1.9469	1	94	0.6628	0
LPRT08D	7.47	Lead	151	J	mg/kg	30	5.0333	1	94	1.6064	1
LPRT08D	7.47	Mercury	300		ug/kg	140	2.1429	1	480	0.625	0
LPRT08D	7.47	Nickel	15.4		mg/kg	15	1.0267	1	47	0.3277	0
LPRT08D	7.47	Silver	3.2		mg/kg	0.23	13.913	1	1.1	2.9091	1
LPRT08D	7.47	Zinc	167		mg/kg	94	1.7766	1	245	0.6816	0
LPRT08D	7.47	1-Methylnaphthalene	420		ug/kg	21	20	1	94	4.4681	1
LPRT08D	7.47	1-Methylphenanthrene	490	J	ug/kg	18	27.222	1	112	4.375	1
LPRT08D	7.47	2,6-Dimethylnaphthalene	210		ug/kg	25	8.4	1	133	1.5789	1
LPRT08D	7.47	2-Methylnaphthalene	420		ug/kg	21	20	1	128	3.2813	1
LPRT08D	7.47	Acenaphthene	480	J	ug/kg	19	25.263	1	116	4.1379	1
LPRT08D	7.47	Acenaphthylene	330		ug/kg	14	23.571	1	140	2.3571	1
LPRT08D	7.47	Anthracene	900	J	ug/kg	34	26.471	1	290	3.1034	1
LPRT08D	7.47	Benzo(a)anthracene	3900		ug/kg	61	63.934	1	446	8.7444	1
LPRT08D	7.47	Benzo(a)pyrene	3800		ug/kg	69	55.072	1	520	7.3077	1
LPRT08D	7.47	Benzo(b/j)fluoranthene	3700		ug/kg	130	28.462	1	1107	3.3424	1
LPRT08D	7.47	Benzo(g,h,i)perylene	2700		ug/kg	67	40.299	1	497	5.4326	1
LPRT08D	7.47	Benzo(k)fluoranthene	2200		ug/kg	70	31.429	1	537	4.0968	1
LPRT08D	7.47	Chrysene	3500		ug/kg	82	42.683	1	650	5.3846	1
LPRT08D	7.47	Dibenzo(a,h)anthracene	720	J	ug/kg	19	37.895	1	113	6.3717	1
LPRT08D	7.47	Fluoranthene	6700	J	ug/kg	119	56.303	1	1034	6.4797	1
LPRT08D	7.47	Fluorene	630	J	ug/kg	19	33.158	1	114	5.5263	1
LPRT08D	7.47	Indeno(1,2,3-cd)pyrene	2100		ug/kg	68	30.882	1	488	4.3033	1
LPRT08D	7.47	Naphthalene	550		ug/kg	30	18.333	1	217	2.5346	1
LPRT08D	7.47	Perylene	1600	J	ug/kg	74	21.622	1	453	3.532	1
LPRT08D	7.47	Phenanthrene	4400		ug/kg	68	64.706	1	455	9.6703	1
LPRT08D	7.47	Pyrene	4900		ug/kg	125	39.2	1	932	5.2575	1
LPRT08D	7.47	1,1'-Biphenyl	260	U	ug/kg	17	15.294	1	73	3.5616	1
LPRT08D	7.47	Total PCB Congeners	340	J	ug/kg	35	9.7143	1	368	0.9239	0
LPRT08D	7.47	4,4'-DDD	36		ug/kg	2.2	16.364	1	19	1.8947	1
LPRT08D	7.47	4,4'-DDE	11		ug/kg	3.1	3.5484	1	103	0.1068	0
LPRT08D	7.47	4,4'-DDT	5.1		ug/kg	1.7	3	1	11	0.4636	0
LPRT08D	7.47	Dieldrin	2.9		ug/kg	0.83	3.494	1	2.9	1	0
LPRT08E	7.88	Antimony	0.29	J	mg/kg	0.63	0.4603	0	2.4	0.1208	0
LPRT08E	7.88	Arsenic	1.4		mg/kg	7.4	0.1892	0	20	0.07	0
LPRT08E	7.88	Cadmium	0.28	J	mg/kg	0.38	0.7368	0	1.4	0.2	0
LPRT08E	7.88	Chromium	14.6		mg/kg	49	0.298	0	141	0.1035	0
LPRT08E	7.88	Copper	36.7		mg/kg	32	1.1469	1	94	0.3904	0
LPRT08E	7.88	Lead	68.3	J	mg/kg	30	2.2767	1	94	0.7266	0
LPRT08E	7.88	Mercury	150		ug/kg	140	1.0714	1	480	0.3125	0
LPRT08E	7.88	Nickel	15.1		mg/kg	15	1.0067	1	47	0.3213	0
LPRT08E	7.88	Silver	0.17		mg/kg	0.23	0.7391	0	1.1	0.1545	0
LPRT08E	7.88	Zinc	106		mg/kg	94	1.1277	1	245	0.4327	0
LPRT08E	7.88	1-Methylnaphthalene	10	U	ug/kg	21	0.4762	0	94	0.1064	0
LPRT08E	7.88	1-Methylphenanthrene	100	J	ug/kg	18	5.5556	1	112	0.8929	0
LPRT08E	7.88	2,6-Dimethylnaphthalene	5.7	U	ug/kg	25	0.228	0	133	0.0429	0
LPRT08E	7.88	2-Methylnaphthalene	27	J	ug/kg	21	1.2857	1	128	0.2109	0
LPRT08E	7.88	Acenaphthene	32	J	ug/kg	19	1.6842	1	116	0.2759	0
LPRT08E	7.88	Acenaphthylene	110	J	ug/kg	14	7.8571	1	140	0.7857	0
LPRT08E	7.88	Anthracene	130	J	ug/kg	34	3.8235	1	290	0.4483	0
LPRT08E	7.88	Benzo(a)anthracene	1200	J	ug/kg	61	19.672	1	446	2.6906	1
LPRT08E	7.88	Benzo(a)pyrene	1100	J	ug/kg	69	15.942	1	520	2.1154	1
LPRT08E	7.88	Benzo(b/j)fluoranthene	1300	J	ug/kg	130	10	1	1107	1.1743	1
LPRT08E	7.88	Benzo(g,h,i)perylene	1200	J	ug/kg	67	17.91	1	497	2.4145	1
LPRT08E	7.88	Benzo(k)fluoranthene	620	J	ug/kg	70	8.8571	1	537	1.1546	1
LPRT08E	7.88	Chrysene	1200	J	ug/kg	82	14.634	1	650	1.8462	1
LPRT08E	7.88	Dibenzo(a,h)anthracene	170	J	ug/kg	19	8.9474	1	113	1.5044	1
LPRT08E	7.88	Fluoranthene	2100	J	ug/kg	119	17.647	1	1034	2.0309	1
LPRT08E	7.88	Fluorene	35	J	ug/kg	19	1.8421	1	114	0.307	0

Table B7-1b. Sediment chemistry LOE

Location ID	No. of Chemicals w/ T20 EF ≥ 1	No. of Chemicals w/ T50 EF ≥ 1	Sediment Chemistry LOE Weight

Table B7-1a. T20/T50 Screen of LPRSA Sediment Chemistry Data

Location ID	RM	Parameter	Result	Qualifier	Units	T20	T20 EF	T20 EF ≥ 1	T50	T50 EF	T50 EF ≥ 1
LPRT08E	7.88	Indeno(1,2,3-cd)pyrene	1000	J	ug/kg	68	14.706	1	488	2.0492	1
LPRT08E	7.88	Naphthalene	78	U	ug/kg	30	2.6	1	217	0.3594	0
LPRT08E	7.88	Perylene	250	J	ug/kg	74	3.3784	1	453	0.5519	0
LPRT08E	7.88	Phenanthrene	620	J	ug/kg	68	9.1176	1	455	1.3626	1
LPRT08E	7.88	Pyrene	1600	J	ug/kg	125	12.8	1	932	1.7167	1
LPRT08E	7.88	1,1'-Biphenyl	230	U	ug/kg	17	13.529	1	73	3.1507	1
LPRT08E	7.88	Total PCB Congeners	71	J	ug/kg	35	2.0286	1	368	0.1929	0
LPRT08E	7.88	4,4'-DDD	51		ug/kg	2.2	23.182	1	19	2.6842	1
LPRT08E	7.88	4,4'-DDE	11		ug/kg	3.1	3.5484	1	103	0.1068	0
LPRT08E	7.88	4,4'-DDT	10		ug/kg	1.7	5.8824	1	11	0.9091	0
LPRT08E	7.88	Dieldrin	2.2		ug/kg	0.83	2.6506	1	2.9	0.7586	0
LPRT09A	8.48	Antimony	0.75	J	mg/kg	0.63	1.1905	1	2.4	0.3125	0
LPRT09A	8.48	Arsenic	4.3	J	mg/kg	7.4	0.5811	0	20	0.215	0
LPRT09A	8.48	Cadmium	1.6		mg/kg	0.38	4.2105	1	1.4	1.1429	1
LPRT09A	8.48	Chromium	69.2		mg/kg	49	1.4122	1	141	0.4908	0
LPRT09A	8.48	Copper	97.1		mg/kg	32	3.0344	1	94	1.033	1
LPRT09A	8.48	Lead	168		mg/kg	30	5.6	1	94	1.7872	1
LPRT09A	8.48	Mercury	970		ug/kg	140	6.9286	1	480	2.0208	1
LPRT09A	8.48	Nickel	16.3		mg/kg	15	1.0867	1	47	0.3468	0
LPRT09A	8.48	Silver	1.1		mg/kg	0.23	4.7826	1	1.1	1	0
LPRT09A	8.48	Zinc	226		mg/kg	94	2.4043	1	245	0.9224	0
LPRT09A	8.48	1-Methylnaphthalene	73	J	ug/kg	21	3.4762	1	94	0.7766	0
LPRT09A	8.48	1-Methylphenanthrene	250	J	ug/kg	18	13.889	1	112	2.2321	1
LPRT09A	8.48	2,6-Dimethylnaphthalene	92	J	ug/kg	25	3.68	1	133	0.6917	0
LPRT09A	8.48	2-Methylnaphthalene	130		ug/kg	21	6.1905	1	128	1.0156	1
LPRT09A	8.48	Acenaphthene	400		ug/kg	19	21.053	1	116	3.4483	1
LPRT09A	8.48	Acenaphthylene	250		ug/kg	14	17.857	1	140	1.7857	1
LPRT09A	8.48	Anthracene	920	J	ug/kg	34	27.059	1	290	3.1724	1
LPRT09A	8.48	Benzo(a)anthracene	2800		ug/kg	61	45.902	1	446	6.278	1
LPRT09A	8.48	Benzo(a)pyrene	1900	J	ug/kg	69	27.536	1	520	3.6538	1
LPRT09A	8.48	Benzo(b/j)fluoranthene	2500		ug/kg	130	19.231	1	1107	2.2584	1
LPRT09A	8.48	Benzo(g,h,i)perylene	1700	J	ug/kg	67	25.373	1	497	3.4205	1
LPRT09A	8.48	Benzo(k)fluoranthene	1200		ug/kg	70	17.143	1	537	2.2346	1
LPRT09A	8.48	Chrysene	2800	J	ug/kg	82	34.146	1	650	4.3077	1
LPRT09A	8.48	Dibenzo(a,h)anthracene	410	J	ug/kg	19	21.579	1	113	3.6283	1
LPRT09A	8.48	Fluoranthene	4600	J	ug/kg	119	38.655	1	1034	4.4487	1
LPRT09A	8.48	Fluorene	270	J	ug/kg	19	14.211	1	114	2.3684	1
LPRT09A	8.48	Indeno(1,2,3-cd)pyrene	1500	J	ug/kg	68	22.059	1	488	3.0738	1
LPRT09A	8.48	Naphthalene	260		ug/kg	30	8.6667	1	217	1.1982	1
LPRT09A	8.48	Perylene	520	J	ug/kg	74	7.027	1	453	1.1479	1
LPRT09A	8.48	Phenanthrene	1300	J	ug/kg	68	19.118	1	455	2.8571	1
LPRT09A	8.48	Pyrene	6100	J	ug/kg	125	48.8	1	932	6.5451	1
LPRT09A	8.48	1,1'-Biphenyl	230	U	ug/kg	17	13.529	1	73	3.1507	1
LPRT09A	8.48	Total PCB Congeners	1900	J	ug/kg	35	54.286	1	368	5.163	1
LPRT09A	8.48	4,4'-DDD	86	J	ug/kg	2.2	39.091	1	19	4.5263	1
LPRT09A	8.48	4,4'-DDE	27	J	ug/kg	3.1	8.7097	1	103	0.2621	0
LPRT09A	8.48	4,4'-DDT	4.6	J	ug/kg	1.7	2.7059	1	11	0.4182	0
LPRT09A	8.48	Dieldrin	8.2	J	ug/kg	0.83	9.8795	1	2.9	2.8276	1
LPRT09B	8.08	Antimony	0.76	J	mg/kg	0.63	1.2063	1	2.4	0.3167	0
LPRT09B	8.08	Arsenic	1.1		mg/kg	7.4	0.1486	0	20	0.055	0
LPRT09B	8.08	Cadmium	0.25		mg/kg	0.38	0.6579	0	1.4	0.1786	0
LPRT09B	8.08	Chromium	11.1		mg/kg	49	0.2265	0	141	0.0787	0
LPRT09B	8.08	Copper	16.3		mg/kg	32	0.5094	0	94	0.1734	0
LPRT09B	8.08	Lead	38.5		mg/kg	30	1.2833	1	94	0.4096	0
LPRT09B	8.08	Mercury	150		ug/kg	140	1.0714	1	480	0.3125	0
LPRT09B	8.08	Nickel	6.9		mg/kg	15	0.46	0	47	0.1468	0
LPRT09B	8.08	Silver	0.15		mg/kg	0.23	0.6522	0	1.1	0.1364	0
LPRT09B	8.08	Zinc	400		mg/kg	94	4.2553	1	245	1.6327	1
LPRT09B	8.08	1-Methylnaphthalene	41	J	ug/kg	21	1.9524	1	94	0.4362	0
LPRT09B	8.08	1-Methylphenanthrene	120		ug/kg	18	6.6667	1	112	1.0714	1
LPRT09B	8.08	2,6-Dimethylnaphthalene	28	J	ug/kg	25	1.12	1	133	0.2105	0
LPRT09B	8.08	2-Methylnaphthalene	46	J	ug/kg	21	2.1905	1	128	0.3594	0
LPRT09B	8.08	Acenaphthene	310	J	ug/kg	19	16.316	1	116	2.6724	1
LPRT09B	8.08	Acenaphthylene	110		ug/kg	14	7.8571	1	140	0.7857	0
LPRT09B	8.08	Anthracene	590	J	ug/kg	34	17.353	1	290	2.0345	1
LPRT09B	8.08	Benzo(a)anthracene	3000		ug/kg	61	49.18	1	446	6.7265	1
LPRT09B	8.08	Benzo(a)pyrene	2100		ug/kg	69	30.435	1	520	4.0385	1
LPRT09B	8.08	Benzo(b/j)fluoranthene	3500		ug/kg	130	26.923	1	1107	3.1617	1
LPRT09B	8.08	Benzo(g,h,i)perylene	1600		ug/kg	67	23.881	1	497	3.2193	1
LPRT09B	8.08	Benzo(k)fluoranthene	1100		ug/kg	70	15.714	1	537	2.0484	1
LPRT09B	8.08	Chrysene	2500		ug/kg	82	30.488	1	650	3.8462	1
LPRT09B	8.08	Dibenzo(a,h)anthracene	320	J	ug/kg	19	16.842	1	113	2.8319	1

Table B7-1b. Sediment chemistry LOE

Location ID	No. of Chemicals w/ T20 EF ≥ 1	No. of Chemicals w/ T50 EF ≥ 1	Sediment Chemistry LOE Weight

Table B7-1a. T20/T50 Screen of LPRSA Sediment Chemistry Data

Location ID	RM	Parameter	Result	Qualifier	Units	T20	T20 EF	T20 EF ≥ 1	T50	T50 EF	T50 EF ≥ 1
LPRT09B	8.08	Fluoranthene	5700	J	ug/kg	119	47.899	1	1034	5.5126	1
LPRT09B	8.08	Fluorene	230	J	ug/kg	19	12.105	1	114	2.0175	1
LPRT09B	8.08	Indeno(1,2,3-cd)pyrene	1200		ug/kg	68	17.647	1	488	2.459	1
LPRT09B	8.08	Naphthalene	67	U	ug/kg	30	2.2333	1	217	0.3088	0
LPRT09B	8.08	Perylene	570		ug/kg	74	7.7027	1	453	1.2583	1
LPRT09B	8.08	Phenanthrene	3400		ug/kg	68	50	1	455	7.4725	1
LPRT09B	8.08	Pyrene	3700		ug/kg	125	29.6	1	932	3.97	1
LPRT09B	8.08	1,1'-Biphenyl	240	U	ug/kg	17	14.118	1	73	3.2877	1
LPRT09B	8.08	Total PCB Congeners	25000	J	ug/kg	35	714.29	1	368	67.935	1
LPRT09B	8.08	4,4'-DDD	120		ug/kg	2.2	54.545	1	19	6.3158	1
LPRT09B	8.08	4,4'-DDE	18		ug/kg	3.1	5.8065	1	103	0.1748	0
LPRT09B	8.08	4,4'-DDT	100		ug/kg	1.7	58.824	1	11	9.0909	1
LPRT09B	8.08	Dieldrin	3.1		ug/kg	0.83	3.7349	1	2.9	1.069	1
LPRT09C	8.65	Antimony	0.46	J	mg/kg	0.63	0.7302	0	2.4	0.1917	0
LPRT09C	8.65	Arsenic	1.6		mg/kg	7.4	0.2162	0	20	0.08	0
LPRT09C	8.65	Cadmium	0.82		mg/kg	0.38	2.1579	1	1.4	0.5857	0
LPRT09C	8.65	Chromium	20.8		mg/kg	49	0.4245	0	141	0.1475	0
LPRT09C	8.65	Copper	36		mg/kg	32	1.125	1	94	0.383	0
LPRT09C	8.65	Lead	72.2		mg/kg	30	2.4067	1	94	0.7681	0
LPRT09C	8.65	Mercury	360		ug/kg	140	2.5714	1	480	0.75	0
LPRT09C	8.65	Nickel	9		mg/kg	15	0.6	0	47	0.1915	0
LPRT09C	8.65	Silver	0.49		mg/kg	0.23	2.1304	1	1.1	0.4455	0
LPRT09C	8.65	Zinc	163		mg/kg	94	1.734	1	245	0.6653	0
LPRT09C	8.65	1-Methylnaphthalene	80	J	ug/kg	21	3.8095	1	94	0.8511	0
LPRT09C	8.65	1-Methylphenanthrene	270		ug/kg	18	15	1	112	2.4107	1
LPRT09C	8.65	2,6-Dimethylnaphthalene	120		ug/kg	25	4.8	1	133	0.9023	0
LPRT09C	8.65	2-Methylnaphthalene	100	J	ug/kg	21	4.7619	1	128	0.7813	0
LPRT09C	8.65	Acenaphthene	230	J	ug/kg	19	12.105	1	116	1.9828	1
LPRT09C	8.65	Acenaphthylene	280		ug/kg	14	20	1	140	2	1
LPRT09C	8.65	Anthracene	370	J	ug/kg	34	10.882	1	290	1.2759	1
LPRT09C	8.65	Benzo(a)anthracene	3300		ug/kg	61	54.098	1	446	7.3991	1
LPRT09C	8.65	Benzo(a)pyrene	3000		ug/kg	69	43.478	1	520	5.7692	1
LPRT09C	8.65	Benzo(b/j)fluoranthene	3300		ug/kg	130	25.385	1	1107	2.981	1
LPRT09C	8.65	Benzo(g,h,i)perylene	1800		ug/kg	67	26.866	1	497	3.6217	1
LPRT09C	8.65	Benzo(k)fluoranthene	1300		ug/kg	70	18.571	1	537	2.4209	1
LPRT09C	8.65	Chrysene	3000		ug/kg	82	36.585	1	650	4.6154	1
LPRT09C	8.65	Dibenzo(a,h)anthracene	360	J	ug/kg	19	18.947	1	113	3.1858	1
LPRT09C	8.65	Fluoranthene	5400	J	ug/kg	119	45.378	1	1034	5.2224	1
LPRT09C	8.65	Fluorene	190	J	ug/kg	19	10	1	114	1.6667	1
LPRT09C	8.65	Indeno(1,2,3-cd)pyrene	1700		ug/kg	68	25	1	488	3.4836	1
LPRT09C	8.65	Naphthalene	150	U	ug/kg	30	5	1	217	0.6912	0
LPRT09C	8.65	Perylene	580		ug/kg	74	7.8378	1	453	1.2804	1
LPRT09C	8.65	Phenanthrene	2500		ug/kg	68	36.765	1	455	5.4945	1
LPRT09C	8.65	Pyrene	3900		ug/kg	125	31.2	1	932	4.1845	1
LPRT09C	8.65	1,1'-Biphenyl	280	U	ug/kg	17	16.471	1	73	3.8356	1
LPRT09C	8.65	Total PCB Congeners	550	J	ug/kg	35	15.714	1	368	1.4946	1
LPRT09C	8.65	4,4'-DDD	14		ug/kg	2.2	6.3636	1	19	0.7368	0
LPRT09C	8.65	4,4'-DDE	12		ug/kg	3.1	3.871	1	103	0.1165	0
LPRT09C	8.65	4,4'-DDT	8		ug/kg	1.7	4.7059	1	11	0.7273	0
LPRT09C	8.65	Dieldrin	2.6		ug/kg	0.83	3.1325	1	2.9	0.8966	0
LPRT09D	8.71	Antimony	0.79	J	mg/kg	0.63	1.254	1	2.4	0.3292	0
LPRT09D	8.71	Arsenic	6.7	J	mg/kg	7.4	0.9054	0	20	0.335	0
LPRT09D	8.71	Cadmium	3.3	J	mg/kg	0.38	8.6842	1	1.4	2.3571	1
LPRT09D	8.71	Chromium	101	J	mg/kg	49	2.0612	1	141	0.7163	0
LPRT09D	8.71	Copper	162	J	mg/kg	32	5.0625	1	94	1.7234	1
LPRT09D	8.71	Lead	211	J	mg/kg	30	7.0333	1	94	2.2447	1
LPRT09D	8.71	Mercury	2300	J	ug/kg	140	16.429	1	480	4.7917	1
LPRT09D	8.71	Nickel	27.8	J	mg/kg	15	1.8533	1	47	0.5915	0
LPRT09D	8.71	Silver	2.6	J	mg/kg	0.23	11.304	1	1.1	2.3636	1
LPRT09D	8.71	Zinc	535	J	mg/kg	94	5.6915	1	245	2.1837	1
LPRT09D	8.71	1-Methylnaphthalene	130	J	ug/kg	21	6.1905	1	94	1.383	1
LPRT09D	8.71	1-Methylphenanthrene	260	J	ug/kg	18	14.444	1	112	2.3214	1
LPRT09D	8.71	2,6-Dimethylnaphthalene	110	J	ug/kg	25	4.4	1	133	0.8271	0
LPRT09D	8.71	2-Methylnaphthalene	240	J	ug/kg	21	11.429	1	128	1.875	1
LPRT09D	8.71	Acenaphthene	180	J	ug/kg	19	9.4737	1	116	1.5517	1
LPRT09D	8.71	Acenaphthylene	350	J	ug/kg	14	25	1	140	2.5	1
LPRT09D	8.71	Anthracene	520	J	ug/kg	34	15.294	1	290	1.7931	1
LPRT09D	8.71	Benzo(a)anthracene	2400	J	ug/kg	61	39.344	1	446	5.3812	1
LPRT09D	8.71	Benzo(a)pyrene	3000	J	ug/kg	69	43.478	1	520	5.7692	1
LPRT09D	8.71	Benzo(b/j)fluoranthene	3600	J	ug/kg	130	27.692	1	1107	3.252	1
LPRT09D	8.71	Benzo(g,h,i)perylene	2200	J	ug/kg	67	32.836	1	497	4.4266	1
LPRT09D	8.71	Benzo(k)fluoranthene	1700	J	ug/kg	70	24.286	1	537	3.1657	1

Table B7-1b. Sediment chemistry LOE

Location ID	No. of Chemicals w/ T20 EF ≥ 1	No. of Chemicals w/ T50 EF ≥ 1	Sediment Chemistry LOE Weight

Table B7-1a. T20/T50 Screen of LPRSA Sediment Chemistry Data

Location ID	RM	Parameter	Result	Qualifier	Units	T20	T20 EF	T20 EF ≥ 1	T50	T50 EF	T50 EF ≥ 1
LPRT09D	8.71	Chrysene	3300	J	ug/kg	82	40.244	1	650	5.0769	1
LPRT09D	8.71	Dibenzo(a,h)anthracene	500	J	ug/kg	19	26.316	1	113	4.4248	1
LPRT09D	8.71	Fluoranthene	4600	J	ug/kg	119	38.655	1	1034	4.4487	1
LPRT09D	8.71	Fluorene	160	J	ug/kg	19	8.4211	1	114	1.4035	1
LPRT09D	8.71	Indeno(1,2,3-cd)pyrene	1800	J	ug/kg	68	26.471	1	488	3.6885	1
LPRT09D	8.71	Naphthalene	440	UJ	ug/kg	30	14.667	1	217	2.0276	1
LPRT09D	8.71	Perylene	700	J	ug/kg	74	9.4595	1	453	1.5453	1
LPRT09D	8.71	Phenanthrene	1700	J	ug/kg	68	25	1	455	3.7363	1
LPRT09D	8.71	Pyrene	3400	J	ug/kg	125	27.2	1	932	3.6481	1
LPRT09D	8.71	1,1'-Biphenyl	670	UJ	ug/kg	17	39.412	1	73	9.1781	1
LPRT09D	8.71	Total PCB Congeners	820	J	ug/kg	35	23.429	1	368	2.2283	1
LPRT09D	8.71	4,4'-DDD	35	J	ug/kg	2.2	15.909	1	19	1.8421	1
LPRT09D	8.71	4,4'-DDE	5.7	J	ug/kg	3.1	1.8387	1	103	0.0553	0
LPRT09D	8.71	4,4'-DDT	13	J	ug/kg	1.7	7.6471	1	11	1.1818	1
LPRT09D	8.71	Dieldrin	8.1	J	ug/kg	0.83	9.759	1	2.9	2.7931	1
LPRT09E	8.76	Antimony	0.91	J	mg/kg	0.63	1.4444	1	2.4	0.3792	0
LPRT09E	8.76	Arsenic	7.2	J	mg/kg	7.4	0.973	0	20	0.36	0
LPRT09E	8.76	Cadmium	3.6	J	mg/kg	0.38	9.4737	1	1.4	2.5714	1
LPRT09E	8.76	Chromium	123	J	mg/kg	49	2.5102	1	141	0.8723	0
LPRT09E	8.76	Copper	181	J	mg/kg	32	5.6563	1	94	1.9255	1
LPRT09E	8.76	Lead	262	J	mg/kg	30	8.7333	1	94	2.7872	1
LPRT09E	8.76	Mercury	1800	J	ug/kg	140	12.857	1	480	3.75	1
LPRT09E	8.76	Nickel	32.2	J	mg/kg	15	2.1467	1	47	0.6851	0
LPRT09E	8.76	Silver	2.4	J	mg/kg	0.23	10.435	1	1.1	2.1818	1
LPRT09E	8.76	Zinc	460	J	mg/kg	94	4.8936	1	245	1.8776	1
LPRT09E	8.76	1-Methylnaphthalene	130	J	ug/kg	21	6.1905	1	94	1.383	1
LPRT09E	8.76	1-Methylphenanthrene	300	J	ug/kg	18	16.667	1	112	2.6786	1
LPRT09E	8.76	2,6-Dimethylnaphthalene	130	J	ug/kg	25	5.2	1	133	0.9774	0
LPRT09E	8.76	2-Methylnaphthalene	240	J	ug/kg	21	11.429	1	128	1.875	1
LPRT09E	8.76	Acenaphthene	240	J	ug/kg	19	12.632	1	116	2.069	1
LPRT09E	8.76	Acenaphthylene	480	J	ug/kg	14	34.286	1	140	3.4286	1
LPRT09E	8.76	Anthracene	550	J	ug/kg	34	16.176	1	290	1.8966	1
LPRT09E	8.76	Benzo(a)anthracene	3500	J	ug/kg	61	57.377	1	446	7.8475	1
LPRT09E	8.76	Benzo(a)pyrene	3300	J	ug/kg	69	47.826	1	520	6.3462	1
LPRT09E	8.76	Benzo(b/j)fluoranthene	5400	J	ug/kg	130	41.538	1	1107	4.878	1
LPRT09E	8.76	Benzo(g,h,i)perylene	2600	J	ug/kg	67	38.806	1	497	5.2314	1
LPRT09E	8.76	Benzo(k)fluoranthene	2500	J	ug/kg	70	35.714	1	537	4.6555	1
LPRT09E	8.76	Chrysene	4000	J	ug/kg	82	48.78	1	650	6.1538	1
LPRT09E	8.76	Dibenzo(a,h)anthracene	530	J	ug/kg	19	27.895	1	113	4.6903	1
LPRT09E	8.76	Fluoranthene	6900	J	ug/kg	119	57.983	1	1034	6.6731	1
LPRT09E	8.76	Fluorene	200	J	ug/kg	19	10.526	1	114	1.7544	1
LPRT09E	8.76	Indeno(1,2,3-cd)pyrene	2400	J	ug/kg	68	35.294	1	488	4.918	1
LPRT09E	8.76	Naphthalene	410	UJ	ug/kg	30	13.667	1	217	1.8894	1
LPRT09E	8.76	Perylene	890	J	ug/kg	74	12.027	1	453	1.9647	1
LPRT09E	8.76	Phenanthrene	2200	J	ug/kg	68	32.353	1	455	4.8352	1
LPRT09E	8.76	Pyrene	5500	J	ug/kg	125	44	1	932	5.9013	1
LPRT09E	8.76	1,1'-Biphenyl	580	UJ	ug/kg	17	34.118	1	73	7.9452	1
LPRT09E	8.76	Total PCB Congeners	1000	J	ug/kg	35	28.571	1	368	2.7174	1
LPRT09E	8.76	4,4'-DDD	36	J	ug/kg	2.2	16.364	1	19	1.8947	1
LPRT09E	8.76	4,4'-DDE	13	J	ug/kg	3.1	4.1935	1	103	0.1262	0
LPRT09E	8.76	4,4'-DDT	8.5	J	ug/kg	1.7	5	1	11	0.7727	0
LPRT09E	8.76	Dieldrin	8.7	J	ug/kg	0.83	10.482	1	2.9	3	1
LPRT09F	8.81	Antimony	0.85	J	mg/kg	0.63	1.3492	1	2.4	0.3542	0
LPRT09F	8.81	Arsenic	6.7	J	mg/kg	7.4	0.9054	0	20	0.335	0
LPRT09F	8.81	Cadmium	5.2	J	mg/kg	0.38	13.684	1	1.4	3.7143	1
LPRT09F	8.81	Chromium	158	J	mg/kg	49	3.2245	1	141	1.1206	1
LPRT09F	8.81	Copper	195	J	mg/kg	32	6.0938	1	94	2.0745	1
LPRT09F	8.81	Lead	302	J	mg/kg	30	10.067	1	94	3.2128	1
LPRT09F	8.81	Mercury	2400	J	ug/kg	140	17.143	1	480	5	1
LPRT09F	8.81	Nickel	31.3	J	mg/kg	15	2.0867	1	47	0.666	0
LPRT09F	8.81	Silver	2.6	J	mg/kg	0.23	11.304	1	1.1	2.3636	1
LPRT09F	8.81	Zinc	430	J	mg/kg	94	4.5745	1	245	1.7551	1
LPRT09F	8.81	1-Methylnaphthalene	86	J	ug/kg	21	4.0952	1	94	0.9149	0
LPRT09F	8.81	1-Methylphenanthrene	240	J	ug/kg	18	13.333	1	112	2.1429	1
LPRT09F	8.81	2,6-Dimethylnaphthalene	99	J	ug/kg	25	3.96	1	133	0.7444	0
LPRT09F	8.81	2-Methylnaphthalene	170	J	ug/kg	21	8.0952	1	128	1.3281	1
LPRT09F	8.81	Acenaphthene	130	J	ug/kg	19	6.8421	1	116	1.1207	1
LPRT09F	8.81	Acenaphthylene	210	J	ug/kg	14	15	1	140	1.5	1
LPRT09F	8.81	Anthracene	310	J	ug/kg	34	9.1176	1	290	1.069	1
LPRT09F	8.81	Benzo(a)anthracene	1600	J	ug/kg	61	26.23	1	446	3.5874	1
LPRT09F	8.81	Benzo(a)pyrene	2700	J	ug/kg	69	39.13	1	520	5.1923	1
LPRT09F	8.81	Benzo(b/j)fluoranthene	3100	J	ug/kg	130	23.846	1	1107	2.8004	1

Table B7-1b. Sediment chemistry LOE

Location ID	No. of Chemicals w/ T20 EF ≥ 1	No. of Chemicals w/ T50 EF ≥ 1	Sediment Chemistry LOE Weight

Table B7-1a. T20/T50 Screen of LPRSA Sediment Chemistry Data

Location ID	RM	Parameter	Result	Qualifier	Units	T20	T20 EF	T20 EF ≥ 1	T50	T50 EF	T50 EF ≥ 1
LPRT09F	8.81	Benzo(g,h,i)perylene	2000	J	ug/kg	67	29.851	1	497	4.0241	1
LPRT09F	8.81	Benzo(k)fluoranthene	1700	J	ug/kg	70	24.286	1	537	3.1657	1
LPRT09F	8.81	Chrysene	2300	J	ug/kg	82	28.049	1	650	3.5385	1
LPRT09F	8.81	Dibenzo(a,h)anthracene	460	J	ug/kg	19	24.211	1	113	4.0708	1
LPRT09F	8.81	Fluoranthene	3700	J	ug/kg	119	31.092	1	1034	3.5783	1
LPRT09F	8.81	Fluorene	180	J	ug/kg	19	9.4737	1	114	1.5789	1
LPRT09F	8.81	Indeno(1,2,3-cd)pyrene	1900	J	ug/kg	68	27.941	1	488	3.8934	1
LPRT09F	8.81	Naphthalene	350	J	ug/kg	30	11.667	1	217	1.6129	1
LPRT09F	8.81	Perylene	610	J	ug/kg	74	8.2432	1	453	1.3466	1
LPRT09F	8.81	Phenanthrene	1400	J	ug/kg	68	20.588	1	455	3.0769	1
LPRT09F	8.81	Pyrene	2900	J	ug/kg	125	23.2	1	932	3.1116	1
LPRT09F	8.81	1,1'-Biphenyl	490	UJ	ug/kg	17	28.824	1	73	6.7123	1
LPRT09F	8.81	Total PCB Congeners	2400	J	ug/kg	35	68.571	1	368	6.5217	1
LPRT09F	8.81	4,4'-DDD	35	J	ug/kg	2.2	15.909	1	19	1.8421	1
LPRT09F	8.81	4,4'-DDE	59	J	ug/kg	3.1	19.032	1	103	0.5728	0
LPRT09F	8.81	4,4'-DDT	14	J	ug/kg	1.7	8.2353	1	11	1.2727	1
LPRT09F	8.81	Dieldrin	5.6	J	ug/kg	0.83	6.747	1	2.9	1.931	1
LPRT09G	8.89	Antimony	0.86	J	mg/kg	0.63	1.3651	1	2.4	0.3583	0
LPRT09G	8.89	Arsenic	1.8		mg/kg	7.4	0.2432	0	20	0.09	0
LPRT09G	8.89	Cadmium	0.54		mg/kg	0.38	1.4211	1	1.4	0.3857	0
LPRT09G	8.89	Chromium	18.8		mg/kg	49	0.3837	0	141	0.1333	0
LPRT09G	8.89	Copper	24.9		mg/kg	32	0.7781	0	94	0.2649	0
LPRT09G	8.89	Lead	36.2		mg/kg	30	1.2067	1	94	0.3851	0
LPRT09G	8.89	Mercury	290		ug/kg	140	2.0714	1	480	0.6042	0
LPRT09G	8.89	Nickel	7.9		mg/kg	15	0.5267	0	47	0.1681	0
LPRT09G	8.89	Silver	0.3		mg/kg	0.23	1.3043	1	1.1	0.2727	0
LPRT09G	8.89	Zinc	102		mg/kg	94	1.0851	1	245	0.4163	0
LPRT09G	8.89	1-Methylnaphthalene	22	U	ug/kg	21	1.0476	1	94	0.234	0
LPRT09G	8.89	1-Methylphenanthrene	13	UJ	ug/kg	18	0.7222	0	112	0.1161	0
LPRT09G	8.89	2,6-Dimethylnaphthalene	10	U	ug/kg	25	0.4	0	133	0.0752	0
LPRT09G	8.89	2-Methylnaphthalene	22	U	ug/kg	21	1.0476	1	128	0.1719	0
LPRT09G	8.89	Acenaphthene	12	UJ	ug/kg	19	0.6316	0	116	0.1034	0
LPRT09G	8.89	Acenaphthylene	16	U	ug/kg	14	1.1429	1	140	0.1143	0
LPRT09G	8.89	Anthracene	16	UJ	ug/kg	34	0.4706	0	290	0.0552	0
LPRT09G	8.89	Benzo(a)anthracene	120		ug/kg	61	1.9672	1	446	0.2691	0
LPRT09G	8.89	Benzo(a)pyrene	140		ug/kg	69	2.029	1	520	0.2692	0
LPRT09G	8.89	Benzo(b/j)fluoranthene	170	J	ug/kg	130	1.3077	1	1107	0.1536	0
LPRT09G	8.89	Benzo(g,h,i)perylene	180		ug/kg	67	2.6866	1	497	0.3622	0
LPRT09G	8.89	Benzo(k)fluoranthene	81	J	ug/kg	70	1.1571	1	537	0.1508	0
LPRT09G	8.89	Chrysene	130		ug/kg	82	1.5854	1	650	0.2	0
LPRT09G	8.89	Dibenzo(a,h)anthracene	32	U	ug/kg	19	1.6842	1	113	0.2832	0
LPRT09G	8.89	Fluoranthene	220		ug/kg	119	1.8487	1	1034	0.2128	0
LPRT09G	8.89	Fluorene	28	UJ	ug/kg	19	1.4737	1	114	0.2456	0
LPRT09G	8.89	Indeno(1,2,3-cd)pyrene	130		ug/kg	68	1.9118	1	488	0.2664	0
LPRT09G	8.89	Naphthalene	67	U	ug/kg	30	2.2333	1	217	0.3088	0
LPRT09G	8.89	Perylene	53	J	ug/kg	74	0.7162	0	453	0.117	0
LPRT09G	8.89	Phenanthrene	84	J	ug/kg	68	1.2353	1	455	0.1846	0
LPRT09G	8.89	Pyrene	190		ug/kg	125	1.52	1	932	0.2039	0
LPRT09G	8.89	1,1'-Biphenyl	230	U	ug/kg	17	13.529	1	73	3.1507	1
LPRT09G	8.89	Total PCB Congeners	170	J	ug/kg	35	4.8571	1	368	0.462	0
LPRT09G	8.89	4,4'-DDD	7.1		ug/kg	2.2	3.2273	1	19	0.3737	0
LPRT09G	8.89	4,4'-DDE	4.7		ug/kg	3.1	1.5161	1	103	0.0456	0
LPRT09G	8.89	4,4'-DDT	1.3	J	ug/kg	1.7	0.7647	0	11	0.1182	0
LPRT09G	8.89	Dieldrin	2.2		ug/kg	0.83	2.6506	1	2.9	0.7586	0
LPRT09H	8.31	Antimony	0.31	J	mg/kg	0.63	0.4921	0	2.4	0.1292	0
LPRT09H	8.31	Arsenic	1.8		mg/kg	7.4	0.2432	0	20	0.09	0
LPRT09H	8.31	Cadmium	0.25	J	mg/kg	0.38	0.6579	0	1.4	0.1786	0
LPRT09H	8.31	Chromium	22.8		mg/kg	49	0.4653	0	141	0.1617	0
LPRT09H	8.31	Copper	17.9		mg/kg	32	0.5594	0	94	0.1904	0
LPRT09H	8.31	Lead	37.8	J	mg/kg	30	1.26	1	94	0.4021	0
LPRT09H	8.31	Mercury	160		ug/kg	140	1.1429	1	480	0.3333	0
LPRT09H	8.31	Nickel	7.4		mg/kg	15	0.4933	0	47	0.1574	0
LPRT09H	8.31	Silver	0.11		mg/kg	0.23	0.4783	0	1.1	0.1	0
LPRT09H	8.31	Zinc	92.8		mg/kg	94	0.9872	0	245	0.3788	0
LPRT09H	8.31	1-Methylnaphthalene	21	J	ug/kg	21	1	0	94	0.2234	0
LPRT09H	8.31	1-Methylphenanthrene	41	J	ug/kg	18	2.2778	1	112	0.3661	0
LPRT09H	8.31	2,6-Dimethylnaphthalene	14	J	ug/kg	25	0.56	0	133	0.1053	0
LPRT09H	8.31	2-Methylnaphthalene	35	J	ug/kg	21	1.6667	1	128	0.2734	0
LPRT09H	8.31	Acenaphthene	42	J	ug/kg	19	2.2105	1	116	0.3621	0
LPRT09H	8.31	Acenaphthylene	130		ug/kg	14	9.2857	1	140	0.9286	0
LPRT09H	8.31	Anthracene	92	J	ug/kg	34	2.7059	1	290	0.3172	0
LPRT09H	8.31	Benzo(a)anthracene	720		ug/kg	61	11.803	1	446	1.6143	1

Table B7-1b. Sediment chemistry LOE

Location ID	No. of Chemicals w/ T20 EF ≥ 1	No. of Chemicals w/ T50 EF ≥ 1	Sediment Chemistry LOE Weight

Table B7-1a. T20/T50 Screen of LPRSA Sediment Chemistry Data

Location ID	RM	Parameter	Result	Qualifier	Units	T20	T20 EF	T20 EF ≥ 1	T50	T50 EF	T50 EF ≥ 1
LPRT09H	8.31	Benzo(a)pyrene	660	J	ug/kg	69	9.5652	1	520	1.2692	1
LPRT09H	8.31	Benzo(b/j)fluoranthene	590	J	ug/kg	130	4.5385	1	1107	0.533	0
LPRT09H	8.31	Benzo(g,h,i)perylene	190	J	ug/kg	67	2.8358	1	497	0.3823	0
LPRT09H	8.31	Benzo(k)fluoranthene	240		ug/kg	70	3.4286	1	537	0.4469	0
LPRT09H	8.31	Chrysene	600	J	ug/kg	82	7.3171	1	650	0.9231	0
LPRT09H	8.31	Dibenzo(a,h)anthracene	78	J	ug/kg	19	4.1053	1	113	0.6903	0
LPRT09H	8.31	Fluoranthene	740	J	ug/kg	119	6.2185	1	1034	0.7157	0
LPRT09H	8.31	Fluorene	31	J	ug/kg	19	1.6316	1	114	0.2719	0
LPRT09H	8.31	Indeno(1,2,3-cd)pyrene	230		ug/kg	68	3.3824	1	488	0.4713	0
LPRT09H	8.31	Naphthalene	88	U	ug/kg	30	2.9333	1	217	0.4055	0
LPRT09H	8.31	Perylene	95	J	ug/kg	74	1.2838	1	453	0.2097	0
LPRT09H	8.31	Phenanthrene	360		ug/kg	68	5.2941	1	455	0.7912	0
LPRT09H	8.31	Pyrene	630	J	ug/kg	125	5.04	1	932	0.676	0
LPRT09H	8.31	1,1'-Biphenyl	210	U	ug/kg	17	12.353	1	73	2.8767	1
LPRT09H	8.31	Total PCB Congeners	1700	J	ug/kg	35	48.571	1	368	4.6196	1
LPRT09H	8.31	4,4'-DDD	40		ug/kg	2.2	18.182	1	19	2.1053	1
LPRT09H	8.31	4,4'-DDE	5.1		ug/kg	3.1	1.6452	1	103	0.0495	0
LPRT09H	8.31	4,4'-DDT	39		ug/kg	1.7	22.941	1	11	3.5455	1
LPRT09H	8.31	Dieldrin	1.6	J	ug/kg	0.83	1.9277	1	2.9	0.5517	0
LPRT10A	9.08	Antimony	1.4	J	mg/kg	0.63	2.2222	1	2.4	0.5833	0
LPRT10A	9.08	Arsenic	4.8	J	mg/kg	7.4	0.6486	0	20	0.24	0
LPRT10A	9.08	Cadmium	2.9	J	mg/kg	0.38	7.6316	1	1.4	2.0714	1
LPRT10A	9.08	Chromium	106	J	mg/kg	49	2.1633	1	141	0.7518	0
LPRT10A	9.08	Copper	154	J	mg/kg	32	4.8125	1	94	1.6383	1
LPRT10A	9.08	Lead	211	J	mg/kg	30	7.0333	1	94	2.2447	1
LPRT10A	9.08	Mercury	1800	J	ug/kg	140	12.857	1	480	3.75	1
LPRT10A	9.08	Nickel	16.6	J	mg/kg	15	1.1067	1	47	0.3532	0
LPRT10A	9.08	Silver	2.3	J	mg/kg	0.23	10	1	1.1	2.0909	1
LPRT10A	9.08	Zinc	511	J	mg/kg	94	5.4362	1	245	2.0857	1
LPRT10A	9.08	1-Methylnaphthalene	100	J	ug/kg	21	4.7619	1	94	1.0638	1
LPRT10A	9.08	1-Methylphenanthrene	190	J	ug/kg	18	10.556	1	112	1.6964	1
LPRT10A	9.08	2,6-Dimethylnaphthalene	110	J	ug/kg	25	4.4	1	133	0.8271	0
LPRT10A	9.08	2-Methylnaphthalene	190	J	ug/kg	21	9.0476	1	128	1.4844	1
LPRT10A	9.08	Acenaphthene	190	J	ug/kg	19	10	1	116	1.6379	1
LPRT10A	9.08	Acenaphthylene	320	J	ug/kg	14	22.857	1	140	2.2857	1
LPRT10A	9.08	Anthracene	480	J	ug/kg	34	14.118	1	290	1.6552	1
LPRT10A	9.08	Benzo(a)anthracene	3000	J	ug/kg	61	49.18	1	446	6.7265	1
LPRT10A	9.08	Benzo(a)pyrene	2700	J	ug/kg	69	39.13	1	520	5.1923	1
LPRT10A	9.08	Benzo(b/j)fluoranthene	4200	J	ug/kg	130	32.308	1	1107	3.794	1
LPRT10A	9.08	Benzo(g,h,i)perylene	2900	J	ug/kg	67	43.284	1	497	5.835	1
LPRT10A	9.08	Benzo(k)fluoranthene	1700	J	ug/kg	70	24.286	1	537	3.1657	1
LPRT10A	9.08	Chrysene	3600	J	ug/kg	82	43.902	1	650	5.5385	1
LPRT10A	9.08	Dibenzo(a,h)anthracene	530	J	ug/kg	19	27.895	1	113	4.6903	1
LPRT10A	9.08	Fluoranthene	5000	J	ug/kg	119	42.017	1	1034	4.8356	1
LPRT10A	9.08	Fluorene	200	J	ug/kg	19	10.526	1	114	1.7544	1
LPRT10A	9.08	Indeno(1,2,3-cd)pyrene	2600	J	ug/kg	68	38.235	1	488	5.3279	1
LPRT10A	9.08	Naphthalene	350	J	ug/kg	30	11.667	1	217	1.6129	1
LPRT10A	9.08	Perylene	640	J	ug/kg	74	8.6486	1	453	1.4128	1
LPRT10A	9.08	Phenanthrene	1900	J	ug/kg	68	27.941	1	455	4.1758	1
LPRT10A	9.08	Pyrene	4400	J	ug/kg	125	35.2	1	932	4.721	1
LPRT10A	9.08	1,1'-Biphenyl	510	Uj	ug/kg	17	30	1	73	6.9863	1
LPRT10A	9.08	Total PCB Congeners	880	J	ug/kg	35	25.143	1	368	2.3913	1
LPRT10A	9.08	4,4'-DDD	27	J	ug/kg	2.2	12.273	1	19	1.4211	1
LPRT10A	9.08	4,4'-DDE	26	J	ug/kg	3.1	8.3871	1	103	0.2524	0
LPRT10A	9.08	4,4'-DDT	12	J	ug/kg	1.7	7.0588	1	11	1.0909	1
LPRT10A	9.08	Dieldrin	7.1	J	ug/kg	0.83	8.5542	1	2.9	2.4483	1
LPRT10B	9.19	Antimony	1.1	J	mg/kg	0.63	1.746	1	2.4	0.4583	0
LPRT10B	9.19	Arsenic	5.1		mg/kg	7.4	0.6892	0	20	0.255	0
LPRT10B	9.19	Cadmium	7.2	J	mg/kg	0.38	18.947	1	1.4	5.1429	1
LPRT10B	9.19	Chromium	197	J	mg/kg	49	4.0204	1	141	1.3972	1
LPRT10B	9.19	Copper	180		mg/kg	32	5.625	1	94	1.9149	1
LPRT10B	9.19	Lead	251	J	mg/kg	30	8.3667	1	94	2.6702	1
LPRT10B	9.19	Mercury	2800		ug/kg	140	20	1	480	5.8333	1
LPRT10B	9.19	Nickel	16.6	J	mg/kg	15	1.1067	1	47	0.3532	0
LPRT10B	9.19	Silver	4.7		mg/kg	0.23	20.435	1	1.1	4.2727	1
LPRT10B	9.19	Zinc	439	J	mg/kg	94	4.6702	1	245	1.7918	1
LPRT10B	9.19	1-Methylnaphthalene	94	J	ug/kg	21	4.4762	1	94	1	0
LPRT10B	9.19	1-Methylphenanthrene	270	J	ug/kg	18	15	1	112	2.4107	1
LPRT10B	9.19	2,6-Dimethylnaphthalene	170		ug/kg	25	6.8	1	133	1.2782	1
LPRT10B	9.19	2-Methylnaphthalene	200		ug/kg	21	9.5238	1	128	1.5625	1
LPRT10B	9.19	Acenaphthene	230		ug/kg	19	12.105	1	116	1.9828	1
LPRT10B	9.19	Acenaphthylene	290		ug/kg	14	20.714	1	140	2.0714	1

Table B7-1b. Sediment chemistry LOE

Location ID	No. of Chemicals w/ T20 EF ≥ 1	No. of Chemicals w/ T50 EF ≥ 1	Sediment Chemistry LOE Weight

Table B7-1a. T20/T50 Screen of LPRSA Sediment Chemistry Data

Location ID	RM	Parameter	Result	Qualifier	Units	T20	T20 EF	T20 EF ≥ 1	T50	T50 EF	T50 EF ≥ 1
LPRT10B	9.19	Anthracene	610	J	ug/kg	34	17.941	1	290	2.1034	1
LPRT10B	9.19	Benzo(a)anthracene	2000		ug/kg	61	32.787	1	446	4.4843	1
LPRT10B	9.19	Benzo(a)pyrene	1700	J	ug/kg	69	24.638	1	520	3.2692	1
LPRT10B	9.19	Benzo(b/j)fluoranthene	2200		ug/kg	130	16.923	1	1107	1.9874	1
LPRT10B	9.19	Benzo(g,h,i)perylene	1600		ug/kg	67	23.881	1	497	3.2193	1
LPRT10B	9.19	Benzo(k)fluoranthene	970		ug/kg	70	13.857	1	537	1.8063	1
LPRT10B	9.19	Chrysene	2400		ug/kg	82	29.268	1	650	3.6923	1
LPRT10B	9.19	Dibenzo(a,h)anthracene	350	J	ug/kg	19	18.421	1	113	3.0973	1
LPRT10B	9.19	Fluoranthene	3700		ug/kg	119	31.092	1	1034	3.5783	1
LPRT10B	9.19	Fluorene	250	J	ug/kg	19	13.158	1	114	2.193	1
LPRT10B	9.19	Indeno(1,2,3-cd)pyrene	1500		ug/kg	68	22.059	1	488	3.0738	1
LPRT10B	9.19	Naphthalene	310		ug/kg	30	10.333	1	217	1.4286	1
LPRT10B	9.19	Perylene	370		ug/kg	74	5	1	453	0.8168	0
LPRT10B	9.19	Phenanthrene	1400		ug/kg	68	20.588	1	455	3.0769	1
LPRT10B	9.19	Pyrene	3600		ug/kg	125	28.8	1	932	3.8627	1
LPRT10B	9.19	1,1'-Biphenyl	300	U	ug/kg	17	17.647	1	73	4.1096	1
LPRT10B	9.19	Total PCB Congeners	3500	J	ug/kg	35	100	1	368	9.5109	1
LPRT10B	9.19	4,4'-DDD	30		ug/kg	2.2	13.636	1	19	1.5789	1
LPRT10B	9.19	4,4'-DDE	76		ug/kg	3.1	24.516	1	103	0.7379	0
LPRT10B	9.19	4,4'-DDT	15		ug/kg	1.7	8.8235	1	11	1.3636	1
LPRT10B	9.19	Dieldrin	6.8		ug/kg	0.83	8.1928	1	2.9	2.3448	1
LPRT10C	9.61	Antimony	0.91	J	mg/kg	0.63	1.4444	1	2.4	0.3792	0
LPRT10C	9.61	Arsenic	3.4	J	mg/kg	7.4	0.4595	0	20	0.17	0
LPRT10C	9.61	Cadmium	2.1	J	mg/kg	0.38	5.5263	1	1.4	1.5	1
LPRT10C	9.61	Chromium	85	J	mg/kg	49	1.7347	1	141	0.6028	0
LPRT10C	9.61	Copper	126	J	mg/kg	32	3.9375	1	94	1.3404	1
LPRT10C	9.61	Lead	174	J	mg/kg	30	5.8	1	94	1.8511	1
LPRT10C	9.61	Mercury	1200	J	ug/kg	140	8.5714	1	480	2.5	1
LPRT10C	9.61	Nickel	13.8	J	mg/kg	15	0.92	0	47	0.2936	0
LPRT10C	9.61	Silver	2.2	J	mg/kg	0.23	9.5652	1	1.1	2	1
LPRT10C	9.61	Zinc	412	J	mg/kg	94	4.383	1	245	1.6816	1
LPRT10C	9.61	1-Methylnaphthalene	97	J	ug/kg	21	4.619	1	94	1.0319	1
LPRT10C	9.61	1-Methylphenanthrene	130	J	ug/kg	18	7.2222	1	112	1.1607	1
LPRT10C	9.61	2,6-Dimethylnaphthalene	76	J	ug/kg	25	3.04	1	133	0.5714	0
LPRT10C	9.61	2-Methylnaphthalene	170	J	ug/kg	21	8.0952	1	128	1.3281	1
LPRT10C	9.61	Acenaphthene	120	J	ug/kg	19	6.3158	1	116	1.0345	1
LPRT10C	9.61	Acenaphthylene	220	J	ug/kg	14	15.714	1	140	1.5714	1
LPRT10C	9.61	Anthracene	390	J	ug/kg	34	11.471	1	290	1.3448	1
LPRT10C	9.61	Benzo(a)anthracene	2000	J	ug/kg	61	32.787	1	446	4.4843	1
LPRT10C	9.61	Benzo(a)pyrene	1800	J	ug/kg	69	26.087	1	520	3.4615	1
LPRT10C	9.61	Benzo(b/j)fluoranthene	2700	J	ug/kg	130	20.769	1	1107	2.439	1
LPRT10C	9.61	Benzo(g,h,i)perylene	1800	J	ug/kg	67	26.866	1	497	3.6217	1
LPRT10C	9.61	Benzo(k)fluoranthene	1100	J	ug/kg	70	15.714	1	537	2.0484	1
LPRT10C	9.61	Chrysene	2300	J	ug/kg	82	28.049	1	650	3.5385	1
LPRT10C	9.61	Dibenzo(a,h)anthracene	360	J	ug/kg	19	18.947	1	113	3.1858	1
LPRT10C	9.61	Fluoranthene	3500	J	ug/kg	119	29.412	1	1034	3.3849	1
LPRT10C	9.61	Fluorene	130	J	ug/kg	19	6.8421	1	114	1.1404	1
LPRT10C	9.61	Indeno(1,2,3-cd)pyrene	1900	J	ug/kg	68	27.941	1	488	3.8934	1
LPRT10C	9.61	Naphthalene	270	J	ug/kg	30	9	1	217	1.2442	1
LPRT10C	9.61	Perylene	430	J	ug/kg	74	5.8108	1	453	0.9492	0
LPRT10C	9.61	Phenanthrene	1300	J	ug/kg	68	19.118	1	455	2.8571	1
LPRT10C	9.61	Pyrene	3100	J	ug/kg	125	24.8	1	932	3.3262	1
LPRT10C	9.61	1,1'-Biphenyl	470	UJ	ug/kg	17	27.647	1	73	6.4384	1
LPRT10C	9.61	Total PCB Congeners	640	J	ug/kg	35	18.286	1	368	1.7391	1
LPRT10C	9.61	4,4'-DDD	21	J	ug/kg	2.2	9.5455	1	19	1.1053	1
LPRT10C	9.61	4,4'-DDE	17	J	ug/kg	3.1	5.4839	1	103	0.165	0
LPRT10C	9.61	4,4'-DDT	15	J	ug/kg	1.7	8.8235	1	11	1.3636	1
LPRT10C	9.61	Dieldrin	5.2	J	ug/kg	0.83	6.2651	1	2.9	1.7931	1
LPRT10D	9.62	Antimony	0.56	J	mg/kg	0.63	0.8889	0	2.4	0.2333	0
LPRT10D	9.62	Arsenic	1.5		mg/kg	7.4	0.2027	0	20	0.075	0
LPRT10D	9.62	Cadmium	0.4		mg/kg	0.38	1.0526	1	1.4	0.2857	0
LPRT10D	9.62	Chromium	9.6		mg/kg	49	0.1959	0	141	0.0681	0
LPRT10D	9.62	Copper	48		mg/kg	32	1.5	1	94	0.5106	0
LPRT10D	9.62	Lead	51.4		mg/kg	30	1.7133	1	94	0.5468	0
LPRT10D	9.62	Mercury	110		ug/kg	140	0.7857	0	480	0.2292	0
LPRT10D	9.62	Nickel	6.9		mg/kg	15	0.46	0	47	0.1468	0
LPRT10D	9.62	Silver	0.12		mg/kg	0.23	0.5217	0	1.1	0.1091	0
LPRT10D	9.62	Zinc	205		mg/kg	94	2.1809	1	245	0.8367	0
LPRT10D	9.62	1-Methylnaphthalene	12	U	ug/kg	21	0.5714	0	94	0.1277	0
LPRT10D	9.62	1-Methylphenanthrene	120		ug/kg	18	6.6667	1	112	1.0714	1
LPRT10D	9.62	2,6-Dimethylnaphthalene	9.2	J	ug/kg	25	0.368	0	133	0.0692	0
LPRT10D	9.62	2-Methylnaphthalene	12	U	ug/kg	21	0.5714	0	128	0.0938	0

Table B7-1b. Sediment chemistry LOE

Location ID	No. of Chemicals w/ T20 EF ≥ 1	No. of Chemicals w/ T50 EF ≥ 1	Sediment Chemistry LOE Weight

Table B7-1a. T20/T50 Screen of LPRSA Sediment Chemistry Data

Location ID	RM	Parameter	Result	Qualifier	Units	T20	T20 EF	T20 EF ≥ 1	T50	T50 EF	T50 EF ≥ 1
LPRT10D	9.62	Acenaphthene	73	J	ug/kg	19	3.8421	1	116	0.6293	0
LPRT10D	9.62	Acenaphthylene	51	J	ug/kg	14	3.6429	1	140	0.3643	0
LPRT10D	9.62	Anthracene	330	J	ug/kg	34	9.7059	1	290	1.1379	1
LPRT10D	9.62	Benzo(a)anthracene	2100		ug/kg	61	34.426	1	446	4.7085	1
LPRT10D	9.62	Benzo(a)pyrene	1500		ug/kg	69	21.739	1	520	2.8846	1
LPRT10D	9.62	Benzo(b/j)fluoranthene	2000		ug/kg	130	15.385	1	1107	1.8067	1
LPRT10D	9.62	Benzo(g,h,i)perylene	1200		ug/kg	67	17.91	1	497	2.4145	1
LPRT10D	9.62	Benzo(k)fluoranthene	1100		ug/kg	70	15.714	1	537	2.0484	1
LPRT10D	9.62	Chrysene	1900		ug/kg	82	23.171	1	650	2.9231	1
LPRT10D	9.62	Dibenzo(a,h)anthracene	270	J	ug/kg	19	14.211	1	113	2.3894	1
LPRT10D	9.62	Fluoranthene	4100		ug/kg	119	34.454	1	1034	3.9652	1
LPRT10D	9.62	Fluorene	84	J	ug/kg	19	4.4211	1	114	0.7368	0
LPRT10D	9.62	Indeno(1,2,3-cd)pyrene	1200		ug/kg	68	17.647	1	488	2.459	1
LPRT10D	9.62	Naphthalene	44	U	ug/kg	30	1.4667	1	217	0.2028	0
LPRT10D	9.62	Perylene	400		ug/kg	74	5.4054	1	453	0.883	0
LPRT10D	9.62	Phenanthrene	2200		ug/kg	68	32.353	1	455	4.8352	1
LPRT10D	9.62	Pyrene	2700		ug/kg	125	21.6	1	932	2.897	1
LPRT10D	9.62	1,1'-Biphenyl	220	U	ug/kg	17	12.941	1	73	3.0137	1
LPRT10D	9.62	Total PCB Congeners	56	J	ug/kg	35	1.6	1	368	0.1522	0
LPRT10D	9.62	4,4'-DDD	18		ug/kg	2.2	8.1818	1	19	0.9474	0
LPRT10D	9.62	4,4'-DDE	7.4		ug/kg	3.1	2.3871	1	103	0.0718	0
LPRT10D	9.62	4,4'-DDT	4.4		ug/kg	1.7	2.5882	1	11	0.4	0
LPRT10D	9.62	Dieldrin	3.6		ug/kg	0.83	4.3373	1	2.9	1.2414	1
LPRT10E	9.93	Antimony	1.1	J	mg/kg	0.63	1.746	1	2.4	0.4583	0
LPRT10E	9.93	Arsenic	5	J	mg/kg	7.4	0.6757	0	20	0.25	0
LPRT10E	9.93	Cadmium	2.8	J	mg/kg	0.38	7.3684	1	1.4	2	1
LPRT10E	9.93	Chromium	81.1	J	mg/kg	49	1.6551	1	141	0.5752	0
LPRT10E	9.93	Copper	133	J	mg/kg	32	4.1563	1	94	1.4149	1
LPRT10E	9.93	Lead	230	J	mg/kg	30	7.6667	1	94	2.4468	1
LPRT10E	9.93	Mercury	1400	J	ug/kg	140	10	1	480	2.9167	1
LPRT10E	9.93	Nickel	21.9	J	mg/kg	15	1.46	1	47	0.466	0
LPRT10E	9.93	Silver	1.8	J	mg/kg	0.23	7.8261	1	1.1	1.6364	1
LPRT10E	9.93	Zinc	502	J	mg/kg	94	5.3404	1	245	2.049	1
LPRT10E	9.93	1-Methylnaphthalene	210	J	ug/kg	21	10	1	94	2.234	1
LPRT10E	9.93	1-Methylphenanthrene	450	J	ug/kg	18	25	1	112	4.0179	1
LPRT10E	9.93	2,6-Dimethylnaphthalene	170	J	ug/kg	25	6.8	1	133	1.2782	1
LPRT10E	9.93	2-Methylnaphthalene	390	J	ug/kg	21	18.571	1	128	3.0469	1
LPRT10E	9.93	Acenaphthene	330	J	ug/kg	19	17.368	1	116	2.8448	1
LPRT10E	9.93	Acenaphthylene	690	J	ug/kg	14	49.286	1	140	4.9286	1
LPRT10E	9.93	Anthracene	950	J	ug/kg	34	27.941	1	290	3.2759	1
LPRT10E	9.93	Benzo(a)anthracene	6100	J	ug/kg	61	100	1	446	13.677	1
LPRT10E	9.93	Benzo(a)pyrene	6100	J	ug/kg	69	88.406	1	520	11.731	1
LPRT10E	9.93	Benzo(b/j)fluoranthene	6800	J	ug/kg	130	52.308	1	1107	6.1427	1
LPRT10E	9.93	Benzo(g,h,i)perylene	4000	J	ug/kg	67	59.701	1	497	8.0483	1
LPRT10E	9.93	Benzo(k)fluoranthene	3300	J	ug/kg	70	47.143	1	537	6.1453	1
LPRT10E	9.93	Chrysene	7000	J	ug/kg	82	85.366	1	650	10.769	1
LPRT10E	9.93	Dibenzo(a,h)anthracene	750	J	ug/kg	19	39.474	1	113	6.6372	1
LPRT10E	9.93	Fluoranthene	8800	J	ug/kg	119	73.95	1	1034	8.5106	1
LPRT10E	9.93	Fluorene	410	J	ug/kg	19	21.579	1	114	3.5965	1
LPRT10E	9.93	Indeno(1,2,3-cd)pyrene	3700	J	ug/kg	68	54.412	1	488	7.582	1
LPRT10E	9.93	Naphthalene	460	UJ	ug/kg	30	15.333	1	217	2.1198	1
LPRT10E	9.93	Perylene	1200	J	ug/kg	74	16.216	1	453	2.649	1
LPRT10E	9.93	Phenanthrene	4200	J	ug/kg	68	61.765	1	455	9.2308	1
LPRT10E	9.93	Pyrene	6400	J	ug/kg	125	51.2	1	932	6.867	1
LPRT10E	9.93	1,1'-Biphenyl	510	UJ	ug/kg	17	30	1	73	6.9863	1
LPRT10E	9.93	Total PCB Congeners	700	J	ug/kg	35	20	1	368	1.9022	1
LPRT10E	9.93	4,4'-DDD	42	J	ug/kg	2.2	19.091	1	19	2.2105	1
LPRT10E	9.93	4,4'-DDE	23	J	ug/kg	3.1	7.4194	1	103	0.2233	0
LPRT10E	9.93	4,4'-DDT	17	J	ug/kg	1.7	10	1	11	1.5455	1
LPRT10E	9.93	Dieldrin	9.8	J	ug/kg	0.83	11.807	1	2.9	3.3793	1
LPRT11A	10.57	Antimony	0.33	J	mg/kg	0.63	0.5238	0	2.4	0.1375	0
LPRT11A	10.57	Arsenic	0.91		mg/kg	7.4	0.123	0	20	0.0455	0
LPRT11A	10.57	Cadmium	0.3	J	mg/kg	0.38	0.7895	0	1.4	0.2143	0
LPRT11A	10.57	Chromium	23.3	J	mg/kg	49	0.4755	0	141	0.1652	0
LPRT11A	10.57	Copper	21.9		mg/kg	32	0.6844	0	94	0.233	0
LPRT11A	10.57	Lead	46.8	J	mg/kg	30	1.56	1	94	0.4979	0
LPRT11A	10.57	Mercury	240		ug/kg	140	1.7143	1	480	0.5	0
LPRT11A	10.57	Nickel	5.4	J	mg/kg	15	0.36	0	47	0.1149	0
LPRT11A	10.57	Silver	0.22		mg/kg	0.23	0.9565	0	1.1	0.2	0
LPRT11A	10.57	Zinc	159	J	mg/kg	94	1.6915	1	245	0.649	0
LPRT11A	10.57	1-Methylnaphthalene	130		ug/kg	21	6.1905	1	94	1.383	1
LPRT11A	10.57	1-Methylphenanthrene	180	J	ug/kg	18	10	1	112	1.6071	1

Table B7-1b. Sediment chemistry LOE

Location ID	No. of Chemicals w/ T20 EF ≥ 1	No. of Chemicals w/ T50 EF ≥ 1	Sediment Chemistry LOE Weight

Table B7-1a. T20/T50 Screen of LPRSA Sediment Chemistry Data

Location ID	RM	Parameter	Result	Qualifier	Units	T20	T20 EF	T20 EF ≥ 1	T50	T50 EF	T50 EF ≥ 1
LPRT11A	10.57	2,6-Dimethylnaphthalene	92		ug/kg	25	3.68	1	133	0.6917	0
LPRT11A	10.57	2-Methylnaphthalene	170		ug/kg	21	8.0952	1	128	1.3281	1
LPRT11A	10.57	Acenaphthene	250		ug/kg	19	13.158	1	116	2.1552	1
LPRT11A	10.57	Acenaphthylene	200		ug/kg	14	14.286	1	140	1.4286	1
LPRT11A	10.57	Anthracene	420	J	ug/kg	34	12.353	1	290	1.4483	1
LPRT11A	10.57	Benzo(a)anthracene	2900	J	ug/kg	61	47.541	1	446	6.5022	1
LPRT11A	10.57	Benzo(a)pyrene	2600	J	ug/kg	69	37.681	1	520	5	1
LPRT11A	10.57	Benzo(b/j)fluoranthene	2700	J	ug/kg	130	20.769	1	1107	2.439	1
LPRT11A	10.57	Benzo(g,h,i)perylene	2000	J	ug/kg	67	29.851	1	497	4.0241	1
LPRT11A	10.57	Benzo(k)fluoranthene	1200	J	ug/kg	70	17.143	1	537	2.2346	1
LPRT11A	10.57	Chrysene	2400	J	ug/kg	82	29.268	1	650	3.6923	1
LPRT11A	10.57	Dibenzo(a,h)anthracene	370	J	ug/kg	19	19.474	1	113	3.2743	1
LPRT11A	10.57	Fluoranthene	6100	J	ug/kg	119	51.261	1	1034	5.8994	1
LPRT11A	10.57	Fluorene	230	J	ug/kg	19	12.105	1	114	2.0175	1
LPRT11A	10.57	Indeno(1,2,3-cd)pyrene	2100	J	ug/kg	68	30.882	1	488	4.3033	1
LPRT11A	10.57	Naphthalene	190		ug/kg	30	6.3333	1	217	0.8756	0
LPRT11A	10.57	Perylene	510	J	ug/kg	74	6.8919	1	453	1.1258	1
LPRT11A	10.57	Phenanthrene	3600	J	ug/kg	68	52.941	1	455	7.9121	1
LPRT11A	10.57	Pyrene	4600	J	ug/kg	125	36.8	1	932	4.9356	1
LPRT11A	10.57	1,1'-Biphenyl	230	U	ug/kg	17	13.529	1	73	3.1507	1
LPRT11A	10.57	Total PCB Congeners	190	J	ug/kg	35	5.4286	1	368	0.5163	0
LPRT11A	10.57	4,4'-DDD	11		ug/kg	2.2	5	1	19	0.5789	0
LPRT11A	10.57	4,4'-DDE	5.2		ug/kg	3.1	1.6774	1	103	0.0505	0
LPRT11A	10.57	4,4'-DDT	2.6		ug/kg	1.7	1.5294	1	11	0.2364	0
LPRT11A	10.57	Dieldrin	1.6	J	ug/kg	0.83	1.9277	1	2.9	0.5517	0
LPRT11B	10.6	Antimony	2.8	J	mg/kg	0.63	4.4444	1	2.4	1.1667	1
LPRT11B	10.6	Arsenic	5.7		mg/kg	7.4	0.7703	0	20	0.285	0
LPRT11B	10.6	Cadmium	2.2	J	mg/kg	0.38	5.7895	1	1.4	1.5714	1
LPRT11B	10.6	Chromium	112	J	mg/kg	49	2.2857	1	141	0.7943	0
LPRT11B	10.6	Copper	331		mg/kg	32	10.344	1	94	3.5213	1
LPRT11B	10.6	Lead	428	J	mg/kg	30	14.267	1	94	4.5532	1
LPRT11B	10.6	Mercury	4100		ug/kg	140	29.286	1	480	8.5417	1
LPRT11B	10.6	Nickel	20.3	J	mg/kg	15	1.3533	1	47	0.4319	0
LPRT11B	10.6	Silver	1.9		mg/kg	0.23	8.2609	1	1.1	1.7273	1
LPRT11B	10.6	Zinc	897	J	mg/kg	94	9.5426	1	245	3.6612	1
LPRT11B	10.6	1-Methylnaphthalene	240		ug/kg	21	11.429	1	94	2.5532	1
LPRT11B	10.6	1-Methylphenanthrene	710	J	ug/kg	18	39.444	1	112	6.3393	1
LPRT11B	10.6	2,6-Dimethylnaphthalene	430		ug/kg	25	17.2	1	133	3.2331	1
LPRT11B	10.6	2-Methylnaphthalene	600		ug/kg	21	28.571	1	128	4.6875	1
LPRT11B	10.6	Acenaphthene	560		ug/kg	19	29.474	1	116	4.8276	1
LPRT11B	10.6	Acenaphthylene	780		ug/kg	14	55.714	1	140	5.5714	1
LPRT11B	10.6	Anthracene	1000	J	ug/kg	34	29.412	1	290	3.4483	1
LPRT11B	10.6	Benzo(a)anthracene	3900		ug/kg	61	63.934	1	446	8.7444	1
LPRT11B	10.6	Benzo(a)pyrene	3500	J	ug/kg	69	50.725	1	520	6.7308	1
LPRT11B	10.6	Benzo(b/j)fluoranthene	4500		ug/kg	130	34.615	1	1107	4.065	1
LPRT11B	10.6	Benzo(g,h,i)perylene	3100		ug/kg	67	46.269	1	497	6.2374	1
LPRT11B	10.6	Benzo(k)fluoranthene	1900		ug/kg	70	27.143	1	537	3.5382	1
LPRT11B	10.6	Chrysene	4400		ug/kg	82	53.659	1	650	6.7692	1
LPRT11B	10.6	Dibenzo(a,h)anthracene	680	J	ug/kg	19	35.789	1	113	6.0177	1
LPRT11B	10.6	Fluoranthene	5600	J	ug/kg	119	47.059	1	1034	5.4159	1
LPRT11B	10.6	Fluorene	480	J	ug/kg	19	25.263	1	114	4.2105	1
LPRT11B	10.6	Indeno(1,2,3-cd)pyrene	3100		ug/kg	68	45.588	1	488	6.3525	1
LPRT11B	10.6	Naphthalene	830		ug/kg	30	27.667	1	217	3.8249	1
LPRT11B	10.6	Perylene	790		ug/kg	74	10.676	1	453	1.7439	1
LPRT11B	10.6	Phenanthrene	3400		ug/kg	68	50	1	455	7.4725	1
LPRT11B	10.6	Pyrene	5200	J	ug/kg	125	41.6	1	932	5.5794	1
LPRT11B	10.6	1,1'-Biphenyl	370	U	ug/kg	17	21.765	1	73	5.0685	1
LPRT11B	10.6	Total PCB Congeners	560	J	ug/kg	35	16	1	368	1.5217	1
LPRT11B	10.6	4,4'-DDD	6.8		ug/kg	2.2	3.0909	1	19	0.3579	0
LPRT11B	10.6	4,4'-DDE	7.6		ug/kg	3.1	2.4516	1	103	0.0738	0
LPRT11B	10.6	4,4'-DDT	22		ug/kg	1.7	12.941	1	11	2	1
LPRT11B	10.6	Dieldrin	1.8	J	ug/kg	0.83	2.1687	1	2.9	0.6207	0
LPRT11C	10.62	Antimony	0.26	J	mg/kg	0.63	0.4127	0	2.4	0.1083	0
LPRT11C	10.62	Arsenic	1.2		mg/kg	7.4	0.1622	0	20	0.06	0
LPRT11C	10.62	Cadmium	0.61	J	mg/kg	0.38	1.6053	1	1.4	0.4357	0
LPRT11C	10.62	Chromium	38.2	J	mg/kg	49	0.7796	0	141	0.2709	0
LPRT11C	10.62	Copper	40.5		mg/kg	32	1.2656	1	94	0.4309	0
LPRT11C	10.62	Lead	142	J	mg/kg	30	4.7333	1	94	1.5106	1
LPRT11C	10.62	Mercury	320		ug/kg	140	2.2857	1	480	0.6667	0
LPRT11C	10.62	Nickel	6.4	J	mg/kg	15	0.4267	0	47	0.1362	0
LPRT11C	10.62	Silver	0.36		mg/kg	0.23	1.5652	1	1.1	0.3273	0
LPRT11C	10.62	Zinc	165	J	mg/kg	94	1.7553	1	245	0.6735	0

Table B7-1b. Sediment chemistry LOE

Location ID	No. of Chemicals w/ T20 EF ≥ 1	No. of Chemicals w/ T50 EF ≥ 1	Sediment Chemistry LOE Weight

Table B7-1a. T20/T50 Screen of LPRSA Sediment Chemistry Data

Location ID	RM	Parameter	Result	Qualifier	Units	T20	T20 EF	T20 EF ≥ 1	T50	T50 EF	T50 EF ≥ 1
LPRT11C	10.62	1-Methylnaphthalene	100		ug/kg	21	4.7619	1	94	1.0638	1
LPRT11C	10.62	1-Methylphenanthrene	380	J	ug/kg	18	21.111	1	112	3.3929	1
LPRT11C	10.62	2,6-Dimethylnaphthalene	95		ug/kg	25	3.8	1	133	0.7143	0
LPRT11C	10.62	2-Methylnaphthalene	110		ug/kg	21	5.2381	1	128	0.8594	0
LPRT11C	10.62	Acenaphthene	430		ug/kg	19	22.632	1	116	3.7069	1
LPRT11C	10.62	Acenaphthylene	310		ug/kg	14	22.143	1	140	2.2143	1
LPRT11C	10.62	Anthracene	860	J	ug/kg	34	25.294	1	290	2.9655	1
LPRT11C	10.62	Benzo(a)anthracene	3800		ug/kg	61	62.295	1	446	8.5202	1
LPRT11C	10.62	Benzo(a)pyrene	2900	J	ug/kg	69	42.029	1	520	5.5769	1
LPRT11C	10.62	Benzo(b/j)fluoranthene	3600		ug/kg	130	27.692	1	1107	3.252	1
LPRT11C	10.62	Benzo(g,h,i)perylene	2200		ug/kg	67	32.836	1	497	4.4266	1
LPRT11C	10.62	Benzo(k)fluoranthene	1500		ug/kg	70	21.429	1	537	2.7933	1
LPRT11C	10.62	Chrysene	3300		ug/kg	82	40.244	1	650	5.0769	1
LPRT11C	10.62	Dibenzo(a,h)anthracene	490	J	ug/kg	19	25.789	1	113	4.3363	1
LPRT11C	10.62	Fluoranthene	6200	J	ug/kg	119	52.101	1	1034	5.9961	1
LPRT11C	10.62	Fluorene	340	J	ug/kg	19	17.895	1	114	2.9825	1
LPRT11C	10.62	Indeno(1,2,3-cd)pyrene	2300		ug/kg	68	33.824	1	488	4.7131	1
LPRT11C	10.62	Naphthalene	170		ug/kg	30	5.6667	1	217	0.7834	0
LPRT11C	10.62	Perylene	650		ug/kg	74	8.7838	1	453	1.4349	1
LPRT11C	10.62	Phenanthrene	4000		ug/kg	68	58.824	1	455	8.7912	1
LPRT11C	10.62	Pyrene	5200	J	ug/kg	125	41.6	1	932	5.5794	1
LPRT11C	10.62	1,1'-Biphenyl	290	U	ug/kg	17	17.059	1	73	3.9726	1
LPRT11C	10.62	Total PCB Congeners	120	J	ug/kg	35	3.4286	1	368	0.3261	0
LPRT11C	10.62	4,4'-DDD	11		ug/kg	2.2	5	1	19	0.5789	0
LPRT11C	10.62	4,4'-DDE	10		ug/kg	3.1	3.2258	1	103	0.0971	0
LPRT11C	10.62	4,4'-DDT	8.2		ug/kg	1.7	4.8235	1	11	0.7455	0
LPRT11C	10.62	Dieldrin	2.9		ug/kg	0.83	3.494	1	2.9	1	0
LPRT11D	10.75	Antimony	0.5		mg/kg	0.63	0.7937	0	2.4	0.2083	0
LPRT11D	10.75	Arsenic	2.5	J	mg/kg	7.4	0.3378	0	20	0.125	0
LPRT11D	10.75	Cadmium	1.5	J	mg/kg	0.38	3.9474	1	1.4	1.0714	1
LPRT11D	10.75	Chromium	54.9	J	mg/kg	49	1.1204	1	141	0.3894	0
LPRT11D	10.75	Copper	99.6	J	mg/kg	32	3.1125	1	94	1.0596	1
LPRT11D	10.75	Lead	128	J	mg/kg	30	4.2667	1	94	1.3617	1
LPRT11D	10.75	Mercury	920		ug/kg	140	6.5714	1	480	1.9167	1
LPRT11D	10.75	Nickel	12.2	J	mg/kg	15	0.8133	0	47	0.2596	0
LPRT11D	10.75	Silver	1.1	J	mg/kg	0.23	4.7826	1	1.1	1	0
LPRT11D	10.75	Zinc	311	J	mg/kg	94	3.3085	1	245	1.2694	1
LPRT11D	10.75	1-Methylnaphthalene	130		ug/kg	21	6.1905	1	94	1.383	1
LPRT11D	10.75	1-Methylphenanthrene	220	J	ug/kg	18	12.222	1	112	1.9643	1
LPRT11D	10.75	2,6-Dimethylnaphthalene	100	J	ug/kg	25	4	1	133	0.7519	0
LPRT11D	10.75	2-Methylnaphthalene	210		ug/kg	21	10	1	128	1.6406	1
LPRT11D	10.75	Acenaphthene	200		ug/kg	19	10.526	1	116	1.7241	1
LPRT11D	10.75	Acenaphthylene	310		ug/kg	14	22.143	1	140	2.2143	1
LPRT11D	10.75	Anthracene	480	J	ug/kg	34	14.118	1	290	1.6552	1
LPRT11D	10.75	Benzo(a)anthracene	3000		ug/kg	61	49.18	1	446	6.7265	1
LPRT11D	10.75	Benzo(a)pyrene	2600	J	ug/kg	69	37.681	1	520	5	1
LPRT11D	10.75	Benzo(b/j)fluoranthene	3500		ug/kg	130	26.923	1	1107	3.1617	1
LPRT11D	10.75	Benzo(g,h,i)perylene	2300		ug/kg	67	34.328	1	497	4.6278	1
LPRT11D	10.75	Benzo(k)fluoranthene	1600		ug/kg	70	22.857	1	537	2.9795	1
LPRT11D	10.75	Chrysene	3800		ug/kg	82	46.341	1	650	5.8462	1
LPRT11D	10.75	Dibenzo(a,h)anthracene	520	J	ug/kg	19	27.368	1	113	4.6018	1
LPRT11D	10.75	Fluoranthene	5400	J	ug/kg	119	45.378	1	1034	5.2224	1
LPRT11D	10.75	Fluorene	190	J	ug/kg	19	10	1	114	1.6667	1
LPRT11D	10.75	Indeno(1,2,3-cd)pyrene	2200		ug/kg	68	32.353	1	488	4.5082	1
LPRT11D	10.75	Naphthalene	270		ug/kg	30	9	1	217	1.2442	1
LPRT11D	10.75	Perylene	560		ug/kg	74	7.5676	1	453	1.2362	1
LPRT11D	10.75	Phenanthrene	2100		ug/kg	68	30.882	1	455	4.6154	1
LPRT11D	10.75	Pyrene	4400		ug/kg	125	35.2	1	932	4.721	1
LPRT11D	10.75	1,1'-Biphenyl	390	UJ	ug/kg	17	22.941	1	73	5.3425	1
LPRT11D	10.75	Total PCB Congeners	450	J	ug/kg	35	12.857	1	368	1.2228	1
LPRT11D	10.75	4,4'-DDD	21		ug/kg	2.2	9.5455	1	19	1.1053	1
LPRT11D	10.75	4,4'-DDE	17		ug/kg	3.1	5.4839	1	103	0.165	0
LPRT11D	10.75	4,4'-DDT	5.9		ug/kg	1.7	3.4706	1	11	0.5364	0
LPRT11D	10.75	Dieldrin	4.9		ug/kg	0.83	5.9036	1	2.9	1.6897	1
LPRT11E	10.91	Antimony	1.1	J	mg/kg	0.63	1.746	1	2.4	0.4583	0
LPRT11E	10.91	Arsenic	4.7	J	mg/kg	7.4	0.6351	0	20	0.235	0
LPRT11E	10.91	Cadmium	3.5	J	mg/kg	0.38	9.2105	1	1.4	2.5	1
LPRT11E	10.91	Chromium	130	J	mg/kg	49	2.6531	1	141	0.922	0
LPRT11E	10.91	Copper	192	J	mg/kg	32	6	1	94	2.0426	1
LPRT11E	10.91	Lead	256	J	mg/kg	30	8.5333	1	94	2.7234	1
LPRT11E	10.91	Mercury	2100	J	ug/kg	140	15	1	480	4.375	1
LPRT11E	10.91	Nickel	18.4	J	mg/kg	15	1.2267	1	47	0.3915	0

Table B7-1b. Sediment chemistry LOE

Location ID	No. of Chemicals w/ T20 EF ≥ 1	No. of Chemicals w/ T50 EF ≥ 1	Sediment Chemistry LOE Weight

Table B7-1a. T20/T50 Screen of LPRSA Sediment Chemistry Data

Location ID	RM	Parameter	Result	Qualifier	Units	T20	T20 EF	T20 EF ≥ 1	T50	T50 EF	T50 EF ≥ 1
LPRT11E	10.91	Silver	3	J	mg/kg	0.23	13.043	1	1.1	2.7273	1
LPRT11E	10.91	Zinc	639	J	mg/kg	94	6.7979	1	245	2.6082	1
LPRT11E	10.91	1-Methylnaphthalene	110	J	ug/kg	21	5.2381	1	94	1.1702	1
LPRT11E	10.91	1-Methylphenanthrene	250	J	ug/kg	18	13.889	1	112	2.2321	1
LPRT11E	10.91	2,6-Dimethylnaphthalene	99	J	ug/kg	25	3.96	1	133	0.7444	0
LPRT11E	10.91	2-Methylnaphthalene	180	J	ug/kg	21	8.5714	1	128	1.4063	1
LPRT11E	10.91	Acenaphthene	220	J	ug/kg	19	11.579	1	116	1.8966	1
LPRT11E	10.91	Acenaphthylene	360	J	ug/kg	14	25.714	1	140	2.5714	1
LPRT11E	10.91	Anthracene	530	J	ug/kg	34	15.588	1	290	1.8276	1
LPRT11E	10.91	Benzo(a)anthracene	2800	J	ug/kg	61	45.902	1	446	6.278	1
LPRT11E	10.91	Benzo(a)pyrene	2900	J	ug/kg	69	42.029	1	520	5.5769	1
LPRT11E	10.91	Benzo(b/j)fluoranthene	4100	J	ug/kg	130	31.538	1	1107	3.7037	1
LPRT11E	10.91	Benzo(g,h,i)perylene	2800	J	ug/kg	67	41.791	1	497	5.6338	1
LPRT11E	10.91	Benzo(k)fluoranthene	1500	J	ug/kg	70	21.429	1	537	2.7933	1
LPRT11E	10.91	Chrysene	3400	J	ug/kg	82	41.463	1	650	5.2308	1
LPRT11E	10.91	Dibenzo(a,h)anthracene	560	J	ug/kg	19	29.474	1	113	4.9558	1
LPRT11E	10.91	Fluoranthene	5200	J	ug/kg	119	43.697	1	1034	5.029	1
LPRT11E	10.91	Fluorene	190	J	ug/kg	19	10	1	114	1.6667	1
LPRT11E	10.91	Indeno(1,2,3-cd)pyrene	2800	J	ug/kg	68	41.176	1	488	5.7377	1
LPRT11E	10.91	Naphthalene	290	J	ug/kg	30	9.6667	1	217	1.3364	1
LPRT11E	10.91	Perylene	610	J	ug/kg	74	8.2432	1	453	1.3466	1
LPRT11E	10.91	Phenanthrene	2100	J	ug/kg	68	30.882	1	455	4.6154	1
LPRT11E	10.91	Pyrene	4600	J	ug/kg	125	36.8	1	932	4.9356	1
LPRT11E	10.91	1,1'-Biphenyl	630	UJ	ug/kg	17	37.059	1	73	8.6301	1
LPRT11E	10.91	Total PCB Congeners	1200	J	ug/kg	35	34.286	1	368	3.2609	1
LPRT11E	10.91	4,4'-DDD	23	J	ug/kg	2.2	10.455	1	19	1.2105	1
LPRT11E	10.91	4,4'-DDE	25	J	ug/kg	3.1	8.0645	1	103	0.2427	0
LPRT11E	10.91	4,4'-DDT	16	J	ug/kg	1.7	9.4118	1	11	1.4545	1
LPRT11E	10.91	Dieldrin	10	J	ug/kg	0.83	12.048	1	2.9	3.4483	1
LPRT11F	11.01	Antimony	1.3	J	mg/kg	0.63	2.0635	1	2.4	0.5417	0
LPRT11F	11.01	Arsenic	3.8		mg/kg	7.4	0.5135	0	20	0.19	0
LPRT11F	11.01	Cadmium	1.4		mg/kg	0.38	3.6842	1	1.4	1	1
LPRT11F	11.01	Chromium	42.3		mg/kg	49	0.8633	0	141	0.3	0
LPRT11F	11.01	Copper	133		mg/kg	32	4.1563	1	94	1.4149	1
LPRT11F	11.01	Lead	233		mg/kg	30	7.7667	1	94	2.4787	1
LPRT11F	11.01	Mercury	1800		ug/kg	140	12.857	1	480	3.75	1
LPRT11F	11.01	Nickel	15.3		mg/kg	15	1.02	1	47	0.3255	0
LPRT11F	11.01	Silver	0.98		mg/kg	0.23	4.2609	1	1.1	0.8909	0
LPRT11F	11.01	Zinc	492		mg/kg	94	5.234	1	245	2.0082	1
LPRT11F	11.01	1-Methylnaphthalene	350		ug/kg	21	16.667	1	94	3.7234	1
LPRT11F	11.01	1-Methylphenanthrene	940		ug/kg	18	52.222	1	112	8.3929	1
LPRT11F	11.01	2,6-Dimethylnaphthalene	440		ug/kg	25	17.6	1	133	3.3083	1
LPRT11F	11.01	2-Methylnaphthalene	780		ug/kg	21	37.143	1	128	6.0938	1
LPRT11F	11.01	Acenaphthene	750	J	ug/kg	19	39.474	1	116	6.4655	1
LPRT11F	11.01	Acenaphthylene	800		ug/kg	14	57.143	1	140	5.7143	1
LPRT11F	11.01	Anthracene	920	J	ug/kg	34	27.059	1	290	3.1724	1
LPRT11F	11.01	Benzo(a)anthracene	3600		ug/kg	61	59.016	1	446	8.0717	1
LPRT11F	11.01	Benzo(a)pyrene	3600		ug/kg	69	52.174	1	520	6.9231	1
LPRT11F	11.01	Benzo(b/j)fluoranthene	3900		ug/kg	130	30	1	1107	3.523	1
LPRT11F	11.01	Benzo(g,h,i)perylene	2400		ug/kg	67	35.821	1	497	4.829	1
LPRT11F	11.01	Benzo(k)fluoranthene	1600		ug/kg	70	22.857	1	537	2.9795	1
LPRT11F	11.01	Chrysene	4400		ug/kg	82	53.659	1	650	6.7692	1
LPRT11F	11.01	Dibenzo(a,h)anthracene	530	J	ug/kg	19	27.895	1	113	4.6903	1
LPRT11F	11.01	Fluoranthene	6500	J	ug/kg	119	54.622	1	1034	6.2863	1
LPRT11F	11.01	Fluorene	570	J	ug/kg	19	30	1	114	5	1
LPRT11F	11.01	Indeno(1,2,3-cd)pyrene	2300		ug/kg	68	33.824	1	488	4.7131	1
LPRT11F	11.01	Naphthalene	650		ug/kg	30	21.667	1	217	2.9954	1
LPRT11F	11.01	Perylene	730		ug/kg	74	9.8649	1	453	1.6115	1
LPRT11F	11.01	Phenanthrene	3900		ug/kg	68	57.353	1	455	8.5714	1
LPRT11F	11.01	Pyrene	5500	J	ug/kg	125	44	1	932	5.9013	1
LPRT11F	11.01	1,1'-Biphenyl	320	U	ug/kg	17	18.824	1	73	4.3836	1
LPRT11F	11.01	Total PCB Congeners	250	J	ug/kg	35	7.1429	1	368	0.6793	0
LPRT11F	11.01	4,4'-DDD	7		ug/kg	2.2	3.1818	1	19	0.3684	0
LPRT11F	11.01	4,4'-DDE	7.7		ug/kg	3.1	2.4839	1	103	0.0748	0
LPRT11F	11.01	4,4'-DDT	2.4		ug/kg	1.7	1.4118	1	11	0.2182	0
LPRT11F	11.01	Dieldrin	2.4		ug/kg	0.83	2.8916	1	2.9	0.8276	0
LPRT11G	11	Antimony	1.6	J	mg/kg	0.63	2.5397	1	2.4	0.6667	0
LPRT11G	11	Arsenic	12.7	J	mg/kg	7.4	1.7162	1	20	0.635	0
LPRT11G	11	Cadmium	11.3	J	mg/kg	0.38	29.737	1	1.4	8.0714	1
LPRT11G	11	Chromium	512	J	mg/kg	49	10.449	1	141	3.6312	1
LPRT11G	11	Copper	340	J	mg/kg	32	10.625	1	94	3.617	1
LPRT11G	11	Lead	397	J	mg/kg	30	13.233	1	94	4.2234	1

Table B7-1b. Sediment chemistry LOE

Location ID	No. of Chemicals w/ T20 EF ≥ 1	No. of Chemicals w/ T50 EF ≥ 1	Sediment Chemistry LOE Weight

Table B7-1a. T20/T50 Screen of LPRSA Sediment Chemistry Data

Location ID	RM	Parameter	Result	Qualifier	Units	T20	T20 EF	T20 EF ≥ 1	T50	T50 EF	T50 EF ≥ 1
LPRT11G	11	Mercury	5800	J	ug/kg	140	41.429	1	480	12.083	1
LPRT11G	11	Nickel	35.5	J	mg/kg	15	2.3667	1	47	0.7553	0
LPRT11G	11	Silver	6.5	J	mg/kg	0.23	28.261	1	1.1	5.9091	1
LPRT11G	11	Zinc	1070	J	mg/kg	94	11.383	1	245	4.3673	1
LPRT11G	11	1-Methylnaphthalene	160	J	ug/kg	21	7.619	1	94	1.7021	1
LPRT11G	11	1-Methylphenanthrene	340	J	ug/kg	18	18.889	1	112	3.0357	1
LPRT11G	11	2,6-Dimethylnaphthalene	240	J	ug/kg	25	9.6	1	133	1.8045	1
LPRT11G	11	2-Methylnaphthalene	280	J	ug/kg	21	13.333	1	128	2.1875	1
LPRT11G	11	Acenaphthene	350	J	ug/kg	19	18.421	1	116	3.0172	1
LPRT11G	11	Acenaphthylene	360	J	ug/kg	14	25.714	1	140	2.5714	1
LPRT11G	11	Anthracene	730	J	ug/kg	34	21.471	1	290	2.5172	1
LPRT11G	11	Benzo(a)anthracene	3400	J	ug/kg	61	55.738	1	446	7.6233	1
LPRT11G	11	Benzo(a)pyrene	3400	J	ug/kg	69	49.275	1	520	6.5385	1
LPRT11G	11	Benzo(b/j)fluoranthene	4400	J	ug/kg	130	33.846	1	1107	3.9747	1
LPRT11G	11	Benzo(g,h,i)perylene	2900	J	ug/kg	67	43.284	1	497	5.835	1
LPRT11G	11	Benzo(k)fluoranthene	1900	J	ug/kg	70	27.143	1	537	3.5382	1
LPRT11G	11	Chrysene	4400	J	ug/kg	82	53.659	1	650	6.7692	1
LPRT11G	11	Dibenzo(a,h)anthracene	610	J	ug/kg	19	32.105	1	113	5.3982	1
LPRT11G	11	Fluoranthene	7100	J	ug/kg	119	59.664	1	1034	6.8665	1
LPRT11G	11	Fluorene	250	J	ug/kg	19	13.158	1	114	2.193	1
LPRT11G	11	Indeno(1,2,3-cd)pyrene	3000	J	ug/kg	68	44.118	1	488	6.1475	1
LPRT11G	11	Naphthalene	460	J	ug/kg	30	15.333	1	217	2.1198	1
LPRT11G	11	Perylene	710	J	ug/kg	74	9.5946	1	453	1.5673	1
LPRT11G	11	Phenanthrene	2200	J	ug/kg	68	32.353	1	455	4.8352	1
LPRT11G	11	Pyrene	6300	J	ug/kg	125	50.4	1	932	6.7597	1
LPRT11G	11	1,1'-Biphenyl	520	UJ	ug/kg	17	30.588	1	73	7.1233	1
LPRT11G	11	Total PCB Congeners	8900	J	ug/kg	35	254.29	1	368	24.185	1
LPRT11G	11	4,4'-DDD	37	J	ug/kg	2.2	16.818	1	19	1.9474	1
LPRT11G	11	4,4'-DDE	120	J	ug/kg	3.1	38.71	1	103	1.165	1
LPRT11G	11	4,4'-DDT	16	J	ug/kg	1.7	9.4118	1	11	1.4545	1
LPRT11G	11	Dieldrin	9.5	J	ug/kg	0.83	11.446	1	2.9	3.2759	1
LPRT12A	11.15	Antimony	0.99	J	mg/kg	0.63	1.5714	1	2.4	0.4125	0
LPRT12A	11.15	Arsenic	4.8	J	mg/kg	7.4	0.6486	0	20	0.24	0
LPRT12A	11.15	Cadmium	3.2	J	mg/kg	0.38	8.4211	1	1.4	2.2857	1
LPRT12A	11.15	Chromium	129	J	mg/kg	49	2.6327	1	141	0.9149	0
LPRT12A	11.15	Copper	194	J	mg/kg	32	6.0625	1	94	2.0638	1
LPRT12A	11.15	Lead	223	J	mg/kg	30	7.4333	1	94	2.3723	1
LPRT12A	11.15	Mercury	1800	J	ug/kg	140	12.857	1	480	3.75	1
LPRT12A	11.15	Nickel	19.1	J	mg/kg	15	1.2733	1	47	0.4064	0
LPRT12A	11.15	Silver	3.2	J	mg/kg	0.23	13.913	1	1.1	2.9091	1
LPRT12A	11.15	Zinc	558	J	mg/kg	94	5.9362	1	245	2.2776	1
LPRT12A	11.15	1-Methylnaphthalene	120	J	ug/kg	21	5.7143	1	94	1.2766	1
LPRT12A	11.15	1-Methylphenanthrene	200	J	ug/kg	18	11.111	1	112	1.7857	1
LPRT12A	11.15	2,6-Dimethylnaphthalene	110	J	ug/kg	25	4.4	1	133	0.8271	0
LPRT12A	11.15	2-Methylnaphthalene	220	J	ug/kg	21	10.476	1	128	1.7188	1
LPRT12A	11.15	Acenaphthene	180	J	ug/kg	19	9.4737	1	116	1.5517	1
LPRT12A	11.15	Acenaphthylene	280	J	ug/kg	14	20	1	140	2	1
LPRT12A	11.15	Anthracene	400	J	ug/kg	34	11.765	1	290	1.3793	1
LPRT12A	11.15	Benzo(a)anthracene	2700	J	ug/kg	61	44.262	1	446	6.0538	1
LPRT12A	11.15	Benzo(a)pyrene	2700	J	ug/kg	69	39.13	1	520	5.1923	1
LPRT12A	11.15	Benzo(b/j)fluoranthene	3800	J	ug/kg	130	29.231	1	1107	3.4327	1
LPRT12A	11.15	Benzo(g,h,i)perylene	2500	J	ug/kg	67	37.313	1	497	5.0302	1
LPRT12A	11.15	Benzo(k)fluoranthene	1800	J	ug/kg	70	25.714	1	537	3.352	1
LPRT12A	11.15	Chrysene	2900	J	ug/kg	82	35.366	1	650	4.4615	1
LPRT12A	11.15	Dibenzo(a,h)anthracene	440	J	ug/kg	19	23.158	1	113	3.8938	1
LPRT12A	11.15	Fluoranthene	4400	J	ug/kg	119	36.975	1	1034	4.2553	1
LPRT12A	11.15	Fluorene	130	J	ug/kg	19	6.8421	1	114	1.1404	1
LPRT12A	11.15	Indeno(1,2,3-cd)pyrene	2300	J	ug/kg	68	33.824	1	488	4.7131	1
LPRT12A	11.15	Naphthalene	390	J	ug/kg	30	13	1	217	1.7972	1
LPRT12A	11.15	Perylene	600	J	ug/kg	74	8.1081	1	453	1.3245	1
LPRT12A	11.15	Phenanthrene	1500	J	ug/kg	68	22.059	1	455	3.2967	1
LPRT12A	11.15	Pyrene	4200	J	ug/kg	125	33.6	1	932	4.5064	1
LPRT12A	11.15	1,1'-Biphenyl	610	UJ	ug/kg	17	35.882	1	73	8.3562	1
LPRT12A	11.15	Total PCB Congeners	1200	J	ug/kg	35	34.286	1	368	3.2609	1
LPRT12A	11.15	4,4'-DDD	34	J	ug/kg	2.2	15.455	1	19	1.7895	1
LPRT12A	11.15	4,4'-DDE	27	J	ug/kg	3.1	8.7097	1	103	0.2621	0
LPRT12A	11.15	4,4'-DDT	18	J	ug/kg	1.7	10.588	1	11	1.6364	1
LPRT12A	11.15	Dieldrin	11	J	ug/kg	0.83	13.253	1	2.9	3.7931	1
LPRT12B	11.38	Antimony	1	J	mg/kg	0.63	1.5873	1	2.4	0.4167	0
LPRT12B	11.38	Arsenic	5.1	J	mg/kg	7.4	0.6892	0	20	0.255	0
LPRT12B	11.38	Cadmium	4	J	mg/kg	0.38	10.526	1	1.4	2.8571	1
LPRT12B	11.38	Chromium	110	J	mg/kg	49	2.2449	1	141	0.7801	0

Table B7-1b. Sediment chemistry LOE

Location ID	No. of Chemicals w/ T20 EF ≥ 1	No. of Chemicals w/ T50 EF ≥ 1	Sediment Chemistry LOE Weight

Table B7-1a. T20/T50 Screen of LPRSA Sediment Chemistry Data

Location ID	RM	Parameter	Result	Qualifier	Units	T20	T20 EF	T20 EF ≥ 1	T50	T50 EF	T50 EF ≥ 1
LPRT12B	11.38	Copper	172	J	mg/kg	32	5.375	1	94	1.8298	1
LPRT12B	11.38	Lead	228	J	mg/kg	30	7.6	1	94	2.4255	1
LPRT12B	11.38	Mercury	1700	J	ug/kg	140	12.143	1	480	3.5417	1
LPRT12B	11.38	Nickel	20.9	J	mg/kg	15	1.3933	1	47	0.4447	0
LPRT12B	11.38	Silver	3.8	J	mg/kg	0.23	16.522	1	1.1	3.4545	1
LPRT12B	11.38	Zinc	506	J	mg/kg	94	5.383	1	245	2.0653	1
LPRT12B	11.38	1-Methylnaphthalene	180	J	ug/kg	21	8.5714	1	94	1.9149	1
LPRT12B	11.38	1-Methylphenanthrene	350	J	ug/kg	18	19.444	1	112	3.125	1
LPRT12B	11.38	2,6-Dimethylnaphthalene	180	J	ug/kg	25	7.2	1	133	1.3534	1
LPRT12B	11.38	2-Methylnaphthalene	370	J	ug/kg	21	17.619	1	128	2.8906	1
LPRT12B	11.38	Acenaphthene	320	J	ug/kg	19	16.842	1	116	2.7586	1
LPRT12B	11.38	Acenaphthylene	530	J	ug/kg	14	37.857	1	140	3.7857	1
LPRT12B	11.38	Anthracene	670	J	ug/kg	34	19.706	1	290	2.3103	1
LPRT12B	11.38	Benzo(a)anthracene	3400	J	ug/kg	61	55.738	1	446	7.6233	1
LPRT12B	11.38	Benzo(a)pyrene	3500	J	ug/kg	69	50.725	1	520	6.7308	1
LPRT12B	11.38	Benzo(b/j)fluoranthene	4900	J	ug/kg	130	37.692	1	1107	4.4264	1
LPRT12B	11.38	Benzo(g,h,i)perylene	3200	J	ug/kg	67	47.761	1	497	6.4386	1
LPRT12B	11.38	Benzo(k)fluoranthene	2100	J	ug/kg	70	30	1	537	3.9106	1
LPRT12B	11.38	Chrysene	4100	J	ug/kg	82	50	1	650	6.3077	1
LPRT12B	11.38	Dibenzo(a,h)anthracene	670	J	ug/kg	19	35.263	1	113	5.9292	1
LPRT12B	11.38	Fluoranthene	5900	J	ug/kg	119	49.58	1	1034	5.706	1
LPRT12B	11.38	Fluorene	220	J	ug/kg	19	11.579	1	114	1.9298	1
LPRT12B	11.38	Indeno(1,2,3-cd)pyrene	3200	J	ug/kg	68	47.059	1	488	6.5574	1
LPRT12B	11.38	Naphthalene	480	J	ug/kg	30	16	1	217	2.212	1
LPRT12B	11.38	Perylene	800	J	ug/kg	74	10.811	1	453	1.766	1
LPRT12B	11.38	Phenanthrene	2500	J	ug/kg	68	36.765	1	455	5.4945	1
LPRT12B	11.38	Pyrene	5300	J	ug/kg	125	42.4	1	932	5.6867	1
LPRT12B	11.38	1,1'-Biphenyl	520	UJ	ug/kg	17	30.588	1	73	7.1233	1
LPRT12B	11.38	Total PCB Congeners	940	J	ug/kg	35	26.857	1	368	2.5543	1
LPRT12B	11.38	4,4'-DDD	34	J	ug/kg	2.2	15.455	1	19	1.7895	1
LPRT12B	11.38	4,4'-DDE	43	J	ug/kg	3.1	13.871	1	103	0.4175	0
LPRT12B	11.38	4,4'-DDT	8.6	J	ug/kg	1.7	5.0588	1	11	0.7818	0
LPRT12B	11.38	Dieldrin	9.4	J	ug/kg	0.83	11.325	1	2.9	3.2414	1
LPRT12C	11.53	Antimony	0.85	J	mg/kg	0.63	1.3492	1	2.4	0.3542	0
LPRT12C	11.53	Arsenic	3.8	J	mg/kg	7.4	0.5135	0	20	0.19	0
LPRT12C	11.53	Cadmium	4.9	J	mg/kg	0.38	12.895	1	1.4	3.5	1
LPRT12C	11.53	Chromium	102	J	mg/kg	49	2.0816	1	141	0.7234	0
LPRT12C	11.53	Copper	139	J	mg/kg	32	4.3438	1	94	1.4787	1
LPRT12C	11.53	Lead	187	J	mg/kg	30	6.2333	1	94	1.9894	1
LPRT12C	11.53	Mercury	1500		ug/kg	140	10.714	1	480	3.125	1
LPRT12C	11.53	Nickel	16.5	J	mg/kg	15	1.1	1	47	0.3511	0
LPRT12C	11.53	Silver	2.9	J	mg/kg	0.23	12.609	1	1.1	2.6364	1
LPRT12C	11.53	Zinc	374	J	mg/kg	94	3.9787	1	245	1.5265	1
LPRT12C	11.53	1-Methylnaphthalene	190		ug/kg	21	9.0476	1	94	2.0213	1
LPRT12C	11.53	1-Methylphenanthrene	290	J	ug/kg	18	16.111	1	112	2.5893	1
LPRT12C	11.53	2,6-Dimethylnaphthalene	190		ug/kg	25	7.6	1	133	1.4286	1
LPRT12C	11.53	2-Methylnaphthalene	360		ug/kg	21	17.143	1	128	2.8125	1
LPRT12C	11.53	Acenaphthene	280		ug/kg	19	14.737	1	116	2.4138	1
LPRT12C	11.53	Acenaphthylene	430		ug/kg	14	30.714	1	140	3.0714	1
LPRT12C	11.53	Anthracene	560	J	ug/kg	34	16.471	1	290	1.931	1
LPRT12C	11.53	Benzo(a)anthracene	3300		ug/kg	61	54.098	1	446	7.3991	1
LPRT12C	11.53	Benzo(a)pyrene	2300	J	ug/kg	69	33.333	1	520	4.4231	1
LPRT12C	11.53	Benzo(b/j)fluoranthene	3400		ug/kg	130	26.154	1	1107	3.0714	1
LPRT12C	11.53	Benzo(g,h,i)perylene	2400		ug/kg	67	35.821	1	497	4.829	1
LPRT12C	11.53	Benzo(k)fluoranthene	1400		ug/kg	70	20	1	537	2.6071	1
LPRT12C	11.53	Chrysene	3400		ug/kg	82	41.463	1	650	5.2308	1
LPRT12C	11.53	Dibenzo(a,h)anthracene	470	J	ug/kg	19	24.737	1	113	4.1593	1
LPRT12C	11.53	Fluoranthene	4800		ug/kg	119	40.336	1	1034	4.6422	1
LPRT12C	11.53	Fluorene	200	J	ug/kg	19	10.526	1	114	1.7544	1
LPRT12C	11.53	Indeno(1,2,3-cd)pyrene	1900		ug/kg	68	27.941	1	488	3.8934	1
LPRT12C	11.53	Naphthalene	430		ug/kg	30	14.333	1	217	1.9816	1
LPRT12C	11.53	Perylene	580		ug/kg	74	7.8378	1	453	1.2804	1
LPRT12C	11.53	Phenanthrene	2000		ug/kg	68	29.412	1	455	4.3956	1
LPRT12C	11.53	Pyrene	4500		ug/kg	125	36	1	932	4.8283	1
LPRT12C	11.53	1,1'-Biphenyl	380	UJ	ug/kg	17	22.353	1	73	5.2055	1
LPRT12C	11.53	Total PCB Congeners	1300	J	ug/kg	35	37.143	1	368	3.5326	1
LPRT12C	11.53	4,4'-DDD	40		ug/kg	2.2	18.182	1	19	2.1053	1
LPRT12C	11.53	4,4'-DDE	67		ug/kg	3.1	21.613	1	103	0.6505	0
LPRT12C	11.53	4,4'-DDT	8.3		ug/kg	1.7	4.8824	1	11	0.7545	0
LPRT12C	11.53	Dieldrin	6.8		ug/kg	0.83	8.1928	1	2.9	2.3448	1
LPRT12D	11.63	Antimony	1.6	J	mg/kg	0.63	2.5397	1	2.4	0.6667	0
LPRT12D	11.63	Arsenic	3		mg/kg	7.4	0.4054	0	20	0.15	0

Table B7-1b. Sediment chemistry LOE

Location ID	No. of Chemicals w/ T20 EF ≥ 1	No. of Chemicals w/ T50 EF ≥ 1	Sediment Chemistry LOE Weight

Table B7-1a. T20/T50 Screen of LPRSA Sediment Chemistry Data

Location ID	RM	Parameter	Result	Qualifier	Units	T20	T20 EF	T20 EF ≥ 1	T50	T50 EF	T50 EF ≥ 1
LPRT12D	11.63	Cadmium	1.3	J	mg/kg	0.38	3.4211	1	1.4	0.9286	0
LPRT12D	11.63	Chromium	63.2	J	mg/kg	49	1.2898	1	141	0.4482	0
LPRT12D	11.63	Copper	108		mg/kg	32	3.375	1	94	1.1489	1
LPRT12D	11.63	Lead	133	J	mg/kg	30	4.4333	1	94	1.4149	1
LPRT12D	11.63	Mercury	1000		ug/kg	140	7.1429	1	480	2.0833	1
LPRT12D	11.63	Nickel	16.2	J	mg/kg	15	1.08	1	47	0.3447	0
LPRT12D	11.63	Silver	1.1		mg/kg	0.23	4.7826	1	1.1	1	0
LPRT12D	11.63	Zinc	330	J	mg/kg	94	3.5106	1	245	1.3469	1
LPRT12D	11.63	1-Methylnaphthalene	72	J	ug/kg	21	3.4286	1	94	0.766	0
LPRT12D	11.63	1-Methylphenanthrene	210	J	ug/kg	18	11.667	1	112	1.875	1
LPRT12D	11.63	2,6-Dimethylnaphthalene	87	J	ug/kg	25	3.48	1	133	0.6541	0
LPRT12D	11.63	2-Methylnaphthalene	160		ug/kg	21	7.619	1	128	1.25	1
LPRT12D	11.63	Acenaphthene	240		ug/kg	19	12.632	1	116	2.069	1
LPRT12D	11.63	Acenaphthylene	270		ug/kg	14	19.286	1	140	1.9286	1
LPRT12D	11.63	Anthracene	360	J	ug/kg	34	10.588	1	290	1.2414	1
LPRT12D	11.63	Benzo(a)anthracene	2400		ug/kg	61	39.344	1	446	5.3812	1
LPRT12D	11.63	Benzo(a)pyrene	1500	J	ug/kg	69	21.739	1	520	2.8846	1
LPRT12D	11.63	Benzo(b/j)fluoranthene	1900		ug/kg	130	14.615	1	1107	1.7164	1
LPRT12D	11.63	Benzo(g,h,i)perylene	1200		ug/kg	67	17.91	1	497	2.4145	1
LPRT12D	11.63	Benzo(k)fluoranthene	770		ug/kg	70	11	1	537	1.4339	1
LPRT12D	11.63	Chrysene	2200		ug/kg	82	26.829	1	650	3.3846	1
LPRT12D	11.63	Dibenzo(a,h)anthracene	260	J	ug/kg	19	13.684	1	113	2.3009	1
LPRT12D	11.63	Fluoranthene	3000		ug/kg	119	25.21	1	1034	2.9014	1
LPRT12D	11.63	Fluorene	120	J	ug/kg	19	6.3158	1	114	1.0526	1
LPRT12D	11.63	Indeno(1,2,3-cd)pyrene	1300		ug/kg	68	19.118	1	488	2.6639	1
LPRT12D	11.63	Naphthalene	200		ug/kg	30	6.6667	1	217	0.9217	0
LPRT12D	11.63	Perylene	390		ug/kg	74	5.2703	1	453	0.8609	0
LPRT12D	11.63	Phenanthrene	960		ug/kg	68	14.118	1	455	2.1099	1
LPRT12D	11.63	Pyrene	3100		ug/kg	125	24.8	1	932	3.3262	1
LPRT12D	11.63	1,1'-Biphenyl	350	U	ug/kg	17	20.588	1	73	4.7945	1
LPRT12D	11.63	Total PCB Congeners	290	J	ug/kg	35	8.2857	1	368	0.788	0
LPRT12D	11.63	4,4'-DDD	12		ug/kg	2.2	5.4545	1	19	0.6316	0
LPRT12D	11.63	4,4'-DDE	13		ug/kg	3.1	4.1935	1	103	0.1262	0
LPRT12D	11.63	4,4'-DDT	2.4		ug/kg	1.7	1.4118	1	11	0.2182	0
LPRT12D	11.63	Dieldrin	3.8		ug/kg	0.83	4.5783	1	2.9	1.3103	1
LPRT12E	11.75	Antimony	0.97	J	mg/kg	0.63	1.5397	1	2.4	0.4042	0
LPRT12E	11.75	Arsenic	7.5	J	mg/kg	7.4	1.0135	1	20	0.375	0
LPRT12E	11.75	Cadmium	5.8	J	mg/kg	0.38	15.263	1	1.4	4.1429	1
LPRT12E	11.75	Chromium	209	J	mg/kg	49	4.2653	1	141	1.4823	1
LPRT12E	11.75	Copper	184	J	mg/kg	32	5.75	1	94	1.9574	1
LPRT12E	11.75	Lead	319	J	mg/kg	30	10.633	1	94	3.3936	1
LPRT12E	11.75	Mercury	3300	J	ug/kg	140	23.571	1	480	6.875	1
LPRT12E	11.75	Nickel	30.6	J	mg/kg	15	2.04	1	47	0.6511	0
LPRT12E	11.75	Silver	4.3	J	mg/kg	0.23	18.696	1	1.1	3.9091	1
LPRT12E	11.75	Zinc	607	J	mg/kg	94	6.4574	1	245	2.4776	1
LPRT12E	11.75	1-Methylnaphthalene	150	J	ug/kg	21	7.1429	1	94	1.5957	1
LPRT12E	11.75	1-Methylphenanthrene	470	J	ug/kg	18	26.111	1	112	4.1964	1
LPRT12E	11.75	2,6-Dimethylnaphthalene	220	J	ug/kg	25	8.8	1	133	1.6541	1
LPRT12E	11.75	2-Methylnaphthalene	300	J	ug/kg	21	14.286	1	128	2.3438	1
LPRT12E	11.75	Acenaphthene	310	J	ug/kg	19	16.316	1	116	2.6724	1
LPRT12E	11.75	Acenaphthylene	530	J	ug/kg	14	37.857	1	140	3.7857	1
LPRT12E	11.75	Anthracene	630	J	ug/kg	34	18.529	1	290	2.1724	1
LPRT12E	11.75	Benzo(a)anthracene	2800	J	ug/kg	61	45.902	1	446	6.278	1
LPRT12E	11.75	Benzo(a)pyrene	4400	J	ug/kg	69	63.768	1	520	8.4615	1
LPRT12E	11.75	Benzo(b/j)fluoranthene	4900	J	ug/kg	130	37.692	1	1107	4.4264	1
LPRT12E	11.75	Benzo(g,h,i)perylene	3200	J	ug/kg	67	47.761	1	497	6.4386	1
LPRT12E	11.75	Benzo(k)fluoranthene	2200	J	ug/kg	70	31.429	1	537	4.0968	1
LPRT12E	11.75	Chrysene	4000	J	ug/kg	82	48.78	1	650	6.1538	1
LPRT12E	11.75	Dibenzo(a,h)anthracene	670	J	ug/kg	19	35.263	1	113	5.9292	1
LPRT12E	11.75	Fluoranthene	5100	J	ug/kg	119	42.857	1	1034	4.9323	1
LPRT12E	11.75	Fluorene	360	J	ug/kg	19	18.947	1	114	3.1579	1
LPRT12E	11.75	Indeno(1,2,3-cd)pyrene	3400	J	ug/kg	68	50	1	488	6.9672	1
LPRT12E	11.75	Naphthalene	450	J	ug/kg	30	15	1	217	2.0737	1
LPRT12E	11.75	Perylene	860	J	ug/kg	74	11.622	1	453	1.8985	1
LPRT12E	11.75	Phenanthrene	2700	J	ug/kg	68	39.706	1	455	5.9341	1
LPRT12E	11.75	Pyrene	3900	J	ug/kg	125	31.2	1	932	4.1845	1
LPRT12E	11.75	1,1'-Biphenyl	440	UJ	ug/kg	17	25.882	1	73	6.0274	1
LPRT12E	11.75	Total PCB Congeners	3500	J	ug/kg	35	100	1	368	9.5109	1
LPRT12E	11.75	4,4'-DDD	11	J	ug/kg	2.2	5	1	19	0.5789	0
LPRT12E	11.75	4,4'-DDE	73	J	ug/kg	3.1	23.548	1	103	0.7087	0
LPRT12E	11.75	4,4'-DDT	16	J	ug/kg	1.7	9.4118	1	11	1.4545	1
LPRT12E	11.75	Dieldrin	9.4	J	ug/kg	0.83	11.325	1	2.9	3.2414	1

Table B7-1b. Sediment chemistry LOE

Location ID	No. of Chemicals w/ T20 EF ≥ 1	No. of Chemicals w/ T50 EF ≥ 1	Sediment Chemistry LOE Weight

Table B7-1a. T20/T50 Screen of LPRSA Sediment Chemistry Data

Location ID	RM	Parameter	Result	Qualifier	Units	T20	T20 EF	T20 EF ≥ 1	T50	T50 EF	T50 EF ≥ 1
LPRT13A	12.14	Antimony	0.46	J	mg/kg	0.63	0.7302	0	2.4	0.1917	0
LPRT13A	12.14	Arsenic	2.6	J	mg/kg	7.4	0.3514	0	20	0.13	0
LPRT13A	12.14	Cadmium	1.2	J	mg/kg	0.38	3.1579	1	1.4	0.8571	0
LPRT13A	12.14	Chromium	32.8	J	mg/kg	49	0.6694	0	141	0.2326	0
LPRT13A	12.14	Copper	67.7	J	mg/kg	32	2.1156	1	94	0.7202	0
LPRT13A	12.14	Lead	116	J	mg/kg	30	3.8667	1	94	1.234	1
LPRT13A	12.14	Mercury	670		ug/kg	140	4.7857	1	480	1.3958	1
LPRT13A	12.14	Nickel	11.9	J	mg/kg	15	0.7933	0	47	0.2532	0
LPRT13A	12.14	Silver	0.98	J	mg/kg	0.23	4.2609	1	1.1	0.8909	0
LPRT13A	12.14	Zinc	277	J	mg/kg	94	2.9468	1	245	1.1306	1
LPRT13A	12.14	1-Methylnaphthalene	290		ug/kg	21	13.81	1	94	3.0851	1
LPRT13A	12.14	1-Methylphenanthrene	890		ug/kg	18	49.444	1	112	7.9464	1
LPRT13A	12.14	2,6-Dimethylnaphthalene	250		ug/kg	25	10	1	133	1.8797	1
LPRT13A	12.14	2-Methylnaphthalene	400		ug/kg	21	19.048	1	128	3.125	1
LPRT13A	12.14	Acenaphthene	550	J	ug/kg	19	28.947	1	116	4.7414	1
LPRT13A	12.14	Acenaphthylene	1200		ug/kg	14	85.714	1	140	8.5714	1
LPRT13A	12.14	Anthracene	1200	J	ug/kg	34	35.294	1	290	4.1379	1
LPRT13A	12.14	Benzo(a)anthracene	4000	J	ug/kg	61	65.574	1	446	8.9686	1
LPRT13A	12.14	Benzo(a)pyrene	5800	J	ug/kg	69	84.058	1	520	11.154	1
LPRT13A	12.14	Benzo(b/j)fluoranthene	6500	J	ug/kg	130	50	1	1107	5.8717	1
LPRT13A	12.14	Benzo(g,h,i)perylene	3600		ug/kg	67	53.731	1	497	7.2435	1
LPRT13A	12.14	Benzo(k)fluoranthene	2200	J	ug/kg	70	31.429	1	537	4.0968	1
LPRT13A	12.14	Chrysene	5500	J	ug/kg	82	67.073	1	650	8.4615	1
LPRT13A	12.14	Dibenzo(a,h)anthracene	910	J	ug/kg	19	47.895	1	113	8.0531	1
LPRT13A	12.14	Fluoranthene	5300	J	ug/kg	119	44.538	1	1034	5.1257	1
LPRT13A	12.14	Fluorene	640	J	ug/kg	19	33.684	1	114	5.614	1
LPRT13A	12.14	Indeno(1,2,3-cd)pyrene	3500		ug/kg	68	51.471	1	488	7.1721	1
LPRT13A	12.14	Naphthalene	660		ug/kg	30	22	1	217	3.0415	1
LPRT13A	12.14	Perylene	1100		ug/kg	74	14.865	1	453	2.4283	1
LPRT13A	12.14	Phenanthrene	3900	J	ug/kg	68	57.353	1	455	8.5714	1
LPRT13A	12.14	Pyrene	4300	J	ug/kg	125	34.4	1	932	4.6137	1
LPRT13A	12.14	1,1'-Biphenyl	340	U	ug/kg	17	20	1	73	4.6575	1
LPRT13A	12.14	Total PCB Congeners	470	J	ug/kg	35	13.429	1	368	1.2772	1
LPRT13A	12.14	4,4'-DDD	5.9		ug/kg	2.2	2.6818	1	19	0.3105	0
LPRT13A	12.14	4,4'-DDE	17		ug/kg	3.1	5.4839	1	103	0.165	0
LPRT13A	12.14	4,4'-DDT	7.4		ug/kg	1.7	4.3529	1	11	0.6727	0
LPRT13A	12.14	Dieldrin	6.3		ug/kg	0.83	7.5904	1	2.9	2.1724	1
LPRT13B	12.29	Antimony	0.81	J	mg/kg	0.63	1.2857	1	2.4	0.3375	0
LPRT13B	12.29	Arsenic	3.3		mg/kg	7.4	0.4459	0	20	0.165	0
LPRT13B	12.29	Cadmium	2.3	J	mg/kg	0.38	6.0526	1	1.4	1.6429	1
LPRT13B	12.29	Chromium	86.7	J	mg/kg	49	1.7694	1	141	0.6149	0
LPRT13B	12.29	Copper	123	J	mg/kg	32	3.8438	1	94	1.3085	1
LPRT13B	12.29	Lead	162		mg/kg	30	5.4	1	94	1.7234	1
LPRT13B	12.29	Mercury	2200	J	ug/kg	140	15.714	1	480	4.5833	1
LPRT13B	12.29	Nickel	17.1	J	mg/kg	15	1.14	1	47	0.3638	0
LPRT13B	12.29	Silver	3	J	mg/kg	0.23	13.043	1	1.1	2.7273	1
LPRT13B	12.29	Zinc	385		mg/kg	94	4.0957	1	245	1.5714	1
LPRT13B	12.29	1-Methylnaphthalene	99	J	ug/kg	21	4.7143	1	94	1.0532	1
LPRT13B	12.29	1-Methylphenanthrene	210	J	ug/kg	18	11.667	1	112	1.875	1
LPRT13B	12.29	2,6-Dimethylnaphthalene	110	J	ug/kg	25	4.4	1	133	0.8271	0
LPRT13B	12.29	2-Methylnaphthalene	200	J	ug/kg	21	9.5238	1	128	1.5625	1
LPRT13B	12.29	Acenaphthene	170	J	ug/kg	19	8.9474	1	116	1.4655	1
LPRT13B	12.29	Acenaphthylene	250	J	ug/kg	14	17.857	1	140	1.7857	1
LPRT13B	12.29	Anthracene	420	J	ug/kg	34	12.353	1	290	1.4483	1
LPRT13B	12.29	Benzo(a)anthracene	2000	J	ug/kg	61	32.787	1	446	4.4843	1
LPRT13B	12.29	Benzo(a)pyrene	2000	J	ug/kg	69	28.986	1	520	3.8462	1
LPRT13B	12.29	Benzo(b/j)fluoranthene	2800	J	ug/kg	130	21.538	1	1107	2.5294	1
LPRT13B	12.29	Benzo(g,h,i)perylene	2000	J	ug/kg	67	29.851	1	497	4.0241	1
LPRT13B	12.29	Benzo(k)fluoranthene	1300	J	ug/kg	70	18.571	1	537	2.4209	1
LPRT13B	12.29	Chrysene	2900	J	ug/kg	82	35.366	1	650	4.4615	1
LPRT13B	12.29	Dibenzo(a,h)anthracene	310	J	ug/kg	19	16.316	1	113	2.7434	1
LPRT13B	12.29	Fluoranthene	4400	J	ug/kg	119	36.975	1	1034	4.2553	1
LPRT13B	12.29	Fluorene	160	J	ug/kg	19	8.4211	1	114	1.4035	1
LPRT13B	12.29	Indeno(1,2,3-cd)pyrene	1800	J	ug/kg	68	26.471	1	488	3.6885	1
LPRT13B	12.29	Naphthalene	290	J	ug/kg	30	9.6667	1	217	1.3364	1
LPRT13B	12.29	Perylene	470	J	ug/kg	74	6.3514	1	453	1.0375	1
LPRT13B	12.29	Phenanthrene	1600	J	ug/kg	68	23.529	1	455	3.5165	1
LPRT13B	12.29	Pyrene	4000	J	ug/kg	125	32	1	932	4.2918	1
LPRT13B	12.29	1,1'-Biphenyl	550	UJ	ug/kg	17	32.353	1	73	7.5342	1
LPRT13B	12.29	Total PCB Congeners	4000	J	ug/kg	35	114.29	1	368	10.87	1
LPRT13B	12.29	4,4'-DDD	18	J	ug/kg	2.2	8.1818	1	19	0.9474	0
LPRT13B	12.29	4,4'-DDE	30	J	ug/kg	3.1	9.6774	1	103	0.2913	0

Table B7-1b. Sediment chemistry LOE

Location ID	No. of Chemicals w/ T20 EF ≥ 1	No. of Chemicals w/ T50 EF ≥ 1	Sediment Chemistry LOE Weight

Table B7-1a. T20/T50 Screen of LPRSA Sediment Chemistry Data

Location ID	RM	Parameter	Result	Qualifier	Units	T20	T20 EF	T20 EF ≥ 1	T50	T50 EF	T50 EF ≥ 1
LPRT13B	12.29	4,4'-DDT	5.4	J	ug/kg	1.7	3.1765	1	11	0.4909	0
LPRT13B	12.29	Dieldrin	4.7	J	ug/kg	0.83	5.6627	1	2.9	1.6207	1
LPRT13C	12.43	Antimony	0.87	J	mg/kg	0.63	1.381	1	2.4	0.3625	0
LPRT13C	12.43	Arsenic	4.5	J	mg/kg	7.4	0.6081	0	20	0.225	0
LPRT13C	12.43	Cadmium	2.6	J	mg/kg	0.38	6.8421	1	1.4	1.8571	1
LPRT13C	12.43	Chromium	81.7	J	mg/kg	49	1.6673	1	141	0.5794	0
LPRT13C	12.43	Copper	126	J	mg/kg	32	3.9375	1	94	1.3404	1
LPRT13C	12.43	Lead	147	J	mg/kg	30	4.9	1	94	1.5638	1
LPRT13C	12.43	Mercury	2600	J	ug/kg	140	18.571	1	480	5.4167	1
LPRT13C	12.43	Nickel	200	J	mg/kg	15	13.333	1	47	4.2553	1
LPRT13C	12.43	Silver	2.6	J	mg/kg	0.23	11.304	1	1.1	2.3636	1
LPRT13C	12.43	Zinc	359	J	mg/kg	94	3.8191	1	245	1.4653	1
LPRT13C	12.43	1-Methylnaphthalene	110	J	ug/kg	21	5.2381	1	94	1.1702	1
LPRT13C	12.43	1-Methylphenanthrene	230	J	ug/kg	18	12.778	1	112	2.0536	1
LPRT13C	12.43	2,6-Dimethylnaphthalene	98	J	ug/kg	25	3.92	1	133	0.7368	0
LPRT13C	12.43	2-Methylnaphthalene	210	J	ug/kg	21	10	1	128	1.6406	1
LPRT13C	12.43	Acenaphthene	180	J	ug/kg	19	9.4737	1	116	1.5517	1
LPRT13C	12.43	Acenaphthylene	330	J	ug/kg	14	23.571	1	140	2.3571	1
LPRT13C	12.43	Anthracene	620	J	ug/kg	34	18.235	1	290	2.1379	1
LPRT13C	12.43	Benzo(a)anthracene	2200	J	ug/kg	61	36.066	1	446	4.9327	1
LPRT13C	12.43	Benzo(a)pyrene	2300	J	ug/kg	69	33.333	1	520	4.4231	1
LPRT13C	12.43	Benzo(b/j)fluoranthene	3400	J	ug/kg	130	26.154	1	1107	3.0714	1
LPRT13C	12.43	Benzo(g,h,i)perylene	2900	J	ug/kg	67	43.284	1	497	5.835	1
LPRT13C	12.43	Benzo(k)fluoranthene	1800	J	ug/kg	70	25.714	1	537	3.352	1
LPRT13C	12.43	Chrysene	3100	J	ug/kg	82	37.805	1	650	4.7692	1
LPRT13C	12.43	Dibenzo(a,h)anthracene	500	J	ug/kg	19	26.316	1	113	4.4248	1
LPRT13C	12.43	Fluoranthene	4500	J	ug/kg	119	37.815	1	1034	4.352	1
LPRT13C	12.43	Fluorene	170	J	ug/kg	19	8.9474	1	114	1.4912	1
LPRT13C	12.43	Indeno(1,2,3-cd)pyrene	2500	J	ug/kg	68	36.765	1	488	5.123	1
LPRT13C	12.43	Naphthalene	330	J	ug/kg	30	11	1	217	1.5207	1
LPRT13C	12.43	Perylene	630	J	ug/kg	74	8.5135	1	453	1.3907	1
LPRT13C	12.43	Phenanthrene	1700	J	ug/kg	68	25	1	455	3.7363	1
LPRT13C	12.43	Pyrene	3900	J	ug/kg	125	31.2	1	932	4.1845	1
LPRT13C	12.43	1,1'-Biphenyl	740	UJ	ug/kg	17	43.529	1	73	10.137	1
LPRT13C	12.43	Total PCB Congeners	1100	J	ug/kg	35	31.429	1	368	2.9891	1
LPRT13C	12.43	4,4'-DDD	34	J	ug/kg	2.2	15.455	1	19	1.7895	1
LPRT13C	12.43	4,4'-DDE	45	J	ug/kg	3.1	14.516	1	103	0.4369	0
LPRT13C	12.43	4,4'-DDT	9	J	ug/kg	1.7	5.2941	1	11	0.8182	0
LPRT13C	12.43	Dieldrin	13	J	ug/kg	0.83	15.663	1	2.9	4.4828	1
LPRT13D	12.51	Antimony	0.43	J	mg/kg	0.63	0.6825	0	2.4	0.1792	0
LPRT13D	12.51	Arsenic	0.88		mg/kg	7.4	0.1189	0	20	0.044	0
LPRT13D	12.51	Cadmium	0.35	J	mg/kg	0.38	0.9211	0	1.4	0.25	0
LPRT13D	12.51	Chromium	16.5	J	mg/kg	49	0.3367	0	141	0.117	0
LPRT13D	12.51	Copper	20		mg/kg	32	0.625	0	94	0.2128	0
LPRT13D	12.51	Lead	39.9	J	mg/kg	30	1.33	1	94	0.4245	0
LPRT13D	12.51	Mercury	210		ug/kg	140	1.5	1	480	0.4375	0
LPRT13D	12.51	Nickel	4.6	J	mg/kg	15	0.3067	0	47	0.0979	0
LPRT13D	12.51	Silver	0.32		mg/kg	0.23	1.3913	1	1.1	0.2909	0
LPRT13D	12.51	Zinc	80.7	J	mg/kg	94	0.8585	0	245	0.3294	0
LPRT13D	12.51	1-Methylnaphthalene	34	J	ug/kg	21	1.619	1	94	0.3617	0
LPRT13D	12.51	1-Methylphenanthrene	42	J	ug/kg	18	2.3333	1	112	0.375	0
LPRT13D	12.51	2,6-Dimethylnaphthalene	29	J	ug/kg	25	1.16	1	133	0.218	0
LPRT13D	12.51	2-Methylnaphthalene	61	J	ug/kg	21	2.9048	1	128	0.4766	0
LPRT13D	12.51	Acenaphthene	36	J	ug/kg	19	1.8947	1	116	0.3103	0
LPRT13D	12.51	Acenaphthylene	51	J	ug/kg	14	3.6429	1	140	0.3643	0
LPRT13D	12.51	Anthracene	58	J	ug/kg	34	1.7059	1	290	0.2	0
LPRT13D	12.51	Benzo(a)anthracene	450		ug/kg	61	7.377	1	446	1.009	1
LPRT13D	12.51	Benzo(a)pyrene	360	J	ug/kg	69	5.2174	1	520	0.6923	0
LPRT13D	12.51	Benzo(b/j)fluoranthene	480		ug/kg	130	3.6923	1	1107	0.4336	0
LPRT13D	12.51	Benzo(g,h,i)perylene	310		ug/kg	67	4.6269	1	497	0.6237	0
LPRT13D	12.51	Benzo(k)fluoranthene	160		ug/kg	70	2.2857	1	537	0.298	0
LPRT13D	12.51	Chrysene	370		ug/kg	82	4.5122	1	650	0.5692	0
LPRT13D	12.51	Dibenzo(a,h)anthracene	69	J	ug/kg	19	3.6316	1	113	0.6106	0
LPRT13D	12.51	Fluoranthene	750		ug/kg	119	6.3025	1	1034	0.7253	0
LPRT13D	12.51	Fluorene	29	J	ug/kg	19	1.5263	1	114	0.2544	0
LPRT13D	12.51	Indeno(1,2,3-cd)pyrene	300		ug/kg	68	4.4118	1	488	0.6148	0
LPRT13D	12.51	Naphthalene	150		ug/kg	30	5	1	217	0.6912	0
LPRT13D	12.51	Perylene	88	J	ug/kg	74	1.1892	1	453	0.1943	0
LPRT13D	12.51	Phenanthrene	270		ug/kg	68	3.9706	1	455	0.5934	0
LPRT13D	12.51	Pyrene	670		ug/kg	125	5.36	1	932	0.7189	0
LPRT13D	12.51	1,1'-Biphenyl	230	U	ug/kg	17	13.529	1	73	3.1507	1
LPRT13D	12.51	Total PCB Congeners	110	J	ug/kg	35	3.1429	1	368	0.2989	0

Table B7-1b. Sediment chemistry LOE

Location ID	No. of Chemicals w/ T20 EF ≥ 1	No. of Chemicals w/ T50 EF ≥ 1	Sediment Chemistry LOE Weight

Table B7-1a. T20/T50 Screen of LPRSA Sediment Chemistry Data

Location ID	RM	Parameter	Result	Qualifier	Units	T20	T20 EF	T20 EF ≥ 1	T50	T50 EF	T50 EF ≥ 1
LPRT13D	12.51	4,4'-DDD	3		ug/kg	2.2	1.3636	1	19	0.1579	0
LPRT13D	12.51	4,4'-DDE	2.9		ug/kg	3.1	0.9355	0	103	0.0282	0
LPRT13D	12.51	4,4'-DDT	5.3		ug/kg	1.7	3.1176	1	11	0.4818	0
LPRT13D	12.51	Dieldrin	0.5	J	ug/kg	0.83	0.6024	0	2.9	0.1724	0
LPRT13E	12.59	Antimony	1.5	J	mg/kg	0.63	2.381	1	2.4	0.625	0
LPRT13E	12.59	Arsenic	3.2		mg/kg	7.4	0.4324	0	20	0.16	0
LPRT13E	12.59	Cadmium	1.6	J	mg/kg	0.38	4.2105	1	1.4	1.1429	1
LPRT13E	12.59	Chromium	44.8	J	mg/kg	49	0.9143	0	141	0.3177	0
LPRT13E	12.59	Copper	83.4	J	mg/kg	32	2.6063	1	94	0.8872	0
LPRT13E	12.59	Lead	140		mg/kg	30	4.6667	1	94	1.4894	1
LPRT13E	12.59	Mercury	830		ug/kg	140	5.9286	1	480	1.7292	1
LPRT13E	12.59	Nickel	17.3	J	mg/kg	15	1.1533	1	47	0.3681	0
LPRT13E	12.59	Silver	1.5	J	mg/kg	0.23	6.5217	1	1.1	1.3636	1
LPRT13E	12.59	Zinc	338		mg/kg	94	3.5957	1	245	1.3796	1
LPRT13E	12.59	1-Methylnaphthalene	98		ug/kg	21	4.6667	1	94	1.0426	1
LPRT13E	12.59	1-Methylphenanthrene	230		ug/kg	18	12.778	1	112	2.0536	1
LPRT13E	12.59	2,6-Dimethylnaphthalene	70	J	ug/kg	25	2.8	1	133	0.5263	0
LPRT13E	12.59	2-Methylnaphthalene	150		ug/kg	21	7.1429	1	128	1.1719	1
LPRT13E	12.59	Acenaphthene	190		ug/kg	19	10	1	116	1.6379	1
LPRT13E	12.59	Acenaphthylene	250		ug/kg	14	17.857	1	140	1.7857	1
LPRT13E	12.59	Anthracene	510	J	ug/kg	34	15	1	290	1.7586	1
LPRT13E	12.59	Benzo(a)anthracene	2900		ug/kg	61	47.541	1	446	6.5022	1
LPRT13E	12.59	Benzo(a)pyrene	2300		ug/kg	69	33.333	1	520	4.4231	1
LPRT13E	12.59	Benzo(b/j)fluoranthene	3200		ug/kg	130	24.615	1	1107	2.8907	1
LPRT13E	12.59	Benzo(g,h,i)perylene	2300		ug/kg	67	34.328	1	497	4.6278	1
LPRT13E	12.59	Benzo(k)fluoranthene	1400		ug/kg	70	20	1	537	2.6071	1
LPRT13E	12.59	Chrysene	2900		ug/kg	82	35.366	1	650	4.4615	1
LPRT13E	12.59	Dibenzo(a,h)anthracene	340	J	ug/kg	19	17.895	1	113	3.0088	1
LPRT13E	12.59	Fluoranthene	5500	J	ug/kg	119	46.218	1	1034	5.3191	1
LPRT13E	12.59	Fluorene	220	J	ug/kg	19	11.579	1	114	1.9298	1
LPRT13E	12.59	Indeno(1,2,3-cd)pyrene	2200		ug/kg	68	32.353	1	488	4.5082	1
LPRT13E	12.59	Naphthalene	230		ug/kg	30	7.6667	1	217	1.0599	1
LPRT13E	12.59	Perylene	640		ug/kg	74	8.6486	1	453	1.4128	1
LPRT13E	12.59	Phenanthrene	2300		ug/kg	68	33.824	1	455	5.0549	1
LPRT13E	12.59	Pyrene	4400	J	ug/kg	125	35.2	1	932	4.721	1
LPRT13E	12.59	1,1'-Biphenyl	370	UJ	ug/kg	17	21.765	1	73	5.0685	1
LPRT13E	12.59	Total PCB Congeners	410	J	ug/kg	35	11.714	1	368	1.1141	1
LPRT13E	12.59	4,4'-DDD	14		ug/kg	2.2	6.3636	1	19	0.7368	0
LPRT13E	12.59	4,4'-DDE	15		ug/kg	3.1	4.8387	1	103	0.1456	0
LPRT13E	12.59	4,4'-DDT	5.1		ug/kg	1.7	3	1	11	0.4636	0
LPRT13E	12.59	Dieldrin	7.1		ug/kg	0.83	8.5542	1	2.9	2.4483	1
LPRT13F	12.81	Antimony	0.55	J	mg/kg	0.63	0.873	0	2.4	0.2292	0
LPRT13F	12.81	Arsenic	2		mg/kg	7.4	0.2703	0	20	0.1	0
LPRT13F	12.81	Cadmium	0.85	J	mg/kg	0.38	2.2368	1	1.4	0.6071	0
LPRT13F	12.81	Chromium	37.6	J	mg/kg	49	0.7673	0	141	0.2667	0
LPRT13F	12.81	Copper	46.5	J	mg/kg	32	1.4531	1	94	0.4947	0
LPRT13F	12.81	Lead	107		mg/kg	30	3.5667	1	94	1.1383	1
LPRT13F	12.81	Mercury	350		ug/kg	140	2.5	1	480	0.7292	0
LPRT13F	12.81	Nickel	10.5	J	mg/kg	15	0.7	0	47	0.2234	0
LPRT13F	12.81	Silver	0.63	J	mg/kg	0.23	2.7391	1	1.1	0.5727	0
LPRT13F	12.81	Zinc	203		mg/kg	94	2.1596	1	245	0.8286	0
LPRT13F	12.81	1-Methylnaphthalene	180		ug/kg	21	8.5714	1	94	1.9149	1
LPRT13F	12.81	1-Methylphenanthrene	330		ug/kg	18	18.333	1	112	2.9464	1
LPRT13F	12.81	2,6-Dimethylnaphthalene	130		ug/kg	25	5.2	1	133	0.9774	0
LPRT13F	12.81	2-Methylnaphthalene	250		ug/kg	21	11.905	1	128	1.9531	1
LPRT13F	12.81	Acenaphthene	360		ug/kg	19	18.947	1	116	3.1034	1
LPRT13F	12.81	Acenaphthylene	580		ug/kg	14	41.429	1	140	4.1429	1
LPRT13F	12.81	Anthracene	650	J	ug/kg	34	19.118	1	290	2.2414	1
LPRT13F	12.81	Benzo(a)anthracene	3400		ug/kg	61	55.738	1	446	7.6233	1
LPRT13F	12.81	Benzo(a)pyrene	2400		ug/kg	69	34.783	1	520	4.6154	1
LPRT13F	12.81	Benzo(b/j)fluoranthene	3200		ug/kg	130	24.615	1	1107	2.8907	1
LPRT13F	12.81	Benzo(g,h,i)perylene	2000		ug/kg	67	29.851	1	497	4.0241	1
LPRT13F	12.81	Benzo(k)fluoranthene	1300		ug/kg	70	18.571	1	537	2.4209	1
LPRT13F	12.81	Chrysene	3800		ug/kg	82	46.341	1	650	5.8462	1
LPRT13F	12.81	Dibenzo(a,h)anthracene	520	J	ug/kg	19	27.368	1	113	4.6018	1
LPRT13F	12.81	Fluoranthene	6100	J	ug/kg	119	51.261	1	1034	5.8994	1
LPRT13F	12.81	Fluorene	280	J	ug/kg	19	14.737	1	114	2.4561	1
LPRT13F	12.81	Indeno(1,2,3-cd)pyrene	2700		ug/kg	68	39.706	1	488	5.5328	1
LPRT13F	12.81	Naphthalene	330		ug/kg	30	11	1	217	1.5207	1
LPRT13F	12.81	Perylene	610		ug/kg	74	8.2432	1	453	1.3466	1
LPRT13F	12.81	Phenanthrene	2300		ug/kg	68	33.824	1	455	5.0549	1
LPRT13F	12.81	Pyrene	5400	J	ug/kg	125	43.2	1	932	5.794	1

Table B7-1b. Sediment chemistry LOE

Location ID	No. of Chemicals w/ T20 EF ≥ 1	No. of Chemicals w/ T50 EF ≥ 1	Sediment Chemistry LOE Weight

Table B7-1a. T20/T50 Screen of LPRSA Sediment Chemistry Data

Location ID	RM	Parameter	Result	Qualifier	Units	T20	T20 EF	T20 EF ≥ 1	T50	T50 EF	T50 EF ≥ 1
LPRT13F	12.81	1,1'-Biphenyl	330	U	ug/kg	17	19.412	1	73	4.5205	1
LPRT13F	12.81	Total PCB Congeners	260	J	ug/kg	35	7.4286	1	368	0.7065	0
LPRT13F	12.81	4,4'-DDD	12		ug/kg	2.2	5.4545	1	19	0.6316	0
LPRT13F	12.81	4,4'-DDE	7.4		ug/kg	3.1	2.3871	1	103	0.0718	0
LPRT13F	12.81	4,4'-DDT	4		ug/kg	1.7	2.3529	1	11	0.3636	0
LPRT13F	12.81	Dieldrin	7.2		ug/kg	0.83	8.6747	1	2.9	2.4828	1
LPRT13G	12.87	Antimony	0.81	J	mg/kg	0.63	1.2857	1	2.4	0.3375	0
LPRT13G	12.87	Arsenic	4.1	J	mg/kg	7.4	0.5541	0	20	0.205	0
LPRT13G	12.87	Cadmium	2.8	J	mg/kg	0.38	7.3684	1	1.4	2	1
LPRT13G	12.87	Chromium	82.6	J	mg/kg	49	1.6857	1	141	0.5858	0
LPRT13G	12.87	Copper	141	J	mg/kg	32	4.4063	1	94	1.5	1
LPRT13G	12.87	Lead	173	J	mg/kg	30	5.7667	1	94	1.8404	1
LPRT13G	12.87	Mercury	1200	J	ug/kg	140	8.5714	1	480	2.5	1
LPRT13G	12.87	Nickel	22.2	J	mg/kg	15	1.48	1	47	0.4723	0
LPRT13G	12.87	Silver	3.3	J	mg/kg	0.23	14.348	1	1.1	3	1
LPRT13G	12.87	Zinc	444	J	mg/kg	94	4.7234	1	245	1.8122	1
LPRT13G	12.87	1-Methylnaphthalene	90	J	ug/kg	21	4.2857	1	94	0.9574	0
LPRT13G	12.87	1-Methylphenanthrene	210	J	ug/kg	18	11.667	1	112	1.875	1
LPRT13G	12.87	2,6-Dimethylnaphthalene	72	J	ug/kg	25	2.88	1	133	0.5414	0
LPRT13G	12.87	2-Methylnaphthalene	150	J	ug/kg	21	7.1429	1	128	1.1719	1
LPRT13G	12.87	Acenaphthene	250	J	ug/kg	19	13.158	1	116	2.1552	1
LPRT13G	12.87	Acenaphthylene	230	J	ug/kg	14	16.429	1	140	1.6429	1
LPRT13G	12.87	Anthracene	490	J	ug/kg	34	14.412	1	290	1.6897	1
LPRT13G	12.87	Benzo(a)anthracene	2000	J	ug/kg	61	32.787	1	446	4.4843	1
LPRT13G	12.87	Benzo(a)pyrene	1700	J	ug/kg	69	24.638	1	520	3.2692	1
LPRT13G	12.87	Benzo(b/j)fluoranthene	2900	J	ug/kg	130	22.308	1	1107	2.6197	1
LPRT13G	12.87	Benzo(g,h,i)perylene	1000	J	ug/kg	67	14.925	1	497	2.0121	1
LPRT13G	12.87	Benzo(k)fluoranthene	920	J	ug/kg	70	13.143	1	537	1.7132	1
LPRT13G	12.87	Chrysene	2800	J	ug/kg	82	34.146	1	650	4.3077	1
LPRT13G	12.87	Dibenzo(a,h)anthracene	270	J	ug/kg	19	14.211	1	113	2.3894	1
LPRT13G	12.87	Fluoranthene	5000	J	ug/kg	119	42.017	1	1034	4.8356	1
LPRT13G	12.87	Fluorene	170	J	ug/kg	19	8.9474	1	114	1.4912	1
LPRT13G	12.87	Indeno(1,2,3-cd)pyrene	1300	J	ug/kg	68	19.118	1	488	2.6639	1
LPRT13G	12.87	Naphthalene	220	J	ug/kg	30	7.3333	1	217	1.0138	1
LPRT13G	12.87	Perylene	410	J	ug/kg	74	5.5405	1	453	0.9051	0
LPRT13G	12.87	Phenanthrene	2100	J	ug/kg	68	30.882	1	455	4.6154	1
LPRT13G	12.87	Pyrene	4300	J	ug/kg	125	34.4	1	932	4.6137	1
LPRT13G	12.87	1,1'-Biphenyl	440	UJ	ug/kg	17	25.882	1	73	6.0274	1
LPRT13G	12.87	Total PCB Congeners	800	J	ug/kg	35	22.857	1	368	2.1739	1
LPRT13G	12.87	4,4'-DDD	59	J	ug/kg	2.2	26.818	1	19	3.1053	1
LPRT13G	12.87	4,4'-DDE	36	J	ug/kg	3.1	11.613	1	103	0.3495	0
LPRT13G	12.87	4,4'-DDT	200	J	ug/kg	1.7	117.65	1	11	18.182	1
LPRT13G	12.87	Dieldrin	6	J	ug/kg	0.83	7.2289	1	2.9	2.069	1
LPRT14A	13.28	Antimony	0.38	J	mg/kg	0.63	0.6032	0	2.4	0.1583	0
LPRT14A	13.28	Arsenic	2.1		mg/kg	7.4	0.2838	0	20	0.105	0
LPRT14A	13.28	Cadmium	1.2	J	mg/kg	0.38	3.1579	1	1.4	0.8571	0
LPRT14A	13.28	Chromium	27.4		mg/kg	49	0.5592	0	141	0.1943	0
LPRT14A	13.28	Copper	55.3		mg/kg	32	1.7281	1	94	0.5883	0
LPRT14A	13.28	Lead	132		mg/kg	30	4.4	1	94	1.4043	1
LPRT14A	13.28	Mercury	410		ug/kg	140	2.9286	1	480	0.8542	0
LPRT14A	13.28	Nickel	13.8		mg/kg	15	0.92	0	47	0.2936	0
LPRT14A	13.28	Silver	0.84		mg/kg	0.23	3.6522	1	1.1	0.7636	0
LPRT14A	13.28	Zinc	211		mg/kg	94	2.2447	1	245	0.8612	0
LPRT14A	13.28	1-Methylnaphthalene	92	J	ug/kg	21	4.381	1	94	0.9787	0
LPRT14A	13.28	1-Methylphenanthrene	240		ug/kg	18	13.333	1	112	2.1429	1
LPRT14A	13.28	2,6-Dimethylnaphthalene	91	J	ug/kg	25	3.64	1	133	0.6842	0
LPRT14A	13.28	2-Methylnaphthalene	170		ug/kg	21	8.0952	1	128	1.3281	1
LPRT14A	13.28	Acenaphthene	170	J	ug/kg	19	8.9474	1	116	1.4655	1
LPRT14A	13.28	Acenaphthylene	230		ug/kg	14	16.429	1	140	1.6429	1
LPRT14A	13.28	Anthracene	300	J	ug/kg	34	8.8235	1	290	1.0345	1
LPRT14A	13.28	Benzo(a)anthracene	2200	J	ug/kg	61	36.066	1	446	4.9327	1
LPRT14A	13.28	Benzo(a)pyrene	3200		ug/kg	69	46.377	1	520	6.1538	1
LPRT14A	13.28	Benzo(b/j)fluoranthene	3600	J	ug/kg	130	27.692	1	1107	3.252	1
LPRT14A	13.28	Benzo(g,h,i)perylene	2300		ug/kg	67	34.328	1	497	4.6278	1
LPRT14A	13.28	Benzo(k)fluoranthene	1500	J	ug/kg	70	21.429	1	537	2.7933	1
LPRT14A	13.28	Chrysene	2800	J	ug/kg	82	34.146	1	650	4.3077	1
LPRT14A	13.28	Dibenzo(a,h)anthracene	410	J	ug/kg	19	21.579	1	113	3.6283	1
LPRT14A	13.28	Fluoranthene	4700	J	ug/kg	119	39.496	1	1034	4.5455	1
LPRT14A	13.28	Fluorene	210	J	ug/kg	19	11.053	1	114	1.8421	1
LPRT14A	13.28	Indeno(1,2,3-cd)pyrene	2600		ug/kg	68	38.235	1	488	5.3279	1
LPRT14A	13.28	Naphthalene	240		ug/kg	30	8	1	217	1.106	1
LPRT14A	13.28	Perylene	640		ug/kg	74	8.6486	1	453	1.4128	1

Table B7-1b. Sediment chemistry LOE

Location ID	No. of Chemicals w/ T20 EF ≥ 1	No. of Chemicals w/ T50 EF ≥ 1	Sediment Chemistry LOE Weight

Table B7-1a. T20/T50 Screen of LPRSA Sediment Chemistry Data

Location ID	RM	Parameter	Result	Qualifier	Units	T20	T20 EF	T20 EF ≥ 1	T50	T50 EF	T50 EF ≥ 1
LPRT14A	13.28	Phenanthrene	2000	J	ug/kg	68	29.412	1	455	4.3956	1
LPRT14A	13.28	Pyrene	3800	J	ug/kg	125	30.4	1	932	4.0773	1
LPRT14A	13.28	1,1'-Biphenyl	330	U	ug/kg	17	19.412	1	73	4.5205	1
LPRT14A	13.28	Total PCB Congeners	280	J	ug/kg	35	8	1	368	0.7609	0
LPRT14A	13.28	4,4'-DDD	7.5		ug/kg	2.2	3.4091	1	19	0.3947	0
LPRT14A	13.28	4,4'-DDE	14		ug/kg	3.1	4.5161	1	103	0.1359	0
LPRT14A	13.28	4,4'-DDT	9.2		ug/kg	1.7	5.4118	1	11	0.8364	0
LPRT14A	13.28	Dieldrin	3.5		ug/kg	0.83	4.2169	1	2.9	1.2069	1
LPRT14B	13.55	Antimony	0.49	J	mg/kg	0.63	0.7778	0	2.4	0.2042	0
LPRT14B	13.55	Arsenic	2.2		mg/kg	7.4	0.2973	0	20	0.11	0
LPRT14B	13.55	Cadmium	11.3	J	mg/kg	0.38	29.737	1	1.4	8.0714	1
LPRT14B	13.55	Chromium	25.1		mg/kg	49	0.5122	0	141	0.178	0
LPRT14B	13.55	Copper	56.3		mg/kg	32	1.7594	1	94	0.5989	0
LPRT14B	13.55	Lead	163		mg/kg	30	5.4333	1	94	1.734	1
LPRT14B	13.55	Mercury	390		ug/kg	140	2.7857	1	480	0.8125	0
LPRT14B	13.55	Nickel	13.9		mg/kg	15	0.9267	0	47	0.2957	0
LPRT14B	13.55	Silver	0.78		mg/kg	0.23	3.3913	1	1.1	0.7091	0
LPRT14B	13.55	Zinc	259		mg/kg	94	2.7553	1	245	1.0571	1
LPRT14B	13.55	1-Methylnaphthalene	130		ug/kg	21	6.1905	1	94	1.383	1
LPRT14B	13.55	1-Methylphenanthrene	230		ug/kg	18	12.778	1	112	2.0536	1
LPRT14B	13.55	2,6-Dimethylnaphthalene	170		ug/kg	25	6.8	1	133	1.2782	1
LPRT14B	13.55	2-Methylnaphthalene	210		ug/kg	21	10	1	128	1.6406	1
LPRT14B	13.55	Acenaphthene	200	J	ug/kg	19	10.526	1	116	1.7241	1
LPRT14B	13.55	Acenaphthylene	230		ug/kg	14	16.429	1	140	1.6429	1
LPRT14B	13.55	Anthracene	390	J	ug/kg	34	11.471	1	290	1.3448	1
LPRT14B	13.55	Benzo(a)anthracene	1600	J	ug/kg	61	26.23	1	446	3.5874	1
LPRT14B	13.55	Benzo(a)pyrene	2800		ug/kg	69	40.58	1	520	5.3846	1
LPRT14B	13.55	Benzo(b/j)fluoranthene	3200	J	ug/kg	130	24.615	1	1107	2.8907	1
LPRT14B	13.55	Benzo(g,h,i)perylene	1900		ug/kg	67	28.358	1	497	3.8229	1
LPRT14B	13.55	Benzo(k)fluoranthene	1500	J	ug/kg	70	21.429	1	537	2.7933	1
LPRT14B	13.55	Chrysene	2500	J	ug/kg	82	30.488	1	650	3.8462	1
LPRT14B	13.55	Dibenzo(a,h)anthracene	400	J	ug/kg	19	21.053	1	113	3.5398	1
LPRT14B	13.55	Fluoranthene	4500	J	ug/kg	119	37.815	1	1034	4.352	1
LPRT14B	13.55	Fluorene	240	J	ug/kg	19	12.632	1	114	2.1053	1
LPRT14B	13.55	Indeno(1,2,3-cd)pyrene	1700		ug/kg	68	25	1	488	3.4836	1
LPRT14B	13.55	Naphthalene	230		ug/kg	30	7.6667	1	217	1.0599	1
LPRT14B	13.55	Perylene	530		ug/kg	74	7.1622	1	453	1.17	1
LPRT14B	13.55	Phenanthrene	2000	J	ug/kg	68	29.412	1	455	4.3956	1
LPRT14B	13.55	Pyrene	3300	J	ug/kg	125	26.4	1	932	3.5408	1
LPRT14B	13.55	1,1'-Biphenyl	300	U	ug/kg	17	17.647	1	73	4.1096	1
LPRT14B	13.55	Total PCB Congeners	250	J	ug/kg	35	7.1429	1	368	0.6793	0
LPRT14B	13.55	4,4'-DDD	2.6		ug/kg	2.2	1.1818	1	19	0.1368	0
LPRT14B	13.55	4,4'-DDE	13		ug/kg	3.1	4.1935	1	103	0.1262	0
LPRT14B	13.55	4,4'-DDT	6.4		ug/kg	1.7	3.7647	1	11	0.5818	0
LPRT14B	13.55	Dieldrin	3.7		ug/kg	0.83	4.4578	1	2.9	1.2759	1
LPRT14C	13.61	Antimony	0.29	J	mg/kg	0.63	0.4603	0	2.4	0.1208	0
LPRT14C	13.61	Arsenic	1.2		mg/kg	7.4	0.1622	0	20	0.06	0
LPRT14C	13.61	Cadmium	0.36	J	mg/kg	0.38	0.9474	0	1.4	0.2571	0
LPRT14C	13.61	Chromium	16		mg/kg	49	0.3265	0	141	0.1135	0
LPRT14C	13.61	Copper	25.4		mg/kg	32	0.7938	0	94	0.2702	0
LPRT14C	13.61	Lead	110		mg/kg	30	3.6667	1	94	1.1702	1
LPRT14C	13.61	Mercury	220		ug/kg	140	1.5714	1	480	0.4583	0
LPRT14C	13.61	Nickel	14.7		mg/kg	15	0.98	0	47	0.3128	0
LPRT14C	13.61	Silver	0.3		mg/kg	0.23	1.3043	1	1.1	0.2727	0
LPRT14C	13.61	Zinc	177		mg/kg	94	1.883	1	245	0.7224	0
LPRT14C	13.61	1-Methylnaphthalene	640		ug/kg	21	30.476	1	94	6.8085	1
LPRT14C	13.61	1-Methylphenanthrene	640		ug/kg	18	35.556	1	112	5.7143	1
LPRT14C	13.61	2,6-Dimethylnaphthalene	480		ug/kg	25	19.2	1	133	3.609	1
LPRT14C	13.61	2-Methylnaphthalene	1200		ug/kg	21	57.143	1	128	9.375	1
LPRT14C	13.61	Acenaphthene	610	J	ug/kg	19	32.105	1	116	5.2586	1
LPRT14C	13.61	Acenaphthylene	550		ug/kg	14	39.286	1	140	3.9286	1
LPRT14C	13.61	Anthracene	1000	J	ug/kg	34	29.412	1	290	3.4483	1
LPRT14C	13.61	Benzo(a)anthracene	4500	J	ug/kg	61	73.77	1	446	10.09	1
LPRT14C	13.61	Benzo(a)pyrene	5200	J	ug/kg	69	75.362	1	520	10	1
LPRT14C	13.61	Benzo(b/j)fluoranthene	5500	J	ug/kg	130	42.308	1	1107	4.9684	1
LPRT14C	13.61	Benzo(g,h,i)perylene	3000		ug/kg	67	44.776	1	497	6.0362	1
LPRT14C	13.61	Benzo(k)fluoranthene	2100	J	ug/kg	70	30	1	537	3.9106	1
LPRT14C	13.61	Chrysene	4600	J	ug/kg	82	56.098	1	650	7.0769	1
LPRT14C	13.61	Dibenzo(a,h)anthracene	800	J	ug/kg	19	42.105	1	113	7.0796	1
LPRT14C	13.61	Fluoranthene	5900	J	ug/kg	119	49.58	1	1034	5.706	1
LPRT14C	13.61	Fluorene	670	J	ug/kg	19	35.263	1	114	5.8772	1
LPRT14C	13.61	Indeno(1,2,3-cd)pyrene	3200		ug/kg	68	47.059	1	488	6.5574	1

Table B7-1b. Sediment chemistry LOE

Location ID	No. of Chemicals w/ T20 EF ≥ 1	No. of Chemicals w/ T50 EF ≥ 1	Sediment Chemistry LOE Weight

Table B7-1a. T20/T50 Screen of LPRSA Sediment Chemistry Data

Location ID	RM	Parameter	Result	Qualifier	Units	T20	T20 EF	T20 EF ≥ 1	T50	T50 EF	T50 EF ≥ 1
LPRT14C	13.61	Naphthalene	1500		ug/kg	30	50	1	217	6.9124	1
LPRT14C	13.61	Perylene	1200		ug/kg	74	16.216	1	453	2.649	1
LPRT14C	13.61	Phenanthrene	5300	J	ug/kg	68	77.941	1	455	11.648	1
LPRT14C	13.61	Pyrene	4100	J	ug/kg	125	32.8	1	932	4.3991	1
LPRT14C	13.61	1,1'-Biphenyl	250	U	ug/kg	17	14.706	1	73	3.4247	1
LPRT14C	13.61	Total PCB Congeners	280	J	ug/kg	35	8	1	368	0.7609	0
LPRT14C	13.61	4,4'-DDD	7.6		ug/kg	2.2	3.4545	1	19	0.4	0
LPRT14C	13.61	4,4'-DDE	5.4		ug/kg	3.1	1.7419	1	103	0.0524	0
LPRT14C	13.61	4,4'-DDT	1.5	J	ug/kg	1.7	0.8824	0	11	0.1364	0
LPRT14C	13.61	Dieldrin	2.6		ug/kg	0.83	3.1325	1	2.9	0.8966	0
LPRT14D	13.67	Antimony	0.72	J	mg/kg	0.63	1.1429	1	2.4	0.3	0
LPRT14D	13.67	Arsenic	2.2		mg/kg	7.4	0.2973	0	20	0.11	0
LPRT14D	13.67	Cadmium	1.1	J	mg/kg	0.38	2.8947	1	1.4	0.7857	0
LPRT14D	13.67	Chromium	26.3		mg/kg	49	0.5367	0	141	0.1865	0
LPRT14D	13.67	Copper	57.1		mg/kg	32	1.7844	1	94	0.6074	0
LPRT14D	13.67	Lead	160		mg/kg	30	5.3333	1	94	1.7021	1
LPRT14D	13.67	Mercury	390		ug/kg	140	2.7857	1	480	0.8125	0
LPRT14D	13.67	Nickel	13		mg/kg	15	0.8667	0	47	0.2766	0
LPRT14D	13.67	Silver	1.1		mg/kg	0.23	4.7826	1	1.1	1	0
LPRT14D	13.67	Zinc	256		mg/kg	94	2.7234	1	245	1.0449	1
LPRT14D	13.67	1-Methylnaphthalene	110		ug/kg	21	5.2381	1	94	1.1702	1
LPRT14D	13.67	1-Methylphenanthrene	280		ug/kg	18	15.556	1	112	2.5	1
LPRT14D	13.67	2,6-Dimethylnaphthalene	95	J	ug/kg	25	3.8	1	133	0.7143	0
LPRT14D	13.67	2-Methylnaphthalene	170		ug/kg	21	8.0952	1	128	1.3281	1
LPRT14D	13.67	Acenaphthene	260	J	ug/kg	19	13.684	1	116	2.2414	1
LPRT14D	13.67	Acenaphthylene	330		ug/kg	14	23.571	1	140	2.3571	1
LPRT14D	13.67	Anthracene	480	J	ug/kg	34	14.118	1	290	1.6552	1
LPRT14D	13.67	Benzo(a)anthracene	2200	J	ug/kg	61	36.066	1	446	4.9327	1
LPRT14D	13.67	Benzo(a)pyrene	3100		ug/kg	69	44.928	1	520	5.9615	1
LPRT14D	13.67	Benzo(b/j)fluoranthene	3500	J	ug/kg	130	26.923	1	1107	3.1617	1
LPRT14D	13.67	Benzo(g,h,i)perylene	2400		ug/kg	67	35.821	1	497	4.829	1
LPRT14D	13.67	Benzo(k)fluoranthene	1800	J	ug/kg	70	25.714	1	537	3.352	1
LPRT14D	13.67	Chrysene	3100	J	ug/kg	82	37.805	1	650	4.7692	1
LPRT14D	13.67	Dibenzo(a,h)anthracene	480	J	ug/kg	19	25.263	1	113	4.2478	1
LPRT14D	13.67	Fluoranthene	4400	J	ug/kg	119	36.975	1	1034	4.2553	1
LPRT14D	13.67	Fluorene	280	J	ug/kg	19	14.737	1	114	2.4561	1
LPRT14D	13.67	Indeno(1,2,3-cd)pyrene	2300		ug/kg	68	33.824	1	488	4.7131	1
LPRT14D	13.67	Naphthalene	270		ug/kg	30	9	1	217	1.2442	1
LPRT14D	13.67	Perylene	640		ug/kg	74	8.6486	1	453	1.4128	1
LPRT14D	13.67	Phenanthrene	2400	J	ug/kg	68	35.294	1	455	5.2747	1
LPRT14D	13.67	Pyrene	3200	J	ug/kg	125	25.6	1	932	3.4335	1
LPRT14D	13.67	1,1'-Biphenyl	300	U	ug/kg	17	17.647	1	73	4.1096	1
LPRT14D	13.67	Total PCB Congeners	300	J	ug/kg	35	8.5714	1	368	0.8152	0
LPRT14D	13.67	4,4'-DDD	3.9		ug/kg	2.2	1.7727	1	19	0.2053	0
LPRT14D	13.67	4,4'-DDE	9.3		ug/kg	3.1	3	1	103	0.0903	0
LPRT14D	13.67	4,4'-DDT	5.3		ug/kg	1.7	3.1176	1	11	0.4818	0
LPRT14D	13.67	Dieldrin	4.7		ug/kg	0.83	5.6627	1	2.9	1.6207	1
LPRT14E	13.71	Antimony	0.31	J	mg/kg	0.63	0.4921	0	2.4	0.1292	0
LPRT14E	13.71	Arsenic	1.2		mg/kg	7.4	0.1622	0	20	0.06	0
LPRT14E	13.71	Cadmium	0.36	J	mg/kg	0.38	0.9474	0	1.4	0.2571	0
LPRT14E	13.71	Chromium	14.9		mg/kg	49	0.3041	0	141	0.1057	0
LPRT14E	13.71	Copper	23.7		mg/kg	32	0.7406	0	94	0.2521	0
LPRT14E	13.71	Lead	45.6		mg/kg	30	1.52	1	94	0.4851	0
LPRT14E	13.71	Mercury	150		ug/kg	140	1.0714	1	480	0.3125	0
LPRT14E	13.71	Nickel	8.5		mg/kg	15	0.5667	0	47	0.1809	0
LPRT14E	13.71	Silver	3.4		mg/kg	0.23	14.783	1	1.1	3.0909	1
LPRT14E	13.71	Zinc	98		mg/kg	94	1.0426	1	245	0.4	0
LPRT14E	13.71	1-Methylnaphthalene	160		ug/kg	21	7.619	1	94	1.7021	1
LPRT14E	13.71	1-Methylphenanthrene	300		ug/kg	18	16.667	1	112	2.6786	1
LPRT14E	13.71	2,6-Dimethylnaphthalene	150		ug/kg	25	6	1	133	1.1278	1
LPRT14E	13.71	2-Methylnaphthalene	160		ug/kg	21	7.619	1	128	1.25	1
LPRT14E	13.71	Acenaphthene	180	J	ug/kg	19	9.4737	1	116	1.5517	1
LPRT14E	13.71	Acenaphthylene	640		ug/kg	14	45.714	1	140	4.5714	1
LPRT14E	13.71	Anthracene	400	J	ug/kg	34	11.765	1	290	1.3793	1
LPRT14E	13.71	Benzo(a)anthracene	1800	J	ug/kg	61	29.508	1	446	4.0359	1
LPRT14E	13.71	Benzo(a)pyrene	2400		ug/kg	69	34.783	1	520	4.6154	1
LPRT14E	13.71	Benzo(b/j)fluoranthene	2000	J	ug/kg	130	15.385	1	1107	1.8067	1
LPRT14E	13.71	Benzo(g,h,i)perylene	1300		ug/kg	67	19.403	1	497	2.6157	1
LPRT14E	13.71	Benzo(k)fluoranthene	880	J	ug/kg	70	12.571	1	537	1.6387	1
LPRT14E	13.71	Chrysene	2200	J	ug/kg	82	26.829	1	650	3.3846	1
LPRT14E	13.71	Dibenzo(a,h)anthracene	360	J	ug/kg	19	18.947	1	113	3.1858	1
LPRT14E	13.71	Fluoranthene	2600	J	ug/kg	119	21.849	1	1034	2.5145	1

Table B7-1b. Sediment chemistry LOE

Location ID	No. of Chemicals w/ T20 EF ≥ 1	No. of Chemicals w/ T50 EF ≥ 1	Sediment Chemistry LOE Weight

Table B7-1a. T20/T50 Screen of LPRSA Sediment Chemistry Data

Location ID	RM	Parameter	Result	Qualifier	Units	T20	T20 EF	T20 EF ≥ 1	T50	T50 EF	T50 EF ≥ 1
LPRT14E	13.71	Fluorene	210	J	ug/kg	19	11.053	1	114	1.8421	1
LPRT14E	13.71	Indeno(1,2,3-cd)pyrene	1000		ug/kg	68	14.706	1	488	2.0492	1
LPRT14E	13.71	Naphthalene	230		ug/kg	30	7.6667	1	217	1.0599	1
LPRT14E	13.71	Perylene	380		ug/kg	74	5.1351	1	453	0.8389	0
LPRT14E	13.71	Phenanthrene	990	J	ug/kg	68	14.559	1	455	2.1758	1
LPRT14E	13.71	Pyrene	2800	J	ug/kg	125	22.4	1	932	3.0043	1
LPRT14E	13.71	1,1'-Biphenyl	220	U	ug/kg	17	12.941	1	73	3.0137	1
LPRT14E	13.71	Total PCB Congeners	120	J	ug/kg	35	3.4286	1	368	0.3261	0
LPRT14E	13.71	4,4'-DDD	4.1		ug/kg	2.2	1.8636	1	19	0.2158	0
LPRT14E	13.71	4,4'-DDE	3.8		ug/kg	3.1	1.2258	1	103	0.0369	0
LPRT14E	13.71	4,4'-DDT	1.8	J	ug/kg	1.7	1.0588	1	11	0.1636	0
LPRT14E	13.71	Dieldrin	2	J	ug/kg	0.83	2.4096	1	2.9	0.6897	0
LPRT14F	13.9	Antimony	0.32	J	mg/kg	0.63	0.5079	0	2.4	0.1333	0
LPRT14F	13.9	Arsenic	1		mg/kg	7.4	0.1351	0	20	0.05	0
LPRT14F	13.9	Cadmium	0.29	J	mg/kg	0.38	0.7632	0	1.4	0.2071	0
LPRT14F	13.9	Chromium	14.1		mg/kg	49	0.2878	0	141	0.1	0
LPRT14F	13.9	Copper	23.9		mg/kg	32	0.7469	0	94	0.2543	0
LPRT14F	13.9	Lead	96.1	J	mg/kg	30	3.2033	1	94	1.0223	1
LPRT14F	13.9	Mercury	250		ug/kg	140	1.7857	1	480	0.5208	0
LPRT14F	13.9	Nickel	9.1		mg/kg	15	0.6067	0	47	0.1936	0
LPRT14F	13.9	Silver	0.39		mg/kg	0.23	1.6957	1	1.1	0.3545	0
LPRT14F	13.9	Zinc	114		mg/kg	94	1.2128	1	245	0.4653	0
LPRT14F	13.9	1-Methylnaphthalene	220		ug/kg	21	10.476	1	94	2.3404	1
LPRT14F	13.9	1-Methylphenanthrene	360		ug/kg	18	20	1	112	3.2143	1
LPRT14F	13.9	2,6-Dimethylnaphthalene	150		ug/kg	25	6	1	133	1.1278	1
LPRT14F	13.9	2-Methylnaphthalene	240		ug/kg	21	11.429	1	128	1.875	1
LPRT14F	13.9	Acenaphthene	420	J	ug/kg	19	22.105	1	116	3.6207	1
LPRT14F	13.9	Acenaphthylene	480		ug/kg	14	34.286	1	140	3.4286	1
LPRT14F	13.9	Anthracene	610	J	ug/kg	34	17.941	1	290	2.1034	1
LPRT14F	13.9	Benzo(a)anthracene	2300	J	ug/kg	61	37.705	1	446	5.157	1
LPRT14F	13.9	Benzo(a)pyrene	2800		ug/kg	69	40.58	1	520	5.3846	1
LPRT14F	13.9	Benzo(b/j)fluoranthene	2700	J	ug/kg	130	20.769	1	1107	2.439	1
LPRT14F	13.9	Benzo(g,h,i)perylene	1700		ug/kg	67	25.373	1	497	3.4205	1
LPRT14F	13.9	Benzo(k)fluoranthene	1400	J	ug/kg	70	20	1	537	2.6071	1
LPRT14F	13.9	Chrysene	2400	J	ug/kg	82	29.268	1	650	3.6923	1
LPRT14F	13.9	Dibenzo(a,h)anthracene	410	J	ug/kg	19	21.579	1	113	3.6283	1
LPRT14F	13.9	Fluoranthene	4500	J	ug/kg	119	37.815	1	1034	4.352	1
LPRT14F	13.9	Fluorene	400	J	ug/kg	19	21.053	1	114	3.5088	1
LPRT14F	13.9	Indeno(1,2,3-cd)pyrene	1800		ug/kg	68	26.471	1	488	3.6885	1
LPRT14F	13.9	Naphthalene	380		ug/kg	30	12.667	1	217	1.7512	1
LPRT14F	13.9	Perylene	530		ug/kg	74	7.1622	1	453	1.17	1
LPRT14F	13.9	Phenanthrene	2600	J	ug/kg	68	38.235	1	455	5.7143	1
LPRT14F	13.9	Pyrene	3400	J	ug/kg	125	27.2	1	932	3.6481	1
LPRT14F	13.9	1,1'-Biphenyl	240	U	ug/kg	17	14.118	1	73	3.2877	1
LPRT14F	13.9	Total PCB Congeners	120	J	ug/kg	35	3.4286	1	368	0.3261	0
LPRT14F	13.9	4,4'-DDD	2.9	J	ug/kg	2.2	1.3182	1	19	0.1526	0
LPRT14F	13.9	4,4'-DDE	3.9		ug/kg	3.1	1.2581	1	103	0.0379	0
LPRT14F	13.9	4,4'-DDT	3.2		ug/kg	1.7	1.8824	1	11	0.2909	0
LPRT14F	13.9	Dieldrin	2	J	ug/kg	0.83	2.4096	1	2.9	0.6897	0
LPRT15A	14.07	Antimony	0.39	J	mg/kg	0.63	0.619	0	2.4	0.1625	0
LPRT15A	14.07	Arsenic	1.6		mg/kg	7.4	0.2162	0	20	0.08	0
LPRT15A	14.07	Cadmium	0.71	J	mg/kg	0.38	1.8684	1	1.4	0.5071	0
LPRT15A	14.07	Chromium	20		mg/kg	49	0.4082	0	141	0.1418	0
LPRT15A	14.07	Copper	56		mg/kg	32	1.75	1	94	0.5957	0
LPRT15A	14.07	Lead	102		mg/kg	30	3.4	1	94	1.0851	1
LPRT15A	14.07	Mercury	340		ug/kg	140	2.4286	1	480	0.7083	0
LPRT15A	14.07	Nickel	9.8		mg/kg	15	0.6533	0	47	0.2085	0
LPRT15A	14.07	Silver	0.72		mg/kg	0.23	3.1304	1	1.1	0.6545	0
LPRT15A	14.07	Zinc	211		mg/kg	94	2.2447	1	245	0.8612	0
LPRT15A	14.07	1-Methylnaphthalene	130		ug/kg	21	6.1905	1	94	1.383	1
LPRT15A	14.07	1-Methylphenanthrene	270		ug/kg	18	15	1	112	2.4107	1
LPRT15A	14.07	2,6-Dimethylnaphthalene	110	J	ug/kg	25	4.4	1	133	0.8271	0
LPRT15A	14.07	2-Methylnaphthalene	200		ug/kg	21	9.5238	1	128	1.5625	1
LPRT15A	14.07	Acenaphthene	280	J	ug/kg	19	14.737	1	116	2.4138	1
LPRT15A	14.07	Acenaphthylene	310		ug/kg	14	22.143	1	140	2.2143	1
LPRT15A	14.07	Anthracene	470	J	ug/kg	34	13.824	1	290	1.6207	1
LPRT15A	14.07	Benzo(a)anthracene	2100	J	ug/kg	61	34.426	1	446	4.7085	1
LPRT15A	14.07	Benzo(a)pyrene	2700		ug/kg	69	39.13	1	520	5.1923	1
LPRT15A	14.07	Benzo(b/j)fluoranthene	3500	J	ug/kg	130	26.923	1	1107	3.1617	1
LPRT15A	14.07	Benzo(g,h,i)perylene	2300		ug/kg	67	34.328	1	497	4.6278	1
LPRT15A	14.07	Benzo(k)fluoranthene	1400	J	ug/kg	70	20	1	537	2.6071	1
LPRT15A	14.07	Chrysene	2700	J	ug/kg	82	32.927	1	650	4.1538	1

Table B7-1b. Sediment chemistry LOE

Location ID	No. of Chemicals w/ T20 EF ≥ 1	No. of Chemicals w/ T50 EF ≥ 1	Sediment Chemistry LOE Weight

Table B7-1a. T20/T50 Screen of LPRSA Sediment Chemistry Data

Location ID	RM	Parameter	Result	Qualifier	Units	T20	T20 EF	T20 EF ≥ 1	T50	T50 EF	T50 EF ≥ 1
LPRT15A	14.07	Dibenzo(a,h)anthracene	450	J	ug/kg	19	23.684	1	113	3.9823	1
LPRT15A	14.07	Fluoranthene	5000	J	ug/kg	119	42.017	1	1034	4.8356	1
LPRT15A	14.07	Fluorene	280	J	ug/kg	19	14.737	1	114	2.4561	1
LPRT15A	14.07	Indeno(1,2,3-cd)pyrene	2000		ug/kg	68	29.412	1	488	4.0984	1
LPRT15A	14.07	Naphthalene	290		ug/kg	30	9.6667	1	217	1.3364	1
LPRT15A	14.07	Perylene	590		ug/kg	74	7.973	1	453	1.3024	1
LPRT15A	14.07	Phenanthrene	2200	J	ug/kg	68	32.353	1	455	4.8352	1
LPRT15A	14.07	Pyrene	3600	J	ug/kg	125	28.8	1	932	3.8627	1
LPRT15A	14.07	1,1'-Biphenyl	300	U	ug/kg	17	17.647	1	73	4.1096	1
LPRT15A	14.07	Total PCB Congeners	200	J	ug/kg	35	5.7143	1	368	0.5435	0
LPRT15A	14.07	4,4'-DDD	2.7	J	ug/kg	2.2	1.2273	1	19	0.1421	0
LPRT15A	14.07	4,4'-DDE	8.5		ug/kg	3.1	2.7419	1	103	0.0825	0
LPRT15A	14.07	4,4'-DDT	6.4		ug/kg	1.7	3.7647	1	11	0.5818	0
LPRT15A	14.07	Dieldrin	3.4		ug/kg	0.83	4.0964	1	2.9	1.1724	1
LPRT15B	14.09	Antimony	1.3	J	mg/kg	0.63	2.0635	1	2.4	0.5417	0
LPRT15B	14.09	Arsenic	3.8	J	mg/kg	7.4	0.5135	0	20	0.19	0
LPRT15B	14.09	Cadmium	1.7	J	mg/kg	0.38	4.4737	1	1.4	1.2143	1
LPRT15B	14.09	Chromium	62.3	J	mg/kg	49	1.2714	1	141	0.4418	0
LPRT15B	14.09	Copper	123	J	mg/kg	32	3.8438	1	94	1.3085	1
LPRT15B	14.09	Lead	193	J	mg/kg	30	6.4333	1	94	2.0532	1
LPRT15B	14.09	Mercury	880	J	ug/kg	140	6.2857	1	480	1.8333	1
LPRT15B	14.09	Nickel	15.6	J	mg/kg	15	1.04	1	47	0.3319	0
LPRT15B	14.09	Silver	1.7	J	mg/kg	0.23	7.3913	1	1.1	1.5455	1
LPRT15B	14.09	Zinc	506	J	mg/kg	94	5.383	1	245	2.0653	1
LPRT15B	14.09	1-Methylnaphthalene	110	J	ug/kg	21	5.2381	1	94	1.1702	1
LPRT15B	14.09	1-Methylphenanthrene	170	J	ug/kg	18	9.4444	1	112	1.5179	1
LPRT15B	14.09	2,6-Dimethylnaphthalene	95	J	ug/kg	25	3.8	1	133	0.7143	0
LPRT15B	14.09	2-Methylnaphthalene	210	J	ug/kg	21	10	1	128	1.6406	1
LPRT15B	14.09	Acenaphthene	130	J	ug/kg	19	6.8421	1	116	1.1207	1
LPRT15B	14.09	Acenaphthylene	280	J	ug/kg	14	20	1	140	2	1
LPRT15B	14.09	Anthracene	380	J	ug/kg	34	11.176	1	290	1.3103	1
LPRT15B	14.09	Benzo(a)anthracene	2500	J	ug/kg	61	40.984	1	446	5.6054	1
LPRT15B	14.09	Benzo(a)pyrene	2500	J	ug/kg	69	36.232	1	520	4.8077	1
LPRT15B	14.09	Benzo(b/j)fluoranthene	3600	J	ug/kg	130	27.692	1	1107	3.252	1
LPRT15B	14.09	Benzo(g,h,i)perylene	2500	J	ug/kg	67	37.313	1	497	5.0302	1
LPRT15B	14.09	Benzo(k)fluoranthene	1500	J	ug/kg	70	21.429	1	537	2.7933	1
LPRT15B	14.09	Chrysene	3100	J	ug/kg	82	37.805	1	650	4.7692	1
LPRT15B	14.09	Dibenzo(a,h)anthracene	480	J	ug/kg	19	25.263	1	113	4.2478	1
LPRT15B	14.09	Fluoranthene	4500	J	ug/kg	119	37.815	1	1034	4.352	1
LPRT15B	14.09	Fluorene	110	J	ug/kg	19	5.7895	1	114	0.9649	0
LPRT15B	14.09	Indeno(1,2,3-cd)pyrene	2300	J	ug/kg	68	33.824	1	488	4.7131	1
LPRT15B	14.09	Naphthalene	290	J	ug/kg	30	9.6667	1	217	1.3364	1
LPRT15B	14.09	Perylene	570	J	ug/kg	74	7.7027	1	453	1.2583	1
LPRT15B	14.09	Phenanthrene	1500	J	ug/kg	68	22.059	1	455	3.2967	1
LPRT15B	14.09	Pyrene	4000	J	ug/kg	125	32	1	932	4.2918	1
LPRT15B	14.09	1,1'-Biphenyl	830	UJ	ug/kg	17	48.824	1	73	11.37	1
LPRT15B	14.09	Total PCB Congeners	400	J	ug/kg	35	11.429	1	368	1.087	1
LPRT15B	14.09	4,4'-DDD	26	J	ug/kg	2.2	11.818	1	19	1.3684	1
LPRT15B	14.09	4,4'-DDE	21	J	ug/kg	3.1	6.7742	1	103	0.2039	0
LPRT15B	14.09	4,4'-DDT	9.3	J	ug/kg	1.7	5.4706	1	11	0.8455	0
LPRT15B	14.09	Dieldrin	8.3	J	ug/kg	0.83	10	1	2.9	2.8621	1
LPRT15C	14.21	Antimony	0.35	J	mg/kg	0.63	0.5556	0	2.4	0.1458	0
LPRT15C	14.21	Arsenic	1.8		mg/kg	7.4	0.2432	0	20	0.09	0
LPRT15C	14.21	Cadmium	1.1	J	mg/kg	0.38	2.8947	1	1.4	0.7857	0
LPRT15C	14.21	Chromium	14.3		mg/kg	49	0.2918	0	141	0.1014	0
LPRT15C	14.21	Copper	21.9		mg/kg	32	0.6844	0	94	0.233	0
LPRT15C	14.21	Lead	62.3		mg/kg	30	2.0767	1	94	0.6628	0
LPRT15C	14.21	Mercury	90		ug/kg	140	0.6429	0	480	0.1875	0
LPRT15C	14.21	Nickel	8.1		mg/kg	15	0.54	0	47	0.1723	0
LPRT15C	14.21	Silver	0.25		mg/kg	0.23	1.087	1	1.1	0.2273	0
LPRT15C	14.21	Zinc	90.2		mg/kg	94	0.9596	0	245	0.3682	0
LPRT15C	14.21	1-Methylnaphthalene	110		ug/kg	21	5.2381	1	94	1.1702	1
LPRT15C	14.21	1-Methylphenanthrene	210		ug/kg	18	11.667	1	112	1.875	1
LPRT15C	14.21	2,6-Dimethylnaphthalene	63	J	ug/kg	25	2.52	1	133	0.4737	0
LPRT15C	14.21	2-Methylnaphthalene	130		ug/kg	21	6.1905	1	128	1.0156	1
LPRT15C	14.21	Acenaphthene	280	J	ug/kg	19	14.737	1	116	2.4138	1
LPRT15C	14.21	Acenaphthylene	160		ug/kg	14	11.429	1	140	1.1429	1
LPRT15C	14.21	Anthracene	480	J	ug/kg	34	14.118	1	290	1.6552	1
LPRT15C	14.21	Benzo(a)anthracene	1700	J	ug/kg	61	27.869	1	446	3.8117	1
LPRT15C	14.21	Benzo(a)pyrene	2200		ug/kg	69	31.884	1	520	4.2308	1
LPRT15C	14.21	Benzo(b/j)fluoranthene	2200	J	ug/kg	130	16.923	1	1107	1.9874	1
LPRT15C	14.21	Benzo(g,h,i)perylene	810	J	ug/kg	67	12.09	1	497	1.6298	1

Table B7-1b. Sediment chemistry LOE

Location ID	No. of Chemicals w/ T20 EF ≥ 1	No. of Chemicals w/ T50 EF ≥ 1	Sediment Chemistry LOE Weight

Table B7-1a. T20/T50 Screen of LPRSA Sediment Chemistry Data

Location ID	RM	Parameter	Result	Qualifier	Units	T20	T20 EF	T20 EF ≥ 1	T50	T50 EF	T50 EF ≥ 1
LPRT15C	14.21	Benzo(k)fluoranthene	1100	J	ug/kg	70	15.714	1	537	2.0484	1
LPRT15C	14.21	Chrysene	2000	J	ug/kg	82	24.39	1	650	3.0769	1
LPRT15C	14.21	Dibenzo(a,h)anthracene	230	J	ug/kg	19	12.105	1	113	2.0354	1
LPRT15C	14.21	Fluoranthene	4500	J	ug/kg	119	37.815	1	1034	4.352	1
LPRT15C	14.21	Fluorene	350	J	ug/kg	19	18.421	1	114	3.0702	1
LPRT15C	14.21	Indeno(1,2,3-cd)pyrene	910	J	ug/kg	68	13.382	1	488	1.8648	1
LPRT15C	14.21	Naphthalene	230		ug/kg	30	7.6667	1	217	1.0599	1
LPRT15C	14.21	Perylene	380		ug/kg	74	5.1351	1	453	0.8389	0
LPRT15C	14.21	Phenanthrene	2900	J	ug/kg	68	42.647	1	455	6.3736	1
LPRT15C	14.21	Pyrene	3100	J	ug/kg	125	24.8	1	932	3.3262	1
LPRT15C	14.21	1,1'-Biphenyl	200	U	ug/kg	17	11.765	1	73	2.7397	1
LPRT15C	14.21	Total PCB Congeners	56	J	ug/kg	35	1.6	1	368	0.1522	0
LPRT15C	14.21	4,4'-DDD	4		ug/kg	2.2	1.8182	1	19	0.2105	0
LPRT15C	14.21	4,4'-DDE	2.1	J	ug/kg	3.1	0.6774	0	103	0.0204	0
LPRT15C	14.21	4,4'-DDT	1.5	J	ug/kg	1.7	0.8824	0	11	0.1364	0
LPRT15C	14.21	Dieldrin	1.5	J	ug/kg	0.83	1.8072	1	2.9	0.5172	0
LPRT15D	14.24	Antimony	0.23	J	mg/kg	0.63	0.3651	0	2.4	0.0958	0
LPRT15D	14.24	Arsenic	0.94		mg/kg	7.4	0.127	0	20	0.047	0
LPRT15D	14.24	Cadmium	0.36	J	mg/kg	0.38	0.9474	0	1.4	0.2571	0
LPRT15D	14.24	Chromium	12.1		mg/kg	49	0.2469	0	141	0.0858	0
LPRT15D	14.24	Copper	25.9		mg/kg	32	0.8094	0	94	0.2755	0
LPRT15D	14.24	Lead	96.8		mg/kg	30	3.2267	1	94	1.0298	1
LPRT15D	14.24	Mercury	210		ug/kg	140	1.5	1	480	0.4375	0
LPRT15D	14.24	Nickel	9.6		mg/kg	15	0.64	0	47	0.2043	0
LPRT15D	14.24	Silver	0.34		mg/kg	0.23	1.4783	1	1.1	0.3091	0
LPRT15D	14.24	Zinc	96		mg/kg	94	1.0213	1	245	0.3918	0
LPRT15D	14.24	1-Methylnaphthalene	68	J	ug/kg	21	3.2381	1	94	0.7234	0
LPRT15D	14.24	1-Methylphenanthrene	230		ug/kg	18	12.778	1	112	2.0536	1
LPRT15D	14.24	2,6-Dimethylnaphthalene	55	J	ug/kg	25	2.2	1	133	0.4135	0
LPRT15D	14.24	2-Methylnaphthalene	90	J	ug/kg	21	4.2857	1	128	0.7031	0
LPRT15D	14.24	Acenaphthene	240	J	ug/kg	19	12.632	1	116	2.069	1
LPRT15D	14.24	Acenaphthylene	190		ug/kg	14	13.571	1	140	1.3571	1
LPRT15D	14.24	Anthracene	270	J	ug/kg	34	7.9412	1	290	0.931	0
LPRT15D	14.24	Benzo(a)anthracene	1300	J	ug/kg	61	21.311	1	446	2.9148	1
LPRT15D	14.24	Benzo(a)pyrene	1300		ug/kg	69	18.841	1	520	2.5	1
LPRT15D	14.24	Benzo(b/j)fluoranthene	1700	J	ug/kg	130	13.077	1	1107	1.5357	1
LPRT15D	14.24	Benzo(g,h,i)perylene	1100		ug/kg	67	16.418	1	497	2.2133	1
LPRT15D	14.24	Benzo(k)fluoranthene	870	J	ug/kg	70	12.429	1	537	1.6201	1
LPRT15D	14.24	Chrysene	1600	J	ug/kg	82	19.512	1	650	2.4615	1
LPRT15D	14.24	Dibenzo(a,h)anthracene	270	J	ug/kg	19	14.211	1	113	2.3894	1
LPRT15D	14.24	Fluoranthene	2700	J	ug/kg	119	22.689	1	1034	2.6112	1
LPRT15D	14.24	Fluorene	190	J	ug/kg	19	10	1	114	1.6667	1
LPRT15D	14.24	Indeno(1,2,3-cd)pyrene	1100		ug/kg	68	16.176	1	488	2.2541	1
LPRT15D	14.24	Naphthalene	150		ug/kg	30	5	1	217	0.6912	0
LPRT15D	14.24	Perylene	280		ug/kg	74	3.7838	1	453	0.6181	0
LPRT15D	14.24	Phenanthrene	1500	J	ug/kg	68	22.059	1	455	3.2967	1
LPRT15D	14.24	Pyrene	1900	J	ug/kg	125	15.2	1	932	2.0386	1
LPRT15D	14.24	1,1'-Biphenyl	250	U	ug/kg	17	14.706	1	73	3.4247	1
LPRT15D	14.24	Total PCB Congeners	68	J	ug/kg	35	1.9429	1	368	0.1848	0
LPRT15D	14.24	4,4'-DDD	1.1	J	ug/kg	2.2	0.5	0	19	0.0579	0
LPRT15D	14.24	4,4'-DDE	3.3		ug/kg	3.1	1.0645	1	103	0.032	0
LPRT15D	14.24	4,4'-DDT	2.3		ug/kg	1.7	1.3529	1	11	0.2091	0
LPRT15D	14.24	Dieldrin	1.1	J	ug/kg	0.83	1.3253	1	2.9	0.3793	0
LPRT15E	14.5	Antimony	0.17	J	mg/kg	0.63	0.2698	0	2.4	0.0708	0
LPRT15E	14.5	Arsenic	1.4		mg/kg	7.4	0.1892	0	20	0.07	0
LPRT15E	14.5	Cadmium	0.36	J	mg/kg	0.38	0.9474	0	1.4	0.2571	0
LPRT15E	14.5	Chromium	14.7		mg/kg	49	0.3	0	141	0.1043	0
LPRT15E	14.5	Copper	40.9		mg/kg	32	1.2781	1	94	0.4351	0
LPRT15E	14.5	Lead	56.9		mg/kg	30	1.8967	1	94	0.6053	0
LPRT15E	14.5	Mercury	240		ug/kg	140	1.7143	1	480	0.5	0
LPRT15E	14.5	Nickel	9.6		mg/kg	15	0.64	0	47	0.2043	0
LPRT15E	14.5	Silver	0.34		mg/kg	0.23	1.4783	1	1.1	0.3091	0
LPRT15E	14.5	Zinc	121		mg/kg	94	1.2872	1	245	0.4939	0
LPRT15E	14.5	1-Methylnaphthalene	200		ug/kg	21	9.5238	1	94	2.1277	1
LPRT15E	14.5	1-Methylphenanthrene	410		ug/kg	18	22.778	1	112	3.6607	1
LPRT15E	14.5	2,6-Dimethylnaphthalene	190		ug/kg	25	7.6	1	133	1.4286	1
LPRT15E	14.5	2-Methylnaphthalene	300		ug/kg	21	14.286	1	128	2.3438	1
LPRT15E	14.5	Acenaphthene	330	J	ug/kg	19	17.368	1	116	2.8448	1
LPRT15E	14.5	Acenaphthylene	470		ug/kg	14	33.571	1	140	3.3571	1
LPRT15E	14.5	Anthracene	570	J	ug/kg	34	16.765	1	290	1.9655	1
LPRT15E	14.5	Benzo(a)anthracene	2200	J	ug/kg	61	36.066	1	446	4.9327	1
LPRT15E	14.5	Benzo(a)pyrene	2500		ug/kg	69	36.232	1	520	4.8077	1

Table B7-1b. Sediment chemistry LOE

Location ID	No. of Chemicals w/ T20 EF ≥ 1	No. of Chemicals w/ T50 EF ≥ 1	Sediment Chemistry LOE Weight

Table B7-1a. T20/T50 Screen of LPRSA Sediment Chemistry Data

Location ID	RM	Parameter	Result	Qualifier	Units	T20	T20 EF	T20 EF ≥ 1	T50	T50 EF	T50 EF ≥ 1
LPRT15E	14.5	Benzo(b/j)fluoranthene	2300	J	ug/kg	130	17.692	1	1107	2.0777	1
LPRT15E	14.5	Benzo(g,h,i)perylene	1300		ug/kg	67	19.403	1	497	2.6157	1
LPRT15E	14.5	Benzo(k)fluoranthene	960	J	ug/kg	70	13.714	1	537	1.7877	1
LPRT15E	14.5	Chrysene	2200	J	ug/kg	82	26.829	1	650	3.3846	1
LPRT15E	14.5	Dibenzo(a,h)anthracene	350	J	ug/kg	19	18.421	1	113	3.0973	1
LPRT15E	14.5	Fluoranthene	3500	J	ug/kg	119	29.412	1	1034	3.3849	1
LPRT15E	14.5	Fluorene	340	J	ug/kg	19	17.895	1	114	2.9825	1
LPRT15E	14.5	Indeno(1,2,3-cd)pyrene	1200		ug/kg	68	17.647	1	488	2.459	1
LPRT15E	14.5	Naphthalene	500		ug/kg	30	16.667	1	217	2.3041	1
LPRT15E	14.5	Perylene	440		ug/kg	74	5.9459	1	453	0.9713	0
LPRT15E	14.5	Phenanthrene	1900	J	ug/kg	68	27.941	1	455	4.1758	1
LPRT15E	14.5	Pyrene	2900	J	ug/kg	125	23.2	1	932	3.1116	1
LPRT15E	14.5	1,1'-Biphenyl	230	U	ug/kg	17	13.529	1	73	3.1507	1
LPRT15E	14.5	Total PCB Congeners	69	J	ug/kg	35	1.9714	1	368	0.1875	0
LPRT15E	14.5	4,4'-DDD	1.5	J	ug/kg	2.2	0.6818	0	19	0.0789	0
LPRT15E	14.5	4,4'-DDE	2.7		ug/kg	3.1	0.871	0	103	0.0262	0
LPRT15E	14.5	4,4'-DDT	1.7	J	ug/kg	1.7	1	1	11	0.1545	0
LPRT15E	14.5	Dieldrin	1.4	J	ug/kg	0.83	1.6867	1	2.9	0.4828	0
LPRT15F	14.79	Antimony	4.8	J	mg/kg	0.63	7.619	1	2.4	2	1
LPRT15F	14.79	Arsenic	2		mg/kg	7.4	0.2703	0	20	0.1	0
LPRT15F	14.79	Cadmium	0.27	J	mg/kg	0.38	0.7105	0	1.4	0.1929	0
LPRT15F	14.79	Chromium	10.6		mg/kg	49	0.2163	0	141	0.0752	0
LPRT15F	14.79	Copper	16.2		mg/kg	32	0.5063	0	94	0.1723	0
LPRT15F	14.79	Lead	31.1		mg/kg	30	1.0367	1	94	0.3309	0
LPRT15F	14.79	Mercury	200		ug/kg	140	1.4286	1	480	0.4167	0
LPRT15F	14.79	Nickel	8.1		mg/kg	15	0.54	0	47	0.1723	0
LPRT15F	14.79	Silver	0.79		mg/kg	0.23	3.4348	1	1.1	0.7182	0
LPRT15F	14.79	Zinc	87		mg/kg	94	0.9255	0	245	0.3551	0
LPRT15F	14.79	1-Methylnaphthalene	330		ug/kg	21	15.714	1	94	3.5106	1
LPRT15F	14.79	1-Methylphenanthrene	450		ug/kg	18	25	1	112	4.0179	1
LPRT15F	14.79	2,6-Dimethylnaphthalene	220		ug/kg	25	8.8	1	133	1.6541	1
LPRT15F	14.79	2-Methylnaphthalene	490		ug/kg	21	23.333	1	128	3.8281	1
LPRT15F	14.79	Acenaphthene	590	J	ug/kg	19	31.053	1	116	5.0862	1
LPRT15F	14.79	Acenaphthylene	450		ug/kg	14	32.143	1	140	3.2143	1
LPRT15F	14.79	Anthracene	670	J	ug/kg	34	19.706	1	290	2.3103	1
LPRT15F	14.79	Benzo(a)anthracene	1900	J	ug/kg	61	31.148	1	446	4.2601	1
LPRT15F	14.79	Benzo(a)pyrene	2400		ug/kg	69	34.783	1	520	4.6154	1
LPRT15F	14.79	Benzo(b/j)fluoranthene	2300	J	ug/kg	130	17.692	1	1107	2.0777	1
LPRT15F	14.79	Benzo(g,h,i)perylene	1100		ug/kg	67	16.418	1	497	2.2133	1
LPRT15F	14.79	Benzo(k)fluoranthene	1000	J	ug/kg	70	14.286	1	537	1.8622	1
LPRT15F	14.79	Chrysene	2400	J	ug/kg	82	29.268	1	650	3.6923	1
LPRT15F	14.79	Dibenzo(a,h)anthracene	340	J	ug/kg	19	17.895	1	113	3.0088	1
LPRT15F	14.79	Fluoranthene	4200	J	ug/kg	119	35.294	1	1034	4.0619	1
LPRT15F	14.79	Fluorene	860	J	ug/kg	19	45.263	1	114	7.5439	1
LPRT15F	14.79	Indeno(1,2,3-cd)pyrene	1200		ug/kg	68	17.647	1	488	2.459	1
LPRT15F	14.79	Naphthalene	1000		ug/kg	30	33.333	1	217	4.6083	1
LPRT15F	14.79	Perylene	390		ug/kg	74	5.2703	1	453	0.8609	0
LPRT15F	14.79	Phenanthrene	4200	J	ug/kg	68	61.765	1	455	9.2308	1
LPRT15F	14.79	Pyrene	3000	J	ug/kg	125	24	1	932	3.2189	1
LPRT15F	14.79	1,1'-Biphenyl	220	U	ug/kg	17	12.941	1	73	3.0137	1
LPRT15F	14.79	Total PCB Congeners	92	J	ug/kg	35	2.6286	1	368	0.25	0
LPRT15F	14.79	4,4'-DDD	1.2	J	ug/kg	2.2	0.5455	0	19	0.0632	0
LPRT15F	14.79	4,4'-DDE	1.9	J	ug/kg	3.1	0.6129	0	103	0.0184	0
LPRT15F	14.79	4,4'-DDT	1.1	U	ug/kg	1.7	0.6471	0	11	0.1	0
LPRT15F	14.79	Dieldrin	0.97	J	ug/kg	0.83	1.1687	1	2.9	0.3345	0
LPRT16A	15.1	Antimony	0.4	J	mg/kg	0.63	0.6349	0	2.4	0.1667	0
LPRT16A	15.1	Arsenic	9.1		mg/kg	7.4	1.2297	1	20	0.455	0
LPRT16A	15.1	Cadmium	0.29	J	mg/kg	0.38	0.7632	0	1.4	0.2071	0
LPRT16A	15.1	Chromium	16.5	J	mg/kg	49	0.3367	0	141	0.117	0
LPRT16A	15.1	Copper	20.3		mg/kg	32	0.6344	0	94	0.216	0
LPRT16A	15.1	Lead	44.7	J	mg/kg	30	1.49	1	94	0.4755	0
LPRT16A	15.1	Mercury	130		ug/kg	140	0.9286	0	480	0.2708	0
LPRT16A	15.1	Nickel	5.8	J	mg/kg	15	0.3867	0	47	0.1234	0
LPRT16A	15.1	Silver	0.18		mg/kg	0.23	0.7826	0	1.1	0.1636	0
LPRT16A	15.1	Zinc	105	J	mg/kg	94	1.117	1	245	0.4286	0
LPRT16A	15.1	1-Methylnaphthalene	20	J	ug/kg	21	0.9524	0	94	0.2128	0
LPRT16A	15.1	1-Methylphenanthrene	39	J	ug/kg	18	2.1667	1	112	0.3482	0
LPRT16A	15.1	2,6-Dimethylnaphthalene	16	J	ug/kg	25	0.64	0	133	0.1203	0
LPRT16A	15.1	2-Methylnaphthalene	32	J	ug/kg	21	1.5238	1	128	0.25	0
LPRT16A	15.1	Acenaphthene	52	J	ug/kg	19	2.7368	1	116	0.4483	0
LPRT16A	15.1	Acenaphthylene	62	J	ug/kg	14	4.4286	1	140	0.4429	0
LPRT16A	15.1	Anthracene	84	J	ug/kg	34	2.4706	1	290	0.2897	0

Table B7-1b. Sediment chemistry LOE

Location ID	No. of Chemicals w/ T20 EF ≥ 1	No. of Chemicals w/ T50 EF ≥ 1	Sediment Chemistry LOE Weight

Table B7-1a. T20/T50 Screen of LPRSA Sediment Chemistry Data

Location ID	RM	Parameter	Result	Qualifier	Units	T20	T20 EF	T20 EF ≥ 1	T50	T50 EF	T50 EF ≥ 1
LPRT16A	15.1	Benzo(a)anthracene	820		ug/kg	61	13.443	1	446	1.8386	1
LPRT16A	15.1	Benzo(a)pyrene	540	J	ug/kg	69	7.8261	1	520	1.0385	1
LPRT16A	15.1	Benzo(b/j)fluoranthene	760		ug/kg	130	5.8462	1	1107	0.6865	0
LPRT16A	15.1	Benzo(g,h,i)perylene	560		ug/kg	67	8.3582	1	497	1.1268	1
LPRT16A	15.1	Benzo(k)fluoranthene	320		ug/kg	70	4.5714	1	537	0.5959	0
LPRT16A	15.1	Chrysene	830		ug/kg	82	10.122	1	650	1.2769	1
LPRT16A	15.1	Dibenzo(a,h)anthracene	110	J	ug/kg	19	5.7895	1	113	0.9735	0
LPRT16A	15.1	Fluoranthene	1300		ug/kg	119	10.924	1	1034	1.2573	1
LPRT16A	15.1	Fluorene	36	J	ug/kg	19	1.8947	1	114	0.3158	0
LPRT16A	15.1	Indeno(1,2,3-cd)pyrene	510		ug/kg	68	7.5	1	488	1.0451	1
LPRT16A	15.1	Naphthalene	59	U	ug/kg	30	1.9667	1	217	0.2719	0
LPRT16A	15.1	Perylene	150		ug/kg	74	2.027	1	453	0.3311	0
LPRT16A	15.1	Phenanthrene	550		ug/kg	68	8.0882	1	455	1.2088	1
LPRT16A	15.1	Pyrene	1100		ug/kg	125	8.8	1	932	1.1803	1
LPRT16A	15.1	1,1'-Biphenyl	220	U	ug/kg	17	12.941	1	73	3.0137	1
LPRT16A	15.1	Total PCB Congeners	40	J	ug/kg	35	1.1429	1	368	0.1087	0
LPRT16A	15.1	4,4'-DDD	2.6		ug/kg	2.2	1.1818	1	19	0.1368	0
LPRT16A	15.1	4,4'-DDE	1.7	J	ug/kg	3.1	0.5484	0	103	0.0165	0
LPRT16A	15.1	4,4'-DDT	1.1	J	ug/kg	1.7	0.6471	0	11	0.1	0
LPRT16A	15.1	Dieldrin	0.96	J	ug/kg	0.83	1.1566	1	2.9	0.331	0
LPRT16B	15.13	Antimony	0.44	J	mg/kg	0.63	0.6984	0	2.4	0.1833	0
LPRT16B	15.13	Arsenic	1.1		mg/kg	7.4	0.1486	0	20	0.055	0
LPRT16B	15.13	Cadmium	0.44		mg/kg	0.38	1.1579	1	1.4	0.3143	0
LPRT16B	15.13	Chromium	14.4		mg/kg	49	0.2939	0	141	0.1021	0
LPRT16B	15.13	Copper	22.3		mg/kg	32	0.6969	0	94	0.2372	0
LPRT16B	15.13	Lead	47.4		mg/kg	30	1.58	1	94	0.5043	0
LPRT16B	15.13	Mercury	240		ug/kg	140	1.7143	1	480	0.5	0
LPRT16B	15.13	Nickel	8.1		mg/kg	15	0.54	0	47	0.1723	0
LPRT16B	15.13	Silver	0.21		mg/kg	0.23	0.913	0	1.1	0.1909	0
LPRT16B	15.13	Zinc	128		mg/kg	94	1.3617	1	245	0.5224	0
LPRT16B	15.13	1-Methylnaphthalene	180		ug/kg	21	8.5714	1	94	1.9149	1
LPRT16B	15.13	1-Methylphenanthrene	390		ug/kg	18	21.667	1	112	3.4821	1
LPRT16B	15.13	2,6-Dimethylnaphthalene	110		ug/kg	25	4.4	1	133	0.8271	0
LPRT16B	15.13	2-Methylnaphthalene	260		ug/kg	21	12.381	1	128	2.0313	1
LPRT16B	15.13	Acenaphthene	430	J	ug/kg	19	22.632	1	116	3.7069	1
LPRT16B	15.13	Acenaphthylene	770		ug/kg	14	55	1	140	5.5	1
LPRT16B	15.13	Anthracene	550	J	ug/kg	34	16.176	1	290	1.8966	1
LPRT16B	15.13	Benzo(a)anthracene	3100		ug/kg	61	50.82	1	446	6.9507	1
LPRT16B	15.13	Benzo(a)pyrene	2200		ug/kg	69	31.884	1	520	4.2308	1
LPRT16B	15.13	Benzo(b/j)fluoranthene	2300		ug/kg	130	17.692	1	1107	2.0777	1
LPRT16B	15.13	Benzo(g,h,i)perylene	880	J	ug/kg	67	13.134	1	497	1.7706	1
LPRT16B	15.13	Benzo(k)fluoranthene	1000		ug/kg	70	14.286	1	537	1.8622	1
LPRT16B	15.13	Chrysene	2800		ug/kg	82	34.146	1	650	4.3077	1
LPRT16B	15.13	Dibenzo(a,h)anthracene	230	J	ug/kg	19	12.105	1	113	2.0354	1
LPRT16B	15.13	Fluoranthene	4900		ug/kg	119	41.176	1	1034	4.7389	1
LPRT16B	15.13	Fluorene	330	J	ug/kg	19	17.368	1	114	2.8947	1
LPRT16B	15.13	Indeno(1,2,3-cd)pyrene	810	J	ug/kg	68	11.912	1	488	1.6598	1
LPRT16B	15.13	Naphthalene	290	U	ug/kg	30	9.6667	1	217	1.3364	1
LPRT16B	15.13	Perylene	440		ug/kg	74	5.9459	1	453	0.9713	0
LPRT16B	15.13	Phenanthrene	2500		ug/kg	68	36.765	1	455	5.4945	1
LPRT16B	15.13	Pyrene	3900		ug/kg	125	31.2	1	932	4.1845	1
LPRT16B	15.13	1,1'-Biphenyl	280	U	ug/kg	17	16.471	1	73	3.8356	1
LPRT16B	15.13	Total PCB Congeners	190	J	ug/kg	35	5.4286	1	368	0.5163	0
LPRT16B	15.13	4,4'-DDD	6.4		ug/kg	2.2	2.9091	1	19	0.3368	0
LPRT16B	15.13	4,4'-DDE	3.9		ug/kg	3.1	1.2581	1	103	0.0379	0
LPRT16B	15.13	4,4'-DDT	1.6	J	ug/kg	1.7	0.9412	0	11	0.1455	0
LPRT16B	15.13	Dieldrin	3.8		ug/kg	0.83	4.5783	1	2.9	1.3103	1
LPRT16C	15.24	Antimony	0.11	J	mg/kg	0.63	0.1746	0	2.4	0.0458	0
LPRT16C	15.24	Arsenic	0.85		mg/kg	7.4	0.1149	0	20	0.0425	0
LPRT16C	15.24	Cadmium	0.22		mg/kg	0.38	0.5789	0	1.4	0.1571	0
LPRT16C	15.24	Chromium	9.6		mg/kg	49	0.1959	0	141	0.0681	0
LPRT16C	15.24	Copper	13.3		mg/kg	32	0.4156	0	94	0.1415	0
LPRT16C	15.24	Lead	21.3		mg/kg	30	0.71	0	94	0.2266	0
LPRT16C	15.24	Mercury	94		ug/kg	140	0.6714	0	480	0.1958	0
LPRT16C	15.24	Nickel	5.3		mg/kg	15	0.3533	0	47	0.1128	0
LPRT16C	15.24	Silver	0.17		mg/kg	0.23	0.7391	0	1.1	0.1545	0

Table B7-1b. Sediment chemistry LOE

Location ID	No. of Chemicals w/ T20 EF ≥ 1	No. of Chemicals w/ T50 EF ≥ 1	Sediment Chemistry LOE Weight

Table B7-1a. T20/T50 Screen of LPRSA Sediment Chemistry Data

Location ID	RM	Parameter	Result	Qualifier	Units	T20	T20 EF	T20 EF ≥ 1	T50	T50 EF	T50 EF ≥ 1
LPRT16C	15.24	Zinc	72.2		mg/kg	94	0.7681	0	245	0.2947	0
LPRT16C	15.24	1-Methylnaphthalene	49	J	ug/kg	21	2.3333	1	94	0.5213	0
LPRT16C	15.24	1-Methylphenanthrene	130		ug/kg	18	7.2222	1	112	1.1607	1
LPRT16C	15.24	2,6-Dimethylnaphthalene	28	J	ug/kg	25	1.12	1	133	0.2105	0
LPRT16C	15.24	2-Methylnaphthalene	56	J	ug/kg	21	2.6667	1	128	0.4375	0
LPRT16C	15.24	Acenaphthene	98	J	ug/kg	19	5.1579	1	116	0.8448	0
LPRT16C	15.24	Acenaphthylene	140		ug/kg	14	10	1	140	1	0
LPRT16C	15.24	Anthracene	130	J	ug/kg	34	3.8235	1	290	0.4483	0
LPRT16C	15.24	Benzo(a)anthracene	1100		ug/kg	61	18.033	1	446	2.4664	1
LPRT16C	15.24	Benzo(a)pyrene	1400		ug/kg	69	20.29	1	520	2.6923	1
LPRT16C	15.24	Benzo(b/j)fluoranthene	1000		ug/kg	130	7.6923	1	1107	0.9033	0
LPRT16C	15.24	Benzo(g,h,i)perylene	760		ug/kg	67	11.343	1	497	1.5292	1
LPRT16C	15.24	Benzo(k)fluoranthene	470		ug/kg	70	6.7143	1	537	0.8752	0
LPRT16C	15.24	Chrysene	1000		ug/kg	82	12.195	1	650	1.5385	1
LPRT16C	15.24	Dibenzo(a,h)anthracene	150	J	ug/kg	19	7.8947	1	113	1.3274	1
LPRT16C	15.24	Fluoranthene	1700		ug/kg	119	14.286	1	1034	1.6441	1
LPRT16C	15.24	Fluorene	77	J	ug/kg	19	4.0526	1	114	0.6754	0
LPRT16C	15.24	Indeno(1,2,3-cd)pyrene	580		ug/kg	68	8.5294	1	488	1.1885	1
LPRT16C	15.24	Naphthalene	98	U	ug/kg	30	3.2667	1	217	0.4516	0
LPRT16C	15.24	Perylene	330		ug/kg	74	4.4595	1	453	0.7285	0
LPRT16C	15.24	Phenanthrene	970		ug/kg	68	14.265	1	455	2.1319	1
LPRT16C	15.24	Pyrene	1200		ug/kg	125	9.6	1	932	1.2876	1
LPRT16C	15.24	1,1'-Biphenyl	270	U	ug/kg	17	15.882	1	73	3.6986	1
LPRT16C	15.24	Total PCB Congeners	30	J	ug/kg	35	0.8571	0	368	0.0815	0
LPRT16C	15.24	4,4'-DDD	3.9		ug/kg	2.2	1.7727	1	19	0.2053	0
LPRT16C	15.24	4,4'-DDE	1.8	U	ug/kg	3.1	0.5806	0	103	0.0175	0
LPRT16C	15.24	4,4'-DDT	3.5	U	ug/kg	1.7	2.0588	1	11	0.3182	0
LPRT16C	15.24	Dieldrin	1.4	U	ug/kg	0.83	1.6867	1	2.9	0.4828	0
LPRT16D	15.53	Antimony	0.33	J	mg/kg	0.63	0.5238	0	2.4	0.1375	0
LPRT16D	15.53	Arsenic	1.5		mg/kg	7.4	0.2027	0	20	0.075	0
LPRT16D	15.53	Cadmium	0.26		mg/kg	0.38	0.6842	0	1.4	0.1857	0
LPRT16D	15.53	Chromium	11.6		mg/kg	49	0.2367	0	141	0.0823	0
LPRT16D	15.53	Copper	18.7		mg/kg	32	0.5844	0	94	0.1989	0
LPRT16D	15.53	Lead	30		mg/kg	30	1	0	94	0.3191	0
LPRT16D	15.53	Mercury	68		ug/kg	140	0.4857	0	480	0.1417	0
LPRT16D	15.53	Nickel	8.3		mg/kg	15	0.5533	0	47	0.1766	0
LPRT16D	15.53	Silver	0.39		mg/kg	0.23	1.6957	1	1.1	0.3545	0
LPRT16D	15.53	Zinc	89		mg/kg	94	0.9468	0	245	0.3633	0
LPRT16D	15.53	1-Methylnaphthalene	240		ug/kg	21	11.429	1	94	2.5532	1
LPRT16D	15.53	1-Methylphenanthrene	330		ug/kg	18	18.333	1	112	2.9464	1
LPRT16D	15.53	2,6-Dimethylnaphthalene	76	J	ug/kg	25	3.04	1	133	0.5714	0
LPRT16D	15.53	2-Methylnaphthalene	220		ug/kg	21	10.476	1	128	1.7188	1
LPRT16D	15.53	Acenaphthene	1800	J	ug/kg	19	94.737	1	116	15.517	1
LPRT16D	15.53	Acenaphthylene	140		ug/kg	14	10	1	140	1	0
LPRT16D	15.53	Anthracene	810	J	ug/kg	34	23.824	1	290	2.7931	1
LPRT16D	15.53	Benzo(a)anthracene	7600	J	ug/kg	61	124.59	1	446	17.04	1
LPRT16D	15.53	Benzo(a)pyrene	7000	J	ug/kg	69	101.45	1	520	13.462	1
LPRT16D	15.53	Benzo(b/j)fluoranthene	8300		ug/kg	130	63.846	1	1107	7.4977	1
LPRT16D	15.53	Benzo(g,h,i)perylene	4000		ug/kg	67	59.701	1	497	8.0483	1
LPRT16D	15.53	Benzo(k)fluoranthene	3800		ug/kg	70	54.286	1	537	7.0764	1
LPRT16D	15.53	Chrysene	7400	J	ug/kg	82	90.244	1	650	11.385	1
LPRT16D	15.53	Dibenzo(a,h)anthracene	620	J	ug/kg	19	32.632	1	113	5.4867	1
LPRT16D	15.53	Fluoranthene	19000	J	ug/kg	119	159.66	1	1034	18.375	1
LPRT16D	15.53	Fluorene	650	J	ug/kg	19	34.211	1	114	5.7018	1
LPRT16D	15.53	Indeno(1,2,3-cd)pyrene	4100		ug/kg	68	60.294	1	488	8.4016	1
LPRT16D	15.53	Naphthalene	250	U	ug/kg	30	8.3333	1	217	1.1521	1
LPRT16D	15.53	Perylene	1600		ug/kg	74	21.622	1	453	3.532	1
LPRT16D	15.53	Phenanthrene	9800	J	ug/kg	68	144.12	1	455	21.538	1
LPRT16D	15.53	Pyrene	13000	J	ug/kg	125	104	1	932	13.948	1
LPRT16D	15.53	1,1'-Biphenyl	250	U	ug/kg	17	14.706	1	73	3.4247	1
LPRT16D	15.53	Total PCB Congeners	52	J	ug/kg	35	1.4857	1	368	0.1413	0
LPRT16D	15.53	4,4'-DDD	3.1		ug/kg	2.2	1.4091	1	19	0.1632	0
LPRT16D	15.53	4,4'-DDE	3.1		ug/kg	3.1	1	0	103	0.0301	0
LPRT16D	15.53	4,4'-DDT	2.9		ug/kg	1.7	1.7059	1	11	0.2636	0
LPRT16D	15.53	Dieldrin	3.3		ug/kg	0.83	3.9759	1	2.9	1.1379	1
LPRT16E	15.59	Antimony	0.63	J	mg/kg	0.63	1	0	2.4	0.2625	0
LPRT16E	15.59	Arsenic	1.2		mg/kg	7.4	0.1622	0	20	0.06	0
LPRT16E	15.59	Cadmium	0.62	J	mg/kg	0.38	1.6316	1	1.4	0.4429	0
LPRT16E	15.59	Chromium	24.1	J	mg/kg	49	0.4918	0	141	0.1709	0
LPRT16E	15.59	Copper	43.1		mg/kg	32	1.3469	1	94	0.4585	0
LPRT16E	15.59	Lead	148	J	mg/kg	30	4.9333	1	94	1.5745	1
LPRT16E	15.59	Mercury	400		ug/kg	140	2.8571	1	480	0.8333	0

Table B7-1b. Sediment chemistry LOE

Location ID	No. of Chemicals w/ T20 EF ≥ 1	No. of Chemicals w/ T50 EF ≥ 1	Sediment Chemistry LOE Weight

Table B7-1a. T20/T50 Screen of LPRSA Sediment Chemistry Data

Location ID	RM	Parameter	Result	Qualifier	Units	T20	T20 EF	T20 EF ≥ 1	T50	T50 EF	T50 EF ≥ 1
LPRT16E	15.59	Nickel	7.5	J	mg/kg	15	0.5	0	47	0.1596	0
LPRT16E	15.59	Silver	0.46		mg/kg	0.23	2	1	1.1	0.4182	0
LPRT16E	15.59	Zinc	252	J	mg/kg	94	2.6809	1	245	1.0286	1
LPRT16E	15.59	1-Methylnaphthalene	200		ug/kg	21	9.5238	1	94	2.1277	1
LPRT16E	15.59	1-Methylphenanthrene	400	J	ug/kg	18	22.222	1	112	3.5714	1
LPRT16E	15.59	2,6-Dimethylnaphthalene	170		ug/kg	25	6.8	1	133	1.2782	1
LPRT16E	15.59	2-Methylnaphthalene	310		ug/kg	21	14.762	1	128	2.4219	1
LPRT16E	15.59	Acenaphthene	580		ug/kg	19	30.526	1	116	5	1
LPRT16E	15.59	Acenaphthylene	600		ug/kg	14	42.857	1	140	4.2857	1
LPRT16E	15.59	Anthracene	830	J	ug/kg	34	24.412	1	290	2.8621	1
LPRT16E	15.59	Benzo(a)anthracene	5100	J	ug/kg	61	83.607	1	446	11.435	1
LPRT16E	15.59	Benzo(a)pyrene	3700	J	ug/kg	69	53.623	1	520	7.1154	1
LPRT16E	15.59	Benzo(b/j)fluoranthene	4400		ug/kg	130	33.846	1	1107	3.9747	1
LPRT16E	15.59	Benzo(g,h,i)perylene	2100		ug/kg	67	31.343	1	497	4.2254	1
LPRT16E	15.59	Benzo(k)fluoranthene	1500		ug/kg	70	21.429	1	537	2.7933	1
LPRT16E	15.59	Chrysene	4000		ug/kg	82	48.78	1	650	6.1538	1
LPRT16E	15.59	Dibenzo(a,h)anthracene	540	J	ug/kg	19	28.421	1	113	4.7788	1
LPRT16E	15.59	Fluoranthene	6900	J	ug/kg	119	57.983	1	1034	6.6731	1
LPRT16E	15.59	Fluorene	430	J	ug/kg	19	22.632	1	114	3.7719	1
LPRT16E	15.59	Indeno(1,2,3-cd)pyrene	2300		ug/kg	68	33.824	1	488	4.7131	1
LPRT16E	15.59	Naphthalene	500		ug/kg	30	16.667	1	217	2.3041	1
LPRT16E	15.59	Perylene	790		ug/kg	74	10.676	1	453	1.7439	1
LPRT16E	15.59	Phenanthrene	4100		ug/kg	68	60.294	1	455	9.011	1
LPRT16E	15.59	Pyrene	6000	J	ug/kg	125	48	1	932	6.4378	1
LPRT16E	15.59	1,1'-Biphenyl	290	U	ug/kg	17	17.059	1	73	3.9726	1
LPRT16E	15.59	Total PCB Congeners	78	J	ug/kg	35	2.2286	1	368	0.212	0
LPRT16E	15.59	4,4'-DDD	7.9		ug/kg	2.2	3.5909	1	19	0.4158	0
LPRT16E	15.59	4,4'-DDE	6.3		ug/kg	3.1	2.0323	1	103	0.0612	0
LPRT16E	15.59	4,4'-DDT	5.7		ug/kg	1.7	3.3529	1	11	0.5182	0

Table B7-1b. Sediment chemistry LOE

Location ID	No. of Chemicals w/ T20 EF ≥ 1	No. of Chemicals w/ T50 EF ≥ 1	Sediment Chemistry LOE Weight

Table B7-1a. T20/T50 Screen of LPRSA Sediment Chemistry Data

Location ID	RM	Parameter	Result	Qualifier	Units	T20	T20 EF	T20 EF ≥ 1	T50	T50 EF	T50 EF ≥ 1
LPRT16E	15.59	Dieldrin	2.8		ug/kg	0.83	3.3735	1	2.9	0.9655	0
LPRT17A	17.05	Antimony	0.84	J	mg/kg	0.63	1.3333	1	2.4	0.35	0
LPRT17A	17.05	Arsenic	1.5		mg/kg	7.4	0.2027	0	20	0.075	0
LPRT17A	17.05	Cadmium	1.4	J	mg/kg	0.38	3.6842	1	1.4	1	1
LPRT17A	17.05	Chromium	15.6		mg/kg	49	0.3184	0	141	0.1106	0
LPRT17A	17.05	Copper	39.8		mg/kg	32	1.2438	1	94	0.4234	0
LPRT17A	17.05	Lead	127		mg/kg	30	4.2333	1	94	1.3511	1
LPRT17A	17.05	Mercury	500		ug/kg	140	3.5714	1	480	1.0417	1
LPRT17A	17.05	Nickel	11.2		mg/kg	15	0.7467	0	47	0.2383	0
LPRT17A	17.05	Silver	0.67		mg/kg	0.23	2.913	1	1.1	0.6091	0
LPRT17A	17.05	Zinc	181		mg/kg	94	1.9255	1	245	0.7388	0
LPRT17A	17.05	1-Methylnaphthalene	200		ug/kg	21	9.5238	1	94	2.1277	1
LPRT17A	17.05	1-Methylphenanthrene	450		ug/kg	18	25	1	112	4.0179	1
LPRT17A	17.05	2,6-Dimethylnaphthalene	170		ug/kg	25	6.8	1	133	1.2782	1
LPRT17A	17.05	2-Methylnaphthalene	250		ug/kg	21	11.905	1	128	1.9531	1
LPRT17A	17.05	Acenaphthene	460	J	ug/kg	19	24.211	1	116	3.9655	1
LPRT17A	17.05	Acenaphthylene	910		ug/kg	14	65	1	140	6.5	1
LPRT17A	17.05	Anthracene	780	J	ug/kg	34	22.941	1	290	2.6897	1
LPRT17A	17.05	Benzo(a)anthracene	3100	J	ug/kg	61	50.82	1	446	6.9507	1
LPRT17A	17.05	Benzo(a)pyrene	3500		ug/kg	69	50.725	1	520	6.7308	1
LPRT17A	17.05	Benzo(b/j)fluoranthene	3800	J	ug/kg	130	29.231	1	1107	3.4327	1
LPRT17A	17.05	Benzo(g,h,i)perylene	2300		ug/kg	67	34.328	1	497	4.6278	1
LPRT17A	17.05	Benzo(k)fluoranthene	1700	J	ug/kg	70	24.286	1	537	3.1657	1
LPRT17A	17.05	Chrysene	3700	J	ug/kg	82	45.122	1	650	5.6923	1
LPRT17A	17.05	Dibenzo(a,h)anthracene	570	J	ug/kg	19	30	1	113	5.0442	1
LPRT17A	17.05	Fluoranthene	5500	J	ug/kg	119	46.218	1	1034	5.3191	1
LPRT17A	17.05	Fluorene	480	J	ug/kg	19	25.263	1	114	4.2105	1
LPRT17A	17.05	Indeno(1,2,3-cd)pyrene	2700		ug/kg	68	39.706	1	488	5.5328	1
LPRT17A	17.05	Naphthalene	320		ug/kg	30	10.667	1	217	1.4747	1
LPRT17A	17.05	Perylene	650		ug/kg	74	8.7838	1	453	1.4349	1
LPRT17A	17.05	Phenanthrene	2900	J	ug/kg	68	42.647	1	455	6.3736	1
LPRT17A	17.05	Pyrene	4700	J	ug/kg	125	37.6	1	932	5.0429	1
LPRT17A	17.05	1,1'-Biphenyl	270	U	ug/kg	17	15.882	1	73	3.6986	1
LPRT17A	17.05	Total PCB Congeners	2900	J	ug/kg	35	82.857	1	368	7.8804	1
LPRT17A	17.05	4,4'-DDD	4.7		ug/kg	2.2	2.1364	1	19	0.2474	0
LPRT17A	17.05	4,4'-DDE	5.1		ug/kg	3.1	1.6452	1	103	0.0495	0
LPRT17A	17.05	4,4'-DDT	4.6		ug/kg	1.7	2.7059	1	11	0.4182	0
LPRT17A	17.05	Dieldrin	14		ug/kg	0.83	16.867	1	2.9	4.8276	1
LPRT17D	16.55	Antimony	0.22	J	mg/kg	0.63	0.3492	0	2.4	0.0917	0
LPRT17D	16.55	Arsenic	0.87		mg/kg	7.4	0.1176	0	20	0.0435	0
LPRT17D	16.55	Cadmium	0.33	J	mg/kg	0.38	0.8684	0	1.4	0.2357	0
LPRT17D	16.55	Chromium	15.3		mg/kg	49	0.3122	0	141	0.1085	0
LPRT17D	16.55	Copper	28.4		mg/kg	32	0.8875	0	94	0.3021	0
LPRT17D	16.55	Lead	126		mg/kg	30	4.2	1	94	1.3404	1
LPRT17D	16.55	Mercury	270		ug/kg	140	1.9286	1	480	0.5625	0
LPRT17D	16.55	Nickel	8.6		mg/kg	15	0.5733	0	47	0.183	0
LPRT17D	16.55	Silver	0.43		mg/kg	0.23	1.8696	1	1.1	0.3909	0
LPRT17D	16.55	Zinc	135		mg/kg	94	1.4362	1	245	0.551	0
LPRT17D	16.55	1-Methylnaphthalene	360		ug/kg	21	17.143	1	94	3.8298	1
LPRT17D	16.55	1-Methylphenanthrene	1100		ug/kg	18	61.111	1	112	9.8214	1
LPRT17D	16.55	2,6-Dimethylnaphthalene	290		ug/kg	25	11.6	1	133	2.1805	1
LPRT17D	16.55	2-Methylnaphthalene	540		ug/kg	21	25.714	1	128	4.2188	1
LPRT17D	16.55	Acenaphthene	450	J	ug/kg	19	23.684	1	116	3.8793	1
LPRT17D	16.55	Acenaphthylene	1500		ug/kg	14	107.14	1	140	10.714	1
LPRT17D	16.55	Anthracene	1100	J	ug/kg	34	32.353	1	290	3.7931	1
LPRT17D	16.55	Benzo(a)anthracene	4800	J	ug/kg	61	78.689	1	446	10.762	1
LPRT17D	16.55	Benzo(a)pyrene	6100	J	ug/kg	69	88.406	1	520	11.731	1
LPRT17D	16.55	Benzo(b/j)fluoranthene	5400	J	ug/kg	130	41.538	1	1107	4.878	1
LPRT17D	16.55	Benzo(g,h,i)perylene	1900	J	ug/kg	67	28.358	1	497	3.8229	1
LPRT17D	16.55	Benzo(k)fluoranthene	2100	J	ug/kg	70	30	1	537	3.9106	1
LPRT17D	16.55	Chrysene	5600	J	ug/kg	82	68.293	1	650	8.6154	1
LPRT17D	16.55	Dibenzo(a,h)anthracene	640	J	ug/kg	19	33.684	1	113	5.6637	1
LPRT17D	16.55	Fluoranthene	5900	J	ug/kg	119	49.58	1	1034	5.706	1
LPRT17D	16.55	Fluorene	600	J	ug/kg	19	31.579	1	114	5.2632	1
LPRT17D	16.55	Indeno(1,2,3-cd)pyrene	2000	J	ug/kg	68	29.412	1	488	4.0984	1
LPRT17D	16.55	Naphthalene	770		ug/kg	30	25.667	1	217	3.5484	1
LPRT17D	16.55	Perylene	830		ug/kg	74	11.216	1	453	1.8322	1
LPRT17D	16.55	Phenanthrene	2400	J	ug/kg	68	35.294	1	455	5.2747	1
LPRT17D	16.55	Pyrene	5300	J	ug/kg	125	42.4	1	932	5.6867	1
LPRT17D	16.55	1,1'-Biphenyl	230	U	ug/kg	17	13.529	1	73	3.1507	1
LPRT17D	16.55	Total PCB Congeners	110	J	ug/kg	35	3.1429	1	368	0.2989	0
LPRT17D	16.55	4,4'-DDD	3.6		ug/kg	2.2	1.6364	1	19	0.1895	0

Table B7-1b. Sediment chemistry LOE

Location ID	No. of Chemicals w/ T20 EF ≥ 1	No. of Chemicals w/ T50 EF ≥ 1	Sediment Chemistry LOE Weight

Table B7-1a. T20/T50 Screen of LPRSA Sediment Chemistry Data

Location ID	RM	Parameter	Result	Qualifier	Units	T20	T20 EF	T20 EF ≥ 1	T50	T50 EF	T50 EF ≥ 1
LPRT17D	16.55	4,4'-DDE	4.1		ug/kg	3.1	1.3226	1	103	0.0398	0
LPRT17D	16.55	4,4'-DDT	3.3		ug/kg	1.7	1.9412	1	11	0.3	0
LPRT17D	16.55	Dieldrin	3		ug/kg	0.83	3.6145	1	2.9	1.0345	1

RM -- river mile
T20 -- 20% probability of toxicity
EF -- Exceedance Factor
T50 -- 50% probability of toxicity
Note: Binary results are used to indicate if a T20 or T50 was met or exceeded in an LPRSA location; a value of 1 indicates that the T20 or T50 was exceeded
Exce

Table B7-1b. Sediment chemistry LOE

Location ID	No. of Chemicals w/ T20 EF ≥ 1	No. of Chemicals w/ T50 EF ≥ 1	Sediment Chemistry LOE Weight

Table B7-1 presents the results of the sediment chemistry line of evidence for the LPRSA weight of evidence analysis, which was based on input from USEPA. LPRSA sediment chemistry data were screened against logistic regression model-based 20% and 50% probability thresholds (T20s and T50s). An exceedance of the T20 (but not hte T50) for any chemical resulted in a weight of 0.5, and an exceedance of the T50 (in addition to the T20) for any chemical resulted in a weight of 1.0. Every LPRSA sediment sample had at least one chemical that exceeded aT50 value, resulting in a chemistry weight of 1.0 for all LPRSA SQT samples in the weight of evidence analysis (Tables B8 and B9). Table B7-1a shows the full screening dataset, and Table B7-1b summarizes the results of the T20/T50 screen. These results are presented in Appendix P Section 4.2.4. The usefulness of T20s and T50s is discussed in uncertainty

Table B7-2a. Mean quotient values, toxicity test results, and result of acceptability screen*, Jamaica Bay data

Location ID	mERMq	*A. abdita* survival (% of control)	*A. abdita* survival (accept?)*
2200_56_JB205	0.004	0.860	1
2200_56_JB212	0.005	1.000	1
2200_56_JB042	0.005	1.010	1
2200_56_JB201	0.005	0.930	1
2200_56_JB219	0.005	1.010	1
2200_56_JB043	0.012	0.890	1
2200_56_JB217	0.012	1.000	1
JB386	0.017	0.891	1
2200_46_JBA11	0.020	0.980	1
JB381	**0.020**	**0.698**	**0**
2200_56_JB031	0.021	0.960	1
JB301	0.023	0.725	0
JB319	0.023	0.900	1
2200_27_JB120	0.026	1.000	1
2200_26_JB042	0.027	1.030	1
JB358	0.028	0.544	0
2200_56_JB222	0.030	0.940	1
JB380	0.031	0.785	0
JB317	0.032	0.912	1
2200_27_JB119	0.034	0.980	1
2300_M2_NY-0029-A	0.034	0.902	1
2300_M3_NY03-0236	0.034	0.867	1
2200_56_JB211	0.035	0.730	0
JB359	0.035	0.744	0
2200_27_JB110	0.037	0.990	1
2200_27_JB108	0.038	0.960	1
2200_27_JB115	0.039	0.940	1
JB322	0.042	0.811	1
2200_26_JB006	0.044	0.910	1
2200_27_JB113	0.046	0.950	1
2200_56_JB210	0.046	0.880	1
2200_56_JB216	0.049	0.040	0
2300_M0_NY-0029-A	0.055	0.957	1
2200_27_JB112	0.056	0.980	1
2200_27_JB114	0.056	0.970	1
2200_26_JB031	0.057	0.920	1
2200_26_JB002	0.058	0.960	1
2200_26_JB026	0.058	1.080	1
2300_M1_NY-0032-A	0.060	0.989	1
JB368	0.068	0.681	0
2200_26_JB022	0.073	1.040	1
2200_56_JB215	0.099	0.390	0
2200_27_JB104	0.120	0.800	1
2200_26_JB043	0.140	0.740	0
JB361	0.140	0.611	0
2200_56_JB041	0.150	0.930	1
2200_27_JB117	0.150	1.000	1
2200_56_JB214	0.150	0.940	1
2200_26_JB039	0.160	0.380	0
2200_56_JB026	0.180	0.000	0
JB316	0.180	0.110	0
2200_26_JB033	0.190	0.940	1
JB305	0.190	1.003	1
JB354	0.190	0.211	0
2200_56_JB039	0.210	1.000	1
2200_56_JB223	0.210	0.140	0
2300_M5_NY05-0002	0.210	0.596	0
JB306	0.210	1.011	1
2200_56_JB033	0.230	0.000	0
2300_M4_NY04-0234	0.230	0.948	1
JB323	0.230	0.411	0
2200_56_JB202	0.240	1.000	1
2200_56_JB206	0.240	0.970	1
2200_26_JB041	0.260	0.690	0
JB303	0.260	1.007	1
2200_56_JB209	0.270	1.020	1
JB309	0.270	0.033	0
JB367	0.270	0.067	0
JB374	0.270	0.729	0

Table B7-2b. Mean quotient values, toxicity test results, and result of acceptability screen*, MRGB reference data

Location ID	mERMq	*A. abdita* survival (% of control)	*A. abdita* survival (accept?)*
NJ01-0036	0.011	0.989	1
NCCA10-2622	0.013	0.859	1
2300_L6_NJ06-0035	0.051	1.000	1
NJ00-0037	**0.055**	0.777	0
NJ02-0230	0.060	1.070	1
2300_L3_NJ03-0038	0.077	0.880	1
NJ01-0122	0.083	0.979	1
NJ02-0227	0.084	1.000	1
2300_L6_NJ06-0027	0.130	0.948	1
NJ01-0118	0.140	0.844	1
2300_L6_NJ06-0015	0.140	1.000	1
2300_14_91-348	0.140	0.957	1
NJ01-0038	0.160	1.010	1
NJ00-0035	0.170	0.989	1
NJ02-0229	0.180	0.915	1
2300_L4_NJ04-0429	0.180	0.957	1
MR9922SDM-TSI	0.180	1.030	1
2300_14_91-349	0.180	0.894	1
NJ01-0116	0.190	0.922	1
2300_L4_NJ04-0427	0.190	0.901	1
2300_L5_NJ05-0059	0.190	0.929	1
2300_13_90-118	0.190	0.600	0
MR9923SDM-TSI	0.210	1.030	1
2300_13_90-120	0.250	0.690	0
MR9921SDM-TSI	**0.270**	1.070	1

mPECq -- mean probable effects quotient

* Acceptable toxicity is based on screening criteria for estuarine reference toxicity test results (≥80% of control survival)

Bold text (and gray highlight) identify samples that define low and high mPECq thresholds

Table B7-2c. Mean quotient values, toxicity test results, and result of acceptability screen*, Above Dundee Dam referen

Location ID	*C. dilutus* survival (% of control)	*H. azteca* survival (% of control)	*C. dilutus* survival (accept?)*	*H. azteca* survival (accept?)*	Mean PEC Quotient
UPRT21D	**0.72**	**0.70**	**0**	**0**	**0.076**
UPRT22A	0.71	0.89	0	1	0.10
UPRT20G	0.87	0.76	1	1	0.13
UPRT19M	0.82	0.49	1	0	0.14
UPRT21A	0.91	0.77	1	1	0.19
UPRT19L	0.80	0.72	1	0	0.20
UPRT20E	0.87	0.73	1	0	0.20
UPRT20B	0.82	0.83	1	1	0.21
UPRT22B	0.83	0.66	1	0	0.21
UPRT18H	0.96	0.94	1	1	0.23
UPRT20A	0.81	0.67	1	0	0.28
UPRT21G	0.85	0.70	1	0	0.30
UPRT21C	0.74	0.87	0	1	0.32
UPRT21E	0.86	0.64	1	0	0.39
UPRT21F	0.90	0.81	1	1	0.41
UPRT18K	0.88	0.83	1	1	0.51
UPRT18J	0.91	1.00	1	1	0.65
UPRT19K	0.76	0.99	1	1	0.68
UPRT21B	0.81	0.21	1	0	0.86
UPRT18I	0.72	0.81	0	1	1.0
UPRT20D	0.81	0.82	1	1	1.7
UPRT20C	**0.92**	**0.84**	**1**	**1**	**1.9**
UPRT20F	0.55	0.01	0	0	8.0
UPRT19J	0.04	0.00	0	0	18

mPECq -- mean probable effects quotient

* Acceptable toxicity is based on screening criteria for freshwater reference toxicity test resul

Bold text (and gray highlight) identify samples that define low and high mPECq thresholds

2200_26_JB008	0.280	0.530	0
JB371	0.280	0.135	0
2300_M2_NY-0235-A	0.300	0.904	1
2200_56_JB204	0.320	0.770	0
JB364	0.320	0.822	1
2200_26_JB015	0.330	0.380	0
2200_56_JB008	0.340	0.620	0
2200_56_JB203	0.340	0.920	1
2200_56_JB018	0.350	0.330	0
2200_27_JB103	0.350	0.930	1
2200_27_JB111	0.360	0.970	1
2200_27_JB106	0.370	0.920	1
2200_56_JB207	0.380	0.980	1
2200_56_JB213	0.380	0.950	1
JB313	0.390	0.813	1
2200_26_JB018	0.400	0.810	1
2300_M5_NY05-0010	0.420	1.000	1
JB307	0.440	1.011	1
2300_M2_NY-0239-A	0.500	0.787	0
2200_27_JB101	0.570	0.980	1
JB372	0.780	0.802	1
2200_26_JB012	**1.800**	**0.000**	**0**

mERMq -- mean effects range-median quotient
* Acceptable toxicity is based on screening criteria for estuarine reference toxicity test results (≥80% of control survival)
Bold text (and gray highlight) identify samples that define low and high mPECq thresholds

Table B7-2 presents the results of an alternative analysis of the sediment chemistry line of evidence for the quantitative analysis of uncertainty. Reference area data were used to establish threshold sediment quality guideline quotient values below which toxicity was never observed and above which toxicity was always observed. These thresholds were determined by 1) calculating mean probable effect concentration quotients for freshwater reference samples or mean effect range median concentration quotients for estuarine reference samples; 2) ranking reference area samples from low to high mean quotient; 3) assessing whether survival (in toxicity tests) was "acceptable" according to the screening criterion used in USEPA's preferred method (Tables B3 and B4); and 4) determining what mean quotient values above which there was always toxicity (high threshold) or below which there was never toxicity (low threshold). This process was conducted for all reference areas independently (Tables B7-2a through B7-2c). Selected thresholds are summarized in Table B7-2d.

At the highest mean quotient value measured in Mullica River and Great Bay sediments (mean probable effects concentration quotient = 0.270), there was acceptable *Ampelisca abdita* survival. Therefore, thresholds could not be determined for non-urban data. The urban mean quotient thresholds were used for the alternative sediment chemistry LOE presented in the quantitative analysis of uncertainty (Table B7-3, Appendix P Sections 4.3.5.1 and 4.3.5.2). This approach (using Jamaica Bay thresholds) was more conservative than assigning a maximum sediment chemsitry

Table B7-2d. Selected mean quotient threshold values

Reference Type	Low mERMq Threshold	High mERMq Threshold	Low mPECq Threshold	High mPECq Threshold
Urban	0.020	1.8	<0.076	1.9
Non-urban	0.055	>0.27	na*	na*

na -- not applicable
mERMq -- mean effects range-median quotient
mPECq -- mean probable effects quotient
* Insufficient freshwater, non-urban reference data is available to reasonably characterize risk relative to non-urban conditions
Note: the high mERMq threshold for non-urban reference comparison is unbounded, therefore it is unreasonable to use it for the sediment chemistry LOE

ts (≥75% of control survival)

Table B7-3a. Comparison of LPRSA mean quotients to relevant thresholds, urban, quantiative analysis of uncertainty*

Location ID	Toxicity Test Type	Quotient	Mean Quotient**	Low Threshold	High Threshold	Sediment Chemistry LOE Weight
LPRT01A	Estuarine	mERMq	1.2	0.020	1.8	0.5
LPRT01B	Estuarine	mERMq	2.1	0.020	1.8	1.0
LPRT01C	Estuarine	mERMq	1.4	0.020	1.8	0.5
LPRT01D	Estuarine	mERMq	1.6	0.020	1.8	0.5
LPRT01E	Estuarine	mERMq	0.75	0.020	1.8	0.5
LPRT01F	Estuarine	mERMq	1.7	0.020	1.8	0.5
LPRT01G	Estuarine	mERMq	1.8	0.020	1.8	1.0
LPRT02A	Estuarine	mERMq	1.6	0.020	1.8	0.5
LPRT02B	Estuarine	mERMq	2	0.020	1.8	1.0
LPRT02C	Estuarine	mERMq	2.2	0.020	1.8	1.0
LPRT02D	Estuarine	mERMq	1.8	0.020	1.8	1.0
LPRT02E	Estuarine	mERMq	2.5	0.020	1.8	1.0
LPRT02F	Estuarine	mERMq	2.5	0.020	1.8	1.0
LPRT03A	Estuarine	mERMq	2.9	0.020	1.8	1.0
LPRT03B	Estuarine	mERMq	3.9	0.020	1.8	1.0
LPRT03C	Estuarine	mERMq	1.7	0.020	1.8	0.5
LPRT03D	Estuarine	mERMq	3.2	0.020	1.8	1.0
LPRT03E	Estuarine	mERMq	2.2	0.020	1.8	1.0
LPRT03F	Estuarine	mERMq	2.5	0.020	1.8	1.0
LPRT04A	Estuarine	mERMq	0.7	0.020	1.8	0.5
LPRT04B	Estuarine	mERMq	5.1	0.020	1.8	1.0
LPRT04C	Estuarine	mERMq	10	0.020	1.8	1.0
LPRT04D	Estuarine	mERMq	2.3	0.020	1.8	1.0
LPRT04E	Estuarine	mERMq	2.4	0.020	1.8	1.0
LPRT05A	Estuarine	mERMq	2.5	0.020	1.8	1.0
LPRT05B	Estuarine	mERMq	1.9	0.020	1.8	1.0
LPRT06C	Estuarine	mERMq	1.6	0.020	1.8	0.5
LPRT04F	Freshwater	mPECq	1.3	<0.076	1.9	0.5
LPRT05C	Freshwater	mPECq	1.1	<0.076	1.9	0.5
LPRT05D	Freshwater	mPECq	1.2	<0.076	1.9	0.5
LPRT05E	Freshwater	mPECq	0.74	<0.076	1.9	0.5
LPRT05F	Freshwater	mPECq	1.2	<0.076	1.9	0.5
LPRT06A	Freshwater	mPECq	1.2	<0.076	1.9	0.5
LPRT06B	Freshwater	mPECq	1.2	<0.076	1.9	0.5
LPRT06D	Freshwater	mPECq	0.98	<0.076	1.9	0.5
LPRT06E	Freshwater	mPECq	1.3	<0.076	1.9	0.5
LPRT06F	Freshwater	mPECq	1.2	<0.076	1.9	0.5
LPRT07A	Freshwater	mPECq	0.81	<0.076	1.9	0.5
LPRT07B	Freshwater	mPECq	1.4	<0.076	1.9	0.5
LPRT07C	Freshwater	mPECq	2.5	<0.076	1.9	1.0
LPRT07D	Freshwater	mPECq	1.1	<0.076	1.9	0.5
LPRT07E	Freshwater	mPECq	1.5	<0.076	1.9	0.5
LPRT08A	Freshwater	mPECq	2.5	<0.076	1.9	1.0
LPRT08B	Freshwater	mPECq	1	<0.076	1.9	0.5
LPRT08C	Freshwater	mPECq	2.6	<0.076	1.9	1.0
LPRT08D	Freshwater	mPECq	0.77	<0.076	1.9	0.5
LPRT08E	Freshwater	mPECq	0.28	<0.076	1.9	0.5
LPRT09A	Freshwater	mPECq	1.4	<0.076	1.9	0.5
LPRT09B	Freshwater	mPECq	9.7	<0.076	1.9	1.0
LPRT09C	Freshwater	mPECq	0.72	<0.076	1.9	0.5
LPRT09D	Freshwater	mPECq	1.1	<0.076	1.9	0.5
LPRT09E	Freshwater	mPECq	1.3	<0.076	1.9	0.5
LPRT09F	Freshwater	mPECq	1.6	<0.076	1.9	0.5
LPRT09G	Freshwater	mPECq	0.17	<0.076	1.9	0.5
LPRT09H	Freshwater	mPECq	0.77	<0.076	1.9	0.5
LPRT10A	Freshwater	mPECq	1.1	<0.076	1.9	0.5
LPRT10B	Freshwater	mPECq	2.1	<0.076	1.9	1.0
LPRT10C	Freshwater	mPECq	0.82	<0.076	1.9	0.5
LPRT10D	Freshwater	mPECq	0.57	<0.076	1.9	0.5
LPRT10E	Freshwater	mPECq	1.4	<0.076	1.9	0.5
LPRT11A	Freshwater	mPECq	0.54	<0.076	1.9	0.5
LPRT11B	Freshwater	mPECq	1.2	<0.076	1.9	0.5
LPRT11C	Freshwater	mPECq	0.63	<0.076	1.9	0.5
LPRT11D	Freshwater	mPECq	0.84	<0.076	1.9	0.5
LPRT11E	Freshwater	mPECq	1.4	<0.076	1.9	0.5
LPRT11F	Freshwater	mPECq	0.82	<0.076	1.9	0.5
LPRT11G	Freshwater	mPECq	4.7	<0.076	1.9	1.0
LPRT12A	Freshwater	mPECq	1.3	<0.076	1.9	0.5
LPRT12B	Freshwater	mPECq	1.3	<0.076	1.9	0.5
LPRT12C	Freshwater	mPECq	1.2	<0.076	1.9	0.5
LPRT12D	Freshwater	mPECq	0.57	<0.076	1.9	0.5
LPRT12E	Freshwater	mPECq	2.3	<0.076	1.9	1.0
LPRT13A	Freshwater	mPECq	1	<0.076	1.9	0.5

Table B7-3b. Comparison of LPRSA mean quotients to relevant thresholds, non-urban, quantiative analysis of uncertainty*

Location ID	Toxicity Test Type	mERMq	Low Threshold	High Threshold	Sediment Chemistry LOE Weight
LPRT01A	Estuarine	1.2	0.055	>0.27	Unclear**
LPRT01B	Estuarine	2.1	0.055	>0.27	Unclear**
LPRT01C	Estuarine	1.4	0.055	>0.27	Unclear**
LPRT01D	Estuarine	1.6	0.055	>0.27	Unclear**
LPRT01E	Estuarine	0.75	0.055	>0.27	Unclear**
LPRT01F	Estuarine	1.7	0.055	>0.27	Unclear**
LPRT01G	Estuarine	1.8	0.055	>0.27	Unclear**
LPRT02A	Estuarine	1.6	0.055	>0.27	Unclear**
LPRT02B	Estuarine	2	0.055	>0.27	Unclear**
LPRT02C	Estuarine	2.2	0.055	>0.27	Unclear**
LPRT02D	Estuarine	1.8	0.055	>0.27	Unclear**
LPRT02E	Estuarine	2.5	0.055	>0.27	Unclear**
LPRT02F	Estuarine	2.5	0.055	>0.27	Unclear**
LPRT03A	Estuarine	2.9	0.055	>0.27	Unclear**
LPRT03B	Estuarine	3.9	0.055	>0.27	Unclear**
LPRT03C	Estuarine	1.7	0.055	>0.27	Unclear**
LPRT03D	Estuarine	3.2	0.055	>0.27	Unclear**
LPRT03E	Estuarine	2.2	0.055	>0.27	Unclear**
LPRT03F	Estuarine	2.5	0.055	>0.27	Unclear**
LPRT04A	Estuarine	0.7	0.055	>0.27	Unclear**
LPRT04B	Estuarine	5.1	0.055	>0.27	Unclear**
LPRT04C	Estuarine	10	0.055	>0.27	Unclear**
LPRT04D	Estuarine	2.3	0.055	>0.27	Unclear**
LPRT04E	Estuarine	2.4	0.055	>0.27	Unclear**
LPRT05A	Estuarine	2.5	0.055	>0.27	Unclear**
LPRT05B	Estuarine	1.9	0.055	>0.27	Unclear**
LPRT06C	Estuarine	1.6	0.055	>0.27	Unclear**

mERMq -- mean effects range-median quotient
LOE -- line of evidence
* Non-urban reference areas include only the Mullica River and Great Bay dataset (estuarine); comparable, non-urban, freshwater reference area SQT data are not available
** There was acceptable sediment toxicity in the Mullica River and Great Bay dataset at the highest mERMq value in that reference area (0.27); this value is lower than all other comparable LPRSA locations, so a sediment chemistry weight cannot be assigned

Table B7-3a. Comparison of LPRSA mean quotients to relevant thresholds, urban, quantiative analysis of uncertainty*

Location ID	Toxicity Test Type	Quotient	Mean Quotient**	Low Threshold	High Threshold	Sediment Chemistry LOE Weight
LPRT13B	Freshwater	mPECq	2.1	<0.076	1.9	1.0
LPRT13C	Freshwater	mPECq	1.4	<0.076	1.9	0.5
LPRT13D	Freshwater	mPECq	0.15	<0.076	1.9	0.5
LPRT13E	Freshwater	mPECq	0.82	<0.076	1.9	0.5
LPRT13F	Freshwater	mPECq	0.74	<0.076	1.9	0.5
LPRT13G	Freshwater	mPECq	1	<0.076	1.9	0.5
LPRT14A	Freshwater	mPECq	0.68	<0.076	1.9	0.5
LPRT14B	Freshwater	mPECq	0.67	<0.076	1.9	0.5
LPRT14C	Freshwater	mPECq	0.78	<0.076	1.9	0.5
LPRT14D	Freshwater	mPECq	0.68	<0.076	1.9	0.5
LPRT14E	Freshwater	mPECq	0.36	<0.076	1.9	0.5
LPRT14F	Freshwater	mPECq	0.46	<0.076	1.9	0.5
LPRT15A	Freshwater	mPECq	0.6	<0.076	1.9	0.5
LPRT15B	Freshwater	mPECq	0.89	<0.076	1.9	0.5
LPRT15C	Freshwater	mPECq	0.36	<0.076	1.9	0.5
LPRT15D	Freshwater	mPECq	0.3	<0.076	1.9	0.5
LPRT15E	Freshwater	mPECq	0.37	<0.076	1.9	0.5
LPRT15F	Freshwater	mPECq	0.4	<0.076	1.9	0.5
LPRT16A	Freshwater	mPECq	0.18	<0.076	1.9	0.5
LPRT16B	Freshwater	mPECq	0.47	<0.076	1.9	0.5
LPRT16C	Freshwater	mPECq	0.18	<0.076	1.9	0.5
LPRT16D	Freshwater	mPECq	1.1	<0.076	1.9	0.5
LPRT16E	Freshwater	mPECq	0.68	<0.076	1.9	0.5
LPRT17A	Freshwater	mPECq	1.7	<0.076	1.9	0.5
LPRT17D	Freshwater	mPECq	0.69	<0.076	1.9	0.5

LOE -- line of evidence
mERMq -- mean effects range-median quotient
mPECq -- mean probable effects quotient
* Urban reference areas include both Jamaica Bay (estuarine) and the area Above Dundee Dam (freshwater)
** Mean quotient is either the mPECq (freshwater toxicity test type) or mERMq (estuarine toxicity test type)

Table B7-3 presents the results of the mean-quotient based sediment chemistry line of evidence assessment for the quantitative analysis of uncertainty. Mean quotient thresholds were identified in Table B7-2 using reference area datasets. Mean quotient values were then calculated for LPRSA SQT samples and compared to the thresholds. An exceedance of the low threshold resulted in a 0.5 weight, and an exceedance of the high threshold resulted in a 1.0 weight. These results are summarized in Appendix P Sections 4.3.5.1 and 4.3.5.2. Mean quotient thresholds could not be determined from Mullica River and Great Bay toxicity data (Table B7-2b and B7-3b). The urban mean quotient thresholds were used for the alternative sediment chemistry LOE (Table B7-3a) presented in the quantitative analysis of

Table B7-3b. Comparison of LPRSA mean quotients to relevant thresholds, non-urban, quantiative analysis of uncertainty*

Location ID	Toxicity Test Type	mERMq	Low Threshold	High Threshold	Sediment Chemistry LOE Weight

Table B8-1a. Summary of SQT LOEs, urban comparison

Location ID	Toxicity Test Type	Benthic Salinity Zone	LOE Summary	
			Benthic Community LOE	Sediment Toxicity LOE
LPRT01A	Estuarine	Upper Estuary	0.000	0.000
LPRT01D	Estuarine	Upper Estuary	0.000	0.333
LPRT01C	Estuarine	Upper Estuary	0.000	0.667
LPRT01B	Estuarine	Upper Estuary	0.400	0.000
LPRT01E	Estuarine	Upper Estuary	0.000	0.667
LPRT01F	Estuarine	Upper Estuary	0.400	0.000
LPRT01G	Estuarine	Upper Estuary	0.000	0.000
LPRT02A	Estuarine	Upper Estuary	0.200	0.000
LPRT02D	Estuarine	Upper Estuary	0.000	0.000
LPRT02B	Estuarine	Upper Estuary	0.400	0.667
LPRT02C	Estuarine	Upper Estuary	0.000	0.000
LPRT02E	Estuarine	Upper Estuary	0.400	0.333
LPRT02F	Estuarine	Upper Estuary	0.200	0.333
LPRT03A	Estuarine	Upper Estuary	0.800	0.333
LPRT03B	Estuarine	Upper Estuary	0.200	0.000
LPRT03C	Estuarine	Upper Estuary	0.200	0.333
LPRT03D	Estuarine	Upper Estuary	0.200	0.000
LPRT03E	Estuarine	Upper Estuary	0.200	0.000
LPRT03F	Estuarine	Upper Estuary	0.000	0.667
LPRT04A	Estuarine	Upper Estuary	0.000	0.333
LPRT04B	Estuarine	Upper Estuary	0.400	0.333
LPRT04C	Estuarine	Upper Estuary	0.400	1.000
LPRT04D	Estuarine	Upper Estuary	0.800	0.667
LPRT04E	Estuarine	Upper Estuary	0.200	1.000
LPRT04F	Freshwater	Upper Estuary	0.400	0.000
LPRT05A	Estuarine	Fluvial Estuary	0.000	1.000
LPRT05B	Estuarine	Fluvial Estuary	0.400	0.667
LPRT05C	Freshwater	Fluvial Estuary	0.000	0.750
LPRT05D	Freshwater	Fluvial Estuary	0.400	0.750
LPRT05E	Freshwater	Fluvial Estuary	0.400	0.500
LPRT05F	Freshwater	Fluvial Estuary	0.600	0.750
LPRT06A	Freshwater	Fluvial Estuary	0.600	0.250
LPRT06B	Freshwater	Fluvial Estuary	0.800	0.750
LPRT06C	Estuarine	Fluvial Estuary	0.000	0.667
LPRT06D	Freshwater	Fluvial Estuary	0.000	0.750
LPRT06E	Freshwater	Fluvial Estuary	0.200	0.250
LPRT06F	Freshwater	Fluvial Estuary	0.400	0.250
LPRT07A	Freshwater	Fluvial Estuary	0.000	0.500
LPRT07B	Freshwater	Fluvial Estuary	0.000	0.750
LPRT07C	Freshwater	Fluvial Estuary	0.800	0.750
LPRT07D	Freshwater	Fluvial Estuary	0.800	0.750
LPRT07E	Freshwater	Fluvial Estuary	0.800	0.500
LPRT08A	Freshwater	Fluvial Estuary	0.400	0.750
LPRT08B	Freshwater	Fluvial Estuary	0.600	0.500
LPRT08C	Freshwater	Fluvial Estuary	0.000	0.750
LPRT08D	Freshwater	Fluvial Estuary	0.200	0.250
LPRT08E	Freshwater	Fluvial Estuary	0.200	0.250
LPRT09B	Freshwater	Fluvial Estuary	0.400	0.250
LPRT09H	Freshwater	Fluvial Estuary	0.200	0.000
LPRT09A	Freshwater	Fluvial Estuary	0.000	0.750
LPRT09C	Freshwater	Fluvial Estuary	0.000	0.500
LPRT09D	Freshwater	Fluvial Estuary	0.600	0.000
LPRT09E	Freshwater	Fluvial Estuary	0.000	0.750
LPRT09F	Freshwater	Fluvial Estuary	0.600	0.500
LPRT09G	Freshwater	Fluvial Estuary	0.200	0.000
LPRT10A	Freshwater	Fluvial Estuary	0.400	0.750
LPRT10B	Freshwater	Fluvial Estuary	0.000	1.000
LPRT10C	Freshwater	Fluvial Estuary	0.400	0.500
LPRT10D	Freshwater	Fluvial Estuary	0.000	0.500
LPRT10E	Freshwater	Fluvial Estuary	0.000	0.750
LPRT11A	Freshwater	Fluvial Estuary	0.000	0.500
LPRT11B	Freshwater	Fluvial Estuary	0.000	0.750

Table B8-1b. Summary of SQT LOEs, urban comparison, quantiative analysis of uncertainty

Location ID	Toxicity Test Type	Benthic Salinity Zone	LOE Summary	
			Benthic Community LOE	Sediment Toxicity LOE
LPRT01A	Estuarine	Upper Estuary	0.000	0.000
LPRT01D	Estuarine	Upper Estuary	0.000	0.000
LPRT01C	Estuarine	Upper Estuary	0.000	0.667
LPRT01B	Estuarine	Upper Estuary	0.400	0.000
LPRT01E	Estuarine	Upper Estuary	0.000	0.667
LPRT01F	Estuarine	Upper Estuary	0.400	0.000
LPRT01G	Estuarine	Upper Estuary	0.000	0.000
LPRT02A	Estuarine	Upper Estuary	0.000	0.000
LPRT02D	Estuarine	Upper Estuary	0.000	0.000
LPRT02B	Estuarine	Upper Estuary	0.400	0.000
LPRT02C	Estuarine	Upper Estuary	0.000	0.000
LPRT02E	Estuarine	Upper Estuary	0.400	0.000
LPRT02F	Estuarine	Upper Estuary	0.200	0.000
LPRT03A	Estuarine	Upper Estuary	0.800	0.000
LPRT03B	Estuarine	Upper Estuary	0.200	0.000
LPRT03C	Estuarine	Upper Estuary	0.400	0.333
LPRT03D	Estuarine	Upper Estuary	0.200	0.000
LPRT03E	Estuarine	Upper Estuary	0.000	0.000
LPRT03F	Estuarine	Upper Estuary	0.000	0.000
LPRT04A	Estuarine	Upper Estuary	0.000	0.000
LPRT04B	Estuarine	Upper Estuary	0.200	0.333
LPRT04C	Estuarine	Upper Estuary	0.400	1.000
LPRT04D	Estuarine	Upper Estuary	0.800	0.000
LPRT04E	Estuarine	Upper Estuary	0.200	0.000
LPRT04F	Freshwater	Upper Estuary	0.400	0.000
LPRT05A	Estuarine	Fluvial Estuary	0.000	1.000
LPRT05B	Estuarine	Fluvial Estuary	0.200	0.667
LPRT05C	Freshwater	Fluvial Estuary	0.000	0.500
LPRT05D	Freshwater	Fluvial Estuary	0.400	0.000
LPRT05E	Freshwater	Fluvial Estuary	0.400	0.000
LPRT05F	Freshwater	Fluvial Estuary	0.600	0.750
LPRT06A	Freshwater	Fluvial Estuary	0.600	0.250
LPRT06B	Freshwater	Fluvial Estuary	0.800	0.500
LPRT06C	Estuarine	Fluvial Estuary	0.000	0.667
LPRT06D	Freshwater	Fluvial Estuary	0.000	0.500
LPRT06E	Freshwater	Fluvial Estuary	0.000	0.000
LPRT06F	Freshwater	Fluvial Estuary	0.400	0.250
LPRT07A	Freshwater	Fluvial Estuary	0.000	0.000
LPRT07B	Freshwater	Fluvial Estuary	0.000	0.750
LPRT07C	Freshwater	Fluvial Estuary	0.600	0.250
LPRT07D	Freshwater	Fluvial Estuary	0.800	0.000
LPRT07E	Freshwater	Fluvial Estuary	0.800	0.250
LPRT08A	Freshwater	Fluvial Estuary	0.400	0.500
LPRT08B	Freshwater	Fluvial Estuary	0.600	0.000
LPRT08C	Freshwater	Fluvial Estuary	0.000	0.750
LPRT08D	Freshwater	Fluvial Estuary	0.200	0.000
LPRT08E	Freshwater	Fluvial Estuary	0.200	0.000
LPRT09B	Freshwater	Fluvial Estuary	0.200	0.000
LPRT09H	Freshwater	Fluvial Estuary	0.000	0.000
LPRT09A	Freshwater	Fluvial Estuary	0.000	0.750
LPRT09C	Freshwater	Fluvial Estuary	0.000	0.000
LPRT09D	Freshwater	Fluvial Estuary	0.600	0.000
LPRT09E	Freshwater	Fluvial Estuary	0.000	0.250
LPRT09F	Freshwater	Fluvial Estuary	0.600	0.500
LPRT09G	Freshwater	Fluvial Estuary	0.200	0.000
LPRT10A	Freshwater	Fluvial Estuary	0.600	0.250
LPRT10B	Freshwater	Fluvial Estuary	0.000	1.000
LPRT10C	Freshwater	Fluvial Estuary	0.400	0.250
LPRT10D	Freshwater	Fluvial Estuary	0.000	0.250
LPRT10E	Freshwater	Fluvial Estuary	0.000	0.500
LPRT11A	Freshwater	Fluvial Estuary	0.000	0.250
LPRT11B	Freshwater	Fluvial Estuary	0.000	0.500

Table B8-1a. Summary of SQT LOEs, urban comparison

Location ID	Toxicity Test Type	Benthic Salinity Zone	LOE Summary	
			Benthic Community LOE	Sediment Toxicity LOE
LPRT11C	Freshwater	Fluvial Estuary	0.000	0.500
LPRT11D	Freshwater	Fluvial Estuary	0.000	0.250
LPRT11E	Freshwater	Fluvial Estuary	0.000	0.250
LPRT11F	Freshwater	Fluvial Estuary	0.000	0.500
LPRT11G	Freshwater	Fluvial Estuary	0.200	1.000
LPRT12A	Freshwater	Fluvial Estuary	0.000	0.750
LPRT12B	Freshwater	Fluvial Estuary	0.000	0.250
LPRT12C	Freshwater	Fluvial Estuary	0.000	1.000
LPRT12D	Freshwater	Fluvial Estuary	0.000	0.750
LPRT12E	Freshwater	Fluvial Estuary	0.000	0.750
LPRT13A	Freshwater	Fluvial Estuary	0.000	0.750
LPRT13B	Freshwater	Fluvial Estuary	0.000	0.250
LPRT13C	Freshwater	Fluvial Estuary	0.000	0.250
LPRT13D	Freshwater	Fluvial Estuary	0.000	0.250
LPRT13E	Freshwater	Fluvial Estuary	0.000	0.250
LPRT13F	Freshwater	Fluvial Estuary	0.000	0.000
LPRT13G	Freshwater	Fluvial Estuary	0.000	0.250
LPRT14A	Freshwater	Tidal Freshwater	1.000	0.750
LPRT14B	Freshwater	Tidal Freshwater	0.667	0.750
LPRT14C	Freshwater	Tidal Freshwater	1.000	0.250
LPRT14D	Freshwater	Tidal Freshwater	0.833	1.000
LPRT14E	Freshwater	Tidal Freshwater	0.833	0.750
LPRT14F	Freshwater	Tidal Freshwater	0.167	0.250
LPRT15A	Freshwater	Tidal Freshwater	0.833	0.750
LPRT15B	Freshwater	Tidal Freshwater	1.000	0.250
LPRT15C	Freshwater	Tidal Freshwater	0.667	0.250
LPRT15D	Freshwater	Tidal Freshwater	0.500	0.750
LPRT15E	Freshwater	Tidal Freshwater	0.333	0.250
LPRT15F	Freshwater	Tidal Freshwater	1.000	0.250
LPRT16A	Freshwater	Tidal Freshwater	0.500	0.500
LPRT16C	Freshwater	Tidal Freshwater	0.667	0.000
LPRT16D	Freshwater	Tidal Freshwater	0.667	0.000
LPRT16E	Freshwater	Tidal Freshwater	0.667	0.000
LPRT17D	Freshwater	Tidal Freshwater	1.000	0.250
LPRT17A	Freshwater	Tidal Freshwater	1.000	0.500

Table B8-1b. Summary of SQT LOEs, urban comparison, quantiative analysis of uncertainty

Location ID	Toxicity Test Type	Benthic Salinity Zone	LOE Summary	
			Benthic Community LOE	Sediment Toxicity LOE
LPRT11C	Freshwater	Fluvial Estuary	0.000	0.000
LPRT11D	Freshwater	Fluvial Estuary	0.000	0.250
LPRT11E	Freshwater	Fluvial Estuary	0.000	0.250
LPRT11F	Freshwater	Fluvial Estuary	0.000	0.500
LPRT11G	Freshwater	Fluvial Estuary	0.200	0.750
LPRT12A	Freshwater	Fluvial Estuary	0.000	0.250
LPRT12B	Freshwater	Fluvial Estuary	0.000	0.250
LPRT12C	Freshwater	Fluvial Estuary	0.000	0.500
LPRT12D	Freshwater	Fluvial Estuary	0.000	0.750
LPRT12E	Freshwater	Fluvial Estuary	0.000	0.500
LPRT13A	Freshwater	Fluvial Estuary	0.000	0.500
LPRT13B	Freshwater	Fluvial Estuary	0.000	0.250
LPRT13C	Freshwater	Fluvial Estuary	0.000	0.250
LPRT13D	Freshwater	Fluvial Estuary	0.000	0.250
LPRT13E	Freshwater	Fluvial Estuary	0.000	0.000
LPRT13F	Freshwater	Fluvial Estuary	0.000	0.000
LPRT13G	Freshwater	Fluvial Estuary	0.000	0.250
LPRT14A	Freshwater	Tidal Freshwater	0.833	0.500
LPRT14B	Freshwater	Tidal Freshwater	0.667	0.750
LPRT14C	Freshwater	Tidal Freshwater	0.833	0.250
LPRT14D	Freshwater	Tidal Freshwater	0.500	0.250
LPRT14E	Freshwater	Tidal Freshwater	0.667	0.750
LPRT14F	Freshwater	Tidal Freshwater	0.000	0.000
LPRT15A	Freshwater	Tidal Freshwater	0.667	0.500
LPRT15B	Freshwater	Tidal Freshwater	0.667	0.250
LPRT15C	Freshwater	Tidal Freshwater	0.833	0.250
LPRT15D	Freshwater	Tidal Freshwater	0.000	0.250
LPRT15E	Freshwater	Tidal Freshwater	0.167	0.250
LPRT15F	Freshwater	Tidal Freshwater	0.833	0.250
LPRT16A	Freshwater	Tidal Freshwater	0.667	0.250
LPRT16C	Freshwater	Tidal Freshwater	0.667	0.000
LPRT16D	Freshwater	Tidal Freshwater	0.000	0.000
LPRT16E	Freshwater	Tidal Freshwater	0.833	0.000
LPRT17D	Freshwater	Tidal Freshwater	0.667	0.250
LPRT17A	Freshwater	Tidal Freshwater	1.000	0.250

For Table B8 presents the results of the LPRSA SQT weight of evidence analysis for the BERA based on urban reference conditions (i.e., Jamaica Bay [estuarine] and the area above Dundee Dam [freshwater]). Table B8-1 presents the total weights for the benthic invertebrate community and sediment toxicity lines of evidence, as determined in Tables B3 (assessment of estuarine LPRSA zones, RM 0 to RM 13) and B4 (assessment of freshwater LPRSA zone, RM 13 to RM 17.4). Tables B8-1a and B8-1b present the results for USEPA's preferred SQT approach and the alternative approach for the quantitative analysis of uncertainty, respectively. The weights for the two lines of evidence presented in Table B8-1 are then combined with the

Table B8-2. Summary of Sediment Chemistry LOE

Location ID	Sediment Chemistry LOE Weight, LOE Approach	Sediment Chemistry LOE Weight, Quantitative Uncertainty Analysis
LPRT01A	1.0	0.5
LPRT01B	1.0	1.0
LPRT01C	1.0	0.5
LPRT01D	1.0	0.5
LPRT01E	1.0	0.5
LPRT01F	1.0	0.5
LPRT01G	1.0	1.0
LPRT02A	1.0	0.5
LPRT02B	1.0	1.0
LPRT02C	1.0	1.0
LPRT02D	1.0	1.0
LPRT02E	1.0	1.0
LPRT02F	1.0	1.0
LPRT03A	1.0	1.0
LPRT03B	1.0	1.0
LPRT03C	1.0	0.5
LPRT03D	1.0	1.0
LPRT03E	1.0	1.0
LPRT03F	1.0	1.0
LPRT04A	1.0	0.5
LPRT04B	1.0	1.0
LPRT04C	1.0	1.0
LPRT04D	1.0	1.0
LPRT04E	1.0	1.0
LPRT04F	1.0	0.5
LPRT05A	1.0	1.0
LPRT05B	1.0	1.0
LPRT05C	1.0	0.5
LPRT05D	1.0	0.5
LPRT05E	1.0	0.5
LPRT05F	1.0	0.5
LPRT06A	1.0	0.5
LPRT06B	1.0	0.5
LPRT06C	1.0	0.5
LPRT06D	1.0	0.5
LPRT06E	1.0	0.5
LPRT06F	1.0	0.5
LPRT07A	1.0	0.5
LPRT07B	1.0	0.5
LPRT07C	1.0	1.0
LPRT07D	1.0	0.5
LPRT07E	1.0	0.5
LPRT08A	1.0	1.0
LPRT08B	1.0	0.5
LPRT08C	1.0	1.0
LPRT08D	1.0	0.5
LPRT08E	1.0	0.5
LPRT09A	1.0	0.5
LPRT09B	1.0	1.0
LPRT09C	1.0	0.5
LPRT09D	1.0	0.5
LPRT09E	1.0	0.5
LPRT09F	1.0	0.5
LPRT09G	1.0	0.5
LPRT09H	1.0	0.5
LPRT10A	1.0	0.5
LPRT10B	1.0	1.0
LPRT10C	1.0	0.5
LPRT10D	1.0	0.5

LPRT10E	1.0	0.5
LPRT11A	1.0	0.5
LPRT11B	1.0	0.5
LPRT11C	1.0	0.5
LPRT11D	1.0	0.5
LPRT11E	1.0	0.5
LPRT11F	1.0	0.5
LPRT11G	1.0	1.0
LPRT12A	1.0	0.5
LPRT12B	1.0	0.5
LPRT12C	1.0	0.5
LPRT12D	1.0	0.5
LPRT12E	1.0	1.0
LPRT13A	1.0	0.5
LPRT13B	1.0	1.0
LPRT13C	1.0	0.5
LPRT13D	1.0	0.5
LPRT13E	1.0	0.5
LPRT13F	1.0	0.5
LPRT13G	1.0	0.5
LPRT14A	1.0	0.5
LPRT14B	1.0	0.5
LPRT14C	1.0	0.5
LPRT14D	1.0	0.5
LPRT14E	1.0	0.5
LPRT14F	1.0	0.5
LPRT15A	1.0	0.5
LPRT15B	1.0	0.5
LPRT15C	1.0	0.5
LPRT15D	1.0	0.5
LPRT15E	1.0	0.5
LPRT15F	1.0	0.5
LPRT16A	1.0	0.5
LPRT16B	1.0	0.5
LPRT16C	1.0	0.5
LPRT16D	1.0	0.5
LPRT16E	1.0	0.5
LPRT17A	1.0	0.5
LPRT17D	1.0	0.5

LOE -- line of evidence
For more details see Table B7

Table B8-2 presents the weights for the sediment chemistry line of evidence for the LPRSA SQT weight of evidence analysis in the BERA. These weights were determined in Table B7. Table B8-2 shows the weights for USEPA's preferred "LOE approach" and the alternative approach for the quantitative analysis of uncertainty. Explanations of the weighting of lines of evidence (for the two approaches) are provided in BERA Sections 6.1.1 and 6.1.3.1. The sediment chemistry line of evidence weights were the same for the urban (Table B8) and

Table B8-3a. WOE conclusion framework

WOE Conclusion	Range of WOE Weights	
	Low	High
No impact	0	0.75
Low impact	0.75	1.5
Medium impact	1.5	2.25
High impact	2.25	3

WOE -- weight of evidence
Note: WOE conclusions are assigned by determining into which range the WOE sum falls.
For example, a WOE sum of 0.78 is within the range of 0.75 to 1.5, corresponding to a "Low impact".

Table B8-3b. WOE analysis

Location ID	Toxicity Test Type	Benthic Salinity Zone	Benthic Community LOE	Sediment Toxicity LOE	Sediment Chemistry LOE Weight	WOE Sum	WOE Conclusion
LPRT01A	Estuarine	Upper Estuary	0.000	0.000	1.0	1.000	Low impact
LPRT01D	Estuarine	Upper Estuary	0.000	0.333	1.0	1.333	Low impact
LPRT01C	Estuarine	Upper Estuary	0.000	0.667	1.0	1.667	Medium impact
LPRT01B	Estuarine	Upper Estuary	0.400	0.000	1.0	1.400	Low impact
LPRT01E	Estuarine	Upper Estuary	0.000	0.667	1.0	1.667	Medium impact
LPRT01F	Estuarine	Upper Estuary	0.400	0.000	1.0	1.400	Low impact
LPRT01G	Estuarine	Upper Estuary	0.000	0.000	1.0	1.000	Low impact
LPRT02A	Estuarine	Upper Estuary	0.200	0.000	1.0	1.200	Low impact
LPRT02D	Estuarine	Upper Estuary	0.000	0.000	1.0	1.000	Low impact
LPRT02B	Estuarine	Upper Estuary	0.400	0.667	1.0	2.067	Medium impact
LPRT02C	Estuarine	Upper Estuary	0.000	0.000	1.0	1.000	Low impact
LPRT02E	Estuarine	Upper Estuary	0.400	0.333	1.0	1.733	Medium impact
LPRT02F	Estuarine	Upper Estuary	0.200	0.333	1.0	1.533	Medium impact
LPRT03A	Estuarine	Upper Estuary	0.800	0.333	1.0	2.133	Medium impact
LPRT03B	Estuarine	Upper Estuary	0.200	0.000	1.0	1.200	Low impact
LPRT03C	Estuarine	Upper Estuary	0.200	0.333	1.0	1.533	Medium impact
LPRT03D	Estuarine	Upper Estuary	0.200	0.000	1.0	1.200	Low impact
LPRT03E	Estuarine	Upper Estuary	0.200	0.000	1.0	1.200	Low impact
LPRT03F	Estuarine	Upper Estuary	0.000	0.667	1.0	1.667	Medium impact
LPRT04A	Estuarine	Upper Estuary	0.000	0.333	1.0	1.333	Low impact
LPRT04B	Estuarine	Upper Estuary	0.400	0.333	1.0	1.733	Medium impact
LPRT04C	Estuarine	Upper Estuary	0.400	1.000	1.0	2.400	High impact
LPRT04D	Estuarine	Upper Estuary	0.800	0.667	1.0	2.467	High impact
LPRT04E	Estuarine	Upper Estuary	0.200	1.000	1.0	2.200	Medium impact
LPRT04F	Freshwater	Upper Estuary	0.400	0.000	1.0	1.400	Low impact
LPRT05A	Estuarine	Fluvial Estuary	0.000	1.000	1.0	2.000	Medium impact
LPRT05B	Estuarine	Fluvial Estuary	0.400	0.667	1.0	2.067	Medium impact
LPRT05C	Freshwater	Fluvial Estuary	0.000	0.750	1.0	1.750	Medium impact
LPRT05D	Freshwater	Fluvial Estuary	0.400	0.750	1.0	2.150	Medium impact
LPRT05E	Freshwater	Fluvial Estuary	0.400	0.500	1.0	1.900	Medium impact
LPRT05F	Freshwater	Fluvial Estuary	0.600	0.750	1.0	2.350	High impact
LPRT06A	Freshwater	Fluvial Estuary	0.600	0.250	1.0	1.850	Medium impact
LPRT06B	Freshwater	Fluvial Estuary	0.800	0.750	1.0	2.550	High impact
LPRT06C	Estuarine	Fluvial Estuary	0.000	0.667	1.0	1.667	Medium impact
LPRT06D	Freshwater	Fluvial Estuary	0.000	0.750	1.0	1.750	Medium impact
LPRT06E	Freshwater	Fluvial Estuary	0.200	0.250	1.0	1.450	Low impact
LPRT06F	Freshwater	Fluvial Estuary	0.400	0.250	1.0	1.650	Medium impact
LPRT07A	Freshwater	Fluvial Estuary	0.000	0.500	1.0	1.500	Medium impact
LPRT07B	Freshwater	Fluvial Estuary	0.000	0.750	1.0	1.750	Medium impact
LPRT07C	Freshwater	Fluvial Estuary	0.800	0.750	1.0	2.550	High impact
LPRT07D	Freshwater	Fluvial Estuary	0.800	0.750	1.0	2.550	High impact
LPRT07E	Freshwater	Fluvial Estuary	0.800	0.500	1.0	2.300	High impact
LPRT08A	Freshwater	Fluvial Estuary	0.400	0.750	1.0	2.150	Medium impact
LPRT08B	Freshwater	Fluvial Estuary	0.600	0.500	1.0	2.100	Medium impact
LPRT08C	Freshwater	Fluvial Estuary	0.000	0.750	1.0	1.750	Medium impact
LPRT08D	Freshwater	Fluvial Estuary	0.200	0.250	1.0	1.450	Low impact
LPRT08E	Freshwater	Fluvial Estuary	0.200	0.250	1.0	1.450	Low impact
LPRT09B	Freshwater	Fluvial Estuary	0.400	0.250	1.0	1.650	Medium impact
LPRT09H	Freshwater	Fluvial Estuary	0.200	0.000	1.0	1.200	Low impact
LPRT09A	Freshwater	Fluvial Estuary	0.000	0.750	1.0	1.750	Medium impact
LPRT09C	Freshwater	Fluvial Estuary	0.000	0.500	1.0	1.500	Medium impact
LPRT09D	Freshwater	Fluvial Estuary	0.600	0.000	1.0	1.600	Medium impact
LPRT09E	Freshwater	Fluvial Estuary	0.000	0.750	1.0	1.750	Medium impact
LPRT09F	Freshwater	Fluvial Estuary	0.600	0.500	1.0	2.100	Medium impact
LPRT09G	Freshwater	Fluvial Estuary	0.200	0.000	1.0	1.200	Low impact
LPRT10A	Freshwater	Fluvial Estuary	0.400	0.750	1.0	2.150	Medium impact
LPRT10B	Freshwater	Fluvial Estuary	0.000	1.000	1.0	2.000	Medium impact
LPRT10C	Freshwater	Fluvial Estuary	0.400	0.500	1.0	1.900	Medium impact
LPRT10D	Freshwater	Fluvial Estuary	0.000	0.500	1.0	1.500	Medium impact
LPRT10E	Freshwater	Fluvial Estuary	0.000	0.750	1.0	1.750	Medium impact
LPRT11A	Freshwater	Fluvial Estuary	0.000	0.500	1.0	1.500	Medium impact
LPRT11B	Freshwater	Fluvial Estuary	0.000	0.750	1.0	1.750	Medium impact

Table B8-3c. WOE analysis, quantiative analysis of uncertainty

Location ID	Toxicity Test Type	Benthic Salinity Zone	Benthic Community LOE	Sediment Toxicity LOE	Sediment Chemistry LOE Weight	WOE Sum
LPRT01A	Estuarine	Upper Estuary	0.000	0.000	0.500	0.50
LPRT01D	Estuarine	Upper Estuary	0.000	0.000	0.500	0.50
LPRT01C	Estuarine	Upper Estuary	0.000	0.667	0.500	1.17
LPRT01B	Estuarine	Upper Estuary	0.400	0.000	1.000	1.40
LPRT01E	Estuarine	Upper Estuary	0.000	0.667	0.500	1.17
LPRT01F	Estuarine	Upper Estuary	0.400	0.000	0.500	0.90
LPRT01G	Estuarine	Upper Estuary	0.000	0.000	1.000	1.00
LPRT02A	Estuarine	Upper Estuary	0.000	0.000	0.500	0.50
LPRT02D	Estuarine	Upper Estuary	0.000	0.000	1.000	1.00
LPRT02B	Estuarine	Upper Estuary	0.400	0.000	1.000	1.40
LPRT02C	Estuarine	Upper Estuary	0.000	0.000	1.000	1.00
LPRT02E	Estuarine	Upper Estuary	0.400	0.000	1.000	1.40
LPRT02F	Estuarine	Upper Estuary	0.200	0.000	1.000	1.20
LPRT03A	Estuarine	Upper Estuary	0.800	0.000	1.000	1.80
LPRT03B	Estuarine	Upper Estuary	0.200	0.000	1.000	1.20
LPRT03C	Estuarine	Upper Estuary	0.400	0.333	0.500	1.23
LPRT03D	Estuarine	Upper Estuary	0.200	0.000	1.000	1.20
LPRT03E	Estuarine	Upper Estuary	0.000	0.000	1.000	1.00
LPRT03F	Estuarine	Upper Estuary	0.000	0.000	1.000	1.00
LPRT04A	Estuarine	Upper Estuary	0.000	0.000	0.500	0.50
LPRT04B	Estuarine	Upper Estuary	0.200	0.333	1.000	1.53
LPRT04C	Estuarine	Upper Estuary	0.400	1.000	1.000	2.40
LPRT04D	Estuarine	Upper Estuary	0.800	0.000	1.000	1.80
LPRT04E	Estuarine	Upper Estuary	0.200	0.000	1.000	1.20
LPRT04F	Freshwater	Upper Estuary	0.400	0.000	0.500	0.90
LPRT05A	Estuarine	Fluvial Estuary	0.000	1.000	1.000	2.00
LPRT05B	Estuarine	Fluvial Estuary	0.200	0.667	1.000	1.87
LPRT05C	Freshwater	Fluvial Estuary	0.000	0.500	0.500	1.00
LPRT05D	Freshwater	Fluvial Estuary	0.400	0.000	0.500	0.90
LPRT05E	Freshwater	Fluvial Estuary	0.400	0.000	0.500	0.90
LPRT05F	Freshwater	Fluvial Estuary	0.600	0.750	0.500	1.85
LPRT06A	Freshwater	Fluvial Estuary	0.600	0.250	0.500	1.35
LPRT06B	Freshwater	Fluvial Estuary	0.800	0.500	0.500	1.80
LPRT06C	Estuarine	Fluvial Estuary	0.000	0.667	0.500	1.17
LPRT06D	Freshwater	Fluvial Estuary	0.000	0.500	0.500	1.00
LPRT06E	Freshwater	Fluvial Estuary	0.000	0.000	0.500	0.50
LPRT06F	Freshwater	Fluvial Estuary	0.400	0.250	0.500	1.15
LPRT07A	Freshwater	Fluvial Estuary	0.000	0.000	0.500	0.50
LPRT07B	Freshwater	Fluvial Estuary	0.000	0.750	0.500	1.25
LPRT07C	Freshwater	Fluvial Estuary	0.600	0.250	1.000	1.85
LPRT07D	Freshwater	Fluvial Estuary	0.800	0.000	0.500	1.30
LPRT07E	Freshwater	Fluvial Estuary	0.800	0.250	0.500	1.55
LPRT08A	Freshwater	Fluvial Estuary	0.400	0.500	1.000	1.90
LPRT08B	Freshwater	Fluvial Estuary	0.600	0.000	0.500	1.10
LPRT08C	Freshwater	Fluvial Estuary	0.000	0.750	1.000	1.75
LPRT08D	Freshwater	Fluvial Estuary	0.200	0.000	0.500	0.70
LPRT08E	Freshwater	Fluvial Estuary	0.200	0.000	0.500	0.70
LPRT09B	Freshwater	Fluvial Estuary	0.200	0.000	1.000	1.20
LPRT09H	Freshwater	Fluvial Estuary	0.000	0.000	0.500	0.50
LPRT09A	Freshwater	Fluvial Estuary	0.000	0.750	0.500	1.25
LPRT09C	Freshwater	Fluvial Estuary	0.000	0.000	0.500	0.50
LPRT09D	Freshwater	Fluvial Estuary	0.600	0.000	0.500	1.10
LPRT09E	Freshwater	Fluvial Estuary	0.000	0.250	0.500	0.75
LPRT09F	Freshwater	Fluvial Estuary	0.600	0.500	0.500	1.60
LPRT09G	Freshwater	Fluvial Estuary	0.200	0.000	0.500	0.70
LPRT10A	Freshwater	Fluvial Estuary	0.600	0.250	0.500	1.35
LPRT10B	Freshwater	Fluvial Estuary	0.000	1.000	1.000	2.00
LPRT10C	Freshwater	Fluvial Estuary	0.400	0.250	0.500	1.15
LPRT10D	Freshwater	Fluvial Estuary	0.000	0.250	0.500	0.75
LPRT10E	Freshwater	Fluvial Estuary	0.000	0.500	0.500	1.00
LPRT11A	Freshwater	Fluvial Estuary	0.000	0.250	0.500	0.75
LPRT11B	Freshwater	Fluvial Estuary	0.000	0.500	0.500	1.00

Table B8-3a. WOE conclusion framework

WOE Conclusion	Range of WOE Weights	
	Low	High

Table B8-3b. WOE analysis

Location ID	Toxicity Test Type	Benthic Salinity Zone	Benthic Community LOE	Sediment Toxicity LOE	Sediment Chemistry LOE Weight	WOE Sum	WOE Conclusion
LPRT01A	Estuarine	Upper Estuary	0.000	0.000	1.0	1.000	Low impact
LPRT11C	Freshwater	Fluvial Estuary	0.000	0.500	1.0	1.500	Medium impact
LPRT11D	Freshwater	Fluvial Estuary	0.000	0.250	1.0	1.250	Low impact
LPRT11E	Freshwater	Fluvial Estuary	0.000	0.250	1.0	1.250	Low impact
LPRT11F	Freshwater	Fluvial Estuary	0.000	0.500	1.0	1.500	Medium impact
LPRT11G	Freshwater	Fluvial Estuary	0.200	1.000	1.0	2.200	Medium impact
LPRT12A	Freshwater	Fluvial Estuary	0.000	0.750	1.0	1.750	Medium impact
LPRT12B	Freshwater	Fluvial Estuary	0.000	0.250	1.0	1.250	Low impact
LPRT12C	Freshwater	Fluvial Estuary	0.000	1.000	1.0	2.000	Medium impact
LPRT12D	Freshwater	Fluvial Estuary	0.000	0.750	1.0	1.750	Medium impact
LPRT12E	Freshwater	Fluvial Estuary	0.000	0.750	1.0	1.750	Medium impact
LPRT13A	Freshwater	Fluvial Estuary	0.000	0.750	1.0	1.750	Medium impact
LPRT13B	Freshwater	Fluvial Estuary	0.000	0.250	1.0	1.250	Low impact
LPRT13C	Freshwater	Fluvial Estuary	0.000	0.250	1.0	1.250	Low impact
LPRT13D	Freshwater	Fluvial Estuary	0.000	0.250	1.0	1.250	Low impact
LPRT13E	Freshwater	Fluvial Estuary	0.000	0.250	1.0	1.250	Low impact
LPRT13F	Freshwater	Fluvial Estuary	0.000	0.000	1.0	1.000	Low impact
LPRT13G	Freshwater	Fluvial Estuary	0.000	0.250	1.0	1.250	Low impact
LPRT14A	Freshwater	Tidal Freshwater	1.000	0.750	1.0	2.750	High impact
LPRT14B	Freshwater	Tidal Freshwater	0.667	0.750	1.0	2.417	High impact
LPRT14C	Freshwater	Tidal Freshwater	1.000	0.250	1.0	2.250	High impact
LPRT14D	Freshwater	Tidal Freshwater	0.833	1.000	1.0	2.833	High impact
LPRT14E	Freshwater	Tidal Freshwater	0.833	0.750	1.0	2.583	High impact
LPRT14F	Freshwater	Tidal Freshwater	0.167	0.250	1.0	1.417	Low impact
LPRT15A	Freshwater	Tidal Freshwater	0.833	0.750	1.0	2.583	High impact
LPRT15B	Freshwater	Tidal Freshwater	1.000	0.250	1.0	2.250	High impact
LPRT15C	Freshwater	Tidal Freshwater	0.667	0.250	1.0	1.917	Medium impact
LPRT15D	Freshwater	Tidal Freshwater	0.500	0.750	1.0	2.250	High impact
LPRT15E	Freshwater	Tidal Freshwater	0.333	0.250	1.0	1.583	Medium impact
LPRT15F	Freshwater	Tidal Freshwater	1.000	0.250	1.0	2.250	High impact
LPRT16A	Freshwater	Tidal Freshwater	0.500	0.500	1.0	2.000	Medium impact
LPRT16C	Freshwater	Tidal Freshwater	0.667	0.000	1.0	1.667	Medium impact
LPRT16D	Freshwater	Tidal Freshwater	0.667	0.000	1.0	1.667	Medium impact
LPRT16E	Freshwater	Tidal Freshwater	0.667	0.000	1.0	1.667	Medium impact
LPRT17D	Freshwater	Tidal Freshwater	1.000	0.250	1.0	2.250	High impact
LPRT17A	Freshwater	Tidal Freshwater	1.000	0.500	1.0	2.500	High impact

LOE -- line of evidence
WOE -- weight of evidence
Conclusions are based on WOE Sum as is relates to framework in Table B8-3a

Table B8-3c. WOE analysis, quantiative analysis of uncertainty

Location ID	Toxicity Test Type	Benthic Salinity Zone	Benthic Community LOE	Sediment Toxicity LOE	Sediment Chemistry LOE Weight	WOE Sum
LPRT01A	Estuarine	Upper Estuary	0.000	0.000	0.500	0.50
LPRT11C	Freshwater	Fluvial Estuary	0.000	0.000	0.500	0.50
LPRT11D	Freshwater	Fluvial Estuary	0.000	0.250	0.500	0.75
LPRT11E	Freshwater	Fluvial Estuary	0.000	0.250	0.500	0.75
LPRT11F	Freshwater	Fluvial Estuary	0.000	0.500	0.500	1.00
LPRT11G	Freshwater	Fluvial Estuary	0.200	0.750	1.000	1.95
LPRT12A	Freshwater	Fluvial Estuary	0.000	0.250	0.500	0.75
LPRT12B	Freshwater	Fluvial Estuary	0.000	0.250	0.500	0.75
LPRT12C	Freshwater	Fluvial Estuary	0.000	0.500	0.500	1.00
LPRT12D	Freshwater	Fluvial Estuary	0.000	0.750	0.500	1.25
LPRT12E	Freshwater	Fluvial Estuary	0.000	0.500	1.000	1.50
LPRT13A	Freshwater	Fluvial Estuary	0.000	0.500	0.500	1.00
LPRT13B	Freshwater	Fluvial Estuary	0.000	0.250	1.000	1.25
LPRT13C	Freshwater	Fluvial Estuary	0.000	0.250	0.500	0.75
LPRT13D	Freshwater	Fluvial Estuary	0.000	0.250	0.500	0.75
LPRT13E	Freshwater	Fluvial Estuary	0.000	0.000	0.500	0.50
LPRT13F	Freshwater	Fluvial Estuary	0.000	0.000	0.500	0.50
LPRT13G	Freshwater	Fluvial Estuary	0.000	0.250	0.500	0.75
LPRT14A	Freshwater	Tidal Freshwater	0.833	0.500	0.500	1.83
LPRT14B	Freshwater	Tidal Freshwater	0.667	0.750	0.500	1.92
LPRT14C	Freshwater	Tidal Freshwater	0.833	0.250	0.500	1.58
LPRT14D	Freshwater	Tidal Freshwater	0.500	0.250	0.500	1.25
LPRT14E	Freshwater	Tidal Freshwater	0.667	0.750	0.500	1.92
LPRT14F	Freshwater	Tidal Freshwater	0.000	0.000	0.500	0.50
LPRT15A	Freshwater	Tidal Freshwater	0.667	0.500	0.500	1.67
LPRT15B	Freshwater	Tidal Freshwater	0.667	0.250	0.500	1.42
LPRT15C	Freshwater	Tidal Freshwater	0.833	0.250	0.500	1.58
LPRT15D	Freshwater	Tidal Freshwater	0.000	0.250	0.500	0.75
LPRT15E	Freshwater	Tidal Freshwater	0.167	0.250	0.500	0.92
LPRT15F	Freshwater	Tidal Freshwater	0.833	0.250	0.500	1.58
LPRT16A	Freshwater	Tidal Freshwater	0.667	0.250	0.500	1.42
LPRT16C	Freshwater	Tidal Freshwater	0.667	0.000	0.500	1.17
LPRT16D	Freshwater	Tidal Freshwater	0.000	0.000	0.500	0.50
LPRT16E	Freshwater	Tidal Freshwater	0.833	0.000	0.500	1.33
LPRT17D	Freshwater	Tidal Freshwater	0.667	0.250	0.500	1.42
LPRT17A	Freshwater	Tidal Freshwater	1.000	0.250	0.500	1.75

LOE -- line of evidence
WOE -- weight of evidence
Conclusions are based on WOE Sum as is relates to framework in Table B8-3a

Table B8-3 presents the weight of evidence analysis for the comparison of LPRSA SQT data to urban reference conditions, combining the weights for the three SQT lines of evidence and assigning a risk category (based on Table B8-3a) to each LPRSA SQT sampling location. Table B8-3a provides the framework for assigning risk categories based on the combined weight of the three LOEs, and Tables B8-3b and B8-3c present the results of risk characterization for USEPA's preferred approach and the alternative approach for the quantitative analysis of uncertainty. The individual line of evidence data in Table B8-3 are also provided in Tables B8-1 and B8-2, and were originally developed in Tables B3-6, B3-7, and B4-5, and B4-6. The results in Table B8-3 are summarized in B8-4.

WOE Conclusion
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WOE Conclusion
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Table B8-4a. WOE summary, urban reference comparison

WOE Conclusion	No. of LPRSA Locations (by Zone)			Percent of LPRSA Locations (by Zone)		
	Upper Estuary	Fluvial Estuary	Tidal Freshwater	Upper Estuary	Fluvial Estuary	Tidal Freshwater
No impact	0	0	0	0%	0%	0%
Low impact	13	14	1	52%	26%	6%
Medium impact	10	35	6	40%	65%	33%
High impact	2	5	11	8%	9%	61%

WOE -- weight of evidence
LPRSA -- Lower Passaic River Study Area
Note: percentages are calculated without "unclear" results

Table B8-4b. WOE summary, urban reference comparison, quantiative analysis of uncertainty

WOE Conclusion	No. of LPRSA Locations (by Zone)			Percent of LPRSA Locations (by Zone)		
	Upper Estuary	Fluvial Estuary	Tidal Freshwater	Upper Estuary	Fluvial Estuary	Tidal Freshwater
No impact	4	10	2	16%	19%	11%
Low impact	17	32	8	68%	59%	44%
Medium impact	3	12	8	12%	22%	44%
High impact	1	0	0	4%	0%	0%

WOE -- weight of evidence
LPRSA -- Lower Passaic River Study Area
* Cannot conclude risk using WOE analysis due to missing benthic community data
Note: percentages are calculated without "unclear" results

The results of the LPRSA SQT weight of evidence (based on the comparison of LPRSA data to urban reference conditions) is presented in Table B8-3 and summarized here, in Table B8-4. Tables B8-4a and B8-4b present summaries of the analyses based on USEPA's preferred approach and the alternative approach for the quantitative analysis of uncertainty, respectively. These tables are also presented in the BERA in Sections 6.1.2.1 and 6.1.3.1. Results for the non-urban weight of evidence analyses are presented in Table B9.

Table B9-1a. Summary of SQT LOEs, non-urban comparison

Location ID	Toxicity Test Type	Benthic Salinity Zone	LOE Summary	
			Upper Estuary	Sediment Toxicity LOE
LPRT01A	Estuarine	Upper Estuary	0.400	0.000
LPRT01D	Estuarine	Upper Estuary	0.000	0.333
LPRT01C	Estuarine	Upper Estuary	0.000	0.667
LPRT01B	Estuarine	Upper Estuary	0.400	0.000
LPRT01E	Estuarine	Upper Estuary	0.000	1.000
LPRT01F	Estuarine	Upper Estuary	0.400	0.000
LPRT01G	Estuarine	Upper Estuary	0.200	0.000
LPRT02A	Estuarine	Upper Estuary	0.200	0.000
LPRT02D	Estuarine	Upper Estuary	0.200	0.000
LPRT02B	Estuarine	Upper Estuary	0.400	0.667
LPRT02C	Estuarine	Upper Estuary	0.400	0.000
LPRT02E	Estuarine	Upper Estuary	0.400	0.333
LPRT02F	Estuarine	Upper Estuary	0.400	0.333
LPRT03A	Estuarine	Upper Estuary	0.800	0.333
LPRT03B	Estuarine	Upper Estuary	0.400	0.000
LPRT03C	Estuarine	Upper Estuary	0.400	0.333
LPRT03D	Estuarine	Upper Estuary	0.400	0.000
LPRT03E	Estuarine	Upper Estuary	0.400	0.000
LPRT03F	Estuarine	Upper Estuary	0.400	0.667
LPRT04A	Estuarine	Upper Estuary	0.400	0.333
LPRT04B	Estuarine	Upper Estuary	0.400	0.333
LPRT04C	Estuarine	Upper Estuary	0.400	1.000
LPRT04D	Estuarine	Upper Estuary	1.000	0.667
LPRT04E	Estuarine	Upper Estuary	0.400	1.000
LPRT04F	Freshwater	Upper Estuary	0.400	0.000
LPRT05A	Estuarine	Fluvial Estuary	0.000	1.000
LPRT05B	Estuarine	Fluvial Estuary	0.400	0.667
LPRT05C	Freshwater	Fluvial Estuary	0.000	0.750
LPRT05D	Freshwater	Fluvial Estuary	0.400	0.750
LPRT05E	Freshwater	Fluvial Estuary	0.400	0.500
LPRT05F	Freshwater	Fluvial Estuary	0.600	0.750
LPRT06A	Freshwater	Fluvial Estuary	0.600	0.250
LPRT06B	Freshwater	Fluvial Estuary	0.800	0.750
LPRT06C	Estuarine	Fluvial Estuary	0.200	0.667
LPRT06D	Freshwater	Fluvial Estuary	0.200	0.750
LPRT06E	Freshwater	Fluvial Estuary	0.200	0.250
LPRT06F	Freshwater	Fluvial Estuary	0.800	0.250
LPRT07A	Freshwater	Fluvial Estuary	0.200	0.500
LPRT07B	Freshwater	Fluvial Estuary	0.600	0.750
LPRT07C	Freshwater	Fluvial Estuary	0.800	0.750
LPRT07D	Freshwater	Fluvial Estuary	0.800	0.750
LPRT07E	Freshwater	Fluvial Estuary	0.800	0.500
LPRT08A	Freshwater	Fluvial Estuary	0.800	0.750
LPRT08B	Freshwater	Fluvial Estuary	0.600	0.500
LPRT08C	Freshwater	Fluvial Estuary	0.000	0.750
LPRT08D	Freshwater	Fluvial Estuary	0.400	0.250
LPRT08E	Freshwater	Fluvial Estuary	0.400	0.250
LPRT09B	Freshwater	Fluvial Estuary	0.600	0.250
LPRT09H	Freshwater	Fluvial Estuary	0.600	0.000
LPRT09A	Freshwater	Fluvial Estuary	0.400	0.750
LPRT09C	Freshwater	Fluvial Estuary	0.000	0.500
LPRT09D	Freshwater	Fluvial Estuary	0.600	0.000
LPRT09E	Freshwater	Fluvial Estuary	0.200	0.750
LPRT09F	Freshwater	Fluvial Estuary	0.800	0.500
LPRT09G	Freshwater	Fluvial Estuary	0.600	0.000
LPRT10A	Freshwater	Fluvial Estuary	0.400	0.750
LPRT10B	Freshwater	Fluvial Estuary	0.200	1.000
LPRT10C	Freshwater	Fluvial Estuary	0.400	0.500
LPRT10D	Freshwater	Fluvial Estuary	0.000	0.500
LPRT10E	Freshwater	Fluvial Estuary	0.000	0.750
LPRT11A	Freshwater	Fluvial Estuary	0.000	0.500
LPRT11B	Freshwater	Fluvial Estuary	0.000	0.750

Table B9-1b. Summary of SQT LOEs, non-urban comparison, quantiative analysis of uncertainty

Location ID	Toxicity Test Type	Benthic Salinity Zone	LOE Summary	
			Benthic Community LOE	Sediment Toxicity LOE
LPRT01A	Estuarine	Upper Estuary	0.400	0.000
LPRT01D	Estuarine	Upper Estuary	0.000	0.333
LPRT01C	Estuarine	Upper Estuary	0.000	0.667
LPRT01B	Estuarine	Upper Estuary	0.400	0.000
LPRT01E	Estuarine	Upper Estuary	0.000	1.000
LPRT01F	Estuarine	Upper Estuary	0.400	0.000
LPRT01G	Estuarine	Upper Estuary	0.200	0.000
LPRT02A	Estuarine	Upper Estuary	0.200	0.000
LPRT02D	Estuarine	Upper Estuary	0.200	0.000
LPRT02B	Estuarine	Upper Estuary	0.400	0.333
LPRT02C	Estuarine	Upper Estuary	0.400	0.000
LPRT02E	Estuarine	Upper Estuary	0.400	0.333
LPRT02F	Estuarine	Upper Estuary	0.400	0.333
LPRT03A	Estuarine	Upper Estuary	0.800	0.333
LPRT03B	Estuarine	Upper Estuary	0.400	0.000
LPRT03C	Estuarine	Upper Estuary	0.400	0.333
LPRT03D	Estuarine	Upper Estuary	0.400	0.000
LPRT03E	Estuarine	Upper Estuary	0.400	0.000
LPRT03F	Estuarine	Upper Estuary	0.400	0.333
LPRT04A	Estuarine	Upper Estuary	0.400	0.333
LPRT04B	Estuarine	Upper Estuary	0.400	0.333
LPRT04C	Estuarine	Upper Estuary	0.400	1.000
LPRT04D	Estuarine	Upper Estuary	1.000	0.333
LPRT04E	Estuarine	Upper Estuary	0.400	0.333
LPRT04F	Freshwater	Upper Estuary	0.400	0.000
LPRT05A	Estuarine	Fluvial Estuary	0.000	1.000
LPRT05B	Estuarine	Fluvial Estuary	0.400	0.667
LPRT05C	Freshwater	Fluvial Estuary	0.000	0.500
LPRT05D	Freshwater	Fluvial Estuary	0.400	0.000
LPRT05E	Freshwater	Fluvial Estuary	0.400	0.000
LPRT05F	Freshwater	Fluvial Estuary	0.600	0.750
LPRT06A	Freshwater	Fluvial Estuary	0.600	0.250
LPRT06B	Freshwater	Fluvial Estuary	0.800	0.500
LPRT06C	Estuarine	Fluvial Estuary	0.200	0.667
LPRT06D	Freshwater	Fluvial Estuary	0.200	0.500
LPRT06E	Freshwater	Fluvial Estuary	0.200	0.000
LPRT06F	Freshwater	Fluvial Estuary	0.800	0.250
LPRT07A	Freshwater	Fluvial Estuary	0.200	0.000
LPRT07B	Freshwater	Fluvial Estuary	0.600	0.750
LPRT07C	Freshwater	Fluvial Estuary	0.800	0.250
LPRT07D	Freshwater	Fluvial Estuary	0.800	0.000
LPRT07E	Freshwater	Fluvial Estuary	0.800	0.250
LPRT08A	Freshwater	Fluvial Estuary	0.800	0.500
LPRT08B	Freshwater	Fluvial Estuary	0.600	0.000
LPRT08C	Freshwater	Fluvial Estuary	0.000	0.750
LPRT08D	Freshwater	Fluvial Estuary	0.400	0.000
LPRT08E	Freshwater	Fluvial Estuary	0.400	0.000
LPRT09B	Freshwater	Fluvial Estuary	0.600	0.000
LPRT09H	Freshwater	Fluvial Estuary	0.600	0.000
LPRT09A	Freshwater	Fluvial Estuary	0.400	0.750
LPRT09C	Freshwater	Fluvial Estuary	0.000	0.000
LPRT09D	Freshwater	Fluvial Estuary	0.600	0.000
LPRT09E	Freshwater	Fluvial Estuary	0.200	0.250
LPRT09F	Freshwater	Fluvial Estuary	0.800	0.500
LPRT09G	Freshwater	Fluvial Estuary	0.600	0.000
LPRT10A	Freshwater	Fluvial Estuary	0.400	0.250
LPRT10B	Freshwater	Fluvial Estuary	0.200	1.000
LPRT10C	Freshwater	Fluvial Estuary	0.400	0.250
LPRT10D	Freshwater	Fluvial Estuary	0.000	0.250
LPRT10E	Freshwater	Fluvial Estuary	0.000	0.500
LPRT11A	Freshwater	Fluvial Estuary	0.000	0.250
LPRT11B	Freshwater	Fluvial Estuary	0.000	0.500

Table B9-1a. Summary of SQT LOEs, non-urban comparison

Location ID	Toxicity Test Type	Benthic Salinity Zone	LOE Summary	
			Upper Estuary	Sediment Toxicity LOE
LPRT11C	Freshwater	Fluvial Estuary	0.000	0.500
LPRT11D	Freshwater	Fluvial Estuary	0.000	0.250
LPRT11E	Freshwater	Fluvial Estuary	0.400	0.250
LPRT11F	Freshwater	Fluvial Estuary	0.000	0.500
LPRT11G	Freshwater	Fluvial Estuary	0.600	1.000
LPRT12A	Freshwater	Fluvial Estuary	0.200	0.750
LPRT12B	Freshwater	Fluvial Estuary	0.000	0.250
LPRT12C	Freshwater	Fluvial Estuary	0.000	1.000
LPRT12D	Freshwater	Fluvial Estuary	0.200	0.750
LPRT12E	Freshwater	Fluvial Estuary	0.200	0.750
LPRT13A	Freshwater	Fluvial Estuary	0.000	0.750
LPRT13B	Freshwater	Fluvial Estuary	0.000	0.250
LPRT13C	Freshwater	Fluvial Estuary	0.200	0.250
LPRT13D	Freshwater	Fluvial Estuary	0.400	0.250
LPRT13E	Freshwater	Fluvial Estuary	0.000	0.250
LPRT13F	Freshwater	Fluvial Estuary	0.000	0.000
LPRT13G	Freshwater	Fluvial Estuary	0.200	0.250

LOE -- line of evidence
For more detail see Tables B3 and B4
Non-urban reference data is only available for estuarine locations

Table B9-1b. Summary of SQT LOEs, non-urban comparison, quantiative analysis of uncertainty

Location ID	Toxicity Test Type	Benthic Salinity Zone	LOE Summary	
			Benthic Community LOE	Sediment Toxicity LOE
LPRT11C	Freshwater	Fluvial Estuary	0.000	0.000
LPRT11D	Freshwater	Fluvial Estuary	0.000	0.250
LPRT11E	Freshwater	Fluvial Estuary	0.400	0.250
LPRT11F	Freshwater	Fluvial Estuary	0.000	0.500
LPRT11G	Freshwater	Fluvial Estuary	0.600	0.750
LPRT12A	Freshwater	Fluvial Estuary	0.200	0.250
LPRT12B	Freshwater	Fluvial Estuary	0.000	0.250
LPRT12C	Freshwater	Fluvial Estuary	0.000	0.500
LPRT12D	Freshwater	Fluvial Estuary	0.200	0.750
LPRT12E	Freshwater	Fluvial Estuary	0.200	0.500
LPRT13A	Freshwater	Fluvial Estuary	0.000	0.500
LPRT13B	Freshwater	Fluvial Estuary	0.000	0.250
LPRT13C	Freshwater	Fluvial Estuary	0.200	0.250
LPRT13D	Freshwater	Fluvial Estuary	0.400	0.250
LPRT13E	Freshwater	Fluvial Estuary	0.000	0.000
LPRT13F	Freshwater	Fluvial Estuary	0.000	0.000
LPRT13G	Freshwater	Fluvial Estuary	0.200	0.250

LOE -- line of evidence
For more detail see Tables B3 and B4
Non-urban reference data is only available for estuarine locations

Table B9 presents the results of the LPRSA SQT weight of evidence analysis for the BERA based on non-urban reference conditions (i.e., Mullica River and Great Bay [estuarine]). Non-urban freshwater conditions (e.g., for Mullica River) could not be reasonably characterized from the available data. Table B9-1 presents the total weights for the benthic invertebrate community and sediment toxicity lines of evidence, as determined in Table B3 (assessment of estuarine LPRSA zones, RM 0 to RM 13). Tables B9-1a and B9-1b present the results for USEPA's preferred SQT approach and the alternative approach for the quantitative analysis of uncertainty, respectively. The weights for the two lines of evidence presented in Table B9-1 are

Table B9-2. Summary of Sediment Chemistry LOE

Location ID	Sediment Chemistry LOE Weight, LOE Approach	Sediment Chemistry LOE Weight, Quantitative Uncertainty Analysis*	
LPRT01A	1.0	0.5	Upper Estuary
LPRT01B	1.0	1.0	
LPRT01C	1.0	0.5	
LPRT01D	1.0	0.5	
LPRT01E	1.0	0.5	
LPRT01F	1.0	0.5	
LPRT01G	1.0	1.0	
LPRT02A	1.0	0.5	
LPRT02B	1.0	1.0	
LPRT02C	1.0	1.0	
LPRT02D	1.0	1.0	
LPRT02E	1.0	1.0	
LPRT02F	1.0	1.0	
LPRT03A	1.0	1.0	
LPRT03B	1.0	1.0	
LPRT03C	1.0	0.5	
LPRT03D	1.0	1.0	
LPRT03E	1.0	1.0	
LPRT03F	1.0	1.0	
LPRT04A	1.0	0.5	
LPRT04B	1.0	1.0	
LPRT04C	1.0	1.0	
LPRT04D	1.0	1.0	
LPRT04E	1.0	1.0	
LPRT04F	1.0	0.5	
LPRT05A	1.0	1.0	
LPRT05B	1.0	1.0	
LPRT05C	1.0	0.5	
LPRT05D	1.0	0.5	
LPRT05E	1.0	0.5	
LPRT05F	1.0	0.5	
LPRT06A	1.0	0.5	
LPRT06B	1.0	0.5	
LPRT06C	1.0	0.5	
LPRT06D	1.0	0.5	
LPRT06E	1.0	0.5	
LPRT06F	1.0	0.5	
LPRT07A	1.0	0.5	
LPRT07B	1.0	0.5	
LPRT07C	1.0	1.0	
LPRT07D	1.0	0.5	
LPRT07E	1.0	0.5	
LPRT08A	1.0	1.0	
LPRT08B	1.0	0.5	
LPRT08C	1.0	1.0	
LPRT08D	1.0	0.5	
LPRT08E	1.0	0.5	
LPRT09A	1.0	0.5	
LPRT09B	1.0	1.0	
LPRT09C	1.0	0.5	
LPRT09D	1.0	0.5	
LPRT09E	1.0	0.5	
LPRT09F	1.0	0.5	
LPRT09G	1.0	0.5	
LPRT09H	1.0	0.5	
LPRT10A	1.0	0.5	
LPRT10B	1.0	1.0	
LPRT10C	1.0	0.5	

LPRT10D	1.0	0.5
LPRT10E	1.0	0.5
LPRT11A	1.0	0.5
LPRT11B	1.0	0.5
LPRT11C	1.0	0.5
LPRT11D	1.0	0.5
LPRT11E	1.0	0.5
LPRT11F	1.0	0.5
LPRT11G	1.0	1.0
LPRT12A	1.0	0.5
LPRT12B	1.0	0.5
LPRT12C	1.0	0.5
LPRT12D	1.0	0.5
LPRT12E	1.0	1.0
LPRT13A	1.0	0.5
LPRT13B	1.0	1.0
LPRT13C	1.0	0.5
LPRT13D	1.0	0.5
LPRT13E	1.0	0.5
LPRT13F	1.0	0.5
LPRT13G	1.0	0.5
LPRT14A	1.0	0.5
LPRT14B	1.0	0.5
LPRT14C	1.0	0.5
LPRT14D	1.0	0.5
LPRT14E	1.0	0.5
LPRT14F	1.0	0.5
LPRT15A	1.0	0.5
LPRT15B	1.0	0.5
LPRT15C	1.0	0.5
LPRT15D	1.0	0.5
LPRT15E	1.0	0.5
LPRT15F	1.0	0.5
LPRT16A	1.0	0.5
LPRT16B	1.0	0.5
LPRT16C	1.0	0.5
LPRT16D	1.0	0.5
LPRT16E	1.0	0.5
LPRT17A	1.0	0.5
LPRT17D	1.0	0.5

LOE -- line of evidence

*It was not possible to establish a high sediment chemistry LOE threshold (quantiative analysis of uncertainty) due to acceptable toxicity at the highest observed mERMq in the Mullica River and Great Bay dataset; as a result, the urban thresholds were applied for this evaluation; therefore, the sediment chemistry LOE weights do no differ between the urban and non-urban comparisons to reference (quantiative analysis of uncertainty)

For more details see Table B7.

Table B9-2 presents the weights for the sediment chemistry line of evidence for the LPRSA SQT weight of evidence analysis in the BERA. These weights were determined in Table B7. Table B9-2 shows the weights for USEPA's preferred "LOE approach" and the alternative approach for the quantitative analysis of uncertainty. Explanations of the weighting of lines of evidence (for the two approaches) are provided in BERA Sections 6.1.1 and 6.1.3.1. The sediment chemistry line of evidence weights were the same for the urban (Table B8) and non-urban (Table B9) weight of evidence analyses.

Table B9-3a. WOE conclusion framework

WOE Conclusion	Range of WOE Weights	
	Low	High
No impact	0	0.75
Low impact	0.75	1.5
Medium impact	1.5	2.25
High impact	2.25	3

Upper Estuary

WOE -- weight of evidence
Note: WOE conclusions are assigned by determining into which range the WOE sum falls.
For example, a WOE sum of 0.78 is within the range of 0.75 to 1.5, corresponding to a "Low impact".

Table B9-3b. WOE analysis, non-urban comparison

Location ID	Toxicity Test Type	Benthic Salinity Zone	Benthic Community LOE	Sediment Toxicity LOE	Sediment Chemistry LOE Weight	WOE Sum	WOE Conclusion
LPRT01A	Estuarine	Upper Estuary	0.400	0.000	1.0	1.400	Low impact
LPRT01D	Estuarine	Upper Estuary	0.000	0.333	1.0	1.333	Low impact
LPRT01C	Estuarine	Upper Estuary	0.000	0.667	1.0	1.667	Medium impact
LPRT01B	Estuarine	Upper Estuary	0.400	0.000	1.0	1.400	Low impact
LPRT01E	Estuarine	Upper Estuary	0.000	1.000	1.0	2.000	Medium impact
LPRT01F	Estuarine	Upper Estuary	0.400	0.000	1.0	1.400	Low impact
LPRT01G	Estuarine	Upper Estuary	0.200	0.000	1.0	1.200	Low impact
LPRT02A	Estuarine	Upper Estuary	0.200	0.000	1.0	1.200	Low impact
LPRT02D	Estuarine	Upper Estuary	0.200	0.000	1.0	1.200	Low impact
LPRT02B	Estuarine	Upper Estuary	0.400	0.667	1.0	2.067	Medium impact
LPRT02C	Estuarine	Upper Estuary	0.400	0.000	1.0	1.400	Low impact
LPRT02E	Estuarine	Upper Estuary	0.400	0.333	1.0	1.733	Medium impact
LPRT02F	Estuarine	Upper Estuary	0.400	0.333	1.0	1.733	Medium impact
LPRT03A	Estuarine	Upper Estuary	0.800	0.333	1.0	2.133	Medium impact
LPRT03B	Estuarine	Upper Estuary	0.400	0.000	1.0	1.400	Low impact
LPRT03C	Estuarine	Upper Estuary	0.400	0.333	1.0	1.733	Medium impact
LPRT03D	Estuarine	Upper Estuary	0.400	0.000	1.0	1.400	Low impact
LPRT03E	Estuarine	Upper Estuary	0.400	0.000	1.0	1.400	Low impact
LPRT03F	Estuarine	Upper Estuary	0.400	0.667	1.0	2.067	Medium impact
LPRT04A	Estuarine	Upper Estuary	0.400	0.333	1.0	1.733	Medium impact
LPRT04B	Estuarine	Upper Estuary	0.400	0.333	1.0	1.733	Medium impact
LPRT04C	Estuarine	Upper Estuary	0.400	1.000	1.0	2.400	High impact
LPRT04D	Estuarine	Upper Estuary	1.000	0.667	1.0	2.667	High impact
LPRT04E	Estuarine	Upper Estuary	0.400	1.000	1.0	2.400	High impact
LPRT04F	Freshwater	Upper Estuary	0.400	0.000	1.0	1.400	Low impact
LPRT05A	Estuarine	Fluvial Estuary	0.000	1.000	1.0	2.000	Medium impact
LPRT05B	Estuarine	Fluvial Estuary	0.400	0.667	1.0	2.067	Medium impact
LPRT05C	Freshwater	Fluvial Estuary	0.000	0.750	1.0	1.750	Medium impact
LPRT05D	Freshwater	Fluvial Estuary	0.400	0.750	1.0	2.150	Medium impact
LPRT05E	Freshwater	Fluvial Estuary	0.400	0.500	1.0	1.900	Medium impact
LPRT05F	Freshwater	Fluvial Estuary	0.600	0.750	1.0	2.350	High impact
LPRT06A	Freshwater	Fluvial Estuary	0.600	0.250	1.0	1.850	Medium impact
LPRT06B	Freshwater	Fluvial Estuary	0.800	0.750	1.0	2.550	High impact
LPRT06C	Estuarine	Fluvial Estuary	0.200	0.667	1.0	1.867	Medium impact
LPRT06D	Freshwater	Fluvial Estuary	0.200	0.750	1.0	1.950	Medium impact
LPRT06E	Freshwater	Fluvial Estuary	0.200	0.250	1.0	1.450	Low impact
LPRT06F	Freshwater	Fluvial Estuary	0.800	0.250	1.0	2.050	Medium impact
LPRT07A	Freshwater	Fluvial Estuary	0.200	0.500	1.0	1.700	Medium impact
LPRT07B	Freshwater	Fluvial Estuary	0.600	0.750	1.0	2.350	High impact
LPRT07C	Freshwater	Fluvial Estuary	0.800	0.750	1.0	2.550	High impact
LPRT07D	Freshwater	Fluvial Estuary	0.800	0.750	1.0	2.550	High impact
LPRT07E	Freshwater	Fluvial Estuary	0.800	0.500	1.0	2.300	High impact
LPRT08A	Freshwater	Fluvial Estuary	0.800	0.750	1.0	2.550	High impact
LPRT08B	Freshwater	Fluvial Estuary	0.600	0.500	1.0	2.100	Medium impact
LPRT08C	Freshwater	Fluvial Estuary	0.000	0.750	1.0	1.750	Medium impact
LPRT08D	Freshwater	Fluvial Estuary	0.400	0.250	1.0	1.650	Medium impact
LPRT08E	Freshwater	Fluvial Estuary	0.400	0.250	1.0	1.650	Medium impact
LPRT09B	Freshwater	Fluvial Estuary	0.600	0.250	1.0	1.850	Medium impact
LPRT09H	Freshwater	Fluvial Estuary	0.600	0.000	1.0	1.600	Medium impact
LPRT09A	Freshwater	Fluvial Estuary	0.400	0.750	1.0	2.150	Medium impact
LPRT09C	Freshwater	Fluvial Estuary	0.000	0.500	1.0	1.500	Medium impact
LPRT09D	Freshwater	Fluvial Estuary	0.600	0.000	1.0	1.600	Medium impact
LPRT09E	Freshwater	Fluvial Estuary	0.200	0.750	1.0	1.950	Medium impact
LPRT09F	Freshwater	Fluvial Estuary	0.800	0.500	1.0	2.300	High impact
LPRT09G	Freshwater	Fluvial Estuary	0.600	0.000	1.0	1.600	Medium impact
LPRT10A	Freshwater	Fluvial Estuary	0.400	0.750	1.0	2.150	Medium impact
LPRT10B	Freshwater	Fluvial Estuary	0.200	1.000	1.0	2.200	Medium impact
LPRT10C	Freshwater	Fluvial Estuary	0.400	0.500	1.0	1.900	Medium impact
LPRT10D	Freshwater	Fluvial Estuary	0.000	0.500	1.0	1.500	Medium impact
LPRT10E	Freshwater	Fluvial Estuary	0.000	0.750	1.0	1.750	Medium impact

Table B9-3c. WOE analysis, non-urban comparison, quantiative

Location ID	Toxicity Test Type	Benthic Salinity Zone	Benthic Community LOE	Sediment Toxicity LOE	Sediment Chemistry LOE Weight	WOE Sum
LPRT01A	Estuarine	Upper Estuary	0.400	0.000	0.500	0.90
LPRT01D	Estuarine	Upper Estuary	0.000	0.333	0.500	0.83
LPRT01C	Estuarine	Upper Estuary	0.000	0.667	0.500	1.17
LPRT01B	Estuarine	Upper Estuary	0.400	0.000	1.000	1.40
LPRT01E	Estuarine	Upper Estuary	0.000	1.000	0.500	1.50
LPRT01F	Estuarine	Upper Estuary	0.400	0.000	0.500	0.90
LPRT01G	Estuarine	Upper Estuary	0.200	0.000	1.000	1.20
LPRT02A	Estuarine	Upper Estuary	0.200	0.000	0.500	0.70
LPRT02D	Estuarine	Upper Estuary	0.200	0.000	1.000	1.20
LPRT02B	Estuarine	Upper Estuary	0.400	0.333	1.000	1.73
LPRT02C	Estuarine	Upper Estuary	0.400	0.000	1.000	1.40
LPRT02E	Estuarine	Upper Estuary	0.400	0.333	1.000	1.73
LPRT02F	Estuarine	Upper Estuary	0.400	0.333	1.000	1.73
LPRT03A	Estuarine	Upper Estuary	0.800	0.333	1.000	2.13
LPRT03B	Estuarine	Upper Estuary	0.400	0.000	1.000	1.40
LPRT03C	Estuarine	Upper Estuary	0.400	0.333	0.500	1.23
LPRT03D	Estuarine	Upper Estuary	0.400	0.000	1.000	1.40
LPRT03E	Estuarine	Upper Estuary	0.400	0.000	1.000	1.40
LPRT03F	Estuarine	Upper Estuary	0.400	0.333	1.000	1.73
LPRT04A	Estuarine	Upper Estuary	0.400	0.333	0.500	1.23
LPRT04B	Estuarine	Upper Estuary	0.400	0.333	1.000	1.73
LPRT04C	Estuarine	Upper Estuary	0.400	1.000	1.000	2.40
LPRT04D	Estuarine	Upper Estuary	1.000	0.333	1.000	2.33
LPRT04E	Estuarine	Upper Estuary	0.400	0.333	1.000	1.73
LPRT04F	Freshwater	Upper Estuary	0.400	0.000	0.500	0.90
LPRT05A	Estuarine	Fluvial Estuary	0.000	1.000	1.000	2.00
LPRT05B	Estuarine	Fluvial Estuary	0.400	0.667	1.000	2.07
LPRT05C	Freshwater	Fluvial Estuary	0.000	0.500	0.500	1.00
LPRT05D	Freshwater	Fluvial Estuary	0.400	0.000	0.500	0.90
LPRT05E	Freshwater	Fluvial Estuary	0.400	0.000	0.500	0.90
LPRT05F	Freshwater	Fluvial Estuary	0.600	0.750	0.500	1.85
LPRT06A	Freshwater	Fluvial Estuary	0.600	0.250	0.500	1.35
LPRT06B	Freshwater	Fluvial Estuary	0.800	0.500	0.500	1.80
LPRT06C	Estuarine	Fluvial Estuary	0.200	0.667	0.500	1.37
LPRT06D	Freshwater	Fluvial Estuary	0.200	0.500	0.500	1.20
LPRT06E	Freshwater	Fluvial Estuary	0.200	0.000	0.500	0.70
LPRT06F	Freshwater	Fluvial Estuary	0.800	0.250	0.500	1.55
LPRT07A	Freshwater	Fluvial Estuary	0.200	0.000	0.500	0.70
LPRT07B	Freshwater	Fluvial Estuary	0.600	0.750	0.500	1.85
LPRT07C	Freshwater	Fluvial Estuary	0.800	0.250	1.000	2.05
LPRT07D	Freshwater	Fluvial Estuary	0.800	0.000	0.500	1.30
LPRT07E	Freshwater	Fluvial Estuary	0.800	0.250	0.500	1.55
LPRT08A	Freshwater	Fluvial Estuary	0.800	0.500	1.000	2.30
LPRT08B	Freshwater	Fluvial Estuary	0.600	0.000	0.500	1.10
LPRT08C	Freshwater	Fluvial Estuary	0.000	0.750	1.000	1.75
LPRT08D	Freshwater	Fluvial Estuary	0.400	0.000	0.500	0.90
LPRT08E	Freshwater	Fluvial Estuary	0.400	0.000	0.500	0.90
LPRT09B	Freshwater	Fluvial Estuary	0.600	0.000	1.000	1.60
LPRT09H	Freshwater	Fluvial Estuary	0.600	0.000	0.500	1.10
LPRT09A	Freshwater	Fluvial Estuary	0.400	0.750	0.500	1.65
LPRT09C	Freshwater	Fluvial Estuary	0.000	0.000	0.500	0.50
LPRT09D	Freshwater	Fluvial Estuary	0.600	0.000	0.500	1.10
LPRT09E	Freshwater	Fluvial Estuary	0.200	0.250	0.500	0.95
LPRT09F	Freshwater	Fluvial Estuary	0.800	0.500	0.500	1.80
LPRT09G	Freshwater	Fluvial Estuary	0.600	0.000	0.500	1.10
LPRT10A	Freshwater	Fluvial Estuary	0.400	0.250	0.500	1.15
LPRT10B	Freshwater	Fluvial Estuary	0.200	1.000	1.000	2.20
LPRT10C	Freshwater	Fluvial Estuary	0.400	0.250	0.500	1.15
LPRT10D	Freshwater	Fluvial Estuary	0.000	0.250	0.500	0.75
LPRT10E	Freshwater	Fluvial Estuary	0.000	0.500	0.500	1.00

LPRT11A	Freshwater	Fluvial Estuary	0.000	0.500	1.0	1.500	Medium impact
LPRT11B	Freshwater	Fluvial Estuary	0.000	0.750	1.0	1.750	Medium impact
LPRT11C	Freshwater	Fluvial Estuary	0.000	0.500	1.0	1.500	Medium impact
LPRT11D	Freshwater	Fluvial Estuary	0.000	0.250	1.0	1.250	Low impact
LPRT11E	Freshwater	Fluvial Estuary	0.400	0.250	1.0	1.650	Medium impact
LPRT11F	Freshwater	Fluvial Estuary	0.000	0.500	1.0	1.500	Medium impact
LPRT11G	Freshwater	Fluvial Estuary	0.600	1.000	1.0	2.600	High impact
LPRT12A	Freshwater	Fluvial Estuary	0.200	0.750	1.0	1.950	Medium impact
LPRT12B	Freshwater	Fluvial Estuary	0.000	0.250	1.0	1.250	Low impact
LPRT12C	Freshwater	Fluvial Estuary	0.000	1.000	1.0	2.000	Medium impact
LPRT12D	Freshwater	Fluvial Estuary	0.200	0.750	1.0	1.950	Medium impact
LPRT12E	Freshwater	Fluvial Estuary	0.200	0.750	1.0	1.950	Medium impact
LPRT13A	Freshwater	Fluvial Estuary	0.000	0.750	1.0	1.750	Medium impact
LPRT13B	Freshwater	Fluvial Estuary	0.000	0.250	1.0	1.250	Low impact
LPRT13C	Freshwater	Fluvial Estuary	0.200	0.250	1.0	1.450	Low impact
LPRT13D	Freshwater	Fluvial Estuary	0.400	0.250	1.0	1.650	Medium impact
LPRT13E	Freshwater	Fluvial Estuary	0.000	0.250	1.0	1.250	Low impact
LPRT13F	Freshwater	Fluvial Estuary	0.000	0.000	1.0	1.000	Low impact
LPRT13G	Freshwater	Fluvial Estuary	0.200	0.250	1.0	1.450	Low impact

LOE -- line of evidence
WOE -- weight of evidence
Conclusions are based on WOE Sum as is relates to framework in Table B9-3a

LPRT11A	Freshwater	Fluvial Estuary	0.000	0.250	0.500	0.75
LPRT11B	Freshwater	Fluvial Estuary	0.000	0.500	0.500	1.00
LPRT11C	Freshwater	Fluvial Estuary	0.000	0.000	0.500	0.50
LPRT11D	Freshwater	Fluvial Estuary	0.000	0.250	0.500	0.75
LPRT11E	Freshwater	Fluvial Estuary	0.400	0.250	0.500	1.15
LPRT11F	Freshwater	Fluvial Estuary	0.000	0.500	0.500	1.00
LPRT11G	Freshwater	Fluvial Estuary	0.600	0.750	1.000	2.35
LPRT12A	Freshwater	Fluvial Estuary	0.200	0.250	0.500	0.95
LPRT12B	Freshwater	Fluvial Estuary	0.000	0.250	0.500	0.75
LPRT12C	Freshwater	Fluvial Estuary	0.000	0.500	0.500	1.00
LPRT12D	Freshwater	Fluvial Estuary	0.200	0.750	0.500	1.45
LPRT12E	Freshwater	Fluvial Estuary	0.200	0.500	1.000	1.70
LPRT13A	Freshwater	Fluvial Estuary	0.000	0.500	0.500	1.00
LPRT13B	Freshwater	Fluvial Estuary	0.000	0.250	1.000	1.25
LPRT13C	Freshwater	Fluvial Estuary	0.200	0.250	0.500	0.95
LPRT13D	Freshwater	Fluvial Estuary	0.400	0.250	0.500	1.15
LPRT13E	Freshwater	Fluvial Estuary	0.000	0.000	0.500	0.50
LPRT13F	Freshwater	Fluvial Estuary	0.000	0.000	0.500	0.50
LPRT13G	Freshwater	Fluvial Estuary	0.200	0.250	0.500	0.95

LOE -- line of evidence
WOE -- weight of evidence
Conclusions are based on WOE Sum as is relates to framework in Table B9-3a
y LOE is based on comparison to urban reference area data (see Table B9-2)

Table B9-3 presents the weight of evidence analysis for the comparison of LPRSA SQT data to non-urban reference conditions, combining the weights for the three SQT lines of evidence and assigning a risk category (based on Table B9-3a) to each LPRSA SQT sampling location. Table B9-3a provides the framework for assigning risk categories based on the combined weight of the three LOEs, and Tables B9-3b and B9-3c present the results of risk characterization for USEPA's preferred approach and the alternative approach for the quantitative analysis of uncertainty. The individual line of evidence data in Table B9-3 are also provided in Tables B9-1 and B9-2, and were originally developed in Tables B3-6 and B3-7. The results in Table B9-3 are summarized in B9-4.

e analysis of uncertainty

WOE Conclusion
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Table B9-4a. WOE summary, non-urban comparison

WOE Conclusion	No. of LPRSA Locations (by Zone)		Percent of LPRSA Locations (by Zone)	
	Upper Estuary	Fluvial Estuary	Upper Estuary	Fluvial Estuary
No impact	0	0	0%	0%
Low impact	12	8	48%	15%
Medium impact	10	37	40%	69%
High impact	3	9	12%	17%

WOE -- weight of evidence

Table B9-4b. WOE summary, non-urban comparison, quantiative analysis of uncertainty

WOE Conclusion	No. of LPRSA Locations (by Zone)		Percent of LPRSA Locations (by Zone)	
	Upper Estuary	Fluvial Estuary	Upper Estuary	Fluvial Estuary
No impact	1	6	4%	11%
Low impact	14	32	56%	59%
Medium impact	8	14	32%	26%
High impact	2	2	8%	4%

WOE -- weight of evidence

The results of the LPRSA SQT weight of evidence (based on the comparison of LPRSA data to non-urban reference conditions) is presented in Table B9-3 and summarized here, in Table B9-4. Tables B9-4a and B9-4b present summaries of the analyses based on USEPA's preferred approach and the alternative approach for the quantitative analysis of uncertainty, respectively. These tables are also presented in the BERA in Sections 6.1.2.1 and 6.1.3.1. Results for the urban weight of evidence analyses are presented in Table B8.

reat Bay)

Table B10-1. Decision framework for post-hoc analysis conclusion

High Mean Quotient?*	Portion of Toxicity Endpoints Outside Reference Envelope	Portion of Community Metrics Outside Reference Envelope	Stressful Habitat?**	Logical Narrative	Conclusion of Medium Evaluation***
No	0	0	No	Chemistry is low, therefore any impacts likely not due to chemistry	Likely low impact
No	0	0	Yes	Chemistry is low, therefore any impacts likely not due to chemistry	Likely low impact
No	0	>0	No	Chemistry is low, therefore any impacts likely not due to chemistry	Likely low impact
No	0	>0	Yes	Chemistry is low, therefore any impacts likely not due to chemistry	Likely low impact
No	>0	0	No	Chemistry is low, therefore any impacts likely not due to chemistry	Likely low impact
No	>0	0	Yes	Chemistry is low, therefore any impacts likely not due to chemistry	Likely low impact
No	>0	>0	No	Chemistry is low, therefore any impacts likely not due to chemistry	Likely low impact
No	>0	>0	Yes	Chemistry is low, therefore any impacts likely not due to chemistry	Likely low impact
Yes	0	0	No	No toxicity relative to urban reference condition, therefore impacts unlikely driven by chemical toxicity	Likely low impact
Yes	0	0	Yes	No toxicity relative to urban reference condition, therefore impacts unlikely driven by chemical toxicity	Likely low impact
Yes	0	>0	No	No toxicity relative to urban reference condition, therefore impacts unlikely driven by chemical toxicity	Likely low impact
Yes	0	>0	Yes	No toxicity relative to urban reference condition, therefore impacts unlikely driven by chemical toxicity	Likely low impact
Yes	>0	0	No	Habitat appears suitable, and chemistry is elevated; toxicity potentially caused by chemistry	Likely impacted
Yes	>0	0	Yes	Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains unclear	Medium impact
Yes	>0	>0	No	Habitat appears suitable, and chemistry is elevated; effects potentially caused by chemistry	Likely impacted
Yes	>0	>0	Yes	Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains unclear	Medium impact

* High mPECq defined by USEPA Region 2 as 0.5; high mERMq defined by Hyland et al. (2003) as 0.361; mERMq criterion used for estuarine locations, and mPECq criterion used for tidal freshwater locations
** Habitat is "stressful" if ammonia exceeds 30 mg/kg, TOC exceeds 3.5%, or fines exceed 95%
*** A conclusion of "medium impact" indicates no change due to residual uncertainty in the post-hoc analysis
Note: all possible iterations of key decision points are shown in Table B10-1; decision process is described visually in Section 6 of the BERA; other data presented in Tables B10-2 through B10-5 are included to evaluate uncertainty in conculsions

Table B10 presents the results of the post-hoc analysis of LPRSA SQT locations classified as having a "medium impact" based on the weight of evidence analyses (Tables B8 and B9). The purpose of the analyses presented in Table B10 is to further characterize medium impact locations according to the likelihood that effects are caused by sediment contamination; the result of the analyses is to shift some "medium impact" results down to "likely low impact" or up to "likely impacted" categories. This is intended to better inform risk managers of the risks associated with LPRSA sediments and to identify where uncertainties exist. This is described in more detail in BERA Section 6.1.2.2. Table B10-1 provides the logical decision framework for reassigning medium impacts to the "likely low impact" or "likely impacted" categories. Only "medium impact" locations were recategorized; all others (i.e., no impact, low impact, and high impact) were left as they were categorized in Tables B8 and B9. The linear process follows the following logic: 1) if chemistry is not elevated, then there the potential for chemical risk is limited (therefore, "likely low impact"); 2) if toxicity was always within the reference condition, then chemical toxicity is of low concern (therefore, "likely low impact"); 3) if habitat (sediment) conditions have the potential to impair benthic invertebrate communities or cause toxicity, then effects of site-related chemical contamination is unclear (therefore, "medium impact" unchanged); otherwise 4) chemistry is elevated and effects (i.e., on toxicity and/or community metrics) are apparent, while habitat appears generally suitable for invertebrates (therefore, "likely impacted").

Table B10-2. Post-hoc analysis of LPRSA SQT locations with "medium impacts" WOE conclusion, urban comparison

Location ID	Toxicity Test Type	Benthic Salinity Zone	Mean Quotient (ERM/ PEC)*	High Mean Quotient?*	Portion of Community Metrics Outside Reference Envelope	Portion of Toxicity Endpoints Outside Reference Envelope	Do Toxicity and Community LOEs Agree?	Ammonia (mg/kg)**	TOC (%)**	Fines (%)**	Sand (%)	Gravel (%)	SEM - AVS/OC (µmol/ g OC)	SEM-AVS note***	Closest CSO Distance (ft)	Stressful Habitat?**
LPRT01C	Estuarine	Upper Estuary	1.4	Yes	0%	67%	No	14	2	77.2	22.8	0	93	no metal risk	>1500	No
LPRT01E	Estuarine	Upper Estuary	0.75	Yes	0%	100%	No	8.5	1.4	43.1	56.9	0	335	uncertain metal risk	>1500	No
LPRT02B	Estuarine	Upper Estuary	2	Yes	40%	67%	Yes	11	2.4	63.2	36.8	0	33	no metal risk	939	No
LPRT03F	Estuarine	Upper Estuary	2.5	Yes	0%	67%	No	22	3	82.1	17.8	0.1	373	uncertain metal risk	>1500	No
LPRT04B	Estuarine	Upper Estuary	5.1	Yes	40%	33%	Yes	19	3.1	47.6	52.1	0.3	-594	no bioavailability	448	No
LPRT06C	Estuarine	Fluvial Estuary	1.6	Yes	0%	67%	No	28	2.2	23.4	76.7	0	215	uncertain metal risk	124	No
LPRT07A	Freshwater	Fluvial Estuary	1.5	Yes	0%	50%	No	14	2.8	7.6	92.2	0.2	105	no metal risk	135	No
LPRT09B	Freshwater	Fluvial Estuary	37	Yes	40%	25%	Yes	0.285	1.8	1	85.9	13.1	224	uncertain metal risk	260	No
LPRT09A	Freshwater	Fluvial Estuary	3.8	Yes	0%	75%	No	11	1.9	0.2	81.2	18.6	314	uncertain metal risk	>1500	No
LPRT09C	Freshwater	Fluvial Estuary	1.2	Yes	0%	50%	No	29	2.5	8.1	91.9	0	85	no metal risk	>1500	No
LPRT11A	Freshwater	Fluvial Estuary	0.6	Yes	0%	50%	No	3.6	1.2	5.4	89.4	5.2	1550	uncertain metal risk	>1500	No
LPRT11C	Freshwater	Fluvial Estuary	0.63	Yes	0%	50%	No	24	1.6	11.1	88.9	0	945	uncertain metal risk	>1500	No
LPRT09D	Freshwater	Fluvial Estuary	1.9	Yes	60%	0%	No	98	3.9	90.2	9.8	0	910	uncertain metal risk	>1500	Yes
LPRT10D	Freshwater	Fluvial Estuary	0.43	No	0%	50%	No	0.365	1.1	2.2	84	13.8	365	uncertain metal risk	>1500	No
LPRT15C	Freshwater	Tidal Freshwater	0.36	No	83%	25%	Yes	3.7	2.2	1.9	91.1	7	840	uncertain metal risk	>1500	No
LPRT15E	Freshwater	Tidal Freshwater	0.37	No	17%	25%	Yes	5.3	0.56	1.8	90.9	7.3	1920	uncertain metal risk	>1500	No
LPRT16A	Freshwater	Tidal Freshwater	0.18	No	67%	25%	Yes	9.5	0.93	4.8	89.5	5.7	1840	uncertain metal risk	>1500	No
LPRT16C	Freshwater	Tidal Freshwater	0.18	No	67%	0%	No	9.4	0.56	10.7	76	13.3	648	uncertain metal risk	>1500	No
LPRT16D	Freshwater	Tidal Freshwater	1.1	Yes	0%	0%	Yes	12	0.68	3.9	70	26.1	378	uncertain metal risk	>1500	No
LPRT16E	Freshwater	Tidal Freshwater	0.68	Yes	83%	0%	No	31	2.1	11.4	88	0.6	363	uncertain metal risk	>1500	Yes
LPRT02E	Estuarine	Upper Estuary	2.5	Yes	40%	33%	Yes	36	3.3	68.8	30.9	0.3	-438	no bioavailability	>1500	Yes
LPRT02F	Estuarine	Upper Estuary	2.5	Yes	20%	33%	Yes	58	3.8	78.8	21.1	0.1	-467	no bioavailability	>1500	Yes
LPRT03A	Estuarine	Upper Estuary	2.9	Yes	60%	33%	Yes	53	4.2	53.5	46.5	0	-1500	no bioavailability	>1500	Yes
LPRT03C	Estuarine	Upper Estuary	1.7	Yes	20%	33%	Yes	53	3.9	76.5	23.4	0.1	167	uncertain metal risk	>1500	Yes
LPRT04E	Estuarine	Upper Estuary	2.4	Yes	20%	100%	Yes	110	6.9	53.1	46.7	0.2	328	uncertain metal risk	371	Yes
LPRT05A	Estuarine	Fluvial Estuary	2.5	Yes	0%	100%	No	37	4.2	66	33.9	0.1	162	uncertain metal risk	596	Yes
LPRT05B	Estuarine	Fluvial Estuary	1.9	Yes	40%	67%	Yes	67	5.3	71.3	27.9	0.8	229	uncertain metal risk	522	Yes
LPRT05C	Freshwater	Fluvial Estuary	2.2	Yes	0%	75%	No	35	2.6	63	37	0	996	uncertain metal risk	646	Yes
LPRT05D	Freshwater	Fluvial Estuary	4.4	Yes	40%	75%	Yes	80	3.6	85.9	14.1	0	123	no metal risk	123	Yes
LPRT05E	Freshwater	Fluvial Estuary	1.6	Yes	40%	50%	Yes	76	3.1	42.4	57.5	0.1	1660	uncertain metal risk	375	Yes
LPRT06A	Freshwater	Fluvial Estuary	2.3	Yes	60%	25%	Yes	90	5.6	92.8	7.2	0	578	uncertain metal risk	467	Yes
LPRT06D	Freshwater	Fluvial Estuary	1.4	Yes	0%	75%	No	33	3.8	23.5	76.5	0	49	no metal risk	100	Yes
LPRT06F	Freshwater	Fluvial Estuary	2.2	Yes	40%	25%	Yes	130	3.6	70.6	29.3	0.1	568	uncertain metal risk	421	Yes
LPRT07B	Freshwater	Fluvial Estuary	2.8	Yes	0%	75%	No	48	3.9	23.5	76.5	0	95	no metal risk	536	Yes
LPRT08A	Freshwater	Fluvial Estuary	2.7	Yes	40%	75%	Yes	54	3.2	56.9	42.6	0.5	553	uncertain metal risk	468	Yes
LPRT08B	Freshwater	Fluvial Estuary	2	Yes	40%	50%	Yes	98	4.1	97.4	2.6	0	257	uncertain metal risk	883	Yes
LPRT08C	Freshwater	Fluvial Estuary	7.8	Yes	0%	75%	No	39	4.4	67.8	31.9	0.3	296	uncertain metal risk	>1500	Yes
LPRT09E	Freshwater	Fluvial Estuary	2.2	Yes	0%	75%	No	94	4.3	66.2	32.5	1.3	633	uncertain metal risk	>1500	Yes
LPRT09F	Freshwater	Fluvial Estuary	4.5	Yes	60%	50%	Yes	82	3.9	60.9	36.3	2.8	229	uncertain metal risk	>1500	Yes
LPRT10A	Freshwater	Fluvial Estuary	2	Yes	20%	75%	Yes	150	3.2	64.3	35.7	0	100	no metal risk	>1500	Yes
LPRT10B	Freshwater	Fluvial Estuary	6	Yes	0%	100%	No	67	2	29.1	57.5	13.4	70	no metal risk	>1500	Yes
LPRT10C	Freshwater	Fluvial Estuary	1.5	Yes	40%	50%	Yes	120	2.2	48.9	51.1	0	111	no metal risk	>1500	Yes
LPRT10E	Freshwater	Fluvial Estuary	2	Yes	0%	75%	No	87	4.4	63.2	36.8	0	71	no metal risk	>1500	Yes
LPRT11B	Freshwater	Fluvial Estuary	1.6	Yes	0%	75%	No	110	1.9	68.8	30	1.2	262	uncertain metal risk	>1500	Yes
LPRT11F	Freshwater	Fluvial Estuary	0.87	Yes	0%	50%	No	47	1.5	39.6	60.1	0.3	73	no metal risk	>1500	Yes
LPRT11G	Freshwater	Fluvial Estuary	14	Yes	20%	100%	Yes	130	4	60.4	39.6	0	115	no metal risk	>1500	Yes
LPRT12A	Freshwater	Fluvial Estuary	2.6	Yes	0%	75%	No	100	2.1	84.8	15.2	0	241	uncertain metal risk	>1500	Yes
LPRT12C	Freshwater	Fluvial Estuary	2.9	Yes	0%	100%	No	62	1.9	25.1	74.9	0	496	uncertain metal risk	>1500	Yes
LPRT12D	Freshwater	Fluvial Estuary	0.81	Yes	0%	75%	No	34	2	39.6	56.6	3.8	340	uncertain metal risk	>1500	Yes
LPRT12E	Freshwater	Fluvial Estuary	6	Yes	0%	75%	No	120	3	47	53	0	96	no metal risk	>1500	Yes
LPRT13A	Freshwater	Fluvial Estuary	1.2	Yes	0%	75%	No	41	5.4	21.6	78	0.4	36	no metal risk	>1500	Yes

* Habitat is "stressful" if ammonia exceeds 30 mg/kg, TOC exceeds 3.5%, or fines exceed 95%
** Metals are not bioavailable if OC-normalized SEM-AVS is a negative value; moderate risk is associated with threshold of 130 µmol/g OC; high risk is associated with values >3,000 µmol/g OC
*** A conclusion of "medium impact" indicates no change due to residual uncertainty in the post-hoc analysis
ERM -- effect range-median
PEC -- probable effects concentration
TOC -- total organic carbon
SEM -- simulateously extracted metals
AVS -- acid volatile sulfides
CSO -- combined sewage overflow
LO

Table B10-2 presents the recategorization of risk for LPRSA SQT locations previously classed as having "medium impacts" (based on the comparison of LPRSA data to urban reference conditions, which were determined u

Table B10-2 presents the recategorization of risk for LPRSA SQT locations previously classed as having "medium impacts" (based on the comparison of LPRSA data to urban reference conditions, which were determined a
approach; Tables B3 and B4) (Table B8-3b). This process is described in Table B10-1 and BERA Section 6.1.2.2. Chemistry was said to be elevated if mean effect range-median quotient concentration exceeded 0.361 at est
mean probable effect concentration quotients exceeded 0.5 at freshwater locations; rationale for these thresholds is described in the BERA text (Section 6.1.2.2). "Stressful" habitat conditions are also defined in Section 6
notes. Although information is provided regarding the SEM-AVS/foc (bioavailable metals), sediment fractions of sand and gravel, and proximity to CSOs, these factors were not used to determine if habitat is "stressful" or
variables are included because they can provide useful context for interpreting habitat conditions or chemical contamination.

Logical Narrative	Conclusion of Medium Evaluation****
Habitat appears suitable, and chemistry is elevated; toxicity potentially caused by chemistry	Likely impacted
Habitat appears suitable, and chemistry is elevated; toxicity potentially caused by chemistry	Likely impacted
Habitat appears suitable, and chemistry is elevated; effects potentially caused by chemistry	Likely impacted
Habitat appears suitable, and chemistry is elevated; toxicity potentially caused by chemistry	Likely impacted
Habitat appears suitable, and chemistry is elevated; effects potentially caused by chemistry	Likely impacted
Habitat appears suitable, and chemistry is elevated; toxicity potentially caused by chemistry	Likely impacted
Habitat appears suitable, and chemistry is elevated; toxicity potentially caused by chemistry	Likely impacted
Habitat appears suitable, and chemistry is elevated; effects potentially caused by chemistry	Likely impacted
Habitat appears suitable, and chemistry is elevated; toxicity potentially caused by chemistry	Likely impacted
Habitat appears suitable, and chemistry is elevated; toxicity potentially caused by chemistry	Likely impacted
Habitat appears suitable, and chemistry is elevated; toxicity potentially caused by chemistry	Likely impacted
Habitat appears suitable, and chemistry is elevated; toxicity potentially caused by chemistry	Likely impacted
No toxicity relative to urban reference condition, therefore impacts unlikely driven by chemical toxicity	Likely low impact
Chemistry is low, therefore any impacts likely not due to chemistry	Likely low impact
Chemistry is low, therefore any impacts likely not due to chemistry	Likely low impact
Chemistry is low, therefore any impacts likely not due to chemistry	Likely low impact
Chemistry is low, therefore any impacts likely not due to chemistry	Likely low impact
Chemistry is low, therefore any impacts likely not due to chemistry	Likely low impact
No toxicity relative to urban reference condition, therefore impacts unlikely driven by chemical toxicity	Likely low impact
No toxicity relative to urban reference condition, therefore impacts unlikely driven by chemical toxicity	Likely low impact
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains	Medium impact
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains	Medium impact
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains	Medium impact
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains	Medium impact
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains	Medium impact
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains	Medium impact
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains	Medium impact
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains	Medium impact
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains	Medium impact
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains	Medium impact
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Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains	Medium impact
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains	Medium impact
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains	Medium impact
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains	Medium impact
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains	Medium impact

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using USEPA's preferred
:uarine LPRSA locations or
6.1.2.2 and in Table B10-2
; if chemistry is elevated. Those

Table B10-3. Post-hoc analysis of LPRSA SQT locations with "medium impacts" WOE conclusion, urban comparison, quantitative analysis of uncertainty

Location ID	Toxicity Test Type	Benthic Salinity Zone	Mean Quotient (ERM/ PEC)*	High Mean Quotient?*	Portion of Community Metrics Outside Reference Envelope	Portion of Toxicity Endpoints Outside Reference Envelope	Do Toxicity and Community LOEs Agree?	Stressful Habitat?**	Ammonia (mg/kg)**	TOC (%)**	Fines (%)**	Sand (%)	Gravel (%)	SEM - AVS/OC (µmol/ g OC)	SEM-AVS note***	Closest CSO Distance (ft)
LPRT03A	Estuarine	Upper Estuary	2.9	Yes	60%	33%	Yes	Yes	53	4.2	53.5	46.5	0	-1500	no bioavailability	>1500
LPRT04B	Estuarine	Upper Estuary	5.1	Yes	20%	33%	Yes	No	19	3.1	47.6	52.1	0.3	-594	no bioavailability	448
LPRT04D	Estuarine	Upper Estuary	2.3	Yes	80%	67%	Yes	Yes	46	3.8	35.6	64.3	0.1	976	uncertain metal risk	463
LPRT05A	Estuarine	Fluvial Estuary	2.5	Yes	0%	100%	No	Yes	37	4.2	66	33.9	0.1	162	uncertain metal risk	596
LPRT05B	Estuarine	Fluvial Estuary	1.9	Yes	40%	67%	Yes	Yes	67	5.3	71.3	27.9	0.8	229	uncertain metal risk	522
LPRT05F	Freshwater	Fluvial Estuary	2.4	Yes	60%	75%	Yes	Yes	120	3.6	66	33.3	0.7	1060	uncertain metal risk	678
LPRT06B	Freshwater	Fluvial Estuary	2.3	Yes	80%	75%	Yes	Yes	110	4.7	93.8	6.2	0	572	uncertain metal risk	189
LPRT07C	Freshwater	Fluvial Estuary	6.9	Yes	60%	75%	Yes	Yes	110	3.6	82.7	17.3	0	1350	uncertain metal risk	>1500
LPRT07E	Freshwater	Fluvial Estuary	9.4	Yes	80%	50%	Yes	Yes	72	4.5	97.5	2.5	0	721	uncertain metal risk	244
LPRT08A	Freshwater	Fluvial Estuary	2.7	Yes	40%	75%	Yes	Yes	54	3.2	56.9	42.6	0.5	553	uncertain metal risk	468
LPRT08C	Freshwater	Fluvial Estuary	7.8	Yes	0%	75%	No	Yes	39	4.4	67.8	31.9	0.3	296	uncertain metal risk	>1500
LPRT09F	Freshwater	Fluvial Estuary	4.5	Yes	60%	50%	Yes	Yes	82	3.9	60.9	36.3	2.8	229	uncertain metal risk	>1500
LPRT10B	Freshwater	Fluvial Estuary	6	Yes	0%	100%	No	Yes	67	2	29.1	57.5	13.4	70	no metal risk	>1500
LPRT11G	Freshwater	Fluvial Estuary	14	Yes	20%	100%	Yes	Yes	130	4	60.4	39.6	0	115	no metal risk	>1500
LPRT12E	Freshwater	Fluvial Estuary	6	Yes	0%	75%	No	Yes	120	3	47	53	0	96	no metal risk	>1500
LPRT14A	Freshwater	Tidal Freshwater	0.68	Yes	100%	75%	Yes	No	20	1.9	16.1	82.8	1.1	148	uncertain metal risk	>1500
LPRT14B	Freshwater	Tidal Freshwater	0.67	Yes	67%	75%	Yes	Yes	72	1.6	17.6	82.4	0	176	uncertain metal risk	>1500
LPRT14C	Freshwater	Tidal Freshwater	0.78	Yes	100%	25%	Yes	No	3.2	2.4	2.9	94.9	2.2	518	uncertain metal risk	>1500
LPRT14E	Freshwater	Tidal Freshwater	0.36	No	83%	75%	Yes	No	2.3	1.5	3.6	90.8	5.6	831	uncertain metal risk	>1500
LPRT15A	Freshwater	Tidal Freshwater	0.6	Yes	83%	75%	Yes	Yes	70	1.5	13.1	86.9	0	212	uncertain metal risk	>1500
LPRT15C	Freshwater	Tidal Freshwater	0.36	No	67%	25%	Yes	No	3.7	2.2	1.9	91.1	7	840	uncertain metal risk	>1500
LPRT15F	Freshwater	Tidal Freshwater	0.4	No	100%	25%	Yes	No	4.6	0.2	1.4	93.1	5.5	2045	uncertain metal risk	>1500
LPRT17A	Freshwater	Tidal Freshwater	1.7	Yes	100%	50%	Yes	No	9.7	0.19	12.1	87.9	0	2250	uncertain metal risk	>1500

* High mPECq defined by USEPA Region 2 as 0.5; high mERMq defined by Hyland et al. (2003) as 0.361; mERMq criterion used for estuarine locations, and mPECq criterion used for tidal freshwater locations
** Habitat is "stressful" if ammonia exceeds 30 mg/kg, TOC exceeds 3.5%, or fines exceed 95%
*** Metals are not bioavailable if OC-normalized SEM-AVS is a negative value; uncertain risk is associated with threshold of 1,300 µmol/g OC; high risk is associated with values >3,000 µmol/g OC
**** A conclusion of "medium impact" indicates no change due to residual uncertainty in the post-hoc analysis
ERM -- effect range-median
PEC -- probable effects concentration
TOC -- total organic carbon
SEM -- simulateously extracted metals
AVS -- acid volatile sulfides
CSO -- combined sewer overflow

Table B10-3 presents the recategorization of risk for LPRSA SQT locations previously classed as having "medium impacts" (based on the comparison of LPRSA data to urban reference conditions, whic for the quantitative analysis of uncertainty; Tables B3 and B4) (Table B8-3c). This process is described in Table B10-1 and BERA Section 6.1.2.2. Chemistry was said to be elevated if mean effect range estuarine LPRSA locations or mean probable effect concentration quotients exceeded 0.5 at freshwater locations; rationale for these thresholds is described in the BERA text (Section 6.1.2.2). "Stress 6.1.2.2 and in Table B10-2 notes. Although information is provided regarding the SEM-AVS/foc (bioavailable metals), sediment fractions of sand and gravel, and proximity to CSOs, these factors were chemistry is elevated. Those variables are included because they can provide useful context for interpreting habitat conditions or chemical contamination.

Logical Narrative	Conclusion of Medium Evaluation****
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains	Medium impact
Habitat appears suitable, and chemistry is elevated; effects potentially caused by chemistry	Likely impacted
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains	Medium impact
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains	Medium impact
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains	Medium impact
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains	Medium impact
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains	Medium impact
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains	Medium impact
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains	Medium impact
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains	Medium impact
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains	Medium impact
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains	Medium impact
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains	Medium impact
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains	Medium impact
Habitat appears suitable, and chemistry is elevated; effects potentially caused by chemistry	Likely impacted
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains	Medium impact
Habitat appears suitable, and chemistry is elevated; effects potentially caused by chemistry	Likely impacted
Chemistry is low, therefore any impacts likely not due to chemistry	Likely low impact
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains	Medium impact
Chemistry is low, therefore any impacts likely not due to chemistry	Likely low impact
Chemistry is low, therefore any impacts likely not due to chemistry	Likely low impact
Habitat appears suitable, and chemistry is elevated; effects potentially caused by chemistry	Likely impacted

ch were determined using the alternative approach
-median quotient concentration exceeded 0.361 at
sful" habitat conditions are also defined in Section
not used to determine if habitat is "stressful" or if

Table B10-4. Post-hoc analysis of LPRSA SQT locations with "medium impacts" WOE conclusion, non-urban comparison

Location ID	Toxicity Test Type	Benthic Salinity Zone	Mean Quotient (ERM/ PEC)*	High Mean Quotient?*	Portion of Community Metrics Outside Reference Envelope	Portion of Toxicity Endpoints Outside Reference Envelope	Do Toxicity and Community LOEs Agree?	Stressful Habitat?**	Ammonia (mg/kg)**	TOC (%)**	Fines (%)**	Sand (%)	Gravel (%)	SEM - AVS/OC (µmol/ g OC)	SEM-AVS note***	Closest CSO Distance (ft)
LPRT01C	Estuarine	Upper Estuary	1.4	Yes	0%	67%	No	No	14	2	77.2	22.8	0	93	no metal risk	>1500
LPRT01E	Estuarine	Upper Estuary	0.75	Yes	0%	100%	No	No	8.5	1.4	43.1	56.9	0	335	uncertain metal risk	>1500
LPRT02B	Estuarine	Upper Estuary	2	Yes	40%	33%	Yes	No	11	2.4	63.2	36.8	0	33	no metal risk	939
LPRT02E	Estuarine	Upper Estuary	2.5	Yes	40%	33%	Yes	Yes	36	3.3	68.8	30.9	0.3	-438	no bioavailability	>1500
LPRT02F	Estuarine	Upper Estuary	2.5	Yes	40%	33%	Yes	Yes	58	3.8	78.8	21.1	0.1	-467	no bioavailability	>1500
LPRT03A	Estuarine	Upper Estuary	2.9	Yes	80%	33%	Yes	Yes	53	4.2	53.5	46.5	0	-1500	no bioavailability	>1500
LPRT03C	Estuarine	Upper Estuary	1.7	Yes	40%	33%	Yes	Yes	53	3.9	76.5	23.4	0.1	167	uncertain metal risk	>1500
LPRT03F	Estuarine	Upper Estuary	2.5	Yes	40%	33%	Yes	No	22	3	82.1	17.8	0.1	373	uncertain metal risk	>1500
LPRT04A	Estuarine	Upper Estuary	0.7	Yes	40%	33%	Yes	No	5	2.1	45.4	49.9	4.7	-10	no bioavailability	953
LPRT04B	Estuarine	Upper Estuary	5.1	Yes	40%	33%	Yes	No	19	3.1	47.6	52.1	0.3	-594	no bioavailability	448
LPRT05A	Estuarine	Fluvial Estuary	2.5	Yes	0%	100%	No	Yes	37	4.2	66	33.9	0.1	162	uncertain metal risk	596
LPRT05B	Estuarine	Fluvial Estuary	1.9	Yes	40%	67%	Yes	Yes	67	5.3	71.3	27.9	0.8	229	uncertain metal risk	522
LPRT05C	Freshwater	Fluvial Estuary	2.2	Yes	0%	50%	No	Yes	35	2.6	63	37	0	996	uncertain metal risk	646
LPRT05D	Freshwater	Fluvial Estuary	4.4	Yes	40%	0%	No	Yes	80	3.6	85.9	14.1	0	123	no metal risk	123
LPRT05E	Freshwater	Fluvial Estuary	1.6	Yes	40%	0%	No	Yes	76	3.1	42.4	57.5	0.1	1660	uncertain metal risk	375
LPRT06A	Freshwater	Fluvial Estuary	2.3	Yes	60%	25%	Yes	Yes	90	5.6	92.8	7.2	0	578	uncertain metal risk	467
LPRT06C	Estuarine	Fluvial Estuary	1.6	Yes	20%	67%	Yes	No	28	2.2	23.4	76.7	0	215	uncertain metal risk	124
LPRT06D	Freshwater	Fluvial Estuary	1.4	Yes	20%	50%	Yes	Yes	33	3.8	23.5	76.5	0	49	no metal risk	100
LPRT06F	Freshwater	Fluvial Estuary	2.2	Yes	80%	25%	Yes	Yes	130	3.6	70.6	29.3	0.1	568	uncertain metal risk	421
LPRT07A	Freshwater	Fluvial Estuary	1.5	Yes	20%	0%	No	No	14	2.8	7.6	92.2	0.2	105	no metal risk	135
LPRT08B	Freshwater	Fluvial Estuary	2	Yes	60%	0%	No	Yes	98	4.1	97.4	2.6	0	257	uncertain metal risk	883
LPRT08C	Freshwater	Fluvial Estuary	7.8	Yes	0%	75%	No	Yes	39	4.4	67.8	31.9	0.3	296	uncertain metal risk	>1500
LPRT08D	Freshwater	Fluvial Estuary	1.2	Yes	40%	0%	No	No	21	2.1	4.6	93.6	1.8	159	uncertain metal risk	>1500
LPRT08E	Freshwater	Fluvial Estuary	0.72	Yes	40%	0%	No	No	2	1.6	1.8	96	2.2	1100	uncertain metal risk	540
LPRT09B	Freshwater	Fluvial Estuary	37	Yes	60%	0%	No	No	0.285	1.8	1	85.9	13.1	224	uncertain metal risk	260
LPRT09H	Freshwater	Fluvial Estuary	3	Yes	60%	0%	No	No	0.305	2.8	1.4	92.4	6.2	683	uncertain metal risk	>1500
LPRT09A	Freshwater	Fluvial Estuary	3.8	Yes	40%	75%	Yes	No	11	1.9	0.2	81.2	18.6	314	uncertain metal risk	>1500
LPRT09C	Freshwater	Fluvial Estuary	1.2	Yes	0%	0%	Yes	No	29	2.5	8.1	91.9	0	85	no metal risk	>1500
LPRT09D	Freshwater	Fluvial Estuary	1.9	Yes	60%	0%	No	Yes	98	3.9	90.2	9.8	0	910	uncertain metal risk	>1500
LPRT09E	Freshwater	Fluvial Estuary	2.2	Yes	20%	25%	Yes	Yes	94	4.3	66.2	32.5	1.3	633	uncertain metal risk	>1500
LPRT09G	Freshwater	Fluvial Estuary	0.37	No	60%	0%	No	No	2.9	0.45	4.4	76.6	19	-10	no bioavailability	>1500
LPRT10A	Freshwater	Fluvial Estuary	2	Yes	40%	25%	Yes	Yes	150	3.2	64.3	35.7	0	100	no metal risk	>1500
LPRT10B	Freshwater	Fluvial Estuary	6	Yes	20%	100%	Yes	Yes	67	2	29.1	57.5	13.4	70	no metal risk	>1500
LPRT10C	Freshwater	Fluvial Estuary	1.5	Yes	40%	25%	Yes	Yes	120	2.2	48.9	51.1	0	111	no metal risk	>1500
LPRT10D	Freshwater	Fluvial Estuary	0.43	No	0%	25%	No	No	0.365	1.1	2.2	84	13.8	365	uncertain metal risk	>1500
LPRT10E	Freshwater	Fluvial Estuary	2	Yes	0%	50%	No	Yes	87	4.4	63.2	36.8	0	71	no metal risk	>1500
LPRT11A	Freshwater	Fluvial Estuary	0.6	Yes	0%	25%	No	No	3.6	1.2	5.4	89.4	5.2	1550	uncertain metal risk	>1500
LPRT11B	Freshwater	Fluvial Estuary	1.6	Yes	0%	50%	No	Yes	110	1.9	68.8	30	1.2	262	uncertain metal risk	>1500
LPRT11C	Freshwater	Fluvial Estuary	0.63	Yes	0%	0%	Yes	No	24	1.6	11.1	88.9	0	945	uncertain metal risk	>1500
LPRT11E	Freshwater	Fluvial Estuary	2.5	Yes	40%	25%	Yes	Yes	170	4.9	79.4	20.7	0	251	uncertain metal risk	>1500
LPRT11F	Freshwater	Fluvial Estuary	0.87	Yes	0%	50%	No	Yes	47	1.5	39.6	60.1	0.3	73	no metal risk	>1500
LPRT12A	Freshwater	Fluvial Estuary	2.6	Yes	20%	25%	Yes	Yes	100	2.1	84.8	15.2	0	241	uncertain metal risk	>1500
LPRT12C	Freshwater	Fluvial Estuary	2.9	Yes	0%	50%	No	Yes	62	1.9	25.1	74.9	0	496	uncertain metal risk	>1500
LPRT12D	Freshwater	Fluvial Estuary	0.81	Yes	20%	75%	Yes	Yes	34	2	39.6	56.6	3.8	340	uncertain metal risk	>1500
LPRT12E	Freshwater	Fluvial Estuary	6	Yes	20%	50%	Yes	Yes	120	3	47	53	0	96	no metal risk	>1500
LPRT13A	Freshwater	Fluvial Estuary	1.2	Yes	0%	50%	No	Yes	41	5.4	21.6	78	0.4	36	no metal risk	>1500
LPRT13D	Freshwater	Fluvial Estuary	0.27	No	40%	25%	Yes	No	13	0.47	4.5	71	24.5	374	uncertain metal risk	>1500

* Habitat is "stressful" if ammonia exceeds 30 mg/kg, TOC exceeds 3.5%, or fines exceed 95%
** Metals are not bioavailable if OC-normalized SEM-AVS is a negative value; moderate risk is associated with threshold of 1,300 µmol/g OC; high risk is associated with values >3,000 µmol/g OC
*** A conclusion of "medium impact" indicates no change due to residual uncertainty in the post-hoc analysis
ERM -- effect range-median
PEC -- probable effects concentration
TOC -- total organic carbon
SEM -- simulateously extracted metals
AVS -- acid volatile sulfides

Table B10-4 presents the recategorization of risk for LPRSA SQT locations previously classed as having "medium impacts" (based on the comparison of LPRSA data to non-urban reference conditi

approach; Table B3) (Table B9-3b). This process is described in Table B10-1 and BERA Section 6.1.2.2. Chemistry was said to be elevated if mean effect range-median quotient concentration exce
this threshold is described in the BERA text (Section 6.1.2.2). "Stressful" habitat conditions are also defined in Section 6.1.2.2 and in Table B10-2 notes. Although information is provided regardin
fractions of sand and gravel, and proximity to CSOs, these factors were not used to determine if habitat is "stressful" or if chemistry is elevated. Those variables are included because they can pr
or chemical contamination.

Logical Narrative	Conclusion of Medium Evaluation****
Habitat appears suitable, and chemistry is elevated; toxicity potentially caused by chemistry	Likely impacted
Habitat appears suitable, and chemistry is elevated; toxicity potentially caused by chemistry	Likely impacted
Habitat appears suitable, and chemistry is elevated; effects potentially caused by chemistry	Likely impacted
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains	Medium impact
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains	Medium impact
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains	Medium impact
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains	Medium impact
Habitat appears suitable, and chemistry is elevated; effects potentially caused by chemistry	Likely impacted
Habitat appears suitable, and chemistry is elevated; effects potentially caused by chemistry	Likely impacted
Habitat appears suitable, and chemistry is elevated; effects potentially caused by chemistry	Likely impacted
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains	Medium impact
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains	Medium impact
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains	Medium impact
No toxicity relative to urban reference condition, therefore impacts unlikely driven by chemical toxicity	Likely low impact
No toxicity relative to urban reference condition, therefore impacts unlikely driven by chemical toxicity	Likely low impact
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains	Medium impact
Habitat appears suitable, and chemistry is elevated; effects potentially caused by chemistry	Likely impacted
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains	Medium impact
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains	Medium impact
No toxicity relative to urban reference condition, therefore impacts unlikely driven by chemical toxicity	Likely low impact
No toxicity relative to urban reference condition, therefore impacts unlikely driven by chemical toxicity	Likely low impact
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains	Medium impact
No toxicity relative to urban reference condition, therefore impacts unlikely driven by chemical toxicity	Likely low impact
No toxicity relative to urban reference condition, therefore impacts unlikely driven by chemical toxicity	Likely low impact
No toxicity relative to urban reference condition, therefore impacts unlikely driven by chemical toxicity	Likely low impact
No toxicity relative to urban reference condition, therefore impacts unlikely driven by chemical toxicity	Likely low impact
Habitat appears suitable, and chemistry is elevated; effects potentially caused by chemistry	Likely impacted
No toxicity relative to urban reference condition, therefore impacts unlikely driven by chemical toxicity	Likely low impact
No toxicity relative to urban reference condition, therefore impacts unlikely driven by chemical toxicity	Likely low impact
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains	Medium impact
Chemistry is low, therefore any impacts likely not due to chemistry	Likely low impact
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains	Medium impact
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains	Medium impact
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains	Medium impact
Chemistry is low, therefore any impacts likely not due to chemistry	Likely low impact
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains	Medium impact
Habitat appears suitable, and chemistry is elevated; toxicity potentially caused by chemistry	Likely impacted
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains	Medium impact
No toxicity relative to urban reference condition, therefore impacts unlikely driven by chemical toxicity	Likely low impact
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains	Medium impact
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains	Medium impact
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains	Medium impact
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains	Medium impact
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains	Medium impact
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains	Medium impact
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains	Medium impact
Chemistry is low, therefore any impacts likely not due to chemistry	Likely low impact

ions, which were determined using USEPA's preferred

eeded 0.361 at estuarine LPRSA locations; rationale for
ıg the SEM-AVS/foc (bioavailable metals), sediment
ovide useful context for interpreting habitat conditions

Table B10-5. Post-hoc analysis of LPRSA SQT locations with "medium impacts" WOE conclusion, non-urban comparison, quantitative analysis of un

Location ID	Toxicity Test Type	Benthic Salinity Zone	Mean Quotient (ERM/ PEC)*	High Mean Quotient?*	Portion of Community Metrics Outside Reference Envelope	Portion of Toxicity Endpoints Outside Reference Envelope	Do Toxicity and Community LOEs Agree?	Stressful Habitat?**	Ammonia (mg/kg)**	TOC (%)**	Fines (%)**	Sand (%)	Gravel (%)	SEM - AVS/OC (µmol/ g OC)	SEM-AVS note***	Closest CSO Distance (ft)
LPRT01E	Estuarine	Upper Estuary	0.75	Yes	0%	100%	No	No	8.5	1.4	43.1	56.9	0	335	uncertain metal risk	>1500
LPRT02B	Estuarine	Upper Estuary	2	Yes	40%	67%	Yes	No	11	2.4	63.2	36.8	0	33	no metal risk	939
LPRT02E	Estuarine	Upper Estuary	2.5	Yes	40%	33%	Yes	Yes	36	3.3	68.8	30.9	0.3	-438	no bioavailability	>1500
LPRT02F	Estuarine	Upper Estuary	2.5	Yes	20%	33%	Yes	Yes	58	3.8	78.8	21.1	0.1	-467	no bioavailability	>1500
LPRT03A	Estuarine	Upper Estuary	2.9	Yes	60%	33%	Yes	Yes	53	4.2	53.5	46.5	0	-1500	no bioavailability	>1500
LPRT03F	Estuarine	Upper Estuary	2.5	Yes	0%	67%	No	No	22	3	82.1	17.8	0.1	373	uncertain metal risk	>1500
LPRT04B	Estuarine	Upper Estuary	5.1	Yes	40%	33%	Yes	No	19	3.1	47.6	52.1	0.3	-594	no bioavailability	448
LPRT04E	Estuarine	Upper Estuary	2.4	Yes	20%	100%	Yes	Yes	110	6.9	53.1	46.7	0.2	328	uncertain metal risk	371
LPRT05A	Estuarine	Fluvial Estuary	2.5	Yes	0%	100%	No	Yes	37	4.2	66	33.9	0.1	162	uncertain metal risk	596
LPRT05B	Estuarine	Fluvial Estuary	1.9	Yes	40%	67%	Yes	Yes	67	5.3	71.3	27.9	0.8	229	uncertain metal risk	522
LPRT05F	Freshwater	Fluvial Estuary	2.4	Yes	60%	75%	Yes	Yes	120	3.6	66	33.3	0.7	1060	uncertain metal risk	678
LPRT06B	Freshwater	Fluvial Estuary	2.3	Yes	80%	75%	Yes	Yes	110	4.7	93.8	6.2	0	572	uncertain metal risk	189
LPRT06F	Freshwater	Fluvial Estuary	2.2	Yes	40%	25%	Yes	Yes	130	3.6	70.6	29.3	0.1	568	uncertain metal risk	421
LPRT07B	Freshwater	Fluvial Estuary	2.8	Yes	0%	75%	No	Yes	48	3.9	23.5	76.5	0	95	no metal risk	536
LPRT07C	Freshwater	Fluvial Estuary	6.9	Yes	60%	75%	Yes	Yes	110	3.6	82.7	17.3	0	1350	uncertain metal risk	>1500
LPRT07E	Freshwater	Fluvial Estuary	9.4	Yes	80%	50%	Yes	Yes	72	4.5	97.5	2.5	0	721	uncertain metal risk	244
LPRT08C	Freshwater	Fluvial Estuary	7.8	Yes	0%	75%	No	Yes	39	4.4	67.8	31.9	0.3	296	uncertain metal risk	>1500
LPRT09B	Freshwater	Fluvial Estuary	37	Yes	40%	25%	Yes	No	0.285	1.8	1	85.9	13.1	224	uncertain metal risk	260
LPRT09A	Freshwater	Fluvial Estuary	3.8	Yes	0%	75%	No	No	11	1.9	0.2	81.2	18.6	314	uncertain metal risk	>1500
LPRT09F	Freshwater	Fluvial Estuary	4.5	Yes	60%	50%	Yes	Yes	82	3.9	60.9	36.3	2.8	229	uncertain metal risk	>1500
LPRT10B	Freshwater	Fluvial Estuary	6	Yes	0%	100%	No	Yes	67	2	29.1	57.5	13.4	70	no metal risk	>1500
LPRT12E	Freshwater	Fluvial Estuary	6	Yes	0%	75%	No	Yes	120	3	47	53	0	96	no metal risk	>1500

* Habitat is "stressful" if ammonia exceeds 30 mg/kg, TOC exceeds 3.5%, or fines exceed 95%
** Metals are not bioavailable if OC-normalized SEM-AVS is a negative value; moderate risk is associated with threshold of 1,300 µmol/g OC; high risk is associated with values >3,000 µmol/g OC
*** A conclusion of "medium impact" indicates no change due to residual uncertainty in the post-hoc analysis
ERM -- effect range-median
PEC -- probable effects concentration
TOC -- total organic carbon
SEM -- simulateously extracted metals
AVS -- acid volatile sulfides
C
L

Table B10-5 presents the recategorization of risk for LPRSA SQT locations previously classed as having "medium impacts" (based on the comparison of LPRSA data to non-urban reference co approach for the quantitative analysis of uncertainty; Table B3) (Table B9-3c). This process is described in Table B10-1 and BERA Section 6.1.2.2. Chemistry was said to be elevated if mean ef at estuarine LPRSA locations; rationale for this threshold is described in the BERA text (Section 6.1.2.2). "Stressful" habitat conditions are also defined in Section 6.1.2.2 and in Table B10-2 no AVS/foc (bioavailable metals), sediment fractions of sand and gravel, and proximity to CSOs, these factors were not used to determine if habitat is "stressful" or if chemistry is elevated. Thos context for interpreting habitat conditions or chemical contamination.

certainty

Logical Narrative	Conclusion of Medium Evaluation****
Habitat appears suitable, and chemistry is elevated; toxicity potentially caused by chemistry	Likely impacted
Habitat appears suitable, and chemistry is elevated; effects potentially caused by chemistry	Likely impacted
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains unclear	Medium impact
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains unclear	Medium impact
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains unclear	Medium impact
Habitat appears suitable, and chemistry is elevated; toxicity potentially caused by chemistry	Likely impacted
Habitat appears suitable, and chemistry is elevated; effects potentially caused by chemistry	Likely impacted
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains unclear	Medium impact
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains unclear	Medium impact
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains unclear	Medium impact
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains unclear	Medium impact
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains unclear	Medium impact
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains unclear	Medium impact
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains unclear	Medium impact
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains unclear	Medium impact
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains unclear	Medium impact
Habitat appears suitable, and chemistry is elevated; effects potentially caused by chemistry	Likely impacted
Habitat appears suitable, and chemistry is elevated; toxicity potentially caused by chemistry	Likely impacted
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains unclear	Medium impact
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains unclear	Medium impact
Habitat is stressful and chemistry is elevated; reason for toxic and/or community level response remains unclear	Medium impact

nditions, which were determined using the alternative
fect range-median quotient concentration exceeded 0.361
otes. Although information is provided regarding the SEM-
e variables are included because they can provide useful

Table B10-6a. Post-hoc analysis of LPRSA SQT locations with "medium impacts" WOE conclusion, urban comparison

Benthic Salinity Zone	N	No Impact		Low Impact		Medium Impact: Likely Low Impact		Medium Impact: Medium Impact (Unchanged)		Medium Impact: Likely Impacted		High Impact	
		n	%	n	%	n	%	n	%	n	%	n	%
Upper estuarine (RM 0 to RM 4)	25	0	0%	13	52%	0	0%	5	20%	5	20%	2	8%
Fluvial estuarine (RM 4 to RM 13)	54	0	0%	14	26%	2	4%	26	48%	7	13%	5	9%
Tidal freshwater (RM 13 to RM 17.4)	18a	0	0%	1	6%	6	33%	0	0%	0	0%	11	61%

RM – river mile
N – sample size (by benthic salinity zone)
n – sample size (by conclusion)
WOE – weight of evidence
a. No benthic community data were collected at LPRT16B, so a full WOE analysis could not be conducted for that sample
Data for No, Low, and High Impacts are from Table B8

Table B10-6b. Post-hoc analysis of LPRSA SQT locations with "medium impacts" WOE conclusion, urban comparison, quantiative analysis of uncertainty

Benthic Salinity Zone	N	No Impact		Low Impact		Medium Impact: Likely Low Impact		Medium Impact: Medium Impact (Unchanged)		Medium Impact: Likely Impacted		High Impact	
		n	%	n	%	n	%	n	%	n	%	n	%
Upper estuarine (RM 0 to RM 4)	25	4	16%	17	68%	0	0%	2	8%	1	4%	1	4%
Fluvial estuarine (RM 4 to RM 13)	54	10	19%	32	59%	0	0%	12	22%	0	0%	0	0%
Tidal freshwater (RM 13 to RM 17.4)	18a	2	11%	8	44%	3	17%	2	11%	3	17%	0	0%

RM – river mile
N – sample size (by benthic salinity zone)
n – sample size (by conclusion)
WOE – weight of evidence
a. No benthic community data were collected at LPRT16B, so a full WOE analysis could not be conducted for that sample
Data for No, Low, and High Impacts are from Table B8

Table B10-6c. Post-hoc analysis of LPRSA SQT locations with "medium impacts" WOE conclusion, non-urban comparison

Benthic Salinity Zone	N	No Impact		Low Impact		Medium Impact: Likely Low Impact		Medium Impact: Medium Impact (Unchanged)		Medium Impact: Likely Impacted		High Impact	
		n	%	n	%	n	%	n	%	n	%	n	%
Upper estuarine (RM 0 to RM 4)	25	0	0%	12	48%	0	0%	4	16%	6	24%	3	12%
Fluvial estuarine (RM 4 to RM 13)	54	0	0%	8	15%	5	9%	23	43%	9	17%	9	17%

RM – river mile
N – sample size (by benthic salinity zone)
n – sample size (by conclusion)
WOE – weight of evidence
Note: non-urban freshwater reference area data were not available for these analyses
Data for No, Low, and High Impacts are from Table B9

Table B10-6d. Post-hoc analysis of LPRSA SQT locations with "medium impacts" WOE conclusion, non-urban comparison, quantiative analysis of uncertainty

Benthic Salinity Zone	N	No Impact		Low Impact		Medium Impact: Likely Low Impact		Medium Impact: Medium Impact (Unchanged)		Medium Impact: Likely Impacted		High Impact	
		n	%	n	%	n	%	n	%	n	%	n	%
Upper estuarine (RM 0 to RM 4)	25	1	4%	14	56%	6	24%	0	0%	2	8%	2	8%
Fluvial estuarine (RM 4 to RM 13)	54	6	11%	32	59%	1	2%	12	22%	1	2%	2	4%

RM – river mile
N – sample size (by benthic salinity zone)
n – sample size (by conclusion)
WOE – weight of evidence
Note: non-urban freshwater reference area data were not available for these analyses
Da

Table B10-6 provides a summary of the weight of evidence-based risk categories for all LPRSA SQT locations (including the no impact, low impact, and high impact locations)

Table B10-6 provides a summary of the weight of evidence-based risk categories for all LPRSA SQT locations (including the no impact, low impact, and high impact locations), including the recategorized "medium impact" locations. Tables B10-6a and B10-6b, which are also provided in BERA Section 6.1.2.2, present the summaries for the analyses based on urban reference conditions using USEPA's preferred approach and the alternative approach for the quantitative analysis of uncertainty, respectively. Tables B10-6c and B10-6d present summaries of the analogous analyses but based comparisons of LPRSA data to non-urban reference conditions.

Reference cited: Hyland JL, Balthis WL, Engle VD, Long ER, Paul JF, Summers JK, Van Dolah RF. 2003.
Incidence of Stress in Benthic Communities Along the U.S. Atlantic and Gulf of Mexico Coasts within Different Ranges of Sediment Contamination from Chemical Mixtures. Environmental Monitoring and Assessment 81:149-161.

APPENDIX C. BERA EPC VALUES

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Acronyms

BERA	baseline ecological risk assessment
BMF	biomagnification factor
BW	body weight
CF	conversion factor
COPEC	chemical of potential ecological concern
EPC	exposure point concentration
FIR	food ingestion rate
LOE	line of evidence
LPRSA	Lower Passaic River Study Area
NFF	non-small forage fish
RM	river mile
SFF	small forage fish
SIR	sediment ingestion rate
SLERA	screening-level ecological risk assessment
SQT	sediment quality triad
SUF	site use factor
TRV	toxicity reference value
UCL	upper confidence limit on the mean

1 Introduction

This appendix provides the exposure point concentration (EPC) data used in the baseline ecological risk assessment (BERA) of the Lower Passaic River Study Area (LPRSA). Table 1-1 presents a summary of the EPCs used in the BERA, which are included in Attachment C1.

Table 1-1. Summary of EPCs used in BERA

Receptor	LOE Requiring EPCs	EPCs Required
Benthic invertebrate		
Benthic invertebrate community	surface water	surface water
	sediment	sediment
Blue crab	tissue residue	tissue
Estuarine mussel	tissue residue	tissue
Estuarine worm	tissue residue	tissue
Freshwater mussel	tissue residue	tissue
Freshwater worm	tissue residue	tissue
Fish		
All fish	surface water	surface water
Mummichog	tissue residue	tissue
	dietary dose	sediment, prey tissue
	egg tissue residue (modeled)	tissue
Other forage fish	tissue residue	tissue
Carp	tissue residue	tissue
	dietary dose	sediment, prey tissue
White sucker	tissue residue	tissue
	dietary dose	sediment, prey tissue
Brown bullhead	tissue residue	tissue
	dietary dose	sediment, prey tissue
Channel catfish	tissue residue	tissue
	dietary dose	sediment, prey tissue
White catfish	tissue residue	tissue
	dietary dose	sediment, prey tissue
White perch	tissue residue	tissue
	dietary dose	sediment, prey tissue
Smallmouth bass	tissue residue	tissue
	dietary dose	sediment, prey tissue
Largemouth bass	tissue residue	tissue
	dietary dose	sediment, prey tissue
American eel	tissue residue	tissue
	dietary dose	sediment, prey tissue
Northern Pike	tissue residue	tissue
	dietary dose	sediment, prey tissue

Table 1-1. Summary of EPCs used in BERA

Receptor	LOE Requiring EPCs	EPCs Required
Bird		
Belted kingfisher	dietary dose	sediment, surface water, prey tissue
	egg tissue residue (modeled)	sediment, surface water, prey tissue
Great blue heron	dietary dose	sediment, surface water, prey tissue
	egg tissue residue (modeled)	sediment, surface water, prey tissue
Spotted sandpiper	dietary dose	sediment, surface water, prey tissue
Mammal		
Mink	dietary dose	sediment, surface water, prey tissue
River otter	dietary dose	sediment, surface water, prey tissue
Zooplankton		
Zooplankton community	surface water	surface water
Amphibians/reptiles		
Amphibian/reptile community	surface water	surface water
Aquatic plants		
Aquatic plant community	surface sediment	surface sediment
	surface water	surface water

BERA – baseline risk assessment
EPC – exposure point concentration
LOE – line of evidence

2 Benthic Invertebrates

The primary line of evidence (LOE) for determining risks to benthic invertebrates was based on the sediment quality triad (SQT) approach. In addition, potential risks were quantitatively characterized in the BERA using two other LOEs:

- **Tissue LOE –** comparison of chemical of potential ecological concern (COPEC) concentrations in benthic tissue to tissue TRVs
- **Surface water LOE –** comparison of COPEC concentrations in surface water to toxicity reference values (TRVs)

Sediment data were also evaluated as part of the SQT analysis.

A summary of the EPCs used for each LOE is presented in Table 2-1.

Table 2-1. Summary of EPCs used in the benthic invertebrate risk assessment

LOE Requiring EPCs	EPC			EPC Use in BERA
	Media	Statistic	EPC Location in Appendix C1 Tables	
Tissue residue	tissue	UCL (or max) of species-specific whole-body tissue concentration	selected EPC column under *Benthic Tissue LOE -Tissue EPCs* tab	tissue EPC used to directly represent exposure
Water	surface water	UCL (or max) of near-bottom surface water concentration in freshwater (RM 4–RM 17.4) and estuarine (RM 0–RM 13) areas	selected EPC column under *Surface water EPCs* tab	surface water EPC used to directly represent exposure
Sediment	sediment	sediment chemistry used in SQT analysis (see Section 6.1 of BERA)	selected EPC column under *Sediment EPCs* tab	sediment chemistry used in SQT analysis (see Section 6.1 of BERA)

BERA – baseline risk assessment
EPC – exposure point concentration
LOE – line of evidence
RM – river mile
SQT – sediment quality triad
UCL – upper confidence limit on the mean

3 Fish

The potential for risks to fish was characterized quantitatively using four LOEs:

- **Tissue LOE –** comparison of COPEC concentrations in fish tissue to tissue TRVs
- **Dietary LOE –** comparison of COPEC concentrations in fish diet to dietary TRVs
- **Surface water LOE –** comparison of COPEC concentrations in surface water to TRVs
- **Fish egg tissue LOE –** comparison of modeled COPEC concentrations in mummichog egg tissue to TRVs

A summary of the EPCs used for each LOE is presented in Table 3-1.

Table 3-1. Summary of EPCs used in the fish risk assessment

LOE Requiring EPCs	EPC			EPC Use in BERA
	Media	Statistic	EPC Location in Appendix C1 Tables	
Tissue residue	tissue	UCL (or max) of species-specific whole-body tissue concentration	selected EPC column under *Fish Tissue LOE_Tissue EPCs* tab	tissue EPC used to directly represent exposure
Dietary dose	sediment	UCL (or max) of sediment concentration within species-specific assigned exposure area	selected EPC column under *Diet LOE_Sediment EPCs* tab	Sediment and tissue EPCs were used to derive dietary exposure doses, as follows: Exposure dose = ([(FIR x EPC_{prey}) + (SIR x EPC_{sed})]/BW) x SUF Species-specific dietary assumptions (i.e., prey composition and exposure area) are detailed in Section 7.2.2 of the BERA and summarized in Table 3-2 herein.
	prey	UCL (or max) of tissue concentration per prey item within species-assigned dietary composition and exposure area	selected EPC column under *Diet LOE_Prey Tissue EPCs* tab	
Water	surface water	UCL (or max) of surface water concentration in freshwater (RM 4–RM 17.4) and estuarine (RM 0–RM 13) areas	selected EPC column under *Surface water EPCs* tab	surface water EPC used to directly represent exposure
Egg tissue residue (modeled)	tissue (mummichog only)	egg concentration derived from lipid-normalized UCL (or max) of whole-body tissue concentration (mummichog only)	presented in Section 7.4.2 of BERA	Egg EPC was derived as follows: CF = ($EPC_{egg,lipid}$)/($EPC_{WB,lipid}$) Lipid and CF assumptions are detailed in Section 7.4.2 of the BERA.

BERA – baseline risk assessment
BW – body weight
CF – conversion factor
EPC – exposure point concentration
FIR – food ingestion rate
LOE – line of evidence
RM – river mile
SIR – sediment ingestion rate
SUF – site use factor
UCL – upper confidence limit on the mean

The species-specific dietary assumptions (i.e., prey composition and exposure area) used to derive fish dietary EPCs are detailed in Section 7.2.2 of the BERA and summarized in Table 3-2.

Table 3-2. Data groups for calculation of prey and sediment EPCs for fish diet

Receptor and Exposure Area	Prey Type and Exposure Area			Sediment Exposure Area
	Prey Type[a,b]	% in Diet	Exposure Area	
Mummichog/other forage fish	worms	100	site wide	site-wide mudflats
Common carp	worms	82	RM ≥ 4	RM ≥ 4
	blue crab	17	site wide	
	fish 0–11 cm[c]	1	RM ≥ 4	
White sucker	worms	90	RM ≥ 4	RM ≥ 4
	blue crab	10	site wide	
White perch	worms	70	site wide	site wide
	blue crab	15	site wide	
	fish 0–11 cm[c]	15	site wide	
Channel catfish	worms	55	RM ≥ 4	RM ≥ 4
	blue crab	5	site wide	
	fish 0–13 cm[d]	40	RM ≥ 4	
White catfish	worms	55	site wide	site wide
	blue crab	5	site wide	
	fish 0–13 cm[d]	40	site wide	
American eel < 50 cm	worms	80	site wide	site wide
	blue crab	10	site wide	
	fish 0–13 cm[d]	10	site wide	
American eel ≥ 50 cm	worms	35	site wide	site wide
	blue crab	25	site wide	
	fish 0–20 cm[e]	40	site wide	
Largemouth bass	worms	10	RM ≥ 4	RM ≥ 4
	blue crab	10	site wide	
	fish 0–13 cm[d]	80	RM ≥ 4	
Smallmouth bass	Worms	10	RM ≥ 4	RM ≥ 4
	blue crab	10	site wide	
	fish 0–13 cm[d]	80	RM ≥ 4	
Northern pike	blue crab	10	site wide	RM ≥ 4
	fish 0–20 cm[e]	90	RM ≥ 4	

Note: If fewer than six samples were available to calculate a UCL, the maximum concentration was used.

[a] As represented by whole-body tissue concentrations.

[b] For composite fish samples, length was based on the maximum length of any fish in the sample.

[c] Fish ≤ 11 cm long included the following species: gizzard shad, mummichog, silver shiner, spottail shiner, and white perch. For composite samples, length was based on the maximum of any fish in the sample.

[d] Fish ≤ 13 cm long included the following species: gizzard shad, mixed forage fish, mummichog, silver shiner, spottail shiner, and white perch. For composite samples, length was based on the maximum of any fish in the sample.

[e] Fish ≤ 20 cm long included the following species: gizzard shad, mixed forage fish, mummichog, pumpkinseed, silver shiner, spottail shiner, and white perch. For composite samples, length was based on the maximum of any fish in the sample.

EPC – exposure point concentration

RM – river mile

UCL – upper confidence limit on the mean

4 Birds and Mammals

The potential for risks to bird and mammal species was characterized using two LOEs for COPECs identified in the screening-level ecological risk assessment (SLERA):

- **Dietary LOE –** comparison of estimated COPEC dietary doses to dietary TRVs
- **Egg tissue LOE (piscivorous birds only) –** comparison of estimated COPEC concentrations in tissue of piscivorous bird eggs to egg tissue TRVs

A summary of the EPCs used for each LOE is presented in Table 4-1.

Table 4-1. Summary of EPCs used in the bird and mammal risk assessment

LOE Requiring EPCs	EPC			EPC Use in BERA
	Media	Statistic	EPC Location in Appendix C1 Tables	
Dietary dose	sediment	UCL (or max) of sediment concentration within species-specific assigned exposure area	selected EPC column under *Diet LOE_Sediment EPCs* tab	Sediment and tissue EPCs were used to derive dietary exposure doses, as follows: Exposure dose = ([(FIR x EPC_{prey}) + (SIR x EPC_{sed}) + (WIR x EPC_{water})]/BW) x SUF Species-specific dietary assumptions (i.e., prey composition and exposure area) are detailed in Section 8.1.2 (for birds) and Section 9.1.2 (for mammals) of the BERA and presented in Tables 4-2 and 4-3 herein.
	prey	UCL (or max) of tissue concentration per prey item within species-assigned dietary composition and exposure area	selected EPC column under *Diet LOE_Prey Tissue EPCs* tab	
	surface water	UCL (or max) of surface water concentration in freshwater (RM 4–RM 17.4) and estuarine (RM 0–RM 13) areas	selected EPC column under *Diet LOE_Surface Water EPCs* tab	
Egg tissue residue (modeled)	prey	UCL (or max) of tissue concentration per prey item within species-assigned dietary composition and exposure area	presented in Section 8.2.4 of BERA	Egg EPC was derived as follows: EPC_{egg} = EPC_{prey} x BMF BMF assumptions are detailed in Section 8.4.2 of the BERA. Species-specific dietary assumptions (i.e., prey composition and exposure area) are detailed in Section 8.1.2 of the BERA and presented in Table 4-2 herein.

BERA – baseline risk assessment
BMF – biomagnification factor
BW – body weight
EPC – exposure point concentration
FIR – food ingestion rate
LOE – line of evidence
RM – river mile
SIR - sediment ingestion rate
UCL – upper confidence limit on the mean

The species-specific dietary assumptions (i.e., prey composition and exposure area) used to derive bird dietary EPCs are detailed in Section 8.1.2 of the BERA and summarized in Table 4-2. The same prey EPCs (excluding sediment and surface water) were used in the bird egg tissue residue modeling LOE for great blue heron and belted kingfisher.

Table 4-2. Data groups for calculation of prey, surface water, and sediment EPCs for bird diet

Receptor and Exposure Area	Prey Type and Exposure Area			Surface Water Exposure Area	Sediment Exposure Area
	Prey Type[a,b]	% in Diet	Exposure Area		
Spotted sandpiper: site wide					
Scenario 1	worms	100	site-wide mudflats	RM ≥ 4[c]	site-wide mudflats
Spotted sandpiper: reach specific					
Scenario 1	worms	100	by reach	by reach[d]	mudflats by reach
Great blue heron: site wide					
Scenario 1	fish 0–13 cm	100	site-wide mudflats	RM ≥ 4[c]	site-wide mudflats
Scenario 2	fish 0–13 cm	17	site-wide mudflats	RM ≥ 4[c]	site-wide mudflats
	fish 13–18 cm	29			
	fish 18–30 cm	40			
	fish > 30 cm	14			
Great blue heron: reach specific					
Scenario 1	fish 0–13 cm	100	mudflats by reach	by reach[d]	mudflats by reach
Scenario 2	fish 0–13 cm	17	mudflats by reach	by reach[d]	mudflats by reach
	fish 13–18 cm	29			
	fish 18–30 cm[e]	40			
	fish > 30 cm	14			
Belted kingfisher: RM ≥ 6					
Scenario 1	blue crab[f]	15	RM ≥ 6	RM ≥ 6	RM ≥ 6
	fish 0–9 cm	85			
Scenario 2	blue crab[f]	15	RM ≥ 6	RM ≥ 6	RM ≥ 6
	fish 0–9 cm	31.5			
	fish 9–13 cm	51			
	fish 13–18 cm	2.5			
Belted kingfisher: site wide					
Scenario 1	blue crab[f]	15	site wide	RM ≥ 4[c]	site wide
	fish 0–9 cm	85			
Scenario 2	blue crab	15	site wide	RM ≥ 4[c]	site wide

Table 4-2. Data groups for calculation of prey, surface water, and sediment EPCs for bird diet

Receptor and Exposure Area	Prey Type and Exposure Area			Surface Water Exposure Area	Sediment Exposure Area
	Prey Type[a,b]	% in Diet	Exposure Area		
	fish 0–9 cm	31.5			
	fish 9–13 cm	51			
	fish 13–18 cm	2.5			
Belted kingfisher: by reach					
Scenario 1	blue crab[g]	15	by reach	by reach[d]	by reach
	fish 0–9 cm[h]	85			
Scenario 2	blue crab[g]	15	by reach	by reach[d]	by reach
	fish 0–9 cm[g]	31.5			
	fish 9–13 cm	51			
	fish 13–18 cm[i]	2.5			

Note: If fewer than six samples were available to calculate a UCL, the maximum concentration was used.

[a] As represented by whole-body tissue concentrations.

[b] For composite fish samples, length was based on the maximum length of any fish in the sample.

[c] Included only freshwater.

[d] Surface water data were available for only Reaches 3 through 6. Therefore, in Reaches 1 and 2, surface water EPCs for Reach 3 were used, and in Reaches 7 and 8, surface water EPCs for Reach 6 were used.

[e] Data for fish in the 13–18-cm category were not available for Reaches 1 and 2, so EPCs for fish in the 18–30-cm category were substituted in those reaches.

[f] Data for blue crab were not available for Reaches 6 through 8, so data from Reaches 1 through 5 were used to calculate the EPCs for the ≥ RM 6 and site-wide exposure areas.

[g] Data for blue crab were not available for Reaches 6 through 8, so data from Reach 5 were used to calculate the EPCs for those reaches.

[h] Data for fish in the 0–9-cm category were not available in Reaches 1, 7, and 8, so EPCs for fish in the 9–13-cm category were substituted in those reaches.

[i] Data for fish in the 13–18-cm category were not available in Reaches 1 and 2, so EPCs for fish in the 9–13-cm category were substituted those reaches.

EPC – exposure point concentration

RM – river mile

UCL – upper confidence limit on the mean

The species-specific dietary assumptions (i.e., prey composition and exposure area) used to derive mammal dietary EPCs are detailed in Section 9.1.2 of the BERA and are summarized in Table 4-3.

Table 4-3. Data groups for calculation of prey, surface water, and sediment EPCs for mammal diet

Focal Species	Prey Type[a]						Surface Water	Sediment
	Blue Crab		Fish ≤ 30 cm[b]		Fish > 30 cm[b]			
	% in Diet	Exposure Area	% in Diet	Exposure Area	% in Diet	Exposure Area		
Mink – RM ≥ 10								
Scenario 1 – aquatic/ terrestrial prey[c]	16.5	site wide[d]	34	NFF site wide, SFF ≥ RM 10[e]	0	site wide	RM ≥ 10	RM ≥ 10
Scenario 2 – aquatic/ terrestrial prey[c]	16.5	site wide[d]	31	NFF site wide, SFF ≥ RM 10[e]	3[f]	site wide	RM ≥ 10	RM ≥ 10
Scenario 3 – aquatic prey only	16.5	site wide[d]	83.5	NFF site wide, SFF RM ≥10[e]	0	site wide	RM ≥ 10	RM ≥ 10
Scenario 4 – aquatic prey only	16.5	site wide[d]	80.5	NFF site wide, SFF RM ≥10[e]	3[f]	site wide	RM ≥ 10	RM ≥ 10
Scenario 5 – aquatic prey only[g]	33.5	site wide[d]	63.5	NFF site wide, SFF RM ≥10[e]	3[f]	site wide	RM ≥10	RM ≥ 10
Mink – site wide								
Scenario 1 – aquatic/ terrestrial prey	16.5	site wide[d]	34	site wide	0	site wide	RM ≥ 4[g]	site wide
Scenario 2 – aquatic/ terrestrial prey	16.5	site wide[d]	31	site wide	3[f]	site wide	RM ≥ 4[g]	site wide
Scenario 3 – aquatic prey only	16.5	site wide[d]	83.5	site wide	0	site wide	RM ≥ 4[g]	site wide
Scenario 4 – aquatic prey only	16.5	site wide[d]	80.5	site wide	3[f]	site wide	RM ≥ 4[g]	site wide
Scenario 5 – aquatic prey only	33.5	site wide[d]	63.5	site wide	3[f]	site wide	RM ≥ 4[g]	site wide
River otter – RM ≥ 10								
Scenario 1	15	site wide[d]	100	NFF site wide, SFF RM ≥10[e]	0	site wide	RM ≥ 10	RM ≥ 10
Scenario 2	15	site wide[d]	80	NFF site wide, SFF RM ≥10[e]	5[f]	site wide	RM ≥ 10	RM ≥ 10
River otter – Site wide								
Scenario 1	15	site wide[d]	100	site wide	0	site wide	RM ≥ 4[g]	site wide
Scenario 2	15	site wide[d]	80	site wide	5[f]	site wide	RM ≥ 4[g]	site wide

Note: If fewer than six samples were available to calculate a UCL, the maximum concentration was used.

[a] Included whole-body tissue.

[b] For composite samples, length was based on the maximum length of any fish in the sample.

[c] For the aquatic and terrestrial prey evaluation for mink, the portion of terrestrial prey (i.e., concentration of the diet) was assumed to be negligible (i.e., COPEC concentration set equal to zero).

[d] Included all available blue crab data (i.e., RM 1–RM 10).

[e] SFF included mummichog, gizzard shad, mixed forage fish, pumpkinseed, spottail shiner, and silver shiner that were ≤ 20 cm in length. NFF included all other fish not considered SFF.

[f] A larger percentage of fish > 30 cm in length in the diet was evaluated in the uncertainty section of the BERA (Section 9.1.4.2).

[g] Included only freshwater.

COPEC – chemical of potential ecological concern
EPC – exposure point concentration
NFF – non-small forage fish
RM – river mile
SFF – small forage fish
UCL – upper confidence limit on the mean

5 Zooplankton

The potential for risks to zooplankton was characterized quantitatively using one LOE:

- **Surface water LOE –** comparison of COPEC concentrations in surface water to TRVs

A summary of the EPCs used for the LOE is presented in Table 5-1.

Table 5-1. Summary of EPCs used in the zooplankton risk assessment

LOE Requiring EPCs	EPC			EPC Use in BERA
	Media	Statistic	EPC Location in Appendix C1 Tables	
Water	surface water	UCL (or max) of surface water concentration in freshwater (RM 4–RM 17.4) and estuarine (RM 0–RM 13) areas	selected EPC column under *Surface water EPCs* tab	surface water EPC used to directly represent exposure

BERA – baseline risk assessment
EPC – exposure point concentration
LOE – line of evidence
RM – river mile
UCL – upper confidence limit on the mean

6 Amphibians/Reptiles

The potential for risks to amphibians/reptiles was characterized quantitatively using one LOEs:

- **Surface water LOE –** comparison of COPEC concentrations in freshwater surface water to TRVs

A summary of the EPCs used for the LOE is presented in Table 6-1.

Table 6-1. Summary of EPCs used in the amphibian/reptile risk assessment

LOE Requiring EPCs	EPC			EPC Use in BERA
	Media	Statistic	EPC Location in Appendix C1 Tables	
Water	surface water	UCL (or max) of surface water concentration in freshwater (RM 4–RM 17.4) areas	selected EPC column under *Surface water EPCs* tab	surface water EPC used to directly represent exposure

BERA – baseline risk assessment
EPC – exposure point concentration
LOE – line of evidence
RM – river mile
UCL – upper confidence limit on the mean

7 Aquatic Plants

The potential for risks to aquatic plants was characterized quantitatively using two LOEs:

- **Surface water LOE –** comparison of COPEC concentrations in surface water to TRVs
- **Sediment LOE –** comparison of COPEC concentrations in sediment to soil TRVs

A summary of the EPCs used for each LOE is presented in Table 7-1.

Table 7-1. Summary of EPCs used in aquatic plant risk assessment

LOE Requiring EPCs	EPC			EPC Used in BERA
	Media	Statistic	EPC Location in Appendix C1 Tables	
Water	surface water	UCL (or max) of surface water concentration in freshwater (RM 4–RM 17.4) and estuarine (RM 0–RM 13) areas	selected EPC column under *Surface water EPCs* tab	surface water EPC used to directly represent exposure
Sediment	sediment	UCL (or max) of sediment concentration	selected EPC column under *Plant LOE_Sediment EPCs* tab	sediment EPC used to directly represent exposure

BERA – baseline risk assessment
EPC – exposure point concentration
LOE – line of evidence
RM – river mile
UCL – upper confidence limit on the mean

8 References

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Suter GW, Tsao CL. 1996. Toxicological benchmarks for screening potential contaminants of concern for effects on aquatic biota: 1996 revision. Prepared for U.S. Department of Energy Office of Environmental Management. Risk Assessment Program, Health Sciences Research Division.

Appendix C1. EPC Values and Summary Statistics

Fish Tissue LOE -- Tissue EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
F	American eel	Metals	Arsenic	mg/kg	21	19	90.5	0.054	0.61	0.16	0.17	0.28	0.28	95% KM (Chebyshev) UCL
F	American eel	Metals	Cadmium	mg/kg	21	21	100	0.004	0.27	0.054		0.088	0.088	95% Adjusted Gamma UCL
F	American eel	Metals	Chromium	mg/kg	21	19	90.5	0.04	4.5	1.2	0.02	2.5	2.5	95% KM (Chebyshev) UCL
F	American eel	Metals	Cobalt	mg/kg	14	14	100	0.016	0.096	0.048		0.061	0.061	95% Student's-t UCL
F	American eel	Metals	Copper	mg/kg	21	21	100	0.52	7.8	1.2		2.6	2.6	95% Chebyshev (Mean, Sd) UCL
F	American eel	Metals	Lead	mg/kg	14	14	100	0.18	1.4	0.65		0.87	0.87	95% Student's-t UCL
F	American eel	Metals	Mercury	µg/kg	21	21	100	74	390	220		260	260	95% Student's-t UCL
F	American eel	Metals	Methyl mercury	µg/kg	21	21	100	92	470	240		280	280	95% Student's-t UCL
F	American eel	Metals	Nickel	mg/kg	21	21	100	0.11	2.8	0.76		1.2	1.2	95% Adjusted Gamma UCL
F	American eel	Metals	Selenium	mg/kg	21	21	100	0.33	1.2	0.67		0.77	0.77	95% Student's-t UCL
F	American eel	Metals	Silver	mg/kg	21	18	85.7	0.007	0.062	0.021	0.008	0.025	0.025	95% KM (t) UCL
F	American eel	Metals	Vanadium	mg/kg	21	12	57.1	0.03	0.12	0.08	0.07	0.073	0.073	95% KM (t) UCL
F	American eel	Metals	Zinc	mg/kg	21	21	100	23.1	42.2	29.4		30.9	30.9	95% Student's-t UCL
F	American eel	PAHs	Benzo(a)pyrene	µg/kg	21	10	47.6	0.55	4.5	1.9	2.6	1.7	1.7	95% KM (Percentile Bootstrap) UCL
F	American eel	PAHs	Total HPAHs	µg/kg	21	21	100	3.1	49	19		24	24	95% Student's-t UCL
F	American eel	PAHs	Total LPAHs	µg/kg	21	21	100	15	170	62		86	86	95% Adjusted Gamma UCL
F	American eel	PAHs	Total PAHs	µg/kg	21	21	100	27	170	81		99	99	95% Student's-t UCL
F	American eel	PCB Congeners	Total PCB Congeners	µg/kg	21	21	100	420	5700	1500		2000	2000	95% Adjusted Gamma UCL
F	American eel	PCB Congeners	PCB TEQ-Bird	ng/kg	21	21	100	2.9	23	13		15	15	95% Student's-t UCL
F	American eel	PCB Congeners	PCB TEQ-Fish	ng/kg	21	21	100	0.31	2.4	0.97		1.2	1.2	95% Student's-t UCL
F	American eel	PCB Congeners	PCB TEQ-Mammal	ng/kg	21	21	100	2.8	17	8.9		11	11	95% Student's-t UCL
F	American eel	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	21	20	95.2	0.32	47	18	0.21	23	23	95% KM (t) UCL
F	American eel	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	21	21	100	0.73	48	19		25	25	95% Student's-t UCL
F	American eel	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	21	21	100	0.79	49	19		24	24	95% Student's-t UCL
F	American eel	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	21	21	100	0.81	48	19		24	24	95% Student's-t UCL
F	American eel	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	21	21	100	7.8	62	31		42	42	95% Adjusted Gamma UCL
F	American eel	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	21	21	100	1.2	50	20		25	25	95% Student's-t UCL
F	American eel	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	21	21	100	5.5	56	27		34	34	95% Student's-t UCL
F	American eel	OC Pesticides	Dieldrin	µg/kg	21	21	100	7.6	110	45		54	54	95% Student's-t UCL
F	American eel	OC Pesticides	Endosulfan I	µg/kg	21	2	9.5	0.2	0.59	0.4	5.9		0.59	Maximum detect
F	American eel	OC Pesticides	Endosulfan II	µg/kg	21	2	9.5	0.37	0.56	0.47	8.4		0.56	Maximum detect
F	American eel	OC Pesticides	Heptachlor epoxide	µg/kg	21	21	100	3.1	31	18		21	21	95% Student's-t UCL
F	American eel	OC Pesticides	Total DDx	µg/kg	21	21	100	32	470	220		260	260	95% Student's-t UCL
F	Brown bullhead	Metals	Arsenic	mg/kg	6	6	100	0.031	0.19	0.08		0.13	0.13	95% Student's-t UCL
F	Brown bullhead	Metals	Cadmium	mg/kg	6	6	100	0.005	0.031	0.018		0.027	0.027	95% Student's-t UCL
F	Brown bullhead	Metals	Chromium	mg/kg	6	6	100	0.12	0.94	0.5		0.78	0.78	95% Student's-t UCL
F	Brown bullhead	Metals	Cobalt	mg/kg	6	6	100	0.016	0.054	0.034		0.045	0.045	95% Student's-t UCL
F	Brown bullhead	Metals	Copper	mg/kg	6	6	100	0.55	0.94	0.74		0.86	0.86	95% Student's-t UCL
F	Brown bullhead	Metals	Lead	mg/kg	6	6	100	0.15	0.83	0.59		0.8	0.8	95% Student's-t UCL
F	Brown bullhead	Metals	Mercury	µg/kg	6	6	100	48	140	77		110	110	95% Student's-t UCL
F	Brown bullhead	Metals	Methyl mercury	µg/kg	6	6	100	39	120	65		92	92	95% Student's-t UCL
F	Brown bullhead	Metals	Nickel	mg/kg	6	6	100	0.18	0.84	0.51		0.71	0.71	95% Student's-t UCL
F	Brown bullhead	Metals	Selenium	mg/kg	6	6	100	0.4	0.9	0.61		0.77	0.77	95% Student's-t UCL
F	Brown bullhead	Metals	Silver	mg/kg	6	0	0				0.008		0.008	Maximum DL
F	Brown bullhead	Metals	Vanadium	mg/kg	6	5	83.3	0.12	0.2	0.17	0.03		0.2	Maximum detect
F	Brown bullhead	Metals	Zinc	mg/kg	6	6	100	15	41.4	20.2		29.5	29.5	95% Modified-t UCL
F	Brown bullhead	PAHs	Benzo(a)pyrene	µg/kg	6	2	33.3	2.6	8.6	5.6	1.8		8.6	Maximum detect
F	Brown bullhead	PAHs	Total HPAHs	µg/kg	6	6	100	21	110	77		110	110	95% Student's-t UCL
F	Brown bullhead	PAHs	Total LPAHs	µg/kg	6	6	100	180	260	220		250	250	95% Student's-t UCL
F	Brown bullhead	PAHs	Total PAHs	µg/kg	6	6	100	210	330	300		330	330	95% Student's-t UCL

Fish Tissue LOE -- Tissue EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
F	Brown bullhead	PCB Congeners	Total PCB Congeners	µg/kg	6	6	100	260	1700	870		1400	1400	95% Student's-t UCL
F	Brown bullhead	PCB Congeners	PCB TEQ-Bird	ng/kg	6	6	100	20	84	43		65	65	95% Student's-t UCL
F	Brown bullhead	PCB Congeners	PCB TEQ-Fish	ng/kg	6	6	100	0.42	1.6	0.92		1.3	1.3	95% Student's-t UCL
F	Brown bullhead	PCB Congeners	PCB TEQ-Mammal	ng/kg	6	6	100	6.1	23	13		18	18	95% Student's-t UCL
F	Brown bullhead	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	6	6	100	7.8	190	91		150	150	95% Student's-t UCL
F	Brown bullhead	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	6	6	100	9.6	210	99		160	160	95% Student's-t UCL
F	Brown bullhead	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	6	6	100	8.4	200	96		160	160	95% Student's-t UCL
F	Brown bullhead	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	6	6	100	8.5	200	96		160	160	95% Student's-t UCL
F	Brown bullhead	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	6	6	100	31	290	140		230	230	95% Student's-t UCL
F	Brown bullhead	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	6	6	100	8.8	200	97		160	160	95% Student's-t UCL
F	Brown bullhead	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	6	6	100	15	220	110		180	180	95% Student's-t UCL
F	Brown bullhead	OC Pesticides	Dieldrin	µg/kg	6	6	100	9.7	34	22		30	30	95% Student's-t UCL
F	Brown bullhead	OC Pesticides	Endosulfan I	µg/kg	6	3	50	0.97	1.1	1	0.56		1.1	Maximum detect
F	Brown bullhead	OC Pesticides	Endosulfan II	µg/kg	6	0	0				1.6		1.6	Maximum DL
F	Brown bullhead	OC Pesticides	Heptachlor epoxide	µg/kg	6	6	100	4.5	13	9.1		12	12	95% Student's-t UCL
F	Brown bullhead	OC Pesticides	Total DDx	µg/kg	6	6	100	20	200	93		160	160	95% Student's-t UCL
F	Carp	Metals	Arsenic	mg/kg	12	11	91.7	0.064	0.21	0.12	0.18	0.15	0.15	95% KM (t) UCL
F	Carp	Metals	Cadmium	mg/kg	12	12	100	0.005	0.054	0.024		0.032	0.032	95% Student's-t UCL
F	Carp	Metals	Chromium	mg/kg	12	12	100	0.14	6.6	1.3		2.8	2.8	95% Adjusted Gamma UCL
F	Carp	Metals	Cobalt	mg/kg	12	12	100	0.019	0.1	0.047		0.059	0.059	95% Student's-t UCL
F	Carp	Metals	Copper	mg/kg	12	12	100	0.6	1.6	0.93		1.1	1.1	95% Adjusted Gamma UCL
F	Carp	Metals	Lead	mg/kg	12	12	100	0.21	0.96	0.66		0.79	0.79	95% Student's-t UCL
F	Carp	Metals	Mercury	µg/kg	12	12	100	42	110	67		80	80	95% Student's-t UCL
F	Carp	Metals	Methyl mercury	µg/kg	12	12	100	39	90	54		62	62	95% Student's-t UCL
F	Carp	Metals	Nickel	mg/kg	12	12	100	0.23	4.2	1		1.7	1.7	95% Adjusted Gamma UCL
F	Carp	Metals	Selenium	mg/kg	12	12	100	0.35	0.98	0.73		0.82	0.82	95% Student's-t UCL
F	Carp	Metals	Silver	mg/kg	12	3	25	0.007	0.015	0.011	0.008		0.015	Maximum detect
F	Carp	Metals	Vanadium	mg/kg	12	12	100	0.03	0.21	0.094		0.12	0.12	95% Student's-t UCL
F	Carp	Metals	Zinc	mg/kg	12	12	100	47.6	104	67		75.2	75.2	95% Student's-t UCL
F	Carp	PAHs	Benzo(a)pyrene	µg/kg	12	6	50	0.8	4.9	2	2.5	2.1	2.1	95% KM (t) UCL
F	Carp	PAHs	Total HPAHs	µg/kg	12	12	100	24	120	62		76	76	95% Student's-t UCL
F	Carp	PAHs	Total LPAHs	µg/kg	12	12	100	93	250	140		170	170	95% Student's-t UCL
F	Carp	PAHs	Total PAHs	µg/kg	12	12	100	120	350	210		240	240	95% Student's-t UCL
F	Carp	PCB Congeners	Total PCB Congeners	µg/kg	12	12	100	1500	7900	4100		5200	5200	95% Student's-t UCL
F	Carp	PCB Congeners	PCB TEQ-Bird	ng/kg	12	12	100	67	260	170		200	200	95% Student's-t UCL
F	Carp	PCB Congeners	PCB TEQ-Fish	ng/kg	12	12	100	1.4	6.5	3.6		4.4	4.4	95% Student's-t UCL
F	Carp	PCB Congeners	PCB TEQ-Mammal	ng/kg	12	12	100	16	86	47		58	58	95% Student's-t UCL
F	Carp	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	12	12	100	5.2	1400	410		610	610	95% Student's-t UCL
F	Carp	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	12	12	100	11	1400	430		630	630	95% Student's-t UCL
F	Carp	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	12	12	100	8.5	1400	420		620	620	95% Student's-t UCL
F	Carp	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	12	12	100	8.2	1400	420		610	610	95% Student's-t UCL
F	Carp	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	12	12	100	77	1700	600		830	830	95% Student's-t UCL
F	Carp	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	12	12	100	9.9	1400	420		620	620	95% Student's-t UCL
F	Carp	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	12	12	100	24	1500	470		680	680	95% Student's-t UCL
F	Carp	OC Pesticides	Dieldrin	µg/kg	12	12	100	29	72	48		55	55	95% Student's-t UCL
F	Carp	OC Pesticides	Endosulfan I	µg/kg	12	2	16.7	1.2	4	2.6	5.8		4	Maximum detect
F	Carp	OC Pesticides	Endosulfan II	µg/kg	12	2	16.7	0.71	2.7	1.7	2.9		2.7	Maximum detect
F	Carp	OC Pesticides	Heptachlor epoxide	µg/kg	12	12	100	13	27	19		22	22	95% Student's-t UCL
F	Carp	OC Pesticides	Total DDx	µg/kg	12	12	100	110	1100	510		650	650	95% Student's-t UCL
F	Channel catfish	Metals	Arsenic	mg/kg	11	11	100	0.028	0.076	0.046		0.054	0.054	95% Student's-t UCL
F	Channel catfish	Metals	Cadmium	mg/kg	11	11	100	0.0058	0.017	0.012		0.014	0.014	95% Student's-t UCL
F	Channel catfish	Metals	Chromium	mg/kg	11	11	100	0.043	0.76	0.33		0.44	0.44	95% Student's-t UCL

Fish Tissue LOE -- Tissue EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
F	Channel catfish	Metals	Cobalt	mg/kg	11	11	100	0.011	0.026	0.018		0.02	0.02	95% Student's-t UCL
F	Channel catfish	Metals	Copper	mg/kg	11	11	100	0.31	2.3	0.59		1.3	1.3	95% Chebyshev (Mean, Sd) UCL
F	Channel catfish	Metals	Lead	mg/kg	11	11	100	0.056	0.37	0.24		0.3	0.3	95% Student's-t UCL
F	Channel catfish	Metals	Mercury	µg/kg	11	11	100	32	230	120		150	150	95% Student's-t UCL
F	Channel catfish	Metals	Methyl mercury	µg/kg	11	11	100	30	230	110		140	140	95% Student's-t UCL
F	Channel catfish	Metals	Nickel	mg/kg	11	11	100	0.15	0.5	0.3		0.36	0.36	95% Student's-t UCL
F	Channel catfish	Metals	Selenium	mg/kg	11	11	100	0.24	0.34	0.29		0.31	0.31	95% Student's-t UCL
F	Channel catfish	Metals	Silver	mg/kg	11	1	9.1	0.014	0.014		0.0019		0.014	Maximum detect
F	Channel catfish	Metals	Vanadium	mg/kg	11	11	100	0.032	0.063	0.05		0.056	0.056	95% Student's-t UCL
F	Channel catfish	Metals	Zinc	mg/kg	11	11	100	17	22	19		20	20	95% Student's-t UCL
F	Channel catfish	PAHs	Benzo(a)pyrene	µg/kg	11	1	9.1	1.2	1.2		1.2		1.2	Maximum detect
F	Channel catfish	PAHs	Total HPAHs	µg/kg	11	11	100	20	96	41		55	55	95% Adjusted Gamma UCL
F	Channel catfish	PAHs	Total LPAHs	µg/kg	11	11	100	39	130	78		95	95	95% Student's-t UCL
F	Channel catfish	PAHs	Total PAHs	µg/kg	11	11	100	59	210	120		150	150	95% Student's-t UCL
F	Channel catfish	PCB Congeners	Total PCB Congeners	µg/kg	11	11	100	350	2700	1300		1700	1700	95% Student's-t UCL
F	Channel catfish	PCB Congeners	PCB TEQ-Bird	ng/kg	11	11	100	12	55	34		41	41	95% Student's-t UCL
F	Channel catfish	PCB Congeners	PCB TEQ-Fish	ng/kg	11	11	100	0.23	2.8	1.4		1.8	1.8	95% Student's-t UCL
F	Channel catfish	PCB Congeners	PCB TEQ-Mammal	ng/kg	11	11	100	2.7	38	19		25	25	95% Student's-t UCL
F	Channel catfish	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	11	11	100	22	160	70		96	96	95% Student's-t UCL
F	Channel catfish	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	11	11	100	23	170	76		100	100	95% Student's-t UCL
F	Channel catfish	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	11	11	100	23	170	75		100	100	95% Student's-t UCL
F	Channel catfish	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	11	11	100	22	170	74		100	100	95% Student's-t UCL
F	Channel catfish	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	11	11	100	35	230	110		150	150	95% Student's-t UCL
F	Channel catfish	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	11	11	100	23	170	76		100	100	95% Student's-t UCL
F	Channel catfish	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	11	11	100	25	210	93		130	130	95% Student's-t UCL
F	Channel catfish	OC Pesticides	Dieldrin	µg/kg	11	11	100	18	70	38		47	47	95% Student's-t UCL
F	Channel catfish	OC Pesticides	Endosulfan I	µg/kg	11	3	27.3	0.78	2	1.2	3.6		2	Maximum detect
F	Channel catfish	OC Pesticides	Endosulfan II	µg/kg	11	1	9.1	0.89	0.89		2.6		0.89	Maximum detect
F	Channel catfish	OC Pesticides	Heptachlor epoxide	µg/kg	11	11	100	8	30	18		21	21	95% Student's-t UCL
F	Channel catfish	OC Pesticides	Total DDx	µg/kg	11	11	100	48	490	220		280	280	95% Student's-t UCL
F	Largemouth bass	Metals	Arsenic	mg/kg	3	0	0				0.068		0.068	Maximum DL
F	Largemouth bass	Metals	Cadmium	mg/kg	3	3	100	0.0034	0.037	0.02			0.037	Maximum detect
F	Largemouth bass	Metals	Chromium	mg/kg	3	3	100	0.15	0.23	0.2			0.23	Maximum detect
F	Largemouth bass	Metals	Cobalt	mg/kg	3	3	100	0.021	0.025	0.024			0.025	Maximum detect
F	Largemouth bass	Metals	Copper	mg/kg	3	3	100	0.4	0.58	0.47			0.58	Maximum detect
F	Largemouth bass	Metals	Lead	mg/kg	3	3	100	0.02	0.12	0.079			0.12	Maximum detect
F	Largemouth bass	Metals	Mercury	µg/kg	3	3	100	140	680	330			680	Maximum detect
F	Largemouth bass	Metals	Methyl mercury	µg/kg	3	3	100	110	520	260			520	Maximum detect
F	Largemouth bass	Metals	Nickel	mg/kg	3	3	100	0.32	0.37	0.34			0.37	Maximum detect
F	Largemouth bass	Metals	Selenium	mg/kg	3	3	100	0.36	0.59	0.49			0.59	Maximum detect
F	Largemouth bass	Metals	Silver	mg/kg	3	0	0				0.0026		0.0026	Maximum DL
F	Largemouth bass	Metals	Vanadium	mg/kg	3	0	0				0.01		0.01	Maximum DL
F	Largemouth bass	Metals	Zinc	mg/kg	3	3	100	15.4	16	16			16	Maximum detect
F	Largemouth bass	PAHs	Benzo(a)pyrene	µg/kg	3	0	0				2.8		2.8	Maximum DL
F	Largemouth bass	PAHs	Total HPAHs	µg/kg	3	3	100	5.6	9.4	7.2			9.4	Maximum detect
F	Largemouth bass	PAHs	Total LPAHs	µg/kg	3	3	100	33	61	42			61	Maximum detect
F	Largemouth bass	PAHs	Total PAHs	µg/kg	3	3	100	31	70	45			70	Maximum detect
F	Largemouth bass	PCB Congeners	Total PCB Congeners	µg/kg	3	3	100	1100	7900	3700			7900	Maximum detect
F	Largemouth bass	PCB Congeners	PCB TEQ-Bird	ng/kg	3	3	100	25	550	230			550	Maximum detect
F	Largemouth bass	PCB Congeners	PCB TEQ-Fish	ng/kg	3	3	100	1.1	17	6.7			17	Maximum detect
F	Largemouth bass	PCB Congeners	PCB TEQ-Mammal	ng/kg	3	3	100	15	240	94			240	Maximum detect
F	Largemouth bass	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	3	3	100	0.43	180	82			180	Maximum detect

Fish Tissue LOE -- Tissue EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
F	Largemouth bass	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	3	3	100	12	180	86			180	Maximum detect
F	Largemouth bass	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	3	3	100	2	180	82			180	Maximum detect
F	Largemouth bass	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	3	3	100	2.1	180	82			180	Maximum detect
F	Largemouth bass	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	3	3	100	91	560	310			560	Maximum detect
F	Largemouth bass	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	3	3	100	19	180	88			180	Maximum detect
F	Largemouth bass	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	3	3	100	83	250	180			250	Maximum detect
F	Largemouth bass	OC Pesticides	Dieldrin	µg/kg	3	3	100	16	40	25			40	Maximum detect
F	Largemouth bass	OC Pesticides	Endosulfan I	µg/kg	3	0	0				10		10	Maximum DL
F	Largemouth bass	OC Pesticides	Endosulfan II	µg/kg	3	0	0				3.3		3.3	Maximum DL
F	Largemouth bass	OC Pesticides	Heptachlor epoxide	µg/kg	3	3	100	7.2	16	11			16	Maximum detect
F	Largemouth bass	OC Pesticides	Total DDx	µg/kg	3	3	100	72	160	130			160	Maximum detect
F	Mummichog	Metals	Arsenic	mg/kg	18	18	100	0.19	0.51	0.35		0.38	0.38	95% Student's-t UCL
F	Mummichog	Metals	Cadmium	mg/kg	18	18	100	0.01	0.073	0.026		0.045	0.045	95% Chebyshev (Mean, Sd) UCL
F	Mummichog	Metals	Chromium	mg/kg	18	18	100	0.91	23.2	5.5		8.7	8.7	95% Adjusted Gamma UCL
F	Mummichog	Metals	Cobalt	mg/kg	18	18	100	0.046	0.34	0.12		0.16	0.16	95% Student's-t UCL
F	Mummichog	Metals	Copper	mg/kg	18	18	100	2	4.3	2.8		3.1	3.1	95% Student's-t UCL
F	Mummichog	Metals	Lead	mg/kg	18	18	100	0.38	3.9	1.3		2.4	2.4	95% Chebyshev (Mean, Sd) UCL
F	Mummichog	Metals	Mercury	µg/kg	18	18	100	36	71	58		63	63	95% Student's-t UCL
F	Mummichog	Metals	Methyl mercury	µg/kg	18	18	100	19	69	45		53	53	95% Student's-t UCL
F	Mummichog	Metals	Nickel	mg/kg	18	18	100	0.81	15.8	3.6		5.6	5.6	95% Adjusted Gamma UCL
F	Mummichog	Metals	Selenium	mg/kg	18	18	100	0.38	0.89	0.66		0.72	0.72	95% Student's-t UCL
F	Mummichog	Metals	Silver	mg/kg	18	18	100	0.023	0.06	0.039		0.044	0.044	95% Student's-t UCL
F	Mummichog	Metals	Vanadium	mg/kg	18	18	100	0.15	1.3	0.51		0.7	0.7	95% Adjusted Gamma UCL
F	Mummichog	Metals	Zinc	mg/kg	18	18	100	38.6	51.6	43.4		44.6	44.6	95% Student's-t UCL
F	Mummichog	PAHs	Benzo(a)pyrene	µg/kg	18	18	100	3.3	56	15		23	23	95% Adjusted Gamma UCL
F	Mummichog	PAHs	Total HPAHs	µg/kg	18	18	100	29	540	150		260	260	95% H-UCL
F	Mummichog	PAHs	Total LPAHs	µg/kg	18	18	100	18	130	51		63	63	95% Student's-t UCL
F	Mummichog	PAHs	Total PAHs	µg/kg	18	18	100	48	670	200		290	290	95% Adjusted Gamma UCL
F	Mummichog	PCB Congeners	Total PCB Congeners	µg/kg	18	18	100	240	930	520		600	600	95% Student's-t UCL
F	Mummichog	PCB Congeners	PCB TEQ-Bird	ng/kg	18	18	100	17	73	41		47	47	95% Student's-t UCL
F	Mummichog	PCB Congeners	PCB TEQ-Fish	ng/kg	18	18	100	0.27	0.89	0.55		0.62	0.62	95% Student's-t UCL
F	Mummichog	PCB Congeners	PCB TEQ-Mammal	ng/kg	18	18	100	3.6	12	7.1		8	8	95% Student's-t UCL
F	Mummichog	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	18	18	100	11	100	37		49	49	95% Adjusted Gamma UCL
F	Mummichog	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	18	18	100	12	110	41		54	54	95% Adjusted Gamma UCL
F	Mummichog	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	18	18	100	11	100	38		51	51	95% Adjusted Gamma UCL
F	Mummichog	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	18	18	100	11	100	38		50	50	95% Adjusted Gamma UCL
F	Mummichog	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	18	18	100	30	170	81		98	98	95% Student's-t UCL
F	Mummichog	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	18	18	100	12	100	39		51	51	95% Adjusted Gamma UCL
F	Mummichog	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	18	18	100	15	110	45		59	59	95% Adjusted Gamma UCL
F	Mummichog	OC Pesticides	Dieldrin	µg/kg	18	18	100	3.5	28	8.6		11	11	95% Student's-t UCL
F	Mummichog	OC Pesticides	Endosulfan I	µg/kg	18	0	0				0.8		0.8	Maximum DL
F	Mummichog	OC Pesticides	Endosulfan II	µg/kg	18	0	0				1.3		1.3	Maximum DL
F	Mummichog	OC Pesticides	Heptachlor epoxide	µg/kg	18	18	100	0.84	8.7	2.5		3.3	3.3	95% Student's-t UCL
F	Mummichog	OC Pesticides	Total DDx	µg/kg	18	18	100	26	100	57		66	66	95% Student's-t UCL
F	Northern pike	Metals	Arsenic	mg/kg	1	1	100	0.12	0.12				0.12	Maximum detect
F	Northern pike	Metals	Cadmium	mg/kg	1	1	100	0.0035	0.0035				0.0035	Maximum detect
F	Northern pike	Metals	Chromium	mg/kg	1	1	100	1.1	1.1				1.1	Maximum detect
F	Northern pike	Metals	Cobalt	mg/kg	1	1	100	0.025	0.025				0.025	Maximum detect
F	Northern pike	Metals	Copper	mg/kg	1	1	100	0.57	0.57				0.57	Maximum detect
F	Northern pike	Metals	Lead	mg/kg	1	1	100	0.033	0.033				0.033	Maximum detect
F	Northern pike	Metals	Mercury	µg/kg	1	1	100	220	220				220	Maximum detect
F	Northern pike	Metals	Methyl mercury	µg/kg	1	1	100	180	180				180	Maximum detect

Fish Tissue LOE -- Tissue EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
F	Northern pike	Metals	Nickel	mg/kg	1	1	100	0.51	0.51				0.51	Maximum detect
F	Northern pike	Metals	Selenium	mg/kg	1	1	100	0.55	0.55				0.55	Maximum detect
F	Northern pike	Metals	Silver	mg/kg	1	0	0				0.0028		0.0028	Maximum DL
F	Northern pike	Metals	Vanadium	mg/kg	1	0	0				0.01		0.01	Maximum DL
F	Northern pike	Metals	Zinc	mg/kg	1	1	100	34	34				34	Maximum detect
F	Northern pike	PAHs	Benzo(a)pyrene	µg/kg	1	0	0				2.3		2.3	Maximum DL
F	Northern pike	PAHs	Total HPAHs	µg/kg	1	1	100	42	42				42	Maximum detect
F	Northern pike	PAHs	Total LPAHs	µg/kg	1	1	100	260	260				260	Maximum detect
F	Northern pike	PAHs	Total PAHs	µg/kg	1	1	100	300	300				300	Maximum detect
F	Northern pike	PCB Congeners	Total PCB Congeners	µg/kg	1	1	100	2000	2000				2000	Maximum detect
F	Northern pike	PCB Congeners	PCB TEQ-Bird	ng/kg	1	1	100	160	160				160	Maximum detect
F	Northern pike	PCB Congeners	PCB TEQ-Fish	ng/kg	1	1	100	2.3	2.3				2.3	Maximum detect
F	Northern pike	PCB Congeners	PCB TEQ-Mammal	ng/kg	1	1	100	31	31				31	Maximum detect
F	Northern pike	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	1	1	100	95	95				95	Maximum detect
F	Northern pike	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	1	1	100	120	120				120	Maximum detect
F	Northern pike	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	1	1	100	100	100				100	Maximum detect
F	Northern pike	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	1	1	100	100	100				100	Maximum detect
F	Northern pike	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	1	1	100	280	280				280	Maximum detect
F	Northern pike	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	1	1	100	110	110				110	Maximum detect
F	Northern pike	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	1	1	100	130	130				130	Maximum detect
F	Northern pike	OC Pesticides	Dieldrin	µg/kg	1	1	100	43	43				43	Maximum detect
F	Northern pike	OC Pesticides	Endosulfan I	µg/kg	1	0	0				2.1		2.1	Maximum DL
F	Northern pike	OC Pesticides	Endosulfan II	µg/kg	1	0	0				5		5	Maximum DL
F	Northern pike	OC Pesticides	Heptachlor epoxide	µg/kg	1	1	100	14	14				14	Maximum detect
F	Northern pike	OC Pesticides	Total DDx	µg/kg	1	1	100	280	280				280	Maximum detect
F	Other forage fish (no mummichog)	Metals	Arsenic	mg/kg	10	10	100	0.044	0.52	0.26		0.34	0.34	95% Student's-t UCL
F	Other forage fish (no mummichog)	Metals	Cadmium	mg/kg	10	10	100	0.0091	0.099	0.044		0.058	0.058	95% Student's-t UCL
F	Other forage fish (no mummichog)	Metals	Chromium	mg/kg	10	10	100	0.89	125	24		61	61	95% Adjusted Gamma UCL
F	Other forage fish (no mummichog)	Metals	Cobalt	mg/kg	10	10	100	0.031	1.1	0.32		0.49	0.49	95% Student's-t UCL
F	Other forage fish (no mummichog)	Metals	Copper	mg/kg	10	10	100	0.87	5.4	3.3		4.1	4.1	95% Student's-t UCL
F	Other forage fish (no mummichog)	Metals	Lead	mg/kg	10	10	100	0.15	4.9	2.2		3	3	95% Student's-t UCL
F	Other forage fish (no mummichog)	Metals	Mercury	µg/kg	10	10	100	30	150	63		83	83	95% Student's-t UCL
F	Other forage fish (no mummichog)	Metals	Methyl mercury	µg/kg	10	10	100	14	150	39		70	70	95% Adjusted Gamma UCL
F	Other forage fish (no mummichog)	Metals	Nickel	mg/kg	10	10	100	0.62	89.1	17		44	44	95% Adjusted Gamma UCL
F	Other forage fish (no mummichog)	Metals	Selenium	mg/kg	10	10	100	0.22	0.93	0.55		0.7	0.7	95% Student's-t UCL
F	Other forage fish (no mummichog)	Metals	Silver	mg/kg	10	9	90	0.0067	0.074	0.035	0.0051	0.046	0.046	95% KM (t) UCL
F	Other forage fish (no mummichog)	Metals	Vanadium	mg/kg	10	10	100	0.05	1.3	0.8		1	1	95% Student's-t UCL
F	Other forage fish (no mummichog)	Metals	Zinc	mg/kg	10	10	100	25	48	32.2		36.3	36.3	95% Student's-t UCL
F	Other forage fish (no mummichog)	PAHs	Benzo(a)pyrene	µg/kg	10	10	100	2.1	98	42		58	58	95% Student's-t UCL
F	Other forage fish (no mummichog)	PAHs	Total HPAHs	µg/kg	10	10	100	78	1000	480		670	670	95% Student's-t UCL
F	Other forage fish (no mummichog)	PAHs	Total LPAHs	µg/kg	10	10	100	69	370	160		210	210	95% Student's-t UCL
F	Other forage fish (no mummichog)	PAHs	Total PAHs	µg/kg	10	10	100	170	1200	650		850	850	95% Student's-t UCL
F	Other forage fish (no mummichog)	PCB Congeners	Total PCB Congeners	µg/kg	10	10	100	170	870	440		550	550	95% Student's-t UCL
F	Other forage fish (no mummichog)	PCB Congeners	PCB TEQ-Bird	ng/kg	10	10	100	20	95	53		69	69	95% Student's-t UCL
F	Other forage fish (no mummichog)	PCB Congeners	PCB TEQ-Fish	ng/kg	10	10	100	0.19	0.9	0.5		0.62	0.62	95% Student's-t UCL
F	Other forage fish (no mummichog)	PCB Congeners	PCB TEQ-Mammal	ng/kg	10	10	100	2.1	11	6		7.4	7.4	95% Student's-t UCL
F	Other forage fish (no mummichog)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	10	10	100	2.4	93	30		46	46	95% Student's-t UCL
F	Other forage fish (no mummichog)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	10	10	100	9.1	100	35		53	53	95% Student's-t UCL
F	Other forage fish (no mummichog)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	10	10	100	3.7	96	32		49	49	95% Student's-t UCL
F	Other forage fish (no mummichog)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	10	10	100	3.8	96	32		48	48	95% Student's-t UCL
F	Other forage fish (no mummichog)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	10	10	100	32	200	88		120	120	95% Student's-t UCL
F	Other forage fish (no mummichog)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	10	10	100	4.3	97	32		49	49	95% Student's-t UCL

Fish Tissue LOE -- Tissue EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
F	Other forage fish (no mummichog)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	10	10	100	10	110	38		56	56	95% Student's-t UCL
F	Other forage fish (no mummichog)	OC Pesticides	Dieldrin	µg/kg	10	10	100	8.4	22	13		16	16	95% Student's-t UCL
F	Other forage fish (no mummichog)	OC Pesticides	Endosulfan I	µg/kg	10	0	0				1.5		1.5	Maximum DL
F	Other forage fish (no mummichog)	OC Pesticides	Endosulfan II	µg/kg	10	0	0				1.5		1.5	Maximum DL
F	Other forage fish (no mummichog)	OC Pesticides	Heptachlor epoxide	µg/kg	10	10	100	2.7	6.8	4.6		5.5	5.5	95% Student's-t UCL
F	Other forage fish (no mummichog)	OC Pesticides	Total DDx	µg/kg	10	10	100	22	140	55		75	75	95% Student's-t UCL
F	Smallmouth bass	Metals	Arsenic	mg/kg	3	3	100	0.16	0.25	0.21			0.25	Maximum detect
F	Smallmouth bass	Metals	Cadmium	mg/kg	3	3	100	0.0043	0.0089	0.0069			0.0089	Maximum detect
F	Smallmouth bass	Metals	Chromium	mg/kg	3	3	100	0.24	0.51	0.34			0.51	Maximum detect
F	Smallmouth bass	Metals	Cobalt	mg/kg	3	3	100	0.026	0.031	0.028			0.031	Maximum detect
F	Smallmouth bass	Metals	Copper	mg/kg	3	3	100	0.4	0.8	0.53			0.8	Maximum detect
F	Smallmouth bass	Metals	Lead	mg/kg	3	3	100	0.052	0.098	0.081			0.098	Maximum detect
F	Smallmouth bass	Metals	Mercury	µg/kg	3	3	100	180	300	230			300	Maximum detect
F	Smallmouth bass	Metals	Methyl mercury	µg/kg	3	3	100	140	220	170			220	Maximum detect
F	Smallmouth bass	Metals	Nickel	mg/kg	3	3	100	0.35	0.56	0.43			0.56	Maximum detect
F	Smallmouth bass	Metals	Selenium	mg/kg	3	3	100	0.51	0.69	0.62			0.69	Maximum detect
F	Smallmouth bass	Metals	Silver	mg/kg	3	0	0				0.0028		0.0028	Maximum DL
F	Smallmouth bass	Metals	Vanadium	mg/kg	3	3	100	0.016	0.028	0.02			0.028	Maximum detect
F	Smallmouth bass	Metals	Zinc	mg/kg	3	3	100	15	18.4	17			18.4	Maximum detect
F	Smallmouth bass	PAHs	Benzo(a)pyrene	µg/kg	3	1	33.3	28	28		2.6		28	Maximum detect
F	Smallmouth bass	PAHs	Total HPAHs	µg/kg	3	3	100	7.3	390	140			390	Maximum detect
F	Smallmouth bass	PAHs	Total LPAHs	µg/kg	3	3	100	38	67	50			67	Maximum detect
F	Smallmouth bass	PAHs	Total PAHs	µg/kg	3	3	100	43	460	190			460	Maximum detect
F	Smallmouth bass	PCB Congeners	Total PCB Congeners	µg/kg	3	3	100	630	1400	1000			1400	Maximum detect
F	Smallmouth bass	PCB Congeners	PCB TEQ-Bird	ng/kg	3	3	100	37	67	50			67	Maximum detect
F	Smallmouth bass	PCB Congeners	PCB TEQ-Fish	ng/kg	3	3	100	0.69	1.4	1			1.4	Maximum detect
F	Smallmouth bass	PCB Congeners	PCB TEQ-Mammal	ng/kg	3	3	100	9.4	19	14			19	Maximum detect
F	Smallmouth bass	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	3	3	100	8	76	39			76	Maximum detect
F	Smallmouth bass	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	3	3	100	9.8	82	42			82	Maximum detect
F	Smallmouth bass	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	3	3	100	8.6	76	39			76	Maximum detect
F	Smallmouth bass	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	3	3	100	8.6	76	39			76	Maximum detect
F	Smallmouth bass	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	3	3	100	57	140	88			140	Maximum detect
F	Smallmouth bass	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	3	3	100	9.8	82	42			82	Maximum detect
F	Smallmouth bass	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	3	3	100	22	96	53			96	Maximum detect
F	Smallmouth bass	OC Pesticides	Dieldrin	µg/kg	3	3	100	16	20	18			20	Maximum detect
F	Smallmouth bass	OC Pesticides	Endosulfan I	µg/kg	3	0	0				2.9		2.9	Maximum DL
F	Smallmouth bass	OC Pesticides	Endosulfan II	µg/kg	2	0	0				2.8		2.8	Maximum DL
F	Smallmouth bass	OC Pesticides	Heptachlor epoxide	µg/kg	3	3	100	5	7.6	6.6			7.6	Maximum detect
F	Smallmouth bass	OC Pesticides	Total DDx	µg/kg	3	3	100	100	230	150			230	Maximum detect
F	White catfish	Metals	Arsenic	mg/kg	19	19	100	0.017	0.19	0.063		0.086	0.086	95% Adjusted Gamma UCL
F	White catfish	Metals	Cadmium	mg/kg	19	19	100	0.0039	0.027	0.011		0.014	0.014	95% Student's-t UCL
F	White catfish	Metals	Chromium	mg/kg	19	19	100	0.13	1.6	0.51		0.73	0.73	95% Adjusted Gamma UCL
F	White catfish	Metals	Cobalt	mg/kg	19	19	100	0.016	0.062	0.026		0.031	0.031	95% Modified-t UCL
F	White catfish	Metals	Copper	mg/kg	19	19	100	0.33	0.83	0.63		0.68	0.68	95% Student's-t UCL
F	White catfish	Metals	Lead	mg/kg	19	19	100	0.29	2.2	0.58		0.75	0.75	95% Modified-t UCL
F	White catfish	Metals	Mercury	µg/kg	19	19	100	78	630	220		280	280	95% Adjusted Gamma UCL
F	White catfish	Metals	Methyl mercury	µg/kg	19	19	100	63	530	200		250	250	95% Student's-t UCL
F	White catfish	Metals	Nickel	mg/kg	19	19	100	0.17	0.96	0.39		0.64	0.64	95% Chebyshev (Mean, Sd) UCL
F	White catfish	Metals	Selenium	mg/kg	19	19	100	0.16	0.68	0.33		0.38	0.38	95% Student's-t UCL
F	White catfish	Metals	Silver	mg/kg	19	7	36.8	0.0026	0.0066	0.0047	0.0027	0.0033	0.0033	95% KM (t) UCL
F	White catfish	Metals	Vanadium	mg/kg	19	19	100	0.043	0.21	0.13		0.14	0.14	95% Student's-t UCL
F	White catfish	Metals	Zinc	mg/kg	19	19	100	12	19	16		17	17	95% Student's-t UCL

Fish Tissue LOE -- Tissue EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
F	White catfish	PAHs	Benzo(a)pyrene	µg/kg	19	9	47.4	0.65	24	4.5	0.95	8.4	8.4	95% Adjusted Gamma KM-UCL
F	White catfish	PAHs	Total HPAHs	µg/kg	19	19	100	17	310	66		94	94	95% H-UCL
F	White catfish	PAHs	Total LPAHs	µg/kg	19	19	100	34	470	120		170	170	95% Adjusted Gamma UCL
F	White catfish	PAHs	Total PAHs	µg/kg	19	19	100	58	590	180		260	260	95% Adjusted Gamma UCL
F	White catfish	PCB Congeners	Total PCB Congeners	µg/kg	19	19	100	630	7300	2700		3400	3400	95% Student's-t UCL
F	White catfish	PCB Congeners	PCB TEQ-Bird	ng/kg	19	19	100	18	210	70		92	92	95% Adjusted Gamma UCL
F	White catfish	PCB Congeners	PCB TEQ-Fish	ng/kg	19	19	100	0.61	7.4	2.6		3.5	3.5	95% Adjusted Gamma UCL
F	White catfish	PCB Congeners	PCB TEQ-Mammal	ng/kg	19	19	100	7.8	95	36		45	45	95% Student's-t UCL
F	White catfish	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	19	19	100	20	410	170		210	210	95% Student's-t UCL
F	White catfish	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	19	19	100	23	430	180		230	230	95% Student's-t UCL
F	White catfish	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	19	19	100	22	430	180		220	220	95% Student's-t UCL
F	White catfish	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	19	19	100	22	420	180		220	220	95% Student's-t UCL
F	White catfish	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	19	19	100	42	580	250		310	310	95% Student's-t UCL
F	White catfish	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	19	19	100	23	430	180		230	230	95% Student's-t UCL
F	White catfish	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	19	19	100	35	510	220		260	260	95% Student's-t UCL
F	White catfish	OC Pesticides	Dieldrin	µg/kg	19	19	100	7.2	48	22		27	27	95% Student's-t UCL
F	White catfish	OC Pesticides	Endosulfan I	µg/kg	19	0	0				1.7		1.7	Maximum DL
F	White catfish	OC Pesticides	Endosulfan II	µg/kg	19	1	5.3	2.5	2.5		4.9		2.5	Maximum detect
F	White catfish	OC Pesticides	Heptachlor epoxide	µg/kg	19	19	100	2.7	19	9.1		11	11	95% Student's-t UCL
F	White catfish	OC Pesticides	Total DDx	µg/kg	19	19	100	43	870	250		350	350	95% Adjusted Gamma UCL
F	White perch	Metals	Arsenic	mg/kg	22	21	95.5	0.11	0.35	0.2	0.15	0.22	0.22	95% KM (t) UCL
F	White perch	Metals	Cadmium	mg/kg	22	22	100	0.003	0.031	0.012		0.014	0.014	95% Student's-t UCL
F	White perch	Metals	Chromium	mg/kg	22	22	100	0.61	9.8	3.2		4.4	4.4	95% Adjusted Gamma UCL
F	White perch	Metals	Cobalt	mg/kg	22	22	100	0.032	0.14	0.067		0.082	0.082	95% Adjusted Gamma UCL
F	White perch	Metals	Copper	mg/kg	22	22	100	1.6	50.9	10		14	14	95% Adjusted Gamma UCL
F	White perch	Metals	Lead	mg/kg	22	22	100	0.17	0.96	0.38		0.44	0.44	95% Student's-t UCL
F	White perch	Metals	Mercury	µg/kg	22	22	100	33	530	160		200	200	95% Adjusted Gamma UCL
F	White perch	Metals	Methyl mercury	µg/kg	22	22	100	25	330	150		170	170	95% Student's-t UCL
F	White perch	Metals	Nickel	mg/kg	22	22	100	0.62	6.3	2.1		3	3	95% H-UCL
F	White perch	Metals	Selenium	mg/kg	22	22	100	0.37	3	1.2		1.4	1.4	95% Student's-t UCL
F	White perch	Metals	Silver	mg/kg	22	22	100	0.013	0.64	0.14		0.2	0.2	95% Adjusted Gamma UCL
F	White perch	Metals	Vanadium	mg/kg	22	22	100	0.04	0.39	0.12		0.14	0.14	95% Adjusted Gamma UCL
F	White perch	Metals	Zinc	mg/kg	22	22	100	19.9	30.8	25		26	26	95% Student's-t UCL
F	White perch	PAHs	Benzo(a)pyrene	µg/kg	22	11	50	1.5	24	5.6	2.2	7.2	7.2	95% GROS Adjusted Gamma UCL
F	White perch	PAHs	Total HPAHs	µg/kg	22	22	100	21	340	110		140	140	95% Student's-t UCL
F	White perch	PAHs	Total LPAHs	µg/kg	22	22	100	36	300	170		200	200	95% Student's-t UCL
F	White perch	PAHs	Total PAHs	µg/kg	22	22	100	63	570	280		330	330	95% Student's-t UCL
F	White perch	PCB Congeners	Total PCB Congeners	µg/kg	22	22	100	290	5100	2000		2500	2500	95% Student's-t UCL
F	White perch	PCB Congeners	PCB TEQ-Bird	ng/kg	22	22	100	31	400	190		230	230	95% Student's-t UCL
F	White perch	PCB Congeners	PCB TEQ-Fish	ng/kg	22	22	100	0.28	3.4	1.8		2.1	2.1	95% Student's-t UCL
F	White perch	PCB Congeners	PCB TEQ-Mammal	ng/kg	22	22	100	2.9	41	22		26	26	95% Student's-t UCL
F	White perch	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	22	22	100	18	250	120		190	190	95% Chebyshev (Mean, Sd) UCL
F	White perch	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	22	22	100	21	280	140		210	210	95% Chebyshev (Mean, Sd) UCL
F	White perch	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	22	22	100	19	260	130		200	200	95% Chebyshev (Mean, Sd) UCL
F	White perch	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	22	22	100	19	260	130		200	200	95% Chebyshev (Mean, Sd) UCL
F	White perch	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	22	22	100	52	690	340		400	400	95% Student's-t UCL
F	White perch	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	22	22	100	19	270	130		200	200	95% Chebyshev (Mean, Sd) UCL
F	White perch	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	22	22	100	25	300	150		230	230	95% Chebyshev (Mean, Sd) UCL
F	White perch	OC Pesticides	Dieldrin	µg/kg	22	22	100	7.8	47	26		31	31	95% Student's-t UCL
F	White perch	OC Pesticides	Endosulfan I	µg/kg	22	1	4.5	0.22	0.22		3.2		0.22	Maximum detect
F	White perch	OC Pesticides	Endosulfan II	µg/kg	22	0	0				3.7		3.7	Maximum DL
F	White perch	OC Pesticides	Heptachlor epoxide	µg/kg	22	22	100	2.8	18	10		12	12	95% Student's-t UCL

Fish Tissue LOE -- Tissue EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
F	White perch	OC Pesticides	Total DDx	µg/kg	22	22	100	38	490	200		240	240	95% Student's-t UCL
F	White sucker	Metals	Arsenic	mg/kg	5	5	100	0.064	0.11	0.079			0.11	Maximum detect
F	White sucker	Metals	Cadmium	mg/kg	5	5	100	0.0035	0.013	0.0078			0.013	Maximum detect
F	White sucker	Metals	Chromium	mg/kg	5	5	100	0.09	2	0.81			2	Maximum detect
F	White sucker	Metals	Cobalt	mg/kg	5	5	100	0.014	0.055	0.031			0.055	Maximum detect
F	White sucker	Metals	Copper	mg/kg	5	5	100	0.77	1.1	0.97			1.1	Maximum detect
F	White sucker	Metals	Lead	mg/kg	5	5	100	0.15	0.3	0.23			0.3	Maximum detect
F	White sucker	Metals	Mercury	µg/kg	5	5	100	77	140	110			140	Maximum detect
F	White sucker	Metals	Methyl mercury	µg/kg	5	5	100	71	130	100			130	Maximum detect
F	White sucker	Metals	Nickel	mg/kg	5	5	100	0.14	0.94	0.47			0.94	Maximum detect
F	White sucker	Metals	Selenium	mg/kg	5	5	100	0.3	0.46	0.38			0.46	Maximum detect
F	White sucker	Metals	Silver	mg/kg	5	5	100	0.003	0.005	0.0041			0.005	Maximum detect
F	White sucker	Metals	Vanadium	mg/kg	5	5	100	0.073	0.17	0.11			0.17	Maximum detect
F	White sucker	Metals	Zinc	mg/kg	5	5	100	14	21	17			21	Maximum detect
F	White sucker	PAHs	Benzo(a)pyrene	µg/kg	5	2	40	1.7	2.9	2.3	1.1		2.9	Maximum detect
F	White sucker	PAHs	Total HPAHs	µg/kg	5	5	100	21	48	30			48	Maximum detect
F	White sucker	PAHs	Total LPAHs	µg/kg	5	5	100	17	49	36			49	Maximum detect
F	White sucker	PAHs	Total PAHs	µg/kg	5	5	100	38	97	67			97	Maximum detect
F	White sucker	PCB Congeners	Total PCB Congeners	µg/kg	5	5	100	540	2900	1500			2900	Maximum detect
F	White sucker	PCB Congeners	PCB TEQ-Bird	ng/kg	5	5	100	64	170	120			170	Maximum detect
F	White sucker	PCB Congeners	PCB TEQ-Fish	ng/kg	5	5	100	0.81	3.2	1.7			3.2	Maximum detect
F	White sucker	PCB Congeners	PCB TEQ-Mammal	ng/kg	5	5	100	11	45	22			45	Maximum detect
F	White sucker	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	5	5	100	3.1	130	59			130	Maximum detect
F	White sucker	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	5	5	100	8	140	68			140	Maximum detect
F	White sucker	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	5	5	100	4.1	130	60			130	Maximum detect
F	White sucker	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	5	5	100	4.1	130	60			130	Maximum detect
F	White sucker	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	5	5	100	74	310	190			310	Maximum detect
F	White sucker	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	5	5	100	4.9	130	62			130	Maximum detect
F	White sucker	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	5	5	100	15	170	82			170	Maximum detect
F	White sucker	OC Pesticides	Dieldrin	µg/kg	5	5	100	16	25	20			25	Maximum detect
F	White sucker	OC Pesticides	Endosulfan I	µg/kg	5	1	20	0.45	0.45		0.6		0.45	Maximum detect
F	White sucker	OC Pesticides	Endosulfan II	µg/kg	5	0	0				1.1		1.1	Maximum DL
F	White sucker	OC Pesticides	Heptachlor epoxide	µg/kg	5	5	100	5.4	10	7.3			10	Maximum detect
F	White sucker	OC Pesticides	Total DDx	µg/kg	5	5	100	63	150	110			150	Maximum detect

Benthic Tissue LOE -- Tissue EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
I	Blue crab	Metals	Arsenic	mg/kg	24	24	100	0.29	1.9	1		1.4	1.4	95% Chebyshev (Mean, Sd) UCL
I	Blue crab	Metals	Cadmium	mg/kg	24	24	100	0.047	0.18	0.095		0.11	0.11	95% Student's-t UCL
I	Blue crab	Metals	Chromium	mg/kg	24	24	100	0.45	3.1	1.2		1.4	1.4	95% Adjusted Gamma UCL
I	Blue crab	Metals	Cobalt	mg/kg	24	24	100	0.059	0.095	0.072		0.076	0.076	95% Student's-t UCL
I	Blue crab	Metals	Copper	mg/kg	24	24	100	16.2	30.6	23		24.6	24.6	95% Student's-t UCL
I	Blue crab	Metals	Lead	mg/kg	24	24	100	0.2	0.66	0.32		0.36	0.36	95% Student's-t UCL
I	Blue crab	Metals	Mercury	µg/kg	24	24	100	79	190	130		140	140	95% Student's-t UCL
I	Blue crab	Metals	Methyl mercury	µg/kg	24	24	100	55	170	110		120	120	95% Student's-t UCL
I	Blue crab	Metals	Nickel	mg/kg	24	24	100	0.52	1.9	0.89		1	1	95% Adjusted Gamma UCL
I	Blue crab	Metals	Selenium	mg/kg	24	24	100	0.43	1.1	0.73		0.79	0.79	95% Student's-t UCL
I	Blue crab	Metals	Silver	mg/kg	24	24	100	0.25	0.78	0.54		0.61	0.61	95% Student's-t UCL
I	Blue crab	Metals	Vanadium	mg/kg	24	24	100	0.078	0.14	0.11		0.12	0.12	95% Student's-t UCL
I	Blue crab	Metals	Zinc	mg/kg	24	24	100	28.3	41.1	35.3		36.4	36.4	95% Student's-t UCL
I	Blue crab	PAHs	Benzo(a)pyrene	µg/kg	24	24	100	1.9	40	7.4		10	10	95% H-UCL
I	Blue crab	PAHs	Total HPAHs	µg/kg	24	24	100	14	350	82		110	110	95% Adjusted Gamma UCL
I	Blue crab	PAHs	Total LPAHs	µg/kg	24	24	100	5.8	270	59		83	83	95% Adjusted Gamma UCL
I	Blue crab	PAHs	Total PAHs	µg/kg	24	24	100	17	420	140		190	190	95% Adjusted Gamma UCL
I	Blue crab	PCB Congeners	Total PCB Congeners	µg/kg	24	24	100	150	580	320		350	350	95% Student's-t UCL
I	Blue crab	PCB Congeners	PCB TEQ-Bird	ng/kg	24	24	100	45	110	88		94	94	95% Student's-t UCL
I	Blue crab	PCB Congeners	PCB TEQ-Fish	ng/kg	24	24	100	0.28	1.1	0.71		0.78	0.78	95% Student's-t UCL
I	Blue crab	PCB Congeners	PCB TEQ-Mammal	ng/kg	24	24	100	3	12	8		8.8	8.8	95% Student's-t UCL
I	Blue crab	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	24	24	100	24	86	51		57	57	95% Student's-t UCL
I	Blue crab	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	24	24	100	31	100	66		71	71	95% Student's-t UCL
I	Blue crab	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	24	24	100	26	93	56		62	62	95% Student's-t UCL
I	Blue crab	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	24	24	100	26	93	56		61	61	95% Student's-t UCL
I	Blue crab	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	24	24	100	79	200	150		170	170	95% Student's-t UCL
I	Blue crab	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	24	24	100	26	93	57		63	63	95% Student's-t UCL
I	Blue crab	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	24	24	100	28	100	63		70	70	95% Student's-t UCL
I	Blue crab	OC Pesticides	Dieldrin	µg/kg	24	24	100	2.4	9.1	6.2		6.8	6.8	95% Student's-t UCL
I	Blue crab	OC Pesticides	Endosulfan I	µg/kg	24	0	0				7.7		7.7	Maximum DL
I	Blue crab	OC Pesticides	Endosulfan II	µg/kg	24	0	0				13		13	Maximum DL
I	Blue crab	OC Pesticides	Heptachlor epoxide	µg/kg	24	24	100	1.8	14	5.3		6.3	6.3	95% Student's-t UCL
I	Blue crab	OC Pesticides	Total DDx	µg/kg	24	24	100	30	100	62		68	68	95% Student's-t UCL
I	Worms (all)	Metals	Arsenic	mg/kg	14	14	100	0.58	1.8	1.1		1.4	1.4	95% Student's-t UCL
I	Worms (all)	Metals	Cadmium	mg/kg	14	14	100	0.023	0.2	0.08		0.11	0.11	95% Student's-t UCL
I	Worms (all)	Metals	Chromium	mg/kg	14	14	100	1.4	61	12		21	21	95% Adjusted Gamma UCL
I	Worms (all)	Metals	Cobalt	mg/kg	14	14	100	0.096	1.8	0.42		0.69	0.69	95% Adjusted Gamma UCL
I	Worms (all)	Metals	Copper	mg/kg	14	14	100	1.2	11.9	4.1		5.8	5.8	95% Student's-t UCL
I	Worms (all)	Metals	Lead	mg/kg	14	14	100	0.11	12.4	2.7		6.4	6.4	95% Adjusted Gamma UCL
I	Worms (all)	Metals	Mercury	µg/kg	19	19	100	7.6	150	28		59	59	95% Chebyshev (Mean, Sd) UCL
I	Worms (all)	Metals	Methyl mercury	µg/kg	19	7	36.8	1	3.4	2.5	3.1	2.9	2.9	95% KM (% Bootstrap) UCL
I	Worms (all)	Metals	Nickel	mg/kg	14	14	100	1.2	36.2	7.4		13	13	95% Adjusted Gamma UCL
I	Worms (all)	Metals	Selenium	mg/kg	14	14	100	0.28	0.77	0.46		0.54	0.54	95% Student's-t UCL
I	Worms (all)	Metals	Silver	mg/kg	14	14	100	0.006	0.042	0.023		0.028	0.028	95% Student's-t UCL
I	Worms (all)	Metals	Vanadium	mg/kg	14	14	100	0.07	1.3	0.4		0.59	0.59	95% Student's-t UCL
I	Worms (all)	Metals	Zinc	mg/kg	14	14	100	18.1	45.2	29.5		34	34	95% Student's-t UCL
I	Worms (all)	PAHs	Benzo(a)pyrene	µg/kg	10	5	50	87	440	190	3.2		440	Maximum detect
I	Worms (all)	PAHs	Total HPAHs	µg/kg	10	10	100	58	4900	1200		2000	2000	95% Student's-t UCL
I	Worms (all)	PAHs	Total LPAHs	µg/kg	10	10	100	5.3	940	150		540	540	95% Adjusted Gamma UCL
I	Worms (all)	PAHs	Total PAHs	µg/kg	10	10	100	67	5900	1300		2400	2400	95% Student's-t UCL

Benthic Tissue LOE -- Tissue EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
I	Worms (all)	PCB Congeners	Total PCB Congeners	µg/kg	19	19	100	26	530	150		240	240	95% H-UCL
I	Worms (all)	PCB Congeners	PCB TEQ-Bird	ng/kg	19	19	100	4.3	90	21		31	31	95% Adjusted Gamma UCL
I	Worms (all)	PCB Congeners	PCB TEQ-Fish	ng/kg	19	19	100	0.037	0.44	0.14		0.2	0.2	95% H-UCL
I	Worms (all)	PCB Congeners	PCB TEQ-Mammal	ng/kg	19	19	100	0.49	3.8	1.4		2.5	2.5	95% Chebyshev (Mean, Sd) UCL
I	Worms (all)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	19	19	100	0.5	140	21		38	38	95% Adjusted Gamma UCL
I	Worms (all)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	19	19	100	2.4	150	25		60	60	95% Chebyshev (Mean, Sd) UCL
I	Worms (all)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	19	19	100	0.96	140	22		38	38	95% Adjusted Gamma UCL
I	Worms (all)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	19	19	100	1	140	23		39	39	95% Adjusted Gamma UCL
I	Worms (all)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	19	19	100	8.1	240	46		71	71	95% Adjusted Gamma UCL
I	Worms (all)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	19	19	100	1	140	23		39	39	95% Adjusted Gamma UCL
I	Worms (all)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	19	19	100	2	150	24		40	40	95% Adjusted Gamma UCL
I	Worms (all)	OC Pesticides	Dieldrin	µg/kg	18	18	100	0.57	2.6	1.4		1.6	1.6	95% Student's-t UCL
I	Worms (all)	OC Pesticides	Endosulfan I	µg/kg	18	0	0				1.7		1.7	Maximum DL
I	Worms (all)	OC Pesticides	Endosulfan II	µg/kg	18	0	0				3.9		3.9	Maximum DL
I	Worms (all)	OC Pesticides	Heptachlor epoxide	µg/kg	18	15	83.3	0.082	0.64	0.32	0.25	0.36	0.36	95% KM (t) UCL
I	Worms (all)	OC Pesticides	Total DDx	µg/kg	18	15	83.3	1.8	33	13	4.6	16	16	95% KM (t) UCL
I	Mussels (all, day 0-normed)	Metals	Arsenic	mg/kg	8	8	100	0	0	0		0.01	0	Maximum detect
I	Mussels (all, day 0-normed)	Metals	Cadmium	mg/kg	8	8	100	0	0.009	0.0039		0.01	0.009	Maximum detect
I	Mussels (all, day 0-normed)	Metals	Chromium	mg/kg	8	8	100	0	16	3.4		13	13	95% Chebyshev (Mean, Sd) UCL
I	Mussels (all, day 0-normed)	Metals	Cobalt	mg/kg	8	8	100	0	0.08	0.021		0.075	0.075	95% Chebyshev (Mean, Sd) UCL
I	Mussels (all, day 0-normed)	Metals	Copper	mg/kg	8	8	100	0	0.36	0.11		0.35	0.35	95% Chebyshev (Mean, Sd) UCL
I	Mussels (all, day 0-normed)	Metals	Lead	mg/kg	8	8	100	0.01	0.15	0.095		0.13	0.13	95% Student's-t UCL
I	Mussels (all, day 0-normed)	Metals	Mercury	µg/kg	8	8	100	0	8	2.5		8	8	95% Chebyshev (Mean, Sd) UCL
I	Mussels (all, day 0-normed)	Metals	Methyl mercury	µg/kg	8	8	100	0	7	1.5		3.2	3.2	95% Student's-t UCL
I	Mussels (all, day 0-normed)	Metals	Nickel	mg/kg	8	8	100	0	7.6	1.7		6.6	6.6	95% Chebyshev (Mean, Sd) UCL
I	Mussels (all, day 0-normed)	Metals	Selenium	mg/kg	8	8	100	0	0.09	0.031		0.052	0.052	95% Student's-t UCL
I	Mussels (all, day 0-normed)	Metals	Silver	mg/kg	8	8	100	0	0.002	0.00088		0.0014	0.0014	95% Student's-t UCL
I	Mussels (all, day 0-normed)	Metals	Vanadium	mg/kg	8	8	100	0	0.13	0.016		0.087	0.087	95% Chebyshev (Mean, Sd) UCL
I	Mussels (all, day 0-normed)	Metals	Zinc	mg/kg	8	8	100	0	2.2	0.4		1.6	1.6	95% Chebyshev (Mean, Sd) UCL
I	Mussels (all, day 0-normed)	PAHs	Benzo(a)pyrene	µg/kg	8	8	100	1	9	6		7.9	7.9	95% Student's-t UCL
I	Mussels (all, day 0-normed)	PAHs	Total HPAHs	µg/kg	8	8	100	18	220	170		280	220	Maximum detect
I	Mussels (all, day 0-normed)	PAHs	Total LPAHs	µg/kg	8	8	100	10	110	28		82	82	95% Chebyshev (Mean, Sd) UCL
I	Mussels (all, day 0-normed)	PAHs	Total PAHs	µg/kg	8	8	100	28	330	200		250	250	95% Student's-t UCL
I	Mussels (all, day 0-normed)	PCB Congeners	Total PCB Congeners	µg/kg	8	8	100	1.8	30	18		24	24	95% Student's-t UCL
I	Mussels (all, day 0-normed)	PCB Congeners	PCB TEQ-Bird	ng/kg	8	8	100	0.22	5.1	2.7		3.8	3.8	95% Student's-t UCL
I	Mussels (all, day 0-normed)	PCB Congeners	PCB TEQ-Fish	ng/kg	8	8	100	0.0022	0.026	0.015		0.021	0.021	95% Student's-t UCL
I	Mussels (all, day 0-normed)	PCB Congeners	PCB TEQ-Mammal	ng/kg	8	8	100	0.021	0.24	0.14		0.2	0.2	95% Student's-t UCL
I	Mussels (all, day 0-normed)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	8	8	100	0.077	3.6	1.3		2.2	2.2	95% Student's-t UCL
I	Mussels (all, day 0-normed)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	8	8	100	0.23	4.2	1.7		2.7	2.7	95% Student's-t UCL
I	Mussels (all, day 0-normed)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	8	8	100	0.17	3.7	1.4		2.3	2.3	95% Student's-t UCL
I	Mussels (all, day 0-normed)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	8	8	100	0.17	3.7	1.4		2.3	2.3	95% Student's-t UCL
I	Mussels (all, day 0-normed)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	8	8	100	0.45	9.2	4.5		6.5	6.5	95% Student's-t UCL
I	Mussels (all, day 0-normed)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	8	8	100	0.19	3.7	1.4		2.3	2.3	95% Student's-t UCL
I	Mussels (all, day 0-normed)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	8	8	100	0.21	4	1.6		2.5	2.5	95% Student's-t UCL
I	Mussels (all, day 0-normed)	OC Pesticides	Dieldrin	µg/kg	8	8	100	0.64	3	2.2		2.7	2.7	95% Student's-t UCL
I	Mussels (all, day 0-normed)	OC Pesticides	Endosulfan I	µg/kg	8	0	0				2.5		2.5	Maximum DL
I	Mussels (all, day 0-normed)	OC Pesticides	Endosulfan II	µg/kg	8	0	0				3		3	Maximum DL
I	Mussels (all, day 0-normed)	OC Pesticides	Heptachlor epoxide	µg/kg	8	8	100	0.15	1.2	0.73		0.96	0.96	95% Student's-t UCL
I	Mussels (all, day 0-normed)	OC Pesticides	Total DDx	µg/kg	8	7	87.5	2.3	6.9	4.3	2.7	5.3	5.3	95% KM (t) UCL
I	Blue crab (hepatopancreas)	Metals	Mercury	µg/kg	7	7	100	32	70	56		67	67	95% Student's-t UCL
I	Blue crab (hepatopancreas)	Metals	Methyl mercury	µg/kg	7	7	100	15	60	37		49	49	95% Student's-t UCL
I	Blue crab (muscle)	Metals	Mercury	µg/kg	21	21	100	70	320	180		200	200	95% Student's-t UCL

Benthic Tissue LOE -- Tissue EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
I	Blue crab (muscle)	Metals	Methyl mercury	µg/kg	21	21	100	67	270	160		190	190	95% Student's-t UCL

Diet LOE -- Prey Tissue EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
B, F, M	Blue crab	Metals	Arsenic	mg/kg	24	24	100	0.29	1.9	1		1.4	1.4	95% Chebyshev (Mean, Sd) UCL
B, F, M	Blue crab	Metals	Cadmium	mg/kg	24	24	100	0.047	0.18	0.095		0.11	0.11	95% Student's-t UCL
B, F, M	Blue crab	Metals	Chromium	mg/kg	24	24	100	0.45	3.1	1.2		1.4	1.4	95% Adjusted Gamma UCL
B, F, M	Blue crab	Metals	Cobalt	mg/kg	24	24	100	0.059	0.095	0.072		0.076	0.076	95% Student's-t UCL
B, F, M	Blue crab	Metals	Copper	mg/kg	24	24	100	16.2	30.6	23		24.6	24.6	95% Student's-t UCL
B, F, M	Blue crab	Metals	Lead	mg/kg	24	24	100	0.2	0.66	0.32		0.36	0.36	95% Student's-t UCL
B, F, M	Blue crab	Metals	Mercury	µg/kg	24	24	100	79	190	130		140	140	95% Student's-t UCL
B, F, M	Blue crab	Metals	Methyl mercury	µg/kg	24	24	100	55	170	110		120	120	95% Student's-t UCL
B, F, M	Blue crab	Metals	Nickel	mg/kg	24	24	100	0.52	1.9	0.89		1	1	95% Adjusted Gamma UCL
B, F, M	Blue crab	Metals	Selenium	mg/kg	24	24	100	0.43	1.1	0.73		0.79	0.79	95% Student's-t UCL
B, F, M	Blue crab	Metals	Silver	mg/kg	24	24	100	0.25	0.78	0.54		0.61	0.61	95% Student's-t UCL
B, F, M	Blue crab	Metals	Vanadium	mg/kg	24	24	100	0.078	0.14	0.11		0.12	0.12	95% Student's-t UCL
B, F, M	Blue crab	Metals	Zinc	mg/kg	24	24	100	28.3	41.1	35.3		36.4	36.4	95% Student's-t UCL
B, F, M	Blue crab	PAHs	Benzo(a)pyrene	µg/kg	24	24	100	1.9	40	7.4		10	10	95% H-UCL
B, F, M	Blue crab	PAHs	Total HPAHs	µg/kg	24	24	100	14	350	82		110	110	95% Adjusted Gamma UCL
B, F, M	Blue crab	PAHs	Total LPAHs	µg/kg	24	24	100	5.8	270	59		83	83	95% Adjusted Gamma UCL
B, F, M	Blue crab	PAHs	Total PAHs	µg/kg	24	24	100	17	420	140		190	190	95% Adjusted Gamma UCL
B, F, M	Blue crab	PCB Congeners	Total PCB Congeners	µg/kg	24	24	100	150	580	320		350	350	95% Student's-t UCL
B, F, M	Blue crab	PCB Congeners	PCB TEQ-Bird	ng/kg	24	24	100	45	110	88		94	94	95% Student's-t UCL
B, F, M	Blue crab	PCB Congeners	PCB TEQ-Fish	ng/kg	24	24	100	0.28	1.1	0.71		0.78	0.78	95% Student's-t UCL
B, F, M	Blue crab	PCB Congeners	PCB TEQ-Mammal	ng/kg	24	24	100	3	12	8		8.8	8.8	95% Student's-t UCL
B, F, M	Blue crab	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	24	24	100	24	86	51		57	57	95% Student's-t UCL
B, F, M	Blue crab	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	24	24	100	31	100	66		71	71	95% Student's-t UCL
B, F, M	Blue crab	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	24	24	100	26	93	56		62	62	95% Student's-t UCL
B, F, M	Blue crab	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	24	24	100	26	93	56		61	61	95% Student's-t UCL
B, F, M	Blue crab	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	24	24	100	79	200	150		170	170	95% Student's-t UCL
B, F, M	Blue crab	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	24	24	100	26	93	57		63	63	95% Student's-t UCL
B, F, M	Blue crab	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	24	24	100	28	100	63		70	70	95% Student's-t UCL
B, F, M	Blue crab	OC Pesticides	Dieldrin	µg/kg	24	24	100	2.4	9.1	6.2		6.8	6.8	95% Student's-t UCL
B, F, M	Blue crab	OC Pesticides	Endosulfan I	µg/kg	24	0	0				7.7		7.7	Maximum DL
B, F, M	Blue crab	OC Pesticides	Endosulfan II	µg/kg	24	0	0				13		13	Maximum DL
B, F, M	Blue crab	OC Pesticides	Heptachlor epoxide	µg/kg	24	24	100	1.8	14	5.3		6.3	6.3	95% Student's-t UCL
B, F, M	Blue crab	OC Pesticides	Total DDx	µg/kg	24	24	100	30	100	62		68	68	95% Student's-t UCL
B	Blue crab (Reach 1)	Metals	Arsenic	mg/kg	8	8	100	1.2	1.9	1.4		1.5	1.5	95% Student's-t UCL
B	Blue crab (Reach 1)	Metals	Cadmium	mg/kg	8	8	100	0.079	0.18	0.12		0.15	0.15	95% Student's-t UCL
B	Blue crab (Reach 1)	Metals	Chromium	mg/kg	8	8	100	0.69	1.6	1.1		1.3	1.3	95% Student's-t UCL
B	Blue crab (Reach 1)	Metals	Cobalt	mg/kg	8	8	100	0.062	0.088	0.075		0.08	0.08	95% Student's-t UCL
B	Blue crab (Reach 1)	Metals	Copper	mg/kg	8	8	100	17.1	22.9	19.4		20.6	20.6	95% Student's-t UCL
B	Blue crab (Reach 1)	Metals	Lead	mg/kg	8	8	100	0.22	0.66	0.34		0.44	0.44	95% Student's-t UCL
B	Blue crab (Reach 1)	Metals	Mercury	µg/kg	8	8	100	120	180	150		160	160	95% Student's-t UCL
B	Blue crab (Reach 1)	Metals	Methyl mercury	µg/kg	8	8	100	110	170	140		150	150	95% Student's-t UCL
B	Blue crab (Reach 1)	Metals	Nickel	mg/kg	8	8	100	0.59	1.1	0.86		0.98	0.98	95% Student's-t UCL
B	Blue crab (Reach 1)	Metals	Selenium	mg/kg	8	8	100	0.66	1.1	0.86		0.96	0.96	95% Student's-t UCL
B	Blue crab (Reach 1)	Metals	Silver	mg/kg	8	8	100	0.58	0.75	0.67		0.7	0.7	95% Student's-t UCL
B	Blue crab (Reach 1)	Metals	Vanadium	mg/kg	8	8	100	0.098	0.14	0.12		0.13	0.13	95% Student's-t UCL
B	Blue crab (Reach 1)	Metals	Zinc	mg/kg	8	8	100	31.4	37.6	35.4		36.7	36.7	95% Student's-t UCL
B	Blue crab (Reach 1)	PAHs	Benzo(a)pyrene	µg/kg	8	8	100	2.8	40	11		27	27	95% Adjusted Gamma UCL
B	Blue crab (Reach 1)	PAHs	Total HPAHs	µg/kg	8	8	100	44	350	110		180	180	95% Student's-t UCL
B	Blue crab (Reach 1)	PAHs	Total LPAHs	µg/kg	8	8	100	24	70	43		55	55	95% Student's-t UCL
B	Blue crab (Reach 1)	PAHs	Total PAHs	µg/kg	8	8	100	69	420	150		280	280	95% H-UCL

Diet LOE -- Prey Tissue EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
B	Blue crab (Reach 1)	PCB Congeners	Total PCB Congeners	µg/kg	8	8	100	200	290	250		270	270	95% Student's-t UCL
B	Blue crab (Reach 1)	PCB Congeners	PCB TEQ-Bird	ng/kg	8	8	100	64	96	84		92	92	95% Student's-t UCL
B	Blue crab (Reach 1)	PCB Congeners	PCB TEQ-Fish	ng/kg	8	8	100	0.54	0.77	0.68		0.74	0.74	95% Student's-t UCL
B	Blue crab (Reach 1)	PCB Congeners	PCB TEQ-Mammal	ng/kg	8	8	100	5.9	8.8	7.8		8.5	8.5	95% Student's-t UCL
B	Blue crab (Reach 1)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	8	8	100	28	56	42		48	48	95% Student's-t UCL
B	Blue crab (Reach 1)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	8	8	100	42	73	58		66	66	95% Student's-t UCL
B	Blue crab (Reach 1)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	8	8	100	33	61	47		54	54	95% Student's-t UCL
B	Blue crab (Reach 1)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	8	8	100	32	60	46		53	53	95% Student's-t UCL
B	Blue crab (Reach 1)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	8	8	100	110	170	140		160	160	95% Student's-t UCL
B	Blue crab (Reach 1)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	8	8	100	33	62	48		55	55	95% Student's-t UCL
B	Blue crab (Reach 1)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	8	8	100	38	69	54		62	62	95% Student's-t UCL
B	Blue crab (Reach 1)	OC Pesticides	Dieldrin	µg/kg	8	8	100	2.4	6.4	4.5		5.3	5.3	95% Student's-t UCL
B	Blue crab (Reach 1)	OC Pesticides	Endosulfan I	µg/kg	8	0	0				1.3		1.3	Maximum DL
B	Blue crab (Reach 1)	OC Pesticides	Endosulfan II	µg/kg	8	0	0				5.6		5.6	Maximum DL
B	Blue crab (Reach 1)	OC Pesticides	Heptachlor epoxide	µg/kg	8	8	100	1.8	5.2	3.4		4.2	4.2	95% Student's-t UCL
B	Blue crab (Reach 1)	OC Pesticides	Total DDx	µg/kg	8	8	100	48	68	61		66	66	95% Student's-t UCL
B	Blue crab (Reach 2)	Metals	Arsenic	mg/kg	6	6	100	1.2	1.5	1.4		1.5	1.5	95% Student's-t UCL
B	Blue crab (Reach 2)	Metals	Cadmium	mg/kg	6	6	100	0.061	0.11	0.088		0.1	0.1	95% Student's-t UCL
B	Blue crab (Reach 2)	Metals	Chromium	mg/kg	6	6	100	0.58	1.5	0.93		1.2	1.2	95% Student's-t UCL
B	Blue crab (Reach 2)	Metals	Cobalt	mg/kg	6	6	100	0.065	0.087	0.073		0.079	0.079	95% Student's-t UCL
B	Blue crab (Reach 2)	Metals	Copper	mg/kg	6	6	100	16.2	26.6	21.4		24.2	24.2	95% Student's-t UCL
B	Blue crab (Reach 2)	Metals	Lead	mg/kg	6	6	100	0.28	0.5	0.38		0.46	0.46	95% Student's-t UCL
B	Blue crab (Reach 2)	Metals	Mercury	µg/kg	6	6	100	120	190	160		180	180	95% Student's-t UCL
B	Blue crab (Reach 2)	Metals	Methyl mercury	µg/kg	6	6	100	110	150	130		140	140	95% Student's-t UCL
B	Blue crab (Reach 2)	Metals	Nickel	mg/kg	6	6	100	0.56	1.1	0.75		0.9	0.9	95% Student's-t UCL
B	Blue crab (Reach 2)	Metals	Selenium	mg/kg	6	6	100	0.65	0.91	0.8		0.89	0.89	95% Student's-t UCL
B	Blue crab (Reach 2)	Metals	Silver	mg/kg	6	6	100	0.55	0.78	0.69		0.77	0.77	95% Student's-t UCL
B	Blue crab (Reach 2)	Metals	Vanadium	mg/kg	6	6	100	0.099	0.13	0.11		0.12	0.12	95% Student's-t UCL
B	Blue crab (Reach 2)	Metals	Zinc	mg/kg	6	6	100	37.1	41.1	39		40.3	40.3	95% Student's-t UCL
B	Blue crab (Reach 2)	PAHs	Benzo(a)pyrene	µg/kg	6	6	100	2.8	19	8.8		14	14	95% Student's-t UCL
B	Blue crab (Reach 2)	PAHs	Total HPAHs	µg/kg	6	6	100	46	240	110		170	170	95% Student's-t UCL
B	Blue crab (Reach 2)	PAHs	Total LPAHs	µg/kg	6	6	100	28	100	51		75	75	95% Student's-t UCL
B	Blue crab (Reach 2)	PAHs	Total PAHs	µg/kg	6	6	100	74	310	160		240	240	95% Student's-t UCL
B	Blue crab (Reach 2)	PCB Congeners	Total PCB Congeners	µg/kg	6	6	100	270	340	310		330	330	95% Student's-t UCL
B	Blue crab (Reach 2)	PCB Congeners	PCB TEQ-Bird	ng/kg	6	6	100	82	110	94		100	100	95% Student's-t UCL
B	Blue crab (Reach 2)	PCB Congeners	PCB TEQ-Fish	ng/kg	6	6	100	0.42	0.85	0.69		0.81	0.81	95% Student's-t UCL
B	Blue crab (Reach 2)	PCB Congeners	PCB TEQ-Mammal	ng/kg	6	6	100	3.6	9.7	7.3		9.1	9.1	95% Student's-t UCL
B	Blue crab (Reach 2)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	6	6	100	45	62	53		58	58	95% Student's-t UCL
B	Blue crab (Reach 2)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	6	6	100	63	79	70		75	75	95% Student's-t UCL
B	Blue crab (Reach 2)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	6	6	100	51	68	59		64	64	95% Student's-t UCL
B	Blue crab (Reach 2)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	6	6	100	50	67	58		63	63	95% Student's-t UCL
B	Blue crab (Reach 2)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	6	6	100	150	190	170		180	180	95% Student's-t UCL
B	Blue crab (Reach 2)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	6	6	100	52	69	60		65	65	95% Student's-t UCL
B	Blue crab (Reach 2)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	6	6	100	57	73	65		70	70	95% Student's-t UCL
B	Blue crab (Reach 2)	OC Pesticides	Dieldrin	µg/kg	6	6	100	4.6	6.7	5.8		6.5	6.5	95% Student's-t UCL
B	Blue crab (Reach 2)	OC Pesticides	Endosulfan I	µg/kg	6	0	0				3.1		3.1	Maximum DL
B	Blue crab (Reach 2)	OC Pesticides	Endosulfan II	µg/kg	6	0	0				8.1		8.1	Maximum DL
B	Blue crab (Reach 2)	OC Pesticides	Heptachlor epoxide	µg/kg	6	6	100	2.7	5.7	4.1		5	5	95% Student's-t UCL
B	Blue crab (Reach 2)	OC Pesticides	Total DDx	µg/kg	6	6	100	41	100	66		84	84	95% Student's-t UCL
B	Blue crab (Reach 3)	Metals	Arsenic	mg/kg	4	4	100	0.5	0.86	0.69			0.86	Maximum detect
B	Blue crab (Reach 3)	Metals	Cadmium	mg/kg	4	4	100	0.047	0.068	0.058			0.068	Maximum detect
B	Blue crab (Reach 3)	Metals	Chromium	mg/kg	4	4	100	0.45	3.1	1.4			3.1	Maximum detect

Diet LOE -- Prey Tissue EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
B	Blue crab (Reach 3)	Metals	Cobalt	mg/kg	4	4	100	0.07	0.095	0.08			0.095	Maximum detect
B	Blue crab (Reach 3)	Metals	Copper	mg/kg	4	4	100	22.5	30.1	26.3			30.1	Maximum detect
B	Blue crab (Reach 3)	Metals	Lead	mg/kg	4	4	100	0.28	0.36	0.31			0.36	Maximum detect
B	Blue crab (Reach 3)	Metals	Mercury	µg/kg	4	4	100	88	120	100			120	Maximum detect
B	Blue crab (Reach 3)	Metals	Methyl mercury	µg/kg	4	4	100	67	96	81			96	Maximum detect
B	Blue crab (Reach 3)	Metals	Nickel	mg/kg	4	4	100	0.52	1.9	1			1.9	Maximum detect
B	Blue crab (Reach 3)	Metals	Selenium	mg/kg	4	4	100	0.52	0.75	0.66			0.75	Maximum detect
B	Blue crab (Reach 3)	Metals	Silver	mg/kg	4	4	100	0.28	0.62	0.46			0.62	Maximum detect
B	Blue crab (Reach 3)	Metals	Vanadium	mg/kg	4	4	100	0.078	0.13	0.1			0.13	Maximum detect
B	Blue crab (Reach 3)	Metals	Zinc	mg/kg	4	4	100	31.1	36.5	33.9			36.5	Maximum detect
B	Blue crab (Reach 3)	PAHs	Benzo(a)pyrene	µg/kg	4	4	100	3.1	6.8	4.8			6.8	Maximum detect
B	Blue crab (Reach 3)	PAHs	Total HPAHs	µg/kg	4	4	100	46	110	65			110	Maximum detect
B	Blue crab (Reach 3)	PAHs	Total LPAHs	µg/kg	4	4	100	45	270	120			270	Maximum detect
B	Blue crab (Reach 3)	PAHs	Total PAHs	µg/kg	4	4	100	92	380	180			380	Maximum detect
B	Blue crab (Reach 3)	PCB Congeners	Total PCB Congeners	µg/kg	4	4	100	290	450	390			450	Maximum detect
B	Blue crab (Reach 3)	PCB Congeners	PCB TEQ-Bird	ng/kg	4	4	100	88	110	100			110	Maximum detect
B	Blue crab (Reach 3)	PCB Congeners	PCB TEQ-Fish	ng/kg	4	4	100	0.69	0.91	0.79			0.91	Maximum detect
B	Blue crab (Reach 3)	PCB Congeners	PCB TEQ-Mammal	ng/kg	4	4	100	7.8	10	9			10	Maximum detect
B	Blue crab (Reach 3)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	4	4	100	46	74	64			74	Maximum detect
B	Blue crab (Reach 3)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	4	4	100	60	90	77			90	Maximum detect
B	Blue crab (Reach 3)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	4	4	100	51	79	69			79	Maximum detect
B	Blue crab (Reach 3)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	4	4	100	50	79	68			79	Maximum detect
B	Blue crab (Reach 3)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	4	4	100	150	200	180			200	Maximum detect
B	Blue crab (Reach 3)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	4	4	100	51	80	70			80	Maximum detect
B	Blue crab (Reach 3)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	4	4	100	58	91	78			91	Maximum detect
B	Blue crab (Reach 3)	OC Pesticides	Dieldrin	µg/kg	4	4	100	7.3	9.1	8.2			9.1	Maximum detect
B	Blue crab (Reach 3)	OC Pesticides	Endosulfan I	µg/kg	4	0	0				2.1		2.1	Maximum DL
B	Blue crab (Reach 3)	OC Pesticides	Endosulfan II	µg/kg	4	0	0				13		13	Maximum DL
B	Blue crab (Reach 3)	OC Pesticides	Heptachlor epoxide	µg/kg	4	4	100	5	8.7	6.7			8.7	Maximum detect
B	Blue crab (Reach 3)	OC Pesticides	Total DDx	µg/kg	4	4	100	50	79	70			79	Maximum detect
B	Blue crab (Reach 4)	Metals	Arsenic	mg/kg	4	4	100	0.33	0.56	0.41			0.56	Maximum detect
B	Blue crab (Reach 4)	Metals	Cadmium	mg/kg	4	4	100	0.055	0.097	0.083			0.097	Maximum detect
B	Blue crab (Reach 4)	Metals	Chromium	mg/kg	4	4	100	1.2	2.3	1.6			2.3	Maximum detect
B	Blue crab (Reach 4)	Metals	Cobalt	mg/kg	4	4	100	0.059	0.072	0.065			0.072	Maximum detect
B	Blue crab (Reach 4)	Metals	Copper	mg/kg	4	4	100	23	30.6	26.7			30.6	Maximum detect
B	Blue crab (Reach 4)	Metals	Lead	mg/kg	4	4	100	0.2	0.27	0.24			0.27	Maximum detect
B	Blue crab (Reach 4)	Metals	Mercury	µg/kg	4	4	100	86	130	110			130	Maximum detect
B	Blue crab (Reach 4)	Metals	Methyl mercury	µg/kg	4	4	100	65	100	88			100	Maximum detect
B	Blue crab (Reach 4)	Metals	Nickel	mg/kg	4	4	100	0.87	1.6	1.1			1.6	Maximum detect
B	Blue crab (Reach 4)	Metals	Selenium	mg/kg	4	4	100	0.43	0.62	0.56			0.62	Maximum detect
B	Blue crab (Reach 4)	Metals	Silver	mg/kg	4	4	100	0.25	0.33	0.3			0.33	Maximum detect
B	Blue crab (Reach 4)	Metals	Vanadium	mg/kg	4	4	100	0.098	0.12	0.11			0.12	Maximum detect
B	Blue crab (Reach 4)	Metals	Zinc	mg/kg	4	4	100	28.3	35.2	32.3			35.2	Maximum detect
B	Blue crab (Reach 4)	PAHs	Benzo(a)pyrene	µg/kg	4	4	100	1.9	4	2.5			4	Maximum detect
B	Blue crab (Reach 4)	PAHs	Total HPAHs	µg/kg	4	4	100	14	71	37			71	Maximum detect
B	Blue crab (Reach 4)	PAHs	Total LPAHs	µg/kg	4	4	100	10	230	69			230	Maximum detect
B	Blue crab (Reach 4)	PAHs	Total PAHs	µg/kg	4	4	100	33	300	110			300	Maximum detect
B	Blue crab (Reach 4)	PCB Congeners	Total PCB Congeners	µg/kg	4	4	100	150	580	420			580	Maximum detect
B	Blue crab (Reach 4)	PCB Congeners	PCB TEQ-Bird	ng/kg	4	4	100	49	110	89			110	Maximum detect
B	Blue crab (Reach 4)	PCB Congeners	PCB TEQ-Fish	ng/kg	4	4	100	0.28	1.1	0.82			1.1	Maximum detect
B	Blue crab (Reach 4)	PCB Congeners	PCB TEQ-Mammal	ng/kg	4	4	100	3	12	9.5			12	Maximum detect
B	Blue crab (Reach 4)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	4	4	100	24	86	61			86	Maximum detect

Diet LOE -- Prey Tissue EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
B	Blue crab (Reach 4)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	4	4	100	31	100	70			100	Maximum detect
B	Blue crab (Reach 4)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	4	4	100	26	93	64			93	Maximum detect
B	Blue crab (Reach 4)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	4	4	100	26	93	64			93	Maximum detect
B	Blue crab (Reach 4)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	4	4	100	79	200	160			200	Maximum detect
B	Blue crab (Reach 4)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	4	4	100	26	93	66			93	Maximum detect
B	Blue crab (Reach 4)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	4	4	100	28	100	73			100	Maximum detect
B	Blue crab (Reach 4)	OC Pesticides	Dieldrin	µg/kg	4	4	100	5.7	9.1	7.5			9.1	Maximum detect
B	Blue crab (Reach 4)	OC Pesticides	Endosulfan I	µg/kg	4	0	0				7.7		7.7	Maximum DL
B	Blue crab (Reach 4)	OC Pesticides	Endosulfan II	µg/kg	4	0	0				7.9		7.9	Maximum DL
B	Blue crab (Reach 4)	OC Pesticides	Heptachlor epoxide	µg/kg	4	4	100	4.8	14	8.9			14	Maximum detect
B	Blue crab (Reach 4)	OC Pesticides	Total DDx	µg/kg	4	4	100	30	89	62			89	Maximum detect
B	Blue crab (Reach 5)	Metals	Arsenic	mg/kg	2	2	100	0.29	0.39	0.34			0.39	Maximum detect
B	Blue crab (Reach 5)	Metals	Cadmium	mg/kg	2	2	100	0.084	0.12	0.1			0.12	Maximum detect
B	Blue crab (Reach 5)	Metals	Chromium	mg/kg	2	2	100	0.88	1	0.94			1	Maximum detect
B	Blue crab (Reach 5)	Metals	Cobalt	mg/kg	2	2	100	0.059	0.06	0.06			0.06	Maximum detect
B	Blue crab (Reach 5)	Metals	Copper	mg/kg	2	2	100	28.7	29.3	29			29.3	Maximum detect
B	Blue crab (Reach 5)	Metals	Lead	mg/kg	2	2	100	0.23	0.33	0.28			0.33	Maximum detect
B	Blue crab (Reach 5)	Metals	Mercury	µg/kg	2	2	100	79	83	81			83	Maximum detect
B	Blue crab (Reach 5)	Metals	Methyl mercury	µg/kg	2	2	100	55	68	62			68	Maximum detect
B	Blue crab (Reach 5)	Metals	Nickel	mg/kg	2	2	100	0.68	0.78	0.73			0.78	Maximum detect
B	Blue crab (Reach 5)	Metals	Selenium	mg/kg	2	2	100	0.5	0.52	0.51			0.52	Maximum detect
B	Blue crab (Reach 5)	Metals	Silver	mg/kg	2	2	100	0.27	0.31	0.29			0.31	Maximum detect
B	Blue crab (Reach 5)	Metals	Vanadium	mg/kg	2	2	100	0.093	0.11	0.1			0.11	Maximum detect
B	Blue crab (Reach 5)	Metals	Zinc	mg/kg	2	2	100	29.6	35.5	32.6			35.5	Maximum detect
B	Blue crab (Reach 5)	PAHs	Benzo(a)pyrene	µg/kg	2	2	100	1.9	3.6	2.8			3.6	Maximum detect
B	Blue crab (Reach 5)	PAHs	Total HPAHs	µg/kg	2	2	100	14	23	19			23	Maximum detect
B	Blue crab (Reach 5)	PAHs	Total LPAHs	µg/kg	2	2	100	5.8	28	17			28	Maximum detect
B	Blue crab (Reach 5)	PAHs	Total PAHs	µg/kg	2	2	100	17	51	34			51	Maximum detect
B	Blue crab (Reach 5)	PCB Congeners	Total PCB Congeners	µg/kg	2	2	100	210	290	250			290	Maximum detect
B	Blue crab (Reach 5)	PCB Congeners	PCB TEQ-Bird	ng/kg	2	2	100	45	66	56			66	Maximum detect
B	Blue crab (Reach 5)	PCB Congeners	PCB TEQ-Fish	ng/kg	2	2	100	0.41	0.64	0.53			0.64	Maximum detect
B	Blue crab (Reach 5)	PCB Congeners	PCB TEQ-Mammal	ng/kg	2	2	100	4.4	7.4	5.9			7.4	Maximum detect
B	Blue crab (Reach 5)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	2	2	100	31	53	42			53	Maximum detect
B	Blue crab (Reach 5)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	2	2	100	36	62	49			62	Maximum detect
B	Blue crab (Reach 5)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	2	2	100	32	57	45			57	Maximum detect
B	Blue crab (Reach 5)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	2	2	100	32	56	44			56	Maximum detect
B	Blue crab (Reach 5)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	2	2	100	82	130	110			130	Maximum detect
B	Blue crab (Reach 5)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	2	2	100	33	57	45			57	Maximum detect
B	Blue crab (Reach 5)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	2	2	100	35	64	50			64	Maximum detect
B	Blue crab (Reach 5)	OC Pesticides	Dieldrin	µg/kg	2	2	100	7.3	7.4	7.4			7.4	Maximum detect
B	Blue crab (Reach 5)	OC Pesticides	Endosulfan I	µg/kg	2	0	0				0.53		0.53	Maximum DL
B	Blue crab (Reach 5)	OC Pesticides	Endosulfan II	µg/kg	2	0	0				1.2		1.2	Maximum DL
B	Blue crab (Reach 5)	OC Pesticides	Heptachlor epoxide	µg/kg	2	2	100	6.7	7.4	7.1			7.4	Maximum detect
B	Blue crab (Reach 5)	OC Pesticides	Total DDx	µg/kg	2	2	100	41	54	48			54	Maximum detect
B	Fish (> 13 and ≤ 18 cm)	Metals	Arsenic	mg/kg	15	15	100	0.12	0.52	0.21		0.26	0.26	95% Modified-t UCL
B	Fish (> 13 and ≤ 18 cm)	Metals	Cadmium	mg/kg	15	15	100	0.006	0.054	0.015		0.023	0.023	95% Adjusted Gamma UCL
B	Fish (> 13 and ≤ 18 cm)	Metals	Chromium	mg/kg	15	15	100	0.87	125	13		48	48	95% Chebyshev (Mean, Sd) UCL
B	Fish (> 13 and ≤ 18 cm)	Metals	Cobalt	mg/kg	15	15	100	0.032	1.1	0.16		0.46	0.46	95% Chebyshev (Mean, Sd) UCL
B	Fish (> 13 and ≤ 18 cm)	Metals	Copper	mg/kg	15	15	100	1.2	14.7	5.6		7.2	7.2	95% Student's-t UCL
B	Fish (> 13 and ≤ 18 cm)	Metals	Lead	mg/kg	15	15	100	0.22	1.8	0.53		1	1	95% Chebyshev (Mean, Sd) UCL
B	Fish (> 13 and ≤ 18 cm)	Metals	Mercury	µg/kg	15	15	100	48	180	100		120	120	95% Student's-t UCL
B	Fish (> 13 and ≤ 18 cm)	Metals	Methyl mercury	µg/kg	15	15	100	37	190	100		120	120	95% Student's-t UCL

Diet LOE -- Prey Tissue EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
B	Fish (> 13 and ≤ 18 cm)	Metals	Nickel	mg/kg	15	15	100	0.73	89.1	9.3		34	34	95% Chebyshev (Mean, Sd) UCL
B	Fish (> 13 and ≤ 18 cm)	Metals	Selenium	mg/kg	15	15	100	0.27	1.3	0.84		0.98	0.98	95% Student's-t UCL
B	Fish (> 13 and ≤ 18 cm)	Metals	Silver	mg/kg	15	15	100	0.0067	0.19	0.065		0.088	0.088	95% Student's-t UCL
B	Fish (> 13 and ≤ 18 cm)	Metals	Vanadium	mg/kg	15	15	100	0.04	1.2	0.23		0.58	0.58	95% Chebyshev (Mean, Sd) UCL
B	Fish (> 13 and ≤ 18 cm)	Metals	Zinc	mg/kg	15	15	100	21.4	32.7	26.3		27.9	27.9	95% Student's-t UCL
B	Fish (> 13 and ≤ 18 cm)	PAHs	Benzo(a)pyrene	µg/kg	15	11	73.3	1.5	64	13	2.2	40	40	97.5% KM (Chebyshev) UCL
B	Fish (> 13 and ≤ 18 cm)	PAHs	Total HPAHs	µg/kg	15	15	100	44	750	170		270	270	95% H-UCL
B	Fish (> 13 and ≤ 18 cm)	PAHs	Total LPAHs	µg/kg	15	15	100	60	300	150		180	180	95% Student's-t UCL
B	Fish (> 13 and ≤ 18 cm)	PAHs	Total PAHs	µg/kg	15	15	100	100	930	330		440	440	95% Adjusted Gamma UCL
B	Fish (> 13 and ≤ 18 cm)	PCB Congeners	Total PCB Congeners	µg/kg	15	15	100	170	5100	1900		2500	2500	95% Student's-t UCL
B	Fish (> 13 and ≤ 18 cm)	PCB Congeners	PCB TEQ-Bird	ng/kg	15	15	100	23	310	180		220	220	95% Student's-t UCL
B	Fish (> 13 and ≤ 18 cm)	PCB Congeners	PCB TEQ-Fish	ng/kg	15	15	100	0.19	3.1	1.7		2	2	95% Student's-t UCL
B	Fish (> 13 and ≤ 18 cm)	PCB Congeners	PCB TEQ-Mammal	ng/kg	15	15	100	2.1	36	20		24	24	95% Student's-t UCL
B	Fish (> 13 and ≤ 18 cm)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	15	15	100	7.5	230	120		200	200	95% Chebyshev (Mean, Sd) UCL
B	Fish (> 13 and ≤ 18 cm)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	15	15	100	9.1	250	130		220	220	95% Chebyshev (Mean, Sd) UCL
B	Fish (> 13 and ≤ 18 cm)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	15	15	100	7.9	240	120		210	210	95% Chebyshev (Mean, Sd) UCL
B	Fish (> 13 and ≤ 18 cm)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	15	15	100	7.9	240	120		210	210	95% Chebyshev (Mean, Sd) UCL
B	Fish (> 13 and ≤ 18 cm)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	15	15	100	32	560	310		390	390	95% Student's-t UCL
B	Fish (> 13 and ≤ 18 cm)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	15	15	100	8.1	240	130		210	210	95% Chebyshev (Mean, Sd) UCL
B	Fish (> 13 and ≤ 18 cm)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	15	15	100	10	270	140		230	230	95% Chebyshev (Mean, Sd) UCL
B	Fish (> 13 and ≤ 18 cm)	OC Pesticides	Dieldrin	µg/kg	15	15	100	8.6	47	28		33	33	95% Student's-t UCL
B	Fish (> 13 and ≤ 18 cm)	OC Pesticides	Endosulfan I	µg/kg	15	0	0				3.2		3.2	Maximum DL
B	Fish (> 13 and ≤ 18 cm)	OC Pesticides	Endosulfan II	µg/kg	15	0	0				3.1		3.1	Maximum DL
B	Fish (> 13 and ≤ 18 cm)	OC Pesticides	Heptachlor epoxide	µg/kg	15	15	100	3.5	18	10		12	12	95% Student's-t UCL
B	Fish (> 13 and ≤ 18 cm)	OC Pesticides	Total DDx	µg/kg	15	15	100	22	340	160		200	200	95% Student's-t UCL
B	Fish (> 13 and ≤ 18 cm, reach 3)	Metals	Arsenic	mg/kg	4	4	100	0.19	0.26	0.22			0.26	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 3)	Metals	Cadmium	mg/kg	4	4	100	0.006	0.009	0.0068			0.009	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 3)	Metals	Chromium	mg/kg	4	4	100	0.87	5.4	2.4			5.4	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 3)	Metals	Cobalt	mg/kg	4	4	100	0.032	0.091	0.052			0.091	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 3)	Metals	Copper	mg/kg	4	4	100	4.7	8.5	6.5			8.5	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 3)	Metals	Lead	mg/kg	4	4	100	0.22	0.45	0.32			0.45	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 3)	Metals	Mercury	µg/kg	4	4	100	100	130	120			130	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 3)	Metals	Methyl mercury	µg/kg	4	4	100	78	120	100			120	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 3)	Metals	Nickel	mg/kg	4	4	100	0.73	3.3	1.6			3.3	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 3)	Metals	Selenium	mg/kg	4	4	100	0.81	1.3	1			1.3	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 3)	Metals	Silver	mg/kg	4	4	100	0.078	0.13	0.1			0.13	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 3)	Metals	Vanadium	mg/kg	4	4	100	0.08	0.13	0.1			0.13	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 3)	Metals	Zinc	mg/kg	4	4	100	21.4	23.4	22.4			23.4	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 3)	PAHs	Benzo(a)pyrene	µg/kg	4	4	100	1.5	3.2	2.1			3.2	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 3)	PAHs	Total HPAHs	µg/kg	4	4	100	120	150	140			150	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 3)	PAHs	Total LPAHs	µg/kg	4	4	100	200	300	230			300	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 3)	PAHs	Total PAHs	µg/kg	4	4	100	340	440	370			440	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 3)	PCB Congeners	Total PCB Congeners	µg/kg	4	4	100	2300	2800	2600			2800	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 3)	PCB Congeners	PCB TEQ-Bird	ng/kg	4	4	100	220	280	250			280	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 3)	PCB Congeners	PCB TEQ-Fish	ng/kg	4	4	100	2	2.5	2.3			2.5	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 3)	PCB Congeners	PCB TEQ-Mammal	ng/kg	4	4	100	24	29	27			29	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 3)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	4	4	100	160	180	170			180	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 3)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	4	4	100	180	200	190			200	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 3)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	4	4	100	170	190	180			190	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 3)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	4	4	100	170	190	180			190	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 3)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	4	4	100	400	490	440			490	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 3)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	4	4	100	170	190	180			190	Maximum detect

Diet LOE -- Prey Tissue EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
B	Fish (> 13 and ≤ 18 cm, reach 3)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	4	4	100	190	220	200			220	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 3)	OC Pesticides	Dieldrin	µg/kg	4	4	100	22	39	30			39	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 3)	OC Pesticides	Endosulfan I	µg/kg	4	0	0				3.2		3.2	Maximum DL
B	Fish (> 13 and ≤ 18 cm, reach 3)	OC Pesticides	Endosulfan II	µg/kg	4	0	0				3.1		3.1	Maximum DL
B	Fish (> 13 and ≤ 18 cm, reach 3)	OC Pesticides	Heptachlor epoxide	µg/kg	4	4	100	8.9	14	11			14	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 3)	OC Pesticides	Total DDx	µg/kg	4	4	100	140	340	220			340	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 4)	Metals	Arsenic	mg/kg	3	3	100	0.15	0.52	0.31			0.52	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 4)	Metals	Cadmium	mg/kg	3	3	100	0.012	0.04	0.022			0.04	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 4)	Metals	Chromium	mg/kg	3	3	100	4.2	16.8	10			16.8	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 4)	Metals	Cobalt	mg/kg	3	3	100	0.087	0.23	0.14			0.23	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 4)	Metals	Copper	mg/kg	3	3	100	2.8	4	3.6			4	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 4)	Metals	Lead	mg/kg	3	3	100	0.43	1.8	0.89			1.8	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 4)	Metals	Mercury	µg/kg	3	3	100	48	110	75			110	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 4)	Metals	Methyl mercury	µg/kg	3	3	100	37	93	64			93	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 4)	Metals	Nickel	mg/kg	3	3	100	2.7	11.6	6.9			11.6	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 4)	Metals	Selenium	mg/kg	3	3	100	0.7	0.93	0.84			0.93	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 4)	Metals	Silver	mg/kg	3	3	100	0.03	0.047	0.04			0.047	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 4)	Metals	Vanadium	mg/kg	3	3	100	0.12	0.68	0.34			0.68	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 4)	Metals	Zinc	mg/kg	3	3	100	23.9	30.1	27.6			30.1	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 4)	PAHs	Benzo(a)pyrene	µg/kg	3	3	100	2.3	34	14			34	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 4)	PAHs	Total HPAHs	µg/kg	3	3	100	84	350	190			350	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 4)	PAHs	Total LPAHs	µg/kg	3	3	100	110	160	130			160	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 4)	PAHs	Total PAHs	µg/kg	3	3	100	200	470	330			470	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 4)	PCB Congeners	Total PCB Congeners	µg/kg	3	3	100	870	2000	1600			2000	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 4)	PCB Congeners	PCB TEQ-Bird	ng/kg	3	3	100	95	220	170			220	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 4)	PCB Congeners	PCB TEQ-Fish	ng/kg	3	3	100	0.9	2	1.5			2	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 4)	PCB Congeners	PCB TEQ-Mammal	ng/kg	3	3	100	11	23	18			23	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 4)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	3	3	100	93	160	130			160	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 4)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	3	3	100	100	180	150			180	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 4)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	3	3	100	96	170	140			170	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 4)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	3	3	100	96	160	140			160	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 4)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	3	3	100	200	400	320			400	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 4)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	3	3	100	97	170	140			170	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 4)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	3	3	100	110	190	160			190	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 4)	OC Pesticides	Dieldrin	µg/kg	3	3	100	19	44	28			44	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 4)	OC Pesticides	Endosulfan I	µg/kg	3	0	0				1.5		1.5	Maximum DL
B	Fish (> 13 and ≤ 18 cm, reach 4)	OC Pesticides	Endosulfan II	µg/kg	3	0	0				1.9		1.9	Maximum DL
B	Fish (> 13 and ≤ 18 cm, reach 4)	OC Pesticides	Heptachlor epoxide	µg/kg	3	3	100	6.7	14	9.2			14	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 4)	OC Pesticides	Total DDx	µg/kg	3	3	100	140	200	170			200	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 5)	Metals	Arsenic	mg/kg	2	2	100	0.16	0.25	0.21			0.25	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 5)	Metals	Cadmium	mg/kg	2	2	100	0.007	0.01	0.0085			0.01	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 5)	Metals	Chromium	mg/kg	2	2	100	1.4	2	1.7			2	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 5)	Metals	Cobalt	mg/kg	2	2	100	0.04	0.047	0.044			0.047	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 5)	Metals	Copper	mg/kg	2	2	100	2.3	14.7	8.5			14.7	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 5)	Metals	Lead	mg/kg	2	2	100	0.25	0.28	0.27			0.28	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 5)	Metals	Mercury	µg/kg	2	2	100	68	180	120			180	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 5)	Metals	Methyl mercury	µg/kg	2	2	100	91	190	140			190	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 5)	Metals	Nickel	mg/kg	2	2	100	1.1	1.4	1.3			1.4	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 5)	Metals	Selenium	mg/kg	2	2	100	0.92	1.2	1.1			1.2	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 5)	Metals	Silver	mg/kg	2	2	100	0.025	0.19	0.11			0.19	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 5)	Metals	Vanadium	mg/kg	2	2	100	0.04	0.08	0.06			0.08	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 5)	Metals	Zinc	mg/kg	2	2	100	22.1	24.8	23.5			24.8	Maximum detect

Diet LOE -- Prey Tissue EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
B	Fish (> 13 and ≤ 18 cm, reach 5)	PAHs	Benzo(a)pyrene	µg/kg	2	0	0				2		2	Maximum DL
B	Fish (> 13 and ≤ 18 cm, reach 5)	PAHs	Total HPAHs	µg/kg	2	2	100	68	100	84			100	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 5)	PAHs	Total LPAHs	µg/kg	2	2	100	99	130	110			130	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 5)	PAHs	Total PAHs	µg/kg	2	2	100	170	230	200			230	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 5)	PCB Congeners	Total PCB Congeners	µg/kg	2	2	100	2700	5100	3900			5100	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 5)	PCB Congeners	PCB TEQ-Bird	ng/kg	2	2	100	230	310	270			310	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 5)	PCB Congeners	PCB TEQ-Fish	ng/kg	2	2	100	2.1	3.1	2.6			3.1	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 5)	PCB Congeners	PCB TEQ-Mammal	ng/kg	2	2	100	24	36	30			36	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 5)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	2	2	100	170	230	200			230	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 5)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	2	2	100	190	250	220			250	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 5)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	2	2	100	180	240	210			240	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 5)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	2	2	100	170	240	210			240	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 5)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	2	2	100	420	560	490			560	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 5)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	2	2	100	180	240	210			240	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 5)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	2	2	100	200	270	240			270	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 5)	OC Pesticides	Dieldrin	µg/kg	2	2	100	33	47	40			47	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 5)	OC Pesticides	Endosulfan I	µg/kg	2	0	0				1.4		1.4	Maximum DL
B	Fish (> 13 and ≤ 18 cm, reach 5)	OC Pesticides	Endosulfan II	µg/kg	2	0	0				2.4		2.4	Maximum DL
B	Fish (> 13 and ≤ 18 cm, reach 5)	OC Pesticides	Heptachlor epoxide	µg/kg	2	2	100	13	17	15			17	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 5)	OC Pesticides	Total DDx	µg/kg	2	2	100	230	280	260			280	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 6)	Metals	Arsenic	mg/kg	1	1	100	0.17	0.17				0.17	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 6)	Metals	Cadmium	mg/kg	1	1	100	0.013	0.013				0.013	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 6)	Metals	Chromium	mg/kg	1	1	100	9	9				9	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 6)	Metals	Cobalt	mg/kg	1	1	100	0.12	0.12				0.12	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 6)	Metals	Copper	mg/kg	1	1	100	1.2	1.2				1.2	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 6)	Metals	Lead	mg/kg	1	1	100	0.71	0.71				0.71	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 6)	Metals	Mercury	µg/kg	1	1	100	62	62				62	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 6)	Metals	Methyl mercury	µg/kg	1	1	100	50	50				50	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 6)	Metals	Nickel	mg/kg	1	1	100	6.6	6.6				6.6	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 6)	Metals	Selenium	mg/kg	1	1	100	0.27	0.27				0.27	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 6)	Metals	Silver	mg/kg	1	1	100	0.0067	0.0067				0.0067	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 6)	Metals	Vanadium	mg/kg	1	1	100	0.28	0.28				0.28	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 6)	Metals	Zinc	mg/kg	1	1	100	30.9	30.9				30.9	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 6)	PAHs	Benzo(a)pyrene	µg/kg	1	1	100	64	64				64	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 6)	PAHs	Total HPAHs	µg/kg	1	1	100	750	750				750	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 6)	PAHs	Total LPAHs	µg/kg	1	1	100	180	180				180	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 6)	PAHs	Total PAHs	µg/kg	1	1	100	930	930				930	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 6)	PCB Congeners	Total PCB Congeners	µg/kg	1	1	100	390	390				390	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 6)	PCB Congeners	PCB TEQ-Bird	ng/kg	1	1	100	44	44				44	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 6)	PCB Congeners	PCB TEQ-Fish	ng/kg	1	1	100	0.47	0.47				0.47	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 6)	PCB Congeners	PCB TEQ-Mammal	ng/kg	1	1	100	5.4	5.4				5.4	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 6)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	1	1	100	25	25				25	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 6)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	1	1	100	28	28				28	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 6)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	1	1	100	26	26				26	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 6)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	1	1	100	26	26				26	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 6)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	1	1	100	72	72				72	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 6)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	1	1	100	26	26				26	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 6)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	1	1	100	31	31				31	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 6)	OC Pesticides	Dieldrin	µg/kg	1	1	100	13	13				13	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 6)	OC Pesticides	Endosulfan I	µg/kg	1	0	0				1		1	Maximum DL
B	Fish (> 13 and ≤ 18 cm, reach 6)	OC Pesticides	Endosulfan II	µg/kg	1	0	0				1.1		1.1	Maximum DL
B	Fish (> 13 and ≤ 18 cm, reach 6)	OC Pesticides	Heptachlor epoxide	µg/kg	1	1	100	4.8	4.8				4.8	Maximum detect

Diet LOE -- Prey Tissue EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
B	Fish (> 13 and ≤ 18 cm, reach 6)	OC Pesticides	Total DDx	µg/kg	1	1	100	35	35				35	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 7)	Metals	Arsenic	mg/kg	2	2	100	0.16	0.19	0.18			0.19	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 7)	Metals	Cadmium	mg/kg	2	2	100	0.007	0.054	0.031			0.054	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 7)	Metals	Chromium	mg/kg	2	2	100	2.7	125	64			125	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 7)	Metals	Cobalt	mg/kg	2	2	100	0.07	1.1	0.59			1.1	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 7)	Metals	Copper	mg/kg	2	2	100	3.8	8.7	6.3			8.7	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 7)	Metals	Lead	mg/kg	2	2	100	0.44	1.1	0.77			1.1	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 7)	Metals	Mercury	µg/kg	2	2	100	120	150	140			150	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 7)	Metals	Methyl mercury	µg/kg	2	2	100	110	150	130			150	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 7)	Metals	Nickel	mg/kg	2	2	100	2	89.1	46			89.1	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 7)	Metals	Selenium	mg/kg	2	2	100	0.89	1.07	0.98			1.07	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 7)	Metals	Silver	mg/kg	2	2	100	0.0074	0.082	0.045			0.082	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 7)	Metals	Vanadium	mg/kg	2	2	100	0.1	1.2	0.65			1.2	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 7)	Metals	Zinc	mg/kg	2	2	100	29.1	32.7	30.9			32.7	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 7)	PAHs	Benzo(a)pyrene	µg/kg	2	1	50	27	27		2.2		27	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 7)	PAHs	Total HPAHs	µg/kg	2	2	100	130	260	200			260	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 7)	PAHs	Total LPAHs	µg/kg	2	2	100	96	220	160			220	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 7)	PAHs	Total PAHs	µg/kg	2	2	100	340	360	350			360	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 7)	PCB Congeners	Total PCB Congeners	µg/kg	2	2	100	170	2700	1400			2700	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 7)	PCB Congeners	PCB TEQ-Bird	ng/kg	2	2	100	23	250	140			250	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 7)	PCB Congeners	PCB TEQ-Fish	ng/kg	2	2	100	0.19	2.2	1.2			2.2	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 7)	PCB Congeners	PCB TEQ-Mammal	ng/kg	2	2	100	2.1	26	14			26	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 7)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	2	2	100	7.5	160	84			160	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 7)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	2	2	100	9.1	180	95			180	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 7)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	2	2	100	7.9	170	89			170	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 7)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	2	2	100	7.9	170	89			170	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 7)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	2	2	100	32	430	230			430	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 7)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	2	2	100	8.1	170	89			170	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 7)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	2	2	100	10	190	100			190	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 7)	OC Pesticides	Dieldrin	µg/kg	2	2	100	8.6	40	24			40	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 7)	OC Pesticides	Endosulfan I	µg/kg	2	0	0				3.1		3.1	Maximum DL
B	Fish (> 13 and ≤ 18 cm, reach 7)	OC Pesticides	Endosulfan II	µg/kg	2	0	0				2.1		2.1	Maximum DL
B	Fish (> 13 and ≤ 18 cm, reach 7)	OC Pesticides	Heptachlor epoxide	µg/kg	2	2	100	3.5	18	11			18	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 7)	OC Pesticides	Total DDx	µg/kg	2	2	100	22	240	130			240	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 8)	Metals	Arsenic	mg/kg	3	3	100	0.12	0.18	0.15			0.18	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 8)	Metals	Cadmium	mg/kg	3	3	100	0.013	0.018	0.015			0.018	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 8)	Metals	Chromium	mg/kg	3	3	100	4.4	8.2	6.4			8.2	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 8)	Metals	Cobalt	mg/kg	3	3	100	0.089	0.14	0.11			0.14	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 8)	Metals	Copper	mg/kg	3	3	100	4.6	7.6	5.7			7.6	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 8)	Metals	Lead	mg/kg	3	3	100	0.36	0.47	0.41			0.47	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 8)	Metals	Mercury	µg/kg	3	3	100	95	110	100			110	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 8)	Metals	Methyl mercury	µg/kg	3	3	100	110	120	110			120	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 8)	Metals	Nickel	mg/kg	3	3	100	2.9	4.9	4			4.9	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 8)	Metals	Selenium	mg/kg	3	3	100	0.37	0.83	0.53			0.83	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 8)	Metals	Silver	mg/kg	3	3	100	0.035	0.055	0.047			0.055	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 8)	Metals	Vanadium	mg/kg	3	3	100	0.1	0.14	0.12			0.14	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 8)	Metals	Zinc	mg/kg	3	3	100	25.5	28.4	27.4			28.4	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 8)	PAHs	Benzo(a)pyrene	µg/kg	3	2	66.7	2.3	4.7	3.5	1.5		4.7	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 8)	PAHs	Total HPAHs	µg/kg	3	3	100	44	84	58			84	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 8)	PAHs	Total LPAHs	µg/kg	3	3	100	60	91	75			91	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 8)	PAHs	Total PAHs	µg/kg	3	3	100	100	160	130			160	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 8)	PCB Congeners	Total PCB Congeners	µg/kg	3	3	100	820	1000	930			1000	Maximum detect

Diet LOE -- Prey Tissue EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
B	Fish (> 13 and ≤ 18 cm, reach 8)	PCB Congeners	PCB TEQ-Bird	ng/kg	3	3	100	97	130	110			130	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 8)	PCB Congeners	PCB TEQ-Fish	ng/kg	3	3	100	1	1.2	1.1			1.2	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 8)	PCB Congeners	PCB TEQ-Mammal	ng/kg	3	3	100	13	14	14			14	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 8)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	3	3	100	20	62	35			62	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 8)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	3	3	100	28	73	44			73	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 8)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	3	3	100	23	65	38			65	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 8)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	3	3	100	22	65	37			65	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 8)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	3	3	100	130	200	150			200	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 8)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	3	3	100	24	67	39			67	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 8)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	3	3	100	35	79	51			79	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 8)	OC Pesticides	Dieldrin	µg/kg	3	3	100	18	25	22			25	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 8)	OC Pesticides	Endosulfan I	µg/kg	3	0	0				0.76		0.76	Maximum DL
B	Fish (> 13 and ≤ 18 cm, reach 8)	OC Pesticides	Endosulfan II	µg/kg	3	0	0				0.95		0.95	Maximum DL
B	Fish (> 13 and ≤ 18 cm, reach 8)	OC Pesticides	Heptachlor epoxide	µg/kg	3	3	100	8.3	10	9.1			10	Maximum detect
B	Fish (> 13 and ≤ 18 cm, reach 8)	OC Pesticides	Total DDx	µg/kg	3	3	100	71	120	94			120	Maximum detect
B	Fish (> 13 and ≤ 18 cm, ≥ RM 6)	Metals	Arsenic	mg/kg	11	11	100	0.12	0.52	0.21		0.28	0.28	95% Modified-t UCL
B	Fish (> 13 and ≤ 18 cm, ≥ RM 6)	Metals	Cadmium	mg/kg	11	11	100	0.007	0.054	0.018		0.029	0.029	95% H-UCL
B	Fish (> 13 and ≤ 18 cm, ≥ RM 6)	Metals	Chromium	mg/kg	11	11	100	1.4	125	17		65	65	95% Chebyshev (Mean, Sd) UCL
B	Fish (> 13 and ≤ 18 cm, ≥ RM 6)	Metals	Cobalt	mg/kg	11	11	100	0.04	1.1	0.19		0.38	0.38	95% H-UCL
B	Fish (> 13 and ≤ 18 cm, ≥ RM 6)	Metals	Copper	mg/kg	11	11	100	1.2	14.7	5.3		8.5	8.5	95% Adjusted Gamma UCL
B	Fish (> 13 and ≤ 18 cm, ≥ RM 6)	Metals	Lead	mg/kg	11	11	100	0.25	1.8	0.61		1.2	1.2	95% Chebyshev (Mean, Sd) UCL
B	Fish (> 13 and ≤ 18 cm, ≥ RM 6)	Metals	Mercury	µg/kg	11	11	100	48	180	100		120	120	95% Student's-t UCL
B	Fish (> 13 and ≤ 18 cm, ≥ RM 6)	Metals	Methyl mercury	µg/kg	11	11	100	37	190	100		130	130	95% Student's-t UCL
B	Fish (> 13 and ≤ 18 cm, ≥ RM 6)	Metals	Nickel	mg/kg	11	11	100	1.1	89.1	12		46	46	95% Chebyshev (Mean, Sd) UCL
B	Fish (> 13 and ≤ 18 cm, ≥ RM 6)	Metals	Selenium	mg/kg	11	11	100	0.27	1.2	0.77		0.93	0.93	95% Student's-t UCL
B	Fish (> 13 and ≤ 18 cm, ≥ RM 6)	Metals	Silver	mg/kg	11	11	100	0.0067	0.19	0.052		0.098	0.098	95% Adjusted Gamma UCL
B	Fish (> 13 and ≤ 18 cm, ≥ RM 6)	Metals	Vanadium	mg/kg	11	11	100	0.04	1.2	0.28		0.58	0.58	95% Adjusted Gamma UCL
B	Fish (> 13 and ≤ 18 cm, ≥ RM 6)	Metals	Zinc	mg/kg	11	11	100	22.1	32.7	27.7		29.4	29.4	95% Student's-t UCL
B	Fish (> 13 and ≤ 18 cm, ≥ RM 6)	PAHs	Benzo(a)pyrene	µg/kg	11	7	63.6	2.3	64	20	2.2	25	25	95% KM (t) UCL
B	Fish (> 13 and ≤ 18 cm, ≥ RM 6)	PAHs	Total HPAHs	µg/kg	11	11	100	44	750	190		360	360	95% Adjusted Gamma UCL
B	Fish (> 13 and ≤ 18 cm, ≥ RM 6)	PAHs	Total LPAHs	µg/kg	11	11	100	60	220	120		150	150	95% Student's-t UCL
B	Fish (> 13 and ≤ 18 cm, ≥ RM 6)	PAHs	Total PAHs	µg/kg	11	11	100	100	930	310		440	440	95% Student's-t UCL
B	Fish (> 13 and ≤ 18 cm, ≥ RM 6)	PCB Congeners	Total PCB Congeners	µg/kg	11	11	100	170	5100	1700		2500	2500	95% Student's-t UCL
B	Fish (> 13 and ≤ 18 cm, ≥ RM 6)	PCB Congeners	PCB TEQ-Bird	ng/kg	11	11	100	23	310	150		200	200	95% Student's-t UCL
B	Fish (> 13 and ≤ 18 cm, ≥ RM 6)	PCB Congeners	PCB TEQ-Fish	ng/kg	11	11	100	0.19	3.1	1.5		1.9	1.9	95% Student's-t UCL
B	Fish (> 13 and ≤ 18 cm, ≥ RM 6)	PCB Congeners	PCB TEQ-Mammal	ng/kg	11	11	100	2.1	36	17		22	22	95% Student's-t UCL
B	Fish (> 13 and ≤ 18 cm, ≥ RM 6)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	11	11	100	7.5	230	100		140	140	95% Student's-t UCL
B	Fish (> 13 and ≤ 18 cm, ≥ RM 6)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	11	11	100	9.1	250	110		160	160	95% Student's-t UCL
B	Fish (> 13 and ≤ 18 cm, ≥ RM 6)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	11	11	100	7.9	240	100		150	150	95% Student's-t UCL
B	Fish (> 13 and ≤ 18 cm, ≥ RM 6)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	11	11	100	7.9	240	100		150	150	95% Student's-t UCL
B	Fish (> 13 and ≤ 18 cm, ≥ RM 6)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	11	11	100	32	560	270		360	360	95% Student's-t UCL
B	Fish (> 13 and ≤ 18 cm, ≥ RM 6)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	11	11	100	8.1	240	110		150	150	95% Student's-t UCL
B	Fish (> 13 and ≤ 18 cm, ≥ RM 6)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	11	11	100	10	270	120		170	170	95% Student's-t UCL
B	Fish (> 13 and ≤ 18 cm, ≥ RM 6)	OC Pesticides	Dieldrin	µg/kg	11	11	100	8.6	47	27		33	33	95% Student's-t UCL
B	Fish (> 13 and ≤ 18 cm, ≥ RM 6)	OC Pesticides	Endosulfan I	µg/kg	11	0	0				3.1		3.1	Maximum DL
B	Fish (> 13 and ≤ 18 cm, ≥ RM 6)	OC Pesticides	Endosulfan II	µg/kg	11	0	0				2.4		2.4	Maximum DL
B	Fish (> 13 and ≤ 18 cm, ≥ RM 6)	OC Pesticides	Heptachlor epoxide	µg/kg	11	11	100	3.5	18	10		13	13	95% Student's-t UCL
B	Fish (> 13 and ≤ 18 cm, ≥ RM 6)	OC Pesticides	Total DDx	µg/kg	11	11	100	22	280	150		190	190	95% Student's-t UCL
B	Fish (> 18 and ≤ 30 cm)	Metals	Arsenic	mg/kg	21	17	81	0.031	0.26	0.15	0.17	0.16	0.16	95% KM (t) UCL
B	Fish (> 18 and ≤ 30 cm)	Metals	Cadmium	mg/kg	21	21	100	0.003	0.19	0.028		0.044	0.044	95% Adjusted Gamma UCL
B	Fish (> 18 and ≤ 30 cm)	Metals	Chromium	mg/kg	21	21	100	0.12	4.5	1.3		2	2	95% Adjusted Gamma UCL
B	Fish (> 18 and ≤ 30 cm)	Metals	Cobalt	mg/kg	21	21	100	0.016	0.096	0.048		0.057	0.057	95% Student's-t UCL

Diet LOE -- Prey Tissue EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
B	Fish (> 18 and ≤ 30 cm)	Metals	Copper	mg/kg	21	21	100	0.4	50.9	6.2		17	17	95% Chebyshev (Mean, Sd) UCL
B	Fish (> 18 and ≤ 30 cm)	Metals	Lead	mg/kg	21	21	100	0.052	1.3	0.52		0.66	0.66	95% Student's-t UCL
B	Fish (> 18 and ≤ 30 cm)	Metals	Mercury	µg/kg	21	21	100	48	310	150		180	180	95% Student's-t UCL
B	Fish (> 18 and ≤ 30 cm)	Metals	Methyl mercury	µg/kg	21	21	100	39	330	150		170	170	95% Student's-t UCL
B	Fish (> 18 and ≤ 30 cm)	Metals	Nickel	mg/kg	21	21	100	0.18	2.8	0.99		1.3	1.3	95% Adjusted Gamma UCL
B	Fish (> 18 and ≤ 30 cm)	Metals	Selenium	mg/kg	21	21	100	0.34	3	0.99		1.3	1.3	95% Adjusted Gamma UCL
B	Fish (> 18 and ≤ 30 cm)	Metals	Silver	mg/kg	21	12	57.1	0.007	0.64	0.14	0.008	0.19	0.19	95% Adjusted Gamma KM-UCL
B	Fish (> 18 and ≤ 30 cm)	Metals	Vanadium	mg/kg	21	19	90.5	0.016	0.2	0.11	0.03	0.12	0.12	95% KM (t) UCL
B	Fish (> 18 and ≤ 30 cm)	Metals	Zinc	mg/kg	21	21	100	15	41.4	23		25	25	95% Student's-t UCL
B	Fish (> 18 and ≤ 30 cm)	PAHs	Benzo(a)pyrene	µg/kg	21	7	33.3	1.7	28	10	2.6	6.8	6.8	95% KM (t) UCL
B	Fish (> 18 and ≤ 30 cm)	PAHs	Total HPAHs	µg/kg	21	21	100	9.4	390	89		140	140	95% Adjusted Gamma UCL
B	Fish (> 18 and ≤ 30 cm)	PAHs	Total LPAHs	µg/kg	21	21	100	19	300	150		190	190	95% Student's-t UCL
B	Fish (> 18 and ≤ 30 cm)	PAHs	Total PAHs	µg/kg	21	21	100	33	570	240		300	300	95% Student's-t UCL
B	Fish (> 18 and ≤ 30 cm)	PCB Congeners	Total PCB Congeners	µg/kg	21	21	100	260	3700	1300		1700	1700	95% Adjusted Gamma UCL
B	Fish (> 18 and ≤ 30 cm)	PCB Congeners	PCB TEQ-Bird	ng/kg	21	21	100	7	400	88		140	140	95% Adjusted Gamma UCL
B	Fish (> 18 and ≤ 30 cm)	PCB Congeners	PCB TEQ-Fish	ng/kg	21	21	100	0.28	3.4	1.2		1.5	1.5	95% Student's-t UCL
B	Fish (> 18 and ≤ 30 cm)	PCB Congeners	PCB TEQ-Mammal	ng/kg	21	21	100	2.9	41	16		20	20	95% Student's-t UCL
B	Fish (> 18 and ≤ 30 cm)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	21	20	95.2	0.32	250	81	0.21	110	110	95% KM (t) UCL
B	Fish (> 18 and ≤ 30 cm)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	21	21	100	0.73	280	86		120	120	95% Student's-t UCL
B	Fish (> 18 and ≤ 30 cm)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	21	21	100	0.79	260	82		110	110	95% Student's-t UCL
B	Fish (> 18 and ≤ 30 cm)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	21	21	100	0.81	260	81		110	110	95% Student's-t UCL
B	Fish (> 18 and ≤ 30 cm)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	21	21	100	7.9	690	170		290	290	95% Adjusted Gamma UCL
B	Fish (> 18 and ≤ 30 cm)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	21	21	100	1.2	270	82		110	110	95% Student's-t UCL
B	Fish (> 18 and ≤ 30 cm)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	21	21	100	5.5	300	96		150	150	95% Adjusted Gamma UCL
B	Fish (> 18 and ≤ 30 cm)	OC Pesticides	Dieldrin	µg/kg	21	21	100	7.8	110	30		38	38	95% Student's-t UCL
B	Fish (> 18 and ≤ 30 cm)	OC Pesticides	Endosulfan I	µg/kg	21	4	19	0.22	1.1	0.82	2.9		1.1	Maximum detect
B	Fish (> 18 and ≤ 30 cm)	OC Pesticides	Endosulfan II	µg/kg	20	0	0				3.7		3.7	Maximum DL
B	Fish (> 18 and ≤ 30 cm)	OC Pesticides	Heptachlor epoxide	µg/kg	21	21	100	3.5	27	11		13	13	95% Student's-t UCL
B	Fish (> 18 and ≤ 30 cm)	OC Pesticides	Total DDx	µg/kg	21	21	100	20	490	170		220	220	95% Student's-t UCL
B	Fish (> 18 and ≤ 30 cm, reach 1)	Metals	Arsenic	mg/kg	1	1	100	0.14	0.14				0.14	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 1)	Metals	Cadmium	mg/kg	1	1	100	0.003	0.003				0.003	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 1)	Metals	Chromium	mg/kg	1	1	100	0.8	0.8				0.8	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 1)	Metals	Cobalt	mg/kg	1	1	100	0.033	0.033				0.033	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 1)	Metals	Copper	mg/kg	1	1	100	6.1	6.1				6.1	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 1)	Metals	Lead	mg/kg	1	1	100	0.17	0.17				0.17	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 1)	Metals	Mercury	µg/kg	1	1	100	150	150				150	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 1)	Metals	Methyl mercury	µg/kg	1	1	100	160	160				160	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 1)	Metals	Nickel	mg/kg	1	1	100	0.71	0.71				0.71	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 1)	Metals	Selenium	mg/kg	1	1	100	0.52	0.52				0.52	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 1)	Metals	Silver	mg/kg	1	1	100	0.047	0.047				0.047	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 1)	Metals	Vanadium	mg/kg	1	1	100	0.15	0.15				0.15	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 1)	Metals	Zinc	mg/kg	1	1	100	24.8	24.8				24.8	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 1)	PAHs	Benzo(a)pyrene	µg/kg	1	0	0				0.58		0.58	Maximum DL
B	Fish (> 18 and ≤ 30 cm, reach 1)	PAHs	Total HPAHs	µg/kg	1	1	100	77	77				77	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 1)	PAHs	Total LPAHs	µg/kg	1	1	100	280	280				280	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 1)	PAHs	Total PAHs	µg/kg	1	1	100	360	360				360	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 1)	PCB Congeners	Total PCB Congeners	µg/kg	1	1	100	1700	1700				1700	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 1)	PCB Congeners	PCB TEQ-Bird	ng/kg	1	1	100	150	150				150	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 1)	PCB Congeners	PCB TEQ-Fish	ng/kg	1	1	100	2.3	2.3				2.3	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 1)	PCB Congeners	PCB TEQ-Mammal	ng/kg	1	1	100	33	33				33	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 1)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	1	1	100	110	110				110	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 1)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	1	1	100	130	130				130	Maximum detect

Diet LOE -- Prey Tissue EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
B	Fish (> 18 and ≤ 30 cm, reach 1)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	1	1	100	120	120				120	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 1)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	1	1	100	110	110				110	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 1)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	1	1	100	290	290				290	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 1)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	1	1	100	120	120				120	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 1)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	1	1	100	150	150				150	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 1)	OC Pesticides	Dieldrin	µg/kg	1	1	100	12	12				12	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 1)	OC Pesticides	Endosulfan I	µg/kg	1	0	0				0.36		0.36	Maximum DL
B	Fish (> 18 and ≤ 30 cm, reach 1)	OC Pesticides	Endosulfan II	µg/kg	1	0	0				0.33		0.33	Maximum DL
B	Fish (> 18 and ≤ 30 cm, reach 1)	OC Pesticides	Heptachlor epoxide	µg/kg	1	1	100	4.1	4.1				4.1	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 1)	OC Pesticides	Total DDx	µg/kg	1	1	100	490	490				490	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 2)	Metals	Arsenic	mg/kg	1	1	100	0.23	0.23				0.23	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 2)	Metals	Cadmium	mg/kg	1	1	100	0.008	0.008				0.008	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 2)	Metals	Chromium	mg/kg	1	1	100	1.1	1.1				1.1	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 2)	Metals	Cobalt	mg/kg	1	1	100	0.05	0.05				0.05	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 2)	Metals	Copper	mg/kg	1	1	100	50.9	50.9				50.9	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 2)	Metals	Lead	mg/kg	1	1	100	0.51	0.51				0.51	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 2)	Metals	Mercury	µg/kg	1	1	100	270	270				270	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 2)	Metals	Methyl mercury	µg/kg	1	1	100	270	270				270	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 2)	Metals	Nickel	mg/kg	1	1	100	1	1				1	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 2)	Metals	Selenium	mg/kg	1	1	100	1.9	1.9				1.9	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 2)	Metals	Silver	mg/kg	1	1	100	0.64	0.64				0.64	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 2)	Metals	Vanadium	mg/kg	1	1	100	0.12	0.12				0.12	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 2)	Metals	Zinc	mg/kg	1	1	100	30.7	30.7				30.7	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 2)	PAHs	Benzo(a)pyrene	µg/kg	1	0	0				1.1		1.1	Maximum DL
B	Fish (> 18 and ≤ 30 cm, reach 2)	PAHs	Total HPAHs	µg/kg	1	1	100	63	63				63	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 2)	PAHs	Total LPAHs	µg/kg	1	1	100	130	130				130	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 2)	PAHs	Total PAHs	µg/kg	1	1	100	190	190				190	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 2)	PCB Congeners	Total PCB Congeners	µg/kg	1	1	100	1300	1300				1300	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 2)	PCB Congeners	PCB TEQ-Bird	ng/kg	1	1	100	99	99				99	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 2)	PCB Congeners	PCB TEQ-Fish	ng/kg	1	1	100	1.2	1.2				1.2	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 2)	PCB Congeners	PCB TEQ-Mammal	ng/kg	1	1	100	15	15				15	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 2)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	1	1	100	73	73				73	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 2)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	1	1	100	83	83				83	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 2)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	1	1	100	76	76				76	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 2)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	1	1	100	76	76				76	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 2)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	1	1	100	180	180				180	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 2)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	1	1	100	78	78				78	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 2)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	1	1	100	91	91				91	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 2)	OC Pesticides	Dieldrin	µg/kg	1	1	100	16	16				16	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 2)	OC Pesticides	Endosulfan I	µg/kg	1	0	0				0.64		0.64	Maximum DL
B	Fish (> 18 and ≤ 30 cm, reach 2)	OC Pesticides	Endosulfan II	µg/kg	1	0	0				0.71		0.71	Maximum DL
B	Fish (> 18 and ≤ 30 cm, reach 2)	OC Pesticides	Heptachlor epoxide	µg/kg	1	1	100	5.2	5.2				5.2	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 2)	OC Pesticides	Total DDx	µg/kg	1	1	100	280	280				280	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 3)	Metals	Arsenic	mg/kg	3	3	100	0.19	0.26	0.23			0.26	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 3)	Metals	Cadmium	mg/kg	3	3	100	0.004	0.011	0.0067			0.011	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 3)	Metals	Chromium	mg/kg	3	3	100	0.12	3.4	1.7			3.4	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 3)	Metals	Cobalt	mg/kg	3	3	100	0.016	0.071	0.042			0.071	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 3)	Metals	Copper	mg/kg	3	3	100	0.7	9.3	5.8			9.3	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 3)	Metals	Lead	mg/kg	3	3	100	0.15	0.46	0.27			0.46	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 3)	Metals	Mercury	µg/kg	3	3	100	48	170	120			170	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 3)	Metals	Methyl mercury	µg/kg	3	3	100	39	140	110			140	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 3)	Metals	Nickel	mg/kg	3	3	100	0.18	2.1	1.2			2.1	Maximum detect

Diet LOE -- Prey Tissue EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
B	Fish (> 18 and ≤ 30 cm, reach 3)	Metals	Selenium	mg/kg	3	3	100	0.75	1.6	1.2			1.6	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 3)	Metals	Silver	mg/kg	3	2	66.7	0.13	0.17	0.15	0.008		0.17	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 3)	Metals	Vanadium	mg/kg	3	2	66.7	0.08	0.13	0.11	0.03		0.13	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 3)	Metals	Zinc	mg/kg	3	3	100	20.8	41.4	28.2			41.4	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 3)	PAHs	Benzo(a)pyrene	µg/kg	3	3	100	1.7	24	9.4			24	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 3)	PAHs	Total HPAHs	µg/kg	3	3	100	110	340	200			340	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 3)	PAHs	Total LPAHs	µg/kg	3	3	100	210	300	240			300	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 3)	PAHs	Total PAHs	µg/kg	3	3	100	320	570	440			570	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 3)	PCB Congeners	Total PCB Congeners	µg/kg	3	3	100	1700	2800	2400			2800	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 3)	PCB Congeners	PCB TEQ-Bird	ng/kg	3	3	100	67	270	190			270	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 3)	PCB Congeners	PCB TEQ-Fish	ng/kg	3	3	100	1.4	2.4	2.1			2.4	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 3)	PCB Congeners	PCB TEQ-Mammal	ng/kg	3	3	100	19	29	25			29	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 3)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	3	3	100	160	170	160			170	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 3)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	3	3	100	170	190	180			190	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 3)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	3	3	100	170	180	170			180	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 3)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	3	3	100	170	180	170			180	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 3)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	3	3	100	240	460	370			460	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 3)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	3	3	100	170	180	170			180	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 3)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	3	3	100	190	210	200			210	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 3)	OC Pesticides	Dieldrin	µg/kg	3	3	100	28	34	30			34	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 3)	OC Pesticides	Endosulfan I	µg/kg	3	1	33.3	0.97	0.97		1.6		0.97	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 3)	OC Pesticides	Endosulfan II	µg/kg	3	0	0				3.7		3.7	Maximum DL
B	Fish (> 18 and ≤ 30 cm, reach 3)	OC Pesticides	Heptachlor epoxide	µg/kg	3	3	100	12	13	12			13	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 3)	OC Pesticides	Total DDx	µg/kg	3	3	100	200	250	230			250	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 4)	Metals	Arsenic	mg/kg	3	3	100	0.094	0.23	0.16			0.23	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 4)	Metals	Cadmium	mg/kg	3	3	100	0.0043	0.014	0.0081			0.014	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 4)	Metals	Chromium	mg/kg	3	3	100	0.24	1.2	0.72			1.2	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 4)	Metals	Cobalt	mg/kg	3	3	100	0.026	0.037	0.032			0.037	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 4)	Metals	Copper	mg/kg	3	3	100	0.4	13.5	4.9			13.5	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 4)	Metals	Lead	mg/kg	3	3	100	0.052	0.62	0.3			0.62	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 4)	Metals	Mercury	µg/kg	3	3	100	59	180	130			180	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 4)	Metals	Methyl mercury	µg/kg	3	3	100	44	150	110			150	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 4)	Metals	Nickel	mg/kg	3	3	100	0.35	0.86	0.59			0.86	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 4)	Metals	Selenium	mg/kg	3	3	100	0.63	0.91	0.73			0.91	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 4)	Metals	Silver	mg/kg	3	1	33.3	0.19	0.19		0.006		0.19	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 4)	Metals	Vanadium	mg/kg	3	3	100	0.016	0.12	0.069			0.12	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 4)	Metals	Zinc	mg/kg	3	3	100	15	19.9	17			19.9	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 4)	PAHs	Benzo(a)pyrene	µg/kg	3	0	0				2.6		2.6	Maximum DL
B	Fish (> 18 and ≤ 30 cm, reach 4)	PAHs	Total HPAHs	µg/kg	3	3	100	11	160	94			160	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 4)	PAHs	Total LPAHs	µg/kg	3	3	100	38	260	160			260	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 4)	PAHs	Total PAHs	µg/kg	3	3	100	43	420	250			420	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 4)	PCB Congeners	Total PCB Congeners	µg/kg	3	3	100	630	3700	2000			3700	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 4)	PCB Congeners	PCB TEQ-Bird	ng/kg	3	3	100	37	400	170			400	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 4)	PCB Congeners	PCB TEQ-Fish	ng/kg	3	3	100	0.69	3.4	1.9			3.4	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 4)	PCB Congeners	PCB TEQ-Mammal	ng/kg	3	3	100	9.4	41	24			41	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 4)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	3	3	100	32	250	160			250	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 4)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	3	3	100	34	280	170			280	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 4)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	3	3	100	33	260	160			260	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 4)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	3	3	100	33	260	160			260	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 4)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	3	3	100	68	690	350			690	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 4)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	3	3	100	33	270	170			270	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 4)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	3	3	100	42	300	190			300	Maximum detect

Diet LOE -- Prey Tissue EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
B	Fish (> 18 and ≤ 30 cm, reach 4)	OC Pesticides	Dieldrin	µg/kg	3	3	100	20	43	32			43	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 4)	OC Pesticides	Endosulfan I	µg/kg	3	1	33.3	1	1		2.9		1	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 4)	OC Pesticides	Endosulfan II	µg/kg	2	0	0				1.8		1.8	Maximum DL
B	Fish (> 18 and ≤ 30 cm, reach 4)	OC Pesticides	Heptachlor epoxide	µg/kg	3	3	100	7.3	16	12			16	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 4)	OC Pesticides	Total DDx	µg/kg	3	3	100	190	380	270			380	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 5)	Metals	Arsenic	mg/kg	2	0	0				0.15		0.15	Maximum DL
B	Fish (> 18 and ≤ 30 cm, reach 5)	Metals	Cadmium	mg/kg	2	2	100	0.016	0.02	0.018			0.02	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 5)	Metals	Chromium	mg/kg	2	2	100	0.23	1.2	0.72			1.2	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 5)	Metals	Cobalt	mg/kg	2	2	100	0.025	0.096	0.061			0.096	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 5)	Metals	Copper	mg/kg	2	2	100	0.43	10.8	5.6			10.8	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 5)	Metals	Lead	mg/kg	2	2	100	0.097	0.43	0.26			0.43	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 5)	Metals	Mercury	µg/kg	2	2	100	150	170	160			170	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 5)	Metals	Methyl mercury	µg/kg	2	2	100	140	180	160			180	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 5)	Metals	Nickel	mg/kg	2	2	100	0.33	0.93	0.63			0.93	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 5)	Metals	Selenium	mg/kg	2	2	100	0.51	1.4	0.96			1.4	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 5)	Metals	Silver	mg/kg	2	1	50	0.13	0.13		0.0026		0.13	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 5)	Metals	Vanadium	mg/kg	2	1	50	0.08	0.08		0.01		0.08	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 5)	Metals	Zinc	mg/kg	2	2	100	15.8	21.9	18.9			21.9	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 5)	PAHs	Benzo(a)pyrene	µg/kg	2	0	0				1.3		1.3	Maximum DL
B	Fish (> 18 and ≤ 30 cm, reach 5)	PAHs	Total HPAHs	µg/kg	2	2	100	9.4	78	44			78	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 5)	PAHs	Total LPAHs	µg/kg	2	2	100	61	130	96			130	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 5)	PAHs	Total PAHs	µg/kg	2	2	100	70	200	140			200	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 5)	PCB Congeners	Total PCB Congeners	µg/kg	2	2	100	1100	2900	2000			2900	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 5)	PCB Congeners	PCB TEQ-Bird	ng/kg	2	2	100	25	240	130			240	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 5)	PCB Congeners	PCB TEQ-Fish	ng/kg	2	2	100	1.1	2.3	1.7			2.3	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 5)	PCB Congeners	PCB TEQ-Mammal	ng/kg	2	2	100	15	28	22			28	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 5)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	2	2	100	65	160	110			160	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 5)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	2	2	100	65	180	120			180	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 5)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	2	2	100	65	170	120			170	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 5)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	2	2	100	65	170	120			170	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 5)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	2	2	100	91	420	260			420	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 5)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	2	2	100	65	170	120			170	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 5)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	2	2	100	83	190	140			190	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 5)	OC Pesticides	Dieldrin	µg/kg	2	2	100	18	39	29			39	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 5)	OC Pesticides	Endosulfan I	µg/kg	2	0	0				1.1		1.1	Maximum DL
B	Fish (> 18 and ≤ 30 cm, reach 5)	OC Pesticides	Endosulfan II	µg/kg	2	0	0				3.3		3.3	Maximum DL
B	Fish (> 18 and ≤ 30 cm, reach 5)	OC Pesticides	Heptachlor epoxide	µg/kg	2	2	100	7.2	14	11			14	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 5)	OC Pesticides	Total DDx	µg/kg	2	2	100	160	220	190			220	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 6)	Metals	Arsenic	mg/kg	4	4	100	0.031	0.14	0.059			0.14	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 6)	Metals	Cadmium	mg/kg	4	4	100	0.011	0.031	0.023			0.031	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 6)	Metals	Chromium	mg/kg	4	4	100	0.18	2.7	1			2.7	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 6)	Metals	Cobalt	mg/kg	4	4	100	0.024	0.057	0.038			0.057	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 6)	Metals	Copper	mg/kg	4	4	100	0.55	8.3	2.6			8.3	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 6)	Metals	Lead	mg/kg	4	4	100	0.35	0.83	0.58			0.83	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 6)	Metals	Mercury	µg/kg	4	4	100	50	220	110			220	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 6)	Metals	Methyl mercury	µg/kg	4	4	100	45	250	110			250	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 6)	Metals	Nickel	mg/kg	4	4	100	0.36	2	0.91			2	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 6)	Metals	Selenium	mg/kg	4	4	100	0.4	3	1.1			3	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 6)	Metals	Silver	mg/kg	4	1	25	0.12	0.12		0.006		0.12	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 6)	Metals	Vanadium	mg/kg	4	4	100	0.04	0.2	0.15			0.2	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 6)	Metals	Zinc	mg/kg	4	4	100	15.8	26.8	18.9			26.8	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 6)	PAHs	Benzo(a)pyrene	µg/kg	4	0	0				1.1		1.1	Maximum DL

Diet LOE -- Prey Tissue EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
B	Fish (> 18 and ≤ 30 cm, reach 6)	PAHs	Total HPAHs	µg/kg	4	4	100	21	58	38			58	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 6)	PAHs	Total LPAHs	µg/kg	4	4	100	190	260	230			260	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 6)	PAHs	Total PAHs	µg/kg	4	4	100	210	310	260			310	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 6)	PCB Congeners	Total PCB Congeners	µg/kg	4	4	100	290	600	490			600	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 6)	PCB Congeners	PCB TEQ-Bird	ng/kg	4	4	100	20	36	30			36	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 6)	PCB Congeners	PCB TEQ-Fish	ng/kg	4	4	100	0.28	0.77	0.59			0.77	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 6)	PCB Congeners	PCB TEQ-Mammal	ng/kg	4	4	100	2.9	11	7.9			11	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 6)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	4	4	100	26	81	54			81	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 6)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	4	4	100	28	87	58			87	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 6)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	4	4	100	26	85	57			85	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 6)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	4	4	100	26	85	56			85	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 6)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	4	4	100	58	120	90			120	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 6)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	4	4	100	27	86	57			86	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 6)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	4	4	100	29	96	64			96	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 6)	OC Pesticides	Dieldrin	µg/kg	4	4	100	8.6	24	15			24	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 6)	OC Pesticides	Endosulfan I	µg/kg	4	2	50	0.22	1.1	0.66	0.56		1.1	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 6)	OC Pesticides	Endosulfan II	µg/kg	4	0	0				1		1	Maximum DL
B	Fish (> 18 and ≤ 30 cm, reach 6)	OC Pesticides	Heptachlor epoxide	µg/kg	4	4	100	3.5	9.3	6.6			9.3	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 6)	OC Pesticides	Total DDx	µg/kg	4	4	100	39	60	49			60	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 7)	Metals	Arsenic	mg/kg	2	2	100	0.097	0.11	0.1			0.11	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 7)	Metals	Cadmium	mg/kg	2	2	100	0.023	0.031	0.027			0.031	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 7)	Metals	Chromium	mg/kg	2	2	100	0.73	0.77	0.75			0.77	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 7)	Metals	Cobalt	mg/kg	2	2	100	0.036	0.054	0.045			0.054	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 7)	Metals	Copper	mg/kg	2	2	100	0.94	13.1	7			13.1	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 7)	Metals	Lead	mg/kg	2	2	100	0.48	0.81	0.65			0.81	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 7)	Metals	Mercury	µg/kg	2	2	100	140	310	230			310	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 7)	Metals	Methyl mercury	µg/kg	2	2	100	120	330	230			330	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 7)	Metals	Nickel	mg/kg	2	2	100	0.69	0.7	0.7			0.7	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 7)	Metals	Selenium	mg/kg	2	2	100	0.9	2.3	1.6			2.3	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 7)	Metals	Silver	mg/kg	2	1	50	0.21	0.21		0.005		0.21	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 7)	Metals	Vanadium	mg/kg	2	2	100	0.1	0.19	0.15			0.19	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 7)	Metals	Zinc	mg/kg	2	2	100	15	22.5	18.8			22.5	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 7)	PAHs	Benzo(a)pyrene	µg/kg	2	1	50	8.6	8.6		1.5		8.6	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 7)	PAHs	Total HPAHs	µg/kg	2	2	100	28	110	69			110	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 7)	PAHs	Total LPAHs	µg/kg	2	2	100	36	230	130			230	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 7)	PAHs	Total PAHs	µg/kg	2	2	100	63	330	200			330	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 7)	PCB Congeners	Total PCB Congeners	µg/kg	2	2	100	260	410	340			410	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 7)	PCB Congeners	PCB TEQ-Bird	ng/kg	2	2	100	22	31	27			31	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 7)	PCB Congeners	PCB TEQ-Fish	ng/kg	2	2	100	0.42	0.44	0.43			0.44	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 7)	PCB Congeners	PCB TEQ-Mammal	ng/kg	2	2	100	5.8	6.1	6			6.1	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 7)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	2	2	100	7.8	18	13			18	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 7)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	2	2	100	9.6	21	15			21	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 7)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	2	2	100	8.4	19	14			19	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 7)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	2	2	100	8.5	19	14			19	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 7)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	2	2	100	31	52	42			52	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 7)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	2	2	100	8.8	19	14			19	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 7)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	2	2	100	15	25	20			25	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 7)	OC Pesticides	Dieldrin	µg/kg	2	2	100	7.8	16	12			16	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 7)	OC Pesticides	Endosulfan I	µg/kg	2	0	0				1.1		1.1	Maximum DL
B	Fish (> 18 and ≤ 30 cm, reach 7)	OC Pesticides	Endosulfan II	µg/kg	2	0	0				2.7		2.7	Maximum DL
B	Fish (> 18 and ≤ 30 cm, reach 7)	OC Pesticides	Heptachlor epoxide	µg/kg	2	2	100	3.5	5.9	4.7			5.9	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 7)	OC Pesticides	Total DDx	µg/kg	2	2	100	20	38	29			38	Maximum detect

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Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
B	Fish (> 18 and ≤ 30 cm, reach 8)	Metals	Arsenic	mg/kg	5	3	60	0.09	0.25	0.16	0.17		0.25	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 8)	Metals	Cadmium	mg/kg	5	5	100	0.0074	0.19	0.069			0.19	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 8)	Metals	Chromium	mg/kg	5	5	100	0.51	4.5	2.3			4.5	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 8)	Metals	Cobalt	mg/kg	5	5	100	0.031	0.096	0.067			0.096	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 8)	Metals	Copper	mg/kg	5	5	100	0.4	1.5	0.95			1.5	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 8)	Metals	Lead	mg/kg	5	5	100	0.093	1.3	0.89			1.3	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 8)	Metals	Mercury	µg/kg	5	5	100	110	220	160			220	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 8)	Metals	Methyl mercury	µg/kg	5	5	100	110	190	150			190	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 8)	Metals	Nickel	mg/kg	5	5	100	0.56	2.8	1.5			2.8	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 8)	Metals	Selenium	mg/kg	5	5	100	0.34	0.82	0.61			0.82	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 8)	Metals	Silver	mg/kg	5	4	80	0.007	0.009	0.0083	0.0026		0.009	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 8)	Metals	Vanadium	mg/kg	5	5	100	0.028	0.12	0.092			0.12	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 8)	Metals	Zinc	mg/kg	5	5	100	18.4	31.3	26.3			31.3	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 8)	PAHs	Benzo(a)pyrene	µg/kg	5	3	60	1.9	28	11	1.6		28	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 8)	PAHs	Total HPAHs	µg/kg	5	5	100	11	390	95			390	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 8)	PAHs	Total LPAHs	µg/kg	5	5	100	19	67	37			67	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 8)	PAHs	Total PAHs	µg/kg	5	5	100	33	460	130			460	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 8)	PCB Congeners	Total PCB Congeners	µg/kg	5	5	100	420	1200	760			1200	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 8)	PCB Congeners	PCB TEQ-Bird	ng/kg	5	5	100	7	47	17			47	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 8)	PCB Congeners	PCB TEQ-Fish	ng/kg	5	5	100	0.41	1.2	0.72			1.2	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 8)	PCB Congeners	PCB TEQ-Mammal	ng/kg	5	5	100	4.7	14	8.5			14	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 8)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	5	4	80	0.32	8	2.5	0.21		8	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 8)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	5	5	100	0.73	9.8	3.2			9.8	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 8)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	5	5	100	0.79	8.6	3			8.6	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 8)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	5	5	100	0.81	8.6	3			8.6	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 8)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	5	5	100	7.9	57	20			57	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 8)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	5	5	100	1.2	9.8	3.8			9.8	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 8)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	5	5	100	5.5	22	12			22	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 8)	OC Pesticides	Dieldrin	µg/kg	5	5	100	16	110	54			110	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 8)	OC Pesticides	Endosulfan I	µg/kg	5	0	0				2		2	Maximum DL
B	Fish (> 18 and ≤ 30 cm, reach 8)	OC Pesticides	Endosulfan II	µg/kg	5	0	0				2.8		2.8	Maximum DL
B	Fish (> 18 and ≤ 30 cm, reach 8)	OC Pesticides	Heptachlor epoxide	µg/kg	5	5	100	5	27	17			27	Maximum detect
B	Fish (> 18 and ≤ 30 cm, reach 8)	OC Pesticides	Total DDx	µg/kg	5	5	100	99	240	140			240	Maximum detect
B	Fish (> 9 and ≤ 13 cm)	Metals	Arsenic	mg/kg	16	16	100	0.044	0.4	0.3		0.34	0.34	95% Student's-t UCL
B	Fish (> 9 and ≤ 13 cm)	Metals	Cadmium	mg/kg	16	16	100	0.0091	0.099	0.029		0.039	0.039	95% Student's-t UCL
B	Fish (> 9 and ≤ 13 cm)	Metals	Chromium	mg/kg	16	16	100	0.89	31.7	7		12	12	95% Adjusted Gamma UCL
B	Fish (> 9 and ≤ 13 cm)	Metals	Cobalt	mg/kg	16	16	100	0.031	0.42	0.15		0.23	0.23	95% Adjusted Gamma UCL
B	Fish (> 9 and ≤ 13 cm)	Metals	Copper	mg/kg	16	16	100	0.87	5.4	3		3.4	3.4	95% Student's-t UCL
B	Fish (> 9 and ≤ 13 cm)	Metals	Lead	mg/kg	16	16	100	0.15	4.9	1.5		3	3	95% Chebyshev (Mean, Sd) UCL
B	Fish (> 9 and ≤ 13 cm)	Metals	Mercury	µg/kg	16	16	100	30	83	59		65	65	95% Student's-t UCL
B	Fish (> 9 and ≤ 13 cm)	Metals	Methyl mercury	µg/kg	16	16	100	14	69	44		67	67	95% Chebyshev (Mean, Sd) UCL
B	Fish (> 9 and ≤ 13 cm)	Metals	Nickel	mg/kg	16	16	100	0.62	22.1	4.8		8.2	8.2	95% Adjusted Gamma UCL
B	Fish (> 9 and ≤ 13 cm)	Metals	Selenium	mg/kg	16	16	100	0.22	0.89	0.61		0.69	0.69	95% Student's-t UCL
B	Fish (> 9 and ≤ 13 cm)	Metals	Silver	mg/kg	16	15	93.8	0.024	0.074	0.04	0.0051	0.045	0.045	95% KM (t) UCL
B	Fish (> 9 and ≤ 13 cm)	Metals	Vanadium	mg/kg	16	16	100	0.05	1.3	0.52		0.69	0.69	95% Student's-t UCL
B	Fish (> 9 and ≤ 13 cm)	Metals	Zinc	mg/kg	16	16	100	25	48.2	39.1		42.6	42.6	95% Student's-t UCL
B	Fish (> 9 and ≤ 13 cm)	PAHs	Benzo(a)pyrene	µg/kg	16	16	100	2.1	98	22		52	52	95% Chebyshev (Mean, Sd) UCL
B	Fish (> 9 and ≤ 13 cm)	PAHs	Total HPAHs	µg/kg	16	16	100	29	1000	250		600	600	95% Chebyshev (Mean, Sd) UCL
B	Fish (> 9 and ≤ 13 cm)	PAHs	Total LPAHs	µg/kg	16	16	100	18	370	94		150	150	95% Adjusted Gamma UCL
B	Fish (> 9 and ≤ 13 cm)	PAHs	Total PAHs	µg/kg	16	16	100	60	1200	350		760	760	95% Chebyshev (Mean, Sd) UCL
B	Fish (> 9 and ≤ 13 cm)	PCB Congeners	Total PCB Congeners	µg/kg	16	16	100	240	610	390		440	440	95% Student's-t UCL
B	Fish (> 9 and ≤ 13 cm)	PCB Congeners	PCB TEQ-Bird	ng/kg	16	16	100	17	88	39		49	49	95% H-UCL

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Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
B	Fish (> 9 and ≤ 13 cm)	PCB Congeners	PCB TEQ-Fish	ng/kg	16	16	100	0.25	0.64	0.45		0.5	0.5	95% Student's-t UCL
B	Fish (> 9 and ≤ 13 cm)	PCB Congeners	PCB TEQ-Mammal	ng/kg	16	16	100	3.3	7.5	5.6		6.2	6.2	95% Student's-t UCL
B	Fish (> 9 and ≤ 13 cm)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	16	16	100	2.4	57	23		29	29	95% Student's-t UCL
B	Fish (> 9 and ≤ 13 cm)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	16	16	100	9.9	65	27		33	33	95% Student's-t UCL
B	Fish (> 9 and ≤ 13 cm)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	16	16	100	3.7	60	24		31	31	95% Student's-t UCL
B	Fish (> 9 and ≤ 13 cm)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	16	16	100	3.8	59	24		30	30	95% Student's-t UCL
B	Fish (> 9 and ≤ 13 cm)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	16	16	100	30	130	65		77	77	95% Student's-t UCL
B	Fish (> 9 and ≤ 13 cm)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	16	16	100	4.3	60	24		31	31	95% Student's-t UCL
B	Fish (> 9 and ≤ 13 cm)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	16	16	100	11	67	30		36	36	95% Student's-t UCL
B	Fish (> 9 and ≤ 13 cm)	OC Pesticides	Dieldrin	µg/kg	16	16	100	3.5	17	8		10	10	95% Student's-t UCL
B	Fish (> 9 and ≤ 13 cm)	OC Pesticides	Endosulfan I	µg/kg	16	0	0				1.5		1.5	Maximum DL
B	Fish (> 9 and ≤ 13 cm)	OC Pesticides	Endosulfan II	µg/kg	16	0	0				1.5		1.5	Maximum DL
B	Fish (> 9 and ≤ 13 cm)	OC Pesticides	Heptachlor epoxide	µg/kg	16	16	100	0.84	6.6	2.6		3.4	3.4	95% Student's-t UCL
B	Fish (> 9 and ≤ 13 cm)	OC Pesticides	Total DDx	µg/kg	16	16	100	26	71	46		52	52	95% Student's-t UCL
B	Fish (> 9 and ≤ 13 cm reach 1)	Metals	Arsenic	mg/kg	2	2	100	0.39	0.4	0.4			0.4	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 1)	Metals	Cadmium	mg/kg	2	2	100	0.015	0.02	0.018			0.02	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 1)	Metals	Chromium	mg/kg	2	2	100	1.3	4.9	3.1			4.9	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 1)	Metals	Cobalt	mg/kg	2	2	100	0.061	0.095	0.078			0.095	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 1)	Metals	Copper	mg/kg	2	2	100	2.5	2.9	2.7			2.9	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 1)	Metals	Lead	mg/kg	2	2	100	0.41	0.77	0.59			0.77	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 1)	Metals	Mercury	µg/kg	2	2	100	70	71	71			71	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 1)	Metals	Methyl mercury	µg/kg	2	2	100	60	69	65			69	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 1)	Metals	Nickel	mg/kg	2	2	100	1.1	3.1	2.1			3.1	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 1)	Metals	Selenium	mg/kg	2	2	100	0.58	0.64	0.61			0.64	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 1)	Metals	Silver	mg/kg	2	2	100	0.043	0.054	0.049			0.054	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 1)	Metals	Vanadium	mg/kg	2	2	100	0.23	0.51	0.37			0.51	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 1)	Metals	Zinc	mg/kg	2	2	100	46	48.2	47.1			48.2	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 1)	PAHs	Benzo(a)pyrene	µg/kg	2	2	100	4.4	7	5.7			7	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 1)	PAHs	Total HPAHs	µg/kg	2	2	100	42	68	55			68	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 1)	PAHs	Total LPAHs	µg/kg	2	2	100	23	35	29			35	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 1)	PAHs	Total PAHs	µg/kg	2	2	100	65	100	83			100	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 1)	PCB Congeners	Total PCB Congeners	µg/kg	2	2	100	240	340	290			340	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 1)	PCB Congeners	PCB TEQ-Bird	ng/kg	2	2	100	17	23	20			23	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 1)	PCB Congeners	PCB TEQ-Fish	ng/kg	2	2	100	0.27	0.46	0.37			0.46	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 1)	PCB Congeners	PCB TEQ-Mammal	ng/kg	2	2	100	3.6	6.5	5.1			6.5	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 1)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	2	2	100	11	15	13			15	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 1)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	2	2	100	12	17	15			17	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 1)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	2	2	100	11	16	14			16	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 1)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	2	2	100	11	16	14			16	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 1)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	2	2	100	30	40	35			40	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 1)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	2	2	100	12	16	14			16	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 1)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	2	2	100	15	22	19			22	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 1)	OC Pesticides	Dieldrin	µg/kg	2	2	100	3.5	3.5	3.5			3.5	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 1)	OC Pesticides	Endosulfan I	µg/kg	2	0	0				0.4		0.4	Maximum DL
B	Fish (> 9 and ≤ 13 cm reach 1)	OC Pesticides	Endosulfan II	µg/kg	2	0	0				0.47		0.47	Maximum DL
B	Fish (> 9 and ≤ 13 cm reach 1)	OC Pesticides	Heptachlor epoxide	µg/kg	2	2	100	0.84	0.96	0.9			0.96	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 1)	OC Pesticides	Total DDx	µg/kg	2	2	100	26	32	29			32	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 2)	Metals	Arsenic	mg/kg	5	5	100	0.27	0.35	0.31			0.35	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 2)	Metals	Cadmium	mg/kg	5	5	100	0.01	0.025	0.014			0.025	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 2)	Metals	Chromium	mg/kg	5	5	100	1.4	6.8	3.3			6.8	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 2)	Metals	Cobalt	mg/kg	5	5	100	0.053	0.12	0.074			0.12	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 2)	Metals	Copper	mg/kg	5	5	100	2	3.4	2.7			3.4	Maximum detect

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Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
B	Fish (> 9 and ≤ 13 cm reach 2)	Metals	Lead	mg/kg	5	5	100	0.38	0.86	0.53			0.86	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 2)	Metals	Mercury	µg/kg	5	5	100	63	71	68			71	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 2)	Metals	Methyl mercury	µg/kg	5	5	100	61	68	63			68	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 2)	Metals	Nickel	mg/kg	5	5	100	1	4.9	2.4			4.9	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 2)	Metals	Selenium	mg/kg	5	5	100	0.38	0.88	0.67			0.88	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 2)	Metals	Silver	mg/kg	5	5	100	0.032	0.044	0.037			0.044	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 2)	Metals	Vanadium	mg/kg	5	5	100	0.15	0.49	0.27			0.49	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 2)	Metals	Zinc	mg/kg	5	5	100	42.3	45.1	43.5			45.1	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 2)	PAHs	Benzo(a)pyrene	µg/kg	5	5	100	3.3	10	6			10	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 2)	PAHs	Total HPAHs	µg/kg	5	5	100	29	81	49			81	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 2)	PAHs	Total LPAHs	µg/kg	5	5	100	18	37	29			37	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 2)	PAHs	Total PAHs	µg/kg	5	5	100	60	120	78			120	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 2)	PCB Congeners	Total PCB Congeners	µg/kg	5	5	100	290	440	370			440	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 2)	PCB Congeners	PCB TEQ-Bird	ng/kg	5	5	100	24	32	29			32	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 2)	PCB Congeners	PCB TEQ-Fish	ng/kg	5	5	100	0.36	0.52	0.43			0.52	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 2)	PCB Congeners	PCB TEQ-Mammal	ng/kg	5	5	100	4.6	6.9	5.7			6.9	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 2)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	5	5	100	18	27	23			27	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 2)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	5	5	100	19	29	25			29	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 2)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	5	5	100	18	28	24			28	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 2)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	5	5	100	18	28	24			28	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 2)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	5	5	100	43	60	54			60	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 2)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	5	5	100	19	28	24			28	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 2)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	5	5	100	24	34	30			34	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 2)	OC Pesticides	Dieldrin	µg/kg	5	5	100	3.7	5.4	4.6			5.4	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 2)	OC Pesticides	Endosulfan I	µg/kg	5	0	0				0.58		0.58	Maximum DL
B	Fish (> 9 and ≤ 13 cm reach 2)	OC Pesticides	Endosulfan II	µg/kg	5	0	0				0.66		0.66	Maximum DL
B	Fish (> 9 and ≤ 13 cm reach 2)	OC Pesticides	Heptachlor epoxide	µg/kg	5	5	100	0.92	1.4	1.2			1.4	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 2)	OC Pesticides	Total DDx	µg/kg	5	5	100	36	52	43			52	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 3)	Metals	Arsenic	mg/kg	2	2	100	0.33	0.35	0.34			0.35	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 3)	Metals	Cadmium	mg/kg	2	2	100	0.01	0.011	0.011			0.011	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 3)	Metals	Chromium	mg/kg	2	2	100	1.5	2	1.8			2	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 3)	Metals	Cobalt	mg/kg	2	2	100	0.059	0.065	0.062			0.065	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 3)	Metals	Copper	mg/kg	2	2	100	2	2.5	2.3			2.5	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 3)	Metals	Lead	mg/kg	2	2	100	0.45	0.48	0.47			0.48	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 3)	Metals	Mercury	µg/kg	2	2	100	47	68	58			68	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 3)	Metals	Methyl mercury	µg/kg	2	2	100	43	64	54			64	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 3)	Metals	Nickel	mg/kg	2	2	100	1.2	1.6	1.4			1.6	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 3)	Metals	Selenium	mg/kg	2	2	100	0.8	0.89	0.85			0.89	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 3)	Metals	Silver	mg/kg	2	2	100	0.031	0.032	0.032			0.032	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 3)	Metals	Vanadium	mg/kg	2	2	100	0.21	0.22	0.22			0.22	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 3)	Metals	Zinc	mg/kg	2	2	100	41	43.1	42.1			43.1	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 3)	PAHs	Benzo(a)pyrene	µg/kg	2	2	100	7.7	11	9.4			11	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 3)	PAHs	Total HPAHs	µg/kg	2	2	100	67	68	68			68	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 3)	PAHs	Total LPAHs	µg/kg	2	2	100	59	63	61			63	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 3)	PAHs	Total PAHs	µg/kg	2	2	100	130	130	130			130	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 3)	PCB Congeners	Total PCB Congeners	µg/kg	2	2	100	370	510	440			510	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 3)	PCB Congeners	PCB TEQ-Bird	ng/kg	2	2	100	32	34	33			34	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 3)	PCB Congeners	PCB TEQ-Fish	ng/kg	2	2	100	0.37	0.46	0.42			0.46	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 3)	PCB Congeners	PCB TEQ-Mammal	ng/kg	2	2	100	4.7	5.8	5.3			5.8	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 3)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	2	2	100	23	29	26			29	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 3)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	2	2	100	25	31	28			31	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 3)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	2	2	100	24	30	27			30	Maximum detect

Diet LOE -- Prey Tissue EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
B	Fish (> 9 and ≤ 13 cm reach 3)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	2	2	100	24	29	27			29	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 3)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	2	2	100	56	65	61			65	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 3)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	2	2	100	24	30	27			30	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 3)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	2	2	100	28	35	32			35	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 3)	OC Pesticides	Dieldrin	µg/kg	2	2	100	5.5	6.8	6.2			6.8	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 3)	OC Pesticides	Endosulfan I	µg/kg	2	0	0				0.39		0.39	Maximum DL
B	Fish (> 9 and ≤ 13 cm reach 3)	OC Pesticides	Endosulfan II	µg/kg	2	0	0				0.56		0.56	Maximum DL
B	Fish (> 9 and ≤ 13 cm reach 3)	OC Pesticides	Heptachlor epoxide	µg/kg	2	2	100	1.5	1.9	1.7			1.9	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 3)	OC Pesticides	Total DDx	µg/kg	2	2	100	45	59	52			59	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 4)	Metals	Arsenic	mg/kg	1	1	100	0.39	0.39				0.39	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 4)	Metals	Cadmium	mg/kg	1	1	100	0.099	0.099				0.099	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 4)	Metals	Chromium	mg/kg	1	1	100	7.9	7.9				7.9	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 4)	Metals	Cobalt	mg/kg	1	1	100	0.27	0.27				0.27	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 4)	Metals	Copper	mg/kg	1	1	100	5.4	5.4				5.4	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 4)	Metals	Lead	mg/kg	1	1	100	4.9	4.9				4.9	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 4)	Metals	Mercury	µg/kg	1	1	100	83	83				83	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 4)	Metals	Methyl mercury	µg/kg	1	1	100	17	17				17	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 4)	Metals	Nickel	mg/kg	1	1	100	4.5	4.5				4.5	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 4)	Metals	Selenium	mg/kg	1	1	100	0.58	0.58				0.58	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 4)	Metals	Silver	mg/kg	1	1	100	0.074	0.074				0.074	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 4)	Metals	Vanadium	mg/kg	1	1	100	1.3	1.3				1.3	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 4)	Metals	Zinc	mg/kg	1	1	100	30.1	30.1				30.1	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 4)	PAHs	Benzo(a)pyrene	µg/kg	1	1	100	98	98				98	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 4)	PAHs	Total HPAHs	µg/kg	1	1	100	1000	1000				1000	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 4)	PAHs	Total LPAHs	µg/kg	1	1	100	190	190				190	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 4)	PAHs	Total PAHs	µg/kg	1	1	100	1200	1200				1200	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 4)	PCB Congeners	Total PCB Congeners	µg/kg	1	1	100	450	450				450	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 4)	PCB Congeners	PCB TEQ-Bird	ng/kg	1	1	100	45	45				45	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 4)	PCB Congeners	PCB TEQ-Fish	ng/kg	1	1	100	0.47	0.47				0.47	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 4)	PCB Congeners	PCB TEQ-Mammal	ng/kg	1	1	100	5.9	5.9				5.9	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 4)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	1	1	100	44	44				44	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 4)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	1	1	100	52	52				52	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 4)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	1	1	100	47	47				47	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 4)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	1	1	100	47	47				47	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 4)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	1	1	100	97	97				97	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 4)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	1	1	100	47	47				47	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 4)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	1	1	100	53	53				53	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 4)	OC Pesticides	Dieldrin	µg/kg	1	1	100	9.2	9.2				9.2	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 4)	OC Pesticides	Endosulfan I	µg/kg	1	0	0				1.1		1.1	Maximum DL
B	Fish (> 9 and ≤ 13 cm reach 4)	OC Pesticides	Endosulfan II	µg/kg	1	0	0				1		1	Maximum DL
B	Fish (> 9 and ≤ 13 cm reach 4)	OC Pesticides	Heptachlor epoxide	µg/kg	1	1	100	2.8	2.8				2.8	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 4)	OC Pesticides	Total DDx	µg/kg	1	1	100	61	61				61	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 5)	Metals	Arsenic	mg/kg	1	1	100	0.38	0.38				0.38	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 5)	Metals	Cadmium	mg/kg	1	1	100	0.051	0.051				0.051	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 5)	Metals	Chromium	mg/kg	1	1	100	9.4	9.4				9.4	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 5)	Metals	Cobalt	mg/kg	1	1	100	0.2	0.2				0.2	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 5)	Metals	Copper	mg/kg	1	1	100	3.6	3.6				3.6	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 5)	Metals	Lead	mg/kg	1	1	100	2.4	2.4				2.4	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 5)	Metals	Mercury	µg/kg	1	1	100	54	54				54	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 5)	Metals	Methyl mercury	µg/kg	1	1	100	25	25				25	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 5)	Metals	Nickel	mg/kg	1	1	100	5.7	5.7				5.7	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 5)	Metals	Selenium	mg/kg	1	1	100	0.62	0.62				0.62	Maximum detect

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Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
B	Fish (> 9 and ≤ 13 cm reach 5)	Metals	Silver	mg/kg	1	1	100	0.047	0.047				0.047	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 5)	Metals	Vanadium	mg/kg	1	1	100	0.77	0.77				0.77	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 5)	Metals	Zinc	mg/kg	1	1	100	29.8	29.8				29.8	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 5)	PAHs	Benzo(a)pyrene	µg/kg	1	1	100	44	44				44	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 5)	PAHs	Total HPAHs	µg/kg	1	1	100	480	480				480	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 5)	PAHs	Total LPAHs	µg/kg	1	1	100	120	120				120	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 5)	PAHs	Total PAHs	µg/kg	1	1	100	600	600				600	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 5)	PCB Congeners	Total PCB Congeners	µg/kg	1	1	100	610	610				610	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 5)	PCB Congeners	PCB TEQ-Bird	ng/kg	1	1	100	69	69				69	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 5)	PCB Congeners	PCB TEQ-Fish	ng/kg	1	1	100	0.64	0.64				0.64	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 5)	PCB Congeners	PCB TEQ-Mammal	ng/kg	1	1	100	7.5	7.5				7.5	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 5)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	1	1	100	57	57				57	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 5)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	1	1	100	65	65				65	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 5)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	1	1	100	60	60				60	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 5)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	1	1	100	59	59				59	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 5)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	1	1	100	130	130				130	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 5)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	1	1	100	60	60				60	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 5)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	1	1	100	67	67				67	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 5)	OC Pesticides	Dieldrin	µg/kg	1	1	100	8.7	8.7				8.7	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 5)	OC Pesticides	Endosulfan I	µg/kg	1	0	0				1.5		1.5	Maximum DL
B	Fish (> 9 and ≤ 13 cm reach 5)	OC Pesticides	Endosulfan II	µg/kg	1	0	0				1.5		1.5	Maximum DL
B	Fish (> 9 and ≤ 13 cm reach 5)	OC Pesticides	Heptachlor epoxide	µg/kg	1	1	100	2.7	2.7				2.7	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 5)	OC Pesticides	Total DDx	µg/kg	1	1	100	71	71				71	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 6)	Metals	Arsenic	mg/kg	1	1	100	0.28	0.28				0.28	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 6)	Metals	Cadmium	mg/kg	1	1	100	0.051	0.051				0.051	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 6)	Metals	Chromium	mg/kg	1	1	100	10.2	10.2				10.2	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 6)	Metals	Cobalt	mg/kg	1	1	100	0.27	0.27				0.27	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 6)	Metals	Copper	mg/kg	1	1	100	4.1	4.1				4.1	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 6)	Metals	Lead	mg/kg	1	1	100	3.2	3.2				3.2	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 6)	Metals	Mercury	µg/kg	1	1	100	50	50				50	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 6)	Metals	Methyl mercury	µg/kg	1	1	100	14	14				14	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 6)	Metals	Nickel	mg/kg	1	1	100	6.9	6.9				6.9	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 6)	Metals	Selenium	mg/kg	1	1	100	0.44	0.44				0.44	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 6)	Metals	Silver	mg/kg	1	1	100	0.045	0.045				0.045	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 6)	Metals	Vanadium	mg/kg	1	1	100	0.9	0.9				0.9	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 6)	Metals	Zinc	mg/kg	1	1	100	26.3	26.3				26.3	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 6)	PAHs	Benzo(a)pyrene	µg/kg	1	1	100	48	48				48	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 6)	PAHs	Total HPAHs	µg/kg	1	1	100	620	620				620	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 6)	PAHs	Total LPAHs	µg/kg	1	1	100	160	160				160	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 6)	PAHs	Total PAHs	µg/kg	1	1	100	780	780				780	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 6)	PCB Congeners	Total PCB Congeners	µg/kg	1	1	100	450	450				450	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 6)	PCB Congeners	PCB TEQ-Bird	ng/kg	1	1	100	41	41				41	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 6)	PCB Congeners	PCB TEQ-Fish	ng/kg	1	1	100	0.46	0.46				0.46	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 6)	PCB Congeners	PCB TEQ-Mammal	ng/kg	1	1	100	5.9	5.9				5.9	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 6)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	1	1	100	35	35				35	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 6)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	1	1	100	41	41				41	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 6)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	1	1	100	37	37				37	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 6)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	1	1	100	37	37				37	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 6)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	1	1	100	82	82				82	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 6)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	1	1	100	37	37				37	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 6)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	1	1	100	43	43				43	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 6)	OC Pesticides	Dieldrin	µg/kg	1	1	100	17	17				17	Maximum detect

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Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
B	Fish (> 9 and ≤ 13 cm reach 6)	OC Pesticides	Endosulfan I	µg/kg	1	0	0				1.3		1.3	Maximum DL
B	Fish (> 9 and ≤ 13 cm reach 6)	OC Pesticides	Endosulfan II	µg/kg	1	0	0				1.3		1.3	Maximum DL
B	Fish (> 9 and ≤ 13 cm reach 6)	OC Pesticides	Heptachlor epoxide	µg/kg	1	1	100	5.7	5.7				5.7	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 6)	OC Pesticides	Total DDx	µg/kg	1	1	100	58	58				58	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 7)	Metals	Arsenic	mg/kg	1	1	100	0.19	0.19				0.19	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 7)	Metals	Cadmium	mg/kg	1	1	100	0.048	0.048				0.048	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 7)	Metals	Chromium	mg/kg	1	1	100	4.3	4.3				4.3	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 7)	Metals	Cobalt	mg/kg	1	1	100	0.19	0.19				0.19	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 7)	Metals	Copper	mg/kg	1	1	100	3.6	3.6				3.6	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 7)	Metals	Lead	mg/kg	1	1	100	2.5	2.5				2.5	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 7)	Metals	Mercury	µg/kg	1	1	100	43	43				43	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 7)	Metals	Methyl mercury	µg/kg	1	1	100	17	17				17	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 7)	Metals	Nickel	mg/kg	1	1	100	3	3				3	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 7)	Metals	Selenium	mg/kg	1	1	100	0.3	0.3				0.3	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 7)	Metals	Silver	mg/kg	1	1	100	0.04	0.04				0.04	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 7)	Metals	Vanadium	mg/kg	1	1	100	0.68	0.68				0.68	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 7)	Metals	Zinc	mg/kg	1	1	100	25	25				25	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 7)	PAHs	Benzo(a)pyrene	µg/kg	1	1	100	28	28				28	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 7)	PAHs	Total HPAHs	µg/kg	1	1	100	340	340				340	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 7)	PAHs	Total LPAHs	µg/kg	1	1	100	85	85				85	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 7)	PAHs	Total PAHs	µg/kg	1	1	100	430	430				430	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 7)	PCB Congeners	Total PCB Congeners	µg/kg	1	1	100	250	250				250	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 7)	PCB Congeners	PCB TEQ-Bird	ng/kg	1	1	100	20	20				20	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 7)	PCB Congeners	PCB TEQ-Fish	ng/kg	1	1	100	0.25	0.25				0.25	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 7)	PCB Congeners	PCB TEQ-Mammal	ng/kg	1	1	100	3.3	3.3				3.3	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 7)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	1	1	100	11	11				11	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 7)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	1	1	100	15	15				15	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 7)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	1	1	100	12	12				12	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 7)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	1	1	100	12	12				12	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 7)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	1	1	100	35	35				35	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 7)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	1	1	100	12	12				12	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 7)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	1	1	100	16	16				16	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 7)	OC Pesticides	Dieldrin	µg/kg	1	1	100	11	11				11	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 7)	OC Pesticides	Endosulfan I	µg/kg	1	0	0				0.81		0.81	Maximum DL
B	Fish (> 9 and ≤ 13 cm reach 7)	OC Pesticides	Endosulfan II	µg/kg	1	0	0				1		1	Maximum DL
B	Fish (> 9 and ≤ 13 cm reach 7)	OC Pesticides	Heptachlor epoxide	µg/kg	1	1	100	4	4				4	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 7)	OC Pesticides	Total DDx	µg/kg	1	1	100	29	29				29	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 8)	Metals	Arsenic	mg/kg	3	3	100	0.044	0.21	0.15			0.21	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 8)	Metals	Cadmium	mg/kg	3	3	100	0.0091	0.037	0.028			0.037	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 8)	Metals	Chromium	mg/kg	3	3	100	0.89	31.7	18			31.7	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 8)	Metals	Cobalt	mg/kg	3	3	100	0.031	0.42	0.27			0.42	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 8)	Metals	Copper	mg/kg	3	3	100	0.87	3.7	2.5			3.7	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 8)	Metals	Lead	mg/kg	3	3	100	0.15	3.1	2			3.1	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 8)	Metals	Mercury	µg/kg	3	3	100	30	48	41			48	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 8)	Metals	Methyl mercury	µg/kg	3	3	100	21	29	26			29	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 8)	Metals	Nickel	mg/kg	3	3	100	0.62	22.1	13			22.1	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 8)	Metals	Selenium	mg/kg	3	3	100	0.22	0.76	0.5			0.76	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 8)	Metals	Silver	mg/kg	3	2	66.7	0.024	0.028	0.026	0.0051		0.028	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 8)	Metals	Vanadium	mg/kg	3	3	100	0.05	1.1	0.72			1.1	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 8)	Metals	Zinc	mg/kg	3	3	100	29.1	48	39.4			48	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 8)	PAHs	Benzo(a)pyrene	µg/kg	3	3	100	2.1	63	25			63	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 8)	PAHs	Total HPAHs	µg/kg	3	3	100	78	860	350			860	Maximum detect

Diet LOE -- Prey Tissue EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
B	Fish (> 9 and ≤ 13 cm reach 8)	PAHs	Total LPAHs	µg/kg	3	3	100	69	370	210			370	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 8)	PAHs	Total PAHs	µg/kg	3	3	100	170	1100	570			1100	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 8)	PCB Congeners	Total PCB Congeners	µg/kg	3	3	100	310	480	400			480	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 8)	PCB Congeners	PCB TEQ-Bird	ng/kg	3	3	100	24	88	64			88	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 8)	PCB Congeners	PCB TEQ-Fish	ng/kg	3	3	100	0.33	0.64	0.53			0.64	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 8)	PCB Congeners	PCB TEQ-Mammal	ng/kg	3	3	100	4.5	7.2	6.2			7.2	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 8)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	3	3	100	2.4	16	8.5			16	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 8)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	3	3	100	9.9	23	15			23	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 8)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	3	3	100	3.7	18	10			18	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 8)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	3	3	100	3.8	18	10			18	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 8)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	3	3	100	35	100	78			100	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 8)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	3	3	100	4.3	19	11			19	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 8)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	3	3	100	11	25	16			25	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 8)	OC Pesticides	Dieldrin	µg/kg	3	3	100	8.4	17	13			17	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 8)	OC Pesticides	Endosulfan I	µg/kg	3	0	0				1.1		1.1	Maximum DL
B	Fish (> 9 and ≤ 13 cm reach 8)	OC Pesticides	Endosulfan II	µg/kg	3	0	0				1		1	Maximum DL
B	Fish (> 9 and ≤ 13 cm reach 8)	OC Pesticides	Heptachlor epoxide	µg/kg	3	3	100	3.1	6.6	5.1			6.6	Maximum detect
B	Fish (> 9 and ≤ 13 cm reach 8)	OC Pesticides	Total DDx	µg/kg	3	3	100	33	56	46			56	Maximum detect
B	Fish (> 9 and ≤ 13 cm, ≥ RM 6)	Metals	Arsenic	mg/kg	7	7	100	0.044	0.39	0.24		0.33	0.33	95% Student's-t UCL
B	Fish (> 9 and ≤ 13 cm, ≥ RM 6)	Metals	Cadmium	mg/kg	7	7	100	0.0091	0.099	0.047		0.067	0.067	95% Student's-t UCL
B	Fish (> 9 and ≤ 13 cm, ≥ RM 6)	Metals	Chromium	mg/kg	7	7	100	0.89	31.7	12		20	20	95% Student's-t UCL
B	Fish (> 9 and ≤ 13 cm, ≥ RM 6)	Metals	Cobalt	mg/kg	7	7	100	0.031	0.42	0.25		0.34	0.34	95% Student's-t UCL
B	Fish (> 9 and ≤ 13 cm, ≥ RM 6)	Metals	Copper	mg/kg	7	7	100	0.87	5.4	3.4		4.5	4.5	95% Student's-t UCL
B	Fish (> 9 and ≤ 13 cm, ≥ RM 6)	Metals	Lead	mg/kg	7	7	100	0.15	4.9	2.7		3.7	3.7	95% Student's-t UCL
B	Fish (> 9 and ≤ 13 cm, ≥ RM 6)	Metals	Mercury	µg/kg	7	7	100	30	83	50		62	62	95% Student's-t UCL
B	Fish (> 9 and ≤ 13 cm, ≥ RM 6)	Metals	Methyl mercury	µg/kg	7	7	100	14	29	21		26	26	95% Student's-t UCL
B	Fish (> 9 and ≤ 13 cm, ≥ RM 6)	Metals	Nickel	mg/kg	7	7	100	0.62	22.1	8.3		14	14	95% Student's-t UCL
B	Fish (> 9 and ≤ 13 cm, ≥ RM 6)	Metals	Selenium	mg/kg	7	7	100	0.22	0.76	0.49		0.63	0.63	95% Student's-t UCL
B	Fish (> 9 and ≤ 13 cm, ≥ RM 6)	Metals	Silver	mg/kg	7	6	85.7	0.024	0.074	0.043	0.0051	0.054	0.054	95% KM (t) UCL
B	Fish (> 9 and ≤ 13 cm, ≥ RM 6)	Metals	Vanadium	mg/kg	7	7	100	0.05	1.3	0.83		1.1	1.1	95% Student's-t UCL
B	Fish (> 9 and ≤ 13 cm, ≥ RM 6)	Metals	Zinc	mg/kg	7	7	100	25	48	32.8		39	39	95% Student's-t UCL
B	Fish (> 9 and ≤ 13 cm, ≥ RM 6)	PAHs	Benzo(a)pyrene	µg/kg	7	7	100	2.1	98	42		66	66	95% Student's-t UCL
B	Fish (> 9 and ≤ 13 cm, ≥ RM 6)	PAHs	Total HPAHs	µg/kg	7	7	100	78	1000	500		760	760	95% Student's-t UCL
B	Fish (> 9 and ≤ 13 cm, ≥ RM 6)	PAHs	Total LPAHs	µg/kg	7	7	100	69	370	170		240	240	95% Student's-t UCL
B	Fish (> 9 and ≤ 13 cm, ≥ RM 6)	PAHs	Total PAHs	µg/kg	7	7	100	170	1200	680		950	950	95% Student's-t UCL
B	Fish (> 9 and ≤ 13 cm, ≥ RM 6)	PCB Congeners	Total PCB Congeners	µg/kg	7	7	100	250	610	420		510	510	95% Student's-t UCL
B	Fish (> 9 and ≤ 13 cm, ≥ RM 6)	PCB Congeners	PCB TEQ-Bird	ng/kg	7	7	100	20	88	52		72	72	95% Student's-t UCL
B	Fish (> 9 and ≤ 13 cm, ≥ RM 6)	PCB Congeners	PCB TEQ-Fish	ng/kg	7	7	100	0.25	0.64	0.49		0.6	0.6	95% Student's-t UCL
B	Fish (> 9 and ≤ 13 cm, ≥ RM 6)	PCB Congeners	PCB TEQ-Mammal	ng/kg	7	7	100	3.3	7.5	5.9		7	7	95% Student's-t UCL
B	Fish (> 9 and ≤ 13 cm, ≥ RM 6)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	7	7	100	2.4	57	25		40	40	95% Student's-t UCL
B	Fish (> 9 and ≤ 13 cm, ≥ RM 6)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	7	7	100	9.9	65	31		47	47	95% Student's-t UCL
B	Fish (> 9 and ≤ 13 cm, ≥ RM 6)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	7	7	100	3.7	60	27		42	42	95% Student's-t UCL
B	Fish (> 9 and ≤ 13 cm, ≥ RM 6)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	7	7	100	3.8	59	26		42	42	95% Student's-t UCL
B	Fish (> 9 and ≤ 13 cm, ≥ RM 6)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	7	7	100	35	130	82		110	110	95% Student's-t UCL
B	Fish (> 9 and ≤ 13 cm, ≥ RM 6)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	7	7	100	4.3	60	27		43	43	95% Student's-t UCL
B	Fish (> 9 and ≤ 13 cm, ≥ RM 6)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	7	7	100	11	67	33		49	49	95% Student's-t UCL
B	Fish (> 9 and ≤ 13 cm, ≥ RM 6)	OC Pesticides	Dieldrin	µg/kg	7	7	100	8.4	17	12		15	15	95% Student's-t UCL
B	Fish (> 9 and ≤ 13 cm, ≥ RM 6)	OC Pesticides	Endosulfan I	µg/kg	7	0	0				1.5		1.5	Maximum DL
B	Fish (> 9 and ≤ 13 cm, ≥ RM 6)	OC Pesticides	Endosulfan II	µg/kg	7	0	0				1.5		1.5	Maximum DL
B	Fish (> 9 and ≤ 13 cm, ≥ RM 6)	OC Pesticides	Heptachlor epoxide	µg/kg	7	7	100	2.7	6.6	4.4		5.5	5.5	95% Student's-t UCL
B	Fish (> 9 and ≤ 13 cm, ≥ RM 6)	OC Pesticides	Total DDx	µg/kg	7	7	100	29	71	51		62	62	95% Student's-t UCL
B, M	Fish (> 30 cm)	Metals	Arsenic	mg/kg	69	66	95.7	0.017	0.61	0.1	0.18	0.15	0.15	95% KM (Chebyshev) UCL

Diet LOE -- Prey Tissue EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
B, M	Fish (> 30 cm)	Metals	Cadmium	mg/kg	69	69	100	0.0034	0.27	0.022		0.042	0.042	95% Chebyshev (Mean, Sd) UCL
B, M	Fish (> 30 cm)	Metals	Chromium	mg/kg	69	67	97.1	0.04	6.6	0.72	0.02	1.3	1.3	95% KM (Chebyshev) UCL
B, M	Fish (> 30 cm)	Metals	Cobalt	mg/kg	62	62	100	0.011	0.1	0.031		0.035	0.035	95% Student's-t UCL
B, M	Fish (> 30 cm)	Metals	Copper	mg/kg	69	69	100	0.31	29	1.3		3.1	3.1	95% Chebyshev (Mean, Sd) UCL
B, M	Fish (> 30 cm)	Metals	Lead	mg/kg	62	62	100	0.02	2.2	0.45		0.53	0.53	95% Approximate Gamma UCL
B, M	Fish (> 30 cm)	Metals	Mercury	µg/kg	69	69	100	32	680	180		210	210	95% Approximate Gamma UCL
B, M	Fish (> 30 cm)	Metals	Methyl mercury	µg/kg	69	69	100	30	530	170		200	200	95% Approximate Gamma UCL
B, M	Fish (> 30 cm)	Metals	Nickel	mg/kg	69	69	100	0.11	4.2	0.52		0.85	0.85	95% Chebyshev (Mean, Sd) UCL
B, M	Fish (> 30 cm)	Metals	Selenium	mg/kg	69	69	100	0.16	1.4	0.51		0.57	0.57	95% H-UCL
B, M	Fish (> 30 cm)	Metals	Silver	mg/kg	69	31	44.9	0.0026	0.49	0.03	0.008	0.029	0.029	95% KM (BCA) UCL
B, M	Fish (> 30 cm)	Metals	Vanadium	mg/kg	69	57	82.6	0.017	0.21	0.092	0.07	0.093	0.093	95% GROS Approximate Gamma UCL
B, M	Fish (> 30 cm)	Metals	Zinc	mg/kg	69	69	100	12	104	29		39	39	95% Chebyshev (Mean, Sd) UCL
B, M	Fish (> 30 cm)	PAHs	Benzo(a)pyrene	µg/kg	69	26	37.7	0.55	24	2.7	2.8	1.9	1.9	95% KM (% Bootstrap) UCL
B, M	Fish (> 30 cm)	PAHs	Total HPAHs	µg/kg	69	69	100	3.1	310	45		53	53	95% Approximate Gamma UCL
B, M	Fish (> 30 cm)	PAHs	Total LPAHs	µg/kg	69	69	100	15	470	98		110	110	95% Approximate Gamma UCL
B, M	Fish (> 30 cm)	PAHs	Total PAHs	µg/kg	69	69	100	27	590	140		160	160	95% Approximate Gamma UCL
B, M	Fish (> 30 cm)	PCB Congeners	Total PCB Congeners	µg/kg	69	69	100	350	7900	2400		2800	2800	95% Approximate Gamma UCL
B, M	Fish (> 30 cm)	PCB Congeners	PCB TEQ-Bird	ng/kg	69	69	100	2.9	550	82		100	100	95% Approximate Gamma UCL
B, M	Fish (> 30 cm)	PCB Congeners	PCB TEQ-Fish	ng/kg	69	69	100	0.23	17	2.3		2.8	2.8	95% H-UCL
B, M	Fish (> 30 cm)	PCB Congeners	PCB TEQ-Mammal	ng/kg	69	69	100	2.7	240	30		36	36	95% Approximate Gamma UCL
B, M	Fish (> 30 cm)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	69	69	100	0.43	1400	150		190	190	95% Approximate Gamma UCL
B, M	Fish (> 30 cm)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	69	69	100	1.7	1400	160		200	200	95% Approximate Gamma UCL
B, M	Fish (> 30 cm)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	69	69	100	1.8	1400	150		200	200	95% Approximate Gamma UCL
B, M	Fish (> 30 cm)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	69	69	100	1.8	1400	150		190	190	95% Approximate Gamma UCL
B, M	Fish (> 30 cm)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	69	69	100	7.8	1700	240		300	300	95% Approximate Gamma UCL
B, M	Fish (> 30 cm)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	69	69	100	2.8	1400	150		200	200	95% Approximate Gamma UCL
B, M	Fish (> 30 cm)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	69	69	100	7	1500	180		230	230	95% Approximate Gamma UCL
B, M	Fish (> 30 cm)	OC Pesticides	Dieldrin	µg/kg	69	69	100	7.2	88	34		38	38	95% Approximate Gamma UCL
B, M	Fish (> 30 cm)	OC Pesticides	Endosulfan I	µg/kg	69	8	11.6	0.2	4	1.3	10	0.5	0.5	95% KM (Percentile Bootstrap) UCL
B, M	Fish (> 30 cm)	OC Pesticides	Endosulfan II	µg/kg	69	6	8.7	0.37	2.7	1.3	8.4	0.52	0.52	95% KM (Percentile Bootstrap) UCL
B, M	Fish (> 30 cm)	OC Pesticides	Heptachlor epoxide	µg/kg	69	69	100	2.7	31	14		16	16	95% Approximate Gamma UCL
B, M	Fish (> 30 cm)	OC Pesticides	Total DDx	µg/kg	69	69	100	32	1100	270		310	310	95% Approximate Gamma UCL
M	Fish (bass > 30 cm)	Metals	Arsenic	mg/kg	3	1	33.3	0.22	0.22		0.068		0.22	Maximum detect
M	Fish (bass > 30 cm)	Metals	Cadmium	mg/kg	3	3	100	0.0034	0.037	0.016			0.037	Maximum detect
M	Fish (bass > 30 cm)	Metals	Chromium	mg/kg	3	3	100	0.15	0.28	0.22			0.28	Maximum detect
M	Fish (bass > 30 cm)	Metals	Cobalt	mg/kg	3	3	100	0.021	0.028	0.025			0.028	Maximum detect
M	Fish (bass > 30 cm)	Metals	Copper	mg/kg	3	3	100	0.4	0.8	0.59			0.8	Maximum detect
M	Fish (bass > 30 cm)	Metals	Lead	mg/kg	3	3	100	0.02	0.12	0.079			0.12	Maximum detect
M	Fish (bass > 30 cm)	Metals	Mercury	µg/kg	3	3	100	140	680	370			680	Maximum detect
M	Fish (bass > 30 cm)	Metals	Methyl mercury	µg/kg	3	3	100	110	520	280			520	Maximum detect
M	Fish (bass > 30 cm)	Metals	Nickel	mg/kg	3	3	100	0.32	0.37	0.35			0.37	Maximum detect
M	Fish (bass > 30 cm)	Metals	Selenium	mg/kg	3	3	100	0.36	0.69	0.55			0.69	Maximum detect
M	Fish (bass > 30 cm)	Metals	Silver	mg/kg	3	0	0				0.0028		0.0028	Maximum DL
M	Fish (bass > 30 cm)	Metals	Vanadium	mg/kg	3	1	33.3	0.017	0.017		0.01		0.017	Maximum detect
M	Fish (bass > 30 cm)	Metals	Zinc	mg/kg	3	3	100	15.4	17.7	16			17.7	Maximum detect
M	Fish (bass > 30 cm)	PAHs	Benzo(a)pyrene	µg/kg	3	0	0				2.8		2.8	Maximum DL
M	Fish (bass > 30 cm)	PAHs	Total HPAHs	µg/kg	3	3	100	5.6	7.3	6.5			7.3	Maximum detect
M	Fish (bass > 30 cm)	PAHs	Total LPAHs	µg/kg	3	3	100	33	46	37			46	Maximum detect
M	Fish (bass > 30 cm)	PAHs	Total PAHs	µg/kg	3	3	100	31	52	39			52	Maximum detect
M	Fish (bass > 30 cm)	PCB Congeners	Total PCB Congeners	µg/kg	3	3	100	1400	7900	3800			7900	Maximum detect
M	Fish (bass > 30 cm)	PCB Congeners	PCB TEQ-Bird	ng/kg	3	3	100	67	550	240			550	Maximum detect
M	Fish (bass > 30 cm)	PCB Congeners	PCB TEQ-Fish	ng/kg	3	3	100	1.4	17	6.8			17	Maximum detect

Diet LOE -- Prey Tissue EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
M	Fish (bass > 30 cm)	PCB Congeners	PCB TEQ-Mammal	ng/kg	3	3	100	19	240	95			240	Maximum detect
M	Fish (bass > 30 cm)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	3	3	100	0.43	180	85			180	Maximum detect
M	Fish (bass > 30 cm)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	3	3	100	12	180	91			180	Maximum detect
M	Fish (bass > 30 cm)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	3	3	100	2	180	86			180	Maximum detect
M	Fish (bass > 30 cm)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	3	3	100	2.1	180	86			180	Maximum detect
M	Fish (bass > 30 cm)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	3	3	100	140	560	330			560	Maximum detect
M	Fish (bass > 30 cm)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	3	3	100	19	180	94			180	Maximum detect
M	Fish (bass > 30 cm)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	3	3	100	96	250	190			250	Maximum detect
M	Fish (bass > 30 cm)	OC Pesticides	Dieldrin	µg/kg	3	3	100	16	40	25			40	Maximum detect
M	Fish (bass > 30 cm)	OC Pesticides	Endosulfan I	µg/kg	3	0	0				10		10	Maximum DL
M	Fish (bass > 30 cm)	OC Pesticides	Endosulfan II	µg/kg	3	0	0				3.1		3.1	Maximum DL
M	Fish (bass > 30 cm)	OC Pesticides	Heptachlor epoxide	µg/kg	3	3	100	7.6	16	11			16	Maximum detect
M	Fish (bass > 30 cm)	OC Pesticides	Total DDx	µg/kg	3	3	100	72	150	120			150	Maximum detect
M	Fish (carp > 30 cm)	Metals	Arsenic	mg/kg	12	11	91.7	0.064	0.21	0.12	0.18	0.15	0.15	95% KM (t) UCL
M	Fish (carp > 30 cm)	Metals	Cadmium	mg/kg	12	12	100	0.005	0.054	0.024		0.032	0.032	95% Student's-t UCL
M	Fish (carp > 30 cm)	Metals	Chromium	mg/kg	12	12	100	0.14	6.6	1.3		2.8	2.8	95% Adjusted Gamma UCL
M	Fish (carp > 30 cm)	Metals	Cobalt	mg/kg	12	12	100	0.019	0.1	0.047		0.059	0.059	95% Student's-t UCL
M	Fish (carp > 30 cm)	Metals	Copper	mg/kg	12	12	100	0.6	1.6	0.93		1.1	1.1	95% Adjusted Gamma UCL
M	Fish (carp > 30 cm)	Metals	Lead	mg/kg	12	12	100	0.21	0.96	0.66		0.79	0.79	95% Student's-t UCL
M	Fish (carp > 30 cm)	Metals	Mercury	µg/kg	12	12	100	42	110	67		80	80	95% Student's-t UCL
M	Fish (carp > 30 cm)	Metals	Methyl mercury	µg/kg	12	12	100	39	90	54		62	62	95% Student's-t UCL
M	Fish (carp > 30 cm)	Metals	Nickel	mg/kg	12	12	100	0.23	4.2	1		1.7	1.7	95% Adjusted Gamma UCL
M	Fish (carp > 30 cm)	Metals	Selenium	mg/kg	12	12	100	0.35	0.98	0.73		0.82	0.82	95% Student's-t UCL
M	Fish (carp > 30 cm)	Metals	Silver	mg/kg	12	3	25	0.007	0.015	0.011	0.008		0.015	Maximum detect
M	Fish (carp > 30 cm)	Metals	Vanadium	mg/kg	12	12	100	0.03	0.21	0.094		0.12	0.12	95% Student's-t UCL
M	Fish (carp > 30 cm)	Metals	Zinc	mg/kg	12	12	100	47.6	104	67		75.2	75.2	95% Student's-t UCL
M	Fish (carp > 30 cm)	PAHs	Benzo(a)pyrene	µg/kg	12	6	50	0.8	4.9	2	2.5	2.1	2.1	95% KM (t) UCL
M	Fish (carp > 30 cm)	PAHs	Total HPAHs	µg/kg	12	12	100	24	120	62		76	76	95% Student's-t UCL
M	Fish (carp > 30 cm)	PAHs	Total LPAHs	µg/kg	12	12	100	93	250	140		170	170	95% Student's-t UCL
M	Fish (carp > 30 cm)	PAHs	Total PAHs	µg/kg	12	12	100	120	350	210		240	240	95% Student's-t UCL
M	Fish (carp > 30 cm)	PCB Congeners	Total PCB Congeners	µg/kg	12	12	100	1500	7900	4100		5200	5200	95% Student's-t UCL
M	Fish (carp > 30 cm)	PCB Congeners	PCB TEQ-Bird	ng/kg	12	12	100	67	260	170		200	200	95% Student's-t UCL
M	Fish (carp > 30 cm)	PCB Congeners	PCB TEQ-Fish	ng/kg	12	12	100	1.4	6.5	3.6		4.4	4.4	95% Student's-t UCL
M	Fish (carp > 30 cm)	PCB Congeners	PCB TEQ-Mammal	ng/kg	12	12	100	16	86	47		58	58	95% Student's-t UCL
M	Fish (carp > 30 cm)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	12	12	100	5.2	1400	410		610	610	95% Student's-t UCL
M	Fish (carp > 30 cm)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	12	12	100	11	1400	430		630	630	95% Student's-t UCL
M	Fish (carp > 30 cm)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	12	12	100	8.5	1400	420		620	620	95% Student's-t UCL
M	Fish (carp > 30 cm)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	12	12	100	8.2	1400	420		610	610	95% Student's-t UCL
M	Fish (carp > 30 cm)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	12	12	100	77	1700	600		830	830	95% Student's-t UCL
M	Fish (carp > 30 cm)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	12	12	100	9.9	1400	420		620	620	95% Student's-t UCL
M	Fish (carp > 30 cm)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	12	12	100	24	1500	470		680	680	95% Student's-t UCL
M	Fish (carp > 30 cm)	OC Pesticides	Dieldrin	µg/kg	12	12	100	29	72	48		55	55	95% Student's-t UCL
M	Fish (carp > 30 cm)	OC Pesticides	Endosulfan I	µg/kg	12	2	16.7	1.2	4	2.6	5.8		4	Maximum detect
M	Fish (carp > 30 cm)	OC Pesticides	Endosulfan II	µg/kg	12	2	16.7	0.71	2.7	1.7	2.9		2.7	Maximum detect
M	Fish (carp > 30 cm)	OC Pesticides	Heptachlor epoxide	µg/kg	12	12	100	13	27	19		22	22	95% Student's-t UCL
M	Fish (carp > 30 cm)	OC Pesticides	Total DDx	µg/kg	12	12	100	110	1100	510		650	650	95% Student's-t UCL
M	Fish (catfish > 30 cm)	Metals	Arsenic	mg/kg	35	35	100	0.017	0.19	0.06		0.071	0.071	95% Adjusted Gamma UCL
M	Fish (catfish > 30 cm)	Metals	Cadmium	mg/kg	35	35	100	0.0035	0.027	0.011		0.013	0.013	95% Student's-t UCL
M	Fish (catfish > 30 cm)	Metals	Chromium	mg/kg	35	35	100	0.043	2	0.5		0.65	0.65	95% Adjusted Gamma UCL
M	Fish (catfish > 30 cm)	Metals	Cobalt	mg/kg	35	35	100	0.011	0.062	0.024		0.028	0.028	95% Modified-t UCL
M	Fish (catfish > 30 cm)	Metals	Copper	mg/kg	35	35	100	0.31	2.3	0.67		0.76	0.76	95% Adjusted Gamma UCL
M	Fish (catfish > 30 cm)	Metals	Lead	mg/kg	35	35	100	0.056	2.2	0.42		0.51	0.51	95% Adjusted Gamma UCL

Diet LOE -- Prey Tissue EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
M	Fish (catfish > 30 cm)	Metals	Mercury	µg/kg	35	35	100	32	630	170		200	200	95% Adjusted Gamma UCL
M	Fish (catfish > 30 cm)	Metals	Methyl mercury	µg/kg	35	35	100	30	530	150		230	230	95% Chebyshev (Mean, Sd) UCL
M	Fish (catfish > 30 cm)	Metals	Nickel	mg/kg	35	35	100	0.14	0.96	0.37		0.55	0.55	95% Chebyshev (Mean, Sd) UCL
M	Fish (catfish > 30 cm)	Metals	Selenium	mg/kg	35	35	100	0.16	0.68	0.32		0.35	0.35	95% Student's-t UCL
M	Fish (catfish > 30 cm)	Metals	Silver	mg/kg	35	13	37.1	0.0026	0.014	0.0052	0.0027	0.0035	0.0035	95% KM (% Bootstrap) UCL
M	Fish (catfish > 30 cm)	Metals	Vanadium	mg/kg	35	35	100	0.032	0.21	0.1		0.11	0.11	95% Student's-t UCL
M	Fish (catfish > 30 cm)	Metals	Zinc	mg/kg	35	35	100	12	22	17		18	18	95% Student's-t UCL
M	Fish (catfish > 30 cm)	PAHs	Benzo(a)pyrene	µg/kg	35	12	34.3	0.65	24	3.9	1.2	4.1	4.1	95% Adjusted Gamma KM-UCL
M	Fish (catfish > 30 cm)	PAHs	Total HPAHs	µg/kg	35	35	100	17	310	53		93	93	95% Chebyshev (Mean, Sd) UCL
M	Fish (catfish > 30 cm)	PAHs	Total LPAHs	µg/kg	35	35	100	17	470	92		110	110	95% H-UCL
M	Fish (catfish > 30 cm)	PAHs	Total PAHs	µg/kg	35	35	100	38	590	150		240	240	95% Chebyshev (Mean, Sd) UCL
M	Fish (catfish > 30 cm)	PCB Congeners	Total PCB Congeners	µg/kg	35	35	100	350	7300	2100		2600	2600	95% Adjusted Gamma UCL
M	Fish (catfish > 30 cm)	PCB Congeners	PCB TEQ-Bird	ng/kg	35	35	100	12	210	66		81	81	95% Adjusted Gamma UCL
M	Fish (catfish > 30 cm)	PCB Congeners	PCB TEQ-Fish	ng/kg	35	35	100	0.23	7.4	2.1		2.6	2.6	95% Adjusted Gamma UCL
M	Fish (catfish > 30 cm)	PCB Congeners	PCB TEQ-Mammal	ng/kg	35	35	100	2.7	95	29		35	35	95% Adjusted Gamma UCL
M	Fish (catfish > 30 cm)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	35	35	100	3.1	410	130		150	150	95% Student's-t UCL
M	Fish (catfish > 30 cm)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	35	35	100	8	430	130		160	160	95% Student's-t UCL
M	Fish (catfish > 30 cm)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	35	35	100	4.1	430	130		160	160	95% Student's-t UCL
M	Fish (catfish > 30 cm)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	35	35	100	4.1	420	130		160	160	95% Student's-t UCL
M	Fish (catfish > 30 cm)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	35	35	100	35	580	200		240	240	95% Student's-t UCL
M	Fish (catfish > 30 cm)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	35	35	100	4.9	430	130		160	160	95% Student's-t UCL
M	Fish (catfish > 30 cm)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	35	35	100	15	510	160		190	190	95% Student's-t UCL
M	Fish (catfish > 30 cm)	OC Pesticides	Dieldrin	µg/kg	35	35	100	7.2	70	27		32	32	95% Adjusted Gamma UCL
M	Fish (catfish > 30 cm)	OC Pesticides	Endosulfan I	µg/kg	35	4	11.4	0.45	2	1	3.6		2	Maximum detect
M	Fish (catfish > 30 cm)	OC Pesticides	Endosulfan II	µg/kg	35	2	5.7	0.89	2.5	1.7	4.9		2.5	Maximum detect
M	Fish (catfish > 30 cm)	OC Pesticides	Heptachlor epoxide	µg/kg	35	35	100	2.7	30	12		14	14	95% Adjusted Gamma UCL
M	Fish (catfish > 30 cm)	OC Pesticides	Total DDx	µg/kg	35	35	100	43	870	220		270	270	95% Adjusted Gamma UCL
M	Fish (eel > 30 cm)	Metals	Arsenic	mg/kg	17	17	100	0.054	0.61	0.16		0.32	0.32	95% Chebyshev (Mean, Sd) UCL
M	Fish (eel > 30 cm)	Metals	Cadmium	mg/kg	17	17	100	0.004	0.27	0.047		0.12	0.12	95% Chebyshev (Mean, Sd) UCL
M	Fish (eel > 30 cm)	Metals	Chromium	mg/kg	17	15	88.2	0.04	4.3	0.84	0.02	2.1	2.1	95% KM (Chebyshev) UCL
M	Fish (eel > 30 cm)	Metals	Cobalt	mg/kg	10	10	100	0.016	0.076	0.037		0.05	0.05	95% Student's-t UCL
M	Fish (eel > 30 cm)	Metals	Copper	mg/kg	17	17	100	0.52	7.8	1.2		3	3	95% Chebyshev (Mean, Sd) UCL
M	Fish (eel > 30 cm)	Metals	Lead	mg/kg	10	10	100	0.18	1.4	0.48		0.84	0.84	95% Adjusted Gamma UCL
M	Fish (eel > 30 cm)	Metals	Mercury	µg/kg	17	17	100	74	390	240		280	280	95% Student's-t UCL
M	Fish (eel > 30 cm)	Metals	Methyl mercury	µg/kg	17	17	100	92	470	260		300	300	95% Student's-t UCL
M	Fish (eel > 30 cm)	Metals	Nickel	mg/kg	17	17	100	0.11	2.6	0.52		1.3	1.3	95% Chebyshev (Mean, Sd) UCL
M	Fish (eel > 30 cm)	Metals	Selenium	mg/kg	17	17	100	0.33	1.2	0.68		0.8	0.8	95% Student's-t UCL
M	Fish (eel > 30 cm)	Metals	Silver	mg/kg	17	14	82.4	0.007	0.062	0.025	0.008	0.029	0.029	95% KM (t) UCL
M	Fish (eel > 30 cm)	Metals	Vanadium	mg/kg	17	8	47.1	0.03	0.11	0.066	0.07	0.061	0.061	95% KM (t) UCL
M	Fish (eel > 30 cm)	Metals	Zinc	mg/kg	17	17	100	23.1	42.2	29.6		31.5	31.5	95% Student's-t UCL
M	Fish (eel > 30 cm)	PAHs	Benzo(a)pyrene	µg/kg	17	8	47.1	0.55	3.2	1.5	2.6	1.4	1.4	95% KM (Percentile Bootstrap) UCL
M	Fish (eel > 30 cm)	PAHs	Total HPAHs	µg/kg	17	17	100	3.1	49	18		24	24	95% Student's-t UCL
M	Fish (eel > 30 cm)	PAHs	Total LPAHs	µg/kg	17	17	100	15	170	70		91	91	95% Student's-t UCL
M	Fish (eel > 30 cm)	PAHs	Total PAHs	µg/kg	17	17	100	27	170	88		110	110	95% Student's-t UCL
M	Fish (eel > 30 cm)	PCB Congeners	Total PCB Congeners	µg/kg	17	17	100	730	5700	1700		2300	2300	95% Adjusted Gamma UCL
M	Fish (eel > 30 cm)	PCB Congeners	PCB TEQ-Bird	ng/kg	17	17	100	2.9	23	13		16	16	95% Student's-t UCL
M	Fish (eel > 30 cm)	PCB Congeners	PCB TEQ-Fish	ng/kg	17	17	100	0.31	2.4	1.1		1.3	1.3	95% Student's-t UCL
M	Fish (eel > 30 cm)	PCB Congeners	PCB TEQ-Mammal	ng/kg	17	17	100	2.8	17	9.3		11	11	95% Student's-t UCL
M	Fish (eel > 30 cm)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	17	17	100	0.54	47	22		27	27	95% Student's-t UCL
M	Fish (eel > 30 cm)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	17	17	100	1.7	48	23		29	29	95% Student's-t UCL
M	Fish (eel > 30 cm)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	17	17	100	1.8	49	23		29	29	95% Student's-t UCL
M	Fish (eel > 30 cm)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	17	17	100	1.8	48	23		29	29	95% Student's-t UCL

Diet LOE -- Prey Tissue EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
M	Fish (eel > 30 cm)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	17	17	100	7.8	62	36		44	44	95% Student's-t UCL
M	Fish (eel > 30 cm)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	17	17	100	2.8	50	24		30	30	95% Student's-t UCL
M	Fish (eel > 30 cm)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	17	17	100	7	56	31		38	38	95% Student's-t UCL
M	Fish (eel > 30 cm)	OC Pesticides	Dieldrin	µg/kg	17	17	100	7.6	88	41		50	50	95% Student's-t UCL
M	Fish (eel > 30 cm)	OC Pesticides	Endosulfan I	µg/kg	17	2	11.8	0.2	0.59	0.4	5.9		0.59	Maximum detect
M	Fish (eel > 30 cm)	OC Pesticides	Endosulfan II	µg/kg	17	2	11.8	0.37	0.56	0.47	8.4		0.56	Maximum detect
M	Fish (eel > 30 cm)	OC Pesticides	Heptachlor epoxide	µg/kg	17	17	100	3.1	31	17		21	21	95% Student's-t UCL
M	Fish (eel > 30 cm)	OC Pesticides	Total DDx	µg/kg	17	17	100	32	470	240		280	280	95% Student's-t UCL
M	Fish (perch > 30 cm)	Metals	Arsenic	mg/kg	1	1	100	0.35	0.35				0.35	Maximum detect
M	Fish (perch > 30 cm)	Metals	Cadmium	mg/kg	1	1	100	0.016	0.016				0.016	Maximum detect
M	Fish (perch > 30 cm)	Metals	Chromium	mg/kg	1	1	100	0.61	0.61				0.61	Maximum detect
M	Fish (perch > 30 cm)	Metals	Cobalt	mg/kg	1	1	100	0.047	0.047				0.047	Maximum detect
M	Fish (perch > 30 cm)	Metals	Copper	mg/kg	1	1	100	29	29				29	Maximum detect
M	Fish (perch > 30 cm)	Metals	Lead	mg/kg	1	1	100	0.22	0.22				0.22	Maximum detect
M	Fish (perch > 30 cm)	Metals	Mercury	µg/kg	1	1	100	530	530				530	Maximum detect
M	Fish (perch > 30 cm)	Metals	Methyl mercury	µg/kg	1	1	100	290	290				290	Maximum detect
M	Fish (perch > 30 cm)	Metals	Nickel	mg/kg	1	1	100	0.62	0.62				0.62	Maximum detect
M	Fish (perch > 30 cm)	Metals	Selenium	mg/kg	1	1	100	1.4	1.4				1.4	Maximum detect
M	Fish (perch > 30 cm)	Metals	Silver	mg/kg	1	1	100	0.49	0.49				0.49	Maximum detect
M	Fish (perch > 30 cm)	Metals	Vanadium	mg/kg	1	1	100	0.089	0.089				0.089	Maximum detect
M	Fish (perch > 30 cm)	Metals	Zinc	mg/kg	1	1	100	21	21				21	Maximum detect
M	Fish (perch > 30 cm)	PAHs	Benzo(a)pyrene	µg/kg	1	0	0				0.5		0.5	Maximum DL
M	Fish (perch > 30 cm)	PAHs	Total HPAHs	µg/kg	1	1	100	140	140				140	Maximum detect
M	Fish (perch > 30 cm)	PAHs	Total LPAHs	µg/kg	1	1	100	240	240				240	Maximum detect
M	Fish (perch > 30 cm)	PAHs	Total PAHs	µg/kg	1	1	100	370	370				370	Maximum detect
M	Fish (perch > 30 cm)	PCB Congeners	Total PCB Congeners	µg/kg	1	1	100	1100	1100				1100	Maximum detect
M	Fish (perch > 30 cm)	PCB Congeners	PCB TEQ-Bird	ng/kg	1	1	100	200	200				200	Maximum detect
M	Fish (perch > 30 cm)	PCB Congeners	PCB TEQ-Fish	ng/kg	1	1	100	1.7	1.7				1.7	Maximum detect
M	Fish (perch > 30 cm)	PCB Congeners	PCB TEQ-Mammal	ng/kg	1	1	100	20	20				20	Maximum detect
M	Fish (perch > 30 cm)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	1	1	100	94	94				94	Maximum detect
M	Fish (perch > 30 cm)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	1	1	100	120	120				120	Maximum detect
M	Fish (perch > 30 cm)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	1	1	100	100	100				100	Maximum detect
M	Fish (perch > 30 cm)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	1	1	100	100	100				100	Maximum detect
M	Fish (perch > 30 cm)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	1	1	100	320	320				320	Maximum detect
M	Fish (perch > 30 cm)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	1	1	100	110	110				110	Maximum detect
M	Fish (perch > 30 cm)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	1	1	100	120	120				120	Maximum detect
M	Fish (perch > 30 cm)	OC Pesticides	Dieldrin	µg/kg	1	1	100	22	22				22	Maximum detect
M	Fish (perch > 30 cm)	OC Pesticides	Endosulfan I	µg/kg	1	0	0				0.18		0.18	Maximum DL
M	Fish (perch > 30 cm)	OC Pesticides	Endosulfan II	µg/kg	1	0	0				0.37		0.37	Maximum DL
M	Fish (perch > 30 cm)	OC Pesticides	Heptachlor epoxide	µg/kg	1	1	100	8.5	8.5				8.5	Maximum detect
M	Fish (perch > 30 cm)	OC Pesticides	Total DDx	µg/kg	1	1	100	160	160				160	Maximum detect
B	Fish (> 30 cm, reach 1)	Metals	Arsenic	mg/kg	3	3	100	0.35	0.61	0.46			0.61	Maximum detect
B	Fish (> 30 cm, reach 1)	Metals	Cadmium	mg/kg	3	3	100	0.0069	0.016	0.011			0.016	Maximum detect
B	Fish (> 30 cm, reach 1)	Metals	Chromium	mg/kg	3	2	66.7	0.49	0.61	0.55	0.013		0.61	Maximum detect
B	Fish (> 30 cm, reach 1)	Metals	Cobalt	mg/kg	2	2	100	0.022	0.047	0.035			0.047	Maximum detect
B	Fish (> 30 cm, reach 1)	Metals	Copper	mg/kg	3	3	100	0.86	29	10			29	Maximum detect
B	Fish (> 30 cm, reach 1)	Metals	Lead	mg/kg	2	2	100	0.22	0.27	0.25			0.27	Maximum detect
B	Fish (> 30 cm, reach 1)	Metals	Mercury	µg/kg	3	3	100	180	530	320			530	Maximum detect
B	Fish (> 30 cm, reach 1)	Metals	Methyl mercury	µg/kg	3	3	100	170	290	250			290	Maximum detect
B	Fish (> 30 cm, reach 1)	Metals	Nickel	mg/kg	3	3	100	0.12	0.62	0.39			0.62	Maximum detect
B	Fish (> 30 cm, reach 1)	Metals	Selenium	mg/kg	3	3	100	0.68	1.4	0.97			1.4	Maximum detect
B	Fish (> 30 cm, reach 1)	Metals	Silver	mg/kg	3	3	100	0.014	0.49	0.17			0.49	Maximum detect

Diet LOE -- Prey Tissue EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
B	Fish (> 30 cm, reach 1)	Metals	Vanadium	mg/kg	3	2	66.7	0.03	0.089	0.06	0.02		0.089	Maximum detect
B	Fish (> 30 cm, reach 1)	Metals	Zinc	mg/kg	3	3	100	21	42.2	32			42.2	Maximum detect
B	Fish (> 30 cm, reach 1)	PAHs	Benzo(a)pyrene	µg/kg	3	0	0				2.6		2.6	Maximum DL
B	Fish (> 30 cm, reach 1)	PAHs	Total HPAHs	µg/kg	3	3	100	14	140	57			140	Maximum detect
B	Fish (> 30 cm, reach 1)	PAHs	Total LPAHs	µg/kg	3	3	100	84	240	150			240	Maximum detect
B	Fish (> 30 cm, reach 1)	PAHs	Total PAHs	µg/kg	3	3	100	98	370	200			370	Maximum detect
B	Fish (> 30 cm, reach 1)	PCB Congeners	Total PCB Congeners	µg/kg	3	3	100	1100	1300	1200			1300	Maximum detect
B	Fish (> 30 cm, reach 1)	PCB Congeners	PCB TEQ-Bird	ng/kg	3	3	100	20	200	80			200	Maximum detect
B	Fish (> 30 cm, reach 1)	PCB Congeners	PCB TEQ-Fish	ng/kg	3	3	100	1.1	1.7	1.3			1.7	Maximum detect
B	Fish (> 30 cm, reach 1)	PCB Congeners	PCB TEQ-Mammal	ng/kg	3	3	100	13	20	15			20	Maximum detect
B	Fish (> 30 cm, reach 1)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	3	3	100	25	94	49			94	Maximum detect
B	Fish (> 30 cm, reach 1)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	3	3	100	29	120	60			120	Maximum detect
B	Fish (> 30 cm, reach 1)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	3	3	100	28	100	53			100	Maximum detect
B	Fish (> 30 cm, reach 1)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	3	3	100	28	100	52			100	Maximum detect
B	Fish (> 30 cm, reach 1)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	3	3	100	49	320	140			320	Maximum detect
B	Fish (> 30 cm, reach 1)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	3	3	100	29	110	57			110	Maximum detect
B	Fish (> 30 cm, reach 1)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	3	3	100	40	120	67			120	Maximum detect
B	Fish (> 30 cm, reach 1)	OC Pesticides	Dieldrin	µg/kg	3	3	100	19	31	24			31	Maximum detect
B	Fish (> 30 cm, reach 1)	OC Pesticides	Endosulfan I	µg/kg	3	0	0				0.84		0.84	Maximum DL
B	Fish (> 30 cm, reach 1)	OC Pesticides	Endosulfan II	µg/kg	3	0	0				1.3		1.3	Maximum DL
B	Fish (> 30 cm, reach 1)	OC Pesticides	Heptachlor epoxide	µg/kg	3	3	100	6.7	10	8.4			10	Maximum detect
B	Fish (> 30 cm, reach 1)	OC Pesticides	Total DDx	µg/kg	3	3	100	160	230	200			230	Maximum detect
B	Fish (> 30 cm, reach 2)	Metals	Arsenic	mg/kg	2	2	100	0.19	0.22	0.21			0.22	Maximum detect
B	Fish (> 30 cm, reach 2)	Metals	Cadmium	mg/kg	2	2	100	0.009	0.012	0.011			0.012	Maximum detect
B	Fish (> 30 cm, reach 2)	Metals	Chromium	mg/kg	2	2	100	0.15	1.4	0.78			1.4	Maximum detect
B	Fish (> 30 cm, reach 2)	Metals	Cobalt	mg/kg	1	1	100	0.043	0.043				0.043	Maximum detect
B	Fish (> 30 cm, reach 2)	Metals	Copper	mg/kg	2	2	100	0.78	0.84	0.81			0.84	Maximum detect
B	Fish (> 30 cm, reach 2)	Metals	Lead	mg/kg	1	1	100	0.43	0.43				0.43	Maximum detect
B	Fish (> 30 cm, reach 2)	Metals	Mercury	µg/kg	2	2	100	230	240	240			240	Maximum detect
B	Fish (> 30 cm, reach 2)	Metals	Methyl mercury	µg/kg	2	2	100	210	260	240			260	Maximum detect
B	Fish (> 30 cm, reach 2)	Metals	Nickel	mg/kg	2	2	100	0.18	0.89	0.54			0.89	Maximum detect
B	Fish (> 30 cm, reach 2)	Metals	Selenium	mg/kg	2	2	100	0.41	0.85	0.63			0.85	Maximum detect
B	Fish (> 30 cm, reach 2)	Metals	Silver	mg/kg	2	2	100	0.006	0.025	0.016			0.025	Maximum detect
B	Fish (> 30 cm, reach 2)	Metals	Vanadium	mg/kg	2	2	100	0.059	0.15	0.1			0.15	Maximum detect
B	Fish (> 30 cm, reach 2)	Metals	Zinc	mg/kg	2	2	100	18	30.3	24			30.3	Maximum detect
B	Fish (> 30 cm, reach 2)	PAHs	Benzo(a)pyrene	µg/kg	2	2	100	1	1.3	1.2			1.3	Maximum detect
B	Fish (> 30 cm, reach 2)	PAHs	Total HPAHs	µg/kg	2	2	100	16	34	25			34	Maximum detect
B	Fish (> 30 cm, reach 2)	PAHs	Total LPAHs	µg/kg	2	2	100	57	180	120			180	Maximum detect
B	Fish (> 30 cm, reach 2)	PAHs	Total PAHs	µg/kg	2	2	100	73	210	140			210	Maximum detect
B	Fish (> 30 cm, reach 2)	PCB Congeners	Total PCB Congeners	µg/kg	2	2	100	1800	2700	2300			2700	Maximum detect
B	Fish (> 30 cm, reach 2)	PCB Congeners	PCB TEQ-Bird	ng/kg	2	2	100	18	71	45			71	Maximum detect
B	Fish (> 30 cm, reach 2)	PCB Congeners	PCB TEQ-Fish	ng/kg	2	2	100	1.3	3.1	2.2			3.1	Maximum detect
B	Fish (> 30 cm, reach 2)	PCB Congeners	PCB TEQ-Mammal	ng/kg	2	2	100	14	44	29			44	Maximum detect
B	Fish (> 30 cm, reach 2)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	2	2	100	26	170	98			170	Maximum detect
B	Fish (> 30 cm, reach 2)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	2	2	100	28	170	99			170	Maximum detect
B	Fish (> 30 cm, reach 2)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	2	2	100	28	170	99			170	Maximum detect
B	Fish (> 30 cm, reach 2)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	2	2	100	28	170	99			170	Maximum detect
B	Fish (> 30 cm, reach 2)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	2	2	100	47	250	150			250	Maximum detect
B	Fish (> 30 cm, reach 2)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	2	2	100	29	170	100			170	Maximum detect
B	Fish (> 30 cm, reach 2)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	2	2	100	42	220	130			220	Maximum detect
B	Fish (> 30 cm, reach 2)	OC Pesticides	Dieldrin	µg/kg	2	2	100	7.2	35	21			35	Maximum detect
B	Fish (> 30 cm, reach 2)	OC Pesticides	Endosulfan I	µg/kg	2	0	0				0.4		0.4	Maximum DL

Diet LOE -- Prey Tissue EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
B	Fish (> 30 cm, reach 2)	OC Pesticides	Endosulfan II	µg/kg	2	0	0				0.63		0.63	Maximum DL
B	Fish (> 30 cm, reach 2)	OC Pesticides	Heptachlor epoxide	µg/kg	2	2	100	2.7	11	6.9			11	Maximum detect
B	Fish (> 30 cm, reach 2)	OC Pesticides	Total DDx	µg/kg	2	2	100	260	280	270			280	Maximum detect
B	Fish (> 30 cm, reach 3)	Metals	Arsenic	mg/kg	9	9	100	0.042	0.19	0.094		0.12	0.12	95% Student's-t UCL
B	Fish (> 30 cm, reach 3)	Metals	Cadmium	mg/kg	9	9	100	0.004	0.05	0.014		0.027	0.027	95% Adjusted Gamma UCL
B	Fish (> 30 cm, reach 3)	Metals	Chromium	mg/kg	9	9	100	0.04	3.5	0.85		3	3	95% Adjusted Gamma UCL
B	Fish (> 30 cm, reach 3)	Metals	Cobalt	mg/kg	6	6	100	0.018	0.073	0.033		0.05	0.05	95% Student's-t UCL
B	Fish (> 30 cm, reach 3)	Metals	Copper	mg/kg	9	9	100	0.53	1.2	0.75		0.92	0.92	95% Adjusted Gamma UCL
B	Fish (> 30 cm, reach 3)	Metals	Lead	mg/kg	6	6	100	0.38	2.2	0.8		1.4	1.4	95% Student's-t UCL
B	Fish (> 30 cm, reach 3)	Metals	Mercury	µg/kg	9	9	100	47	630	230		360	360	95% Student's-t UCL
B	Fish (> 30 cm, reach 3)	Metals	Methyl mercury	µg/kg	9	9	100	39	530	230		350	350	95% Student's-t UCL
B	Fish (> 30 cm, reach 3)	Metals	Nickel	mg/kg	9	9	100	0.12	2.1	0.57		4.6	2.1	Maximum detect
B	Fish (> 30 cm, reach 3)	Metals	Selenium	mg/kg	9	9	100	0.16	1.1	0.53		0.7	0.7	95% Student's-t UCL
B	Fish (> 30 cm, reach 3)	Metals	Silver	mg/kg	9	5	55.6	0.0026	0.062	0.021	0.006		0.062	Maximum detect
B	Fish (> 30 cm, reach 3)	Metals	Vanadium	mg/kg	9	8	88.9	0.06	0.14	0.1	0.07	0.12	0.12	95% KM (t) UCL
B	Fish (> 30 cm, reach 3)	Metals	Zinc	mg/kg	9	9	100	12	85.9	34		50	50	95% Student's-t UCL
B	Fish (> 30 cm, reach 3)	PAHs	Benzo(a)pyrene	µg/kg	9	5	55.6	0.55	1.3	0.88	0.96		1.3	Maximum detect
B	Fish (> 30 cm, reach 3)	PAHs	Total HPAHs	µg/kg	9	9	100	3.1	77	43		58	58	95% Student's-t UCL
B	Fish (> 30 cm, reach 3)	PAHs	Total LPAHs	µg/kg	9	9	100	36	160	98		130	130	95% Student's-t UCL
B	Fish (> 30 cm, reach 3)	PAHs	Total PAHs	µg/kg	9	9	100	57	220	140		180	180	95% Student's-t UCL
B	Fish (> 30 cm, reach 3)	PCB Congeners	Total PCB Congeners	µg/kg	9	9	100	1300	5800	3200		4300	4300	95% Student's-t UCL
B	Fish (> 30 cm, reach 3)	PCB Congeners	PCB TEQ-Bird	ng/kg	9	9	100	8.1	150	74		110	110	95% Student's-t UCL
B	Fish (> 30 cm, reach 3)	PCB Congeners	PCB TEQ-Fish	ng/kg	9	9	100	0.64	6.3	2.6		3.6	3.6	95% Student's-t UCL
B	Fish (> 30 cm, reach 3)	PCB Congeners	PCB TEQ-Mammal	ng/kg	9	9	100	6.1	86	31		46	46	95% Student's-t UCL
B	Fish (> 30 cm, reach 3)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	9	9	100	5.7	410	180		260	260	95% Student's-t UCL
B	Fish (> 30 cm, reach 3)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	9	9	100	5.9	430	190		280	280	95% Student's-t UCL
B	Fish (> 30 cm, reach 3)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	9	9	100	5.9	430	180		270	270	95% Student's-t UCL
B	Fish (> 30 cm, reach 3)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	9	9	100	5.9	420	180		270	270	95% Student's-t UCL
B	Fish (> 30 cm, reach 3)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	9	9	100	11	580	260		390	390	95% Student's-t UCL
B	Fish (> 30 cm, reach 3)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	9	9	100	6.5	430	180		280	280	95% Student's-t UCL
B	Fish (> 30 cm, reach 3)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	9	9	100	9.8	510	210		320	320	95% Student's-t UCL
B	Fish (> 30 cm, reach 3)	OC Pesticides	Dieldrin	µg/kg	9	9	100	7.6	60	28		40	40	95% Student's-t UCL
B	Fish (> 30 cm, reach 3)	OC Pesticides	Endosulfan I	µg/kg	9	0	0				5.9		5.9	Maximum DL
B	Fish (> 30 cm, reach 3)	OC Pesticides	Endosulfan II	µg/kg	9	0	0				8.4		8.4	Maximum DL
B	Fish (> 30 cm, reach 3)	OC Pesticides	Heptachlor epoxide	µg/kg	9	9	100	3.1	29	12		17	17	95% Student's-t UCL
B	Fish (> 30 cm, reach 3)	OC Pesticides	Total DDx	µg/kg	9	9	100	43	540	280		400	400	95% Student's-t UCL
B	Fish (> 30 cm, reach 4)	Metals	Arsenic	mg/kg	8	8	100	0.064	0.21	0.12		0.15	0.15	95% Student's-t UCL
B	Fish (> 30 cm, reach 4)	Metals	Cadmium	mg/kg	8	8	100	0.0039	0.069	0.02		0.035	0.035	95% Student's-t UCL
B	Fish (> 30 cm, reach 4)	Metals	Chromium	mg/kg	8	8	100	0.14	1.4	0.41		0.69	0.69	95% Student's-t UCL
B	Fish (> 30 cm, reach 4)	Metals	Cobalt	mg/kg	6	6	100	0.016	0.076	0.033		0.052	0.052	95% Student's-t UCL
B	Fish (> 30 cm, reach 4)	Metals	Copper	mg/kg	8	8	100	0.52	1.1	0.74		0.87	0.87	95% Student's-t UCL
B	Fish (> 30 cm, reach 4)	Metals	Lead	mg/kg	6	6	100	0.18	0.44	0.28		0.36	0.36	95% Student's-t UCL
B	Fish (> 30 cm, reach 4)	Metals	Mercury	µg/kg	8	8	100	46	340	210		290	290	95% Student's-t UCL
B	Fish (> 30 cm, reach 4)	Metals	Methyl mercury	µg/kg	8	8	100	43	360	210		300	300	95% Student's-t UCL
B	Fish (> 30 cm, reach 4)	Metals	Nickel	mg/kg	8	8	100	0.2	0.49	0.31		0.38	0.38	95% Student's-t UCL
B	Fish (> 30 cm, reach 4)	Metals	Selenium	mg/kg	8	8	100	0.33	0.6	0.44		0.52	0.52	95% Student's-t UCL
B	Fish (> 30 cm, reach 4)	Metals	Silver	mg/kg	8	5	62.5	0.005	0.052	0.026	0.008		0.052	Maximum detect
B	Fish (> 30 cm, reach 4)	Metals	Vanadium	mg/kg	8	5	62.5	0.03	0.13	0.072	0.07		0.13	Maximum detect
B	Fish (> 30 cm, reach 4)	Metals	Zinc	mg/kg	8	8	100	13	52.7	31		40	40	95% Student's-t UCL
B	Fish (> 30 cm, reach 4)	PAHs	Benzo(a)pyrene	µg/kg	8	4	50	1.1	24	7.3	1.3		24	Maximum detect
B	Fish (> 30 cm, reach 4)	PAHs	Total HPAHs	µg/kg	8	8	100	14	310	75		140	140	95% Student's-t UCL
B	Fish (> 30 cm, reach 4)	PAHs	Total LPAHs	µg/kg	8	8	100	15	250	93		150	150	95% Student's-t UCL

Diet LOE -- Prey Tissue EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
B	Fish (> 30 cm, reach 4)	PAHs	Total PAHs	µg/kg	8	8	100	33	480	170		280	280	95% Student's-t UCL
B	Fish (> 30 cm, reach 4)	PCB Congeners	Total PCB Congeners	µg/kg	8	8	100	880	7900	3200		4700	4700	95% Student's-t UCL
B	Fish (> 30 cm, reach 4)	PCB Congeners	PCB TEQ-Bird	ng/kg	8	8	100	5.2	250	95		160	160	95% Student's-t UCL
B	Fish (> 30 cm, reach 4)	PCB Congeners	PCB TEQ-Fish	ng/kg	8	8	100	0.38	6.5	2.5		3.8	3.8	95% Student's-t UCL
B	Fish (> 30 cm, reach 4)	PCB Congeners	PCB TEQ-Mammal	ng/kg	8	8	100	3.3	86	30		49	49	95% Student's-t UCL
B	Fish (> 30 cm, reach 4)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	8	8	100	14	1400	300		620	620	95% Student's-t UCL
B	Fish (> 30 cm, reach 4)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	8	8	100	15	1400	310		630	630	95% Student's-t UCL
B	Fish (> 30 cm, reach 4)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	8	8	100	14	1400	300		1400	1400	95% Adjusted Gamma UCL
B	Fish (> 30 cm, reach 4)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	8	8	100	14	1400	300		620	620	95% Student's-t UCL
B	Fish (> 30 cm, reach 4)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	8	8	100	20	1700	410		800	800	95% Student's-t UCL
B	Fish (> 30 cm, reach 4)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	8	8	100	15	1400	300		1400	1400	95% Adjusted Gamma UCL
B	Fish (> 30 cm, reach 4)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	8	8	100	17	1500	330		680	680	95% Student's-t UCL
B	Fish (> 30 cm, reach 4)	OC Pesticides	Dieldrin	µg/kg	8	8	100	19	88	49		65	65	95% Student's-t UCL
B	Fish (> 30 cm, reach 4)	OC Pesticides	Endosulfan I	µg/kg	8	1	12.5	0.59	0.59		3.7		0.59	Maximum detect
B	Fish (> 30 cm, reach 4)	OC Pesticides	Endosulfan II	µg/kg	8	0	0				2.9		2.9	Maximum DL
B	Fish (> 30 cm, reach 4)	OC Pesticides	Heptachlor epoxide	µg/kg	8	8	100	5.4	30	20		25	25	95% Student's-t UCL
B	Fish (> 30 cm, reach 4)	OC Pesticides	Total DDx	µg/kg	8	8	100	150	1100	420		630	630	95% Student's-t UCL
B	Fish (> 30 cm, reach 5)	Metals	Arsenic	mg/kg	12	10	83.3	0.031	0.22	0.099	0.18	0.12	0.12	95% KM (t) UCL
B	Fish (> 30 cm, reach 5)	Metals	Cadmium	mg/kg	12	12	100	0.0035	0.12	0.028		0.045	0.045	95% Student's-t UCL
B	Fish (> 30 cm, reach 5)	Metals	Chromium	mg/kg	12	11	91.7	0.09	4.3	0.84	0.02	2.3	2.3	95% KM (Chebyshev) UCL
B	Fish (> 30 cm, reach 5)	Metals	Cobalt	mg/kg	12	12	100	0.014	0.076	0.036		0.046	0.046	95% Student's-t UCL
B	Fish (> 30 cm, reach 5)	Metals	Copper	mg/kg	12	12	100	0.31	1.1	0.75		0.87	0.87	95% Student's-t UCL
B	Fish (> 30 cm, reach 5)	Metals	Lead	mg/kg	12	12	100	0.056	0.92	0.39		0.55	0.55	95% Student's-t UCL
B	Fish (> 30 cm, reach 5)	Metals	Mercury	µg/kg	12	12	100	32	560	180		300	300	95% Adjusted Gamma UCL
B	Fish (> 30 cm, reach 5)	Metals	Methyl mercury	µg/kg	12	12	100	30	440	150		220	220	95% Student's-t UCL
B	Fish (> 30 cm, reach 5)	Metals	Nickel	mg/kg	12	12	100	0.11	2.6	0.58		1.1	1.1	95% Adjusted Gamma UCL
B	Fish (> 30 cm, reach 5)	Metals	Selenium	mg/kg	12	12	100	0.17	1.2	0.56		0.7	0.7	95% Student's-t UCL
B	Fish (> 30 cm, reach 5)	Metals	Silver	mg/kg	12	6	50	0.003	0.031	0.013	0.007	0.013	0.013	95% KM (t) UCL
B	Fish (> 30 cm, reach 5)	Metals	Vanadium	mg/kg	12	8	66.7	0.017	0.21	0.086	0.07	0.095	0.095	95% KM (t) UCL
B	Fish (> 30 cm, reach 5)	Metals	Zinc	mg/kg	12	12	100	14	104	31		65	65	95% Chebyshev (Mean, Sd) UCL
B	Fish (> 30 cm, reach 5)	PAHs	Benzo(a)pyrene	µg/kg	12	4	33.3	0.91	4.9	3.2	2.8		4.9	Maximum detect
B	Fish (> 30 cm, reach 5)	PAHs	Total HPAHs	µg/kg	12	12	100	5.6	120	45		64	64	95% Student's-t UCL
B	Fish (> 30 cm, reach 5)	PAHs	Total LPAHs	µg/kg	12	12	100	21	150	63		100	100	95% H-UCL
B	Fish (> 30 cm, reach 5)	PAHs	Total PAHs	µg/kg	12	12	100	31	270	110		150	150	95% Student's-t UCL
B	Fish (> 30 cm, reach 5)	PCB Congeners	Total PCB Congeners	µg/kg	12	12	100	350	7300	2500		3600	3600	95% Student's-t UCL
B	Fish (> 30 cm, reach 5)	PCB Congeners	PCB TEQ-Bird	ng/kg	12	12	100	9.3	210	100		150	150	95% Student's-t UCL
B	Fish (> 30 cm, reach 5)	PCB Congeners	PCB TEQ-Fish	ng/kg	12	12	100	0.23	7.4	2.3		3.4	3.4	95% Student's-t UCL
B	Fish (> 30 cm, reach 5)	PCB Congeners	PCB TEQ-Mammal	ng/kg	12	12	100	2.7	95	29		43	43	95% Student's-t UCL
B	Fish (> 30 cm, reach 5)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	12	12	100	20	520	160		240	240	95% Student's-t UCL
B	Fish (> 30 cm, reach 5)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	12	12	100	23	550	160		260	260	95% Student's-t UCL
B	Fish (> 30 cm, reach 5)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	12	12	100	22	540	160		250	250	95% Student's-t UCL
B	Fish (> 30 cm, reach 5)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	12	12	100	22	530	160		250	250	95% Student's-t UCL
B	Fish (> 30 cm, reach 5)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	12	12	100	36	750	260		400	400	95% Student's-t UCL
B	Fish (> 30 cm, reach 5)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	12	12	100	23	540	160		250	250	95% Student's-t UCL
B	Fish (> 30 cm, reach 5)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	12	12	100	25	590	190		290	290	95% Student's-t UCL
B	Fish (> 30 cm, reach 5)	OC Pesticides	Dieldrin	µg/kg	12	12	100	13	60	37		44	44	95% Student's-t UCL
B	Fish (> 30 cm, reach 5)	OC Pesticides	Endosulfan I	µg/kg	12	2	16.7	0.78	1.2	0.99	3.3		1.2	Maximum detect
B	Fish (> 30 cm, reach 5)	OC Pesticides	Endosulfan II	µg/kg	12	0	0				3.1		3.1	Maximum DL
B	Fish (> 30 cm, reach 5)	OC Pesticides	Heptachlor epoxide	µg/kg	12	12	100	6.3	23	16		19	19	95% Student's-t UCL
B	Fish (> 30 cm, reach 5)	OC Pesticides	Total DDx	µg/kg	12	12	100	48	870	280		560	560	95% H-UCL
B	Fish (> 30 cm, reach 6)	Metals	Arsenic	mg/kg	12	12	100	0.018	0.12	0.057		0.074	0.074	95% Student's-t UCL
B	Fish (> 30 cm, reach 6)	Metals	Cadmium	mg/kg	12	12	100	0.0035	0.041	0.017		0.022	0.022	95% Student's-t UCL

Diet LOE -- Prey Tissue EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
B	Fish (> 30 cm, reach 6)	Metals	Chromium	mg/kg	12	12	100	0.14	1.1	0.4		0.64	0.64	95% Adjusted Gamma UCL
B	Fish (> 30 cm, reach 6)	Metals	Cobalt	mg/kg	12	12	100	0.015	0.045	0.026		0.033	0.033	95% Adjusted Gamma UCL
B	Fish (> 30 cm, reach 6)	Metals	Copper	mg/kg	12	12	100	0.39	0.89	0.69		0.77	0.77	95% Student's-t UCL
B	Fish (> 30 cm, reach 6)	Metals	Lead	mg/kg	12	12	100	0.033	0.86	0.45		0.59	0.59	95% Student's-t UCL
B	Fish (> 30 cm, reach 6)	Metals	Mercury	µg/kg	12	12	100	67	270	160		190	190	95% Student's-t UCL
B	Fish (> 30 cm, reach 6)	Metals	Methyl mercury	µg/kg	12	12	100	54	280	150		190	190	95% Student's-t UCL
B	Fish (> 30 cm, reach 6)	Metals	Nickel	mg/kg	12	12	100	0.2	0.79	0.37		0.47	0.47	95% Modified-t UCL
B	Fish (> 30 cm, reach 6)	Metals	Selenium	mg/kg	12	12	100	0.21	0.98	0.47		0.67	0.67	95% Adjusted Gamma UCL
B	Fish (> 30 cm, reach 6)	Metals	Silver	mg/kg	12	3	25	0.0047	0.005	0.0049	0.008		0.005	Maximum detect
B	Fish (> 30 cm, reach 6)	Metals	Vanadium	mg/kg	12	10	83.3	0.032	0.18	0.098	0.06	0.11	0.11	95% KM (t) UCL
B	Fish (> 30 cm, reach 6)	Metals	Zinc	mg/kg	12	12	100	14	63.3	27		38	38	95% Adjusted Gamma UCL
B	Fish (> 30 cm, reach 6)	PAHs	Benzo(a)pyrene	µg/kg	12	7	58.3	0.67	6.9	2	2.3	2.4	2.4	95% KM (t) UCL
B	Fish (> 30 cm, reach 6)	PAHs	Total HPAHs	µg/kg	12	12	100	5.2	170	42		76	76	95% Adjusted Gamma UCL
B	Fish (> 30 cm, reach 6)	PAHs	Total LPAHs	µg/kg	12	12	100	34	380	130		180	180	95% Student's-t UCL
B	Fish (> 30 cm, reach 6)	PAHs	Total PAHs	µg/kg	12	12	100	59	540	170		260	260	95% Adjusted Gamma UCL
B	Fish (> 30 cm, reach 6)	PCB Congeners	Total PCB Congeners	µg/kg	12	12	100	630	5200	2100		3200	3200	95% Adjusted Gamma UCL
B	Fish (> 30 cm, reach 6)	PCB Congeners	PCB TEQ-Bird	ng/kg	12	12	100	7.7	180	66		98	98	95% Student's-t UCL
B	Fish (> 30 cm, reach 6)	PCB Congeners	PCB TEQ-Fish	ng/kg	12	12	100	0.48	4.4	1.9		2.6	2.6	95% Student's-t UCL
B	Fish (> 30 cm, reach 6)	PCB Congeners	PCB TEQ-Mammal	ng/kg	12	12	100	5.4	59	26		35	35	95% Student's-t UCL
B	Fish (> 30 cm, reach 6)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	12	12	100	6.6	640	150		230	230	95% Student's-t UCL
B	Fish (> 30 cm, reach 6)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	12	12	100	7.2	670	160		250	250	95% Student's-t UCL
B	Fish (> 30 cm, reach 6)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	12	12	100	7.1	660	150		320	320	95% Adjusted Gamma UCL
B	Fish (> 30 cm, reach 6)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	12	12	100	7.2	650	150		310	310	95% Adjusted Gamma UCL
B	Fish (> 30 cm, reach 6)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	12	12	100	17	820	220		340	340	95% Student's-t UCL
B	Fish (> 30 cm, reach 6)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	12	12	100	7.8	660	150		240	240	95% Student's-t UCL
B	Fish (> 30 cm, reach 6)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	12	12	100	14	710	170		350	350	95% Adjusted Gamma UCL
B	Fish (> 30 cm, reach 6)	OC Pesticides	Dieldrin	µg/kg	12	12	100	9.1	45	26		32	32	95% Student's-t UCL
B	Fish (> 30 cm, reach 6)	OC Pesticides	Endosulfan I	µg/kg	12	1	8.3	0.84	0.84		5.8		0.84	Maximum detect
B	Fish (> 30 cm, reach 6)	OC Pesticides	Endosulfan II	µg/kg	12	2	16.7	0.37	0.89	0.63	5		0.89	Maximum detect
B	Fish (> 30 cm, reach 6)	OC Pesticides	Heptachlor epoxide	µg/kg	12	12	100	3.9	22	11		14	14	95% Student's-t UCL
B	Fish (> 30 cm, reach 6)	OC Pesticides	Total DDx	µg/kg	12	12	100	79	680	280		420	420	95% Adjusted Gamma UCL
B	Fish (> 30 cm, reach 7)	Metals	Arsenic	mg/kg	7	7	100	0.036	0.1	0.074		0.091	0.091	95% Student's-t UCL
B	Fish (> 30 cm, reach 7)	Metals	Cadmium	mg/kg	7	7	100	0.0042	0.27	0.049		0.29	0.27	Maximum detect
B	Fish (> 30 cm, reach 7)	Metals	Chromium	mg/kg	7	7	100	0.043	0.97	0.49		0.73	0.73	95% Student's-t UCL
B	Fish (> 30 cm, reach 7)	Metals	Cobalt	mg/kg	7	7	100	0.011	0.048	0.027		0.036	0.036	95% Student's-t UCL
B	Fish (> 30 cm, reach 7)	Metals	Copper	mg/kg	7	7	100	0.4	7.8	1.7		6.1	6.1	95% Chebyshev (Mean, Sd) UCL
B	Fish (> 30 cm, reach 7)	Metals	Lead	mg/kg	7	7	100	0.096	1.4	0.58		0.91	0.91	95% Student's-t UCL
B	Fish (> 30 cm, reach 7)	Metals	Mercury	µg/kg	7	7	100	42	200	110		150	150	95% Student's-t UCL
B	Fish (> 30 cm, reach 7)	Metals	Methyl mercury	µg/kg	7	7	100	41	170	97		130	130	95% Student's-t UCL
B	Fish (> 30 cm, reach 7)	Metals	Nickel	mg/kg	7	7	100	0.15	0.72	0.45		0.63	0.63	95% Student's-t UCL
B	Fish (> 30 cm, reach 7)	Metals	Selenium	mg/kg	7	7	100	0.25	0.89	0.49		0.69	0.69	95% Student's-t UCL
B	Fish (> 30 cm, reach 7)	Metals	Silver	mg/kg	7	1	14.3	0.008	0.008		0.008		0.008	Maximum detect
B	Fish (> 30 cm, reach 7)	Metals	Vanadium	mg/kg	7	7	100	0.033	0.21	0.092		0.14	0.14	95% Student's-t UCL
B	Fish (> 30 cm, reach 7)	Metals	Zinc	mg/kg	7	7	100	13	69.4	33		51	51	95% Student's-t UCL
B	Fish (> 30 cm, reach 7)	PAHs	Benzo(a)pyrene	µg/kg	7	2	28.6	1.5	2.5	2	1.3		2.5	Maximum detect
B	Fish (> 30 cm, reach 7)	PAHs	Total HPAHs	µg/kg	7	7	100	7.6	110	57		80	80	95% Student's-t UCL
B	Fish (> 30 cm, reach 7)	PAHs	Total LPAHs	µg/kg	7	7	100	100	470	180		280	280	95% Student's-t UCL
B	Fish (> 30 cm, reach 7)	PAHs	Total PAHs	µg/kg	7	7	100	150	590	240		510	510	95% Chebyshev (Mean, Sd) UCL
B	Fish (> 30 cm, reach 7)	PCB Congeners	Total PCB Congeners	µg/kg	7	7	100	720	7000	2700		4200	4200	95% Student's-t UCL
B	Fish (> 30 cm, reach 7)	PCB Congeners	PCB TEQ-Bird	ng/kg	7	7	100	2.9	260	84		150	150	95% Student's-t UCL
B	Fish (> 30 cm, reach 7)	PCB Congeners	PCB TEQ-Fish	ng/kg	7	7	100	0.31	5.7	2.3		3.6	3.6	95% Student's-t UCL
B	Fish (> 30 cm, reach 7)	PCB Congeners	PCB TEQ-Mammal	ng/kg	7	7	100	2.8	73	30		47	47	95% Student's-t UCL

Diet LOE -- Prey Tissue EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
B	Fish (> 30 cm, reach 7)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	7	7	100	4.9	530	180		320	320	95% Student's-t UCL
B	Fish (> 30 cm, reach 7)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	7	7	100	5.1	560	190		340	340	95% Student's-t UCL
B	Fish (> 30 cm, reach 7)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	7	7	100	5.2	550	190		330	330	95% Student's-t UCL
B	Fish (> 30 cm, reach 7)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	7	7	100	5.1	550	190		330	330	95% Student's-t UCL
B	Fish (> 30 cm, reach 7)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	7	7	100	7.8	820	280		480	480	95% Student's-t UCL
B	Fish (> 30 cm, reach 7)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	7	7	100	5.5	560	190		340	340	95% Student's-t UCL
B	Fish (> 30 cm, reach 7)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	7	7	100	7	620	220		380	380	95% Student's-t UCL
B	Fish (> 30 cm, reach 7)	OC Pesticides	Dieldrin	µg/kg	7	7	100	14	61	36		49	49	95% Student's-t UCL
B	Fish (> 30 cm, reach 7)	OC Pesticides	Endosulfan I	µg/kg	7	3	42.9	0.2	4	2.1	1.5		4	Maximum detect
B	Fish (> 30 cm, reach 7)	OC Pesticides	Endosulfan II	µg/kg	7	3	42.9	0.56	2.7	1.3	2		2.7	Maximum detect
B	Fish (> 30 cm, reach 7)	OC Pesticides	Heptachlor epoxide	µg/kg	7	7	100	6.2	30	17		23	23	95% Student's-t UCL
B	Fish (> 30 cm, reach 7)	OC Pesticides	Total DDx	µg/kg	7	7	100	32	540	240		350	350	95% Student's-t UCL
B	Fish (> 30 cm, reach 8)	Metals	Arsenic	mg/kg	16	15	93.8	0.017	0.26	0.076	0.068	0.14	0.14	95% KM (Chebyshev) UCL
B	Fish (> 30 cm, reach 8)	Metals	Cadmium	mg/kg	16	16	100	0.0034	0.089	0.02		0.034	0.034	95% H-UCL
B	Fish (> 30 cm, reach 8)	Metals	Chromium	mg/kg	16	16	100	0.12	6.6	1.1		1.9	1.9	95% H-UCL
B	Fish (> 30 cm, reach 8)	Metals	Cobalt	mg/kg	16	16	100	0.012	0.1	0.031		0.042	0.042	95% Adjusted Gamma UCL
B	Fish (> 30 cm, reach 8)	Metals	Copper	mg/kg	16	16	100	0.32	2.3	0.77		1	1	95% Student's-t UCL
B	Fish (> 30 cm, reach 8)	Metals	Lead	mg/kg	16	16	100	0.02	0.96	0.4		0.5	0.5	95% Student's-t UCL
B	Fish (> 30 cm, reach 8)	Metals	Mercury	µg/kg	16	16	100	75	680	170		230	230	95% Adjusted Gamma UCL
B	Fish (> 30 cm, reach 8)	Metals	Methyl mercury	µg/kg	16	16	100	63	520	150		210	210	95% H-UCL
B	Fish (> 30 cm, reach 8)	Metals	Nickel	mg/kg	16	16	100	0.19	4.2	0.73		1.8	1.8	95% Chebyshev (Mean, Sd) UCL
B	Fish (> 30 cm, reach 8)	Metals	Selenium	mg/kg	16	16	100	0.23	1.1	0.43		0.55	0.55	95% Modified-t UCL
B	Fish (> 30 cm, reach 8)	Metals	Silver	mg/kg	16	6	37.5	0.0044	0.014	0.0082	0.0026	0.0057	0.0057	95% KM (t) UCL
B	Fish (> 30 cm, reach 8)	Metals	Vanadium	mg/kg	16	15	93.8	0.043	0.21	0.097	0.01	0.12	0.12	95% KM (t) UCL
B	Fish (> 30 cm, reach 8)	Metals	Zinc	mg/kg	16	16	100	15.4	72.4	24		31	31	95% Modified-t UCL
B	Fish (> 30 cm, reach 8)	PAHs	Benzo(a)pyrene	µg/kg	16	2	12.5	1.3	2.9	2.1	2.5		2.9	Maximum detect
B	Fish (> 30 cm, reach 8)	PAHs	Total HPAHs	µg/kg	16	16	100	5.2	49	29		34	34	95% Student's-t UCL
B	Fish (> 30 cm, reach 8)	PAHs	Total LPAHs	µg/kg	16	16	100	22	98	58		67	67	95% Student's-t UCL
B	Fish (> 30 cm, reach 8)	PAHs	Total PAHs	µg/kg	16	16	100	27	140	85		99	99	95% Student's-t UCL
B	Fish (> 30 cm, reach 8)	PCB Congeners	Total PCB Congeners	µg/kg	16	16	100	440	7900	1900		2800	2800	95% Adjusted Gamma UCL
B	Fish (> 30 cm, reach 8)	PCB Congeners	PCB TEQ-Bird	ng/kg	16	16	100	12	550	82		130	130	95% H-UCL
B	Fish (> 30 cm, reach 8)	PCB Congeners	PCB TEQ-Fish	ng/kg	16	16	100	0.35	17	2.6		6.9	6.9	95% Chebyshev (Mean, Sd) UCL
B	Fish (> 30 cm, reach 8)	PCB Congeners	PCB TEQ-Mammal	ng/kg	16	16	100	4.7	240	35		55	55	95% H-UCL
B	Fish (> 30 cm, reach 8)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	16	16	100	0.43	160	58		83	83	95% Student's-t UCL
B	Fish (> 30 cm, reach 8)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	16	16	100	1.7	170	64		89	89	95% Student's-t UCL
B	Fish (> 30 cm, reach 8)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	16	16	100	1.8	170	61		87	87	95% Student's-t UCL
B	Fish (> 30 cm, reach 8)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	16	16	100	1.8	170	60		86	86	95% Student's-t UCL
B	Fish (> 30 cm, reach 8)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	16	16	100	15	560	150		200	200	95% Student's-t UCL
B	Fish (> 30 cm, reach 8)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	16	16	100	2.8	170	64		89	89	95% Student's-t UCL
B	Fish (> 30 cm, reach 8)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	16	16	100	12	250	97		130	130	95% Student's-t UCL
B	Fish (> 30 cm, reach 8)	OC Pesticides	Dieldrin	µg/kg	16	16	100	16	77	36		44	44	95% Student's-t UCL
B	Fish (> 30 cm, reach 8)	OC Pesticides	Endosulfan I	µg/kg	16	1	6.2	0.45	0.45		10		0.45	Maximum detect
B	Fish (> 30 cm, reach 8)	OC Pesticides	Endosulfan II	µg/kg	16	1	6.2	2.5	2.5		3.1		2.5	Maximum detect
B	Fish (> 30 cm, reach 8)	OC Pesticides	Heptachlor epoxide	µg/kg	16	16	100	5.8	31	15		18	18	95% Student's-t UCL
B	Fish (> 30 cm, reach 8)	OC Pesticides	Total DDx	µg/kg	16	16	100	63	490	200		260	260	95% Student's-t UCL
M	Fish (> 30 cm, ≥ RM10)	Metals	Arsenic	mg/kg	35	34	97.1	0.017	0.26	0.069	0.068	0.084	0.084	95% Adjusted Gamma KM-UCL
M	Fish (> 30 cm, ≥ RM10)	Metals	Cadmium	mg/kg	35	35	100	0.0034	0.27	0.025		0.059	0.059	95% Chebyshev (Mean, Sd) UCL
M	Fish (> 30 cm, ≥ RM10)	Metals	Chromium	mg/kg	35	35	100	0.043	6.6	0.72		0.98	0.98	95% Adjusted Gamma UCL
M	Fish (> 30 cm, ≥ RM10)	Metals	Cobalt	mg/kg	35	35	100	0.011	0.1	0.029		0.034	0.034	95% Modified-t UCL
M	Fish (> 30 cm, ≥ RM10)	Metals	Copper	mg/kg	35	35	100	0.32	7.8	0.92		1.8	1.8	95% Chebyshev (Mean, Sd) UCL
M	Fish (> 30 cm, ≥ RM10)	Metals	Lead	mg/kg	35	35	100	0.02	1.4	0.45		0.54	0.54	95% Student's-t UCL
M	Fish (> 30 cm, ≥ RM10)	Metals	Mercury	µg/kg	35	35	100	42	680	150		180	180	95% Adjusted Gamma UCL

Diet LOE -- Prey Tissue EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
M	Fish (> 30 cm, ≥ RM10)	Metals	Methyl mercury	µg/kg	35	35	100	41	520	140		170	170	95% Adjusted Gamma UCL
M	Fish (> 30 cm, ≥ RM10)	Metals	Nickel	mg/kg	35	35	100	0.15	4.2	0.55		1	1	95% Chebyshev (Mean, Sd) UCL
M	Fish (> 30 cm, ≥ RM10)	Metals	Selenium	mg/kg	35	35	100	0.21	1.1	0.46		0.65	0.65	95% Chebyshev (Mean, Sd) UCL
M	Fish (> 30 cm, ≥ RM10)	Metals	Silver	mg/kg	35	10	28.6	0.0044	0.014	0.0072	0.008	0.004	0.004	95% KM (t) UCL
M	Fish (> 30 cm, ≥ RM10)	Metals	Vanadium	mg/kg	35	32	91.4	0.032	0.21	0.096	0.06	0.11	0.11	95% KM (t) UCL
M	Fish (> 30 cm, ≥ RM10)	Metals	Zinc	mg/kg	35	35	100	13	72.4	27		40	40	95% Chebyshev (Mean, Sd) UCL
M	Fish (> 30 cm, ≥ RM10)	PAHs	Benzo(a)pyrene	µg/kg	35	11	31.4	0.67	6.9	2	2.5	1.2	1.2	95% KM (Percentile Bootstrap) UCL
M	Fish (> 30 cm, ≥ RM10)	PAHs	Total HPAHs	µg/kg	35	35	100	5.2	170	39		49	49	95% Adjusted Gamma UCL
M	Fish (> 30 cm, ≥ RM10)	PAHs	Total LPAHs	µg/kg	35	35	100	22	470	110		130	130	95% Adjusted Gamma UCL
M	Fish (> 30 cm, ≥ RM10)	PAHs	Total PAHs	µg/kg	35	35	100	27	590	140		180	180	95% Adjusted Gamma UCL
M	Fish (> 30 cm, ≥ RM10)	PCB Congeners	Total PCB Congeners	µg/kg	35	35	100	440	7900	2100		2600	2600	95% Adjusted Gamma UCL
M	Fish (> 30 cm, ≥ RM10)	PCB Congeners	PCB TEQ-Bird	ng/kg	35	35	100	2.9	550	77		100	100	95% Adjusted Gamma UCL
M	Fish (> 30 cm, ≥ RM10)	PCB Congeners	PCB TEQ-Fish	ng/kg	35	35	100	0.31	17	2.3		3	3	95% H-UCL
M	Fish (> 30 cm, ≥ RM10)	PCB Congeners	PCB TEQ-Mammal	ng/kg	35	35	100	2.8	240	31		43	43	95% H-UCL
M	Fish (> 30 cm, ≥ RM10)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	35	35	100	0.43	640	110		170	170	95% Adjusted Gamma UCL
M	Fish (> 30 cm, ≥ RM10)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	35	35	100	1.7	670	120		170	170	95% Adjusted Gamma UCL
M	Fish (> 30 cm, ≥ RM10)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	35	35	100	1.8	660	120		170	170	95% Adjusted Gamma UCL
M	Fish (> 30 cm, ≥ RM10)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	35	35	100	1.8	650	120		170	170	95% Adjusted Gamma UCL
M	Fish (> 30 cm, ≥ RM10)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	35	35	100	7.8	820	200		270	270	95% Adjusted Gamma UCL
M	Fish (> 30 cm, ≥ RM10)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	35	35	100	2.8	660	120		170	170	95% Adjusted Gamma UCL
M	Fish (> 30 cm, ≥ RM10)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	35	35	100	7	710	150		200	200	95% Adjusted Gamma UCL
M	Fish (> 30 cm, ≥ RM10)	OC Pesticides	Dieldrin	µg/kg	35	35	100	9.1	77	33		37	37	95% Student's-t UCL
M	Fish (> 30 cm, ≥ RM10)	OC Pesticides	Endosulfan I	µg/kg	35	5	14.3	0.2	4	1.5	10		4	Maximum detect
M	Fish (> 30 cm, ≥ RM10)	OC Pesticides	Endosulfan II	µg/kg	35	6	17.1	0.37	2.7	1.3	5	0.72	0.72	95% KM (t) UCL
M	Fish (> 30 cm, ≥ RM10)	OC Pesticides	Heptachlor epoxide	µg/kg	35	35	100	3.9	31	14		16	16	95% Student's-t UCL
M	Fish (> 30 cm, ≥ RM10)	OC Pesticides	Total DDx	µg/kg	35	35	100	32	680	240		290	290	95% Adjusted Gamma UCL
F	Fish (≤ 11 cm)	Metals	Arsenic	mg/kg	23	23	100	0.044	0.51	0.31		0.35	0.35	95% Student's-t UCL
F	Fish (≤ 11 cm)	Metals	Cadmium	mg/kg	23	23	100	0.0091	0.073	0.027		0.044	0.044	95% Chebyshev (Mean, Sd) UCL
F	Fish (≤ 11 cm)	Metals	Chromium	mg/kg	23	23	100	0.89	23.2	6.2		9.1	9.1	95% Adjusted Gamma UCL
F	Fish (≤ 11 cm)	Metals	Cobalt	mg/kg	23	23	100	0.031	0.35	0.14		0.19	0.19	95% Adjusted Gamma UCL
F	Fish (≤ 11 cm)	Metals	Copper	mg/kg	23	23	100	0.87	4.3	2.8		3.1	3.1	95% Student's-t UCL
F	Fish (≤ 11 cm)	Metals	Lead	mg/kg	23	23	100	0.15	3.9	1.4		2	2	95% Adjusted Gamma UCL
F	Fish (≤ 11 cm)	Metals	Mercury	µg/kg	23	23	100	30	71	54		59	59	95% Student's-t UCL
F	Fish (≤ 11 cm)	Metals	Methyl mercury	µg/kg	23	23	100	14	69	40		58	58	95% Chebyshev (Mean, Sd) UCL
F	Fish (≤ 11 cm)	Metals	Nickel	mg/kg	23	23	100	0.62	15.8	4.1		6	6	95% Adjusted Gamma UCL
F	Fish (≤ 11 cm)	Metals	Selenium	mg/kg	23	23	100	0.3	0.89	0.63		0.69	0.69	95% Student's-t UCL
F	Fish (≤ 11 cm)	Metals	Silver	mg/kg	23	22	95.7	0.013	0.06	0.038	0.0051	0.041	0.041	95% KM (t) UCL
F	Fish (≤ 11 cm)	Metals	Vanadium	mg/kg	23	23	100	0.05	1.3	0.53		0.66	0.66	95% Student's-t UCL
F	Fish (≤ 11 cm)	Metals	Zinc	mg/kg	23	23	100	25	51.6	41.4		43.7	43.7	95% Student's-t UCL
F	Fish (≤ 11 cm)	PAHs	Benzo(a)pyrene	µg/kg	23	23	100	2.1	63	19		27	27	95% Adjusted Gamma UCL
F	Fish (≤ 11 cm)	PAHs	Total HPAHs	µg/kg	23	23	100	29	860	210		410	410	95% Chebyshev (Mean, Sd) UCL
F	Fish (≤ 11 cm)	PAHs	Total LPAHs	µg/kg	23	23	100	18	370	78		110	110	95% Adjusted Gamma UCL
F	Fish (≤ 11 cm)	PAHs	Total PAHs	µg/kg	23	23	100	48	1100	290		410	410	95% Adjusted Gamma UCL
F	Fish (≤ 11 cm)	PCB Congeners	Total PCB Congeners	µg/kg	23	23	100	240	930	490		570	570	95% Adjusted Gamma UCL
F	Fish (≤ 11 cm)	PCB Congeners	PCB TEQ-Bird	ng/kg	23	23	100	17	88	45		52	52	95% Student's-t UCL
F	Fish (≤ 11 cm)	PCB Congeners	PCB TEQ-Fish	ng/kg	23	23	100	0.25	0.89	0.54		0.6	0.6	95% Student's-t UCL
F	Fish (≤ 11 cm)	PCB Congeners	PCB TEQ-Mammal	ng/kg	23	23	100	3.3	12	6.8		7.6	7.6	95% Student's-t UCL
F	Fish (≤ 11 cm)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	23	23	100	2.4	100	34		45	45	95% Adjusted Gamma UCL
F	Fish (≤ 11 cm)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	23	23	100	9.9	110	38		48	48	95% Adjusted Gamma UCL
F	Fish (≤ 11 cm)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	23	23	100	3.7	100	35		46	46	95% Adjusted Gamma UCL
F	Fish (≤ 11 cm)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	23	23	100	3.8	100	35		46	46	95% Adjusted Gamma UCL
F	Fish (≤ 11 cm)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	23	23	100	30	170	82		96	96	95% Student's-t UCL

Diet LOE -- Prey Tissue EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
F	Fish (≤ 11 cm)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	23	23	100	4.3	100	35		46	46	95% Adjusted Gamma UCL
F	Fish (≤ 11 cm)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	23	23	100	11	110	42		53	53	95% Adjusted Gamma UCL
F	Fish (≤ 11 cm)	OC Pesticides	Dieldrin	µg/kg	23	23	100	3.5	28	9.7		12	12	95% Student's-t UCL
F	Fish (≤ 11 cm)	OC Pesticides	Endosulfan I	µg/kg	23	0	0				1.3		1.3	Maximum DL
F	Fish (≤ 11 cm)	OC Pesticides	Endosulfan II	µg/kg	23	0	0				1.3		1.3	Maximum DL
F	Fish (≤ 11 cm)	OC Pesticides	Heptachlor epoxide	µg/kg	23	23	100	0.84	8.7	3.1		3.8	3.8	95% Student's-t UCL
F	Fish (≤ 11 cm)	OC Pesticides	Total DDx	µg/kg	23	23	100	26	100	55		62	62	95% Student's-t UCL
F	Fish (≤ 11 cm, above RM 4)	Metals	Arsenic	mg/kg	15	15	100	0.044	0.51	0.31		0.36	0.36	95% Student's-t UCL
F	Fish (≤ 11 cm, above RM 4)	Metals	Cadmium	mg/kg	15	15	100	0.0091	0.073	0.034		0.043	0.043	95% Student's-t UCL
F	Fish (≤ 11 cm, above RM 4)	Metals	Chromium	mg/kg	15	15	100	0.89	23.2	7.9		11	11	95% Student's-t UCL
F	Fish (≤ 11 cm, above RM 4)	Metals	Cobalt	mg/kg	15	15	100	0.031	0.35	0.18		0.22	0.22	95% Student's-t UCL
F	Fish (≤ 11 cm, above RM 4)	Metals	Copper	mg/kg	15	15	100	0.87	4.3	2.8		3.2	3.2	95% Student's-t UCL
F	Fish (≤ 11 cm, above RM 4)	Metals	Lead	mg/kg	15	15	100	0.15	3.9	1.9		2.4	2.4	95% Student's-t UCL
F	Fish (≤ 11 cm, above RM 4)	Metals	Mercury	ug/kg	15	15	100	30	68	46		51	51	95% Student's-t UCL
F	Fish (≤ 11 cm, above RM 4)	Metals	Methyl mercury	ug/kg	15	15	100	14	64	28		33	33	95% Student's-t UCL
F	Fish (≤ 11 cm, above RM 4)	Metals	Nickel	mg/kg	15	15	100	0.62	15.8	5.2		7.4	7.4	95% Student's-t UCL
F	Fish (≤ 11 cm, above RM 4)	Metals	Selenium	mg/kg	15	15	100	0.3	0.89	0.62		0.7	0.7	95% Student's-t UCL
F	Fish (≤ 11 cm, above RM 4)	Metals	Silver	mg/kg	15	14	93.3	0.013	0.06	0.036	0.0051	0.041	0.041	95% KM (t) UCL
F	Fish (≤ 11 cm, above RM 4)	Metals	Vanadium	mg/kg	15	15	100	0.05	1.3	0.66		0.84	0.84	95% Student's-t UCL
F	Fish (≤ 11 cm, above RM 4)	Metals	Zinc	mg/kg	15	15	100	25	48	39.2		42.3	42.3	95% Student's-t UCL
F	Fish (≤ 11 cm, above RM 4)	Butyltin	Tributyltin	ug/kg	15	14	93.3	0.23	7	2.9	0.99	3.8	3.8	95% KM (t) UCL
F	Fish (≤ 11 cm, above RM 4)	PAHs	Benzo(a)pyrene	ug/kg	15	15	100	2.1	63	25		34	34	95% Student's-t UCL
F	Fish (≤ 11 cm, above RM 4)	PAHs	Total PAHs	ug/kg	15	15	100	120	1100	400		530	530	95% Student's-t UCL
F	Fish (≤ 11 cm, above RM 4)	PCB Congeners	Total PCB Congeners	ug/kg	15	15	100	250	930	570		660	660	95% Student's-t UCL
F	Fish (≤ 11 cm, above RM 4)	PCB Congeners	PCB TEQ-Fish	ng/kg	15	15	100	0.25	0.89	0.6		0.68	0.68	95% Student's-t UCL
F	Fish (≤ 11 cm, above RM 4)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	15	15	100	3.7	100	42		54	54	95% Student's-t UCL
F	Fish (≤ 11 cm, above RM 4)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	15	15	100	4.3	100	43		55	55	95% Student's-t UCL
F	Fish (≤ 11 cm, above RM 4)	OC Pesticides	Dieldrin	ug/kg	15	15	100	5.5	28	13		15	15	95% Student's-t UCL
F	Fish (≤ 11 cm, above RM 4)	OC Pesticides	Endosulfan I	ug/kg	15	0	0				1.3		1.3	Maximum DL
F	Fish (≤ 11 cm, above RM 4)	OC Pesticides	Endosulfan II	ug/kg	15	0	0				1.3		1.3	Maximum DL
F	Fish (≤ 11 cm, above RM 4)	OC Pesticides	Endosulfan sulfate	ug/kg	15	11	73.3	0.076	0.41	0.22	0.16	0.23	0.23	95% KM (t) UCL
F	Fish (≤ 11 cm, above RM 4)	OC Pesticides	Endrin	ug/kg	15	0	0				0.69		0.69	Maximum DL
F	Fish (≤ 11 cm, above RM 4)	OC Pesticides	Total DDx	ug/kg	15	15	100	29	100	63		72	72	95% Student's-t UCL
B, F	Fish (≤ 13 cm)	Metals	Arsenic	mg/kg	26	26	100	0.044	0.51	0.32		0.35	0.35	95% Student's-t UCL
B, F	Fish (≤ 13 cm)	Metals	Cadmium	mg/kg	26	26	100	0.0091	0.099	0.031		0.039	0.039	95% Student's-t UCL
B, F	Fish (≤ 13 cm)	Metals	Chromium	mg/kg	26	26	100	0.89	31.7	7.3		11	11	95% Adjusted Gamma UCL
B, F	Fish (≤ 13 cm)	Metals	Cobalt	mg/kg	26	26	100	0.031	0.42	0.16		0.21	0.21	95% Adjusted Gamma UCL
B, F	Fish (≤ 13 cm)	Metals	Copper	mg/kg	26	26	100	0.87	5.4	2.9		3.2	3.2	95% Student's-t UCL
B, F	Fish (≤ 13 cm)	Metals	Lead	mg/kg	26	26	100	0.15	4.9	1.6		2.3	2.3	95% Adjusted Gamma UCL
B, F	Fish (≤ 13 cm)	Metals	Mercury	µg/kg	26	26	100	30	83	55		59	59	95% Student's-t UCL
B, F	Fish (≤ 13 cm)	Metals	Methyl mercury	µg/kg	26	26	100	14	69	38		55	55	95% Chebyshev (Mean, Sd) UCL
B, F	Fish (≤ 13 cm)	Metals	Nickel	mg/kg	26	26	100	0.62	22.1	4.9		7.1	7.1	95% Adjusted Gamma UCL
B, F	Fish (≤ 13 cm)	Metals	Selenium	mg/kg	26	26	100	0.22	0.89	0.62		0.67	0.67	95% Student's-t UCL
B, F	Fish (≤ 13 cm)	Metals	Silver	mg/kg	26	25	96.2	0.013	0.074	0.039	0.0051	0.043	0.043	95% KM (t) UCL
B, F	Fish (≤ 13 cm)	Metals	Vanadium	mg/kg	26	26	100	0.05	1.3	0.59		0.72	0.72	95% Student's-t UCL
B, F	Fish (≤ 13 cm)	Metals	Zinc	mg/kg	26	26	100	25	51.6	40		42.4	42.4	95% Student's-t UCL
B, F	Fish (≤ 13 cm)	PAHs	Benzo(a)pyrene	µg/kg	26	26	100	2.1	98	22		32	32	95% Adjusted Gamma UCL
B, F	Fish (≤ 13 cm)	PAHs	Total HPAHs	µg/kg	26	26	100	29	1000	240		440	440	95% H-UCL
B, F	Fish (≤ 13 cm)	PAHs	Total LPAHs	µg/kg	26	26	100	18	370	84		110	110	95% Adjusted Gamma UCL
B, F	Fish (≤ 13 cm)	PAHs	Total PAHs	µg/kg	26	26	100	48	1200	330		470	470	95% Adjusted Gamma UCL
B, F	Fish (≤ 13 cm)	PCB Congeners	Total PCB Congeners	µg/kg	26	26	100	240	930	490		560	560	95% Adjusted Gamma UCL
B, F	Fish (≤ 13 cm)	PCB Congeners	PCB TEQ-Bird	ng/kg	26	26	100	17	88	45		52	52	95% Student's-t UCL

Diet LOE -- Prey Tissue EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
B, F	Fish (≤ 13 cm)	PCB Congeners	PCB TEQ-Fish	ng/kg	26	26	100	0.25	0.89	0.53		0.59	0.59	95% Student's-t UCL
B, F	Fish (≤ 13 cm)	PCB Congeners	PCB TEQ-Mammal	ng/kg	26	26	100	3.3	12	6.7		7.4	7.4	95% Student's-t UCL
B, F	Fish (≤ 13 cm)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	26	26	100	2.4	100	34		42	42	95% Student's-t UCL
B, F	Fish (≤ 13 cm)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	26	26	100	9.9	110	38		48	48	95% Adjusted Gamma UCL
B, F	Fish (≤ 13 cm)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	26	26	100	3.7	100	35		43	43	95% Student's-t UCL
B, F	Fish (≤ 13 cm)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	26	26	100	3.8	100	35		45	45	95% Adjusted Gamma UCL
B, F	Fish (≤ 13 cm)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	26	26	100	30	170	83		96	96	95% Student's-t UCL
B, F	Fish (≤ 13 cm)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	26	26	100	4.3	100	36		46	46	95% Adjusted Gamma UCL
B, F	Fish (≤ 13 cm)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	26	26	100	11	110	42		52	52	95% Adjusted Gamma UCL
B, F	Fish (≤ 13 cm)	OC Pesticides	Dieldrin	µg/kg	26	26	100	3.5	28	9.6		11	11	95% Student's-t UCL
B, F	Fish (≤ 13 cm)	OC Pesticides	Endosulfan I	µg/kg	26	0	0				1.5		1.5	Maximum DL
B, F	Fish (≤ 13 cm)	OC Pesticides	Endosulfan II	µg/kg	26	0	0				1.5		1.5	Maximum DL
B, F	Fish (≤ 13 cm)	OC Pesticides	Heptachlor epoxide	µg/kg	26	26	100	0.84	8.7	3		3.7	3.7	95% Student's-t UCL
B, F	Fish (≤ 13 cm)	OC Pesticides	Total DDx	µg/kg	26	26	100	26	100	56		62	62	95% Student's-t UCL
B	Fish (≤ 13 cm, reach 1)	Metals	Arsenic	mg/kg	2	2	100	0.39	0.4	0.4			0.4	Maximum detect
B	Fish (≤ 13 cm, reach 1)	Metals	Cadmium	mg/kg	2	2	100	0.015	0.02	0.018			0.02	Maximum detect
B	Fish (≤ 13 cm, reach 1)	Metals	Chromium	mg/kg	2	2	100	1.3	4.9	3.1			4.9	Maximum detect
B	Fish (≤ 13 cm, reach 1)	Metals	Cobalt	mg/kg	2	2	100	0.061	0.095	0.078			0.095	Maximum detect
B	Fish (≤ 13 cm, reach 1)	Metals	Copper	mg/kg	2	2	100	2.5	2.9	2.7			2.9	Maximum detect
B	Fish (≤ 13 cm, reach 1)	Metals	Lead	mg/kg	2	2	100	0.41	0.77	0.59			0.77	Maximum detect
B	Fish (≤ 13 cm, reach 1)	Metals	Mercury	µg/kg	2	2	100	70	71	71			71	Maximum detect
B	Fish (≤ 13 cm, reach 1)	Metals	Methyl mercury	µg/kg	2	2	100	60	69	65			69	Maximum detect
B	Fish (≤ 13 cm, reach 1)	Metals	Nickel	mg/kg	2	2	100	1.1	3.1	2.1			3.1	Maximum detect
B	Fish (≤ 13 cm, reach 1)	Metals	Selenium	mg/kg	2	2	100	0.58	0.64	0.61			0.64	Maximum detect
B	Fish (≤ 13 cm, reach 1)	Metals	Silver	mg/kg	2	2	100	0.043	0.054	0.049			0.054	Maximum detect
B	Fish (≤ 13 cm, reach 1)	Metals	Vanadium	mg/kg	2	2	100	0.23	0.51	0.37			0.51	Maximum detect
B	Fish (≤ 13 cm, reach 1)	Metals	Zinc	mg/kg	2	2	100	46	48.2	47.1			48.2	Maximum detect
B	Fish (≤ 13 cm, reach 1)	PAHs	Benzo(a)pyrene	µg/kg	2	2	100	4.4	7	5.7			7	Maximum detect
B	Fish (≤ 13 cm, reach 1)	PAHs	Total HPAHs	µg/kg	2	2	100	42	68	55			68	Maximum detect
B	Fish (≤ 13 cm, reach 1)	PAHs	Total LPAHs	µg/kg	2	2	100	23	35	29			35	Maximum detect
B	Fish (≤ 13 cm, reach 1)	PAHs	Total PAHs	µg/kg	2	2	100	65	100	83			100	Maximum detect
B	Fish (≤ 13 cm, reach 1)	PCB Congeners	Total PCB Congeners	µg/kg	2	2	100	240	340	290			340	Maximum detect
B	Fish (≤ 13 cm, reach 1)	PCB Congeners	PCB TEQ-Bird	ng/kg	2	2	100	17	23	20			23	Maximum detect
B	Fish (≤ 13 cm, reach 1)	PCB Congeners	PCB TEQ-Fish	ng/kg	2	2	100	0.27	0.46	0.37			0.46	Maximum detect
B	Fish (≤ 13 cm, reach 1)	PCB Congeners	PCB TEQ-Mammal	ng/kg	2	2	100	3.6	6.5	5.1			6.5	Maximum detect
B	Fish (≤ 13 cm, reach 1)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	2	2	100	11	15	13			15	Maximum detect
B	Fish (≤ 13 cm, reach 1)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	2	2	100	12	17	15			17	Maximum detect
B	Fish (≤ 13 cm, reach 1)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	2	2	100	11	16	14			16	Maximum detect
B	Fish (≤ 13 cm, reach 1)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	2	2	100	11	16	14			16	Maximum detect
B	Fish (≤ 13 cm, reach 1)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	2	2	100	30	40	35			40	Maximum detect
B	Fish (≤ 13 cm, reach 1)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	2	2	100	12	16	14			16	Maximum detect
B	Fish (≤ 13 cm, reach 1)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	2	2	100	15	22	19			22	Maximum detect
B	Fish (≤ 13 cm, reach 1)	OC Pesticides	Dieldrin	µg/kg	2	2	100	3.5	3.5	3.5			3.5	Maximum detect
B	Fish (≤ 13 cm, reach 1)	OC Pesticides	Endosulfan I	µg/kg	2	0	0				0.4		0.4	Maximum DL
B	Fish (≤ 13 cm, reach 1)	OC Pesticides	Endosulfan II	µg/kg	2	0	0				0.47		0.47	Maximum DL
B	Fish (≤ 13 cm, reach 1)	OC Pesticides	Heptachlor epoxide	µg/kg	2	2	100	0.84	0.96	0.9			0.96	Maximum detect
B	Fish (≤ 13 cm, reach 1)	OC Pesticides	Total DDx	µg/kg	2	2	100	26	32	29			32	Maximum detect
B	Fish (≤ 13 cm, reach 2)	Metals	Arsenic	mg/kg	6	6	100	0.27	0.35	0.31		0.34	0.34	95% Student's-t UCL
B	Fish (≤ 13 cm, reach 2)	Metals	Cadmium	mg/kg	6	6	100	0.01	0.025	0.014		0.019	0.019	95% Modified-t UCL
B	Fish (≤ 13 cm, reach 2)	Metals	Chromium	mg/kg	6	6	100	0.91	6.8	2.9		4.6	4.6	95% Student's-t UCL
B	Fish (≤ 13 cm, reach 2)	Metals	Cobalt	mg/kg	6	6	100	0.046	0.12	0.069		0.093	0.093	95% Student's-t UCL
B	Fish (≤ 13 cm, reach 2)	Metals	Copper	mg/kg	6	6	100	2	3.4	2.7		3.1	3.1	95% Student's-t UCL

Diet LOE -- Prey Tissue EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
B	Fish (≤ 13 cm, reach 2)	Metals	Lead	mg/kg	6	6	100	0.38	0.86	0.54		0.68	0.68	95% Student's-t UCL
B	Fish (≤ 13 cm, reach 2)	Metals	Mercury	µg/kg	6	6	100	62	71	67		70	70	95% Student's-t UCL
B	Fish (≤ 13 cm, reach 2)	Metals	Methyl mercury	µg/kg	6	6	100	58	68	62		65	65	95% Student's-t UCL
B	Fish (≤ 13 cm, reach 2)	Metals	Nickel	mg/kg	6	6	100	0.88	4.9	2.2		3.4	3.4	95% Student's-t UCL
B	Fish (≤ 13 cm, reach 2)	Metals	Selenium	mg/kg	6	6	100	0.38	0.88	0.68		0.81	0.81	95% Student's-t UCL
B	Fish (≤ 13 cm, reach 2)	Metals	Silver	mg/kg	6	6	100	0.032	0.044	0.038		0.041	0.041	95% Student's-t UCL
B	Fish (≤ 13 cm, reach 2)	Metals	Vanadium	mg/kg	6	6	100	0.15	0.49	0.26		0.36	0.36	95% Student's-t UCL
B	Fish (≤ 13 cm, reach 2)	Metals	Zinc	mg/kg	6	6	100	42.3	51.6	44.9		47.7	47.7	95% Student's-t UCL
B	Fish (≤ 13 cm, reach 2)	PAHs	Benzo(a)pyrene	µg/kg	6	6	100	3.3	10	5.6		7.7	7.7	95% Student's-t UCL
B	Fish (≤ 13 cm, reach 2)	PAHs	Total HPAHs	µg/kg	6	6	100	29	81	46		61	61	95% Student's-t UCL
B	Fish (≤ 13 cm, reach 2)	PAHs	Total LPAHs	µg/kg	6	6	100	18	37	27		33	33	95% Student's-t UCL
B	Fish (≤ 13 cm, reach 2)	PAHs	Total PAHs	µg/kg	6	6	100	48	120	73		93	93	95% Student's-t UCL
B	Fish (≤ 13 cm, reach 2)	PCB Congeners	Total PCB Congeners	µg/kg	6	6	100	290	440	380		430	430	95% Student's-t UCL
B	Fish (≤ 13 cm, reach 2)	PCB Congeners	PCB TEQ-Bird	ng/kg	6	6	100	24	35	30		33	33	95% Student's-t UCL
B	Fish (≤ 13 cm, reach 2)	PCB Congeners	PCB TEQ-Fish	ng/kg	6	6	100	0.36	0.55	0.45		0.52	0.52	95% Student's-t UCL
B	Fish (≤ 13 cm, reach 2)	PCB Congeners	PCB TEQ-Mammal	ng/kg	6	6	100	4.6	7.2	6		6.8	6.8	95% Student's-t UCL
B	Fish (≤ 13 cm, reach 2)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	6	6	100	18	27	23		26	26	95% Student's-t UCL
B	Fish (≤ 13 cm, reach 2)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	6	6	100	19	29	25		28	28	95% Student's-t UCL
B	Fish (≤ 13 cm, reach 2)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	6	6	100	18	28	24		27	27	95% Student's-t UCL
B	Fish (≤ 13 cm, reach 2)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	6	6	100	18	28	24		26	26	95% Student's-t UCL
B	Fish (≤ 13 cm, reach 2)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	6	6	100	43	60	55		60	60	95% Student's-t UCL
B	Fish (≤ 13 cm, reach 2)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	6	6	100	19	28	24		27	27	95% Student's-t UCL
B	Fish (≤ 13 cm, reach 2)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	6	6	100	24	34	30		32	32	95% Student's-t UCL
B	Fish (≤ 13 cm, reach 2)	OC Pesticides	Dieldrin	µg/kg	6	6	100	3.7	5.4	4.5		5	5	95% Student's-t UCL
B	Fish (≤ 13 cm, reach 2)	OC Pesticides	Endosulfan I	µg/kg	6	0	0				0.58		0.58	Maximum DL
B	Fish (≤ 13 cm, reach 2)	OC Pesticides	Endosulfan II	µg/kg	6	0	0				0.66		0.66	Maximum DL
B	Fish (≤ 13 cm, reach 2)	OC Pesticides	Heptachlor epoxide	µg/kg	6	6	100	0.92	1.4	1.2		1.4	1.4	95% Student's-t UCL
B	Fish (≤ 13 cm, reach 2)	OC Pesticides	Total DDx	µg/kg	6	6	100	36	52	44		49	49	95% Student's-t UCL
B	Fish (≤ 13 cm, reach 3)	Metals	Arsenic	mg/kg	3	3	100	0.33	0.49	0.39			0.49	Maximum detect
B	Fish (≤ 13 cm, reach 3)	Metals	Cadmium	mg/kg	3	3	100	0.01	0.053	0.025			0.053	Maximum detect
B	Fish (≤ 13 cm, reach 3)	Metals	Chromium	mg/kg	3	3	100	1.5	7.1	3.5			7.1	Maximum detect
B	Fish (≤ 13 cm, reach 3)	Metals	Cobalt	mg/kg	3	3	100	0.059	0.22	0.11			0.22	Maximum detect
B	Fish (≤ 13 cm, reach 3)	Metals	Copper	mg/kg	3	3	100	2	3.5	2.7			3.5	Maximum detect
B	Fish (≤ 13 cm, reach 3)	Metals	Lead	mg/kg	3	3	100	0.45	1.7	0.88			1.7	Maximum detect
B	Fish (≤ 13 cm, reach 3)	Metals	Mercury	µg/kg	3	3	100	47	68	54			68	Maximum detect
B	Fish (≤ 13 cm, reach 3)	Metals	Methyl mercury	µg/kg	3	3	100	31	64	46			64	Maximum detect
B	Fish (≤ 13 cm, reach 3)	Metals	Nickel	mg/kg	3	3	100	1.2	4.8	2.5			4.8	Maximum detect
B	Fish (≤ 13 cm, reach 3)	Metals	Selenium	mg/kg	3	3	100	0.68	0.89	0.79			0.89	Maximum detect
B	Fish (≤ 13 cm, reach 3)	Metals	Silver	mg/kg	3	3	100	0.031	0.057	0.04			0.057	Maximum detect
B	Fish (≤ 13 cm, reach 3)	Metals	Vanadium	mg/kg	3	3	100	0.21	0.79	0.41			0.79	Maximum detect
B	Fish (≤ 13 cm, reach 3)	Metals	Zinc	mg/kg	3	3	100	41	43.5	42.5			43.5	Maximum detect
B	Fish (≤ 13 cm, reach 3)	PAHs	Benzo(a)pyrene	µg/kg	3	3	100	7.7	19	13			19	Maximum detect
B	Fish (≤ 13 cm, reach 3)	PAHs	Total HPAHs	µg/kg	3	3	100	67	180	110			180	Maximum detect
B	Fish (≤ 13 cm, reach 3)	PAHs	Total LPAHs	µg/kg	3	3	100	59	85	69			85	Maximum detect
B	Fish (≤ 13 cm, reach 3)	PAHs	Total PAHs	µg/kg	3	3	100	130	260	170			260	Maximum detect
B	Fish (≤ 13 cm, reach 3)	PCB Congeners	Total PCB Congeners	µg/kg	3	3	100	370	860	580			860	Maximum detect
B	Fish (≤ 13 cm, reach 3)	PCB Congeners	PCB TEQ-Bird	ng/kg	3	3	100	32	58	41			58	Maximum detect
B	Fish (≤ 13 cm, reach 3)	PCB Congeners	PCB TEQ-Fish	ng/kg	3	3	100	0.37	0.86	0.56			0.86	Maximum detect
B	Fish (≤ 13 cm, reach 3)	PCB Congeners	PCB TEQ-Mammal	ng/kg	3	3	100	4.7	11	7.2			11	Maximum detect
B	Fish (≤ 13 cm, reach 3)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	3	3	100	23	54	35			54	Maximum detect
B	Fish (≤ 13 cm, reach 3)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	3	3	100	25	58	38			58	Maximum detect
B	Fish (≤ 13 cm, reach 3)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	3	3	100	24	55	36			55	Maximum detect

Diet LOE -- Prey Tissue EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
B	Fish (≤ 13 cm, reach 3)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	3	3	100	24	55	36			55	Maximum detect
B	Fish (≤ 13 cm, reach 3)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	3	3	100	56	120	80			120	Maximum detect
B	Fish (≤ 13 cm, reach 3)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	3	3	100	24	56	37			56	Maximum detect
B	Fish (≤ 13 cm, reach 3)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	3	3	100	28	67	43			67	Maximum detect
B	Fish (≤ 13 cm, reach 3)	OC Pesticides	Dieldrin	µg/kg	3	3	100	5.5	9.2	7.2			9.2	Maximum detect
B	Fish (≤ 13 cm, reach 3)	OC Pesticides	Endosulfan I	µg/kg	3	0	0				0.79		0.79	Maximum DL
B	Fish (≤ 13 cm, reach 3)	OC Pesticides	Endosulfan II	µg/kg	3	0	0				0.81		0.81	Maximum DL
B	Fish (≤ 13 cm, reach 3)	OC Pesticides	Heptachlor epoxide	µg/kg	3	3	100	1.5	2.6	2			2.6	Maximum detect
B	Fish (≤ 13 cm, reach 3)	OC Pesticides	Total DDx	µg/kg	3	3	100	45	100	68			100	Maximum detect
B	Fish (≤ 13 cm, reach 4)	Metals	Arsenic	mg/kg	5	5	100	0.34	0.51	0.42			0.51	Maximum detect
B	Fish (≤ 13 cm, reach 4)	Metals	Cadmium	mg/kg	5	5	100	0.014	0.099	0.052			0.099	Maximum detect
B	Fish (≤ 13 cm, reach 4)	Metals	Chromium	mg/kg	5	5	100	1	12.2	5.3			12.2	Maximum detect
B	Fish (≤ 13 cm, reach 4)	Metals	Cobalt	mg/kg	5	5	100	0.062	0.28	0.17			0.28	Maximum detect
B	Fish (≤ 13 cm, reach 4)	Metals	Copper	mg/kg	5	5	100	2	5.4	3.5			5.4	Maximum detect
B	Fish (≤ 13 cm, reach 4)	Metals	Lead	mg/kg	5	5	100	0.53	4.9	2.7			4.9	Maximum detect
B	Fish (≤ 13 cm, reach 4)	Metals	Mercury	µg/kg	5	5	100	36	83	55			83	Maximum detect
B	Fish (≤ 13 cm, reach 4)	Metals	Methyl mercury	µg/kg	5	5	100	17	33	22			33	Maximum detect
B	Fish (≤ 13 cm, reach 4)	Metals	Nickel	mg/kg	5	5	100	0.81	6.6	2.9			6.6	Maximum detect
B	Fish (≤ 13 cm, reach 4)	Metals	Selenium	mg/kg	5	5	100	0.46	0.7	0.56			0.7	Maximum detect
B	Fish (≤ 13 cm, reach 4)	Metals	Silver	mg/kg	5	5	100	0.026	0.074	0.05			0.074	Maximum detect
B	Fish (≤ 13 cm, reach 4)	Metals	Vanadium	mg/kg	5	5	100	0.3	1.3	0.88			1.3	Maximum detect
B	Fish (≤ 13 cm, reach 4)	Metals	Zinc	mg/kg	5	5	100	30.1	44.1	39.6			44.1	Maximum detect
B	Fish (≤ 13 cm, reach 4)	PAHs	Benzo(a)pyrene	µg/kg	5	5	100	5.5	98	39			98	Maximum detect
B	Fish (≤ 13 cm, reach 4)	PAHs	Total HPAHs	µg/kg	5	5	100	71	1000	410			1000	Maximum detect
B	Fish (≤ 13 cm, reach 4)	PAHs	Total LPAHs	µg/kg	5	5	100	46	190	96			190	Maximum detect
B	Fish (≤ 13 cm, reach 4)	PAHs	Total PAHs	µg/kg	5	5	100	120	1200	510			1200	Maximum detect
B	Fish (≤ 13 cm, reach 4)	PCB Congeners	Total PCB Congeners	µg/kg	5	5	100	450	930	710			930	Maximum detect
B	Fish (≤ 13 cm, reach 4)	PCB Congeners	PCB TEQ-Bird	ng/kg	5	5	100	45	73	58			73	Maximum detect
B	Fish (≤ 13 cm, reach 4)	PCB Congeners	PCB TEQ-Fish	ng/kg	5	5	100	0.47	0.89	0.69			0.89	Maximum detect
B	Fish (≤ 13 cm, reach 4)	PCB Congeners	PCB TEQ-Mammal	ng/kg	5	5	100	5.9	12	8.9			12	Maximum detect
B	Fish (≤ 13 cm, reach 4)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	5	5	100	41	78	56			78	Maximum detect
B	Fish (≤ 13 cm, reach 4)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	5	5	100	45	84	62			84	Maximum detect
B	Fish (≤ 13 cm, reach 4)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	5	5	100	43	81	59			81	Maximum detect
B	Fish (≤ 13 cm, reach 4)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	5	5	100	43	80	58			80	Maximum detect
B	Fish (≤ 13 cm, reach 4)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	5	5	100	97	160	120			160	Maximum detect
B	Fish (≤ 13 cm, reach 4)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	5	5	100	43	81	59			81	Maximum detect
B	Fish (≤ 13 cm, reach 4)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	5	5	100	50	92	67			92	Maximum detect
B	Fish (≤ 13 cm, reach 4)	OC Pesticides	Dieldrin	µg/kg	5	5	100	9.2	13	11			13	Maximum detect
B	Fish (≤ 13 cm, reach 4)	OC Pesticides	Endosulfan I	µg/kg	5	0	0				1.1		1.1	Maximum DL
B	Fish (≤ 13 cm, reach 4)	OC Pesticides	Endosulfan II	µg/kg	5	0	0				1.1		1.1	Maximum DL
B	Fish (≤ 13 cm, reach 4)	OC Pesticides	Heptachlor epoxide	µg/kg	5	5	100	2.8	4.3	3.5			4.3	Maximum detect
B	Fish (≤ 13 cm, reach 4)	OC Pesticides	Total DDx	µg/kg	5	5	100	61	86	74			86	Maximum detect
B	Fish (≤ 13 cm, reach 5)	Metals	Arsenic	mg/kg	4	4	100	0.27	0.38	0.3			0.38	Maximum detect
B	Fish (≤ 13 cm, reach 5)	Metals	Cadmium	mg/kg	4	4	100	0.016	0.052	0.036			0.052	Maximum detect
B	Fish (≤ 13 cm, reach 5)	Metals	Chromium	mg/kg	4	4	100	6	23.2	11			23.2	Maximum detect
B	Fish (≤ 13 cm, reach 5)	Metals	Cobalt	mg/kg	4	4	100	0.12	0.34	0.2			0.34	Maximum detect
B	Fish (≤ 13 cm, reach 5)	Metals	Copper	mg/kg	4	4	100	1.6	3.8	2.8			3.8	Maximum detect
B	Fish (≤ 13 cm, reach 5)	Metals	Lead	mg/kg	4	4	100	0.96	3.1	1.9			3.1	Maximum detect
B	Fish (≤ 13 cm, reach 5)	Metals	Mercury	µg/kg	4	4	100	33	54	44			54	Maximum detect
B	Fish (≤ 13 cm, reach 5)	Metals	Methyl mercury	µg/kg	4	4	100	23	25	24			25	Maximum detect
B	Fish (≤ 13 cm, reach 5)	Metals	Nickel	mg/kg	4	4	100	4.1	15.8	7.5			15.8	Maximum detect
B	Fish (≤ 13 cm, reach 5)	Metals	Selenium	mg/kg	4	4	100	0.56	0.81	0.66			0.81	Maximum detect

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Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
B	Fish (≤ 13 cm, reach 5)	Metals	Silver	mg/kg	4	4	100	0.013	0.047	0.032			0.047	Maximum detect
B	Fish (≤ 13 cm, reach 5)	Metals	Vanadium	mg/kg	4	4	100	0.39	1.1	0.7			1.1	Maximum detect
B	Fish (≤ 13 cm, reach 5)	Metals	Zinc	mg/kg	4	4	100	29.8	42.3	35.4			42.3	Maximum detect
B	Fish (≤ 13 cm, reach 5)	PAHs	Benzo(a)pyrene	µg/kg	4	4	100	13	48	30			48	Maximum detect
B	Fish (≤ 13 cm, reach 5)	PAHs	Total HPAHs	µg/kg	4	4	100	160	480	330			480	Maximum detect
B	Fish (≤ 13 cm, reach 5)	PAHs	Total LPAHs	µg/kg	4	4	100	47	120	80			120	Maximum detect
B	Fish (≤ 13 cm, reach 5)	PAHs	Total PAHs	µg/kg	4	4	100	200	600	400			600	Maximum detect
B	Fish (≤ 13 cm, reach 5)	PCB Congeners	Total PCB Congeners	µg/kg	4	4	100	450	710	570			710	Maximum detect
B	Fish (≤ 13 cm, reach 5)	PCB Congeners	PCB TEQ-Bird	ng/kg	4	4	100	39	72	60			72	Maximum detect
B	Fish (≤ 13 cm, reach 5)	PCB Congeners	PCB TEQ-Fish	ng/kg	4	4	100	0.5	0.72	0.61			0.72	Maximum detect
B	Fish (≤ 13 cm, reach 5)	PCB Congeners	PCB TEQ-Mammal	ng/kg	4	4	100	6.2	8.9	7.3			8.9	Maximum detect
B	Fish (≤ 13 cm, reach 5)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	4	4	100	36	100	59			100	Maximum detect
B	Fish (≤ 13 cm, reach 5)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	4	4	100	39	110	65			110	Maximum detect
B	Fish (≤ 13 cm, reach 5)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	4	4	100	37	100	60			100	Maximum detect
B	Fish (≤ 13 cm, reach 5)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	4	4	100	37	100	60			100	Maximum detect
B	Fish (≤ 13 cm, reach 5)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	4	4	100	78	170	120			170	Maximum detect
B	Fish (≤ 13 cm, reach 5)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	4	4	100	38	100	61			100	Maximum detect
B	Fish (≤ 13 cm, reach 5)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	4	4	100	44	110	68			110	Maximum detect
B	Fish (≤ 13 cm, reach 5)	OC Pesticides	Dieldrin	µg/kg	4	4	100	8.2	14	11			14	Maximum detect
B	Fish (≤ 13 cm, reach 5)	OC Pesticides	Endosulfan I	µg/kg	4	0	0				1.5		1.5	Maximum DL
B	Fish (≤ 13 cm, reach 5)	OC Pesticides	Endosulfan II	µg/kg	4	0	0				1.5		1.5	Maximum DL
B	Fish (≤ 13 cm, reach 5)	OC Pesticides	Heptachlor epoxide	µg/kg	4	4	100	2.7	4.1	3.3			4.1	Maximum detect
B	Fish (≤ 13 cm, reach 5)	OC Pesticides	Total DDx	µg/kg	4	4	100	49	81	65			81	Maximum detect
B	Fish (≤ 13 cm, reach 6)	Metals	Arsenic	mg/kg	2	2	100	0.19	0.28	0.24			0.28	Maximum detect
B	Fish (≤ 13 cm, reach 6)	Metals	Cadmium	mg/kg	2	2	100	0.038	0.051	0.045			0.051	Maximum detect
B	Fish (≤ 13 cm, reach 6)	Metals	Chromium	mg/kg	2	2	100	10.2	16.4	13.3			16.4	Maximum detect
B	Fish (≤ 13 cm, reach 6)	Metals	Cobalt	mg/kg	2	2	100	0.26	0.27	0.27			0.27	Maximum detect
B	Fish (≤ 13 cm, reach 6)	Metals	Copper	mg/kg	2	2	100	2.9	4.1	3.5			4.1	Maximum detect
B	Fish (≤ 13 cm, reach 6)	Metals	Lead	mg/kg	2	2	100	2.5	3.2	2.9			3.2	Maximum detect
B	Fish (≤ 13 cm, reach 6)	Metals	Mercury	µg/kg	2	2	100	50	50	50			50	Maximum detect
B	Fish (≤ 13 cm, reach 6)	Metals	Methyl mercury	µg/kg	2	2	100	14	31	23			31	Maximum detect
B	Fish (≤ 13 cm, reach 6)	Metals	Nickel	mg/kg	2	2	100	6.9	9.9	8.4			9.9	Maximum detect
B	Fish (≤ 13 cm, reach 6)	Metals	Selenium	mg/kg	2	2	100	0.44	0.69	0.57			0.69	Maximum detect
B	Fish (≤ 13 cm, reach 6)	Metals	Silver	mg/kg	2	2	100	0.023	0.045	0.034			0.045	Maximum detect
B	Fish (≤ 13 cm, reach 6)	Metals	Vanadium	mg/kg	2	2	100	0.9	0.9	0.9			0.9	Maximum detect
B	Fish (≤ 13 cm, reach 6)	Metals	Zinc	mg/kg	2	2	100	26.3	40.9	33.6			40.9	Maximum detect
B	Fish (≤ 13 cm, reach 6)	PAHs	Benzo(a)pyrene	µg/kg	2	2	100	33	48	41			48	Maximum detect
B	Fish (≤ 13 cm, reach 6)	PAHs	Total HPAHs	µg/kg	2	2	100	290	620	460			620	Maximum detect
B	Fish (≤ 13 cm, reach 6)	PAHs	Total LPAHs	µg/kg	2	2	100	74	160	120			160	Maximum detect
B	Fish (≤ 13 cm, reach 6)	PAHs	Total PAHs	µg/kg	2	2	100	360	780	570			780	Maximum detect
B	Fish (≤ 13 cm, reach 6)	PCB Congeners	Total PCB Congeners	µg/kg	2	2	100	430	450	440			450	Maximum detect
B	Fish (≤ 13 cm, reach 6)	PCB Congeners	PCB TEQ-Bird	ng/kg	2	2	100	41	43	42			43	Maximum detect
B	Fish (≤ 13 cm, reach 6)	PCB Congeners	PCB TEQ-Fish	ng/kg	2	2	100	0.46	0.51	0.49			0.51	Maximum detect
B	Fish (≤ 13 cm, reach 6)	PCB Congeners	PCB TEQ-Mammal	ng/kg	2	2	100	5.9	6.4	6.2			6.4	Maximum detect
B	Fish (≤ 13 cm, reach 6)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	2	2	100	28	35	32			35	Maximum detect
B	Fish (≤ 13 cm, reach 6)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	2	2	100	31	41	36			41	Maximum detect
B	Fish (≤ 13 cm, reach 6)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	2	2	100	29	37	33			37	Maximum detect
B	Fish (≤ 13 cm, reach 6)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	2	2	100	29	37	33			37	Maximum detect
B	Fish (≤ 13 cm, reach 6)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	2	2	100	74	82	78			82	Maximum detect
B	Fish (≤ 13 cm, reach 6)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	2	2	100	30	37	34			37	Maximum detect
B	Fish (≤ 13 cm, reach 6)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	2	2	100	35	43	39			43	Maximum detect
B	Fish (≤ 13 cm, reach 6)	OC Pesticides	Dieldrin	µg/kg	2	2	100	17	28	23			28	Maximum detect

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Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
B	Fish (≤ 13 cm, reach 6)	OC Pesticides	Endosulfan I	µg/kg	2	0	0				1.3		1.3	Maximum DL
B	Fish (≤ 13 cm, reach 6)	OC Pesticides	Endosulfan II	µg/kg	2	0	0				1.3		1.3	Maximum DL
B	Fish (≤ 13 cm, reach 6)	OC Pesticides	Heptachlor epoxide	µg/kg	2	2	100	5.7	8.7	7.2			8.7	Maximum detect
B	Fish (≤ 13 cm, reach 6)	OC Pesticides	Total DDx	µg/kg	2	2	100	58	67	63			67	Maximum detect
B	Fish (≤ 13 cm, reach 7)	Metals	Arsenic	mg/kg	1	1	100	0.19	0.19				0.19	Maximum detect
B	Fish (≤ 13 cm, reach 7)	Metals	Cadmium	mg/kg	1	1	100	0.048	0.048				0.048	Maximum detect
B	Fish (≤ 13 cm, reach 7)	Metals	Chromium	mg/kg	1	1	100	4.3	4.3				4.3	Maximum detect
B	Fish (≤ 13 cm, reach 7)	Metals	Cobalt	mg/kg	1	1	100	0.19	0.19				0.19	Maximum detect
B	Fish (≤ 13 cm, reach 7)	Metals	Copper	mg/kg	1	1	100	3.6	3.6				3.6	Maximum detect
B	Fish (≤ 13 cm, reach 7)	Metals	Lead	mg/kg	1	1	100	2.5	2.5				2.5	Maximum detect
B	Fish (≤ 13 cm, reach 7)	Metals	Mercury	µg/kg	1	1	100	43	43				43	Maximum detect
B	Fish (≤ 13 cm, reach 7)	Metals	Methyl mercury	µg/kg	1	1	100	17	17				17	Maximum detect
B	Fish (≤ 13 cm, reach 7)	Metals	Nickel	mg/kg	1	1	100	3	3				3	Maximum detect
B	Fish (≤ 13 cm, reach 7)	Metals	Selenium	mg/kg	1	1	100	0.3	0.3				0.3	Maximum detect
B	Fish (≤ 13 cm, reach 7)	Metals	Silver	mg/kg	1	1	100	0.04	0.04				0.04	Maximum detect
B	Fish (≤ 13 cm, reach 7)	Metals	Vanadium	mg/kg	1	1	100	0.68	0.68				0.68	Maximum detect
B	Fish (≤ 13 cm, reach 7)	Metals	Zinc	mg/kg	1	1	100	25	25				25	Maximum detect
B	Fish (≤ 13 cm, reach 7)	PAHs	Benzo(a)pyrene	µg/kg	1	1	100	28	28				28	Maximum detect
B	Fish (≤ 13 cm, reach 7)	PAHs	Total HPAHs	µg/kg	1	1	100	340	340				340	Maximum detect
B	Fish (≤ 13 cm, reach 7)	PAHs	Total LPAHs	µg/kg	1	1	100	85	85				85	Maximum detect
B	Fish (≤ 13 cm, reach 7)	PAHs	Total PAHs	µg/kg	1	1	100	430	430				430	Maximum detect
B	Fish (≤ 13 cm, reach 7)	PCB Congeners	Total PCB Congeners	µg/kg	1	1	100	250	250				250	Maximum detect
B	Fish (≤ 13 cm, reach 7)	PCB Congeners	PCB TEQ-Bird	ng/kg	1	1	100	20	20				20	Maximum detect
B	Fish (≤ 13 cm, reach 7)	PCB Congeners	PCB TEQ-Fish	ng/kg	1	1	100	0.25	0.25				0.25	Maximum detect
B	Fish (≤ 13 cm, reach 7)	PCB Congeners	PCB TEQ-Mammal	ng/kg	1	1	100	3.3	3.3				3.3	Maximum detect
B	Fish (≤ 13 cm, reach 7)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	1	1	100	11	11				11	Maximum detect
B	Fish (≤ 13 cm, reach 7)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	1	1	100	15	15				15	Maximum detect
B	Fish (≤ 13 cm, reach 7)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	1	1	100	12	12				12	Maximum detect
B	Fish (≤ 13 cm, reach 7)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	1	1	100	12	12				12	Maximum detect
B	Fish (≤ 13 cm, reach 7)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	1	1	100	35	35				35	Maximum detect
B	Fish (≤ 13 cm, reach 7)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	1	1	100	12	12				12	Maximum detect
B	Fish (≤ 13 cm, reach 7)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	1	1	100	16	16				16	Maximum detect
B	Fish (≤ 13 cm, reach 7)	OC Pesticides	Dieldrin	µg/kg	1	1	100	11	11				11	Maximum detect
B	Fish (≤ 13 cm, reach 7)	OC Pesticides	Endosulfan I	µg/kg	1	0	0				0.81		0.81	Maximum DL
B	Fish (≤ 13 cm, reach 7)	OC Pesticides	Endosulfan II	µg/kg	1	0	0				1		1	Maximum DL
B	Fish (≤ 13 cm, reach 7)	OC Pesticides	Heptachlor epoxide	µg/kg	1	1	100	4	4				4	Maximum detect
B	Fish (≤ 13 cm, reach 7)	OC Pesticides	Total DDx	µg/kg	1	1	100	29	29				29	Maximum detect
B	Fish (≤ 13 cm, reach 8)	Metals	Arsenic	mg/kg	3	3	100	0.044	0.21	0.15			0.21	Maximum detect
B	Fish (≤ 13 cm, reach 8)	Metals	Cadmium	mg/kg	3	3	100	0.0091	0.037	0.028			0.037	Maximum detect
B	Fish (≤ 13 cm, reach 8)	Metals	Chromium	mg/kg	3	3	100	0.89	31.7	18			31.7	Maximum detect
B	Fish (≤ 13 cm, reach 8)	Metals	Cobalt	mg/kg	3	3	100	0.031	0.42	0.27			0.42	Maximum detect
B	Fish (≤ 13 cm, reach 8)	Metals	Copper	mg/kg	3	3	100	0.87	3.7	2.5			3.7	Maximum detect
B	Fish (≤ 13 cm, reach 8)	Metals	Lead	mg/kg	3	3	100	0.15	3.1	2			3.1	Maximum detect
B	Fish (≤ 13 cm, reach 8)	Metals	Mercury	µg/kg	3	3	100	30	48	41			48	Maximum detect
B	Fish (≤ 13 cm, reach 8)	Metals	Methyl mercury	µg/kg	3	3	100	21	29	26			29	Maximum detect
B	Fish (≤ 13 cm, reach 8)	Metals	Nickel	mg/kg	3	3	100	0.62	22.1	13			22.1	Maximum detect
B	Fish (≤ 13 cm, reach 8)	Metals	Selenium	mg/kg	3	3	100	0.22	0.76	0.5			0.76	Maximum detect
B	Fish (≤ 13 cm, reach 8)	Metals	Silver	mg/kg	3	2	66.7	0.024	0.028	0.026	0.0051		0.028	Maximum detect
B	Fish (≤ 13 cm, reach 8)	Metals	Vanadium	mg/kg	3	3	100	0.05	1.1	0.72			1.1	Maximum detect
B	Fish (≤ 13 cm, reach 8)	Metals	Zinc	mg/kg	3	3	100	29.1	48	39.4			48	Maximum detect
B	Fish (≤ 13 cm, reach 8)	PAHs	Benzo(a)pyrene	µg/kg	3	3	100	2.1	63	25			63	Maximum detect
B	Fish (≤ 13 cm, reach 8)	PAHs	Total HPAHs	µg/kg	3	3	100	78	860	350			860	Maximum detect

Diet LOE -- Prey Tissue EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
B	Fish (≤ 13 cm, reach 8)	PAHs	Total LPAHs	µg/kg	3	3	100	69	370	210			370	Maximum detect
B	Fish (≤ 13 cm, reach 8)	PAHs	Total PAHs	µg/kg	3	3	100	170	1100	570			1100	Maximum detect
B	Fish (≤ 13 cm, reach 8)	PCB Congeners	Total PCB Congeners	µg/kg	3	3	100	310	480	400			480	Maximum detect
B	Fish (≤ 13 cm, reach 8)	PCB Congeners	PCB TEQ-Bird	ng/kg	3	3	100	24	88	64			88	Maximum detect
B	Fish (≤ 13 cm, reach 8)	PCB Congeners	PCB TEQ-Fish	ng/kg	3	3	100	0.33	0.64	0.53			0.64	Maximum detect
B	Fish (≤ 13 cm, reach 8)	PCB Congeners	PCB TEQ-Mammal	ng/kg	3	3	100	4.5	7.2	6.2			7.2	Maximum detect
B	Fish (≤ 13 cm, reach 8)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	3	3	100	2.4	16	8.5			16	Maximum detect
B	Fish (≤ 13 cm, reach 8)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	3	3	100	9.9	23	15			23	Maximum detect
B	Fish (≤ 13 cm, reach 8)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	3	3	100	3.7	18	10			18	Maximum detect
B	Fish (≤ 13 cm, reach 8)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	3	3	100	3.8	18	10			18	Maximum detect
B	Fish (≤ 13 cm, reach 8)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	3	3	100	35	100	78			100	Maximum detect
B	Fish (≤ 13 cm, reach 8)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	3	3	100	4.3	19	11			19	Maximum detect
B	Fish (≤ 13 cm, reach 8)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	3	3	100	11	25	16			25	Maximum detect
B	Fish (≤ 13 cm, reach 8)	OC Pesticides	Dieldrin	µg/kg	3	3	100	8.4	17	13			17	Maximum detect
B	Fish (≤ 13 cm, reach 8)	OC Pesticides	Endosulfan I	µg/kg	3	0	0				1.1		1.1	Maximum DL
B	Fish (≤ 13 cm, reach 8)	OC Pesticides	Endosulfan II	µg/kg	3	0	0				1		1	Maximum DL
B	Fish (≤ 13 cm, reach 8)	OC Pesticides	Heptachlor epoxide	µg/kg	3	3	100	3.1	6.6	5.1			6.6	Maximum detect
B	Fish (≤ 13 cm, reach 8)	OC Pesticides	Total DDx	µg/kg	3	3	100	33	56	46			56	Maximum detect
F	Fish (≤ 13 cm, above RM 4)	Metals	Arsenic	mg/kg	18	18	100	0.044	0.51	0.31		0.36	0.36	95% Student's-t UCL
F	Fish (≤ 13 cm, above RM 4)	Metals	Cadmium	mg/kg	18	18	100	0.0091	0.099	0.039		0.049	0.049	95% Student's-t UCL
F	Fish (≤ 13 cm, above RM 4)	Metals	Chromium	mg/kg	18	18	100	0.89	31.7	9.3		13	13	95% Student's-t UCL
F	Fish (≤ 13 cm, above RM 4)	Metals	Cobalt	mg/kg	18	18	100	0.031	0.42	0.2		0.24	0.24	95% Student's-t UCL
F	Fish (≤ 13 cm, above RM 4)	Metals	Copper	mg/kg	18	18	100	0.87	5.4	3		3.5	3.5	95% Student's-t UCL
F	Fish (≤ 13 cm, above RM 4)	Metals	Lead	mg/kg	18	18	100	0.15	4.9	2.1		2.7	2.7	95% Student's-t UCL
F	Fish (≤ 13 cm, above RM 4)	Metals	Mercury	µg/kg	18	18	100	30	83	49		54	54	95% Student's-t UCL
F	Fish (≤ 13 cm, above RM 4)	Metals	Methyl mercury	µg/kg	18	18	100	14	64	27		32	32	95% Student's-t UCL
F	Fish (≤ 13 cm, above RM 4)	Metals	Nickel	mg/kg	18	18	100	0.62	22.1	6.1		9.8	9.8	95% Adjusted Gamma UCL
F	Fish (≤ 13 cm, above RM 4)	Metals	Selenium	mg/kg	18	18	100	0.22	0.89	0.6		0.67	0.67	95% Student's-t UCL
F	Fish (≤ 13 cm, above RM 4)	Metals	Silver	mg/kg	18	17	94.4	0.013	0.074	0.039	0.0051	0.044	0.044	95% KM (t) UCL
F	Fish (≤ 13 cm, above RM 4)	Metals	Vanadium	mg/kg	18	18	100	0.05	1.3	0.72		0.88	0.88	95% Student's-t UCL
F	Fish (≤ 13 cm, above RM 4)	Metals	Zinc	mg/kg	18	18	100	25	48	37.7		40.5	40.5	95% Student's-t UCL
F	Fish (≤ 13 cm, above RM 4)	PAHs	Benzo(a)pyrene	µg/kg	18	18	100	2.1	98	30		40	40	95% Student's-t UCL
F	Fish (≤ 13 cm, above RM 4)	PAHs	Total HPAHs	µg/kg	18	18	100	67	1000	330		450	450	95% Student's-t UCL
F	Fish (≤ 13 cm, above RM 4)	PAHs	Total LPAHs	µg/kg	18	18	100	46	370	110		140	140	95% H-UCL
F	Fish (≤ 13 cm, above RM 4)	PAHs	Total PAHs	µg/kg	18	18	100	120	1200	440		570	570	95% Student's-t UCL
F	Fish (≤ 13 cm, above RM 4)	PCB Congeners	Total PCB Congeners	µg/kg	18	18	100	250	930	550		630	630	95% Student's-t UCL
F	Fish (≤ 13 cm, above RM 4)	PCB Congeners	PCB TEQ-Bird	ng/kg	18	18	100	20	88	53		61	61	95% Student's-t UCL
F	Fish (≤ 13 cm, above RM 4)	PCB Congeners	PCB TEQ-Fish	ng/kg	18	18	100	0.25	0.89	0.58		0.65	0.65	95% Student's-t UCL
F	Fish (≤ 13 cm, above RM 4)	PCB Congeners	PCB TEQ-Mammal	ng/kg	18	18	100	3.3	12	7.2		8.1	8.1	95% Student's-t UCL
F	Fish (≤ 13 cm, above RM 4)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	18	18	100	2.4	100	40		50	50	95% Student's-t UCL
F	Fish (≤ 13 cm, above RM 4)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	18	18	100	9.9	110	45		56	56	95% Student's-t UCL
F	Fish (≤ 13 cm, above RM 4)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	18	18	100	3.7	100	42		52	52	95% Student's-t UCL
F	Fish (≤ 13 cm, above RM 4)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	18	18	100	3.8	100	42		52	52	95% Student's-t UCL
F	Fish (≤ 13 cm, above RM 4)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	18	18	100	35	170	98		110	110	95% Student's-t UCL
F	Fish (≤ 13 cm, above RM 4)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	18	18	100	4.3	100	42		52	52	95% Student's-t UCL
F	Fish (≤ 13 cm, above RM 4)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	18	18	100	11	110	49		60	60	95% Student's-t UCL
F	Fish (≤ 13 cm, above RM 4)	OC Pesticides	Dieldrin	µg/kg	18	18	100	5.5	28	12		14	14	95% Student's-t UCL
F	Fish (≤ 13 cm, above RM 4)	OC Pesticides	Endosulfan I	µg/kg	18	0	0				1.5		1.5	Maximum DL
F	Fish (≤ 13 cm, above RM 4)	OC Pesticides	Endosulfan II	µg/kg	18	0	0				1.5		1.5	Maximum DL
F	Fish (≤ 13 cm, above RM 4)	OC Pesticides	Heptachlor epoxide	µg/kg	18	18	100	1.5	8.7	3.9		4.6	4.6	95% Student's-t UCL
F	Fish (≤ 13 cm, above RM 4)	OC Pesticides	Total DDx	µg/kg	18	18	100	29	100	63		70	70	95% Student's-t UCL
F	Fish (≤ 20 cm)	Metals	Arsenic	mg/kg	43	43	100	0.044	0.52	0.28		0.31	0.31	95% Student's-t UCL

Diet LOE -- Prey Tissue EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
F	Fish (≤ 20 cm)	Metals	Cadmium	mg/kg	43	43	100	0.004	0.099	0.025		0.039	0.039	95% Chebyshev (Mean, Sd) UCL
F	Fish (≤ 20 cm)	Metals	Chromium	mg/kg	43	43	100	0.87	125	9.2		12	12	95% H-UCL
F	Fish (≤ 20 cm)	Metals	Cobalt	mg/kg	43	43	100	0.031	1.1	0.15		0.19	0.19	95% H-UCL
F	Fish (≤ 20 cm)	Metals	Copper	mg/kg	43	43	100	0.87	14.7	4.1		4.8	4.8	95% Adjusted Gamma UCL
F	Fish (≤ 20 cm)	Metals	Lead	mg/kg	43	43	100	0.15	4.9	1.2		2	2	95% Chebyshev (Mean, Sd) UCL
F	Fish (≤ 20 cm)	Metals	Mercury	µg/kg	43	43	100	30	180	77		87	87	95% Modified-t UCL
F	Fish (≤ 20 cm)	Metals	Methyl mercury	µg/kg	43	43	100	14	190	65		78	78	95% Adjusted Gamma UCL
F	Fish (≤ 20 cm)	Metals	Nickel	mg/kg	43	43	100	0.62	89.1	6.3		7.8	7.8	95% H-UCL
F	Fish (≤ 20 cm)	Metals	Selenium	mg/kg	43	43	100	0.22	1.6	0.73		0.81	0.81	95% Student's-t UCL
F	Fish (≤ 20 cm)	Metals	Silver	mg/kg	43	42	97.7	0.0067	0.19	0.054	0.0051	0.08	0.08	95% KM (Chebyshev) UCL
F	Fish (≤ 20 cm)	Metals	Vanadium	mg/kg	43	43	100	0.04	1.3	0.44		0.57	0.57	95% Adjusted Gamma UCL
F	Fish (≤ 20 cm)	Metals	Zinc	mg/kg	43	43	100	20.8	51.6	34.4		36.8	36.8	95% Student's-t UCL
F	Fish (≤ 20 cm)	PAHs	Benzo(a)pyrene	µg/kg	43	39	90.7	1.5	98	19	2.2	32	32	95% KM (Chebyshev) UCL
F	Fish (≤ 20 cm)	PAHs	Total HPAHs	µg/kg	43	43	100	29	1000	220		310	310	95% H-UCL
F	Fish (≤ 20 cm)	PAHs	Total LPAHs	µg/kg	43	43	100	18	370	120		140	140	95% Adjusted Gamma UCL
F	Fish (≤ 20 cm)	PAHs	Total PAHs	µg/kg	43	43	100	48	1200	340		420	420	95% Adjusted Gamma UCL
F	Fish (≤ 20 cm)	PCB Congeners	Total PCB Congeners	µg/kg	43	43	100	170	5100	1100		1800	1800	95% Chebyshev (Mean, Sd) UCL
F	Fish (≤ 20 cm)	PCB Congeners	PCB TEQ-Bird	ng/kg	43	43	100	17	310	100		160	160	95% Chebyshev (Mean, Sd) UCL
F	Fish (≤ 20 cm)	PCB Congeners	PCB TEQ-Fish	ng/kg	43	43	100	0.19	3.1	1		1.5	1.5	95% Chebyshev (Mean, Sd) UCL
F	Fish (≤ 20 cm)	PCB Congeners	PCB TEQ-Mammal	ng/kg	43	43	100	2.1	36	12		18	18	95% Chebyshev (Mean, Sd) UCL
F	Fish (≤ 20 cm)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	43	43	100	2.4	230	69		110	110	95% H-UCL
F	Fish (≤ 20 cm)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	43	43	100	9.1	250	78		120	120	95% Chebyshev (Mean, Sd) UCL
F	Fish (≤ 20 cm)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	43	43	100	3.7	240	73		110	110	95% H-UCL
F	Fish (≤ 20 cm)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	43	43	100	3.8	240	72		110	110	95% H-UCL
F	Fish (≤ 20 cm)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	43	43	100	30	560	180		290	290	95% Chebyshev (Mean, Sd) UCL
F	Fish (≤ 20 cm)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	43	43	100	4.3	240	73		120	120	95% Chebyshev (Mean, Sd) UCL
F	Fish (≤ 20 cm)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	43	43	100	10	270	84		130	130	95% Chebyshev (Mean, Sd) UCL
F	Fish (≤ 20 cm)	OC Pesticides	Dieldrin	µg/kg	43	43	100	3.5	47	17		20	20	95% Adjusted Gamma UCL
F	Fish (≤ 20 cm)	OC Pesticides	Endosulfan I	µg/kg	43	0	0				3.2		3.2	Maximum DL
F	Fish (≤ 20 cm)	OC Pesticides	Endosulfan II	µg/kg	43	0	0				3.7		3.7	Maximum DL
F	Fish (≤ 20 cm)	OC Pesticides	Heptachlor epoxide	µg/kg	43	43	100	0.84	18	6		7.6	7.6	95% Adjusted Gamma UCL
F	Fish (≤ 20 cm)	OC Pesticides	Total DDx	µg/kg	43	43	100	22	340	100		130	130	95% H-UCL
F	Fish (≤ 20 cm, above RM 4)	Metals	Arsenic	mg/kg	35	35	100	0.044	0.52	0.27		0.31	0.31	95% Adjusted Gamma UCL
F	Fish (≤ 20 cm, above RM 4)	Metals	Cadmium	mg/kg	35	35	100	0.004	0.099	0.027		0.044	0.044	95% Chebyshev (Mean, Sd) UCL
F	Fish (≤ 20 cm, above RM 4)	Metals	Chromium	mg/kg	35	35	100	0.87	125	11		16	16	95% H-UCL
F	Fish (≤ 20 cm, above RM 4)	Metals	Cobalt	mg/kg	35	35	100	0.031	1.1	0.17		0.22	0.22	95% Adjusted Gamma UCL
F	Fish (≤ 20 cm, above RM 4)	Metals	Copper	mg/kg	35	35	100	0.87	14.7	4.5		5.3	5.3	95% Adjusted Gamma UCL
F	Fish (≤ 20 cm, above RM 4)	Metals	Lead	mg/kg	35	35	100	0.15	4.9	1.3		2.3	2.3	95% Chebyshev (Mean, Sd) UCL
F	Fish (≤ 20 cm, above RM 4)	Metals	Mercury	ug/kg	35	35	100	30	180	79		94	94	95% H-UCL
F	Fish (≤ 20 cm, above RM 4)	Metals	Methyl mercury	ug/kg	35	35	100	14	190	65		100	100	95% Chebyshev (Mean, Sd) UCL
F	Fish (≤ 20 cm, above RM 4)	Metals	Nickel	mg/kg	35	35	100	0.62	89.1	7.2		10	10	95% H-UCL
F	Fish (≤ 20 cm, above RM 4)	Metals	Selenium	mg/kg	35	35	100	0.22	1.6	0.75		0.84	0.84	95% Student's-t UCL
F	Fish (≤ 20 cm, above RM 4)	Metals	Silver	mg/kg	35	34	97.1	0.0067	0.19	0.057	0.0051	0.088	0.088	95% KM (Chebyshev) UCL
F	Fish (≤ 20 cm, above RM 4)	Metals	Vanadium	mg/kg	35	35	100	0.04	1.3	0.48		0.79	0.79	95% Chebyshev (Mean, Sd) UCL
F	Fish (≤ 20 cm, above RM 4)	Metals	Zinc	mg/kg	35	35	100	20.8	48	31.9		34.2	34.2	or 95% Modified-t UCL
F	Fish (≤ 20 cm, above RM 4)	Butyltin	Tributyltin	ug/kg	35	33	94.3	0.18	16	5.2	1	8.3	8.3	95% KM (Chebyshev) UCL
F	Fish (≤ 20 cm, above RM 4)	PAHs	Benzo(a)pyrene	ug/kg	35	31	88.6	1.5	98	23	2.2	38	38	95% KM (Chebyshev) UCL
F	Fish (≤ 20 cm, above RM 4)	PAHs	Total PAHs	ug/kg	35	35	100	100	1200	400		480	480	95% Adjusted Gamma UCL
F	Fish (≤ 20 cm, above RM 4)	PCB Congeners	Total PCB Congeners	ug/kg	35	35	100	170	5100	1300		1800	1800	95% H-UCL
F	Fish (≤ 20 cm, above RM 4)	PCB Congeners	PCB TEQ-Fish	ng/kg	35	35	100	0.19	3.1	1.1		1.5	1.5	95% H-UCL
F	Fish (≤ 20 cm, above RM 4)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	35	35	100	3.7	240	85		140	140	95% Chebyshev (Mean, Sd) UCL
F	Fish (≤ 20 cm, above RM 4)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	35	35	100	4.3	240	85		140	140	95% Chebyshev (Mean, Sd) UCL

Diet LOE -- Prey Tissue EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
F	Fish (≤ 20 cm, above RM 4)	OC Pesticides	Dieldrin	ug/kg	35	35	100	5.5	47	20		23	23	95% Student's-t UCL
F	Fish (≤ 20 cm, above RM 4)	OC Pesticides	Endosulfan I	ug/kg	35	0	0				3.2		3.2	Maximum DL
F	Fish (≤ 20 cm, above RM 4)	OC Pesticides	Endosulfan II	ug/kg	35	0	0				3.7		3.7	Maximum DL
F	Fish (≤ 20 cm, above RM 4)	OC Pesticides	Endosulfan sulfate	ug/kg	35	24	68.6	0.076	1.5	0.46	0.77	0.48	0.48	95% KM (BCA) UCL
F	Fish (≤ 20 cm, above RM 4)	OC Pesticides	Endrin	ug/kg	35	2	5.7	0.14	0.23	0.19	1.1		0.23	Maximum detect
F	Fish (≤ 20 cm, above RM 4)	OC Pesticides	Total DDx	ug/kg	35	35	100	22	340	120		150	150	95% H-UCL
M	Fish (≤ 30 cm)	Metals	Arsenic	mg/kg	62	58	93.5	0.031	0.52	0.24	0.17	0.26	0.26	95% KM (t) UCL
M	Fish (≤ 30 cm)	Metals	Cadmium	mg/kg	62	62	100	0.003	0.19	0.026		0.033	0.033	95% H-UCL
M	Fish (≤ 30 cm)	Metals	Chromium	mg/kg	62	62	100	0.12	125	6.7		9.3	9.3	95% H-UCL
M	Fish (≤ 30 cm)	Metals	Cobalt	mg/kg	62	62	100	0.016	1.1	0.12		0.14	0.14	95% H-UCL
M	Fish (≤ 30 cm)	Metals	Copper	mg/kg	62	62	100	0.4	50.9	4.7		6.1	6.1	95% H-UCL
M	Fish (≤ 30 cm)	Metals	Lead	mg/kg	62	62	100	0.052	4.9	0.99		1.6	1.6	95% Chebyshev (Mean, Sd) UCL
M	Fish (≤ 30 cm)	Metals	Mercury	µg/kg	62	62	100	30	310	99		130	130	95% Chebyshev (Mean, Sd) UCL
M	Fish (≤ 30 cm)	Metals	Methyl mercury	µg/kg	62	62	100	14	330	90		110	110	95% Approximate Gamma UCL
M	Fish (≤ 30 cm)	Metals	Nickel	mg/kg	62	62	100	0.18	89.1	4.6		5.4	5.4	95% H-UCL
M	Fish (≤ 30 cm)	Metals	Selenium	mg/kg	62	62	100	0.22	3	0.8		0.9	0.9	95% Modified-t UCL
M	Fish (≤ 30 cm)	Metals	Silver	mg/kg	62	52	83.9	0.0067	0.64	0.07	0.008	0.11	0.11	95% KM (Chebyshev) UCL
M	Fish (≤ 30 cm)	Metals	Vanadium	mg/kg	62	60	96.8	0.016	1.3	0.35	0.03	0.54	0.54	95% KM (Chebyshev) UCL
M	Fish (≤ 30 cm)	Metals	Zinc	mg/kg	62	62	100	15	51.6	31		33	33	95% Modified-t UCL
M	Fish (≤ 30 cm)	PAHs	Benzo(a)pyrene	µg/kg	62	44	71	1.5	98	18	2.6	24	24	95% KM (Chebyshev) UCL
M	Fish (≤ 30 cm)	PAHs	Total HPAHs	µg/kg	62	62	100	9.4	1000	170		250	250	95% H-UCL
M	Fish (≤ 30 cm)	PAHs	Total LPAHs	µg/kg	62	62	100	18	370	120		140	140	95% Approximate Gamma UCL
M	Fish (≤ 30 cm)	PAHs	Total PAHs	µg/kg	62	62	100	33	1200	300		350	350	95% Approximate Gamma UCL
M	Fish (≤ 30 cm)	PCB Congeners	Total PCB Congeners	µg/kg	62	62	100	170	5100	1100		1700	1700	95% Chebyshev (Mean, Sd) UCL
M	Fish (≤ 30 cm)	PCB Congeners	PCB TEQ-Bird	ng/kg	62	62	100	7	400	92		140	140	95% Chebyshev (Mean, Sd) UCL
M	Fish (≤ 30 cm)	PCB Congeners	PCB TEQ-Fish	ng/kg	62	62	100	0.19	3.4	1		1.5	1.5	95% Chebyshev (Mean, Sd) UCL
M	Fish (≤ 30 cm)	PCB Congeners	PCB TEQ-Mammal	ng/kg	62	62	100	2.1	41	13		18	18	95% Chebyshev (Mean, Sd) UCL
M	Fish (≤ 30 cm)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	62	61	98.4	0.32	250	70	0.21	110	110	95% KM (Chebyshev) UCL
M	Fish (≤ 30 cm)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	62	62	100	0.73	280	77		97	97	95% Approximate Gamma UCL
M	Fish (≤ 30 cm)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	62	62	100	0.79	260	73		110	110	95% Chebyshev (Mean, Sd) UCL
M	Fish (≤ 30 cm)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	62	62	100	0.81	260	72		91	91	95% Approximate Gamma UCL
M	Fish (≤ 30 cm)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	62	62	100	7.9	690	170		260	260	95% Chebyshev (Mean, Sd) UCL
M	Fish (≤ 30 cm)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	62	62	100	1.2	270	73		110	110	95% Chebyshev (Mean, Sd) UCL
M	Fish (≤ 30 cm)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	62	62	100	5.5	300	85		130	130	95% Chebyshev (Mean, Sd) UCL
M	Fish (≤ 30 cm)	OC Pesticides	Dieldrin	µg/kg	62	62	100	3.5	110	21		24	24	95% Approximate Gamma UCL
M	Fish (≤ 30 cm)	OC Pesticides	Endosulfan I	µg/kg	62	4	6.5	0.22	1.1	0.82	3.2		1.1	Maximum detect
M	Fish (≤ 30 cm)	OC Pesticides	Endosulfan II	µg/kg	61	0	0				3.7		3.7	Maximum DL
M	Fish (≤ 30 cm)	OC Pesticides	Heptachlor epoxide	µg/kg	62	62	100	0.84	27	7.4		8.8	8.8	95% Approximate Gamma UCL
M	Fish (≤ 30 cm)	OC Pesticides	Total DDx	µg/kg	62	62	100	20	490	120		180	180	95% Chebyshev (Mean, Sd) UCL
M	Fish (≤ 30 cm, ≥ RM10)	Metals	Arsenic	mg/kg	23	21	91.3	0.031	0.28	0.14	0.17	0.17	0.17	95% KM (t) UCL
M	Fish (≤ 30 cm, ≥ RM10)	Metals	Cadmium	mg/kg	23	23	100	0.007	0.19	0.036		0.05	0.05	95% Adjusted Gamma UCL
M	Fish (≤ 30 cm, ≥ RM10)	Metals	Chromium	mg/kg	23	23	100	0.18	125	11		21	21	95% Adjusted Gamma UCL
M	Fish (≤ 30 cm, ≥ RM10)	Metals	Cobalt	mg/kg	23	23	100	0.024	1.1	0.16		0.25	0.25	95% Adjusted Gamma UCL
M	Fish (≤ 30 cm, ≥ RM10)	Metals	Copper	mg/kg	23	23	100	0.4	13.1	3.4		5	5	95% Adjusted Gamma UCL
M	Fish (≤ 30 cm, ≥ RM10)	Metals	Lead	mg/kg	23	23	100	0.093	3.2	1.1		1.6	1.6	95% Adjusted Gamma UCL
M	Fish (≤ 30 cm, ≥ RM10)	Metals	Mercury	µg/kg	23	23	100	30	310	110		140	140	95% Student's-t UCL
M	Fish (≤ 30 cm, ≥ RM10)	Metals	Methyl mercury	µg/kg	23	23	100	14	330	110		140	140	95% Student's-t UCL
M	Fish (≤ 30 cm, ≥ RM10)	Metals	Nickel	mg/kg	23	23	100	0.36	89.1	7.8		25	25	95% Chebyshev (Mean, Sd) UCL
M	Fish (≤ 30 cm, ≥ RM10)	Metals	Selenium	mg/kg	23	23	100	0.22	3	0.75		0.99	0.99	95% Adjusted Gamma UCL
M	Fish (≤ 30 cm, ≥ RM10)	Metals	Silver	mg/kg	23	17	73.9	0.0067	0.21	0.045	0.006	0.078	0.078	95% KM (Chebyshev) UCL
M	Fish (≤ 30 cm, ≥ RM10)	Metals	Vanadium	mg/kg	23	23	100	0.028	1.2	0.34		0.7	0.7	95% Chebyshev (Mean, Sd) UCL
M	Fish (≤ 30 cm, ≥ RM10)	Metals	Zinc	mg/kg	23	23	100	15	48	27.4		30.4	30.4	95% Student's-t UCL

Diet LOE -- Prey Tissue EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
M	Fish (≤ 30 cm, ≥ RM10)	PAHs	Benzo(a)pyrene	µg/kg	23	14	60.9	1.9	64	23	2.2	36	36	95% GROS Adjusted Gamma UCL
M	Fish (≤ 30 cm, ≥ RM10)	PAHs	Total HPAHs	µg/kg	23	23	100	11	860	190		320	320	95% Adjusted Gamma UCL
M	Fish (≤ 30 cm, ≥ RM10)	PAHs	Total LPAHs	µg/kg	23	23	100	19	370	130		180	180	95% Adjusted Gamma UCL
M	Fish (≤ 30 cm, ≥ RM10)	PAHs	Total PAHs	µg/kg	23	23	100	33	1100	320		460	460	95% Adjusted Gamma UCL
M	Fish (≤ 30 cm, ≥ RM10)	PCB Congeners	Total PCB Congeners	µg/kg	23	23	100	170	2700	640		830	830	95% Adjusted Gamma UCL
M	Fish (≤ 30 cm, ≥ RM10)	PCB Congeners	PCB TEQ-Bird	ng/kg	23	23	100	7	250	52		75	75	95% Adjusted Gamma UCL
M	Fish (≤ 30 cm, ≥ RM10)	PCB Congeners	PCB TEQ-Fish	ng/kg	23	23	100	0.19	2.2	0.69		0.87	0.87	95% Adjusted Gamma UCL
M	Fish (≤ 30 cm, ≥ RM10)	PCB Congeners	PCB TEQ-Mammal	ng/kg	23	23	100	2.1	26	8.5		11	11	95% Adjusted Gamma UCL
M	Fish (≤ 30 cm, ≥ RM10)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	23	22	95.7	0.32	160	29	0.21	62	62	95% KM (Chebyshev) UCL
M	Fish (≤ 30 cm, ≥ RM10)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	23	23	100	0.73	180	33		54	54	95% Adjusted Gamma UCL
M	Fish (≤ 30 cm, ≥ RM10)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	23	23	100	0.79	170	30		49	49	95% Adjusted Gamma UCL
M	Fish (≤ 30 cm, ≥ RM10)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	23	23	100	0.81	170	30		49	49	95% Adjusted Gamma UCL
M	Fish (≤ 30 cm, ≥ RM10)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	23	23	100	7.9	430	85		120	120	95% Adjusted Gamma UCL
M	Fish (≤ 30 cm, ≥ RM10)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	23	23	100	1.2	170	31		49	49	95% Adjusted Gamma UCL
M	Fish (≤ 30 cm, ≥ RM10)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	23	23	100	5.5	190	38		55	55	95% Adjusted Gamma UCL
M	Fish (≤ 30 cm, ≥ RM10)	OC Pesticides	Dieldrin	µg/kg	23	23	100	7.8	110	25		34	34	95% Adjusted Gamma UCL
M	Fish (≤ 30 cm, ≥ RM10)	OC Pesticides	Endosulfan I	µg/kg	23	2	8.7	0.22	1.1	0.66	3.1		1.1	Maximum detect
M	Fish (≤ 30 cm, ≥ RM10)	OC Pesticides	Endosulfan II	µg/kg	23	0	0				2.8		2.8	Maximum DL
M	Fish (≤ 30 cm, ≥ RM10)	OC Pesticides	Heptachlor epoxide	µg/kg	23	23	100	3.1	27	9		12	12	95% Adjusted Gamma UCL
M	Fish (≤ 30 cm, ≥ RM10)	OC Pesticides	Total DDx	µg/kg	23	23	100	20	240	78		100	100	95% Adjusted Gamma UCL
B	Fish (≤ 9 cm)	Metals	Arsenic	mg/kg	10	10	100	0.19	0.51	0.35		0.41	0.41	95% Student's-t UCL
B	Fish (≤ 9 cm)	Metals	Cadmium	mg/kg	10	10	100	0.01	0.073	0.036		0.047	0.047	95% Student's-t UCL
B	Fish (≤ 9 cm)	Metals	Chromium	mg/kg	10	10	100	0.91	23.2	7.9		12	12	95% Student's-t UCL
B	Fish (≤ 9 cm)	Metals	Cobalt	mg/kg	10	10	100	0.046	0.34	0.17		0.23	0.23	95% Student's-t UCL
B	Fish (≤ 9 cm)	Metals	Copper	mg/kg	10	10	100	1.6	4.3	2.9		3.4	3.4	95% Student's-t UCL
B	Fish (≤ 9 cm)	Metals	Lead	mg/kg	10	10	100	0.53	3.9	1.9		2.5	2.5	95% Student's-t UCL
B	Fish (≤ 9 cm)	Metals	Mercury	µg/kg	10	10	100	33	65	48		54	54	95% Student's-t UCL
B	Fish (≤ 9 cm)	Metals	Methyl mercury	µg/kg	10	10	100	19	58	29		35	35	95% Student's-t UCL
B	Fish (≤ 9 cm)	Metals	Nickel	mg/kg	10	10	100	0.81	15.8	5		7.8	7.8	95% Student's-t UCL
B	Fish (≤ 9 cm)	Metals	Selenium	mg/kg	10	10	100	0.46	0.81	0.63		0.69	0.69	95% Student's-t UCL
B	Fish (≤ 9 cm)	Metals	Silver	mg/kg	10	10	100	0.013	0.06	0.037		0.047	0.047	95% Student's-t UCL
B	Fish (≤ 9 cm)	Metals	Vanadium	mg/kg	10	10	100	0.2	1.3	0.7		0.91	0.91	95% Student's-t UCL
B	Fish (≤ 9 cm)	Metals	Zinc	mg/kg	10	10	100	30.8	51.6	41.6		44.6	44.6	95% Student's-t UCL
B	Fish (≤ 9 cm)	PAHs	Benzo(a)pyrene	µg/kg	10	10	100	3.3	56	23		33	33	95% Student's-t UCL
B	Fish (≤ 9 cm)	PAHs	Total HPAHs	µg/kg	10	10	100	30	540	240		330	330	95% Student's-t UCL
B	Fish (≤ 9 cm)	PAHs	Total LPAHs	µg/kg	10	10	100	18	130	67		84	84	95% Student's-t UCL
B	Fish (≤ 9 cm)	PAHs	Total PAHs	µg/kg	10	10	100	48	670	300		410	410	95% Student's-t UCL
B	Fish (≤ 9 cm)	PCB Congeners	Total PCB Congeners	µg/kg	10	10	100	420	930	650		760	760	95% Student's-t UCL
B	Fish (≤ 9 cm)	PCB Congeners	PCB TEQ-Bird	ng/kg	10	10	100	35	73	55		63	63	95% Student's-t UCL
B	Fish (≤ 9 cm)	PCB Congeners	PCB TEQ-Fish	ng/kg	10	10	100	0.5	0.89	0.67		0.75	0.75	95% Student's-t UCL
B	Fish (≤ 9 cm)	PCB Congeners	PCB TEQ-Mammal	ng/kg	10	10	100	6.2	12	8.5		9.7	9.7	95% Student's-t UCL
B	Fish (≤ 9 cm)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	10	10	100	21	100	52		66	66	95% Student's-t UCL
B	Fish (≤ 9 cm)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	10	10	100	23	110	57		72	72	95% Student's-t UCL
B	Fish (≤ 9 cm)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	10	10	100	22	100	53		67	67	95% Student's-t UCL
B	Fish (≤ 9 cm)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	10	10	100	22	100	53		67	67	95% Student's-t UCL
B	Fish (≤ 9 cm)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	10	10	100	58	170	110		130	130	95% Student's-t UCL
B	Fish (≤ 9 cm)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	10	10	100	22	100	54		68	68	95% Student's-t UCL
B	Fish (≤ 9 cm)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	10	10	100	29	110	62		77	77	95% Student's-t UCL
B	Fish (≤ 9 cm)	OC Pesticides	Dieldrin	µg/kg	10	10	100	4.1	28	12		16	16	95% Student's-t UCL
B	Fish (≤ 9 cm)	OC Pesticides	Endosulfan I	µg/kg	10	0	0				0.95		0.95	Maximum DL
B	Fish (≤ 9 cm)	OC Pesticides	Endosulfan II	µg/kg	10	0	0				1.3		1.3	Maximum DL
B	Fish (≤ 9 cm)	OC Pesticides	Heptachlor epoxide	µg/kg	10	10	100	0.99	8.7	3.7		5.5	5.5	95% Adjusted Gamma UCL

Diet LOE -- Prey Tissue EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
B	Fish (≤ 9 cm)	OC Pesticides	Total DDx	µg/kg	10	10	100	44	100	71		81	81	95% Student's-t UCL
B	Fish (≤ 9 cm, reach 2)	Metals	Arsenic	mg/kg	1	1	100	0.3	0.3				0.3	Maximum detect
B	Fish (≤ 9 cm, reach 2)	Metals	Cadmium	mg/kg	1	1	100	0.01	0.01				0.01	Maximum detect
B	Fish (≤ 9 cm, reach 2)	Metals	Chromium	mg/kg	1	1	100	0.91	0.91				0.91	Maximum detect
B	Fish (≤ 9 cm, reach 2)	Metals	Cobalt	mg/kg	1	1	100	0.046	0.046				0.046	Maximum detect
B	Fish (≤ 9 cm, reach 2)	Metals	Copper	mg/kg	1	1	100	2.7	2.7				2.7	Maximum detect
B	Fish (≤ 9 cm, reach 2)	Metals	Lead	mg/kg	1	1	100	0.59	0.59				0.59	Maximum detect
B	Fish (≤ 9 cm, reach 2)	Metals	Mercury	µg/kg	1	1	100	62	62				62	Maximum detect
B	Fish (≤ 9 cm, reach 2)	Metals	Methyl mercury	µg/kg	1	1	100	58	58				58	Maximum detect
B	Fish (≤ 9 cm, reach 2)	Metals	Nickel	mg/kg	1	1	100	0.88	0.88				0.88	Maximum detect
B	Fish (≤ 9 cm, reach 2)	Metals	Selenium	mg/kg	1	1	100	0.7	0.7				0.7	Maximum detect
B	Fish (≤ 9 cm, reach 2)	Metals	Silver	mg/kg	1	1	100	0.038	0.038				0.038	Maximum detect
B	Fish (≤ 9 cm, reach 2)	Metals	Vanadium	mg/kg	1	1	100	0.2	0.2				0.2	Maximum detect
B	Fish (≤ 9 cm, reach 2)	Metals	Zinc	mg/kg	1	1	100	51.6	51.6				51.6	Maximum detect
B	Fish (≤ 9 cm, reach 2)	PAHs	Benzo(a)pyrene	µg/kg	1	1	100	3.3	3.3				3.3	Maximum detect
B	Fish (≤ 9 cm, reach 2)	PAHs	Total HPAHs	µg/kg	1	1	100	30	30				30	Maximum detect
B	Fish (≤ 9 cm, reach 2)	PAHs	Total LPAHs	µg/kg	1	1	100	18	18				18	Maximum detect
B	Fish (≤ 9 cm, reach 2)	PAHs	Total PAHs	µg/kg	1	1	100	48	48				48	Maximum detect
B	Fish (≤ 9 cm, reach 2)	PCB Congeners	Total PCB Congeners	µg/kg	1	1	100	420	420				420	Maximum detect
B	Fish (≤ 9 cm, reach 2)	PCB Congeners	PCB TEQ-Bird	ng/kg	1	1	100	35	35				35	Maximum detect
B	Fish (≤ 9 cm, reach 2)	PCB Congeners	PCB TEQ-Fish	ng/kg	1	1	100	0.55	0.55				0.55	Maximum detect
B	Fish (≤ 9 cm, reach 2)	PCB Congeners	PCB TEQ-Mammal	ng/kg	1	1	100	7.2	7.2				7.2	Maximum detect
B	Fish (≤ 9 cm, reach 2)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	1	1	100	21	21				21	Maximum detect
B	Fish (≤ 9 cm, reach 2)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	1	1	100	23	23				23	Maximum detect
B	Fish (≤ 9 cm, reach 2)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	1	1	100	22	22				22	Maximum detect
B	Fish (≤ 9 cm, reach 2)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	1	1	100	22	22				22	Maximum detect
B	Fish (≤ 9 cm, reach 2)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	1	1	100	58	58				58	Maximum detect
B	Fish (≤ 9 cm, reach 2)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	1	1	100	22	22				22	Maximum detect
B	Fish (≤ 9 cm, reach 2)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	1	1	100	29	29				29	Maximum detect
B	Fish (≤ 9 cm, reach 2)	OC Pesticides	Dieldrin	µg/kg	1	1	100	4.1	4.1				4.1	Maximum detect
B	Fish (≤ 9 cm, reach 2)	OC Pesticides	Endosulfan I	µg/kg	1	0	0				0.31		0.31	Maximum DL
B	Fish (≤ 9 cm, reach 2)	OC Pesticides	Endosulfan II	µg/kg	1	0	0				0.49		0.49	Maximum DL
B	Fish (≤ 9 cm, reach 2)	OC Pesticides	Heptachlor epoxide	µg/kg	1	1	100	0.99	0.99				0.99	Maximum detect
B	Fish (≤ 9 cm, reach 2)	OC Pesticides	Total DDx	µg/kg	1	1	100	44	44				44	Maximum detect
B	Fish (≤ 9 cm, reach 3)	Metals	Arsenic	mg/kg	1	1	100	0.49	0.49				0.49	Maximum detect
B	Fish (≤ 9 cm, reach 3)	Metals	Cadmium	mg/kg	1	1	100	0.053	0.053				0.053	Maximum detect
B	Fish (≤ 9 cm, reach 3)	Metals	Chromium	mg/kg	1	1	100	7.1	7.1				7.1	Maximum detect
B	Fish (≤ 9 cm, reach 3)	Metals	Cobalt	mg/kg	1	1	100	0.22	0.22				0.22	Maximum detect
B	Fish (≤ 9 cm, reach 3)	Metals	Copper	mg/kg	1	1	100	3.5	3.5				3.5	Maximum detect
B	Fish (≤ 9 cm, reach 3)	Metals	Lead	mg/kg	1	1	100	1.7	1.7				1.7	Maximum detect
B	Fish (≤ 9 cm, reach 3)	Metals	Mercury	µg/kg	1	1	100	47	47				47	Maximum detect
B	Fish (≤ 9 cm, reach 3)	Metals	Methyl mercury	µg/kg	1	1	100	31	31				31	Maximum detect
B	Fish (≤ 9 cm, reach 3)	Metals	Nickel	mg/kg	1	1	100	4.8	4.8				4.8	Maximum detect
B	Fish (≤ 9 cm, reach 3)	Metals	Selenium	mg/kg	1	1	100	0.68	0.68				0.68	Maximum detect
B	Fish (≤ 9 cm, reach 3)	Metals	Silver	mg/kg	1	1	100	0.057	0.057				0.057	Maximum detect
B	Fish (≤ 9 cm, reach 3)	Metals	Vanadium	mg/kg	1	1	100	0.79	0.79				0.79	Maximum detect
B	Fish (≤ 9 cm, reach 3)	Metals	Zinc	mg/kg	1	1	100	43.5	43.5				43.5	Maximum detect
B	Fish (≤ 9 cm, reach 3)	PAHs	Benzo(a)pyrene	µg/kg	1	1	100	19	19				19	Maximum detect
B	Fish (≤ 9 cm, reach 3)	PAHs	Total HPAHs	µg/kg	1	1	100	180	180				180	Maximum detect
B	Fish (≤ 9 cm, reach 3)	PAHs	Total LPAHs	µg/kg	1	1	100	85	85				85	Maximum detect
B	Fish (≤ 9 cm, reach 3)	PAHs	Total PAHs	µg/kg	1	1	100	260	260				260	Maximum detect
B	Fish (≤ 9 cm, reach 3)	PCB Congeners	Total PCB Congeners	µg/kg	1	1	100	860	860				860	Maximum detect

Diet LOE -- Prey Tissue EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
B	Fish (≤ 9 cm, reach 3)	PCB Congeners	PCB TEQ-Bird	ng/kg	1	1	100	58	58				58	Maximum detect
B	Fish (≤ 9 cm, reach 3)	PCB Congeners	PCB TEQ-Fish	ng/kg	1	1	100	0.86	0.86				0.86	Maximum detect
B	Fish (≤ 9 cm, reach 3)	PCB Congeners	PCB TEQ-Mammal	ng/kg	1	1	100	11	11				11	Maximum detect
B	Fish (≤ 9 cm, reach 3)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	1	1	100	54	54				54	Maximum detect
B	Fish (≤ 9 cm, reach 3)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	1	1	100	58	58				58	Maximum detect
B	Fish (≤ 9 cm, reach 3)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	1	1	100	55	55				55	Maximum detect
B	Fish (≤ 9 cm, reach 3)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	1	1	100	55	55				55	Maximum detect
B	Fish (≤ 9 cm, reach 3)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	1	1	100	120	120				120	Maximum detect
B	Fish (≤ 9 cm, reach 3)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	1	1	100	56	56				56	Maximum detect
B	Fish (≤ 9 cm, reach 3)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	1	1	100	67	67				67	Maximum detect
B	Fish (≤ 9 cm, reach 3)	OC Pesticides	Dieldrin	µg/kg	1	1	100	9.2	9.2				9.2	Maximum detect
B	Fish (≤ 9 cm, reach 3)	OC Pesticides	Endosulfan I	µg/kg	1	0	0				0.79		0.79	Maximum DL
B	Fish (≤ 9 cm, reach 3)	OC Pesticides	Endosulfan II	µg/kg	1	0	0				0.81		0.81	Maximum DL
B	Fish (≤ 9 cm, reach 3)	OC Pesticides	Heptachlor epoxide	µg/kg	1	1	100	2.6	2.6				2.6	Maximum detect
B	Fish (≤ 9 cm, reach 3)	OC Pesticides	Total DDx	µg/kg	1	1	100	100	100				100	Maximum detect
B	Fish (≤ 9 cm, reach 4)	Metals	Arsenic	mg/kg	4	4	100	0.34	0.51	0.43			0.51	Maximum detect
B	Fish (≤ 9 cm, reach 4)	Metals	Cadmium	mg/kg	4	4	100	0.014	0.073	0.04			0.073	Maximum detect
B	Fish (≤ 9 cm, reach 4)	Metals	Chromium	mg/kg	4	4	100	1	12.2	4.6			12.2	Maximum detect
B	Fish (≤ 9 cm, reach 4)	Metals	Cobalt	mg/kg	4	4	100	0.062	0.28	0.15			0.28	Maximum detect
B	Fish (≤ 9 cm, reach 4)	Metals	Copper	mg/kg	4	4	100	2	4.3	3			4.3	Maximum detect
B	Fish (≤ 9 cm, reach 4)	Metals	Lead	mg/kg	4	4	100	0.53	3.9	2.2			3.9	Maximum detect
B	Fish (≤ 9 cm, reach 4)	Metals	Mercury	µg/kg	4	4	100	36	65	48			65	Maximum detect
B	Fish (≤ 9 cm, reach 4)	Metals	Methyl mercury	µg/kg	4	4	100	19	33	24			33	Maximum detect
B	Fish (≤ 9 cm, reach 4)	Metals	Nickel	mg/kg	4	4	100	0.81	6.6	2.6			6.6	Maximum detect
B	Fish (≤ 9 cm, reach 4)	Metals	Selenium	mg/kg	4	4	100	0.46	0.7	0.56			0.7	Maximum detect
B	Fish (≤ 9 cm, reach 4)	Metals	Silver	mg/kg	4	4	100	0.026	0.06	0.044			0.06	Maximum detect
B	Fish (≤ 9 cm, reach 4)	Metals	Vanadium	mg/kg	4	4	100	0.3	1.3	0.77			1.3	Maximum detect
B	Fish (≤ 9 cm, reach 4)	Metals	Zinc	mg/kg	4	4	100	40.6	44.1	42			44.1	Maximum detect
B	Fish (≤ 9 cm, reach 4)	PAHs	Benzo(a)pyrene	µg/kg	4	4	100	5.5	56	24			56	Maximum detect
B	Fish (≤ 9 cm, reach 4)	PAHs	Total HPAHs	µg/kg	4	4	100	71	540	260			540	Maximum detect
B	Fish (≤ 9 cm, reach 4)	PAHs	Total LPAHs	µg/kg	4	4	100	46	130	72			130	Maximum detect
B	Fish (≤ 9 cm, reach 4)	PAHs	Total PAHs	µg/kg	4	4	100	120	670	330			670	Maximum detect
B	Fish (≤ 9 cm, reach 4)	PCB Congeners	Total PCB Congeners	µg/kg	4	4	100	590	930	770			930	Maximum detect
B	Fish (≤ 9 cm, reach 4)	PCB Congeners	PCB TEQ-Bird	ng/kg	4	4	100	55	73	61			73	Maximum detect
B	Fish (≤ 9 cm, reach 4)	PCB Congeners	PCB TEQ-Fish	ng/kg	4	4	100	0.59	0.89	0.75			0.89	Maximum detect
B	Fish (≤ 9 cm, reach 4)	PCB Congeners	PCB TEQ-Mammal	ng/kg	4	4	100	7.2	12	9.7			12	Maximum detect
B	Fish (≤ 9 cm, reach 4)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	4	4	100	41	78	60			78	Maximum detect
B	Fish (≤ 9 cm, reach 4)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	4	4	100	45	84	64			84	Maximum detect
B	Fish (≤ 9 cm, reach 4)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	4	4	100	43	81	62			81	Maximum detect
B	Fish (≤ 9 cm, reach 4)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	4	4	100	43	80	61			80	Maximum detect
B	Fish (≤ 9 cm, reach 4)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	4	4	100	100	160	130			160	Maximum detect
B	Fish (≤ 9 cm, reach 4)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	4	4	100	43	81	62			81	Maximum detect
B	Fish (≤ 9 cm, reach 4)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	4	4	100	50	92	71			92	Maximum detect
B	Fish (≤ 9 cm, reach 4)	OC Pesticides	Dieldrin	µg/kg	4	4	100	9.9	13	11			13	Maximum detect
B	Fish (≤ 9 cm, reach 4)	OC Pesticides	Endosulfan I	µg/kg	4	0	0				0.61		0.61	Maximum DL
B	Fish (≤ 9 cm, reach 4)	OC Pesticides	Endosulfan II	µg/kg	4	0	0				1.1		1.1	Maximum DL
B	Fish (≤ 9 cm, reach 4)	OC Pesticides	Heptachlor epoxide	µg/kg	4	4	100	2.9	4.3	3.6			4.3	Maximum detect
B	Fish (≤ 9 cm, reach 4)	OC Pesticides	Total DDx	µg/kg	4	4	100	70	86	78			86	Maximum detect
B	Fish (≤ 9 cm, reach 5)	Metals	Arsenic	mg/kg	3	3	100	0.27	0.27	0.27			0.27	Maximum detect
B	Fish (≤ 9 cm, reach 5)	Metals	Cadmium	mg/kg	3	3	100	0.016	0.052	0.031			0.052	Maximum detect
B	Fish (≤ 9 cm, reach 5)	Metals	Chromium	mg/kg	3	3	100	6	23.2	12			23.2	Maximum detect
B	Fish (≤ 9 cm, reach 5)	Metals	Cobalt	mg/kg	3	3	100	0.12	0.34	0.2			0.34	Maximum detect

Diet LOE -- Prey Tissue EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
B	Fish (≤ 9 cm, reach 5)	Metals	Copper	mg/kg	3	3	100	1.6	3.8	2.6			3.8	Maximum detect
B	Fish (≤ 9 cm, reach 5)	Metals	Lead	mg/kg	3	3	100	0.96	3.1	1.8			3.1	Maximum detect
B	Fish (≤ 9 cm, reach 5)	Metals	Mercury	µg/kg	3	3	100	33	49	41			49	Maximum detect
B	Fish (≤ 9 cm, reach 5)	Metals	Methyl mercury	µg/kg	3	3	100	23	25	24			25	Maximum detect
B	Fish (≤ 9 cm, reach 5)	Metals	Nickel	mg/kg	3	3	100	4.1	15.8	8.1			15.8	Maximum detect
B	Fish (≤ 9 cm, reach 5)	Metals	Selenium	mg/kg	3	3	100	0.56	0.81	0.67			0.81	Maximum detect
B	Fish (≤ 9 cm, reach 5)	Metals	Silver	mg/kg	3	3	100	0.013	0.043	0.027			0.043	Maximum detect
B	Fish (≤ 9 cm, reach 5)	Metals	Vanadium	mg/kg	3	3	100	0.39	1.1	0.68			1.1	Maximum detect
B	Fish (≤ 9 cm, reach 5)	Metals	Zinc	mg/kg	3	3	100	30.8	42.3	37.2			42.3	Maximum detect
B	Fish (≤ 9 cm, reach 5)	PAHs	Benzo(a)pyrene	µg/kg	3	3	100	13	48	25			48	Maximum detect
B	Fish (≤ 9 cm, reach 5)	PAHs	Total HPAHs	µg/kg	3	3	100	160	480	270			480	Maximum detect
B	Fish (≤ 9 cm, reach 5)	PAHs	Total LPAHs	µg/kg	3	3	100	47	86	67			86	Maximum detect
B	Fish (≤ 9 cm, reach 5)	PAHs	Total PAHs	µg/kg	3	3	100	200	570	340			570	Maximum detect
B	Fish (≤ 9 cm, reach 5)	PCB Congeners	Total PCB Congeners	µg/kg	3	3	100	450	710	550			710	Maximum detect
B	Fish (≤ 9 cm, reach 5)	PCB Congeners	PCB TEQ-Bird	ng/kg	3	3	100	39	72	57			72	Maximum detect
B	Fish (≤ 9 cm, reach 5)	PCB Congeners	PCB TEQ-Fish	ng/kg	3	3	100	0.5	0.72	0.6			0.72	Maximum detect
B	Fish (≤ 9 cm, reach 5)	PCB Congeners	PCB TEQ-Mammal	ng/kg	3	3	100	6.2	8.9	7.2			8.9	Maximum detect
B	Fish (≤ 9 cm, reach 5)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	3	3	100	36	100	59			100	Maximum detect
B	Fish (≤ 9 cm, reach 5)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	3	3	100	39	110	65			110	Maximum detect
B	Fish (≤ 9 cm, reach 5)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	3	3	100	37	100	60			100	Maximum detect
B	Fish (≤ 9 cm, reach 5)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	3	3	100	37	100	60			100	Maximum detect
B	Fish (≤ 9 cm, reach 5)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	3	3	100	78	170	120			170	Maximum detect
B	Fish (≤ 9 cm, reach 5)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	3	3	100	38	100	61			100	Maximum detect
B	Fish (≤ 9 cm, reach 5)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	3	3	100	44	110	68			110	Maximum detect
B	Fish (≤ 9 cm, reach 5)	OC Pesticides	Dieldrin	µg/kg	3	3	100	8.2	14	11			14	Maximum detect
B	Fish (≤ 9 cm, reach 5)	OC Pesticides	Endosulfan I	µg/kg	3	0	0				0.95		0.95	Maximum DL
B	Fish (≤ 9 cm, reach 5)	OC Pesticides	Endosulfan II	µg/kg	3	0	0				1.3		1.3	Maximum DL
B	Fish (≤ 9 cm, reach 5)	OC Pesticides	Heptachlor epoxide	µg/kg	3	3	100	2.8	4.1	3.5			4.1	Maximum detect
B	Fish (≤ 9 cm, reach 5)	OC Pesticides	Total DDx	µg/kg	3	3	100	49	81	63			81	Maximum detect
B	Fish (≤ 9 cm, reach 6)	Metals	Arsenic	mg/kg	1	1	100	0.19	0.19				0.19	Maximum detect
B	Fish (≤ 9 cm, reach 6)	Metals	Cadmium	mg/kg	1	1	100	0.038	0.038				0.038	Maximum detect
B	Fish (≤ 9 cm, reach 6)	Metals	Chromium	mg/kg	1	1	100	16.4	16.4				16.4	Maximum detect
B	Fish (≤ 9 cm, reach 6)	Metals	Cobalt	mg/kg	1	1	100	0.26	0.26				0.26	Maximum detect
B	Fish (≤ 9 cm, reach 6)	Metals	Copper	mg/kg	1	1	100	2.9	2.9				2.9	Maximum detect
B	Fish (≤ 9 cm, reach 6)	Metals	Lead	mg/kg	1	1	100	2.5	2.5				2.5	Maximum detect
B	Fish (≤ 9 cm, reach 6)	Metals	Mercury	µg/kg	1	1	100	50	50				50	Maximum detect
B	Fish (≤ 9 cm, reach 6)	Metals	Methyl mercury	µg/kg	1	1	100	31	31				31	Maximum detect
B	Fish (≤ 9 cm, reach 6)	Metals	Nickel	mg/kg	1	1	100	9.9	9.9				9.9	Maximum detect
B	Fish (≤ 9 cm, reach 6)	Metals	Selenium	mg/kg	1	1	100	0.69	0.69				0.69	Maximum detect
B	Fish (≤ 9 cm, reach 6)	Metals	Silver	mg/kg	1	1	100	0.023	0.023				0.023	Maximum detect
B	Fish (≤ 9 cm, reach 6)	Metals	Vanadium	mg/kg	1	1	100	0.9	0.9				0.9	Maximum detect
B	Fish (≤ 9 cm, reach 6)	Metals	Zinc	mg/kg	1	1	100	40.9	40.9				40.9	Maximum detect
B	Fish (≤ 9 cm, reach 6)	PAHs	Benzo(a)pyrene	µg/kg	1	1	100	33	33				33	Maximum detect
B	Fish (≤ 9 cm, reach 6)	PAHs	Total HPAHs	µg/kg	1	1	100	290	290				290	Maximum detect
B	Fish (≤ 9 cm, reach 6)	PAHs	Total LPAHs	µg/kg	1	1	100	74	74				74	Maximum detect
B	Fish (≤ 9 cm, reach 6)	PAHs	Total PAHs	µg/kg	1	1	100	360	360				360	Maximum detect
B	Fish (≤ 9 cm, reach 6)	PCB Congeners	Total PCB Congeners	µg/kg	1	1	100	430	430				430	Maximum detect
B	Fish (≤ 9 cm, reach 6)	PCB Congeners	PCB TEQ-Bird	ng/kg	1	1	100	43	43				43	Maximum detect
B	Fish (≤ 9 cm, reach 6)	PCB Congeners	PCB TEQ-Fish	ng/kg	1	1	100	0.51	0.51				0.51	Maximum detect
B	Fish (≤ 9 cm, reach 6)	PCB Congeners	PCB TEQ-Mammal	ng/kg	1	1	100	6.4	6.4				6.4	Maximum detect
B	Fish (≤ 9 cm, reach 6)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	1	1	100	28	28				28	Maximum detect
B	Fish (≤ 9 cm, reach 6)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	1	1	100	31	31				31	Maximum detect

Diet LOE -- Prey Tissue EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
B	Fish (≤ 9 cm, reach 6)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	1	1	100	29	29				29	Maximum detect
B	Fish (≤ 9 cm, reach 6)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	1	1	100	29	29				29	Maximum detect
B	Fish (≤ 9 cm, reach 6)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	1	1	100	74	74				74	Maximum detect
B	Fish (≤ 9 cm, reach 6)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	1	1	100	30	30				30	Maximum detect
B	Fish (≤ 9 cm, reach 6)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	1	1	100	35	35				35	Maximum detect
B	Fish (≤ 9 cm, reach 6)	OC Pesticides	Dieldrin	µg/kg	1	1	100	28	28				28	Maximum detect
B	Fish (≤ 9 cm, reach 6)	OC Pesticides	Endosulfan I	µg/kg	1	0	0				0.73		0.73	Maximum DL
B	Fish (≤ 9 cm, reach 6)	OC Pesticides	Endosulfan II	µg/kg	1	0	0				1		1	Maximum DL
B	Fish (≤ 9 cm, reach 6)	OC Pesticides	Heptachlor epoxide	µg/kg	1	1	100	8.7	8.7				8.7	Maximum detect
B	Fish (≤ 9 cm, reach 6)	OC Pesticides	Total DDx	µg/kg	1	1	100	67	67				67	Maximum detect
B	Fish (≤ 9 cm, ≥ RM 6)	Metals	Arsenic	mg/kg	8	8	100	0.19	0.51	0.34		0.41	0.41	95% Student's-t UCL
B	Fish (≤ 9 cm, ≥ RM 6)	Metals	Cadmium	mg/kg	8	8	100	0.014	0.073	0.037		0.05	0.05	95% Student's-t UCL
B	Fish (≤ 9 cm, ≥ RM 6)	Metals	Chromium	mg/kg	8	8	100	1	23.2	8.9		14	14	95% Student's-t UCL
B	Fish (≤ 9 cm, ≥ RM 6)	Metals	Cobalt	mg/kg	8	8	100	0.062	0.34	0.18		0.25	0.25	95% Student's-t UCL
B	Fish (≤ 9 cm, ≥ RM 6)	Metals	Copper	mg/kg	8	8	100	1.6	4.3	2.8		3.4	3.4	95% Student's-t UCL
B	Fish (≤ 9 cm, ≥ RM 6)	Metals	Lead	mg/kg	8	8	100	0.53	3.9	2.1		2.8	2.8	95% Student's-t UCL
B	Fish (≤ 9 cm, ≥ RM 6)	Metals	Mercury	µg/kg	8	8	100	33	65	46		53	53	95% Student's-t UCL
B	Fish (≤ 9 cm, ≥ RM 6)	Metals	Methyl mercury	µg/kg	8	8	100	19	33	25		28	28	95% Student's-t UCL
B	Fish (≤ 9 cm, ≥ RM 6)	Metals	Nickel	mg/kg	8	8	100	0.81	15.8	5.6		9	9	95% Student's-t UCL
B	Fish (≤ 9 cm, ≥ RM 6)	Metals	Selenium	mg/kg	8	8	100	0.46	0.81	0.62		0.69	0.69	95% Student's-t UCL
B	Fish (≤ 9 cm, ≥ RM 6)	Metals	Silver	mg/kg	8	8	100	0.013	0.06	0.035		0.046	0.046	95% Student's-t UCL
B	Fish (≤ 9 cm, ≥ RM 6)	Metals	Vanadium	mg/kg	8	8	100	0.3	1.3	0.75		0.99	0.99	95% Student's-t UCL
B	Fish (≤ 9 cm, ≥ RM 6)	Metals	Zinc	mg/kg	8	8	100	30.8	44.1	40.1		42.8	42.8	95% Student's-t UCL
B	Fish (≤ 9 cm, ≥ RM 6)	PAHs	Benzo(a)pyrene	µg/kg	8	8	100	5.5	56	25		38	38	95% Student's-t UCL
B	Fish (≤ 9 cm, ≥ RM 6)	PAHs	Total HPAHs	µg/kg	8	8	100	71	540	270		380	380	95% Student's-t UCL
B	Fish (≤ 9 cm, ≥ RM 6)	PAHs	Total LPAHs	µg/kg	8	8	100	46	130	70		89	89	95% Student's-t UCL
B	Fish (≤ 9 cm, ≥ RM 6)	PAHs	Total PAHs	µg/kg	8	8	100	120	670	340		470	470	95% Student's-t UCL
B	Fish (≤ 9 cm, ≥ RM 6)	PCB Congeners	Total PCB Congeners	µg/kg	8	8	100	430	930	650		770	770	95% Student's-t UCL
B	Fish (≤ 9 cm, ≥ RM 6)	PCB Congeners	PCB TEQ-Bird	ng/kg	8	8	100	39	73	57		65	65	95% Student's-t UCL
B	Fish (≤ 9 cm, ≥ RM 6)	PCB Congeners	PCB TEQ-Fish	ng/kg	8	8	100	0.5	0.89	0.66		0.76	0.76	95% Student's-t UCL
B	Fish (≤ 9 cm, ≥ RM 6)	PCB Congeners	PCB TEQ-Mammal	ng/kg	8	8	100	6.2	12	8.3		9.7	9.7	95% Student's-t UCL
B	Fish (≤ 9 cm, ≥ RM 6)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	8	8	100	28	100	56		72	72	95% Student's-t UCL
B	Fish (≤ 9 cm, ≥ RM 6)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	8	8	100	31	110	61		78	78	95% Student's-t UCL
B	Fish (≤ 9 cm, ≥ RM 6)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	8	8	100	29	100	57		73	73	95% Student's-t UCL
B	Fish (≤ 9 cm, ≥ RM 6)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	8	8	100	29	100	57		73	73	95% Student's-t UCL
B	Fish (≤ 9 cm, ≥ RM 6)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	8	8	100	74	170	120		140	140	95% Student's-t UCL
B	Fish (≤ 9 cm, ≥ RM 6)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	8	8	100	30	100	58		73	73	95% Student's-t UCL
B	Fish (≤ 9 cm, ≥ RM 6)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	8	8	100	35	110	65		83	83	95% Student's-t UCL
B	Fish (≤ 9 cm, ≥ RM 6)	OC Pesticides	Dieldrin	µg/kg	8	8	100	8.2	28	13		19	19	95% Adjusted Gamma UCL
B	Fish (≤ 9 cm, ≥ RM 6)	OC Pesticides	Endosulfan I	µg/kg	8	0	0				0.95		0.95	Maximum DL
B	Fish (≤ 9 cm, ≥ RM 6)	OC Pesticides	Endosulfan II	µg/kg	8	0	0				1.3		1.3	Maximum DL
B	Fish (≤ 9 cm, ≥ RM 6)	OC Pesticides	Heptachlor epoxide	µg/kg	8	8	100	2.8	8.7	4.2		5.6	5.6	95% Modified-t UCL
B	Fish (≤ 9 cm, ≥ RM 6)	OC Pesticides	Total DDx	µg/kg	8	8	100	49	86	71		79	79	95% Student's-t UCL
M	Non-forage fish (all) and small forage fis	Metals	Arsenic	mg/kg	111	104	93.7	0.017	0.61	0.13	0.18	0.14	0.14	95% KM (BCA) UCL
M	Non-forage fish (all) and small forage fis	Metals	Cadmium	mg/kg	111	111	100	0.003	0.27	0.023		0.037	0.037	95% Chebyshev (Mean, Sd) UCL
M	Non-forage fish (all) and small forage fis	Metals	Chromium	mg/kg	111	109	98.2	0.04	125	3.2	0.02	8.3	8.3	95% KM (Chebyshev) UCL
M	Non-forage fish (all) and small forage fis	Metals	Cobalt	mg/kg	104	104	100	0.011	1.1	0.064		0.12	0.12	95% Chebyshev (Mean, Sd) UCL
M	Non-forage fish (all) and small forage fis	Metals	Copper	mg/kg	111	111	100	0.31	50.9	2.8		5.4	5.4	95% Chebyshev (Mean, Sd) UCL
M	Non-forage fish (all) and small forage fis	Metals	Lead	mg/kg	104	104	100	0.02	3.2	0.58		0.71	0.71	95% H-UCL
M	Non-forage fish (all) and small forage fis	Metals	Mercury	µg/kg	111	111	100	30	680	160		180	180	95% H-UCL
M	Non-forage fish (all) and small forage fis	Metals	Methyl mercury	µg/kg	111	111	100	14	530	150		170	170	95% Approximate Gamma UCL
M	Non-forage fish (all) and small forage fis	Metals	Nickel	mg/kg	111	111	100	0.11	89.1	2.2		5.9	5.9	95% Chebyshev (Mean, Sd) UCL

Diet LOE -- Prey Tissue EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
M	Non-forage fish (all) and small forage fis	Metals	Selenium	mg/kg	111	111	100	0.16	3	0.64		0.7	0.7	95% Approximate Gamma UCL
M	Non-forage fish (all) and small forage fis	Metals	Silver	mg/kg	111	63	56.8	0.0026	0.64	0.059	0.008	0.07	0.07	95% KM (Chebyshev) UCL
M	Non-forage fish (all) and small forage fis	Metals	Vanadium	mg/kg	111	97	87.4	0.016	1.2	0.16	0.07	0.18	0.18	95% KM (BCA) UCL
M	Non-forage fish (all) and small forage fis	Metals	Zinc	mg/kg	111	111	100	12	104	28		30	30	95% Modified-t UCL
M	Non-forage fish (all) and small forage fis	PAHs	Benzo(a)pyrene	µg/kg	111	50	45	0.55	64	9	2.8	6.2	6.2	95% KM (BCA) UCL
M	Non-forage fish (all) and small forage fis	PAHs	Total HPAHs	µg/kg	111	111	100	3.1	860	87		110	110	95% H-UCL
M	Non-forage fish (all) and small forage fis	PAHs	Total LPAHs	µg/kg	111	111	100	15	470	120		130	130	95% Approximate Gamma UCL
M	Non-forage fish (all) and small forage fis	PAHs	Total PAHs	µg/kg	111	111	100	27	1100	210		230	230	95% Approximate Gamma UCL
M	Non-forage fish (all) and small forage fis	PCB Congeners	Total PCB Congeners	µg/kg	111	111	100	170	7900	2000		2300	2300	95% Approximate Gamma UCL
M	Non-forage fish (all) and small forage fis	PCB Congeners	PCB TEQ-Bird	ng/kg	111	111	100	2.9	550	94		110	110	95% Approximate Gamma UCL
M	Non-forage fish (all) and small forage fis	PCB Congeners	PCB TEQ-Fish	ng/kg	111	111	100	0.19	17	1.9		2.3	2.3	95% H-UCL
M	Non-forage fish (all) and small forage fis	PCB Congeners	PCB TEQ-Mammal	ng/kg	111	111	100	2.1	240	24		28	28	95% Approximate Gamma UCL
M	Non-forage fish (all) and small forage fis	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	111	110	99.1	0.32	1400	120	0.21	190	190	95% KM (Chebyshev) UCL
M	Non-forage fish (all) and small forage fis	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	111	111	100	0.73	1400	130		160	160	95% Approximate Gamma UCL
M	Non-forage fish (all) and small forage fis	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	111	111	100	0.79	1400	130		150	150	95% Approximate Gamma UCL
M	Non-forage fish (all) and small forage fis	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	111	111	100	0.81	1400	130		150	150	95% Approximate Gamma UCL
M	Non-forage fish (all) and small forage fis	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	111	111	100	7.8	1700	230		270	270	95% Approximate Gamma UCL
M	Non-forage fish (all) and small forage fis	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	111	111	100	1.2	1400	130		160	160	95% Approximate Gamma UCL
M	Non-forage fish (all) and small forage fis	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	111	111	100	5.5	1500	150		230	230	95% Chebyshev (Mean, Sd) UCL
M	Non-forage fish (all) and small forage fis	OC Pesticides	Dieldrin	µg/kg	111	111	100	7.2	110	31		34	34	95% Approximate Gamma UCL
M	Non-forage fish (all) and small forage fis	OC Pesticides	Endosulfan I	µg/kg	111	12	10.8	0.2	4	1.1	10	0.43	0.43	95% KM (t) UCL
M	Non-forage fish (all) and small forage fis	OC Pesticides	Endosulfan II	µg/kg	110	6	5.5	0.37	2.7	1.3	8.4	0.45	0.45	95% KM (Percentile Bootstrap) UCL
M	Non-forage fish (all) and small forage fis	OC Pesticides	Heptachlor epoxide	µg/kg	111	111	100	2.7	31	13		14	14	95% Approximate Gamma UCL
M	Non-forage fish (all) and small forage fis	OC Pesticides	Total DDx	µg/kg	111	111	100	20	1100	220		250	250	95% Approximate Gamma UCL
M	Non-forage fish (≤ 30 cm) - Bass	Metals	Arsenic	mg/kg	3	2	66.7	0.16	0.25	0.21	0.064		0.25	Maximum detect
M	Non-forage fish (≤ 30 cm) - Bass	Metals	Cadmium	mg/kg	3	3	100	0.0043	0.02	0.011			0.02	Maximum detect
M	Non-forage fish (≤ 30 cm) - Bass	Metals	Chromium	mg/kg	3	3	100	0.23	0.51	0.33			0.51	Maximum detect
M	Non-forage fish (≤ 30 cm) - Bass	Metals	Cobalt	mg/kg	3	3	100	0.025	0.031	0.027			0.031	Maximum detect
M	Non-forage fish (≤ 30 cm) - Bass	Metals	Copper	mg/kg	3	3	100	0.4	0.43	0.41			0.43	Maximum detect
M	Non-forage fish (≤ 30 cm) - Bass	Metals	Lead	mg/kg	3	3	100	0.052	0.097	0.081			0.097	Maximum detect
M	Non-forage fish (≤ 30 cm) - Bass	Metals	Mercury	µg/kg	3	3	100	170	220	190			220	Maximum detect
M	Non-forage fish (≤ 30 cm) - Bass	Metals	Methyl mercury	µg/kg	3	3	100	140	160	150			160	Maximum detect
M	Non-forage fish (≤ 30 cm) - Bass	Metals	Nickel	mg/kg	3	3	100	0.33	0.56	0.41			0.56	Maximum detect
M	Non-forage fish (≤ 30 cm) - Bass	Metals	Selenium	mg/kg	3	3	100	0.51	0.65	0.56			0.65	Maximum detect
M	Non-forage fish (≤ 30 cm) - Bass	Metals	Silver	mg/kg	3	0	0				0.0026		0.0026	Maximum DL
M	Non-forage fish (≤ 30 cm) - Bass	Metals	Vanadium	mg/kg	3	2	66.7	0.016	0.028	0.022	0.01		0.028	Maximum detect
M	Non-forage fish (≤ 30 cm) - Bass	Metals	Zinc	mg/kg	3	3	100	15	18.4	16			18.4	Maximum detect
M	Non-forage fish (≤ 30 cm) - Bass	PAHs	Benzo(a)pyrene	µg/kg	3	1	33.3	28	28		2.6		28	Maximum detect
M	Non-forage fish (≤ 30 cm) - Bass	PAHs	Total HPAHs	µg/kg	3	3	100	9.4	390	140			390	Maximum detect
M	Non-forage fish (≤ 30 cm) - Bass	PAHs	Total LPAHs	µg/kg	3	3	100	38	67	55			67	Maximum detect
M	Non-forage fish (≤ 30 cm) - Bass	PAHs	Total PAHs	µg/kg	3	3	100	43	460	190			460	Maximum detect
M	Non-forage fish (≤ 30 cm) - Bass	PCB Congeners	Total PCB Congeners	µg/kg	3	3	100	630	1100	900			1100	Maximum detect
M	Non-forage fish (≤ 30 cm) - Bass	PCB Congeners	PCB TEQ-Bird	ng/kg	3	3	100	25	47	36			47	Maximum detect
M	Non-forage fish (≤ 30 cm) - Bass	PCB Congeners	PCB TEQ-Fish	ng/kg	3	3	100	0.69	1.1	0.93			1.1	Maximum detect
M	Non-forage fish (≤ 30 cm) - Bass	PCB Congeners	PCB TEQ-Mammal	ng/kg	3	3	100	9.4	15	12			15	Maximum detect
M	Non-forage fish (≤ 30 cm) - Bass	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	3	3	100	8	65	35			65	Maximum detect
M	Non-forage fish (≤ 30 cm) - Bass	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	3	3	100	9.8	65	36			65	Maximum detect
M	Non-forage fish (≤ 30 cm) - Bass	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	3	3	100	8.6	65	36			65	Maximum detect
M	Non-forage fish (≤ 30 cm) - Bass	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	3	3	100	8.6	65	36			65	Maximum detect
M	Non-forage fish (≤ 30 cm) - Bass	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	3	3	100	57	91	72			91	Maximum detect
M	Non-forage fish (≤ 30 cm) - Bass	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	3	3	100	9.8	65	36			65	Maximum detect
M	Non-forage fish (≤ 30 cm) - Bass	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	3	3	100	22	83	49			83	Maximum detect

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Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
M	Non-forage fish (≤ 30 cm) - Bass	OC Pesticides	Dieldrin	µg/kg	3	3	100	16	20	18			20	Maximum detect
M	Non-forage fish (≤ 30 cm) - Bass	OC Pesticides	Endosulfan I	µg/kg	3	0	0				2.9		2.9	Maximum DL
M	Non-forage fish (≤ 30 cm) - Bass	OC Pesticides	Endosulfan II	µg/kg	2	0	0				3.3		3.3	Maximum DL
M	Non-forage fish (≤ 30 cm) - Bass	OC Pesticides	Heptachlor epoxide	µg/kg	3	3	100	5	7.3	6.5			7.3	Maximum detect
M	Non-forage fish (≤ 30 cm) - Bass	OC Pesticides	Total DDx	µg/kg	3	3	100	100	230	160			230	Maximum detect
M	Non-forage fish (≤ 30 cm) - Brown bullhe	Metals	Arsenic	mg/kg	6	6	100	0.031	0.19	0.08		0.13	0.13	95% Student's-t UCL
M	Non-forage fish (≤ 30 cm) - Brown bullhe	Metals	Cadmium	mg/kg	6	6	100	0.005	0.031	0.018		0.027	0.027	95% Student's-t UCL
M	Non-forage fish (≤ 30 cm) - Brown bullhe	Metals	Chromium	mg/kg	6	6	100	0.12	0.94	0.5		0.78	0.78	95% Student's-t UCL
M	Non-forage fish (≤ 30 cm) - Brown bullhe	Metals	Cobalt	mg/kg	6	6	100	0.016	0.054	0.034		0.045	0.045	95% Student's-t UCL
M	Non-forage fish (≤ 30 cm) - Brown bullhe	Metals	Copper	mg/kg	6	6	100	0.55	0.94	0.74		0.86	0.86	95% Student's-t UCL
M	Non-forage fish (≤ 30 cm) - Brown bullhe	Metals	Lead	mg/kg	6	6	100	0.15	0.83	0.59		0.8	0.8	95% Student's-t UCL
M	Non-forage fish (≤ 30 cm) - Brown bullhe	Metals	Mercury	µg/kg	6	6	100	48	140	77		110	110	95% Student's-t UCL
M	Non-forage fish (≤ 30 cm) - Brown bullhe	Metals	Methyl mercury	µg/kg	6	6	100	39	120	65		92	92	95% Student's-t UCL
M	Non-forage fish (≤ 30 cm) - Brown bullhe	Metals	Nickel	mg/kg	6	6	100	0.18	0.84	0.51		0.71	0.71	95% Student's-t UCL
M	Non-forage fish (≤ 30 cm) - Brown bullhe	Metals	Selenium	mg/kg	6	6	100	0.4	0.9	0.61		0.77	0.77	95% Student's-t UCL
M	Non-forage fish (≤ 30 cm) - Brown bullhe	Metals	Silver	mg/kg	6	0	0				0.008		0.008	Maximum DL
M	Non-forage fish (≤ 30 cm) - Brown bullhe	Metals	Vanadium	mg/kg	6	5	83.3	0.12	0.2	0.17	0.03		0.2	Maximum detect
M	Non-forage fish (≤ 30 cm) - Brown bullhe	Metals	Zinc	mg/kg	6	6	100	15	41.4	20.2		29.5	29.5	95% Modified-t UCL
M	Non-forage fish (≤ 30 cm) - Brown bullhe	PAHs	Benzo(a)pyrene	µg/kg	6	2	33.3	2.6	8.6	5.6	1.8		8.6	Maximum detect
M	Non-forage fish (≤ 30 cm) - Brown bullhe	PAHs	Total HPAHs	µg/kg	6	6	100	21	110	77		110	110	95% Student's-t UCL
M	Non-forage fish (≤ 30 cm) - Brown bullhe	PAHs	Total LPAHs	µg/kg	6	6	100	180	260	220		250	250	95% Student's-t UCL
M	Non-forage fish (≤ 30 cm) - Brown bullhe	PAHs	Total PAHs	µg/kg	6	6	100	210	330	300		330	330	95% Student's-t UCL
M	Non-forage fish (≤ 30 cm) - Brown bullhe	PCB Congeners	Total PCB Congeners	µg/kg	6	6	100	260	1700	870		1400	1400	95% Student's-t UCL
M	Non-forage fish (≤ 30 cm) - Brown bullhe	PCB Congeners	PCB TEQ-Bird	ng/kg	6	6	100	20	84	43		65	65	95% Student's-t UCL
M	Non-forage fish (≤ 30 cm) - Brown bullhe	PCB Congeners	PCB TEQ-Fish	ng/kg	6	6	100	0.42	1.6	0.92		1.3	1.3	95% Student's-t UCL
M	Non-forage fish (≤ 30 cm) - Brown bullhe	PCB Congeners	PCB TEQ-Mammal	ng/kg	6	6	100	6.1	23	13		18	18	95% Student's-t UCL
M	Non-forage fish (≤ 30 cm) - Brown bullhe	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	6	6	100	7.8	190	91		150	150	95% Student's-t UCL
M	Non-forage fish (≤ 30 cm) - Brown bullhe	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	6	6	100	9.6	210	99		160	160	95% Student's-t UCL
M	Non-forage fish (≤ 30 cm) - Brown bullhe	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	6	6	100	8.4	200	96		160	160	95% Student's-t UCL
M	Non-forage fish (≤ 30 cm) - Brown bullhe	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	6	6	100	8.5	200	96		160	160	95% Student's-t UCL
M	Non-forage fish (≤ 30 cm) - Brown bullhe	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	6	6	100	31	290	140		230	230	95% Student's-t UCL
M	Non-forage fish (≤ 30 cm) - Brown bullhe	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	6	6	100	8.8	200	97		160	160	95% Student's-t UCL
M	Non-forage fish (≤ 30 cm) - Brown bullhe	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	6	6	100	15	220	110		180	180	95% Student's-t UCL
M	Non-forage fish (≤ 30 cm) - Brown bullhe	OC Pesticides	Dieldrin	µg/kg	6	6	100	9.7	34	22		30	30	95% Student's-t UCL
M	Non-forage fish (≤ 30 cm) - Brown bullhe	OC Pesticides	Endosulfan I	µg/kg	6	3	50	0.97	1.1	1	0.56		1.1	Maximum detect
M	Non-forage fish (≤ 30 cm) - Brown bullhe	OC Pesticides	Endosulfan II	µg/kg	6	0	0				1.6		1.6	Maximum DL
M	Non-forage fish (≤ 30 cm) - Brown bullhe	OC Pesticides	Heptachlor epoxide	µg/kg	6	6	100	4.5	13	9.1		12	12	95% Student's-t UCL
M	Non-forage fish (≤ 30 cm) - Brown bullhe	OC Pesticides	Total DDx	µg/kg	6	6	100	20	200	93		160	160	95% Student's-t UCL
M	Non-forage fish (≤ 30 cm) - American ee	Metals	Arsenic	mg/kg	4	2	50	0.09	0.13	0.11	0.17		0.13	Maximum detect
M	Non-forage fish (≤ 30 cm) - American ee	Metals	Cadmium	mg/kg	4	4	100	0.035	0.19	0.084			0.19	Maximum detect
M	Non-forage fish (≤ 30 cm) - American ee	Metals	Chromium	mg/kg	4	4	100	1.4	4.5	2.7			4.5	Maximum detect
M	Non-forage fish (≤ 30 cm) - American ee	Metals	Cobalt	mg/kg	4	4	100	0.052	0.096	0.077			0.096	Maximum detect
M	Non-forage fish (≤ 30 cm) - American ee	Metals	Copper	mg/kg	4	4	100	0.86	1.5	1.1			1.5	Maximum detect
M	Non-forage fish (≤ 30 cm) - American ee	Metals	Lead	mg/kg	4	4	100	0.84	1.3	1.1			1.3	Maximum detect
M	Non-forage fish (≤ 30 cm) - American ee	Metals	Mercury	µg/kg	4	4	100	110	170	140			170	Maximum detect
M	Non-forage fish (≤ 30 cm) - American ee	Metals	Methyl mercury	µg/kg	4	4	100	110	190	150			190	Maximum detect
M	Non-forage fish (≤ 30 cm) - American ee	Metals	Nickel	mg/kg	4	4	100	0.9	2.8	1.8			2.8	Maximum detect
M	Non-forage fish (≤ 30 cm) - American ee	Metals	Selenium	mg/kg	4	4	100	0.34	0.82	0.63			0.82	Maximum detect
M	Non-forage fish (≤ 30 cm) - American ee	Metals	Silver	mg/kg	4	4	100	0.007	0.009	0.0083			0.009	Maximum detect
M	Non-forage fish (≤ 30 cm) - American ee	Metals	Vanadium	mg/kg	4	4	100	0.1	0.12	0.11			0.12	Maximum detect
M	Non-forage fish (≤ 30 cm) - American ee	Metals	Zinc	mg/kg	4	4	100	26.7	31.3	28.3			31.3	Maximum detect
M	Non-forage fish (≤ 30 cm) - American ee	PAHs	Benzo(a)pyrene	µg/kg	4	2	50	1.9	4.5	3.2	1.6		4.5	Maximum detect

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Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
M	Non-forage fish (≤ 30 cm) - American ee	PAHs	Total HPAHs	µg/kg	4	4	100	11	42	21			42	Maximum detect
M	Non-forage fish (≤ 30 cm) - American ee	PAHs	Total LPAHs	µg/kg	4	4	100	19	47	29			47	Maximum detect
M	Non-forage fish (≤ 30 cm) - American ee	PAHs	Total PAHs	µg/kg	4	4	100	33	89	51			89	Maximum detect
M	Non-forage fish (≤ 30 cm) - American ee	PCB Congeners	Total PCB Congeners	µg/kg	4	4	100	420	1200	700			1200	Maximum detect
M	Non-forage fish (≤ 30 cm) - American ee	PCB Congeners	PCB TEQ-Bird	ng/kg	4	4	100	7	17	9.7			17	Maximum detect
M	Non-forage fish (≤ 30 cm) - American ee	PCB Congeners	PCB TEQ-Fish	ng/kg	4	4	100	0.41	1.2	0.65			1.2	Maximum detect
M	Non-forage fish (≤ 30 cm) - American ee	PCB Congeners	PCB TEQ-Mammal	ng/kg	4	4	100	4.7	14	7.4			14	Maximum detect
M	Non-forage fish (≤ 30 cm) - American ee	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	4	3	75	0.32	1.4	0.7	0.21		1.4	Maximum detect
M	Non-forage fish (≤ 30 cm) - American ee	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	4	4	100	0.73	3.3	1.6			3.3	Maximum detect
M	Non-forage fish (≤ 30 cm) - American ee	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	4	4	100	0.79	3.4	1.6			3.4	Maximum detect
M	Non-forage fish (≤ 30 cm) - American ee	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	4	4	100	0.81	3.4	1.6			3.4	Maximum detect
M	Non-forage fish (≤ 30 cm) - American ee	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	4	4	100	7.9	20	11			20	Maximum detect
M	Non-forage fish (≤ 30 cm) - American ee	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	4	4	100	1.2	4.6	2.3			4.6	Maximum detect
M	Non-forage fish (≤ 30 cm) - American ee	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	4	4	100	5.5	18	9.2			18	Maximum detect
M	Non-forage fish (≤ 30 cm) - American ee	OC Pesticides	Dieldrin	µg/kg	4	4	100	38	110	63			110	Maximum detect
M	Non-forage fish (≤ 30 cm) - American ee	OC Pesticides	Endosulfan I	µg/kg	4	0	0				2		2	Maximum DL
M	Non-forage fish (≤ 30 cm) - American ee	OC Pesticides	Endosulfan II	µg/kg	4	0	0				2.6		2.6	Maximum DL
M	Non-forage fish (≤ 30 cm) - American ee	OC Pesticides	Heptachlor epoxide	µg/kg	4	4	100	14	27	20			27	Maximum detect
M	Non-forage fish (≤ 30 cm) - American ee	OC Pesticides	Total DDx	µg/kg	4	4	100	99	240	140			240	Maximum detect
M	Non-forage fish (≤ 30 cm) - White perch	Metals	Arsenic	mg/kg	21	20	95.2	0.11	0.27	0.2	0.15	0.22	0.22	95% KM (t) UCL
M	Non-forage fish (≤ 30 cm) - White perch	Metals	Cadmium	mg/kg	21	21	100	0.003	0.031	0.011		0.014	0.014	95% Student's-t UCL
M	Non-forage fish (≤ 30 cm) - White perch	Metals	Chromium	mg/kg	21	21	100	0.77	9.8	3.3		4.6	4.6	95% Adjusted Gamma UCL
M	Non-forage fish (≤ 30 cm) - White perch	Metals	Cobalt	mg/kg	21	21	100	0.032	0.14	0.068		0.081	0.081	95% Student's-t UCL
M	Non-forage fish (≤ 30 cm) - White perch	Metals	Copper	mg/kg	21	21	100	1.6	50.9	9.4		13	13	95% Adjusted Gamma UCL
M	Non-forage fish (≤ 30 cm) - White perch	Metals	Lead	mg/kg	21	21	100	0.17	0.96	0.39		0.46	0.46	95% Adjusted Gamma UCL
M	Non-forage fish (≤ 30 cm) - White perch	Metals	Mercury	µg/kg	21	21	100	33	310	140		160	160	95% Student's-t UCL
M	Non-forage fish (≤ 30 cm) - White perch	Metals	Methyl mercury	µg/kg	21	21	100	25	330	140		170	170	95% Student's-t UCL
M	Non-forage fish (≤ 30 cm) - White perch	Metals	Nickel	mg/kg	21	21	100	0.69	6.3	2.2		2.9	2.9	95% Adjusted Gamma UCL
M	Non-forage fish (≤ 30 cm) - White perch	Metals	Selenium	mg/kg	21	21	100	0.37	3	1.1		1.4	1.4	95% Student's-t UCL
M	Non-forage fish (≤ 30 cm) - White perch	Metals	Silver	mg/kg	21	21	100	0.013	0.64	0.12		0.18	0.18	95% Adjusted Gamma UCL
M	Non-forage fish (≤ 30 cm) - White perch	Metals	Vanadium	mg/kg	21	21	100	0.04	0.39	0.12		0.15	0.15	95% Adjusted Gamma UCL
M	Non-forage fish (≤ 30 cm) - White perch	Metals	Zinc	mg/kg	21	21	100	19.9	30.8	24.9		26.2	26.2	95% Student's-t UCL
M	Non-forage fish (≤ 30 cm) - White perch	PAHs	Benzo(a)pyrene	µg/kg	21	11	52.4	1.5	24	5.6	2.2	7.6	7.6	95% GROS Adjusted Gamma UCL
M	Non-forage fish (≤ 30 cm) - White perch	PAHs	Total HPAHs	µg/kg	21	21	100	21	340	110		140	140	95% Student's-t UCL
M	Non-forage fish (≤ 30 cm) - White perch	PAHs	Total LPAHs	µg/kg	21	21	100	36	300	170		200	200	95% Student's-t UCL
M	Non-forage fish (≤ 30 cm) - White perch	PAHs	Total PAHs	µg/kg	21	21	100	63	570	280		330	330	95% Student's-t UCL
M	Non-forage fish (≤ 30 cm) - White perch	PCB Congeners	Total PCB Congeners	µg/kg	21	21	100	290	5100	2100		2500	2500	95% Student's-t UCL
M	Non-forage fish (≤ 30 cm) - White perch	PCB Congeners	PCB TEQ-Bird	ng/kg	21	21	100	31	400	190		230	230	95% Student's-t UCL
M	Non-forage fish (≤ 30 cm) - White perch	PCB Congeners	PCB TEQ-Fish	ng/kg	21	21	100	0.28	3.4	1.8		2.2	2.2	95% Student's-t UCL
M	Non-forage fish (≤ 30 cm) - White perch	PCB Congeners	PCB TEQ-Mammal	ng/kg	21	21	100	2.9	41	22		26	26	95% Student's-t UCL
M	Non-forage fish (≤ 30 cm) - White perch	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	21	21	100	18	250	130		190	190	95% Chebyshev (Mean, Sd) UCL
M	Non-forage fish (≤ 30 cm) - White perch	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	21	21	100	21	280	140		220	220	95% Chebyshev (Mean, Sd) UCL
M	Non-forage fish (≤ 30 cm) - White perch	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	21	21	100	19	260	130		200	200	95% Chebyshev (Mean, Sd) UCL
M	Non-forage fish (≤ 30 cm) - White perch	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	21	21	100	19	260	130		200	200	95% Chebyshev (Mean, Sd) UCL
M	Non-forage fish (≤ 30 cm) - White perch	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	21	21	100	52	690	340		400	400	95% Student's-t UCL
M	Non-forage fish (≤ 30 cm) - White perch	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	21	21	100	19	270	130		210	210	95% Chebyshev (Mean, Sd) UCL
M	Non-forage fish (≤ 30 cm) - White perch	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	21	21	100	25	300	150		230	230	95% Chebyshev (Mean, Sd) UCL
M	Non-forage fish (≤ 30 cm) - White perch	OC Pesticides	Dieldrin	µg/kg	21	21	100	7.8	47	27		31	31	95% Student's-t UCL
M	Non-forage fish (≤ 30 cm) - White perch	OC Pesticides	Endosulfan I	µg/kg	21	1	4.8	0.22	0.22		3.2		0.22	Maximum detect
M	Non-forage fish (≤ 30 cm) - White perch	OC Pesticides	Endosulfan II	µg/kg	21	0	0				3.7		3.7	Maximum DL
M	Non-forage fish (≤ 30 cm) - White perch	OC Pesticides	Heptachlor epoxide	µg/kg	21	21	100	2.8	18	10		12	12	95% Student's-t UCL
M	Non-forage fish (≤ 30 cm) - White perch	OC Pesticides	Total DDx	µg/kg	21	21	100	38	490	200		250	250	95% Student's-t UCL

Diet LOE -- Prey Tissue EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
M	Non-forage fish (≤ 30 cm) and small fora	Metals	Arsenic	mg/kg	42	38	90.5	0.031	0.28	0.17	0.17	0.18	0.18	95% KM (t) UCL
M	Non-forage fish (≤ 30 cm) and small fora	Metals	Cadmium	mg/kg	42	42	100	0.003	0.19	0.024		0.045	0.045	95% Chebyshev (Mean, Sd) UCL
M	Non-forage fish (≤ 30 cm) and small fora	Metals	Chromium	mg/kg	42	42	100	0.12	125	7.2		12	12	95% H-UCL
M	Non-forage fish (≤ 30 cm) and small fora	Metals	Cobalt	mg/kg	42	42	100	0.016	1.1	0.11		0.23	0.23	95% Chebyshev (Mean, Sd) UCL
M	Non-forage fish (≤ 30 cm) and small fora	Metals	Copper	mg/kg	42	42	100	0.4	50.9	5.5		7.5	7.5	95% Adjusted Gamma UCL
M	Non-forage fish (≤ 30 cm) and small fora	Metals	Lead	mg/kg	42	42	100	0.052	3.2	0.76		1.3	1.3	95% Chebyshev (Mean, Sd) UCL
M	Non-forage fish (≤ 30 cm) and small fora	Metals	Mercury	µg/kg	42	42	100	30	310	120		130	130	95% Student's-t UCL
M	Non-forage fish (≤ 30 cm) and small fora	Metals	Methyl mercury	µg/kg	42	42	100	14	330	110		130	130	95% Student's-t UCL
M	Non-forage fish (≤ 30 cm) and small fora	Metals	Nickel	mg/kg	42	42	100	0.18	89.1	5		14	14	95% Chebyshev (Mean, Sd) UCL
M	Non-forage fish (≤ 30 cm) and small fora	Metals	Selenium	mg/kg	42	42	100	0.22	3	0.86		1	1	95% Adjusted Gamma UCL
M	Non-forage fish (≤ 30 cm) and small fora	Metals	Silver	mg/kg	42	32	76.2	0.0067	0.64	0.087	0.008	0.14	0.14	95% KM (Chebyshev) UCL
M	Non-forage fish (≤ 30 cm) and small fora	Metals	Vanadium	mg/kg	42	40	95.2	0.016	1.2	0.25	0.03	0.45	0.45	95% KM (Chebyshev) UCL
M	Non-forage fish (≤ 30 cm) and small fora	Metals	Zinc	mg/kg	42	42	100	15	48	26		28	28	95% Student's-t UCL
M	Non-forage fish (≤ 30 cm) and small fora	PAHs	Benzo(a)pyrene	µg/kg	42	24	57.1	1.5	64	16	2.6	21	21	95% KM (Chebyshev) UCL
M	Non-forage fish (≤ 30 cm) and small fora	PAHs	Total HPAHs	µg/kg	42	42	100	9.4	860	160		210	210	95% Adjusted Gamma UCL
M	Non-forage fish (≤ 30 cm) and small fora	PAHs	Total LPAHs	µg/kg	42	42	100	19	370	150		170	170	95% Student's-t UCL
M	Non-forage fish (≤ 30 cm) and small fora	PAHs	Total PAHs	µg/kg	42	42	100	33	1100	310		380	380	95% Adjusted Gamma UCL
M	Non-forage fish (≤ 30 cm) and small fora	PCB Congeners	Total PCB Congeners	µg/kg	42	42	100	170	5100	1400		2100	2100	95% Chebyshev (Mean, Sd) UCL
M	Non-forage fish (≤ 30 cm) and small fora	PCB Congeners	PCB TEQ-Bird	ng/kg	42	42	100	7	400	110		190	190	95% Chebyshev (Mean, Sd) UCL
M	Non-forage fish (≤ 30 cm) and small fora	PCB Congeners	PCB TEQ-Fish	ng/kg	42	42	100	0.19	3.4	1.3		1.5	1.5	95% Adjusted Gamma UCL
M	Non-forage fish (≤ 30 cm) and small fora	PCB Congeners	PCB TEQ-Mammal	ng/kg	42	42	100	2.1	41	15		19	19	95% Adjusted Gamma UCL
M	Non-forage fish (≤ 30 cm) and small fora	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	42	41	97.6	0.32	250	84	0.21	160	160	97.5% KM (Chebyshev) UCL
M	Non-forage fish (≤ 30 cm) and small fora	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	42	42	100	0.73	280	92		150	150	95% Chebyshev (Mean, Sd) UCL
M	Non-forage fish (≤ 30 cm) and small fora	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	42	42	100	0.79	260	86		140	140	95% Chebyshev (Mean, Sd) UCL
M	Non-forage fish (≤ 30 cm) and small fora	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	42	42	100	0.81	260	86		140	140	95% Chebyshev (Mean, Sd) UCL
M	Non-forage fish (≤ 30 cm) and small fora	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	42	42	100	7.9	690	210		330	330	95% Chebyshev (Mean, Sd) UCL
M	Non-forage fish (≤ 30 cm) and small fora	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	42	42	100	1.2	270	87		140	140	95% Chebyshev (Mean, Sd) UCL
M	Non-forage fish (≤ 30 cm) and small fora	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	42	42	100	5.5	300	100		160	160	95% Chebyshev (Mean, Sd) UCL
M	Non-forage fish (≤ 30 cm) and small fora	OC Pesticides	Dieldrin	µg/kg	42	42	100	7.8	110	27		32	32	95% Adjusted Gamma UCL
M	Non-forage fish (≤ 30 cm) and small fora	OC Pesticides	Endosulfan I	µg/kg	42	4	9.5	0.22	1.1	0.82	3.2		1.1	Maximum detect
M	Non-forage fish (≤ 30 cm) and small fora	OC Pesticides	Endosulfan II	µg/kg	41	0	0				3.7		3.7	Maximum DL
M	Non-forage fish (≤ 30 cm) and small fora	OC Pesticides	Heptachlor epoxide	µg/kg	42	42	100	2.8	27	9.8		11	11	95% Student's-t UCL
M	Non-forage fish (≤ 30 cm) and small fora	OC Pesticides	Total DDx	µg/kg	42	42	100	20	490	150		180	180	95% Adjusted Gamma UCL
M	Small forage fish (≥ RM 10)	Metals	Arsenic	mg/kg	8	8	100	0.044	0.28	0.19		0.23	0.23	95% Student's-t UCL
M	Small forage fish (≥ RM 10)	Metals	Cadmium	mg/kg	8	8	100	0.0091	0.054	0.036		0.047	0.047	95% Student's-t UCL
M	Small forage fish (≥ RM 10)	Metals	Chromium	mg/kg	8	8	100	0.89	125	27		100	100	95% Adjusted Gamma UCL
M	Small forage fish (≥ RM 10)	Metals	Cobalt	mg/kg	8	8	100	0.031	1.1	0.34		0.56	0.56	95% Student's-t UCL
M	Small forage fish (≥ RM 10)	Metals	Copper	mg/kg	8	8	100	0.87	4.1	2.9		3.7	3.7	95% Student's-t UCL
M	Small forage fish (≥ RM 10)	Metals	Lead	mg/kg	8	8	100	0.15	3.2	2		2.8	2.8	95% Student's-t UCL
M	Small forage fish (≥ RM 10)	Metals	Mercury	µg/kg	8	8	100	30	150	60		87	87	95% Modified-t UCL
M	Small forage fish (≥ RM 10)	Metals	Methyl mercury	µg/kg	8	8	100	14	150	42		91	91	95% H-UCL
M	Small forage fish (≥ RM 10)	Metals	Nickel	mg/kg	8	8	100	0.62	89.1	19		71	71	95% Adjusted Gamma UCL
M	Small forage fish (≥ RM 10)	Metals	Selenium	mg/kg	8	8	100	0.22	0.89	0.51		0.68	0.68	95% Student's-t UCL
M	Small forage fish (≥ RM 10)	Metals	Silver	mg/kg	8	7	87.5	0.0067	0.045	0.025	0.0051	0.033	0.033	95% KM (t) UCL
M	Small forage fish (≥ RM 10)	Metals	Vanadium	mg/kg	8	8	100	0.05	1.2	0.76		1	1	95% Student's-t UCL
M	Small forage fish (≥ RM 10)	Metals	Zinc	mg/kg	8	8	100	25	48	34.3		39.8	39.8	95% Student's-t UCL
M	Small forage fish (≥ RM 10)	PAHs	Benzo(a)pyrene	µg/kg	8	8	100	2.1	64	34		50	50	95% Student's-t UCL
M	Small forage fish (≥ RM 10)	PAHs	Total HPAHs	µg/kg	8	8	100	78	860	410		610	610	95% Student's-t UCL
M	Small forage fish (≥ RM 10)	PAHs	Total LPAHs	µg/kg	8	8	100	69	370	150		220	220	95% Student's-t UCL
M	Small forage fish (≥ RM 10)	PAHs	Total PAHs	µg/kg	8	8	100	170	1100	570		790	790	95% Student's-t UCL
M	Small forage fish (≥ RM 10)	PCB Congeners	Total PCB Congeners	µg/kg	8	8	100	170	480	360		430	430	95% Student's-t UCL
M	Small forage fish (≥ RM 10)	PCB Congeners	PCB TEQ-Bird	ng/kg	8	8	100	20	88	45		62	62	95% Student's-t UCL

Diet LOE -- Prey Tissue EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
M	Small forage fish (≥ RM 10)	PCB Congeners	PCB TEQ-Fish	ng/kg	8	8	100	0.19	0.64	0.44		0.55	0.55	95% Student's-t UCL
M	Small forage fish (≥ RM 10)	PCB Congeners	PCB TEQ-Mammal	ng/kg	8	8	100	2.1	7.2	5.2		6.4	6.4	95% Student's-t UCL
M	Small forage fish (≥ RM 10)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	8	8	100	2.4	35	17		24	24	95% Student's-t UCL
M	Small forage fish (≥ RM 10)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	8	8	100	9.1	41	21		29	29	95% Student's-t UCL
M	Small forage fish (≥ RM 10)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	8	8	100	3.7	37	18		26	26	95% Student's-t UCL
M	Small forage fish (≥ RM 10)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	8	8	100	3.8	37	18		26	26	95% Student's-t UCL
M	Small forage fish (≥ RM 10)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	8	8	100	32	100	66		85	85	95% Student's-t UCL
M	Small forage fish (≥ RM 10)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	8	8	100	4.3	37	18		26	26	95% Student's-t UCL
M	Small forage fish (≥ RM 10)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	8	8	100	10	43	23		31	31	95% Student's-t UCL
M	Small forage fish (≥ RM 10)	OC Pesticides	Dieldrin	µg/kg	8	8	100	8.4	28	15		19	19	95% Student's-t UCL
M	Small forage fish (≥ RM 10)	OC Pesticides	Endosulfan I	µg/kg	8	0	0				1.3		1.3	Maximum DL
M	Small forage fish (≥ RM 10)	OC Pesticides	Endosulfan II	µg/kg	8	0	0				1.3		1.3	Maximum DL
M	Small forage fish (≥ RM 10)	OC Pesticides	Heptachlor epoxide	µg/kg	8	8	100	3.1	8.7	5.3		6.5	6.5	95% Student's-t UCL
M	Small forage fish (≥ RM 10)	OC Pesticides	Total DDx	µg/kg	8	8	100	22	67	44		54	54	95% Student's-t UCL
M	Small forage fish (all)	Metals	Arsenic	mg/kg	28	28	100	0.044	0.52	0.32		0.35	0.35	95% Student's-t UCL
M	Small forage fish (all)	Metals	Cadmium	mg/kg	28	28	100	0.0091	0.099	0.032		0.051	0.051	95% Chebyshev (Mean, Sd) UCL
M	Small forage fish (all)	Metals	Chromium	mg/kg	28	28	100	0.89	125	12		19	19	95% Adjusted Gamma UCL
M	Small forage fish (all)	Metals	Cobalt	mg/kg	28	28	100	0.031	1.1	0.19		0.26	0.26	95% Adjusted Gamma UCL
M	Small forage fish (all)	Metals	Copper	mg/kg	28	28	100	0.87	5.4	3		3.3	3.3	95% Student's-t UCL
M	Small forage fish (all)	Metals	Lead	mg/kg	28	28	100	0.15	4.9	1.6		2.2	2.2	95% Adjusted Gamma UCL
M	Small forage fish (all)	Metals	Mercury	µg/kg	28	28	100	30	150	60		67	67	95% Adjusted Gamma UCL
M	Small forage fish (all)	Metals	Methyl mercury	µg/kg	28	28	100	14	150	43		53	53	95% Adjusted Gamma UCL
M	Small forage fish (all)	Metals	Nickel	mg/kg	28	28	100	0.62	89.1	8.2		13	13	95% H-UCL
M	Small forage fish (all)	Metals	Selenium	mg/kg	28	28	100	0.22	0.93	0.62		0.69	0.69	95% Student's-t UCL
M	Small forage fish (all)	Metals	Silver	mg/kg	28	27	96.4	0.0067	0.074	0.038	0.0051	0.042	0.042	95% KM (t) UCL
M	Small forage fish (all)	Metals	Vanadium	mg/kg	28	28	100	0.05	1.3	0.61		0.79	0.79	95% Adjusted Gamma UCL
M	Small forage fish (all)	Metals	Zinc	mg/kg	28	28	100	25	51.6	39.4		41.7	41.7	95% Student's-t UCL
M	Small forage fish (all)	PAHs	Benzo(a)pyrene	µg/kg	28	28	100	2.1	98	25		35	35	95% Adjusted Gamma UCL
M	Small forage fish (all)	PAHs	Total HPAHs	µg/kg	28	28	100	29	1000	270		390	390	95% Adjusted Gamma UCL
M	Small forage fish (all)	PAHs	Total LPAHs	µg/kg	28	28	100	18	370	89		120	120	95% Adjusted Gamma UCL
M	Small forage fish (all)	PAHs	Total PAHs	µg/kg	28	28	100	48	1200	360		500	500	95% Adjusted Gamma UCL
M	Small forage fish (all)	PCB Congeners	Total PCB Congeners	µg/kg	28	28	100	170	930	490		560	560	95% Adjusted Gamma UCL
M	Small forage fish (all)	PCB Congeners	PCB TEQ-Bird	ng/kg	28	28	100	17	95	45		52	52	95% Student's-t UCL
M	Small forage fish (all)	PCB Congeners	PCB TEQ-Fish	ng/kg	28	28	100	0.19	0.9	0.53		0.59	0.59	95% Student's-t UCL
M	Small forage fish (all)	PCB Congeners	PCB TEQ-Mammal	ng/kg	28	28	100	2.1	12	6.7		7.4	7.4	95% Student's-t UCL
M	Small forage fish (all)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	28	28	100	2.4	100	35		45	45	95% Adjusted Gamma UCL
M	Small forage fish (all)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	28	28	100	9.1	110	39		49	49	95% Adjusted Gamma UCL
M	Small forage fish (all)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	28	28	100	3.7	100	36		47	47	95% Adjusted Gamma UCL
M	Small forage fish (all)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	28	28	100	3.8	100	36		46	46	95% Adjusted Gamma UCL
M	Small forage fish (all)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	28	28	100	30	200	84		98	98	95% Student's-t UCL
M	Small forage fish (all)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	28	28	100	4.3	100	36		47	47	95% Adjusted Gamma UCL
M	Small forage fish (all)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	28	28	100	10	110	43		54	54	95% Adjusted Gamma UCL
M	Small forage fish (all)	OC Pesticides	Dieldrin	µg/kg	28	28	100	3.5	28	10		12	12	95% Student's-t UCL
M	Small forage fish (all)	OC Pesticides	Endosulfan I	µg/kg	28	0	0				1.5		1.5	Maximum DL
M	Small forage fish (all)	OC Pesticides	Endosulfan II	µg/kg	28	0	0				1.5		1.5	Maximum DL
M	Small forage fish (all)	OC Pesticides	Heptachlor epoxide	µg/kg	28	28	100	0.84	8.7	3.3		3.9	3.9	95% Student's-t UCL
M	Small forage fish (all)	OC Pesticides	Total DDx	µg/kg	28	28	100	22	140	57		65	65	95% Student's-t UCL
B	Worms (Reach 1)	Metals	Arsenic	mg/kg	3	3	100	1.6	1.8	1.7			1.8	Maximum detect
B	Worms (Reach 1)	Metals	Cadmium	mg/kg	3	3	100	0.023	0.025	0.024			0.025	Maximum detect
B	Worms (Reach 1)	Metals	Chromium	mg/kg	3	3	100	1.4	4.9	3.3			4.9	Maximum detect
B	Worms (Reach 1)	Metals	Cobalt	mg/kg	3	3	100	0.096	0.2	0.14			0.2	Maximum detect
B	Worms (Reach 1)	Metals	Copper	mg/kg	3	3	100	1.2	1.6	1.4			1.6	Maximum detect

Diet LOE -- Prey Tissue EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
B	Worms (Reach 1)	Metals	Lead	mg/kg	3	3	100	0.11	0.22	0.15			0.22	Maximum detect
B	Worms (Reach 1)	Metals	Mercury	µg/kg	3	3	100	21	24	22			24	Maximum detect
B	Worms (Reach 1)	Metals	Methyl mercury	µg/kg	3	3	100	2.9	3.4	3.1			3.4	Maximum detect
B	Worms (Reach 1)	Metals	Nickel	mg/kg	3	3	100	1.2	3.4	2.4			3.4	Maximum detect
B	Worms (Reach 1)	Metals	Selenium	mg/kg	3	3	100	0.3	0.35	0.32			0.35	Maximum detect
B	Worms (Reach 1)	Metals	Silver	mg/kg	3	3	100	0.021	0.024	0.023			0.024	Maximum detect
B	Worms (Reach 1)	Metals	Vanadium	mg/kg	3	3	100	0.07	0.08	0.073			0.08	Maximum detect
B	Worms (Reach 1)	Metals	Zinc	mg/kg	3	3	100	18.4	19.1	18.7			19.1	Maximum detect
B	Worms (Reach 1)	PAHs	Benzo(a)pyrene	µg/kg	3	0	0				3.2		3.2	Maximum DL
B	Worms (Reach 1)	PAHs	Total HPAHs	µg/kg	3	3	100	58	95	79			95	Maximum detect
B	Worms (Reach 1)	PAHs	Total LPAHs	µg/kg	3	3	100	5.3	11	8.2			11	Maximum detect
B	Worms (Reach 1)	PAHs	Total PAHs	µg/kg	3	3	100	67	110	89			110	Maximum detect
B	Worms (Reach 1)	PCB Congeners	Total PCB Congeners	µg/kg	3	3	100	26	35	32			35	Maximum detect
B	Worms (Reach 1)	PCB Congeners	PCB TEQ-Bird	ng/kg	3	3	100	4.3	4.8	4.5			4.8	Maximum detect
B	Worms (Reach 1)	PCB Congeners	PCB TEQ-Fish	ng/kg	3	3	100	0.037	0.048	0.044			0.048	Maximum detect
B	Worms (Reach 1)	PCB Congeners	PCB TEQ-Mammal	ng/kg	3	3	100	0.49	0.69	0.61			0.69	Maximum detect
B	Worms (Reach 1)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	3	3	100	1.8	2.9	2.4			2.9	Maximum detect
B	Worms (Reach 1)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	3	3	100	3.8	5.2	4.6			5.2	Maximum detect
B	Worms (Reach 1)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	3	3	100	2.3	3.7	2.9			3.7	Maximum detect
B	Worms (Reach 1)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	3	3	100	2.3	3.6	2.9			3.6	Maximum detect
B	Worms (Reach 1)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	3	3	100	8.1	10	9.1			10	Maximum detect
B	Worms (Reach 1)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	3	3	100	2.3	3.7	2.9			3.7	Maximum detect
B	Worms (Reach 1)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	3	3	100	2.4	3.7	3			3.7	Maximum detect
B	Worms (Reach 1)	OC Pesticides	Dieldrin	µg/kg	3	3	100	0.57	1	0.8			1	Maximum detect
B	Worms (Reach 1)	OC Pesticides	Endosulfan I	µg/kg	3	0	0				1.4		1.4	Maximum DL
B	Worms (Reach 1)	OC Pesticides	Endosulfan II	µg/kg	3	0	0				2.6		2.6	Maximum DL
B	Worms (Reach 1)	OC Pesticides	Heptachlor epoxide	µg/kg	3	3	100	0.082	0.23	0.18			0.23	Maximum detect
B	Worms (Reach 1)	OC Pesticides	Total DDx	µg/kg	3	1	33.3	1.8	1.8		4.6		1.8	Maximum detect
B	Worms (Reach 2)	Metals	Arsenic	mg/kg	1	1	100	1.7	1.7				1.7	Maximum detect
B	Worms (Reach 2)	Metals	Cadmium	mg/kg	1	1	100	0.024	0.024				0.024	Maximum detect
B	Worms (Reach 2)	Metals	Chromium	mg/kg	1	1	100	3.8	3.8				3.8	Maximum detect
B	Worms (Reach 2)	Metals	Cobalt	mg/kg	1	1	100	0.11	0.11				0.11	Maximum detect
B	Worms (Reach 2)	Metals	Copper	mg/kg	1	1	100	1.2	1.2				1.2	Maximum detect
B	Worms (Reach 2)	Metals	Lead	mg/kg	1	1	100	0.16	0.16				0.16	Maximum detect
B	Worms (Reach 2)	Metals	Mercury	µg/kg	1	1	100	22	22				22	Maximum detect
B	Worms (Reach 2)	Metals	Methyl mercury	µg/kg	1	1	100	2.9	2.9				2.9	Maximum detect
B	Worms (Reach 2)	Metals	Nickel	mg/kg	1	1	100	2.6	2.6				2.6	Maximum detect
B	Worms (Reach 2)	Metals	Selenium	mg/kg	1	1	100	0.28	0.28				0.28	Maximum detect
B	Worms (Reach 2)	Metals	Silver	mg/kg	1	1	100	0.027	0.027				0.027	Maximum detect
B	Worms (Reach 2)	Metals	Vanadium	mg/kg	1	1	100	0.08	0.08				0.08	Maximum detect
B	Worms (Reach 2)	Metals	Zinc	mg/kg	1	1	100	19.5	19.5				19.5	Maximum detect
B	Worms (Reach 2)	PAHs	Benzo(a)pyrene	µg/kg	1	0	0				1.9		1.9	Maximum DL
B	Worms (Reach 2)	PAHs	Total HPAHs	µg/kg	1	1	100	140	140				140	Maximum detect
B	Worms (Reach 2)	PAHs	Total LPAHs	µg/kg	1	1	100	12	12				12	Maximum detect
B	Worms (Reach 2)	PAHs	Total PAHs	µg/kg	1	1	100	150	150				150	Maximum detect
B	Worms (Reach 2)	PCB Congeners	Total PCB Congeners	µg/kg	1	1	100	130	130				130	Maximum detect
B	Worms (Reach 2)	PCB Congeners	PCB TEQ-Bird	ng/kg	1	1	100	25	25				25	Maximum detect
B	Worms (Reach 2)	PCB Congeners	PCB TEQ-Fish	ng/kg	1	1	100	0.14	0.14				0.14	Maximum detect
B	Worms (Reach 2)	PCB Congeners	PCB TEQ-Mammal	ng/kg	1	1	100	1.3	1.3				1.3	Maximum detect
B	Worms (Reach 2)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	1	1	100	19	19				19	Maximum detect
B	Worms (Reach 2)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	1	1	100	22	22				22	Maximum detect
B	Worms (Reach 2)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	1	1	100	20	20				20	Maximum detect

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Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
B	Worms (Reach 2)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	1	1	100	20	20				20	Maximum detect
B	Worms (Reach 2)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	1	1	100	47	47				47	Maximum detect
B	Worms (Reach 2)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	1	1	100	20	20				20	Maximum detect
B	Worms (Reach 2)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	1	1	100	21	21				21	Maximum detect
B	Worms (Reach 2)	OC Pesticides	Dieldrin	µg/kg	1	1	100	2	2				2	Maximum detect
B	Worms (Reach 2)	OC Pesticides	Endosulfan I	µg/kg	1	0	0				1.3		1.3	Maximum DL
B	Worms (Reach 2)	OC Pesticides	Endosulfan II	µg/kg	1	0	0				2.6		2.6	Maximum DL
B	Worms (Reach 2)	OC Pesticides	Heptachlor epoxide	µg/kg	1	1	100	0.11	0.11				0.11	Maximum detect
B	Worms (Reach 2)	OC Pesticides	Total DDx	µg/kg	1	1	100	3.6	3.6				3.6	Maximum detect
B	Worms (Reach 3)	Metals	Arsenic	mg/kg	1	1	100	1.7	1.7				1.7	Maximum detect
B	Worms (Reach 3)	Metals	Cadmium	mg/kg	1	1	100	0.026	0.026				0.026	Maximum detect
B	Worms (Reach 3)	Metals	Chromium	mg/kg	1	1	100	7.7	7.7				7.7	Maximum detect
B	Worms (Reach 3)	Metals	Cobalt	mg/kg	1	1	100	0.27	0.27				0.27	Maximum detect
B	Worms (Reach 3)	Metals	Copper	mg/kg	1	1	100	1.5	1.5				1.5	Maximum detect
B	Worms (Reach 3)	Metals	Lead	mg/kg	1	1	100	0.16	0.16				0.16	Maximum detect
B	Worms (Reach 3)	Metals	Mercury	µg/kg	1	1	100	25	25				25	Maximum detect
B	Worms (Reach 3)	Metals	Methyl mercury	µg/kg	1	1	100	3.1	3.1				3.1	Maximum detect
B	Worms (Reach 3)	Metals	Nickel	mg/kg	1	1	100	4.9	4.9				4.9	Maximum detect
B	Worms (Reach 3)	Metals	Selenium	mg/kg	1	1	100	0.28	0.28				0.28	Maximum detect
B	Worms (Reach 3)	Metals	Silver	mg/kg	1	1	100	0.021	0.021				0.021	Maximum detect
B	Worms (Reach 3)	Metals	Vanadium	mg/kg	1	1	100	0.08	0.08				0.08	Maximum detect
B	Worms (Reach 3)	Metals	Zinc	mg/kg	1	1	100	18.1	18.1				18.1	Maximum detect
B	Worms (Reach 3)	PAHs	Benzo(a)pyrene	µg/kg	1	0	0				3		3	Maximum DL
B	Worms (Reach 3)	PAHs	Total HPAHs	µg/kg	1	1	100	99	99				99	Maximum detect
B	Worms (Reach 3)	PAHs	Total LPAHs	µg/kg	1	1	100	8.3	8.3				8.3	Maximum detect
B	Worms (Reach 3)	PAHs	Total PAHs	µg/kg	1	1	100	110	110				110	Maximum detect
B	Worms (Reach 3)	PCB Congeners	Total PCB Congeners	µg/kg	1	1	100	41	41				41	Maximum detect
B	Worms (Reach 3)	PCB Congeners	PCB TEQ-Bird	ng/kg	1	1	100	4.9	4.9				4.9	Maximum detect
B	Worms (Reach 3)	PCB Congeners	PCB TEQ-Fish	ng/kg	1	1	100	0.054	0.054				0.054	Maximum detect
B	Worms (Reach 3)	PCB Congeners	PCB TEQ-Mammal	ng/kg	1	1	100	0.77	0.77				0.77	Maximum detect
B	Worms (Reach 3)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	1	1	100	4.2	4.2				4.2	Maximum detect
B	Worms (Reach 3)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	1	1	100	5.9	5.9				5.9	Maximum detect
B	Worms (Reach 3)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	1	1	100	4.6	4.6				4.6	Maximum detect
B	Worms (Reach 3)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	1	1	100	4.6	4.6				4.6	Maximum detect
B	Worms (Reach 3)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	1	1	100	11	11				11	Maximum detect
B	Worms (Reach 3)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	1	1	100	4.6	4.6				4.6	Maximum detect
B	Worms (Reach 3)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	1	1	100	4.7	4.7				4.7	Maximum detect
B	Worms (Reach 3)	OC Pesticides	Dieldrin	µg/kg	1	1	100	0.91	0.91				0.91	Maximum detect
B	Worms (Reach 3)	OC Pesticides	Endosulfan I	µg/kg	1	0	0				1.2		1.2	Maximum DL
B	Worms (Reach 3)	OC Pesticides	Endosulfan II	µg/kg	1	0	0				2.2		2.2	Maximum DL
B	Worms (Reach 3)	OC Pesticides	Heptachlor epoxide	µg/kg	1	0	0				0.15		0.15	Maximum DL
B	Worms (Reach 3)	OC Pesticides	Total DDx	µg/kg	1	0	0				4.2		4.2	Maximum DL
B	Worms (Reach 4)	Metals	Arsenic	mg/kg	1	1	100	0.65	0.65				0.65	Maximum detect
B	Worms (Reach 4)	Metals	Cadmium	mg/kg	1	1	100	0.16	0.16				0.16	Maximum detect
B	Worms (Reach 4)	Metals	Chromium	mg/kg	1	1	100	24.7	24.7				24.7	Maximum detect
B	Worms (Reach 4)	Metals	Cobalt	mg/kg	1	1	100	0.82	0.82				0.82	Maximum detect
B	Worms (Reach 4)	Metals	Copper	mg/kg	1	1	100	11.9	11.9				11.9	Maximum detect
B	Worms (Reach 4)	Metals	Lead	mg/kg	1	1	100	10.2	10.2				10.2	Maximum detect
B	Worms (Reach 4)	Metals	Mercury	µg/kg	3	3	100	13	150	61			150	Maximum detect
B	Worms (Reach 4)	Metals	Methyl mercury	µg/kg	3	0	0				3.1		3.1	Maximum DL
B	Worms (Reach 4)	Metals	Nickel	mg/kg	1	1	100	14.8	14.8				14.8	Maximum detect
B	Worms (Reach 4)	Metals	Selenium	mg/kg	1	1	100	0.55	0.55				0.55	Maximum detect

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Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
B	Worms (Reach 4)	Metals	Silver	mg/kg	1	1	100	0.042	0.042				0.042	Maximum detect
B	Worms (Reach 4)	Metals	Vanadium	mg/kg	1	1	100	1.2	1.2				1.2	Maximum detect
B	Worms (Reach 4)	Metals	Zinc	mg/kg	1	1	100	39.8	39.8				39.8	Maximum detect
B	Worms (Reach 4)	PAHs	Benzo(a)pyrene	µg/kg	1	1	100	440	440				440	Maximum detect
B	Worms (Reach 4)	PAHs	Total HPAHs	µg/kg	1	1	100	4900	4900				4900	Maximum detect
B	Worms (Reach 4)	PAHs	Total LPAHs	µg/kg	1	1	100	940	940				940	Maximum detect
B	Worms (Reach 4)	PAHs	Total PAHs	µg/kg	1	1	100	5900	5900				5900	Maximum detect
B	Worms (Reach 4)	PCB Congeners	Total PCB Congeners	µg/kg	3	3	100	90	530	250			530	Maximum detect
B	Worms (Reach 4)	PCB Congeners	PCB TEQ-Bird	ng/kg	3	3	100	12	90	40			90	Maximum detect
B	Worms (Reach 4)	PCB Congeners	PCB TEQ-Fish	ng/kg	3	3	100	0.077	0.44	0.2			0.44	Maximum detect
B	Worms (Reach 4)	PCB Congeners	PCB TEQ-Mammal	ng/kg	3	3	100	0.98	3.7	1.9			3.7	Maximum detect
B	Worms (Reach 4)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	3	3	100	13	140	56			140	Maximum detect
B	Worms (Reach 4)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	3	3	100	15	150	62			150	Maximum detect
B	Worms (Reach 4)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	3	3	100	14	140	57			140	Maximum detect
B	Worms (Reach 4)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	3	3	100	14	140	58			140	Maximum detect
B	Worms (Reach 4)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	3	3	100	27	240	100			240	Maximum detect
B	Worms (Reach 4)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	3	3	100	14	140	57			140	Maximum detect
B	Worms (Reach 4)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	3	3	100	14	150	61			150	Maximum detect
B	Worms (Reach 4)	OC Pesticides	Dieldrin	µg/kg	2	2	100	1.2	1.3	1.3			1.3	Maximum detect
B	Worms (Reach 4)	OC Pesticides	Endosulfan I	µg/kg	2	0	0				1.3		1.3	Maximum DL
B	Worms (Reach 4)	OC Pesticides	Endosulfan II	µg/kg	2	0	0				2.9		2.9	Maximum DL
B	Worms (Reach 4)	OC Pesticides	Heptachlor epoxide	µg/kg	2	1	50	0.34	0.34		0.17		0.34	Maximum detect
B	Worms (Reach 4)	OC Pesticides	Total DDx	µg/kg	2	2	100	19	33	26			33	Maximum detect
B	Worms (Reach 5)	Metals	Arsenic	mg/kg	1	1	100	0.58	0.58				0.58	Maximum detect
B	Worms (Reach 5)	Metals	Cadmium	mg/kg	1	1	100	0.15	0.15				0.15	Maximum detect
B	Worms (Reach 5)	Metals	Chromium	mg/kg	1	1	100	7.2	7.2				7.2	Maximum detect
B	Worms (Reach 5)	Metals	Cobalt	mg/kg	1	1	100	0.33	0.33				0.33	Maximum detect
B	Worms (Reach 5)	Metals	Copper	mg/kg	1	1	100	6.1	6.1				6.1	Maximum detect
B	Worms (Reach 5)	Metals	Lead	mg/kg	1	1	100	1.8	1.8				1.8	Maximum detect
B	Worms (Reach 5)	Metals	Mercury	µg/kg	3	3	100	7.6	26	18			26	Maximum detect
B	Worms (Reach 5)	Metals	Methyl mercury	µg/kg	3	0	0				2.9		2.9	Maximum DL
B	Worms (Reach 5)	Metals	Nickel	mg/kg	1	1	100	5.1	5.1				5.1	Maximum detect
B	Worms (Reach 5)	Metals	Selenium	mg/kg	1	1	100	0.29	0.29				0.29	Maximum detect
B	Worms (Reach 5)	Metals	Silver	mg/kg	1	1	100	0.01	0.01				0.01	Maximum detect
B	Worms (Reach 5)	Metals	Vanadium	mg/kg	1	1	100	0.17	0.17				0.17	Maximum detect
B	Worms (Reach 5)	Metals	Zinc	mg/kg	1	1	100	33.8	33.8				33.8	Maximum detect
B	Worms (Reach 5)	PCB Congeners	Total PCB Congeners	µg/kg	3	3	100	55	130	98			130	Maximum detect
B	Worms (Reach 5)	PCB Congeners	PCB TEQ-Bird	ng/kg	3	3	100	8.8	19	15			19	Maximum detect
B	Worms (Reach 5)	PCB Congeners	PCB TEQ-Fish	ng/kg	3	3	100	0.065	0.14	0.11			0.14	Maximum detect
B	Worms (Reach 5)	PCB Congeners	PCB TEQ-Mammal	ng/kg	3	3	100	0.72	1.7	1.2			1.7	Maximum detect
B	Worms (Reach 5)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	3	3	100	7.7	22	16			22	Maximum detect
B	Worms (Reach 5)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	3	3	100	10	25	20			25	Maximum detect
B	Worms (Reach 5)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	3	3	100	8.8	23	18			23	Maximum detect
B	Worms (Reach 5)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	3	3	100	8.8	23	18			23	Maximum detect
B	Worms (Reach 5)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	3	3	100	19	43	35			43	Maximum detect
B	Worms (Reach 5)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	3	3	100	8.8	23	18			23	Maximum detect
B	Worms (Reach 5)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	3	3	100	8.9	24	19			24	Maximum detect
B	Worms (Reach 5)	OC Pesticides	Dieldrin	µg/kg	3	3	100	1.7	2.6	2.1			2.6	Maximum detect
B	Worms (Reach 5)	OC Pesticides	Endosulfan I	µg/kg	3	0	0				1.6		1.6	Maximum DL
B	Worms (Reach 5)	OC Pesticides	Endosulfan II	µg/kg	3	0	0				3.9		3.9	Maximum DL
B	Worms (Reach 5)	OC Pesticides	Heptachlor epoxide	µg/kg	3	3	100	0.4	0.64	0.55			0.64	Maximum detect
B	Worms (Reach 5)	OC Pesticides	Total DDx	µg/kg	3	3	100	11	32	21			32	Maximum detect

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Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
B	Worms (Reach 6)	Metals	Arsenic	mg/kg	2	2	100	1	1.2	1.1			1.2	Maximum detect
B	Worms (Reach 6)	Metals	Cadmium	mg/kg	2	2	100	0.098	0.11	0.1			0.11	Maximum detect
B	Worms (Reach 6)	Metals	Chromium	mg/kg	2	2	100	7.6	8.8	8.2			8.8	Maximum detect
B	Worms (Reach 6)	Metals	Cobalt	mg/kg	2	2	100	0.32	0.4	0.36			0.4	Maximum detect
B	Worms (Reach 6)	Metals	Copper	mg/kg	2	2	100	3.1	5.4	4.3			5.4	Maximum detect
B	Worms (Reach 6)	Metals	Lead	mg/kg	2	2	100	1.4	3	2.2			3	Maximum detect
B	Worms (Reach 6)	Metals	Mercury	µg/kg	2	2	100	27	29	28			29	Maximum detect
B	Worms (Reach 6)	Metals	Methyl mercury	µg/kg	2	0	0				3		3	Maximum DL
B	Worms (Reach 6)	Metals	Nickel	mg/kg	2	2	100	4.7	5.5	5.1			5.5	Maximum detect
B	Worms (Reach 6)	Metals	Selenium	mg/kg	2	2	100	0.76	0.77	0.77			0.77	Maximum detect
B	Worms (Reach 6)	Metals	Silver	mg/kg	2	2	100	0.019	0.024	0.022			0.024	Maximum detect
B	Worms (Reach 6)	Metals	Vanadium	mg/kg	2	2	100	0.28	0.5	0.39			0.5	Maximum detect
B	Worms (Reach 6)	Metals	Zinc	mg/kg	2	2	100	32.3	40	36.2			40	Maximum detect
B	Worms (Reach 6)	PAHs	Benzo(a)pyrene	µg/kg	2	2	100	87	120	100			120	Maximum detect
B	Worms (Reach 6)	PAHs	Total HPAHs	µg/kg	2	2	100	1100	1800	1500			1800	Maximum detect
B	Worms (Reach 6)	PAHs	Total LPAHs	µg/kg	2	2	100	71	130	100			130	Maximum detect
B	Worms (Reach 6)	PAHs	Total PAHs	µg/kg	2	2	100	1200	1900	1600			1900	Maximum detect
B	Worms (Reach 6)	PCB Congeners	Total PCB Congeners	µg/kg	2	2	100	120	370	250			370	Maximum detect
B	Worms (Reach 6)	PCB Congeners	PCB TEQ-Bird	ng/kg	2	2	100	21	66	44			66	Maximum detect
B	Worms (Reach 6)	PCB Congeners	PCB TEQ-Fish	ng/kg	2	2	100	0.13	0.34	0.24			0.34	Maximum detect
B	Worms (Reach 6)	PCB Congeners	PCB TEQ-Mammal	ng/kg	2	2	100	1.3	3.2	2.3			3.2	Maximum detect
B	Worms (Reach 6)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	2	2	100	26	74	50			74	Maximum detect
B	Worms (Reach 6)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	2	2	100	28	83	56			83	Maximum detect
B	Worms (Reach 6)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	2	2	100	27	75	51			75	Maximum detect
B	Worms (Reach 6)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	2	2	100	27	76	52			76	Maximum detect
B	Worms (Reach 6)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	2	2	100	50	150	100			150	Maximum detect
B	Worms (Reach 6)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	2	2	100	27	76	52			76	Maximum detect
B	Worms (Reach 6)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	2	2	100	28	79	54			79	Maximum detect
B	Worms (Reach 6)	OC Pesticides	Dieldrin	µg/kg	2	2	100	1.6	1.8	1.7			1.8	Maximum detect
B	Worms (Reach 6)	OC Pesticides	Endosulfan I	µg/kg	2	0	0				1.1		1.1	Maximum DL
B	Worms (Reach 6)	OC Pesticides	Endosulfan II	µg/kg	2	0	0				3.1		3.1	Maximum DL
B	Worms (Reach 6)	OC Pesticides	Heptachlor epoxide	µg/kg	2	2	100	0.4	0.41	0.41			0.41	Maximum detect
B	Worms (Reach 6)	OC Pesticides	Total DDx	µg/kg	2	2	100	13	32	23			32	Maximum detect
B	Worms (Reach 7)	Metals	Arsenic	mg/kg	5	5	100	0.62	1.1	0.85			1.1	Maximum detect
B	Worms (Reach 7)	Metals	Cadmium	mg/kg	5	5	100	0.042	0.2	0.096			0.2	Maximum detect
B	Worms (Reach 7)	Metals	Chromium	mg/kg	5	5	100	3.1	61	19			61	Maximum detect
B	Worms (Reach 7)	Metals	Cobalt	mg/kg	5	5	100	0.21	1.8	0.65			1.8	Maximum detect
B	Worms (Reach 7)	Metals	Copper	mg/kg	5	5	100	2.1	11.4	4.8			11.4	Maximum detect
B	Worms (Reach 7)	Metals	Lead	mg/kg	5	5	100	0.54	12.4	4.2			12.4	Maximum detect
B	Worms (Reach 7)	Metals	Mercury	µg/kg	5	5	100	14	40	25			40	Maximum detect
B	Worms (Reach 7)	Metals	Methyl mercury	µg/kg	5	1	20	1.4	1.4		3		1.4	Maximum detect
B	Worms (Reach 7)	Metals	Nickel	mg/kg	5	5	100	2.4	36.2	12			36.2	Maximum detect
B	Worms (Reach 7)	Metals	Selenium	mg/kg	5	5	100	0.41	0.54	0.5			0.54	Maximum detect
B	Worms (Reach 7)	Metals	Silver	mg/kg	5	5	100	0.006	0.038	0.023			0.038	Maximum detect
B	Worms (Reach 7)	Metals	Vanadium	mg/kg	5	5	100	0.11	1.3	0.6			1.3	Maximum detect
B	Worms (Reach 7)	Metals	Zinc	mg/kg	5	5	100	26.4	45.2	34.7			45.2	Maximum detect
B	Worms (Reach 7)	PAHs	Benzo(a)pyrene	µg/kg	2	2	100	130	150	140			150	Maximum detect
B	Worms (Reach 7)	PAHs	Total HPAHs	µg/kg	2	2	100	1600	1700	1700			1700	Maximum detect
B	Worms (Reach 7)	PAHs	Total LPAHs	µg/kg	2	2	100	120	220	170			220	Maximum detect
B	Worms (Reach 7)	PAHs	Total PAHs	µg/kg	2	2	100	1700	1900	1800			1900	Maximum detect
B	Worms (Reach 7)	PCB Congeners	Total PCB Congeners	µg/kg	5	5	100	72	470	190			470	Maximum detect
B	Worms (Reach 7)	PCB Congeners	PCB TEQ-Bird	ng/kg	5	5	100	10	31	19			31	Maximum detect

Diet LOE -- Prey Tissue EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
B	Worms (Reach 7)	PCB Congeners	PCB TEQ-Fish	ng/kg	5	5	100	0.067	0.39	0.16			0.39	Maximum detect
B	Worms (Reach 7)	PCB Congeners	PCB TEQ-Mammal	ng/kg	5	5	100	0.68	3.8	1.7			3.8	Maximum detect
B	Worms (Reach 7)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	5	5	100	3.5	24	12			24	Maximum detect
B	Worms (Reach 7)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	5	5	100	7.2	28	15			28	Maximum detect
B	Worms (Reach 7)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	5	5	100	5.5	26	13			26	Maximum detect
B	Worms (Reach 7)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	5	5	100	5.5	26	13			26	Maximum detect
B	Worms (Reach 7)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	5	5	100	19	59	33			59	Maximum detect
B	Worms (Reach 7)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	5	5	100	5.9	26	13			26	Maximum detect
B	Worms (Reach 7)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	5	5	100	8.7	28	15			28	Maximum detect
B	Worms (Reach 7)	OC Pesticides	Dieldrin	µg/kg	5	5	100	0.79	1.7	1.4			1.7	Maximum detect
B	Worms (Reach 7)	OC Pesticides	Endosulfan I	µg/kg	5	0	0				1.6		1.6	Maximum DL
B	Worms (Reach 7)	OC Pesticides	Endosulfan II	µg/kg	5	0	0				3.9		3.9	Maximum DL
B	Worms (Reach 7)	OC Pesticides	Heptachlor epoxide	µg/kg	5	4	80	0.26	0.37	0.32	0.25		0.37	Maximum detect
B	Worms (Reach 7)	OC Pesticides	Total DDx	µg/kg	5	5	100	3.6	8.8	6.2			8.8	Maximum detect
B	Worms (Reach 8)	Metals	Mercury	µg/kg	1	1	100	12	12				12	Maximum detect
B	Worms (Reach 8)	Metals	Methyl mercury	µg/kg	1	1	100	1	1				1	Maximum detect
B	Worms (Reach 8)	PCB Congeners	Total PCB Congeners	µg/kg	1	1	100	66	66				66	Maximum detect
B	Worms (Reach 8)	PCB Congeners	PCB TEQ-Bird	ng/kg	1	1	100	12	12				12	Maximum detect
B	Worms (Reach 8)	PCB Congeners	PCB TEQ-Fish	ng/kg	1	1	100	0.082	0.082				0.082	Maximum detect
B	Worms (Reach 8)	PCB Congeners	PCB TEQ-Mammal	ng/kg	1	1	100	0.94	0.94				0.94	Maximum detect
B	Worms (Reach 8)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	1	1	100	0.5	0.5				0.5	Maximum detect
B	Worms (Reach 8)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	1	1	100	2.4	2.4				2.4	Maximum detect
B	Worms (Reach 8)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	1	1	100	0.96	0.96				0.96	Maximum detect
B	Worms (Reach 8)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	1	1	100	1	1				1	Maximum detect
B	Worms (Reach 8)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	1	1	100	15	15				15	Maximum detect
B	Worms (Reach 8)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	1	1	100	1	1				1	Maximum detect
B	Worms (Reach 8)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	1	1	100	2	2				2	Maximum detect
B	Worms (Reach 8)	OC Pesticides	Dieldrin	µg/kg	1	1	100	1.2	1.2				1.2	Maximum detect
B	Worms (Reach 8)	OC Pesticides	Endosulfan I	µg/kg	1	0	0				1.7		1.7	Maximum DL
B	Worms (Reach 8)	OC Pesticides	Endosulfan II	µg/kg	1	0	0				2.9		2.9	Maximum DL
B	Worms (Reach 8)	OC Pesticides	Heptachlor epoxide	µg/kg	1	1	100	0.15	0.15				0.15	Maximum detect
B	Worms (Reach 8)	OC Pesticides	Total DDx	µg/kg	1	1	100	5.5	5.5				5.5	Maximum detect
F	Worms (freshwater sp. >RM4)	Metals	Arsenic	mg/kg	10	10	100	0.58	1.7	0.94		1.1	1.1	95% Student's-t UCL
F	Worms (freshwater sp. >RM4)	Metals	Cadmium	mg/kg	10	10	100	0.026	0.2	0.1		0.13	0.13	95% Student's-t UCL
F	Worms (freshwater sp. >RM4)	Metals	Chromium	mg/kg	10	10	100	3.1	61	15		30	30	95% Adjusted Gamma UCL
F	Worms (freshwater sp. >RM4)	Metals	Cobalt	mg/kg	10	10	100	0.21	1.8	0.54		0.87	0.87	95% H-UCL
F	Worms (freshwater sp. >RM4)	Metals	Copper	mg/kg	10	10	100	1.5	11.9	5.2		7.3	7.3	95% Student's-t UCL
F	Worms (freshwater sp. >RM4)	Metals	Lead	mg/kg	10	10	100	0.16	12.4	3.8		8.9	8.9	95% Adjusted Gamma UCL
F	Worms (freshwater sp. >RM4)	Metals	Mercury	µg/kg	15	15	100	7.6	150	30		43	43	95% H-UCL
F	Worms (freshwater sp. >RM4)	Metals	Methyl mercury	µg/kg	15	3	20	1	3.1	1.8	3.1		3.1	Maximum detect
F	Worms (freshwater sp. >RM4)	Metals	Nickel	mg/kg	10	10	100	2.4	36.2	9.3		18	18	95% Adjusted Gamma UCL
F	Worms (freshwater sp. >RM4)	Metals	Selenium	mg/kg	10	10	100	0.28	0.77	0.52		0.61	0.61	95% Student's-t UCL
F	Worms (freshwater sp. >RM4)	Metals	Silver	mg/kg	10	10	100	0.006	0.042	0.023		0.03	0.03	95% Student's-t UCL
F	Worms (freshwater sp. >RM4)	Metals	Vanadium	mg/kg	10	10	100	0.08	1.3	0.52		0.77	0.77	95% Student's-t UCL
F	Worms (freshwater sp. >RM4)	Metals	Zinc	mg/kg	10	10	100	18.1	45.2	33.7		38.3	38.3	95% Student's-t UCL
F	Worms (freshwater sp. >RM4)	PAHs	Benzo(a)pyrene	µg/kg	6	5	83.3	87	440	190	3		440	Maximum detect
F	Worms (freshwater sp. >RM4)	PAHs	Total HPAHs	µg/kg	6	6	100	99	4900	1900		3200	3200	95% Student's-t UCL
F	Worms (freshwater sp. >RM4)	PAHs	Total LPAHs	µg/kg	6	6	100	8.3	940	250		1600	940	Maximum detect
F	Worms (freshwater sp. >RM4)	PAHs	Total PAHs	µg/kg	6	6	100	110	5900	2100		3700	3700	95% Student's-t UCL
F	Worms (freshwater sp. >RM4)	PCB Congeners	Total PCB Congeners	µg/kg	15	15	100	41	530	170		270	270	95% H-UCL
F	Worms (freshwater sp. >RM4)	PCB Congeners	PCB TEQ-Bird	ng/kg	15	15	100	4.9	90	24		37	37	95% Adjusted Gamma UCL
F	Worms (freshwater sp. >RM4)	PCB Congeners	PCB TEQ-Fish	ng/kg	15	15	100	0.054	0.44	0.16		0.3	0.3	95% Chebyshev (Mean, Sd) UCL

Diet LOE -- Prey Tissue EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
F	Worms (freshwater sp. >RM4)	PCB Congeners	PCB TEQ-Mammal	ng/kg	15	15	100	0.68	3.8	1.6		2.8	2.8	95% Chebyshev (Mean, Sd) UCL
F	Worms (freshwater sp. >RM4)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	15	15	100	0.5	140	25		49	49	95% Adjusted Gamma UCL
F	Worms (freshwater sp. >RM4)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	15	15	100	2.4	150	29		52	52	95% Adjusted Gamma UCL
F	Worms (freshwater sp. >RM4)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	15	15	100	0.96	140	26		49	49	95% Adjusted Gamma UCL
F	Worms (freshwater sp. >RM4)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	15	15	100	1	140	27		49	49	95% Adjusted Gamma UCL
F	Worms (freshwater sp. >RM4)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	15	15	100	11	240	54		87	87	95% Adjusted Gamma UCL
F	Worms (freshwater sp. >RM4)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	15	15	100	1	140	27		49	49	95% Adjusted Gamma UCL
F	Worms (freshwater sp. >RM4)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	15	15	100	2	150	28		51	51	95% Adjusted Gamma UCL
F	Worms (freshwater sp. >RM4)	OC Pesticides	Dieldrin	µg/kg	14	14	100	0.79	2.6	1.5		1.7	1.7	95% Student's-t UCL
F	Worms (freshwater sp. >RM4)	OC Pesticides	Endosulfan I	µg/kg	14	0	0				1.7		1.7	Maximum DL
F	Worms (freshwater sp. >RM4)	OC Pesticides	Endosulfan II	µg/kg	14	0	0				3.9		3.9	Maximum DL
F	Worms (freshwater sp. >RM4)	OC Pesticides	Heptachlor epoxide	µg/kg	14	11	78.6	0.15	0.64	0.38	0.25	0.41	0.41	95% KM (t) UCL
F	Worms (freshwater sp. >RM4)	OC Pesticides	Total DDx	µg/kg	14	13	92.9	3.6	33	15	4.2	19	19	95% KM (t) UCL
B, F	Worms (all)	Metals	Arsenic	mg/kg	14	14	100	0.58	1.8	1.1		1.4	1.4	95% Student's-t UCL
B, F	Worms (all)	Metals	Cadmium	mg/kg	14	14	100	0.023	0.2	0.08		0.11	0.11	95% Student's-t UCL
B, F	Worms (all)	Metals	Chromium	mg/kg	14	14	100	1.4	61	12		21	21	95% Adjusted Gamma UCL
B, F	Worms (all)	Metals	Cobalt	mg/kg	14	14	100	0.096	1.8	0.42		0.69	0.69	95% Adjusted Gamma UCL
B, F	Worms (all)	Metals	Copper	mg/kg	14	14	100	1.2	11.9	4.1		5.8	5.8	95% Student's-t UCL
B, F	Worms (all)	Metals	Lead	mg/kg	14	14	100	0.11	12.4	2.7		6.4	6.4	95% Adjusted Gamma UCL
B, F	Worms (all)	Metals	Mercury	µg/kg	19	19	100	7.6	150	28		59	59	95% Chebyshev (Mean, Sd) UCL
B, F	Worms (all)	Metals	Methyl mercury	µg/kg	19	7	36.8	1	3.4	2.5	3.1	2.9	2.9	95% KM (% Bootstrap) UCL
B, F	Worms (all)	Metals	Nickel	mg/kg	14	14	100	1.2	36.2	7.4		13	13	95% Adjusted Gamma UCL
B, F	Worms (all)	Metals	Selenium	mg/kg	14	14	100	0.28	0.77	0.46		0.54	0.54	95% Student's-t UCL
B, F	Worms (all)	Metals	Silver	mg/kg	14	14	100	0.006	0.042	0.023		0.028	0.028	95% Student's-t UCL
B, F	Worms (all)	Metals	Vanadium	mg/kg	14	14	100	0.07	1.3	0.4		0.59	0.59	95% Student's-t UCL
B, F	Worms (all)	Metals	Zinc	mg/kg	14	14	100	18.1	45.2	29.5		34	34	95% Student's-t UCL
B, F	Worms (all)	PAHs	Benzo(a)pyrene	µg/kg	10	5	50	87	440	190	3.2		440	Maximum detect
B, F	Worms (all)	PAHs	Total HPAHs	µg/kg	10	10	100	58	4900	1200		2000	2000	95% Student's-t UCL
B, F	Worms (all)	PAHs	Total LPAHs	µg/kg	10	10	100	5.3	940	150		540	540	95% Adjusted Gamma UCL
B, F	Worms (all)	PAHs	Total PAHs	µg/kg	10	10	100	67	5900	1300		2400	2400	95% Student's-t UCL
B, F	Worms (all)	PCB Congeners	Total PCB Congeners	µg/kg	19	19	100	26	530	150		240	240	95% H-UCL
B, F	Worms (all)	PCB Congeners	PCB TEQ-Bird	ng/kg	19	19	100	4.3	90	21		31	31	95% Adjusted Gamma UCL
B, F	Worms (all)	PCB Congeners	PCB TEQ-Fish	ng/kg	19	19	100	0.037	0.44	0.14		0.2	0.2	95% H-UCL
B, F	Worms (all)	PCB Congeners	PCB TEQ-Mammal	ng/kg	19	19	100	0.49	3.8	1.4		2.5	2.5	95% Chebyshev (Mean, Sd) UCL
B, F	Worms (all)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	19	19	100	0.5	140	21		38	38	95% Adjusted Gamma UCL
B, F	Worms (all)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	19	19	100	2.4	150	25		60	60	95% Chebyshev (Mean, Sd) UCL
B, F	Worms (all)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	19	19	100	0.96	140	22		38	38	95% Adjusted Gamma UCL
B, F	Worms (all)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	19	19	100	1	140	23		39	39	95% Adjusted Gamma UCL
B, F	Worms (all)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	19	19	100	8.1	240	46		71	71	95% Adjusted Gamma UCL
B, F	Worms (all)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	19	19	100	1	140	23		39	39	95% Adjusted Gamma UCL
B, F	Worms (all)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	19	19	100	2	150	24		40	40	95% Adjusted Gamma UCL
B, F	Worms (all)	OC Pesticides	Dieldrin	µg/kg	18	18	100	0.57	2.6	1.4		1.6	1.6	95% Student's-t UCL
B, F	Worms (all)	OC Pesticides	Endosulfan I	µg/kg	18	0	0				1.7		1.7	Maximum DL
B, F	Worms (all)	OC Pesticides	Endosulfan II	µg/kg	18	0	0				3.9		3.9	Maximum DL
B, F	Worms (all)	OC Pesticides	Heptachlor epoxide	µg/kg	18	15	83.3	0.082	0.64	0.32	0.25	0.36	0.36	95% KM (t) UCL
B, F	Worms (all)	OC Pesticides	Total DDx	µg/kg	18	15	83.3	1.8	33	13	4.6	16	16	95% KM (t) UCL
B, M	Fish (all)	Metals	Arsenic	mg/kg	131	124	94.7	0.017	0.61	0.17	0.18	0.18	0.18	95% KM (BCA) UCL
B, M	Fish (all)	Metals	Cadmium	mg/kg	131	131	100	0.003	0.27	0.024		0.037	0.037	95% Chebyshev (Mean, Sd) UCL
B, M	Fish (all)	Metals	Chromium	mg/kg	131	129	98.5	0.04	125	3.6	0.02	9.9	9.9	97.5% KM (Chebyshev) UCL
B, M	Fish (all)	Metals	Cobalt	mg/kg	124	124	100	0.011	1.1	0.076		0.12	0.12	95% Chebyshev (Mean, Sd) UCL
B, M	Fish (all)	Metals	Copper	mg/kg	131	131	100	0.31	50.9	2.9		5	5	95% Chebyshev (Mean, Sd) UCL
B, M	Fish (all)	Metals	Lead	mg/kg	124	124	100	0.02	4.9	0.72		0.87	0.87	95% H-UCL

Diet LOE -- Prey Tissue EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
B, M	Fish (all)	Metals	Mercury	µg/kg	131	131	100	30	680	140		190	190	95% Chebyshev (Mean, Sd) UCL
B, M	Fish (all)	Metals	Methyl mercury	µg/kg	131	131	100	14	530	130		150	150	95% Approximate Gamma UCL
B, M	Fish (all)	Metals	Nickel	mg/kg	131	131	100	0.11	89.1	2.5		5.6	5.6	95% Chebyshev (Mean, Sd) UCL
B, M	Fish (all)	Metals	Selenium	mg/kg	131	131	100	0.16	3	0.65		0.7	0.7	95% Approximate Gamma UCL
B, M	Fish (all)	Metals	Silver	mg/kg	131	83	63.4	0.0026	0.64	0.055	0.008	0.065	0.065	95% KM (Chebyshev) UCL
B, M	Fish (all)	Metals	Vanadium	mg/kg	131	117	89.3	0.016	1.3	0.22	0.07	0.25	0.25	95% KM (BCA) UCL
B, M	Fish (all)	Metals	Zinc	mg/kg	131	131	100	12	104	30		32	32	95% Modified-t UCL
B, M	Fish (all)	PAHs	Benzo(a)pyrene	µg/kg	131	70	53.4	0.55	98	12	2.8	13	13	95% KM (Chebyshev) UCL
B, M	Fish (all)	PAHs	Total HPAHs	µg/kg	131	131	100	3.1	1000	110		130	130	95% H-UCL
B, M	Fish (all)	PAHs	Total LPAHs	µg/kg	131	131	100	15	470	110		120	120	95% Approximate Gamma UCL
B, M	Fish (all)	PAHs	Total PAHs	µg/kg	131	131	100	27	1200	220		250	250	95% H-UCL
B, M	Fish (all)	PCB Congeners	Total PCB Congeners	µg/kg	131	131	100	170	7900	1800		2400	2400	95% Chebyshev (Mean, Sd) UCL
B, M	Fish (all)	PCB Congeners	PCB TEQ-Bird	ng/kg	131	131	100	2.9	550	87		110	110	95% H-UCL
B, M	Fish (all)	PCB Congeners	PCB TEQ-Fish	ng/kg	131	131	100	0.19	17	1.7		1.9	1.9	95% Approximate Gamma UCL
B, M	Fish (all)	PCB Congeners	PCB TEQ-Mammal	ng/kg	131	131	100	2.1	240	22		25	25	95% Approximate Gamma UCL
B, M	Fish (all)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	131	130	99.2	0.32	1400	110	0.21	170	170	95% KM (Chebyshev) UCL
B, M	Fish (all)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	131	131	100	0.73	1400	120		180	180	95% Chebyshev (Mean, Sd) UCL
B, M	Fish (all)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	131	131	100	0.79	1400	110		180	180	95% Chebyshev (Mean, Sd) UCL
B, M	Fish (all)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	131	131	100	0.81	1400	110		180	180	95% Chebyshev (Mean, Sd) UCL
B, M	Fish (all)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	131	131	100	7.8	1700	210		280	280	95% H-UCL
B, M	Fish (all)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	131	131	100	1.2	1400	120		180	180	95% H-UCL
B, M	Fish (all)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	131	131	100	5.5	1500	140		200	200	95% Chebyshev (Mean, Sd) UCL
B, M	Fish (all)	OC Pesticides	Dieldrin	µg/kg	131	131	100	3.5	110	28		31	31	95% Approximate Gamma UCL
B, M	Fish (all)	OC Pesticides	Endosulfan I	µg/kg	131	12	9.2	0.2	4	1.1	10	0.38	0.38	95% KM (t) UCL
B, M	Fish (all)	OC Pesticides	Endosulfan II	µg/kg	130	6	4.6	0.37	2.7	1.3	8.4	0.41	0.41	95% KM (Percentile Bootstrap) UCL
B, M	Fish (all)	OC Pesticides	Heptachlor epoxide	µg/kg	131	131	100	0.84	31	11		12	12	95% Approximate Gamma UCL
B, M	Fish (all)	OC Pesticides	Total DDx	µg/kg	131	131	100	20	1100	200		230	230	95% Approximate Gamma UCL
B	Fish (all, >RM6)	Metals	Arsenic	mg/kg	97	90	92.8	0.017	0.52	0.14	0.18	0.18	0.18	95% KM (Chebyshev) UCL
B	Fish (all, >RM6)	Metals	Cadmium	mg/kg	97	97	100	0.0034	0.27	0.028		0.045	0.045	95% Chebyshev (Mean, Sd) UCL
B	Fish (all, >RM6)	Metals	Chromium	mg/kg	97	96	99	0.043	125	4.2	0.02	13	13	97.5% KM (Chebyshev) UCL
B	Fish (all, >RM6)	Metals	Cobalt	mg/kg	95	95	100	0.011	1.1	0.082		0.14	0.14	95% Chebyshev (Mean, Sd) UCL
B	Fish (all, >RM6)	Metals	Copper	mg/kg	97	97	100	0.31	14.7	2.1		3.4	3.4	95% Chebyshev (Mean, Sd) UCL
B	Fish (all, >RM6)	Metals	Lead	mg/kg	95	95	100	0.02	4.9	0.78		1	1	95% H-UCL
B	Fish (all, >RM6)	Metals	Mercury	µg/kg	97	97	100	30	680	140		150	150	95% Approximate Gamma UCL
B	Fish (all, >RM6)	Metals	Methyl mercury	µg/kg	97	97	100	14	520	130		140	140	95% Approximate Gamma UCL
B	Fish (all, >RM6)	Metals	Nickel	mg/kg	97	97	100	0.11	89.1	2.9		7.1	7.1	95% Chebyshev (Mean, Sd) UCL
B	Fish (all, >RM6)	Metals	Selenium	mg/kg	97	97	100	0.17	3	0.6		0.65	0.65	95% Approximate Gamma UCL
B	Fish (all, >RM6)	Metals	Silver	mg/kg	97	54	55.7	0.003	0.21	0.038	0.008	0.04	0.04	95% KM (Chebyshev) UCL
B	Fish (all, >RM6)	Metals	Vanadium	mg/kg	97	86	88.7	0.016	1.3	0.24	0.07	0.36	0.36	95% KM (Chebyshev) UCL
B	Fish (all, >RM6)	Metals	Zinc	mg/kg	97	97	100	13	104	28		31	31	95% Modified-t UCL
B	Fish (all, >RM6)	PAHs	Benzo(a)pyrene	µg/kg	97	45	46.4	0.67	98	16	2.8	11	11	95% KM (BCA) UCL
B	Fish (all, >RM6)	PAHs	Total HPAHs	µg/kg	97	97	100	5.2	1000	120		200	200	95% Chebyshev (Mean, Sd) UCL
B	Fish (all, >RM6)	PAHs	Total LPAHs	µg/kg	97	97	100	15	470	110		120	120	95% Approximate Gamma UCL
B	Fish (all, >RM6)	PAHs	Total PAHs	µg/kg	97	97	100	27	1200	220		270	270	95% H-UCL
B	Fish (all, >RM6)	PCB Congeners	Total PCB Congeners	µg/kg	97	97	100	170	7900	1800		2100	2100	95% H-UCL
B	Fish (all, >RM6)	PCB Congeners	PCB TEQ-Bird	ng/kg	97	97	100	2.9	550	85		100	100	95% Approximate Gamma UCL
B	Fish (all, >RM6)	PCB Congeners	PCB TEQ-Fish	ng/kg	97	97	100	0.19	17	1.7		2	2	95% H-UCL
B	Fish (all, >RM6)	PCB Congeners	PCB TEQ-Mammal	ng/kg	97	97	100	2.1	240	22		26	26	95% Approximate Gamma UCL
B	Fish (all, >RM6)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	97	96	99	0.32	1400	110	0.21	190	190	95% KM (Chebyshev) UCL
B	Fish (all, >RM6)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	97	97	100	0.73	1400	120		150	150	95% Approximate Gamma UCL
B	Fish (all, >RM6)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	97	97	100	0.79	1400	120		140	140	95% Approximate Gamma UCL
B	Fish (all, >RM6)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	97	97	100	0.81	1400	120		140	140	95% Approximate Gamma UCL

Diet LOE -- Prey Tissue EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
B	Fish (all, >RM6)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	97	97	100	7.8	1700	210		290	290	95% H-UCL
B	Fish (all, >RM6)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	97	97	100	1.2	1400	120		150	150	95% Approximate Gamma UCL
B	Fish (all, >RM6)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	97	97	100	5.5	1500	140		190	190	95% H-UCL
B	Fish (all, >RM6)	OC Pesticides	Dieldrin	µg/kg	97	97	100	7.8	110	31		39	39	95% Chebyshev (Mean, Sd) UCL
B	Fish (all, >RM6)	OC Pesticides	Endosulfan I	µg/kg	97	11	11.3	0.2	4	1.1	10	0.46	0.46	95% KM (t) UCL
B	Fish (all, >RM6)	OC Pesticides	Endosulfan II	µg/kg	96	6	6.2	0.37	2.7	1.3	5	0.49	0.49	95% KM (Percentile Bootstrap) UCL
B	Fish (all, >RM6)	OC Pesticides	Heptachlor epoxide	µg/kg	97	97	100	2.7	31	12		14	14	95% Approximate Gamma UCL
B	Fish (all, >RM6)	OC Pesticides	Total DDx	µg/kg	97	97	100	20	1100	200		230	230	95% Approximate Gamma UCL
B	Fish (≤ 18 cm)	Metals	Arsenic	mg/kg	41	41	100	0.044	0.52	0.28		0.31	0.31	95% Student's-t UCL
B	Fish (≤ 18 cm)	Metals	Cadmium	mg/kg	41	41	100	0.006	0.099	0.026		0.04	0.04	95% Chebyshev (Mean, Sd) UCL
B	Fish (≤ 18 cm)	Metals	Chromium	mg/kg	41	41	100	0.87	125	9.5		13	13	95% H-UCL
B	Fish (≤ 18 cm)	Metals	Cobalt	mg/kg	41	41	100	0.031	1.1	0.16		0.2	0.2	95% H-UCL
B	Fish (≤ 18 cm)	Metals	Copper	mg/kg	41	41	100	0.87	14.7	3.9		4.6	4.6	95% Adjusted Gamma UCL
B	Fish (≤ 18 cm)	Metals	Lead	mg/kg	41	41	100	0.15	4.9	1.2		2	2	95% Chebyshev (Mean, Sd) UCL
B	Fish (≤ 18 cm)	Metals	Mercury	µg/kg	41	41	100	30	180	73		82	82	95% Modified-t UCL
B	Fish (≤ 18 cm)	Metals	Methyl mercury	µg/kg	41	41	100	14	190	61		74	74	95% Adjusted Gamma UCL
B	Fish (≤ 18 cm)	Metals	Nickel	mg/kg	41	41	100	0.62	89.1	6.5		8.3	8.3	95% H-UCL
B	Fish (≤ 18 cm)	Metals	Selenium	mg/kg	41	41	100	0.22	1.3	0.7		0.76	0.76	95% Student's-t UCL
B	Fish (≤ 18 cm)	Metals	Silver	mg/kg	41	40	97.6	0.0067	0.19	0.049	0.0051	0.059	0.059	95% Adjusted Gamma KM-UCL
B	Fish (≤ 18 cm)	Metals	Vanadium	mg/kg	41	41	100	0.04	1.3	0.46		0.59	0.59	95% Adjusted Gamma UCL
B	Fish (≤ 18 cm)	Metals	Zinc	mg/kg	41	41	100	21.4	51.6	35		37.4	37.4	95% Student's-t UCL
B	Fish (≤ 18 cm)	PAHs	Benzo(a)pyrene	µg/kg	41	37	90.2	1.5	98	20	2.2	33	33	95% KM (Chebyshev) UCL
B	Fish (≤ 18 cm)	PAHs	Total HPAHs	µg/kg	41	41	100	29	1000	220		310	310	95% H-UCL
B	Fish (≤ 18 cm)	PAHs	Total LPAHs	µg/kg	41	41	100	18	370	110		130	130	95% Adjusted Gamma UCL
B	Fish (≤ 18 cm)	PAHs	Total PAHs	µg/kg	41	41	100	48	1200	330		410	410	95% Adjusted Gamma UCL
B	Fish (≤ 18 cm)	PCB Congeners	Total PCB Congeners	µg/kg	41	41	100	170	5100	1000		1700	1700	95% Chebyshev (Mean, Sd) UCL
B	Fish (≤ 18 cm)	PCB Congeners	PCB TEQ-Bird	ng/kg	41	41	100	17	310	94		150	150	95% Chebyshev (Mean, Sd) UCL
B	Fish (≤ 18 cm)	PCB Congeners	PCB TEQ-Fish	ng/kg	41	41	100	0.19	3.1	0.95		1.5	1.5	95% Chebyshev (Mean, Sd) UCL
B	Fish (≤ 18 cm)	PCB Congeners	PCB TEQ-Mammal	ng/kg	41	41	100	2.1	36	11		17	17	95% Chebyshev (Mean, Sd) UCL
B	Fish (≤ 18 cm)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	41	41	100	2.4	230	65		85	85	95% Adjusted Gamma UCL
B	Fish (≤ 18 cm)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	41	41	100	9.1	250	72		120	120	95% Chebyshev (Mean, Sd) UCL
B	Fish (≤ 18 cm)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	41	41	100	3.7	240	68		110	110	95% H-UCL
B	Fish (≤ 18 cm)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	41	41	100	3.8	240	67		100	100	95% H-UCL
B	Fish (≤ 18 cm)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	41	41	100	30	560	170		270	270	95% Chebyshev (Mean, Sd) UCL
B	Fish (≤ 18 cm)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	41	41	100	4.3	240	68		100	100	95% H-UCL
B	Fish (≤ 18 cm)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	41	41	100	10	270	79		110	110	95% H-UCL
B	Fish (≤ 18 cm)	OC Pesticides	Dieldrin	µg/kg	41	41	100	3.5	47	16		20	20	95% Adjusted Gamma UCL
B	Fish (≤ 18 cm)	OC Pesticides	Endosulfan I	µg/kg	41	0	0				3.2		3.2	Maximum DL
B	Fish (≤ 18 cm)	OC Pesticides	Endosulfan II	µg/kg	41	0	0				3.1		3.1	Maximum DL
B	Fish (≤ 18 cm)	OC Pesticides	Heptachlor epoxide	µg/kg	41	41	100	0.84	18	5.8		7.3	7.3	95% Adjusted Gamma UCL
B	Fish (≤ 18 cm)	OC Pesticides	Total DDx	µg/kg	41	41	100	22	340	95		120	120	95% H-UCL
B	Fish (≤ 18 cm, >RM6)	Metals	Arsenic	mg/kg	26	26	100	0.044	0.52	0.26		0.3	0.3	95% Student's-t UCL
B	Fish (≤ 18 cm, >RM6)	Metals	Cadmium	mg/kg	26	26	100	0.007	0.099	0.032		0.042	0.042	95% Adjusted Gamma UCL
B	Fish (≤ 18 cm, >RM6)	Metals	Chromium	mg/kg	26	26	100	0.89	125	13		23	23	95% H-UCL
B	Fish (≤ 18 cm, >RM6)	Metals	Cobalt	mg/kg	26	26	100	0.031	1.1	0.2		0.28	0.28	95% Adjusted Gamma UCL
B	Fish (≤ 18 cm, >RM6)	Metals	Copper	mg/kg	26	26	100	0.87	14.7	4		5	5	95% Adjusted Gamma UCL
B	Fish (≤ 18 cm, >RM6)	Metals	Lead	mg/kg	26	26	100	0.15	4.9	1.6		2.3	2.3	95% Adjusted Gamma UCL
B	Fish (≤ 18 cm, >RM6)	Metals	Mercury	µg/kg	26	26	100	30	180	70		84	84	95% H-UCL
B	Fish (≤ 18 cm, >RM6)	Metals	Methyl mercury	µg/kg	26	26	100	14	190	57		98	98	95% Chebyshev (Mean, Sd) UCL
B	Fish (≤ 18 cm, >RM6)	Metals	Nickel	mg/kg	26	26	100	0.62	89.1	9		15	15	95% H-UCL
B	Fish (≤ 18 cm, >RM6)	Metals	Selenium	mg/kg	26	26	100	0.22	1.2	0.65		0.73	0.73	95% Student's-t UCL
B	Fish (≤ 18 cm, >RM6)	Metals	Silver	mg/kg	26	25	96.2	0.0067	0.19	0.044	0.0051	0.058	0.058	95% Adjusted Gamma KM-UCL

Diet LOE -- Prey Tissue EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
B	Fish (≤ 18 cm, >RM6)	Metals	Vanadium	mg/kg	26	26	100	0.04	1.3	0.57		0.72	0.72	95% Student's-t UCL
B	Fish (≤ 18 cm, >RM6)	Metals	Zinc	mg/kg	26	26	100	22.1	48	32.9		35.4	35.4	95% Modified-t UCL
B	Fish (≤ 18 cm, >RM6)	PAHs	Benzo(a)pyrene	µg/kg	26	22	84.6	2.1	98	29	2.2	33	33	95% KM (t) UCL
B	Fish (≤ 18 cm, >RM6)	PAHs	Total HPAHs	µg/kg	26	26	100	44	1000	300		410	410	95% Adjusted Gamma UCL
B	Fish (≤ 18 cm, >RM6)	PAHs	Total LPAHs	µg/kg	26	26	100	46	370	120		140	140	95% Student's-t UCL
B	Fish (≤ 18 cm, >RM6)	PAHs	Total PAHs	µg/kg	26	26	100	100	1200	420		540	540	95% Adjusted Gamma UCL
B	Fish (≤ 18 cm, >RM6)	PCB Congeners	Total PCB Congeners	µg/kg	26	26	100	170	5100	1000		1400	1400	95% H-UCL
B	Fish (≤ 18 cm, >RM6)	PCB Congeners	PCB TEQ-Bird	ng/kg	26	26	100	20	310	97		130	130	95% Adjusted Gamma UCL
B	Fish (≤ 18 cm, >RM6)	PCB Congeners	PCB TEQ-Fish	ng/kg	26	26	100	0.19	3.1	0.95		1.2	1.2	95% Adjusted Gamma UCL
B	Fish (≤ 18 cm, >RM6)	PCB Congeners	PCB TEQ-Mammal	ng/kg	26	26	100	2.1	36	11		15	15	95% Adjusted Gamma UCL
B	Fish (≤ 18 cm, >RM6)	PCDDs/PCDFs	2,3,7,8-TCDD	ng/kg	26	26	100	2.4	230	66		95	95	95% Adjusted Gamma UCL
B	Fish (≤ 18 cm, >RM6)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	26	26	100	9.1	250	74		100	100	95% Adjusted Gamma UCL
B	Fish (≤ 18 cm, >RM6)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	26	26	100	3.7	240	69		98	98	95% Adjusted Gamma UCL
B	Fish (≤ 18 cm, >RM6)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	26	26	100	3.8	240	68		97	97	95% Adjusted Gamma UCL
B	Fish (≤ 18 cm, >RM6)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	26	26	100	32	560	170		240	240	95% H-UCL
B	Fish (≤ 18 cm, >RM6)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	26	26	100	4.3	240	70		99	99	95% Adjusted Gamma UCL
B	Fish (≤ 18 cm, >RM6)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	26	26	100	10	270	80		110	110	95% Adjusted Gamma UCL
B	Fish (≤ 18 cm, >RM6)	OC Pesticides	Dieldrin	µg/kg	26	26	100	8.2	47	19		23	23	95% Adjusted Gamma UCL
B	Fish (≤ 18 cm, >RM6)	OC Pesticides	Endosulfan I	µg/kg	26	0	0				3.1		3.1	Maximum DL
B	Fish (≤ 18 cm, >RM6)	OC Pesticides	Endosulfan II	µg/kg	26	0	0				2.4		2.4	Maximum DL
B	Fish (≤ 18 cm, >RM6)	OC Pesticides	Heptachlor epoxide	µg/kg	26	26	100	2.7	18	6.7		8.4	8.4	95% Adjusted Gamma UCL
B	Fish (≤ 18 cm, >RM6)	OC Pesticides	Total DDx	µg/kg	26	26	100	22	280	97		130	130	95% H-UCL

Diet LOE -- Sediment EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC
M	Sediment ≥ RM 10	Metals	Antimony	mg/kg	173	171	98.8	0.03	7.2	0.78	0.052	0.89	0.89
M	Sediment ≥ RM 10	Metals	Arsenic	mg/kg	173	173	100	0.48	68.6	5.2		7.8	7.8
M	Sediment ≥ RM 10	Metals	Cadmium	mg/kg	173	173	100	0.056	35.4	3.2		4.9	4.9
M	Sediment ≥ RM 10	Metals	Chromium	mg/kg	173	173	100	4.03	1580	110		180	180
M	Sediment ≥ RM 10	Metals	Cobalt	mg/kg	173	173	100	1.8	25.6	6.1		6.6	6.6
M	Sediment ≥ RM 10	Metals	Copper	mg/kg	199	199	100	4.19	778	120		140	140
M	Sediment ≥ RM 10	Metals	Lead	mg/kg	170	170	100	3.94	2050	200		280	280
M	Sediment ≥ RM 10	Metals	Mercury	µg/kg	176	176	100	16.1	22200	1800		2900	2900
M	Sediment ≥ RM 10	Metals	Methyl mercury	µg/kg	48	47	97.9	0.035	4.38	1.1	0.089	1.8	1.8
M	Sediment ≥ RM 10	Metals	Nickel	mg/kg	197	197	100	4.6	200	23		31	31
M	Sediment ≥ RM 10	Metals	Selenium	mg/kg	173	131	75.7	0.038	3.3	0.72	1.72	0.71	0.71
M	Sediment ≥ RM 10	Metals	Silver	mg/kg	173	173	100	0.023	20.4	2.1		3.1	3.1
M	Sediment ≥ RM 10	Metals	Vanadium	mg/kg	173	173	100	3.99	91.6	20		22	22
M	Sediment ≥ RM 10	Metals	Zinc	mg/kg	173	173	100	23.5	2000	370		420	420
M	Sediment ≥ RM 10	PAHs	Acenaphthene	µg/kg	174	172	98.9	1.3	11700	600	0.977	1100	1100
M	Sediment ≥ RM 10	PAHs	Benzo(a)pyrene	µg/kg	174	173	99.4	1.62	41000	3700	0.6	5300	5300
M	Sediment ≥ RM 10	PAHs	Total HPAHs	µg/kg	174	174	100	6.2	510000	35000		54000	54000
M	Sediment ≥ RM 10	PAHs	Total LPAHs	µg/kg	174	173	99.4	0.408	171000	8300	3	14000	14000
M	Sediment ≥ RM 10	PAHs	Total PAHs	µg/kg	174	174	100	6.2	681000	43000		68000	68000
M	Sediment ≥ RM 10	PCB Congeners	Total PCB Congeners	µg/kg	176	176	100	1.34	23800	1500		2400	2400
M	Sediment ≥ RM 10	PCB Congeners	PCB TEQ-Bird	ng/kg	176	176	100	0.416	7850	380		630	630
M	Sediment ≥ RM 10	PCB Congeners	PCB TEQ-Fish	ng/kg	176	176	100	0.00431	32	1.9		2.8	2.8
M	Sediment ≥ RM 10	PCB Congeners	PCB TEQ-Mammal	ng/kg	176	176	100	0.101	265	19		27	27
M	Sediment ≥ RM 10	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	176	176	100	0.515	51600	1200		2000	2000
M	Sediment ≥ RM 10	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	176	176	100	0.434	51400	1100		2400	2400
M	Sediment ≥ RM 10	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	176	176	100	0.553	51400	1100		2200	2200
M	Sediment ≥ RM 10	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	176	176	100	0.997	55500	1500		2200	2200
M	Sediment ≥ RM 10	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	176	176	100	0.412	51400	1100		2400	2400
M	Sediment ≥ RM 10	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	176	176	100	0.62	51500	1100		1900	1900
M	Sediment ≥ RM 10	OC Pesticides	Dieldrin	µg/kg	175	169	96.6	0.107	88	4.8	1.4	7.5	7.5
M	Sediment ≥ RM 10	OC Pesticides	Total DDx	µg/kg	175	172	98.3	0.55	1250	99	5.3	160	160
F	Sediment ≥ RM 4	Metals	Antimony	mg/kg	331	328	99.1	0.03	11.8	0.97	0.052	1.1	1.1
F	Sediment ≥ RM 4	Metals	Arsenic	mg/kg	331	331	100	0.48	68.6	6.6		8.5	8.5
F	Sediment ≥ RM 4	Metals	Cadmium	mg/kg	331	331	100	0.053	46.6	3.9		5.3	5.3
F	Sediment ≥ RM 4	Metals	Chromium	mg/kg	331	331	100	4.03	1580	120		170	170
F	Sediment ≥ RM 4	Metals	Cobalt	mg/kg	331	331	100	1.8	25.6	6.8		7.1	7.1
F	Sediment ≥ RM 4	Metals	Copper	mg/kg	380	380	100	4.19	787	140		150	150
F	Sediment ≥ RM 4	Metals	Lead	mg/kg	328	328	100	3.94	2050	230		280	280
F	Sediment ≥ RM 4	Metals	Mercury	µg/kg	334	334	100	16.1	24300	2200		3000	3000
F	Sediment ≥ RM 4	Metals	Methyl mercury	µg/kg	100	99	99	0.035	23	2.8	0.089	4.1	4.1
F	Sediment ≥ RM 4	Metals	Nickel	mg/kg	378	378	100	4.15	200	27		32	32
F	Sediment ≥ RM 4	Metals	Selenium	mg/kg	314	250	79.6	0.038	3.3	0.84	2	0.81	0.81
F	Sediment ≥ RM 4	Metals	Silver	mg/kg	331	331	100	0.023	20.4	2.5		2.8	2.8
F	Sediment ≥ RM 4	Metals	Vanadium	mg/kg	331	331	100	3.99	110	23		27	27
F	Sediment ≥ RM 4	Metals	Zinc	mg/kg	331	331	100	23.5	2000	420		510	510
F	Sediment ≥ RM 4	PAHs	Acenaphthene	µg/kg	332	328	98.8	1.3	142000	1200	12	3100	3100
F	Sediment ≥ RM 4	PAHs	Benzo(a)pyrene	µg/kg	332	331	99.7	1.62	41000	3700	0.6	4800	4800
F	Sediment ≥ RM 4	PAHs	Total HPAHs	µg/kg	332	332	100	6.2	510000	35000		47000	47000
F	Sediment ≥ RM 4	PAHs	Total LPAHs	µg/kg	332	331	99.7	0.408	749000	11000	3	21000	21000
F	Sediment ≥ RM 4	PAHs	Total PAHs	µg/kg	332	332	100	6.2	1090000	46000		66000	66000

Diet LOE -- Sediment EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC
F	Sediment ≥ RM 4	PCB Congeners	Total PCB Congeners	µg/kg	334	334	100	1.34	28600	1900		2800	2800
F	Sediment ≥ RM 4	PCB Congeners	PCB TEQ-Bird	ng/kg	334	334	100	0.416	7930	450		690	690
F	Sediment ≥ RM 4	PCB Congeners	PCB TEQ-Fish	ng/kg	334	334	100	0.00431	33.2	2.3		3.4	3.4
F	Sediment ≥ RM 4	PCB Congeners	PCB TEQ-Mammal	ng/kg	334	334	100	0.101	267	23		33	33
F	Sediment ≥ RM 4	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	333	333	100	0.515	51600	1500		2700	2700
F	Sediment ≥ RM 4	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	333	333	100	0.434	51400	1500		2700	2700
F	Sediment ≥ RM 4	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	333	333	100	0.553	51400	1500		2700	2700
F	Sediment ≥ RM 4	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	333	333	100	0.997	55500	2000		3300	3300
F	Sediment ≥ RM 4	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	333	333	100	0.412	51400	1500		2700	2700
F	Sediment ≥ RM 4	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	333	333	100	0.62	51500	1500		2700	2700
F	Sediment ≥ RM 4	OC Pesticides	Dieldrin	µg/kg	332	324	97.6	0.093	152	6.2	1.4	9.2	9.2
F	Sediment ≥ RM 4	OC Pesticides	Total DDx	µg/kg	332	329	99.1	0.55	2800	140	5.3	200	200
B	Sediment ≥ RM 6	Metals	Antimony	mg/kg	290	287	99	0.03	11.8	0.92	0.052	1	1
B	Sediment ≥ RM 6	Metals	Arsenic	mg/kg	290	290	100	0.48	68.6	6.3		8.4	8.4
B	Sediment ≥ RM 6	Metals	Cadmium	mg/kg	290	290	100	0.053	46.6	3.9		5.5	5.5
B	Sediment ≥ RM 6	Metals	Chromium	mg/kg	290	290	100	4.03	1580	120		180	180
B	Sediment ≥ RM 6	Metals	Cobalt	mg/kg	290	290	100	1.8	25.6	6.5		6.9	6.9
B	Sediment ≥ RM 6	Metals	Copper	mg/kg	332	332	100	4.19	787	140		170	170
B	Sediment ≥ RM 6	Metals	Lead	mg/kg	287	287	100	3.94	2050	220		280	280
B	Sediment ≥ RM 6	Metals	Mercury	µg/kg	293	293	100	16.1	24300	2100		3000	3000
B	Sediment ≥ RM 6	Metals	Methyl mercury	µg/kg	82	81	98.8	0.035	23	2.5	0.089	4.1	4.1
B	Sediment ≥ RM 6	Metals	Nickel	mg/kg	330	330	100	4.15	200	25		31	31
B	Sediment ≥ RM 6	Metals	Selenium	mg/kg	283	224	79.2	0.038	3.3	0.81	2	0.78	0.78
B	Sediment ≥ RM 6	Metals	Silver	mg/kg	290	290	100	0.023	20.4	2.4		3.2	3.2
B	Sediment ≥ RM 6	Metals	Vanadium	mg/kg	290	290	100	3.99	110	23		27	27
B	Sediment ≥ RM 6	Metals	Zinc	mg/kg	290	290	100	23.5	2000	410		510	510
B	Sediment ≥ RM 6	PAHs	Acenaphthene	µg/kg	291	287	98.6	1.3	11700	540	12	850	850
B	Sediment ≥ RM 6	PAHs	Benzo(a)pyrene	µg/kg	291	290	99.7	1.62	41000	3500	0.6	4600	4600
B	Sediment ≥ RM 6	PAHs	Total HPAHs	µg/kg	291	291	100	6.2	510000	33000		45000	45000
B	Sediment ≥ RM 6	PAHs	Total LPAHs	µg/kg	291	290	99.7	0.408	171000	7500	3	11000	11000
B	Sediment ≥ RM 6	PAHs	Total PAHs	µg/kg	291	291	100	6.2	681000	41000		56000	56000
B	Sediment ≥ RM 6	PCB Congeners	Total PCB Congeners	µg/kg	293	293	100	1.34	28600	1900		2900	2900
B	Sediment ≥ RM 6	PCB Congeners	PCB TEQ-Bird	ng/kg	293	293	100	0.416	7930	440		690	690
B	Sediment ≥ RM 6	PCB Congeners	PCB TEQ-Fish	ng/kg	293	293	100	0.00431	33.2	2.2		3.4	3.4
B	Sediment ≥ RM 6	PCB Congeners	PCB TEQ-Mammal	ng/kg	293	293	100	0.101	267	23		34	34
B	Sediment ≥ RM 6	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	292	292	100	0.515	51600	1600		2900	2900
B	Sediment ≥ RM 6	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	292	292	100	0.434	51400	1500		2800	2800
B	Sediment ≥ RM 6	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	292	292	100	0.553	51400	1500		2800	2800
B	Sediment ≥ RM 6	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	292	292	100	0.997	55500	2000		3500	3500
B	Sediment ≥ RM 6	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	292	292	100	0.412	51400	1500		2800	2800
B	Sediment ≥ RM 6	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	292	292	100	0.62	51500	1500		2800	2800
B	Sediment ≥ RM 6	OC Pesticides	Dieldrin	µg/kg	291	284	97.6	0.093	152	6.2	1.4	9.7	9.7
B	Sediment ≥ RM 6	OC Pesticides	Total DDx	µg/kg	291	288	99	0.55	2800	140	5.3	210	210
B, F	Sediment, mudflats (all)	Metals	Antimony	mg/kg	136	134	98.5	0.03	11.8	1.1	0.052	1.3	1.3
B, F	Sediment, mudflats (all)	Metals	Arsenic	mg/kg	136	136	100	0.48	37.4	7.7		8.7	8.7
B, F	Sediment, mudflats (all)	Metals	Cadmium	mg/kg	136	136	100	0.074	34.7	3.5		5.2	5.2
B, F	Sediment, mudflats (all)	Metals	Chromium	mg/kg	136	136	100	4.03	1180	120		190	190
B, F	Sediment, mudflats (all)	Metals	Cobalt	mg/kg	135	135	100	2.19	16.5	7.4		7.8	7.8
B, F	Sediment, mudflats (all)	Metals	Copper	mg/kg	151	151	100	4.19	706	150		190	190
B, F	Sediment, mudflats (all)	Metals	Lead	mg/kg	134	134	100	3.94	2050	240		320	320
B, F	Sediment, mudflats (all)	Metals	Mercury	µg/kg	136	136	100	21.5	21500	2400		3500	3500
B, F	Sediment, mudflats (all)	Metals	Methyl mercury	µg/kg	57	56	98.2	0.035	23	3.3	0.089	5.3	5.3

Diet LOE -- Sediment EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC
B, F	Sediment, mudflats (all)	Metals	Nickel	mg/kg	151	151	100	4.75	130	28		34	34
B, F	Sediment, mudflats (all)	Metals	Selenium	mg/kg	130	118	90.8	0.038	3.2	0.96	1.39	1.2	1.2
B, F	Sediment, mudflats (all)	Metals	Silver	mg/kg	136	136	100	0.023	13.7	2.5		3.3	3.3
B, F	Sediment, mudflats (all)	Metals	Vanadium	mg/kg	136	136	100	7.2	110	26		28	28
B, F	Sediment, mudflats (all)	Metals	Zinc	mg/kg	136	136	100	23.5	1710	460		590	590
B, F	Sediment, mudflats (all)	PAHs	Acenaphthene	µg/kg	136	134	98.5	1.3	5610	400	12	680	680
B, F	Sediment, mudflats (all)	PAHs	Benzo(a)pyrene	µg/kg	136	136	100	1.62	12000	3200		4000	4000
B, F	Sediment, mudflats (all)	PAHs	Total HPAHs	µg/kg	136	136	100	16.6	114000	28000		35000	35000
B, F	Sediment, mudflats (all)	PAHs	Total LPAHs	µg/kg	136	136	100	0.408	55000	5300		8100	8100
B, F	Sediment, mudflats (all)	PAHs	Total PAHs	µg/kg	136	136	100	17	160000	33000		43000	43000
B, F	Sediment, mudflats (all)	PCB Congeners	Total PCB Congeners	µg/kg	136	136	100	1.34	16900	1700		2900	2900
B, F	Sediment, mudflats (all)	PCB Congeners	PCB TEQ-Bird	ng/kg	136	136	100	0.487	5480	460		770	770
B, F	Sediment, mudflats (all)	PCB Congeners	PCB TEQ-Fish	ng/kg	136	136	100	0.00728	22.9	2.3		3.7	3.7
B, F	Sediment, mudflats (all)	PCB Congeners	PCB TEQ-Mammal	ng/kg	136	136	100	0.101	214	24		37	37
B, F	Sediment, mudflats (all)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	136	136	100	0.515	35000	1300		2900	2900
B, F	Sediment, mudflats (all)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	136	136	100	0.506	34700	1300		2800	2800
B, F	Sediment, mudflats (all)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	136	136	100	0.612	34600	1300		2800	2800
B, F	Sediment, mudflats (all)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	136	136	100	0.997	37000	1800		3500	3500
B, F	Sediment, mudflats (all)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	136	136	100	0.501	34700	1300		2800	2800
B, F	Sediment, mudflats (all)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	136	136	100	0.62	34700	1300		2800	2800
B, F	Sediment, mudflats (all)	OC Pesticides	Dieldrin	µg/kg	136	133	97.8	0.093	24.4	4.0	1.4	5.3	5.3
B, F	Sediment, mudflats (all)	OC Pesticides	Total DDx	µg/kg	136	133	97.8	1.03	1620	140	5.3	230	230
B	Sediment, mudflats (Reach 1)	Metals	Antimony	mg/kg	16	16	100	0.39	2.39	0.75		0.97	0.97
B	Sediment, mudflats (Reach 1)	Metals	Arsenic	mg/kg	16	16	100	6.4	18	9.8		11	11
B	Sediment, mudflats (Reach 1)	Metals	Cadmium	mg/kg	16	16	100	0.77	3.19	2.4		2.8	2.8
B	Sediment, mudflats (Reach 1)	Metals	Chromium	mg/kg	16	16	100	66.6	167	110		120	120
B	Sediment, mudflats (Reach 1)	Metals	Cobalt	mg/kg	15	15	100	4.3	9.81	8.0		8.6	8.6
B	Sediment, mudflats (Reach 1)	Metals	Copper	mg/kg	22	22	100	99.2	221	140		150	150
B	Sediment, mudflats (Reach 1)	Metals	Lead	mg/kg	15	15	100	87.8	216	160		180	180
B	Sediment, mudflats (Reach 1)	Metals	Mercury	µg/kg	16	16	100	1490	5070	2300		2700	2700
B	Sediment, mudflats (Reach 1)	Metals	Methyl mercury	µg/kg	7	7	100	1.86	3.5	2.5		2.9	2.9
B	Sediment, mudflats (Reach 1)	Metals	Nickel	mg/kg	22	22	100	16.5	43.4	29		31	31
B	Sediment, mudflats (Reach 1)	Metals	Selenium	mg/kg	15	15	100	0.17	2.6	1.2		1.5	1.5
B	Sediment, mudflats (Reach 1)	Metals	Silver	mg/kg	16	16	100	0.92	3.21	2.3		2.6	2.6
B	Sediment, mudflats (Reach 1)	Metals	Vanadium	mg/kg	16	16	100	11.1	35.7	28		30	30
B	Sediment, mudflats (Reach 1)	Metals	Zinc	mg/kg	16	16	100	177	674	360		420	420
B	Sediment, mudflats (Reach 1)	PAHs	Acenaphthene	µg/kg	16	16	100	42	2900	310		1100	1100
B	Sediment, mudflats (Reach 1)	PAHs	Benzo(a)pyrene	µg/kg	16	16	100	890	6000	2900		3600	3600
B	Sediment, mudflats (Reach 1)	PAHs	Total HPAHs	µg/kg	16	16	100	6600	55000	23000		28000	28000
B	Sediment, mudflats (Reach 1)	PAHs	Total LPAHs	µg/kg	16	16	100	1100	15000	3400		4900	4900
B	Sediment, mudflats (Reach 1)	PAHs	Total PAHs	µg/kg	16	16	100	7800	70000	26000		33000	33000
B	Sediment, mudflats (Reach 1)	PCB Congeners	Total PCB Congeners	µg/kg	16	16	100	290	4040	1100		1500	1500
B	Sediment, mudflats (Reach 1)	PCB Congeners	PCB TEQ-Bird	ng/kg	16	16	100	47.2	1190	290		440	440
B	Sediment, mudflats (Reach 1)	PCB Congeners	PCB TEQ-Fish	ng/kg	16	16	100	0.46	5.11	1.6		2.1	2.1
B	Sediment, mudflats (Reach 1)	PCB Congeners	PCB TEQ-Mammal	ng/kg	16	16	100	5.6	43.6	19		24	24
B	Sediment, mudflats (Reach 1)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	16	16	100	110	2620	520		1200	1200
B	Sediment, mudflats (Reach 1)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	16	16	100	92	2510	480		1100	1100
B	Sediment, mudflats (Reach 1)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	16	16	100	91	2510	480		1100	1100
B	Sediment, mudflats (Reach 1)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	16	16	100	190	3800	800		1100	1100
B	Sediment, mudflats (Reach 1)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	16	16	100	93	2520	480		1100	1100
B	Sediment, mudflats (Reach 1)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	16	16	100	97	2550	490		1100	1100
B	Sediment, mudflats (Reach 1)	OC Pesticides	Dieldrin	µg/kg	16	16	100	0.93	17	4.1		6.4	6.4

Diet LOE -- Sediment EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC
B	Sediment, mudflats (Reach 1)	OC Pesticides	Total DDx	µg/kg	16	16	100	20	250	80		110	110
B	Sediment, mudflats (Reach 2)	Metals	Antimony	mg/kg	17	17	100	0.47	1.09	0.71		0.79	0.79
B	Sediment, mudflats (Reach 2)	Metals	Arsenic	mg/kg	17	17	100	5.7	14.4	8.5		9.4	9.4
B	Sediment, mudflats (Reach 2)	Metals	Cadmium	mg/kg	17	17	100	0.576	4.48	3.0		3.3	3.3
B	Sediment, mudflats (Reach 2)	Metals	Chromium	mg/kg	17	17	100	37	155	99.1		112	112
B	Sediment, mudflats (Reach 2)	Metals	Cobalt	mg/kg	17	17	100	6.3	10.9	8.5		9.1	9.1
B	Sediment, mudflats (Reach 2)	Metals	Copper	mg/kg	19	19	100	37.2	204	142		159	159
B	Sediment, mudflats (Reach 2)	Metals	Lead	mg/kg	17	17	100	56.7	260	190		210	210
B	Sediment, mudflats (Reach 2)	Metals	Mercury	µg/kg	17	17	100	392	4120	2000		2300	2300
B	Sediment, mudflats (Reach 2)	Metals	Methyl mercury	µg/kg	10	10	100	1.8	6.3	3.6		4.4	4.4
B	Sediment, mudflats (Reach 2)	Metals	Nickel	mg/kg	19	19	100	20	56.3	31		34	34
B	Sediment, mudflats (Reach 2)	Metals	Selenium	mg/kg	16	16	100	0.37	2.9	1.1		1.5	1.5
B	Sediment, mudflats (Reach 2)	Metals	Silver	mg/kg	17	17	100	0.425	4.47	2.6		2.9	2.9
B	Sediment, mudflats (Reach 2)	Metals	Vanadium	mg/kg	17	17	100	24.1	38	29		31	31
B	Sediment, mudflats (Reach 2)	Metals	Zinc	mg/kg	17	17	100	141	546	427		469	469
B	Sediment, mudflats (Reach 2)	PAHs	Acenaphthene	µg/kg	17	17	100	31.6	290	160		190	190
B	Sediment, mudflats (Reach 2)	PAHs	Benzo(a)pyrene	µg/kg	17	17	100	580	5140	3100		3700	3700
B	Sediment, mudflats (Reach 2)	PAHs	Total HPAHs	µg/kg	17	17	100	5200	40300	26000		30000	30000
B	Sediment, mudflats (Reach 2)	PAHs	Total LPAHs	µg/kg	17	17	100	697	5400	3200		3800	3800
B	Sediment, mudflats (Reach 2)	PAHs	Total PAHs	µg/kg	17	17	100	6000	44800	29000		34000	34000
B	Sediment, mudflats (Reach 2)	PCB Congeners	Total PCB Congeners	µg/kg	17	17	100	257	7560	1300		3000	3000
B	Sediment, mudflats (Reach 2)	PCB Congeners	PCB TEQ-Bird	ng/kg	17	17	100	37.2	1250	300		570	570
B	Sediment, mudflats (Reach 2)	PCB Congeners	PCB TEQ-Fish	ng/kg	17	17	100	0.232	7.28	1.7		3.3	3.3
B	Sediment, mudflats (Reach 2)	PCB Congeners	PCB TEQ-Mammal	ng/kg	17	17	100	2.79	73.5	19		35	35
B	Sediment, mudflats (Reach 2)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	17	17	100	52.9	2890	580		1300	1300
B	Sediment, mudflats (Reach 2)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	17	17	100	44.2	2770	540		1200	1200
B	Sediment, mudflats (Reach 2)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	17	17	100	43.9	2770	540		1200	1200
B	Sediment, mudflats (Reach 2)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	17	17	100	90.2	4140	880		1800	1800
B	Sediment, mudflats (Reach 2)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	17	17	100	44.4	2780	540		1200	1200
B	Sediment, mudflats (Reach 2)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	17	17	100	46.9	2840	550		1200	1200
B	Sediment, mudflats (Reach 2)	OC Pesticides	Dieldrin	µg/kg	17	17	100	0.659	24.4	4.1		6	6
B	Sediment, mudflats (Reach 2)	OC Pesticides	Total DDx	µg/kg	17	17	100	31.9	1510	210		330	330
B	Sediment, mudflats (Reach 3)	Metals	Antimony	mg/kg	14	14	100	0.497	2.44	1		1.3	1.3
B	Sediment, mudflats (Reach 3)	Metals	Arsenic	mg/kg	14	14	100	4.7	11.9	7.6		8.5	8.5
B	Sediment, mudflats (Reach 3)	Metals	Cadmium	mg/kg	14	14	100	1.5	13.4	3.8		5.3	5.3
B	Sediment, mudflats (Reach 3)	Metals	Chromium	mg/kg	14	14	100	65.1	500	120		250	250
B	Sediment, mudflats (Reach 3)	Metals	Cobalt	mg/kg	14	14	100	6.4	16.5	9.2		10	10
B	Sediment, mudflats (Reach 3)	Metals	Copper	mg/kg	14	14	100	112	476	180		220	220
B	Sediment, mudflats (Reach 3)	Metals	Lead	mg/kg	14	14	100	153	635	249		309	309
B	Sediment, mudflats (Reach 3)	Metals	Mercury	µg/kg	14	14	100	1270	6200	2300		3000	3000
B	Sediment, mudflats (Reach 3)	Metals	Methyl mercury	µg/kg	7	7	100	3.1	7.9	4.6		6	6
B	Sediment, mudflats (Reach 3)	Metals	Nickel	mg/kg	14	14	100	21.3	130	38.6		52.8	52.8
B	Sediment, mudflats (Reach 3)	Metals	Selenium	mg/kg	11	11	100	0.43	2.7	1.2		1.6	1.6
B	Sediment, mudflats (Reach 3)	Metals	Silver	mg/kg	14	14	100	1.8	12.5	3.2		6.4	6.4
B	Sediment, mudflats (Reach 3)	Metals	Vanadium	mg/kg	14	14	100	19.5	34.3	28.8		31	31
B	Sediment, mudflats (Reach 3)	Metals	Zinc	mg/kg	14	14	100	332	1470	530		670	670
B	Sediment, mudflats (Reach 3)	PAHs	Acenaphthene	µg/kg	14	14	100	100	655	280		350	350
B	Sediment, mudflats (Reach 3)	PAHs	Benzo(a)pyrene	µg/kg	14	14	100	1600	5170	3500		4000	4000
B	Sediment, mudflats (Reach 3)	PAHs	Total HPAHs	µg/kg	14	14	100	23000	44900	31000		35000	35000
B	Sediment, mudflats (Reach 3)	PAHs	Total LPAHs	µg/kg	14	14	100	2800	6870	4400		5100	5100
B	Sediment, mudflats (Reach 3)	PAHs	Total PAHs	µg/kg	14	14	100	26000	51800	36000		41000	41000
B	Sediment, mudflats (Reach 3)	PCB Congeners	Total PCB Congeners	µg/kg	14	14	100	680	3340	1200		1600	1600

Diet LOE -- Sediment EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC
B	Sediment, mudflats (Reach 3)	PCB Congeners	PCB TEQ-Bird	ng/kg	14	14	100	106	678	310		390	390
B	Sediment, mudflats (Reach 3)	PCB Congeners	PCB TEQ-Fish	ng/kg	14	14	100	0.623	3.89	1.7		2.2	2.2
B	Sediment, mudflats (Reach 3)	PCB Congeners	PCB TEQ-Mammal	ng/kg	14	14	100	6.81	46.8	18		23	23
B	Sediment, mudflats (Reach 3)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	14	14	100	247	1240	420		550	550
B	Sediment, mudflats (Reach 3)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	14	14	100	222	1130	380		490	490
B	Sediment, mudflats (Reach 3)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	14	14	100	220	1130	380		500	500
B	Sediment, mudflats (Reach 3)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	14	14	100	352	1920	730		930	930
B	Sediment, mudflats (Reach 3)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	14	14	100	222	1140	380		500	500
B	Sediment, mudflats (Reach 3)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	14	14	100	227	1160	400		510	510
B	Sediment, mudflats (Reach 3)	OC Pesticides	Dieldrin	µg/kg	14	14	100	0.952	9.28	4.0		5.1	5.1
B	Sediment, mudflats (Reach 3)	OC Pesticides	Total DDx	µg/kg	14	14	100	66.9	159	100		110	110
B	Sediment, mudflats (Reach 4)	Metals	Antimony	mg/kg	22	21	95.5	0.051	5.14	1.4	0.034	2.5	2.5
B	Sediment, mudflats (Reach 4)	Metals	Arsenic	mg/kg	22	22	100	1.26	37.4	13		18	18
B	Sediment, mudflats (Reach 4)	Metals	Cadmium	mg/kg	22	22	100	0.094	34.7	7.1		11	11
B	Sediment, mudflats (Reach 4)	Metals	Chromium	mg/kg	22	22	100	8.12	1060	230		360	360
B	Sediment, mudflats (Reach 4)	Metals	Cobalt	mg/kg	22	22	100	3.1	14	8.5		9.6	9.6
B	Sediment, mudflats (Reach 4)	Metals	Copper	mg/kg	23	23	100	8.57	706	240		300	300
B	Sediment, mudflats (Reach 4)	Metals	Lead	mg/kg	22	22	100	9.84	906	333		407	407
B	Sediment, mudflats (Reach 4)	Metals	Mercury	µg/kg	22	22	100	122	12200	4200		6200	6200
B	Sediment, mudflats (Reach 4)	Metals	Methyl mercury	µg/kg	9	9	100	2.4	8.9	5.9		7.2	7.2
B	Sediment, mudflats (Reach 4)	Metals	Nickel	mg/kg	23	23	100	6.54	106	40.8		52.2	52.2
B	Sediment, mudflats (Reach 4)	Metals	Selenium	mg/kg	21	19	90.5	0.1	3.2	1.4	1.24	1.6	1.6
B	Sediment, mudflats (Reach 4)	Metals	Silver	mg/kg	22	22	100	0.034	13.7	4.1		5.3	5.3
B	Sediment, mudflats (Reach 4)	Metals	Vanadium	mg/kg	22	22	100	8.22	110	36		44	44
B	Sediment, mudflats (Reach 4)	Metals	Zinc	mg/kg	22	22	100	29.4	1660	710		1100	1100
B	Sediment, mudflats (Reach 4)	PAHs	Acenaphthene	µg/kg	22	22	100	27.5	4200	540		890	890
B	Sediment, mudflats (Reach 4)	PAHs	Benzo(a)pyrene	µg/kg	22	22	100	174	11000	3900		6500	6500
B	Sediment, mudflats (Reach 4)	PAHs	Total HPAHs	µg/kg	22	22	100	1480	100000	34000		55000	55000
B	Sediment, mudflats (Reach 4)	PAHs	Total LPAHs	µg/kg	22	22	100	324	55000	7900		12000	12000
B	Sediment, mudflats (Reach 4)	PAHs	Total PAHs	µg/kg	22	22	100	1800	160000	42000		73000	73000
B	Sediment, mudflats (Reach 4)	PCB Congeners	Total PCB Congeners	µg/kg	22	22	100	9.42	16900	3400		7800	7800
B	Sediment, mudflats (Reach 4)	PCB Congeners	PCB TEQ-Bird	ng/kg	22	22	100	2.19	5480	940		1700	1700
B	Sediment, mudflats (Reach 4)	PCB Congeners	PCB TEQ-Fish	ng/kg	22	22	100	0.026	22.9	4.3		7.5	7.5
B	Sediment, mudflats (Reach 4)	PCB Congeners	PCB TEQ-Mammal	ng/kg	22	22	100	0.409	191	41		66	66
B	Sediment, mudflats (Reach 4)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	22	22	100	5.23	35000	4700		16000	16000
B	Sediment, mudflats (Reach 4)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	22	22	100	4.71	34700	4600		16000	16000
B	Sediment, mudflats (Reach 4)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	22	22	100	5.26	34600	4600		16000	16000
B	Sediment, mudflats (Reach 4)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	22	22	100	7.54	37000	5600		18000	18000
B	Sediment, mudflats (Reach 4)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	22	22	100	4.71	34700	4600		16000	16000
B	Sediment, mudflats (Reach 4)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	22	22	100	5.37	34700	4600		16000	16000
B	Sediment, mudflats (Reach 4)	OC Pesticides	Dieldrin	µg/kg	22	22	100	0.093	7.76	4.0		4.9	4.9
B	Sediment, mudflats (Reach 4)	OC Pesticides	Total DDx	µg/kg	22	22	100	1.3	1620	320		570	570
B	Sediment, mudflats (Reach 5)	Metals	Antimony	mg/kg	17	17	100	0.053	11.8	1.6		4.4	4.4
B	Sediment, mudflats (Reach 5)	Metals	Arsenic	mg/kg	17	17	100	0.53	15.7	6.8		9.7	9.7
B	Sediment, mudflats (Reach 5)	Metals	Cadmium	mg/kg	17	17	100	0.116	8.18	3.0		5.2	5.2
B	Sediment, mudflats (Reach 5)	Metals	Chromium	mg/kg	17	17	100	18.8	299	100		140	140
B	Sediment, mudflats (Reach 5)	Metals	Cobalt	mg/kg	17	17	100	3	11.2	7.8		8.7	8.7
B	Sediment, mudflats (Reach 5)	Metals	Copper	mg/kg	19	19	100	9.16	306	145		178	178
B	Sediment, mudflats (Reach 5)	Metals	Lead	mg/kg	17	17	100	7.65	1030	235		366	366
B	Sediment, mudflats (Reach 5)	Metals	Mercury	µg/kg	17	17	100	290	9300	2200		3400	3400
B	Sediment, mudflats (Reach 5)	Metals	Methyl mercury	µg/kg	5	5	100	0.36	23	6.3			23
B	Sediment, mudflats (Reach 5)	Metals	Nickel	mg/kg	19	19	100	7.9	47.5	25		29	29

Diet LOE -- Sediment EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC
B	Sediment, mudflats (Reach 5)	Metals	Selenium	mg/kg	17	16	94.1	0.12	1.5	0.77	0.5	0.93	0.93
B	Sediment, mudflats (Reach 5)	Metals	Silver	mg/kg	17	17	100	0.112	6.1	2.2		2.8	2.8
B	Sediment, mudflats (Reach 5)	Metals	Vanadium	mg/kg	17	17	100	12.7	42	26		30	30
B	Sediment, mudflats (Reach 5)	Metals	Zinc	mg/kg	17	17	100	55	1710	490		880	880
B	Sediment, mudflats (Reach 5)	PAHs	Acenaphthene	µg/kg	17	16	94.1	6.65	535	220	12	280	280
B	Sediment, mudflats (Reach 5)	PAHs	Benzo(a)pyrene	µg/kg	17	17	100	140	8100	3100		3900	3900
B	Sediment, mudflats (Reach 5)	PAHs	Total HPAHs	µg/kg	17	17	100	1350	81000	30000		38000	38000
B	Sediment, mudflats (Reach 5)	PAHs	Total LPAHs	µg/kg	17	17	100	84	12000	4300		5600	5600
B	Sediment, mudflats (Reach 5)	PAHs	Total PAHs	µg/kg	17	17	100	1400	93000	34000		44000	44000
B	Sediment, mudflats (Reach 5)	PCB Congeners	Total PCB Congeners	µg/kg	17	17	100	18.1	8330	1700		4000	4000
B	Sediment, mudflats (Reach 5)	PCB Congeners	PCB TEQ-Bird	ng/kg	17	17	100	3.56	2590	490		2300	2300
B	Sediment, mudflats (Reach 5)	PCB Congeners	PCB TEQ-Fish	ng/kg	17	17	100	0.0675	12.4	2.4		5.9	5.9
B	Sediment, mudflats (Reach 5)	PCB Congeners	PCB TEQ-Mammal	ng/kg	17	17	100	1.25	139	25		60	60
B	Sediment, mudflats (Reach 5)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	17	17	100	8.74	3880	620		1600	1600
B	Sediment, mudflats (Reach 5)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	17	17	100	6.24	3780	590		1600	1600
B	Sediment, mudflats (Reach 5)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	17	17	100	6.38	3780	590		1600	1600
B	Sediment, mudflats (Reach 5)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	17	17	100	10.6	5960	1100		2100	2100
B	Sediment, mudflats (Reach 5)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	17	17	100	6.22	3790	590		1600	1600
B	Sediment, mudflats (Reach 5)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	17	17	100	6.48	3850	610		1600	1600
B	Sediment, mudflats (Reach 5)	OC Pesticides	Dieldrin	µg/kg	17	17	100	0.149	14	5.3		6.9	6.9
B	Sediment, mudflats (Reach 5)	OC Pesticides	Total DDx	µg/kg	17	17	100	1.72	604	120		260	260
B	Sediment, mudflats (Reach 6)	Metals	Antimony	mg/kg	32	31	96.9	0.03	2.17	0.78	0.052	1.2	1.2
B	Sediment, mudflats (Reach 6)	Metals	Arsenic	mg/kg	32	32	100	0.48	26.8	6.4		9.9	9.9
B	Sediment, mudflats (Reach 6)	Metals	Cadmium	mg/kg	32	32	100	0.074	18	3.4		5.1	5.1
B	Sediment, mudflats (Reach 6)	Metals	Chromium	mg/kg	32	32	100	4.03	1180	140		260	260
B	Sediment, mudflats (Reach 6)	Metals	Cobalt	mg/kg	32	32	100	2.19	14.8	6.5		7.3	7.3
B	Sediment, mudflats (Reach 6)	Metals	Copper	mg/kg	33	33	100	4.19	484	140		191	191
B	Sediment, mudflats (Reach 6)	Metals	Lead	mg/kg	32	32	100	3.94	2050	257		375	375
B	Sediment, mudflats (Reach 6)	Metals	Mercury	µg/kg	32	32	100	21.5	21500	2700		6100	6100
B	Sediment, mudflats (Reach 6)	Metals	Methyl mercury	µg/kg	7	7	100	0.035	1.5	0.85		1.3	1.3
B	Sediment, mudflats (Reach 6)	Metals	Nickel	mg/kg	33	33	100	4.75	85.4	24		30	30
B	Sediment, mudflats (Reach 6)	Metals	Selenium	mg/kg	32	32	100	0.09	1.9	0.71		0.89	0.89
B	Sediment, mudflats (Reach 6)	Metals	Silver	mg/kg	32	32	100	0.023	8.13	2.1		3.1	3.1
B	Sediment, mudflats (Reach 6)	Metals	Vanadium	mg/kg	32	32	100	9.8	74.3	25		29	29
B	Sediment, mudflats (Reach 6)	Metals	Zinc	mg/kg	32	32	100	23.5	1660	410		560	560
B	Sediment, mudflats (Reach 6)	PAHs	Acenaphthene	µg/kg	32	31	96.9	1.3	5610	570	0.977	2700	2700
B	Sediment, mudflats (Reach 6)	PAHs	Benzo(a)pyrene	µg/kg	32	32	100	1.62	11200	2800		3600	3600
B	Sediment, mudflats (Reach 6)	PAHs	Total HPAHs	µg/kg	32	32	100	16.6	114000	27000		40000	40000
B	Sediment, mudflats (Reach 6)	PAHs	Total LPAHs	µg/kg	32	32	100	0.408	54700	6500		11000	11000
B	Sediment, mudflats (Reach 6)	PAHs	Total PAHs	µg/kg	32	32	100	17	155000	33000		50000	50000
B	Sediment, mudflats (Reach 6)	PCB Congeners	Total PCB Congeners	µg/kg	32	32	100	1.34	14200	2200		6800	6800
B	Sediment, mudflats (Reach 6)	PCB Congeners	PCB TEQ-Bird	ng/kg	32	32	100	0.487	3410	570		1700	1700
B	Sediment, mudflats (Reach 6)	PCB Congeners	PCB TEQ-Fish	ng/kg	32	32	100	0.00728	14.9	2.8		8.3	8.3
B	Sediment, mudflats (Reach 6)	PCB Congeners	PCB TEQ-Mammal	ng/kg	32	32	100	0.101	214	28		69	69
B	Sediment, mudflats (Reach 6)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	32	32	100	0.515	12400	1400		4900	4900
B	Sediment, mudflats (Reach 6)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	32	32	100	0.506	12200	1300		4800	4800
B	Sediment, mudflats (Reach 6)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	32	32	100	0.612	12200	1300		4800	4800
B	Sediment, mudflats (Reach 6)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	32	32	100	0.997	15500	2000		6600	6600
B	Sediment, mudflats (Reach 6)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	32	32	100	0.501	12200	1300		4800	4800
B	Sediment, mudflats (Reach 6)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	32	32	100	0.62	12300	1400		4900	4900
B	Sediment, mudflats (Reach 6)	OC Pesticides	Dieldrin	µg/kg	32	30	93.8	0.107	15	3.3	0.12	5.7	5.7
B	Sediment, mudflats (Reach 6)	OC Pesticides	Total DDx	µg/kg	32	30	93.8	1.03	748	100	0.153	210	210

Diet LOE -- Sediment EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC
B	Sediment, mudflats (Reach 7)	Metals	Antimony	mg/kg	2	2	100	0.318	0.45	0.38			0.45
B	Sediment, mudflats (Reach 7)	Metals	Arsenic	mg/kg	2	2	100	2.57	3.1	2.8			3.1
B	Sediment, mudflats (Reach 7)	Metals	Cadmium	mg/kg	2	2	100	1.05	2.4	1.7			2.4
B	Sediment, mudflats (Reach 7)	Metals	Chromium	mg/kg	2	2	100	34.4	65.1	49.8			65.1
B	Sediment, mudflats (Reach 7)	Metals	Cobalt	mg/kg	2	2	100	5.3	5.34	5.3			5.34
B	Sediment, mudflats (Reach 7)	Metals	Copper	mg/kg	2	2	100	75.5	77.6	76.6			77.6
B	Sediment, mudflats (Reach 7)	Metals	Lead	mg/kg	2	2	100	123	211	167			211
B	Sediment, mudflats (Reach 7)	Metals	Mercury	µg/kg	2	2	100	891	2300	1600			2300
B	Sediment, mudflats (Reach 7)	Metals	Methyl mercury	µg/kg	1	1	100	1.3	1.3				1.3
B	Sediment, mudflats (Reach 7)	Metals	Nickel	mg/kg	2	2	100	12.3	19.5	15.9			19.5
B	Sediment, mudflats (Reach 7)	Metals	Selenium	mg/kg	2	2	100	0.35	0.4	0.38			0.4
B	Sediment, mudflats (Reach 7)	Metals	Silver	mg/kg	2	2	100	0.814	2.9	1.9			2.9
B	Sediment, mudflats (Reach 7)	Metals	Vanadium	mg/kg	2	2	100	10.9	25.6	18.3			25.6
B	Sediment, mudflats (Reach 7)	Metals	Zinc	mg/kg	2	2	100	286	314	300			314
B	Sediment, mudflats (Reach 7)	PAHs	Acenaphthene	µg/kg	2	2	100	23	348	190			348
B	Sediment, mudflats (Reach 7)	PAHs	Benzo(a)pyrene	µg/kg	2	2	100	950	1770	1400			1770
B	Sediment, mudflats (Reach 7)	PAHs	Total HPAHs	µg/kg	2	2	100	8600	15800	12000			15800
B	Sediment, mudflats (Reach 7)	PAHs	Total LPAHs	µg/kg	2	2	100	1100	3260	2200			3260
B	Sediment, mudflats (Reach 7)	PAHs	Total PAHs	µg/kg	2	2	100	9700	19000	14000			19000
B	Sediment, mudflats (Reach 7)	PCB Congeners	Total PCB Congeners	µg/kg	2	2	100	401	560	480			560
B	Sediment, mudflats (Reach 7)	PCB Congeners	PCB TEQ-Bird	ng/kg	2	2	100	63.9	180	120			180
B	Sediment, mudflats (Reach 7)	PCB Congeners	PCB TEQ-Fish	ng/kg	2	2	100	0.454	1	0.73			1
B	Sediment, mudflats (Reach 7)	PCB Congeners	PCB TEQ-Mammal	ng/kg	2	2	100	5.11	12	8.6			12
B	Sediment, mudflats (Reach 7)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	2	2	100	82	370	230			370
B	Sediment, mudflats (Reach 7)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	2	2	100	71.2	330	200			330
B	Sediment, mudflats (Reach 7)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	2	2	100	71.4	330	200			330
B	Sediment, mudflats (Reach 7)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	2	2	100	146	540	340			540
B	Sediment, mudflats (Reach 7)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	2	2	100	71.6	330	200			330
B	Sediment, mudflats (Reach 7)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	2	2	100	76.6	340	210			340
B	Sediment, mudflats (Reach 7)	OC Pesticides	Dieldrin	µg/kg	2	2	100	1.1	14	7.6			14
B	Sediment, mudflats (Reach 7)	OC Pesticides	Total DDx	µg/kg	2	2	100	17	65	41			65
B	Sediment, mudflats (Reach 8)	Metals	Antimony	mg/kg	16	16	100	0.11	7.2	1.4		2.6	2.6
B	Sediment, mudflats (Reach 8)	Metals	Arsenic	mg/kg	16	16	100	0.82	10.6	2.4		3.6	3.6
B	Sediment, mudflats (Reach 8)	Metals	Cadmium	mg/kg	16	16	100	0.22	2.1	0.92		1.2	1.2
B	Sediment, mudflats (Reach 8)	Metals	Chromium	mg/kg	16	16	100	9.6	66.7	26		36	36
B	Sediment, mudflats (Reach 8)	Metals	Cobalt	mg/kg	16	16	100	2.7	6.72	4.2		4.7	4.7
B	Sediment, mudflats (Reach 8)	Metals	Copper	mg/kg	19	19	100	13.3	160	56		71	71
B	Sediment, mudflats (Reach 8)	Metals	Lead	mg/kg	15	15	100	21.3	589	180		286	286
B	Sediment, mudflats (Reach 8)	Metals	Mercury	µg/kg	16	16	100	68	5500	710		2100	2100
B	Sediment, mudflats (Reach 8)	Metals	Methyl mercury	µg/kg	11	10	90.9	0.22	3.1	0.78	0.089	1.9	1.9
B	Sediment, mudflats (Reach 8)	Metals	Nickel	mg/kg	19	19	100	5.3	25.5	12		13	13
B	Sediment, mudflats (Reach 8)	Metals	Selenium	mg/kg	16	7	43.8	0.038	0.93	0.40	1.39	0.48	0.48
B	Sediment, mudflats (Reach 8)	Metals	Silver	mg/kg	16	16	100	0.17	1.7	0.64		0.8	0.8
B	Sediment, mudflats (Reach 8)	Metals	Vanadium	mg/kg	16	16	100	7.2	22.3	12		14	14
B	Sediment, mudflats (Reach 8)	Metals	Zinc	mg/kg	16	16	100	72.2	1600	292		445	445
B	Sediment, mudflats (Reach 8)	PAHs	Acenaphthene	µg/kg	16	16	100	43	1800	510		860	860
B	Sediment, mudflats (Reach 8)	PAHs	Benzo(a)pyrene	µg/kg	16	16	100	480	12000	3300		4900	4900
B	Sediment, mudflats (Reach 8)	PAHs	Total HPAHs	µg/kg	16	16	100	4400	75000	28000		38000	38000
B	Sediment, mudflats (Reach 8)	PAHs	Total LPAHs	µg/kg	16	16	100	1100	17000	5600		8400	8400
B	Sediment, mudflats (Reach 8)	PAHs	Total PAHs	µg/kg	16	16	100	5500	92000	34000		45000	45000
B	Sediment, mudflats (Reach 8)	PCB Congeners	Total PCB Congeners	µg/kg	16	16	100	28.4	2900	370		760	760
B	Sediment, mudflats (Reach 8)	PCB Congeners	PCB TEQ-Bird	ng/kg	16	16	100	5.5	320	48		86	86

Diet LOE -- Sediment EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC
B	Sediment, mudflats (Reach 8)	PCB Congeners	PCB TEQ-Fish	ng/kg	16	16	100	0.0433	3.9	0.55		1.6	1.6
B	Sediment, mudflats (Reach 8)	PCB Congeners	PCB TEQ-Mammal	ng/kg	16	16	100	0.91	46	7.5		21	21
B	Sediment, mudflats (Reach 8)	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	16	16	100	4.7	34	11		15	15
B	Sediment, mudflats (Reach 8)	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	16	16	100	2.44	23	6.3		8.8	8.8
B	Sediment, mudflats (Reach 8)	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	16	16	100	3.15	27	7.4		14	14
B	Sediment, mudflats (Reach 8)	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	16	16	100	10.6	340	59		95	95
B	Sediment, mudflats (Reach 8)	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	16	16	100	2.71	24	6.9		9.6	9.6
B	Sediment, mudflats (Reach 8)	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	16	16	100	4.6	56	15		22	22
B	Sediment, mudflats (Reach 8)	OC Pesticides	Dieldrin	µg/kg	16	15	93.8	0.98	14	3.4	1.4	7	7
B	Sediment, mudflats (Reach 8)	OC Pesticides	Total DDx	µg/kg	16	15	93.8	6	69	18	5.3	25	25
B	Sediment, Reach 1	Metals	Antimony	mg/kg	46	46	100	0.39	5.5	0.95		1.2	1.2
B	Sediment, Reach 1	Metals	Arsenic	mg/kg	46	46	100	6.4	56	11		13	13
B	Sediment, Reach 1	Metals	Cadmium	mg/kg	46	46	100	0.77	29.4	3.3		5.9	5.9
B	Sediment, Reach 1	Metals	Chromium	mg/kg	46	46	100	66.6	187	110		120	120
B	Sediment, Reach 1	Metals	Cobalt	mg/kg	45	45	100	4.3	15.8	9.2		9.6	9.6
B	Sediment, Reach 1	Metals	Copper	mg/kg	66	66	100	97.6	323	150		150	150
B	Sediment, Reach 1	Metals	Lead	mg/kg	45	45	100	87.8	488	200		220	220
B	Sediment, Reach 1	Metals	Mercury	µg/kg	46	46	100	1110	5070	2200		2500	2500
B	Sediment, Reach 1	Metals	Methyl mercury	µg/kg	18	18	100	1.7	8.56	3.1		3.8	3.8
B	Sediment, Reach 1	Metals	Nickel	mg/kg	66	66	100	16.5	80.4	31		33	33
B	Sediment, Reach 1	Metals	Selenium	mg/kg	45	44	97.8	0.17	2.6	1.2	1	1.4	1.4
B	Sediment, Reach 1	Metals	Silver	mg/kg	46	46	100	0.92	4.65	2.5		2.7	2.7
B	Sediment, Reach 1	Metals	Vanadium	mg/kg	46	46	100	11.1	38.6	30		31	31
B	Sediment, Reach 1	Metals	Zinc	mg/kg	46	46	100	177	675	410		440	440
B	Sediment, Reach 1	PAHs	Acenaphthene	µg/kg	46	46	100	42	7150	620		1500	1500
B	Sediment, Reach 1	PAHs	Benzo(a)pyrene	µg/kg	46	46	100	540	35500	4000		4900	4900
B	Sediment, Reach 1	PAHs	Total HPAHs	µg/kg	46	46	100	5100	359000	37000		45000	45000
B	Sediment, Reach 1	PAHs	Total LPAHs	µg/kg	46	46	100	940	102000	7500		18000	18000
B	Sediment, Reach 1	PAHs	Total PAHs	µg/kg	46	46	100	6000	461000	44000		89000	89000
B	Sediment, Reach 1	PCB Congeners	Total PCB Congeners	µg/kg	46	46	100	11.9	6960	1200		1900	1900
B	Sediment, Reach 1	PCB Congeners	PCB TEQ-Bird	ng/kg	46	46	100	2.82	1580	260		430	430
B	Sediment, Reach 1	PCB Congeners	PCB TEQ-Fish	ng/kg	46	46	100	0.0277	6.86	1.5		2.2	2.2
B	Sediment, Reach 1	PCB Congeners	PCB TEQ-Mammal	ng/kg	46	46	100	0.416	57.7	18		24	24
B	Sediment, Reach 1	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	46	46	100	0.0595	2620	440		710	710
B	Sediment, Reach 1	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	46	46	100	0.037	2510	400		660	660
B	Sediment, Reach 1	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	46	46	100	0.0567	2510	400		660	660
B	Sediment, Reach 1	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	46	46	100	2.92	3800	710		1100	1100
B	Sediment, Reach 1	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	46	46	100	0.871	2520	400		660	660
B	Sediment, Reach 1	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	46	46	100	0.931	2550	420		680	680
B	Sediment, Reach 1	OC Pesticides	Dieldrin	µg/kg	46	46	100	0.015	25	4.7		6.1	6.1
B	Sediment, Reach 1	OC Pesticides	Total DDx	µg/kg	46	46	100	3.4	500	95		120	120
B	Sediment, Reach 2	Metals	Antimony	mg/kg	49	49	100	0.185	5.5	1		1.6	1.6
B	Sediment, Reach 2	Metals	Arsenic	mg/kg	49	49	100	1.68	118	11		22	22
B	Sediment, Reach 2	Metals	Cadmium	mg/kg	49	49	100	0.21	7.01	3.1		3.4	3.4
B	Sediment, Reach 2	Metals	Chromium	mg/kg	49	49	100	18.8	338	110		130	130
B	Sediment, Reach 2	Metals	Cobalt	mg/kg	47	47	100	2.98	12.7	8.3		8.8	8.8
B	Sediment, Reach 2	Metals	Copper	mg/kg	57	57	100	25.8	930	170		240	240
B	Sediment, Reach 2	Metals	Lead	mg/kg	49	49	100	42.6	703	220		240	240
B	Sediment, Reach 2	Metals	Mercury	µg/kg	49	49	100	120	16200	2600		4300	4300
B	Sediment, Reach 2	Metals	Methyl mercury	µg/kg	19	19	100	0.32	7.7	3.3		4.1	4.1
B	Sediment, Reach 2	Metals	Nickel	mg/kg	57	57	100	8.09	68.7	30		32	32
B	Sediment, Reach 2	Metals	Selenium	mg/kg	47	47	100	0.2	5.2	1.3		1.5	1.5

Diet LOE -- Sediment EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC
B	Sediment, Reach 2	Metals	Silver	mg/kg	49	49	100	0.26	8.27	2.8		3.7	3.7
B	Sediment, Reach 2	Metals	Vanadium	mg/kg	49	49	100	9.3	43.1	28		29	29
B	Sediment, Reach 2	Metals	Zinc	mg/kg	49	49	100	96.2	883	450		480	480
B	Sediment, Reach 2	PAHs	Acenaphthene	µg/kg	49	49	100	18	9160	630		1500	1500
B	Sediment, Reach 2	PAHs	Benzo(a)pyrene	µg/kg	49	49	100	210	22900	4000		6100	6100
B	Sediment, Reach 2	PAHs	Total HPAHs	µg/kg	49	49	100	1900	231000	36000		57000	57000
B	Sediment, Reach 2	PAHs	Total LPAHs	µg/kg	49	49	100	310	60200	6700		13000	13000
B	Sediment, Reach 2	PAHs	Total PAHs	µg/kg	49	49	100	2200	291000	43000		69000	69000
B	Sediment, Reach 2	PCB Congeners	Total PCB Congeners	µg/kg	49	49	100	5.41	21300	1900		3900	3900
B	Sediment, Reach 2	PCB Congeners	PCB TEQ-Bird	ng/kg	49	49	100	0.000243	6820	470		1400	1400
B	Sediment, Reach 2	PCB Congeners	PCB TEQ-Fish	ng/kg	49	49	100	0.000122	25.8	2.2		4.6	4.6
B	Sediment, Reach 2	PCB Congeners	PCB TEQ-Mammal	ng/kg	49	49	100	0.000729	182	22		40	40
B	Sediment, Reach 2	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	49	49	100	22.9	12400	810		2000	2000
B	Sediment, Reach 2	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	49	49	100	14.2	12100	760		1900	1900
B	Sediment, Reach 2	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	49	49	100	14.8	12100	760		1900	1900
B	Sediment, Reach 2	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	49	49	100	36.4	19300	1300		3100	3100
B	Sediment, Reach 2	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	49	49	100	14.2	12200	770		1900	1900
B	Sediment, Reach 2	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	49	49	100	15.2	12300	790		2000	2000
B	Sediment, Reach 2	OC Pesticides	Dieldrin	µg/kg	49	49	100	0.249	28.6	5.3		6.7	6.7
B	Sediment, Reach 2	OC Pesticides	Total DDx	µg/kg	49	49	100	0.317	1510	200		380	380
B	Sediment, Reach 3	Metals	Antimony	mg/kg	41	41	100	0.241	8.9	1.3		2.3	2.3
B	Sediment, Reach 3	Metals	Arsenic	mg/kg	41	41	100	2.22	27.8	8.6		10	10
B	Sediment, Reach 3	Metals	Cadmium	mg/kg	41	41	100	0.519	15.9	3.9		4.9	4.9
B	Sediment, Reach 3	Metals	Chromium	mg/kg	41	41	100	27.7	564	130		220	220
B	Sediment, Reach 3	Metals	Cobalt	mg/kg	41	41	100	3.84	17	8.6		9.4	9.4
B	Sediment, Reach 3	Metals	Copper	mg/kg	48	48	100	60.9	562	170		200	200
B	Sediment, Reach 3	Metals	Lead	mg/kg	41	41	100	106	798	280		320	320
B	Sediment, Reach 3	Metals	Mercury	µg/kg	41	41	100	55.6	15400	2500		4300	4300
B	Sediment, Reach 3	Metals	Methyl mercury	µg/kg	18	18	100	0.088	7.9	3.9		4.7	4.7
B	Sediment, Reach 3	Metals	Nickel	mg/kg	48	48	100	13.1	130	34		39	39
B	Sediment, Reach 3	Metals	Selenium	mg/kg	31	26	83.9	0.29	2.7	1.1	1.3	1.3	1.3
B	Sediment, Reach 3	Metals	Silver	mg/kg	41	41	100	0.25	13.7	3.2		4.2	4.2
B	Sediment, Reach 3	Metals	Vanadium	mg/kg	41	41	100	11	88.2	27.2		30.6	30.6
B	Sediment, Reach 3	Metals	Zinc	mg/kg	41	41	100	177	1490	500		570	570
B	Sediment, Reach 3	PAHs	Acenaphthene	µg/kg	41	41	100	100	142000	5500		21000	21000
B	Sediment, Reach 3	PAHs	Benzo(a)pyrene	µg/kg	41	41	100	380	32200	5100		9000	9000
B	Sediment, Reach 3	PAHs	Total HPAHs	µg/kg	41	41	100	3800	342000	50000		92000	92000
B	Sediment, Reach 3	PAHs	Total LPAHs	µg/kg	41	41	100	1500	749000	32000		110000	110000
B	Sediment, Reach 3	PAHs	Total PAHs	µg/kg	41	41	100	5300	1090000	81000		200000	200000
B	Sediment, Reach 3	PCB Congeners	Total PCB Congeners	µg/kg	41	41	100	368	20400	2000		4800	4800
B	Sediment, Reach 3	PCB Congeners	PCB TEQ-Bird	ng/kg	41	41	100	15.5	5450	480		1200	1200
B	Sediment, Reach 3	PCB Congeners	PCB TEQ-Fish	ng/kg	41	41	100	0.481	23.6	2.4		5.6	5.6
B	Sediment, Reach 3	PCB Congeners	PCB TEQ-Mammal	ng/kg	41	41	100	4.51	195	23		49	49
B	Sediment, Reach 3	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	41	41	100	23.6	22700	1300		3900	3900
B	Sediment, Reach 3	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	41	41	100	20.8	22300	1200		3800	3800
B	Sediment, Reach 3	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	41	41	100	19.8	22300	1200		3800	3800
B	Sediment, Reach 3	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	41	41	100	41.1	27600	1800		5100	5100
B	Sediment, Reach 3	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	41	41	100	20.9	22300	1300		3800	3800
B	Sediment, Reach 3	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	41	41	100	35.5	22500	1300		3900	3900
B	Sediment, Reach 3	OC Pesticides	Dieldrin	µg/kg	41	40	97.6	0.41	31.5	5.7	0.53	9.6	9.6
B	Sediment, Reach 3	OC Pesticides	Total DDx	µg/kg	41	41	100	5.3	539	130		220	220
B	Sediment, Reach 4	Metals	Antimony	mg/kg	55	54	98.2	0.051	5.14	1.2	0.034	1.8	1.8

Diet LOE -- Sediment EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC
B	Sediment, Reach 4	Metals	Arsenic	mg/kg	55	55	100	0.81	37.4	10		13	13
B	Sediment, Reach 4	Metals	Cadmium	mg/kg	55	55	100	0.094	46.6	5.9		11	11
B	Sediment, Reach 4	Metals	Chromium	mg/kg	55	55	100	8.12	1140	180		290	290
B	Sediment, Reach 4	Metals	Cobalt	mg/kg	55	55	100	2.79	14.8	7.6		8.3	8.3
B	Sediment, Reach 4	Metals	Copper	mg/kg	65	65	100	8.57	787	190		230	230
B	Sediment, Reach 4	Metals	Lead	mg/kg	55	55	100	9.84	906	280		340	340
B	Sediment, Reach 4	Metals	Mercury	µg/kg	55	55	100	97.4	24300	3400		6500	6500
B	Sediment, Reach 4	Metals	Methyl mercury	µg/kg	17	17	100	0.33	11.5	5.1		6.5	6.5
B	Sediment, Reach 4	Metals	Nickel	mg/kg	65	65	100	6.54	109	34		39	39
B	Sediment, Reach 4	Metals	Selenium	mg/kg	49	40	81.6	0.1	3.2	1.2	1.24	1.2	1.2
B	Sediment, Reach 4	Metals	Silver	mg/kg	55	55	100	0.034	18.5	3.4		4.4	4.4
B	Sediment, Reach 4	Metals	Vanadium	mg/kg	55	55	100	5.28	110	29		34	34
B	Sediment, Reach 4	Metals	Zinc	mg/kg	55	55	100	29.4	1660	540		660	660
B	Sediment, Reach 4	PAHs	Acenaphthene	µg/kg	55	55	100	13	8900	600		880	880
B	Sediment, Reach 4	PAHs	Benzo(a)pyrene	µg/kg	55	55	100	174	20300	3800		5600	5600
B	Sediment, Reach 4	PAHs	Total HPAHs	µg/kg	55	55	100	1480	210000	35000		52000	52000
B	Sediment, Reach 4	PAHs	Total LPAHs	µg/kg	55	55	100	310	55000	7500		13000	13000
B	Sediment, Reach 4	PAHs	Total PAHs	µg/kg	55	55	100	1800	259000	42000		65000	65000
B	Sediment, Reach 4	PCB Congeners	Total PCB Congeners	µg/kg	55	55	100	9.42	28600	2800		6800	6800
B	Sediment, Reach 4	PCB Congeners	PCB TEQ-Bird	ng/kg	55	55	100	0.904	7930	700		1500	1500
B	Sediment, Reach 4	PCB Congeners	PCB TEQ-Fish	ng/kg	55	55	100	0.026	33.2	3.4		7	7
B	Sediment, Reach 4	PCB Congeners	PCB TEQ-Mammal	ng/kg	55	55	100	0.409	267	34		67	67
B	Sediment, Reach 4	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	55	55	100	5.23	35000	3200		7400	7400
B	Sediment, Reach 4	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	55	55	100	4.71	34700	3100		7300	7300
B	Sediment, Reach 4	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	55	55	100	5.26	34600	3100		7300	7300
B	Sediment, Reach 4	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	55	55	100	7.54	37000	3900		8700	8700
B	Sediment, Reach 4	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	55	55	100	4.71	34700	3100		7300	7300
B	Sediment, Reach 4	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	55	55	100	5.37	34700	3100		7400	7400
B	Sediment, Reach 4	OC Pesticides	Dieldrin	µg/kg	55	54	98.2	0.093	152	10	0.0753	25	25
B	Sediment, Reach 4	OC Pesticides	Total DDx	µg/kg	55	55	100	0.563	2800	280		560	560
B	Sediment, Reach 5	Metals	Antimony	mg/kg	62	62	100	0.05	11.8	1.1		1.9	1.9
B	Sediment, Reach 5	Metals	Arsenic	mg/kg	62	62	100	0.53	18.3	6.0		7.2	7.2
B	Sediment, Reach 5	Metals	Cadmium	mg/kg	62	62	100	0.053	24.4	4.0		7.1	7.1
B	Sediment, Reach 5	Metals	Chromium	mg/kg	62	62	100	5.45	637	120		210	210
B	Sediment, Reach 5	Metals	Cobalt	mg/kg	62	62	100	1.84	11.2	6.6		7.2	7.2
B	Sediment, Reach 5	Metals	Copper	mg/kg	68	68	100	5.67	540	140		170	170
B	Sediment, Reach 5	Metals	Lead	mg/kg	62	62	100	7.65	1030	230		270	270
B	Sediment, Reach 5	Metals	Mercury	µg/kg	62	62	100	17.8	9300	1900		2400	2400
B	Sediment, Reach 5	Metals	Methyl mercury	µg/kg	17	17	100	0.12	23	3.9		7.1	7.1
B	Sediment, Reach 5	Metals	Nickel	mg/kg	68	68	100	4.15	82.7	25		28	28
B	Sediment, Reach 5	Metals	Selenium	mg/kg	61	53	86.9	0.089	2.4	0.75	2	0.83	0.83
B	Sediment, Reach 5	Metals	Silver	mg/kg	62	62	100	0.03	11.1	2.3		3	3
B	Sediment, Reach 5	Metals	Vanadium	mg/kg	62	62	100	5.53	60.5	23		26	26
B	Sediment, Reach 5	Metals	Zinc	mg/kg	62	62	100	25.3	1710	410		490	490
B	Sediment, Reach 5	PAHs	Acenaphthene	µg/kg	62	60	96.8	2.2	2440	320	12	550	550
B	Sediment, Reach 5	PAHs	Benzo(a)pyrene	µg/kg	62	62	100	43.8	13400	2800		4200	4200
B	Sediment, Reach 5	PAHs	Total HPAHs	µg/kg	62	62	100	500	118000	27000		40000	40000
B	Sediment, Reach 5	PAHs	Total LPAHs	µg/kg	62	62	100	84	39500	5100		8800	8800
B	Sediment, Reach 5	PAHs	Total PAHs	µg/kg	62	62	100	603	158000	32000		48000	48000
B	Sediment, Reach 5	PCB Congeners	Total PCB Congeners	µg/kg	62	62	100	6.02	25000	2000		4100	4100
B	Sediment, Reach 5	PCB Congeners	PCB TEQ-Bird	ng/kg	62	62	100	0.99	2790	400		740	740
B	Sediment, Reach 5	PCB Congeners	PCB TEQ-Fish	ng/kg	62	62	100	0.0114	21	2.3		4.3	4.3

Diet LOE -- Sediment EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC
B	Sediment, Reach 5	PCB Congeners	PCB TEQ-Mammal	ng/kg	62	62	100	0.22	200	23		43	43
B	Sediment, Reach 5	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	61	61	100	1.28	16500	1300		3100	3100
B	Sediment, Reach 5	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	61	61	100	0.757	16400	1300		3000	3000
B	Sediment, Reach 5	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	61	61	100	0.732	16300	1300		3000	3000
B	Sediment, Reach 5	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	61	61	100	2.83	17900	1700		3700	3700
B	Sediment, Reach 5	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	61	61	100	0.759	16400	1300		3000	3000
B	Sediment, Reach 5	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	61	61	100	1.25	16400	1300		3100	3100
B	Sediment, Reach 5	OC Pesticides	Dieldrin	µg/kg	61	61	100	0.112	74	6.6		13	13
B	Sediment, Reach 5	OC Pesticides	Total DDx	µg/kg	61	61	100	1.72	1400	140		180	180
B	Sediment, Reach 6	Metals	Antimony	mg/kg	98	97	99	0.03	2.8	0.73	0.052	0.99	0.99
B	Sediment, Reach 6	Metals	Arsenic	mg/kg	98	98	100	0.48	68.6	6.6		8.1	8.1
B	Sediment, Reach 6	Metals	Cadmium	mg/kg	98	98	100	0.074	32.8	4.0		6.4	6.4
B	Sediment, Reach 6	Metals	Chromium	mg/kg	98	98	100	4.03	1580	150		190	190
B	Sediment, Reach 6	Metals	Cobalt	mg/kg	98	98	100	2.19	25.6	6.9		7.5	7.5
B	Sediment, Reach 6	Metals	Copper	mg/kg	107	107	100	4.19	778	150		180	180
B	Sediment, Reach 6	Metals	Lead	mg/kg	98	98	100	3.94	2050	230		270	270
B	Sediment, Reach 6	Metals	Mercury	µg/kg	99	99	100	21.5	22200	2500		3100	3100
B	Sediment, Reach 6	Metals	Methyl mercury	µg/kg	14	14	100	0.035	3.7	1.5		2.1	2.1
B	Sediment, Reach 6	Metals	Nickel	mg/kg	107	107	100	4.75	161	27		31	31
B	Sediment, Reach 6	Metals	Selenium	mg/kg	98	84	85.7	0.058	3.3	0.85	1.36	0.91	0.91
B	Sediment, Reach 6	Metals	Silver	mg/kg	98	98	100	0.023	17.3	2.5		3.1	3.1
B	Sediment, Reach 6	Metals	Vanadium	mg/kg	98	98	100	3.99	87.2	23		26	26
B	Sediment, Reach 6	Metals	Zinc	mg/kg	98	98	100	23.5	2000	430		500	500
B	Sediment, Reach 6	PAHs	Acenaphthene	µg/kg	99	97	98	1.3	11700	610	0.977	1300	1300
B	Sediment, Reach 6	PAHs	Benzo(a)pyrene	µg/kg	99	98	99	1.62	41000	3700	0.6	6100	6100
B	Sediment, Reach 6	PAHs	Total HPAHs	µg/kg	99	99	100	6.2	510000	37000		68000	68000
B	Sediment, Reach 6	PAHs	Total LPAHs	µg/kg	99	98	99	0.408	171000	9000	3	23000	23000
B	Sediment, Reach 6	PAHs	Total PAHs	µg/kg	99	99	100	6.2	681000	46000		86000	86000
B	Sediment, Reach 6	PCB Congeners	Total PCB Congeners	µg/kg	99	99	100	1.34	23800	1900		3700	3700
B	Sediment, Reach 6	PCB Congeners	PCB TEQ-Bird	ng/kg	99	99	100	0.416	7850	500		990	990
B	Sediment, Reach 6	PCB Congeners	PCB TEQ-Fish	ng/kg	99	99	100	0.00431	32	2.4		5.4	5.4
B	Sediment, Reach 6	PCB Congeners	PCB TEQ-Mammal	ng/kg	99	99	100	0.101	254	24		49	49
B	Sediment, Reach 6	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	99	99	100	0.515	51600	1700		4200	4200
B	Sediment, Reach 6	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	99	99	100	0.506	51400	1700		4200	4200
B	Sediment, Reach 6	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	99	99	100	0.612	51400	1700		3800	3800
B	Sediment, Reach 6	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	99	99	100	0.997	55500	2300		5400	5400
B	Sediment, Reach 6	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	99	99	100	0.501	51400	1700		4200	4200
B	Sediment, Reach 6	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	99	99	100	0.62	51500	1700		3800	3800
B	Sediment, Reach 6	OC Pesticides	Dieldrin	µg/kg	99	95	96	0.107	43	4.4	0.719	6.8	6.8
B	Sediment, Reach 6	OC Pesticides	Total DDx	µg/kg	99	97	98	0.55	1250	120	0.153	210	210
B	Sediment, Reach 7	Metals	Antimony	mg/kg	43	43	100	0.062	3.5	0.7		0.85	0.85
B	Sediment, Reach 7	Metals	Arsenic	mg/kg	43	43	100	0.68	31.2	3.9		4.9	4.9
B	Sediment, Reach 7	Metals	Cadmium	mg/kg	43	43	100	0.131	35.4	3.0		4.3	4.3
B	Sediment, Reach 7	Metals	Chromium	mg/kg	43	43	100	8	394	65		82	82
B	Sediment, Reach 7	Metals	Cobalt	mg/kg	43	43	100	1.8	14.5	6.0		6.8	6.8
B	Sediment, Reach 7	Metals	Copper	mg/kg	52	52	100	9.8	730	99		120	120
B	Sediment, Reach 7	Metals	Lead	mg/kg	43	43	100	14.1	823	184		224	224
B	Sediment, Reach 7	Metals	Mercury	µg/kg	45	45	100	108	14300	1300		1800	1800
B	Sediment, Reach 7	Metals	Methyl mercury	µg/kg	16	16	100	0.32	4.38	1.3		1.9	1.9
B	Sediment, Reach 7	Metals	Nickel	mg/kg	52	52	100	4.6	200	22		40	40
B	Sediment, Reach 7	Metals	Selenium	mg/kg	43	34	79.1	0.049	1.81	0.54	1.72	0.63	0.63
B	Sediment, Reach 7	Metals	Silver	mg/kg	43	43	100	0.079	20.4	2.2		3	3

Diet LOE -- Sediment EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC
B	Sediment, Reach 7	Metals	Vanadium	mg/kg	43	43	100	4.05	91.6	19		22	22
B	Sediment, Reach 7	Metals	Zinc	mg/kg	43	43	100	36.9	1770	320		390	390
B	Sediment, Reach 7	PAHs	Acenaphthene	µg/kg	43	43	100	23	4900	590		900	900
B	Sediment, Reach 7	PAHs	Benzo(a)pyrene	µg/kg	43	43	100	360	23000	4500		8000	8000
B	Sediment, Reach 7	PAHs	Total HPAHs	µg/kg	43	43	100	3300	210000	40000		68000	68000
B	Sediment, Reach 7	PAHs	Total LPAHs	µg/kg	43	43	100	484	63000	8500		17000	17000
B	Sediment, Reach 7	PAHs	Total PAHs	µg/kg	43	43	100	3790	240000	48000		84000	84000
B	Sediment, Reach 7	PCB Congeners	Total PCB Congeners	µg/kg	45	45	100	38.6	23000	1600		2300	2300
B	Sediment, Reach 7	PCB Congeners	PCB TEQ-Bird	ng/kg	45	45	100	5.32	4760	330		530	530
B	Sediment, Reach 7	PCB Congeners	PCB TEQ-Fish	ng/kg	45	45	100	0.103	25.4	1.7		2.3	2.3
B	Sediment, Reach 7	PCB Congeners	PCB TEQ-Mammal	ng/kg	45	45	100	1.03	265	18		24	24
B	Sediment, Reach 7	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	45	45	100	2.56	18300	640		2400	2400
B	Sediment, Reach 7	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	45	45	100	2.53	18000	610		2300	2300
B	Sediment, Reach 7	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	45	45	100	2.79	18000	610		2300	2300
B	Sediment, Reach 7	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	45	45	100	7.92	23100	960		1300	1300
B	Sediment, Reach 7	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	45	45	100	2.48	18000	610		2300	2300
B	Sediment, Reach 7	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	45	45	100	2.75	18300	630		2400	2400
B	Sediment, Reach 7	OC Pesticides	Dieldrin	µg/kg	44	43	97.7	0.23	88	7.0	1.3	16	16
B	Sediment, Reach 7	OC Pesticides	Total DDx	µg/kg	44	44	100	1.54	800	98		160	160
B	Sediment, Reach 8	Metals	Antimony	mg/kg	32	31	96.9	0.11	7.2	1.1	0.05	2.8	2.8
B	Sediment, Reach 8	Metals	Arsenic	mg/kg	32	32	100	0.82	10.6	2.8		5	5
B	Sediment, Reach 8	Metals	Cadmium	mg/kg	32	32	100	0.056	4.88	0.87		1.3	1.3
B	Sediment, Reach 8	Metals	Chromium	mg/kg	32	32	100	7.97	180	26		50	50
B	Sediment, Reach 8	Metals	Cobalt	mg/kg	32	32	100	2.7	12	4.1		4.7	4.7
B	Sediment, Reach 8	Metals	Copper	mg/kg	40	40	100	8.28	229	47		58	58
B	Sediment, Reach 8	Metals	Lead	mg/kg	29	29	100	20	589	140		190	190
B	Sediment, Reach 8	Metals	Mercury	µg/kg	32	32	100	16.1	5500	560		1400	1400
B	Sediment, Reach 8	Metals	Methyl mercury	µg/kg	18	17	94.4	0.11	3.1	0.61	0.089	1.3	1.3
B	Sediment, Reach 8	Metals	Nickel	mg/kg	38	38	100	5.3	40.1	13		15	15
B	Sediment, Reach 8	Metals	Selenium	mg/kg	32	13	40.6	0.038	0.93	0.35	1.39	0.36	0.36
B	Sediment, Reach 8	Metals	Silver	mg/kg	32	32	100	0.03	3.33	0.64		0.84	0.84
B	Sediment, Reach 8	Metals	Vanadium	mg/kg	32	32	100	6.17	52	14		16	16
B	Sediment, Reach 8	Metals	Zinc	mg/kg	32	32	100	39.2	1600	224		438	438
B	Sediment, Reach 8	PAHs	Acenaphthene	µg/kg	32	32	100	2.9	7800	610		1500	1500
B	Sediment, Reach 8	PAHs	Benzo(a)pyrene	µg/kg	32	32	100	78	12000	2600		3500	3500
B	Sediment, Reach 8	PAHs	Total HPAHs	µg/kg	32	32	100	670	75000	23000		28000	28000
B	Sediment, Reach 8	PAHs	Total LPAHs	µg/kg	32	32	100	79	60000	6100		8900	8900
B	Sediment, Reach 8	PAHs	Total PAHs	µg/kg	32	32	100	750	110000	29000		38000	38000
B	Sediment, Reach 8	PCB Congeners	Total PCB Congeners	µg/kg	32	32	100	7.6	2900	280		450	450
B	Sediment, Reach 8	PCB Congeners	PCB TEQ-Bird	ng/kg	32	32	100	1.22	534	51		74	74
B	Sediment, Reach 8	PCB Congeners	PCB TEQ-Fish	ng/kg	32	32	100	0.0149	3.9	0.42		0.64	0.64
B	Sediment, Reach 8	PCB Congeners	PCB TEQ-Mammal	ng/kg	32	32	100	0.231	46	5.4		8.3	8.3
B	Sediment, Reach 8	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	32	32	100	0.832	922	37		160	160
B	Sediment, Reach 8	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	32	32	100	0.434	867	32		150	150
B	Sediment, Reach 8	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	32	32	100	0.553	869	33		150	150
B	Sediment, Reach 8	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	32	32	100	1.61	1460	88		290	290
B	Sediment, Reach 8	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	32	32	100	0.412	870	32		150	150
B	Sediment, Reach 8	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	32	32	100	0.668	896	38		160	160
B	Sediment, Reach 8	OC Pesticides	Dieldrin	µg/kg	32	31	96.9	0.5	14	3.1	1.4	5.4	5.4
B	Sediment, Reach 8	OC Pesticides	Total DDx	µg/kg	32	31	96.9	1.6	190	24	5.3	53	53
B, F, M	Sediment, sitewide	Metals	Antimony	mg/kg	426	423	99.3	0.03	11.8	0.98	0.052	1.1	1.1
B, F, M	Sediment, sitewide	Metals	Arsenic	mg/kg	426	426	100	0.48	118	7.6		9.6	9.6

Diet LOE -- Sediment EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC
B, F, M	Sediment, sitewide	Metals	Cadmium	mg/kg	426	426	100	0.053	46.6	3.7		4.9	4.9
B, F, M	Sediment, sitewide	Metals	Chromium	mg/kg	426	426	100	4.03	1580	120		160	160
B, F, M	Sediment, sitewide	Metals	Cobalt	mg/kg	423	423	100	1.8	25.6	7.2		7.5	7.5
B, F, M	Sediment, sitewide	Metals	Copper	mg/kg	503	503	100	4.19	930	140		170	170
B, F, M	Sediment, sitewide	Metals	Lead	mg/kg	422	422	100	3.94	2050	230		270	270
B, F, M	Sediment, sitewide	Metals	Mercury	µg/kg	429	429	100	16.1	24300	2200		2900	2900
B, F, M	Sediment, sitewide	Metals	Methyl mercury	µg/kg	137	136	99.3	0.035	23	2.9	0.089	3.9	3.9
B, F, M	Sediment, sitewide	Metals	Nickel	mg/kg	501	501	100	4.15	200	28		32	32
B, F, M	Sediment, sitewide	Metals	Selenium	mg/kg	406	341	84	0.038	5.2	0.95	2	0.93	0.93
B, F, M	Sediment, sitewide	Metals	Silver	mg/kg	426	426	100	0.023	20.4	2.5		3.1	3.1
B, F, M	Sediment, sitewide	Metals	Vanadium	mg/kg	426	426	100	3.99	110	24		27	27
B, F, M	Sediment, sitewide	Metals	Zinc	mg/kg	426	426	100	23.5	2000	420		490	490
B, F, M	Sediment, sitewide	PAHs	Acenaphthene	µg/kg	427	423	99.1	1.3	142000	1000	12	2600	2600
B, F, M	Sediment, sitewide	PAHs	Benzo(a)pyrene	µg/kg	427	426	99.8	1.62	41000	3800	0.6	4700	4700
B, F, M	Sediment, sitewide	PAHs	Total HPAHs	µg/kg	427	427	100	6.2	510000	36000		46000	46000
B, F, M	Sediment, sitewide	PAHs	Total LPAHs	µg/kg	427	426	99.8	0.408	749000	9800	3	18000	18000
B, F, M	Sediment, sitewide	PAHs	Total PAHs	µg/kg	427	427	100	6.2	1090000	45000		62000	62000
B, F, M	Sediment, sitewide	PCB Congeners	Total PCB Congeners	µg/kg	429	429	100	1.34	28600	1800		2600	2600
B, F, M	Sediment, sitewide	PCB Congeners	PCB TEQ-Bird	ng/kg	429	429	100	0.000243	7930	430		630	630
B, F, M	Sediment, sitewide	PCB Congeners	PCB TEQ-Fish	ng/kg	429	429	100	0.000122	33.2	2.2		3.1	3.1
B, F, M	Sediment, sitewide	PCB Congeners	PCB TEQ-Mammal	ng/kg	429	429	100	0.000729	267	22		30	30
B, F, M	Sediment, sitewide	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	428	428	100	0.0595	51600	1300		2300	2300
B, F, M	Sediment, sitewide	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	428	428	100	0.037	51400	1300		2200	2200
B, F, M	Sediment, sitewide	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	428	428	100	0.0567	51400	1300		2200	2200
B, F, M	Sediment, sitewide	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	428	428	100	0.997	55500	1800		2800	2800
B, F, M	Sediment, sitewide	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	428	428	100	0.412	51400	1300		2200	2200
B, F, M	Sediment, sitewide	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	428	428	100	0.62	51500	1300		2200	2200
B, F, M	Sediment, sitewide	OC Pesticides	Dieldrin	µg/kg	427	419	98.1	0.015	152	5.9	1.4	8.3	8.3
B, F, M	Sediment, sitewide	OC Pesticides	Total DDx	µg/kg	427	424	99.3	0.317	2800	140	5.3	190	190

Selected EPC Type
95% KM (BCA) UCL
95% Chebyshev (Mean, Sd) UCL
95% Chebyshev (Mean, Sd) UCL
95% Chebyshev (Mean, Sd) UCL
95% Modified-t UCL
95% H-UCL
95% Chebyshev (Mean, Sd) UCL
95% Chebyshev (Mean, Sd) UCL
95% KM (Chebyshev) UCL
95% Chebyshev (Mean, Sd) UCL
95% Approximate Gamma KM-UCL
95% H-UCL
95% H-UCL
95% H-UCL
95% KM (Chebyshev) UCL
95% KM (Chebyshev) UCL
95% Chebyshev (Mean, Sd) UCL
95% KM (Chebyshev) UCL
95% Chebyshev (Mean, Sd) UCL
95% H-UCL
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95% KM (Chebyshev) UCL
95% KM (Chebyshev) UCL
95% KM (BCA) UCL
95% Chebyshev (Mean, Sd) UCL
95% Chebyshev (Mean, Sd) UCL
95% Chebyshev (Mean, Sd) UCL
95% Approximate Gamma UCL
95% Approximate Gamma UCL
95% Chebyshev (Mean, Sd) UCL
95% Chebyshev (Mean, Sd) UCL
95% KM (Chebyshev) UCL
95% Chebyshev (Mean, Sd) UCL
95% KM (BCA) UCL
95% Approximate Gamma UCL
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95% KM (Chebyshev) UCL
95% Chebyshev (Mean, Sd) UCL

Selected EPC Type
95% Chebyshev (Mean, Sd) UCL
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Diet LOE -- Surface Water EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
M	Surface water, ≥ RM 10	Metals	Arsenic (dissolved)	µg/l	40	36	90	0.4	1.93	0.83	0.5	1.1	1.1	95% KM (Chebyshev) UCL
M	Surface water, ≥ RM 10	Metals	Arsenic (total)	µg/l	40	38	95	0.6	3.02	1.1	0.5	1.4	1.4	95% KM (Chebyshev) UCL
M	Surface water, ≥ RM 10	Metals	Cadmium (dissolved)	µg/l	64	51	79.7	0.004	0.085	0.027	0.02	0.027	0.027	95% Approximate Gamma KM-UCL
M	Surface water, ≥ RM 10	Metals	Cadmium (total)	µg/l	64	64	100	0.018	0.897	0.11		0.13	0.13	95% H-UCL
M	Surface water, ≥ RM 10	Metals	Chromium (dissolved)	µg/l	40	40	100	0.42	2.07	0.97		1.1	1.1	95% Student's-t UCL
M	Surface water, ≥ RM 10	Metals	Chromium (total)	µg/l	40	38	95	0.68	27.4	3.8	0.2	6.7	6.7	95% KM (Chebyshev) UCL
M	Surface water, ≥ RM 10	Metals	Copper (dissolved)	µg/l	64	64	100	1.9	7.78	2.83		3.02	3.02	95% Modified-t UCL
M	Surface water, ≥ RM 10	Metals	Copper (total)	µg/l	64	64	100	2.02	41.7	7.05		7.93	7.93	95% Approximate Gamma UCL
M	Surface water, ≥ RM 10	Metals	Lead (dissolved)	µg/l	64	64	100	0.098	7.35	0.82		1.4	1.4	95% Chebyshev (Mean, Sd) UCL
M	Surface water, ≥ RM 10	Metals	Lead (total)	µg/l	64	64	100	0.104	48.7	6.99		8.35	8.35	95% Approximate Gamma UCL
M	Surface water, ≥ RM 10	Metals	Mercury (dissolved)	ng/l	64	64	100	0.71	55.9	5.6		10	10	95% Chebyshev (Mean, Sd) UCL
M	Surface water, ≥ RM 10	Metals	Mercury (total)	ng/l	64	64	100	3.09	330	51		61	61	95% Approximate Gamma UCL
M	Surface water, ≥ RM 10	Metals	Methyl mercury (dissolved)	ng/l	40	35	87.5	0.026	0.166	0.059	0.055	0.078	0.078	95% KM (Chebyshev) UCL
M	Surface water, ≥ RM 10	Metals	Methyl mercury (total)	ng/l	40	40	100	0.063	2.21	0.31		0.36	0.36	95% H-UCL
M	Surface water, ≥ RM 10	Metals	Nickel (dissolved)	µg/l	40	40	100	0.9	1.94	1.3		1.4	1.4	95% Adjusted Gamma UCL
M	Surface water, ≥ RM 10	Metals	Nickel (total)	µg/l	40	40	100	1.01	7.9	2.07		2.39	2.39	95% Modified-t UCL
M	Surface water, ≥ RM 10	Metals	Selenium (dissolved)	µg/l	40	28	70	0.3	1.8	0.5	1	0.56	0.56	95% KM (BCA) UCL
M	Surface water, ≥ RM 10	Metals	Selenium (total)	µg/l	40	23	57.5	0.3	2	0.58	1	0.63	0.63	95% KM (% Bootstrap) UCL
M	Surface water, ≥ RM 10	Metals	Silver (dissolved)	µg/l	40	17	42.5	0.005	0.097	0.039	0.02	0.029	0.029	95% KM (Percentile Bootstrap) UCL
M	Surface water, ≥ RM 10	Metals	Silver (total)	µg/l	40	38	95	0.023	0.448	0.086	0.02	0.11	0.11	95% Adjusted Gamma KM-UCL
M	Surface water, ≥ RM 10	Metals	Vanadium (dissolved)	µg/l	40	40	100	0.43	3	1.4		2	2	95% Chebyshev (Mean, Sd) UCL
M	Surface water, ≥ RM 10	Metals	Vanadium (total)	µg/l	40	40	100	0.73	7.54	2.2		3.2	3.2	95% Chebyshev (Mean, Sd) UCL
M	Surface water, ≥ RM 10	Metals	Zinc (dissolved)	µg/l	40	40	100	2.1	12.7	6.1		8.3	8.3	95% Chebyshev (Mean, Sd) UCL
M	Surface water, ≥ RM 10	Metals	Zinc (total)	µg/l	40	40	100	7.1	106	20		31	31	95% Chebyshev (Mean, Sd) UCL
M	Surface water, ≥ RM 10	Butyltin	Tributyltin	µg/l	40	0	0				0.05		0.05	Maximum DL
M	Surface water, ≥ RM 10	PAHs	Anthracene	ng/l	40	40	100	2.41	85.4	14.5		17.6	17.6	95% H-UCL
M	Surface water, ≥ RM 10	PAHs	Benzo(a)anthracene	ng/l	40	40	100	6.65	201	44.4		53.5	53.5	95% Adjusted Gamma UCL
M	Surface water, ≥ RM 10	PAHs	Benzo(a)pyrene	ng/l	40	40	100	9.67	347	70.1		85.4	85.4	95% Adjusted Gamma UCL
M	Surface water, ≥ RM 10	PAHs	Fluoranthene	ng/l	40	40	100	25.5	375	126		145	145	95% Student's-t UCL
M	Surface water, ≥ RM 10	PAHs	Pyrene	ng/l	40	40	100	23.2	402	129		150	150	95% Adjusted Gamma UCL
M	Surface water, ≥ RM 10	PAHs	Total HPAHs	ng/l	40	40	100	117	2930	733		871	871	95% Adjusted Gamma UCL
M	Surface water, ≥ RM 10	PAHs	Total LPAHs	ng/l	40	40	100	46.4	365	155		173	173	95% Student's-t UCL
M	Surface water, ≥ RM 10	PAHs	Total PAHs	ng/l	40	40	100	166	3300	890		1000	1000	95% Adjusted Gamma UCL
M	Surface water, ≥ RM 10	SVOCs	Bis-(2-ethylhexyl)phthalate	µg/l	40	6	15	1.2	6	3	2.2	2.1	2.1	95% KM (Percentile Bootstrap) UCL
M	Surface water, ≥ RM 10	SVOCs	Butylbenzylphthalate	µg/l	40	13	32.5	0.17	0.77	0.3	1.1	0.38	0.38	95% KM (% Bootstrap) UCL
M	Surface water, ≥ RM 10	PCB Congeners	Total PCB Congeners	ng/l	64	64	100	1.96	183	18.8		22.3	22.3	95% Approximate Gamma UCL
M	Surface water, ≥ RM 10	PCB Congeners	PCB TEQ-Bird	ng/l	64	64	100	0.000194	0.0303	0.00322		0.00387	0.00387	95% Approximate Gamma UCL
M	Surface water, ≥ RM 10	PCB Congeners	PCB TEQ-Fish	ng/l	64	64	100	3.72E-06	0.000251	2.51E-05		0.00003	0.00003	95% H-UCL
M	Surface water, ≥ RM 10	PCB Congeners	PCB TEQ-Mammal	ng/l	64	64	100	5.63E-05	0.0085	0.000443		0.00102	0.00102	95% Chebyshev (Mean, Sd) UCL
M	Surface water, ≥ RM 10	PCDDs/PCDFs	2,3,7,8-TCDD	ng/l	64	57	89.1	0.00112	0.0813	0.0081	0.00185	0.0145	0.0145	95% KM (Chebyshev) UCL
M	Surface water, ≥ RM 10	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/l	64	64	100	3.04E-06	0.0838	0.00905		0.0168	0.0168	95% Chebyshev (Mean, Sd) UCL
M	Surface water, ≥ RM 10	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/l	64	64	100	3.04E-06	0.082	0.00846		0.0159	0.0159	95% Chebyshev (Mean, Sd) UCL
M	Surface water, ≥ RM 10	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/l	64	64	100	1.72E-05	0.0828	0.00875		0.0163	0.0163	95% Chebyshev (Mean, Sd) UCL
M	Surface water, ≥ RM 10	PCDDs/PCDFs	Total TEQ-Bird	ng/l	64	64	100	0.00116	0.088	0.0122		0.015	0.015	95% H-UCL
M	Surface water, ≥ RM 10	PCDDs/PCDFs	Total TEQ-Fish	ng/l	64	64	100	0.000844	0.0819	0.00845		0.0159	0.0159	95% Chebyshev (Mean, Sd) UCL
M	Surface water, ≥ RM 10	PCDDs/PCDFs	Total TEQ-Mammal	ng/l	64	64	100	0.000938	0.0831	0.00911		0.0169	0.0169	95% Chebyshev (Mean, Sd) UCL
M	Surface water, ≥ RM 10	OC Pesticides	4,4'-DDE	ng/l	40	38	95	0.29	8.26	1.3	0.4	2.1	2.1	95% KM (Chebyshev) UCL
M	Surface water, ≥ RM 10	OC Pesticides	4,4'-DDT	ng/l	40	34	85	0.093	2.12	0.5	1.9	0.59	0.59	95% Adjusted Gamma KM-UCL
M	Surface water, ≥ RM 10	OC Pesticides	Dieldrin	ng/l	40	40	100	0.61	3.05	1.5		1.6	1.6	95% Student's-t UCL

Diet LOE -- Surface Water EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
M	Surface water, ≥ RM 10	OC Pesticides	Hexachlorobenzene	ng/l	40	7	17.5	0.154	1.74	0.62	0.53	0.25	0.25	95% KM (t) UCL
M	Surface water, ≥ RM 10	OC Pesticides	Total Chlordane	ng/l	40	40	100	1.01	13.9	3.53		4.09	4.09	95% Adjusted Gamma UCL
M	Surface water, ≥ RM 10	OC Pesticides	Total DDx	ng/l	40	40	100	0.26	21.1	3.15		3.97	3.97	95% Adjusted Gamma UCL
M	Surface water, ≥ RM 10	Wet chemistry	Cyanide	mg/l	40	4	10	0.004	0.014	0.008	0.01		0.014	Maximum detect
B, M	Surface water, ≥ RM 4	Metals	Arsenic (dissolved)	µg/l	98	90	91.8	0.4	1.93	0.93	0.5	0.96	0.96	95% KM (BCA) UCL
B, M	Surface water, ≥ RM 4	Metals	Arsenic (total)	µg/l	98	94	95.9	0.6	3.02	1.2	0.5	1.3	1.3	95% KM (BCA) UCL
B, M	Surface water, ≥ RM 4	Metals	Cadmium (dissolved)	µg/l	154	113	73.4	0.004	0.149	0.038	0.02	0.035	0.035	95% KM (BCA) UCL
B, M	Surface water, ≥ RM 4	Metals	Cadmium (total)	µg/l	154	153	99.4	0.018	0.897	0.15	0.02	0.17	0.17	95% KM (BCA) UCL
B, M	Surface water, ≥ RM 4	Metals	Chromium (dissolved)	µg/l	98	98	100	0.18	5.46	1.1		1.2	1.2	95% H-UCL
B, M	Surface water, ≥ RM 4	Metals	Chromium (total)	µg/l	98	96	98	0.4	27.4	4.2	0.2	4.8	4.8	95% KM (BCA) UCL
B, M	Surface water, ≥ RM 4	Metals	Copper (dissolved)	µg/l	154	154	100	1.36	9.26	2.94		3.1	3.1	95% Modified-t UCL
B, M	Surface water, ≥ RM 4	Metals	Copper (total)	µg/l	154	154	100	1.68	41.7	8.69		11	11	95% Chebyshev (Mean, Sd) UCL
B, M	Surface water, ≥ RM 4	Metals	Lead (dissolved)	µg/l	154	154	100	0.098	9.97	1.2		1.8	1.8	95% Chebyshev (Mean, Sd) UCL
B, M	Surface water, ≥ RM 4	Metals	Lead (total)	µg/l	154	154	100	0.104	48.7	9.28		12.2	12.2	95% Chebyshev (Mean, Sd) UCL
B, M	Surface water, ≥ RM 4	Metals	Mercury (dissolved)	ng/l	154	154	100	0.29	91.5	8.1		13	13	95% Chebyshev (Mean, Sd) UCL
B, M	Surface water, ≥ RM 4	Metals	Mercury (total)	ng/l	154	154	100	3.09	407	86		120	120	95% Chebyshev (Mean, Sd) UCL
B, M	Surface water, ≥ RM 4	Metals	Methyl mercury (dissolved)	ng/l	98	90	91.8	0.022	0.389	0.071	0.055	0.079	0.079	95% KM (BCA) UCL
B, M	Surface water, ≥ RM 4	Metals	Methyl mercury (total)	ng/l	98	98	100	0.063	2.21	0.32		0.44	0.44	95% Chebyshev (Mean, Sd) UCL
B, M	Surface water, ≥ RM 4	Metals	Nickel (dissolved)	µg/l	98	98	100	0.87	2.6	1.3		1.4	1.4	95% Modified-t UCL
B, M	Surface water, ≥ RM 4	Metals	Nickel (total)	µg/l	98	98	100	1.01	7.9	2.21		2.39	2.39	95% Modified-t UCL
B, M	Surface water, ≥ RM 4	Metals	Selenium (dissolved)	µg/l	98	48	49	0.2	3.2	0.66	1	0.62	0.62	95% KM (% Bootstrap) UCL
B, M	Surface water, ≥ RM 4	Metals	Selenium (total)	µg/l	98	44	44.9	0.2	3.5	0.72	1	0.67	0.67	95% KM (% Bootstrap) UCL
B, M	Surface water, ≥ RM 4	Metals	Silver (dissolved)	µg/l	98	48	49	0.004	0.119	0.032	0.02	0.026	0.026	95% GROS Approximate Gamma UCL
B, M	Surface water, ≥ RM 4	Metals	Silver (total)	µg/l	98	94	95.9	0.022	0.448	0.089	0.02	0.1	0.1	95% KM (BCA) UCL
B, M	Surface water, ≥ RM 4	Metals	Vanadium (dissolved)	µg/l	98	97	99	0.43	5.6	2	2	2.2	2.2	95% KM (BCA) UCL
B, M	Surface water, ≥ RM 4	Metals	Vanadium (total)	µg/l	98	97	99	0.73	7.6	3	2	3.3	3.3	95% KM (BCA) UCL
B, M	Surface water, ≥ RM 4	Metals	Zinc (dissolved)	µg/l	98	98	100	2.1	18.5	6.8		8.5	8.5	95% Chebyshev (Mean, Sd) UCL
B, M	Surface water, ≥ RM 4	Metals	Zinc (total)	µg/l	98	98	100	3.03	106	22		29	29	95% Chebyshev (Mean, Sd) UCL
B, M	Surface water, ≥ RM 4	Butyltin	Tributyltin	µg/l	98	1	1	0.026	0.026		0.05		0.026	Maximum detect
B, M	Surface water, ≥ RM 4	PAHs	Anthracene	ng/l	98	98	100	2.41	120	15.6		17.2	17.2	95% H-UCL
B, M	Surface water, ≥ RM 4	PAHs	Benzo(a)anthracene	ng/l	98	98	100	6.65	316	49.9		56.6	56.6	95% Approximate Gamma UCL
B, M	Surface water, ≥ RM 4	PAHs	Benzo(a)pyrene	ng/l	98	96	98	9.67	560	82	23.1	95.3	95.3	95% KM (BCA) UCL
B, M	Surface water, ≥ RM 4	PAHs	Fluoranthene	ng/l	98	98	100	25.5	583	145		161	161	95% Approximate Gamma UCL
B, M	Surface water, ≥ RM 4	PAHs	Pyrene	ng/l	98	98	100	23.2	587	146		165	165	95% H-UCL
B, M	Surface water, ≥ RM 4	PAHs	Total HPAHs	ng/l	98	98	100	117	4550	829		961	961	95% H-UCL
B, M	Surface water, ≥ RM 4	PAHs	Total LPAHs	ng/l	98	98	100	46.4	420	164		178	178	95% Approximate Gamma UCL
B, M	Surface water, ≥ RM 4	PAHs	Total PAHs	ng/l	98	98	100	166	4970	990		1100	1100	95% Approximate Gamma UCL
B, M	Surface water, ≥ RM 4	SVOCs	Bis-(2-ethylhexyl)phthalate	µg/l	90	14	15.6	1.2	6	2.4	2.3	1.8	1.8	95% KM (t) UCL
B, M	Surface water, ≥ RM 4	SVOCs	Butylbenzylphthalate	µg/l	91	26	28.6	0.14	25	1.2	1.1	1.1	1.1	95% KM (% Bootstrap) UCL
B, M	Surface water, ≥ RM 4	PCB Congeners	Total PCB Congeners	ng/l	154	154	100	1.96	183	25.8		34	34	95% Chebyshev (Mean, Sd) UCL
B, M	Surface water, ≥ RM 4	PCB Congeners	PCB TEQ-Bird	ng/l	154	154	100	0.000194	0.0333	0.00441		0.00609	0.00609	95% Chebyshev (Mean, Sd) UCL
B, M	Surface water, ≥ RM 4	PCB Congeners	PCB TEQ-Fish	ng/l	154	154	100	3.72E-06	0.000335	3.47E-05		5.08E-05	0.0000508	95% Chebyshev (Mean, Sd) UCL
B, M	Surface water, ≥ RM 4	PCB Congeners	PCB TEQ-Mammal	ng/l	154	154	100	5.63E-05	0.0085	0.00056		0.000917	0.000917	95% Chebyshev (Mean, Sd) UCL
B, M	Surface water, ≥ RM 4	PCDDs/PCDFs	2,3,7,8-TCDD	ng/l	154	139	90.3	0.000996	1.87	0.0375	0.00521	0.108	0.108	95% KM (Chebyshev) UCL
B, M	Surface water, ≥ RM 4	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/l	154	154	100	9.46E-07	1.88	0.0366		0.111	0.111	95% Chebyshev (Mean, Sd) UCL
B, M	Surface water, ≥ RM 4	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/l	154	154	100	9.46E-07	1.88	0.0357		0.11	0.11	95% Chebyshev (Mean, Sd) UCL
B, M	Surface water, ≥ RM 4	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/l	154	154	100	2.84E-06	1.88	0.0361		0.11	0.11	95% Chebyshev (Mean, Sd) UCL
B, M	Surface water, ≥ RM 4	PCDDs/PCDFs	Total TEQ-Bird	ng/l	154	154	100	0.00116	1.91	0.0411		0.116	0.116	95% Chebyshev (Mean, Sd) UCL
B, M	Surface water, ≥ RM 4	PCDDs/PCDFs	Total TEQ-Fish	ng/l	154	154	100	0.000718	1.88	0.0357		0.11	0.11	95% Chebyshev (Mean, Sd) UCL
B, M	Surface water, ≥ RM 4	PCDDs/PCDFs	Total TEQ-Mammal	ng/l	154	154	100	0.000863	1.88	0.0365		0.11	0.11	95% Chebyshev (Mean, Sd) UCL
B, M	Surface water, ≥ RM 4	OC Pesticides	4,4'-DDE	ng/l	98	93	94.9	0.29	8.26	1.5	0.4	1.7	1.7	95% KM (BCA) UCL

Diet LOE -- Surface Water EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
B, M	Surface water, ≥ RM 4	OC Pesticides	4,4'-DDT	ng/l	98	87	88.8	0.0619	3.82	0.61	1.9	0.66	0.66	95% KM (BCA) UCL
B, M	Surface water, ≥ RM 4	OC Pesticides	Dieldrin	ng/l	98	98	100	0.412	3.18	1.4		1.5	1.5	95% Modified-t UCL
B, M	Surface water, ≥ RM 4	OC Pesticides	Hexachlorobenzene	ng/l	98	20	20.4	0.119	1.74	0.441	1	0.2	0.2	95% Approximate Gamma KM-UCL
B, M	Surface water, ≥ RM 4	OC Pesticides	Total Chlordane	ng/l	98	98	100	0.875	15.9	3.85		4.32	4.32	95% H-UCL
B, M	Surface water, ≥ RM 4	OC Pesticides	Total DDx	ng/l	98	98	100	0.26	21.1	4.02		4.78	4.78	95% H-UCL
B, M	Surface water, ≥ RM 4	Wet chemistry	Cyanide	mg/l	98	10	10.2	0.003	0.014	0.007	0.01	0.0068	0.0068	95% KM (Percentile Bootstrap) UCL
B	Surface water, ≥ RM 6	Metals	Arsenic (dissolved)	µg/l	70	62	88.6	0.4	1.93	0.89	0.5	0.91	0.91	95% KM (BCA) UCL
B	Surface water, ≥ RM 6	Metals	Arsenic (total)	µg/l	70	66	94.3	0.6	3.02	1.1	0.5	1.2	1.2	95% KM (BCA) UCL
B	Surface water, ≥ RM 6	Metals	Cadmium (dissolved)	µg/l	106	77	72.6	0.004	0.149	0.034	0.02	0.032	0.032	95% KM (BCA) UCL
B	Surface water, ≥ RM 6	Metals	Cadmium (total)	µg/l	106	105	99.1	0.018	0.897	0.14	0.02	0.16	0.16	95% KM (BCA) UCL
B	Surface water, ≥ RM 6	Metals	Chromium (dissolved)	µg/l	70	70	100	0.33	5.46	1.1		1.2	1.2	95% Modified-t UCL
B	Surface water, ≥ RM 6	Metals	Chromium (total)	µg/l	70	68	97.1	0.4	27.4	4	0.2	4.9	4.9	95% KM (BCA) UCL
B	Surface water, ≥ RM 6	Metals	Copper (dissolved)	µg/l	106	106	100	1.69	9.26	3		3.2	3.2	95% Modified-t UCL
B	Surface water, ≥ RM 6	Metals	Copper (total)	µg/l	106	106	100	1.68	41.7	8.16		8.95	8.95	95% H-UCL
B	Surface water, ≥ RM 6	Metals	Lead (dissolved)	µg/l	106	106	100	0.098	9.97	1.2		1.9	1.9	95% Chebyshev (Mean, Sd) UCL
B	Surface water, ≥ RM 6	Metals	Lead (total)	µg/l	106	106	100	0.104	48.7	8.62		9.93	9.93	95% Approximate Gamma UCL
B	Surface water, ≥ RM 6	Metals	Mercury (dissolved)	ng/l	106	106	100	0.49	91.5	8		14	14	95% Chebyshev (Mean, Sd) UCL
B	Surface water, ≥ RM 6	Metals	Mercury (total)	ng/l	106	106	100	3.09	330	68		85	85	95% H-UCL
B	Surface water, ≥ RM 6	Metals	Methyl mercury (dissolved)	ng/l	70	65	92.9	0.026	0.325	0.067	0.055	0.075	0.075	95% KM (BCA) UCL
B	Surface water, ≥ RM 6	Metals	Methyl mercury (total)	ng/l	70	70	100	0.063	2.21	0.32		0.36	0.36	95% H-UCL
B	Surface water, ≥ RM 6	Metals	Nickel (dissolved)	µg/l	70	70	100	0.9	2.6	1.3		1.4	1.4	95% Modified-t UCL
B	Surface water, ≥ RM 6	Metals	Nickel (total)	µg/l	70	70	100	1.01	7.9	2.14		2.37	2.37	95% Modified-t UCL
B	Surface water, ≥ RM 6	Metals	Selenium (dissolved)	µg/l	70	38	54.3	0.2	3.1	0.54	1	0.57	0.57	95% KM (% Bootstrap) UCL
B	Surface water, ≥ RM 6	Metals	Selenium (total)	µg/l	70	31	44.3	0.3	3.5	0.63	1	0.63	0.63	95% KM (% Bootstrap) UCL
B	Surface water, ≥ RM 6	Metals	Silver (dissolved)	µg/l	70	34	48.6	0.004	0.119	0.035	0.02	0.028	0.028	95% GROS Approximate Gamma UCL
B	Surface water, ≥ RM 6	Metals	Silver (total)	µg/l	70	67	95.7	0.022	0.448	0.089	0.02	0.1	0.1	95% KM (BCA) UCL
B	Surface water, ≥ RM 6	Metals	Vanadium (dissolved)	µg/l	70	70	100	0.43	5.2	1.7		2.3	2.3	95% Chebyshev (Mean, Sd) UCL
B	Surface water, ≥ RM 6	Metals	Vanadium (total)	µg/l	70	70	100	0.73	7.6	2.7		3.5	3.5	95% Chebyshev (Mean, Sd) UCL
B	Surface water, ≥ RM 6	Metals	Zinc (dissolved)	µg/l	70	70	100	2.1	18.1	6.4		8.3	8.3	95% Chebyshev (Mean, Sd) UCL
B	Surface water, ≥ RM 6	Metals	Zinc (total)	µg/l	70	70	100	3.03	106	21		24	24	95% H-UCL
B	Surface water, ≥ RM 6	Butyltin	Tributyltin	µg/l	70	0	0				0.05		0.05	Maximum DL
B	Surface water, ≥ RM 6	PAHs	Anthracene	ng/l	70	70	100	2.41	85.4	14.4		16.3	16.3	95% Approximate Gamma UCL
B	Surface water, ≥ RM 6	PAHs	Benzo(a)anthracene	ng/l	70	70	100	6.65	201	47.2		54.4	54.4	95% Approximate Gamma UCL
B	Surface water, ≥ RM 6	PAHs	Benzo(a)pyrene	ng/l	70	69	98.6	9.67	347	76.9	23.1	111	111	95% KM (Chebyshev) UCL
B	Surface water, ≥ RM 6	PAHs	Fluoranthene	ng/l	70	70	100	25.5	393	138		155	155	95% Approximate Gamma UCL
B	Surface water, ≥ RM 6	PAHs	Pyrene	ng/l	70	70	100	23.2	402	140		157	157	95% Approximate Gamma UCL
B	Surface water, ≥ RM 6	PAHs	Total HPAHs	ng/l	70	70	100	117	2930	788		904	904	95% Approximate Gamma UCL
B	Surface water, ≥ RM 6	PAHs	Total LPAHs	ng/l	70	70	100	46.4	365	158		174	174	95% Approximate Gamma UCL
B	Surface water, ≥ RM 6	PAHs	Total PAHs	ng/l	70	70	100	166	3300	950		1100	1100	95% Approximate Gamma UCL
B	Surface water, ≥ RM 6	SVOCs	Bis-(2-ethylhexyl)phthalate	µg/l	66	11	16.7	1.2	6	2.6	2.2	2	2	95% KM (t) UCL
B	Surface water, ≥ RM 6	SVOCs	Butylbenzylphthalate	µg/l	66	22	33.3	0.15	25	1.4	1.1	1.4	1.4	95% KM (BCA) UCL
B	Surface water, ≥ RM 6	PCB Congeners	Total PCB Congeners	ng/l	106	106	100	1.96	183	22		31	31	95% Chebyshev (Mean, Sd) UCL
B	Surface water, ≥ RM 6	PCB Congeners	PCB TEQ-Bird	ng/l	106	106	100	0.000194	0.0333	0.00387		0.00583	0.00583	95% Chebyshev (Mean, Sd) UCL
B	Surface water, ≥ RM 6	PCB Congeners	PCB TEQ-Fish	ng/l	106	106	100	3.72E-06	0.000251	2.83E-05		3.24E-05	0.0000324	95% H-UCL
B	Surface water, ≥ RM 6	PCB Congeners	PCB TEQ-Mammal	ng/l	106	106	100	5.63E-05	0.0085	0.000463		0.000496	0.000496	95% H-UCL
B	Surface water, ≥ RM 6	PCDDs/PCDFs	2,3,7,8-TCDD	ng/l	106	95	89.6	0.00112	1.87	0.0299	0.00521	0.104	0.104	95% KM (Chebyshev) UCL
B	Surface water, ≥ RM 6	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/l	106	106	100	2.91E-06	1.88	0.0292		0.106	0.106	95% Chebyshev (Mean, Sd) UCL
B	Surface water, ≥ RM 6	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/l	106	106	100	2.91E-06	1.88	0.0285		0.106	0.106	95% Chebyshev (Mean, Sd) UCL
B	Surface water, ≥ RM 6	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/l	106	106	100	8.73E-06	1.88	0.0288		0.106	0.106	95% Chebyshev (Mean, Sd) UCL
B	Surface water, ≥ RM 6	PCDDs/PCDFs	Total TEQ-Bird	ng/l	106	106	100	0.00116	1.91	0.033		0.111	0.111	95% Chebyshev (Mean, Sd) UCL
B	Surface water, ≥ RM 6	PCDDs/PCDFs	Total TEQ-Fish	ng/l	106	106	100	0.000718	1.88	0.0284		0.106	0.106	95% Chebyshev (Mean, Sd) UCL

Diet LOE -- Surface Water EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
B	Surface water, ≥ RM 6	PCDDs/PCDFs	Total TEQ-Mammal	ng/l	106	106	100	0.000863	1.88	0.0291		0.106	0.106	95% Chebyshev (Mean, Sd) UCL
B	Surface water, ≥ RM 6	OC Pesticides	4,4'-DDE	ng/l	70	67	95.7	0.29	8.26	1.4	0.4	1.7	1.7	95% KM (BCA) UCL
B	Surface water, ≥ RM 6	OC Pesticides	4,4'-DDT	ng/l	70	61	87.1	0.093	3.82	0.56	1.9	0.62	0.62	95% KM (BCA) UCL
B	Surface water, ≥ RM 6	OC Pesticides	Dieldrin	ng/l	70	70	100	0.61	3.18	1.5		1.6	1.6	95% Approximate Gamma UCL
B	Surface water, ≥ RM 6	OC Pesticides	Hexachlorobenzene	ng/l	70	12	17.1	0.154	1.74	0.557	1	0.23	0.23	95% Approximate Gamma KM-UCL
B	Surface water, ≥ RM 6	OC Pesticides	Total Chlordane	ng/l	70	70	100	1.01	15.9	3.81		4.29	4.29	95% H-UCL
B	Surface water, ≥ RM 6	OC Pesticides	Total DDx	ng/l	70	70	100	0.26	21.1	3.79		4.63	4.63	95% H-UCL
B	Surface water, ≥ RM 6	Wet chemistry	Cyanide	mg/l	70	9	12.9	0.003	0.014	0.007	0.01	0.0072	0.0072	95% KM (Percentile Bootstrap) UCL
B	Surface water, reach 3	Metals	Arsenic (dissolved)	µg/l	28	28	100	0.5	1.68	1		1.1	1.1	95% Student's-t UCL
B	Surface water, reach 3	Metals	Arsenic (total)	µg/l	28	28	100	0.77	2.36	1.4		1.5	1.5	95% Student's-t UCL
B	Surface water, reach 3	Metals	Cadmium (dissolved)	µg/l	48	36	75	0.017	0.107	0.046	0.02	0.046	0.046	95% KM (BCA) UCL
B	Surface water, reach 3	Metals	Cadmium (total)	µg/l	48	48	100	0.038	0.529	0.18		0.26	0.26	95% Chebyshev (Mean, Sd) UCL
B	Surface water, reach 3	Metals	Chromium (dissolved)	µg/l	28	28	100	0.18	4.06	1		1.3	1.3	95% H-UCL
B	Surface water, reach 3	Metals	Chromium (total)	µg/l	28	28	100	1.14	14.9	4.48		7.32	7.32	95% Chebyshev (Mean, Sd) UCL
B	Surface water, reach 3	Metals	Copper (dissolved)	µg/l	48	48	100	1.36	6.2	2.81		3.09	3.09	95% H-UCL
B	Surface water, reach 3	Metals	Copper (total)	µg/l	48	48	100	2.78	28.1	9.87		14.2	14.2	95% Chebyshev (Mean, Sd) UCL
B	Surface water, reach 3	Metals	Lead (dissolved)	µg/l	48	48	100	0.113	5.88	1.18		1.52	1.52	95% Adjusted Gamma UCL
B	Surface water, reach 3	Metals	Lead (total)	µg/l	48	48	100	1.49	32.9	10.7		13.7	13.7	95% H-UCL
B	Surface water, reach 3	Metals	Mercury (dissolved)	ng/l	48	48	100	0.29	53.2	8.3		11	11	95% Adjusted Gamma UCL
B	Surface water, reach 3	Metals	Mercury (total)	ng/l	48	48	100	11.7	407	130		210	210	95% Chebyshev (Mean, Sd) UCL
B	Surface water, reach 3	Metals	Methyl mercury (dissolved)	ng/l	28	25	89.3	0.022	0.389	0.08	0.051	0.15	0.15	95% KM (Chebyshev) UCL
B	Surface water, reach 3	Metals	Methyl mercury (total)	ng/l	28	28	100	0.084	1.02	0.32		0.4	0.4	95% Adjusted Gamma UCL
B	Surface water, reach 3	Metals	Nickel (dissolved)	µg/l	28	28	100	0.87	2.03	1.4		1.5	1.5	95% Student's-t UCL
B	Surface water, reach 3	Metals	Nickel (total)	µg/l	28	28	100	1.36	5.3	2.37		2.72	2.72	95% Modified-t UCL
B	Surface water, reach 3	Metals	Selenium (dissolved)	µg/l	28	10	35.7	0.2	3.2	1.1	1	0.9	0.9	95% KM (% Bootstrap) UCL
B	Surface water, reach 3	Metals	Selenium (total)	µg/l	28	13	46.4	0.2	3.2	0.95	1	0.91	0.91	95% KM (t) UCL
B	Surface water, reach 3	Metals	Silver (dissolved)	µg/l	28	14	50	0.006	0.082	0.024	0.02	0.023	0.023	95% KM (t) UCL
B	Surface water, reach 3	Metals	Silver (total)	µg/l	28	27	96.4	0.03	0.268	0.089	0.02	0.14	0.14	95% KM (Chebyshev) UCL
B	Surface water, reach 3	Metals	Vanadium (dissolved)	µg/l	28	27	96.4	0.61	5.6	2.6	2	3	3	95% KM (t) UCL
B	Surface water, reach 3	Metals	Vanadium (total)	µg/l	28	27	96.4	0.85	6.2	3.8	2	4.2	4.2	95% KM (t) UCL
B	Surface water, reach 3	Metals	Zinc (dissolved)	µg/l	28	28	100	2.83	18.5	7.9		9.3	9.3	95% Adjusted Gamma UCL
B	Surface water, reach 3	Metals	Zinc (total)	µg/l	28	28	100	7.6	78.1	24		30	30	95% H-UCL
B	Surface water, reach 3	Butyltin	Tributyltin	µg/l	28	1	3.6	0.026	0.026		0.05		0.026	Maximum detect
B	Surface water, reach 3	PAHs	Anthracene	ng/l	28	28	100	3.56	120	18.7		24.5	24.5	95% Adjusted Gamma UCL
B	Surface water, reach 3	PAHs	Benzo(a)anthracene	ng/l	28	28	100	9.38	316	56.5		76.3	76.3	95% Adjusted Gamma UCL
B	Surface water, reach 3	PAHs	Benzo(a)pyrene	ng/l	28	27	96.4	11	560	94.8	15.4	182	182	95% KM (Chebyshev) UCL
B	Surface water, reach 3	PAHs	Fluoranthene	ng/l	28	28	100	39.5	583	164		206	206	95% Adjusted Gamma UCL
B	Surface water, reach 3	PAHs	Pyrene	ng/l	28	28	100	37.9	587	163		201	201	95% Adjusted Gamma UCL
B	Surface water, reach 3	PAHs	Total HPAHs	ng/l	28	28	100	156	4550	929		1230	1230	95% Adjusted Gamma UCL
B	Surface water, reach 3	PAHs	Total LPAHs	ng/l	28	28	100	57.3	420	178		210	210	95% Student's-t UCL
B	Surface water, reach 3	PAHs	Total PAHs	ng/l	28	28	100	222	4970	1100		1400	1400	95% Adjusted Gamma UCL
B	Surface water, reach 3	SVOCs	Bis-(2-ethylhexyl)phthalate	µg/l	24	3	12.5	1.3	2.6	1.8	2.3		2.6	Maximum detect
B	Surface water, reach 3	SVOCs	Butylbenzylphthalate	µg/l	25	4	16	0.14	0.68	0.37	1		0.68	Maximum detect
B	Surface water, reach 3	PCB Congeners	Total PCB Congeners	ng/l	48	48	100	4.19	102	34.2		42.4	42.4	95% H-UCL
B	Surface water, reach 3	PCB Congeners	PCB TEQ-Bird	ng/l	48	48	100	0.000564	0.0211	0.0056		0.00719	0.00719	95% H-UCL
B	Surface water, reach 3	PCB Congeners	PCB TEQ-Fish	ng/l	48	48	100	0.000006	0.000335	4.89E-05		6.11E-05	0.0000611	95% H-UCL
B	Surface water, reach 3	PCB Congeners	PCB TEQ-Mammal	ng/l	48	48	100	8.55E-05	0.00651	0.000775		0.00156	0.00156	95% Chebyshev (Mean, Sd) UCL
B	Surface water, reach 3	PCDDs/PCDFs	2,3,7,8-TCDD	ng/l	48	44	91.7	0.000996	1.83	0.0538	0.00224	0.215	0.215	95% KM (Chebyshev) UCL
B	Surface water, reach 3	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/l	48	48	100	9.46E-07	1.84	0.053		0.291	0.291	97.5% Chebyshev (Mean, Sd) UCL
B	Surface water, reach 3	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/l	48	48	100	9.46E-07	1.84	0.0517		0.29	0.29	97.5% Chebyshev (Mean, Sd) UCL
B	Surface water, reach 3	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/l	48	48	100	2.84E-06	1.84	0.0521		0.218	0.218	95% Chebyshev (Mean, Sd) UCL

Diet LOE -- Surface Water EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
B	Surface water, reach 3	PCDDs/PCDFs	Total TEQ-Bird	ng/l	48	48	100	0.00233	1.86	0.0588		0.227	0.227	95% Chebyshev (Mean, Sd) UCL
B	Surface water, reach 3	PCDDs/PCDFs	Total TEQ-Fish	ng/l	48	48	100	0.00111	1.84	0.0518		0.218	0.218	95% Chebyshev (Mean, Sd) UCL
B	Surface water, reach 3	PCDDs/PCDFs	Total TEQ-Mammal	ng/l	48	48	100	0.00163	1.84	0.0528		0.219	0.219	95% Chebyshev (Mean, Sd) UCL
B	Surface water, reach 3	OC Pesticides	4,4'-DDE	ng/l	28	26	92.9	0.42	5.82	1.7	0.11	2.7	2.7	95% KM (Chebyshev) UCL
B	Surface water, reach 3	OC Pesticides	4,4'-DDT	ng/l	28	26	92.9	0.0619	3.17	0.72	0.0897	1.2	1.2	95% KM (Chebyshev) UCL
B	Surface water, reach 3	OC Pesticides	Dieldrin	ng/l	28	28	100	0.412	2.89	1.2		1.4	1.4	95% Student's-t UCL
B	Surface water, reach 3	OC Pesticides	Hexachlorobenzene	ng/l	28	8	28.6	0.119	0.439	0.266	0.95	0.21	0.21	95% KM (Percentile Bootstrap) UCL
B	Surface water, reach 3	OC Pesticides	Total Chlordane	ng/l	28	28	100	0.875	14.2	3.94		5.15	5.15	95% Adjusted Gamma UCL
B	Surface water, reach 3	OC Pesticides	Total DDx	ng/l	28	28	100	0.637	17.2	4.6		5.97	5.97	95% Adjusted Gamma UCL
B	Surface water, reach 3	Wet chemistry	Cyanide	mg/l	28	1	3.6	0.003	0.003		0.01		0.003	Maximum detect
B	Surface water, reach 4	Metals	Arsenic (dissolved)	µg/l	28	24	85.7	0.5	1.6	0.94	0.5	0.99	0.99	95% KM (t) UCL
B	Surface water, reach 4	Metals	Arsenic (total)	µg/l	28	26	92.9	0.6	2.11	1.2	0.5	1.3	1.3	95% KM (t) UCL
B	Surface water, reach 4	Metals	Cadmium (dissolved)	µg/l	40	24	60	0.021	0.149	0.049	0.02	0.045	0.045	95% KM (t) UCL
B	Surface water, reach 4	Metals	Cadmium (total)	µg/l	40	40	100	0.045	0.518	0.18		0.27	0.27	95% Chebyshev (Mean, Sd) UCL
B	Surface water, reach 4	Metals	Chromium (dissolved)	µg/l	28	28	100	0.33	5.46	1.2		1.4	1.4	95% H-UCL
B	Surface water, reach 4	Metals	Chromium (total)	µg/l	28	28	100	1.06	14.8	4.49		5.67	5.67	95% Adjusted Gamma UCL
B	Surface water, reach 4	Metals	Copper (dissolved)	µg/l	40	40	100	1.69	9.26	3.26		3.72	3.72	95% Modified-t UCL
B	Surface water, reach 4	Metals	Copper (total)	µg/l	40	40	100	3.07	27.9	10.2		15.2	15.2	95% Chebyshev (Mean, Sd) UCL
B	Surface water, reach 4	Metals	Lead (dissolved)	µg/l	40	40	100	0.207	9.97	1.69		3.28	3.28	95% Chebyshev (Mean, Sd) UCL
B	Surface water, reach 4	Metals	Lead (total)	µg/l	40	40	100	1.7	33.4	11.5		14.4	14.4	95% Adjusted Gamma UCL
B	Surface water, reach 4	Metals	Mercury (dissolved)	ng/l	40	40	100	1.59	91.5	11.8		25.2	25.2	95% Chebyshev (Mean, Sd) UCL
B	Surface water, reach 4	Metals	Mercury (total)	ng/l	40	40	100	17.7	323	96		130	130	95% H-UCL
B	Surface water, reach 4	Metals	Methyl mercury (dissolved)	ng/l	28	28	100	0.026	0.325	0.077		0.13	0.13	95% Chebyshev (Mean, Sd) UCL
B	Surface water, reach 4	Metals	Methyl mercury (total)	ng/l	28	28	100	0.116	1.2	0.341		0.413	0.413	95% Adjusted Gamma UCL
B	Surface water, reach 4	Metals	Nickel (dissolved)	µg/l	28	28	100	0.95	2.6	1.3		1.5	1.5	95% Modified-t UCL
B	Surface water, reach 4	Metals	Nickel (total)	µg/l	28	28	100	1.15	4.98	2.27		2.6	2.6	95% Modified-t UCL
B	Surface water, reach 4	Metals	Selenium (dissolved)	µg/l	28	10	35.7	0.2	3.1	0.65	1	0.67	0.67	95% KM (% Bootstrap) UCL
B	Surface water, reach 4	Metals	Selenium (total)	µg/l	28	8	28.6	0.3	3.5	0.76	1	0.69	0.69	95% KM (t) UCL
B	Surface water, reach 4	Metals	Silver (dissolved)	µg/l	28	15	53.6	0.004	0.119	0.032	0.02	0.033	0.033	95% Adjusted Gamma KM-UCL
B	Surface water, reach 4	Metals	Silver (total)	µg/l	28	28	100	0.022	0.343	0.094		0.12	0.12	95% Adjusted Gamma UCL
B	Surface water, reach 4	Metals	Vanadium (dissolved)	µg/l	28	28	100	0.45	5.2	2		3	3	95% Chebyshev (Mean, Sd) UCL
B	Surface water, reach 4	Metals	Vanadium (total)	µg/l	28	28	100	0.81	7.6	3.2		3.7	3.7	95% Student's-t UCL
B	Surface water, reach 4	Metals	Zinc (dissolved)	µg/l	28	28	100	2.86	18.1	6.9		10	10	95% Chebyshev (Mean, Sd) UCL
B	Surface water, reach 4	Metals	Zinc (total)	µg/l	28	28	100	8.7	78.3	24		30	30	95% Adjusted Gamma UCL
B	Surface water, reach 4	Butyltin	Tributyltin	µg/l	28	0	0				0.05		0.05	Maximum DL
B	Surface water, reach 4	PAHs	Anthracene	ng/l	28	28	100	3.59	33.6	14.6		17.1	17.1	95% Student's-t UCL
B	Surface water, reach 4	PAHs	Benzo(a)anthracene	ng/l	28	28	100	8.06	155	53		69.5	69.5	95% Adjusted Gamma UCL
B	Surface water, reach 4	PAHs	Benzo(a)pyrene	ng/l	28	27	96.4	10.7	318	90.2	23.1	153	153	95% KM (Chebyshev) UCL
B	Surface water, reach 4	PAHs	Fluoranthene	ng/l	28	28	100	31.4	393	158		198	198	95% Adjusted Gamma UCL
B	Surface water, reach 4	PAHs	Pyrene	ng/l	28	28	100	28.6	400	158		189	189	95% Student's-t UCL
B	Surface water, reach 4	PAHs	Total HPAHs	ng/l	28	28	100	135	2830	895		1170	1170	95% Adjusted Gamma UCL
B	Surface water, reach 4	PAHs	Total LPAHs	ng/l	28	28	100	53.6	356	169		195	195	95% Student's-t UCL
B	Surface water, reach 4	PAHs	Total PAHs	ng/l	28	28	100	213	3180	1100		1400	1400	95% Adjusted Gamma UCL
B	Surface water, reach 4	SVOCs	Bis-(2-ethylhexyl)phthalate	µg/l	24	5	20.8	1.6	3.9	2.2	2		3.9	Maximum detect
B	Surface water, reach 4	SVOCs	Butylbenzylphthalate	µg/l	24	9	37.5	0.15	25	3	1	8	8	97.5% KM (Chebyshev) UCL
B	Surface water, reach 4	PCB Congeners	Total PCB Congeners	ng/l	40	40	100	2.95	71.3	26.8		32.3	32.3	95% Adjusted Gamma UCL
B	Surface water, reach 4	PCB Congeners	PCB TEQ-Bird	ng/l	40	40	100	0.000416	0.0333	0.00492		0.00651	0.00651	95% H-UCL
B	Surface water, reach 4	PCB Congeners	PCB TEQ-Fish	ng/l	40	40	100	4.28E-06	0.00014	3.35E-05		5.44E-05	0.0000544	95% Chebyshev (Mean, Sd) UCL
B	Surface water, reach 4	PCB Congeners	PCB TEQ-Mammal	ng/l	40	40	100	6.11E-05	0.00248	0.000499		0.000863	0.000863	95% Chebyshev (Mean, Sd) UCL
B	Surface water, reach 4	PCDDs/PCDFs	2,3,7,8-TCDD	ng/l	40	36	90	0.00138	1.87	0.0656	0.00521	0.262	0.262	95% KM (Chebyshev) UCL
B	Surface water, reach 4	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/l	40	40	100	2.91E-06	1.88	0.0623		0.266	0.266	95% Chebyshev (Mean, Sd) UCL

Diet LOE -- Surface Water EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
B	Surface water, reach 4	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/l	40	40	100	2.91E-06	1.88	0.0613		0.265	0.265	95% Chebyshev (Mean, Sd) UCL
B	Surface water, reach 4	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/l	40	40	100	8.73E-06	1.88	0.0617		0.265	0.265	95% Chebyshev (Mean, Sd) UCL
B	Surface water, reach 4	PCDDs/PCDFs	Total TEQ-Bird	ng/l	40	40	100	0.00156	1.91	0.0671		0.274	0.274	95% Chebyshev (Mean, Sd) UCL
B	Surface water, reach 4	PCDDs/PCDFs	Total TEQ-Fish	ng/l	40	40	100	0.000718	1.88	0.0613		0.265	0.265	95% Chebyshev (Mean, Sd) UCL
B	Surface water, reach 4	PCDDs/PCDFs	Total TEQ-Mammal	ng/l	40	40	100	0.000863	1.88	0.062		0.266	0.266	95% Chebyshev (Mean, Sd) UCL
B	Surface water, reach 4	OC Pesticides	4,4'-DDE	ng/l	28	27	96.4	0.4	5.31	1.7	0.153	2.9	2.9	95% KM (Chebyshev) UCL
B	Surface water, reach 4	OC Pesticides	4,4'-DDT	ng/l	28	25	89.3	0.137	3.82	0.67	0.104	0.95	0.95	95% Adjusted Gamma KM-UCL
B	Surface water, reach 4	OC Pesticides	Dieldrin	ng/l	28	28	100	0.66	3.18	1.5		1.7	1.7	95% H-UCL
B	Surface water, reach 4	OC Pesticides	Hexachlorobenzene	ng/l	28	5	17.9	0.238	1.04	0.469	1		1.04	Maximum detect
B	Surface water, reach 4	OC Pesticides	Total Chlordane	ng/l	28	28	100	1.19	15.9	4.33		5.59	5.59	95% Adjusted Gamma UCL
B	Surface water, reach 4	OC Pesticides	Total DDx	ng/l	28	28	100	0.92	20.2	4.73		6.43	6.43	95% H-UCL
B	Surface water, reach 4	Wet chemistry	Cyanide	mg/l	28	5	17.9	0.003	0.01	0.006	0.01		0.01	Maximum detect
B	Surface water, reach 5	Metals	Arsenic (dissolved)	µg/l	2	2	100	1.24	1.3	1.27			1.3	Maximum detect
B	Surface water, reach 5	Metals	Arsenic (total)	µg/l	2	2	100	1.15	1.42	1.29			1.42	Maximum detect
B	Surface water, reach 5	Metals	Cadmium (dissolved)	µg/l	2	2	100	0.031	0.045	0.038			0.045	Maximum detect
B	Surface water, reach 5	Metals	Cadmium (total)	µg/l	2	1	50	0.081	0.081		0.02		0.081	Maximum detect
B	Surface water, reach 5	Metals	Chromium (dissolved)	µg/l	2	2	100	1.21	2.16	1.69			2.16	Maximum detect
B	Surface water, reach 5	Metals	Chromium (total)	µg/l	2	2	100	0.4	3.37	1.9			3.37	Maximum detect
B	Surface water, reach 5	Metals	Copper (dissolved)	µg/l	2	2	100	2.61	3.53	3.07			3.53	Maximum detect
B	Surface water, reach 5	Metals	Copper (total)	µg/l	2	2	100	1.68	5.2	3.44			5.2	Maximum detect
B	Surface water, reach 5	Metals	Lead (dissolved)	µg/l	2	2	100	2.28	5.39	3.835			5.39	Maximum detect
B	Surface water, reach 5	Metals	Lead (total)	µg/l	2	2	100	0.247	7.53	3.89			7.53	Maximum detect
B	Surface water, reach 5	Metals	Mercury (dissolved)	ng/l	2	2	100	0.49	12.3	6.4			12.3	Maximum detect
B	Surface water, reach 5	Metals	Mercury (total)	ng/l	2	2	100	28	43.6	35.8			43.6	Maximum detect
B	Surface water, reach 5	Metals	Methyl mercury (dissolved)	ng/l	2	2	100	0.034	0.099	0.067			0.099	Maximum detect
B	Surface water, reach 5	Metals	Methyl mercury (total)	ng/l	2	2	100	0.193	0.289	0.241			0.289	Maximum detect
B	Surface water, reach 5	Metals	Nickel (dissolved)	µg/l	2	2	100	1.76	1.92	1.84			1.92	Maximum detect
B	Surface water, reach 5	Metals	Nickel (total)	µg/l	2	2	100	1.54	2.23	1.89			2.23	Maximum detect
B	Surface water, reach 5	Metals	Selenium (dissolved)	µg/l	2	0	0				1		1	Maximum DL
B	Surface water, reach 5	Metals	Selenium (total)	µg/l	2	0	0				1		1	Maximum DL
B	Surface water, reach 5	Metals	Silver (dissolved)	µg/l	2	2	100	0.019	0.034	0.027			0.034	Maximum detect
B	Surface water, reach 5	Metals	Silver (total)	µg/l	2	1	50	0.062	0.062		0.02		0.062	Maximum detect
B	Surface water, reach 5	Metals	Vanadium (dissolved)	µg/l	2	2	100	3.7	3.7	3.7			3.7	Maximum detect
B	Surface water, reach 5	Metals	Vanadium (total)	µg/l	2	2	100	4	5.3	4.7			5.3	Maximum detect
B	Surface water, reach 5	Metals	Zinc (dissolved)	µg/l	2	2	100	5.4	7.38	6.39			7.38	Maximum detect
B	Surface water, reach 5	Metals	Zinc (total)	µg/l	2	2	100	3.03	11.1	7.07			11.1	Maximum detect
B	Surface water, reach 5	Butyltin	Tributyltin	µg/l	2	0	0				0.05		0.05	Maximum DL
B	Surface water, reach 5	PAHs	Anthracene	ng/l	2	2	100	8.14	10.8	9.47			10.8	Maximum detect
B	Surface water, reach 5	PAHs	Benzo(a)anthracene	ng/l	2	2	100	16.2	28.7	22.5			28.7	Maximum detect
B	Surface water, reach 5	PAHs	Benzo(a)pyrene	ng/l	2	2	100	25.3	42.1	33.7			42.1	Maximum detect
B	Surface water, reach 5	PAHs	Fluoranthene	ng/l	2	2	100	76.5	95.8	86.2			95.8	Maximum detect
B	Surface water, reach 5	PAHs	Pyrene	ng/l	2	2	100	86.4	108	97.2			108	Maximum detect
B	Surface water, reach 5	PAHs	Total HPAHs	ng/l	2	2	100	335	484	410			484	Maximum detect
B	Surface water, reach 5	PAHs	Total LPAHs	ng/l	2	2	100	66.8	74.4	70.6			74.4	Maximum detect
B	Surface water, reach 5	PAHs	Total PAHs	ng/l	2	2	100	402	558	480			558	Maximum detect
B	Surface water, reach 5	SVOCs	Bis-(2-ethylhexyl)phthalate	µg/l	2	0	0				2.1		2.1	Maximum DL
B	Surface water, reach 5	SVOCs	Butylbenzylphthalate	µg/l	2	0	0				1		1	Maximum DL
B	Surface water, reach 5	PCB Congeners	Total PCB Congeners	ng/l	2	2	100	22.3	27.9	25.1			27.9	Maximum detect
B	Surface water, reach 5	PCB Congeners	PCB TEQ-Bird	ng/l	2	2	100	0.00338	0.00436	0.00387			0.00436	Maximum detect
B	Surface water, reach 5	PCB Congeners	PCB TEQ-Fish	ng/l	2	2	100	0.000022	3.02E-05	2.61E-05			0.0000302	Maximum detect
B	Surface water, reach 5	PCB Congeners	PCB TEQ-Mammal	ng/l	2	2	100	0.000265	0.000459	0.000362			0.000459	Maximum detect

Diet LOE -- Surface Water EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
B	Surface water, reach 5	PCDDs/PCDFs	2,3,7,8-TCDD	ng/l	2	2	100	0.00367	0.0163	0.00999			0.0163	Maximum detect
B	Surface water, reach 5	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/l	2	2	100	0.00425	0.0228	0.0135			0.0228	Maximum detect
B	Surface water, reach 5	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/l	2	2	100	0.00421	0.0198	0.012			0.0198	Maximum detect
B	Surface water, reach 5	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/l	2	2	100	0.00432	0.0195	0.0119			0.0195	Maximum detect
B	Surface water, reach 5	PCDDs/PCDFs	Total TEQ-Bird	ng/l	2	2	100	0.0076	0.0271	0.0174			0.0271	Maximum detect
B	Surface water, reach 5	PCDDs/PCDFs	Total TEQ-Fish	ng/l	2	2	100	0.00416	0.0197	0.0119			0.0197	Maximum detect
B	Surface water, reach 5	PCDDs/PCDFs	Total TEQ-Mammal	ng/l	2	2	100	0.00448	0.0199	0.0122			0.0199	Maximum detect
B	Surface water, reach 5	OC Pesticides	4,4'-DDE	ng/l	2	2	100	0.852	1.16	1.01			1.16	Maximum detect
B	Surface water, reach 5	OC Pesticides	4,4'-DDT	ng/l	2	2	100	0.127	0.21	0.169			0.21	Maximum detect
B	Surface water, reach 5	OC Pesticides	Dieldrin	ng/l	2	2	100	1.22	1.27	1.25			1.27	Maximum detect
B	Surface water, reach 5	OC Pesticides	Hexachlorobenzene	ng/l	2	0	0				0.305		0.305	Maximum DL
B	Surface water, reach 5	OC Pesticides	Total Chlordane	ng/l	2	2	100	1.86	2.29	2.08			2.29	Maximum detect
B	Surface water, reach 5	OC Pesticides	Total DDx	ng/l	2	2	100	2.91	3.77	3.34			3.77	Maximum detect
B	Surface water, reach 5	Wet chemistry	Cyanide	mg/l	2	0	0				0.01		0.01	Maximum DL
B	Surface water, reach 6	Metals	Arsenic (dissolved)	µg/l	40	36	90	0.4	1.93	0.83	0.5	1.1	1.1	95% KM (Chebyshev) UCL
B	Surface water, reach 6	Metals	Arsenic (total)	µg/l	40	38	95	0.6	3.02	1.1	0.5	1.4	1.4	95% KM (Chebyshev) UCL
B	Surface water, reach 6	Metals	Cadmium (dissolved)	µg/l	64	51	79.7	0.004	0.085	0.027	0.02	0.027	0.027	95% Approximate Gamma KM-UCL
B	Surface water, reach 6	Metals	Cadmium (total)	µg/l	64	64	100	0.018	0.897	0.11		0.13	0.13	95% H-UCL
B	Surface water, reach 6	Metals	Chromium (dissolved)	µg/l	40	40	100	0.42	2.07	0.97		1.1	1.1	95% Student's-t UCL
B	Surface water, reach 6	Metals	Chromium (total)	µg/l	40	38	95	0.68	27.4	3.8	0.2	6.7	6.7	95% KM (Chebyshev) UCL
B	Surface water, reach 6	Metals	Copper (dissolved)	µg/l	64	64	100	1.9	7.78	2.83		3.02	3.02	95% Modified-t UCL
B	Surface water, reach 6	Metals	Copper (total)	µg/l	64	64	100	2.02	41.7	7.05		7.93	7.93	95% Approximate Gamma UCL
B	Surface water, reach 6	Metals	Lead (dissolved)	µg/l	64	64	100	0.098	7.35	0.82		1.4	1.4	95% Chebyshev (Mean, Sd) UCL
B	Surface water, reach 6	Metals	Lead (total)	µg/l	64	64	100	0.104	48.7	6.99		8.35	8.35	95% Approximate Gamma UCL
B	Surface water, reach 6	Metals	Mercury (dissolved)	ng/l	64	64	100	0.71	55.9	5.6		10	10	95% Chebyshev (Mean, Sd) UCL
B	Surface water, reach 6	Metals	Mercury (total)	ng/l	64	64	100	3.09	330	51		61	61	95% Approximate Gamma UCL
B	Surface water, reach 6	Metals	Methyl mercury (dissolved)	ng/l	40	35	87.5	0.026	0.166	0.059	0.055	0.078	0.078	95% KM (Chebyshev) UCL
B	Surface water, reach 6	Metals	Methyl mercury (total)	ng/l	40	40	100	0.063	2.21	0.31		0.36	0.36	95% H-UCL
B	Surface water, reach 6	Metals	Nickel (dissolved)	µg/l	40	40	100	0.9	1.94	1.3		1.4	1.4	95% Adjusted Gamma UCL
B	Surface water, reach 6	Metals	Nickel (total)	µg/l	40	40	100	1.01	7.9	2.07		2.39	2.39	95% Modified-t UCL
B	Surface water, reach 6	Metals	Selenium (dissolved)	µg/l	40	28	70	0.3	1.8	0.5	1	0.56	0.56	95% KM (BCA) UCL
B	Surface water, reach 6	Metals	Selenium (total)	µg/l	40	23	57.5	0.3	2	0.58	1	0.63	0.63	95% KM (% Bootstrap) UCL
B	Surface water, reach 6	Metals	Silver (dissolved)	µg/l	40	17	42.5	0.005	0.097	0.039	0.02	0.029	0.029	95% KM (Percentile Bootstrap) UCL
B	Surface water, reach 6	Metals	Silver (total)	µg/l	40	38	95	0.023	0.448	0.086	0.02	0.11	0.11	95% Adjusted Gamma KM-UCL
B	Surface water, reach 6	Metals	Vanadium (dissolved)	µg/l	40	40	100	0.43	3	1.4		2	2	95% Chebyshev (Mean, Sd) UCL
B	Surface water, reach 6	Metals	Vanadium (total)	µg/l	40	40	100	0.73	7.54	2.2		3.2	3.2	95% Chebyshev (Mean, Sd) UCL
B	Surface water, reach 6	Metals	Zinc (dissolved)	µg/l	40	40	100	2.1	12.7	6.1		8.3	8.3	95% Chebyshev (Mean, Sd) UCL
B	Surface water, reach 6	Metals	Zinc (total)	µg/l	40	40	100	7.1	106	20		31	31	95% Chebyshev (Mean, Sd) UCL
B	Surface water, reach 6	Butyltin	Tributyltin	µg/l	40	0	0				0.05		0.05	Maximum DL
B	Surface water, reach 6	PAHs	Anthracene	ng/l	40	40	100	2.41	85.4	14.5		17.6	17.6	95% H-UCL
B	Surface water, reach 6	PAHs	Benzo(a)anthracene	ng/l	40	40	100	6.65	201	44.4		53.5	53.5	95% Adjusted Gamma UCL
B	Surface water, reach 6	PAHs	Benzo(a)pyrene	ng/l	40	40	100	9.67	347	70.1		85.4	85.4	95% Adjusted Gamma UCL
B	Surface water, reach 6	PAHs	Fluoranthene	ng/l	40	40	100	25.5	375	126		145	145	95% Student's-t UCL
B	Surface water, reach 6	PAHs	Pyrene	ng/l	40	40	100	23.2	402	129		150	150	95% Adjusted Gamma UCL
B	Surface water, reach 6	PAHs	Total HPAHs	ng/l	40	40	100	117	2930	733		871	871	95% Adjusted Gamma UCL
B	Surface water, reach 6	PAHs	Total LPAHs	ng/l	40	40	100	46.4	365	155		173	173	95% Student's-t UCL
B	Surface water, reach 6	PAHs	Total PAHs	ng/l	40	40	100	166	3300	890		1000	1000	95% Adjusted Gamma UCL
B	Surface water, reach 6	SVOCs	Bis-(2-ethylhexyl)phthalate	µg/l	40	6	15	1.2	6	3	2.2	2.1	2.1	95% KM (Percentile Bootstrap) UCL
B	Surface water, reach 6	SVOCs	Butylbenzylphthalate	µg/l	40	13	32.5	0.17	0.77	0.3	1.1	0.38	0.38	95% KM (% Bootstrap) UCL
B	Surface water, reach 6	PCB Congeners	Total PCB Congeners	ng/l	64	64	100	1.96	183	18.8		22.3	22.3	95% Approximate Gamma UCL
B	Surface water, reach 6	PCB Congeners	PCB TEQ-Bird	ng/l	64	64	100	0.000194	0.0303	0.00322		0.00387	0.00387	95% Approximate Gamma UCL

Diet LOE -- Surface Water EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
B	Surface water, reach 6	PCB Congeners	PCB TEQ-Fish	ng/l	64	64	100	3.72E-06	0.000251	2.51E-05		0.00003	0.00003	95% H-UCL
B	Surface water, reach 6	PCB Congeners	PCB TEQ-Mammal	ng/l	64	64	100	5.63E-05	0.0085	0.000443		0.00102	0.00102	95% Chebyshev (Mean, Sd) UCL
B	Surface water, reach 6	PCDDs/PCDFs	2,3,7,8-TCDD	ng/l	64	57	89.1	0.00112	0.0813	0.0081	0.00185	0.0145	0.0145	95% KM (Chebyshev) UCL
B	Surface water, reach 6	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/l	64	64	100	3.04E-06	0.0838	0.00905		0.0168	0.0168	95% Chebyshev (Mean, Sd) UCL
B	Surface water, reach 6	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/l	64	64	100	3.04E-06	0.082	0.00846		0.0159	0.0159	95% Chebyshev (Mean, Sd) UCL
B	Surface water, reach 6	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/l	64	64	100	1.72E-05	0.0828	0.00875		0.0163	0.0163	95% Chebyshev (Mean, Sd) UCL
B	Surface water, reach 6	PCDDs/PCDFs	Total TEQ-Bird	ng/l	64	64	100	0.00116	0.088	0.0122		0.015	0.015	95% H-UCL
B	Surface water, reach 6	PCDDs/PCDFs	Total TEQ-Fish	ng/l	64	64	100	0.000844	0.0819	0.00845		0.0159	0.0159	95% Chebyshev (Mean, Sd) UCL
B	Surface water, reach 6	PCDDs/PCDFs	Total TEQ-Mammal	ng/l	64	64	100	0.000938	0.0831	0.00911		0.0169	0.0169	95% Chebyshev (Mean, Sd) UCL
B	Surface water, reach 6	OC Pesticides	4,4'-DDE	ng/l	40	38	95	0.29	8.26	1.3	0.4	2.1	2.1	95% KM (Chebyshev) UCL
B	Surface water, reach 6	OC Pesticides	4,4'-DDT	ng/l	40	34	85	0.093	2.12	0.5	1.9	0.59	0.59	95% Adjusted Gamma KM-UCL
B	Surface water, reach 6	OC Pesticides	Dieldrin	ng/l	40	40	100	0.61	3.05	1.5		1.6	1.6	95% Student's-t UCL
B	Surface water, reach 6	OC Pesticides	Hexachlorobenzene	ng/l	40	7	17.5	0.154	1.74	0.62	0.53	0.26	0.26	95% KM (Percentile Bootstrap) UCL
B	Surface water, reach 6	OC Pesticides	Total Chlordane	ng/l	40	40	100	1.01	13.9	3.53		4.09	4.09	95% Adjusted Gamma UCL
B	Surface water, reach 6	OC Pesticides	Total DDx	ng/l	40	40	100	0.26	21.1	3.15		3.97	3.97	95% Adjusted Gamma UCL
B	Surface water, reach 6	Wet chemistry	Cyanide	mg/l	40	4	10	0.004	0.014	0.008	0.01		0.014	Maximum detect

EPC Key

Assessment Group	Assessment Group Abbr.	Receptor	LOE requiring EPCs	EPCs required
Benthic invertebrate	I	Benthic invertebrate community	Surface water	Surface water
		Benthic invertebrate community	Sediment	Sediment
		Blue crab	Tissue residue	Tissue
		Estuarine mussel	Tissue residue	Tissue
		Estuarine worm	Tissue residue	Tissue
		Freshwater mussel	Tissue residue	Tissue
		Freshwater worm	Tissue residue	Tissue
Bird	B	Spotted sandpiper	Dietary dose	Sediment, surface water, prey tissue
		Belted kingfisher	Dietary dose	Sediment, surface water, prey tissue
			Egg tissue residue (modeled)	Sediment, surface water, prey tissue
		Great blue heron	Dietary dose	Sediment, surface water, prey tissue
			Egg tissue residue (modeled)	Sediment, surface water, prey tissue
Fish	F	Mummichog	Tissue residue	Tissue
			Dietary dose	Sediment, prey tissue
			Egg tissue residue (modeled)	Tissue
			Surface water	Surface water
		Other forage fish	Tissue residue	Tissue
			Dietary dose	Sediment, prey tissue
			Surface water	Surface water
		Carp	Tissue residue	Tissue
			Dietary dose	Sediment, prey tissue
			Surface water	Surface water
		White sucker	Tissue residue	Tissue
			Dietary dose	Sediment, prey tissue
			Surface water	Surface water
		White perch	Tissue residue	Tissue
			Dietary dose	Sediment, prey tissue
			Surface water	Surface water
		Channel catfish	Tissue residue	Tissue
			Dietary dose	Sediment, prey tissue
			Surface water	Surface water
		Brown bullhead	Tissue residue	Tissue
			Dietary dose	Sediment, prey tissue
			Surface water	Surface water
		White catfish	Tissue residue	Tissue
			Dietary dose	Sediment, prey tissue
			Surface water	Surface water
		American eel	Tissue residue	Tissue
			Dietary dose	Sediment, prey tissue
			Surface water	Surface water
		Largemouth bass	Tissue residue	Tissue
			Dietary dose	Sediment, prey tissue
			Surface water	Surface water
		Smallmouth bass	Tissue residue	Tissue
			Dietary dose	Sediment, prey tissue
			Surface water	Surface water
		Northern Pike	Tissue residue	Tissue
			Dietary dose	Sediment, prey tissue
			Surface water	Surface water
Mammal	M	Mink	Dietary dose	Sediment, surface water, prey tissue
		River otter	Dietary dose	Sediment, surface water, prey tissue
Zooplankton	Z	Zooplankton community	Surface water	Surface water
Amphibians/reptiles	AR	Amphibian/reptile community	Surface Water	Surface water

EPC Key

Assessment Group	Assessment Group Abbr.	Receptor	LOE requiring EPCs	EPCs required
Aquatic plants	P	Aquatic plant community	Surface Sediment	Surface Sediment
			Surface Water	Surface water

Plant LOE - sediment EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
P	Sediment, sitewide	Metals	Antimony	mg/kg	426	423	99.3	0.03	11.8	0.98	0.052	1.1	1.1	95% KM (BCA) UCL
P	Sediment, sitewide	Metals	Arsenic	mg/kg	426	426	100	0.48	118	7.6		9.6	9.6	95% Chebyshev (Mean, Sd) UCL
P	Sediment, sitewide	Metals	Cadmium	mg/kg	426	426	100	0.053	46.6	3.7		4.9	4.9	95% Chebyshev (Mean, Sd) UCL
P	Sediment, sitewide	Metals	Chromium	mg/kg	426	426	100	4.03	1580	120		160	160	95% Chebyshev (Mean, Sd) UCL
P	Sediment, sitewide	Metals	Cobalt	mg/kg	423	423	100	1.8	25.6	7.2		7.5	7.5	95% Modified-t UCL
P	Sediment, sitewide	Metals	Copper	mg/kg	503	503	100	4.19	930	140		170	170	95% Chebyshev (Mean, Sd) UCL
P	Sediment, sitewide	Metals	Lead	mg/kg	422	422	100	3.94	2050	230		270	270	95% Chebyshev (Mean, Sd) UCL
P	Sediment, sitewide	Metals	Mercury	µg/kg	429	429	100	16.1	24300	2200		2900	2900	95% Chebyshev (Mean, Sd) UCL
P	Sediment, sitewide	Metals	Methyl mercury	µg/kg	137	136	99.3	0.035	23	2.9	0.089	3.9	3.9	95% KM (Chebyshev) UCL
P	Sediment, sitewide	Metals	Nickel	mg/kg	501	501	100	4.15	200	28		32	32	95% Chebyshev (Mean, Sd) UCL
P	Sediment, sitewide	Metals	Selenium	mg/kg	406	341	84	0.038	5.2	0.95	2	0.93	0.93	95% KM (BCA) UCL
P	Sediment, sitewide	Metals	Silver	mg/kg	426	426	100	0.023	20.4	2.5		3.1	3.1	95% Chebyshev (Mean, Sd) UCL
P	Sediment, sitewide	Metals	Vanadium	mg/kg	426	426	100	3.99	110	24		27	27	95% Chebyshev (Mean, Sd) UCL
P	Sediment, sitewide	Metals	Zinc	mg/kg	426	426	100	23.5	2000	420		490	490	95% Chebyshev (Mean, Sd) UCL
P	Sediment, sitewide	PAHs	Acenaphthene	µg/kg	427	423	99.1	1.3	142000	1000	12	2600	2600	95% KM (Chebyshev) UCL
P	Sediment, sitewide	PAHs	Benzo(a)pyrene	µg/kg	427	426	99.8	1.62	41000	3800	0.6	4700	4700	95% KM (Chebyshev) UCL
P	Sediment, sitewide	PAHs	Total HPAHs	µg/kg	427	427	100	6.2	510000	36000		46000	46000	95% Chebyshev (Mean, Sd) UCL
P	Sediment, sitewide	PAHs	Total LPAHs	µg/kg	427	426	99.8	0.408	749000	9800	3	18000	18000	95% KM (Chebyshev) UCL
P	Sediment, sitewide	PAHs	Total PAHs	µg/kg	427	427	100	6.2	1090000	45000		62000	62000	95% Chebyshev (Mean, Sd) UCL
P	Sediment, sitewide	PCB Congeners	Total PCB Congeners	µg/kg	429	429	100	1.34	28600	1800		2600	2600	95% Chebyshev (Mean, Sd) UCL
P	Sediment, sitewide	PCB Congeners	PCB TEQ-Bird	ng/kg	429	429	100	0.000243	7930	430		630	630	95% Chebyshev (Mean, Sd) UCL
P	Sediment, sitewide	PCB Congeners	PCB TEQ-Fish	ng/kg	429	429	100	0.000122	33.2	2.2		3.1	3.1	95% Chebyshev (Mean, Sd) UCL
P	Sediment, sitewide	PCB Congeners	PCB TEQ-Mammal	ng/kg	429	429	100	0.000729	267	22		30	30	95% Chebyshev (Mean, Sd) UCL
P	Sediment, sitewide	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	428	428	100	0.0595	51600	1300		2300	2300	95% Chebyshev (Mean, Sd) UCL
P	Sediment, sitewide	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	428	428	100	0.037	51400	1300		2200	2200	95% Chebyshev (Mean, Sd) UCL
P	Sediment, sitewide	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	428	428	100	0.0567	51400	1300		2200	2200	95% Chebyshev (Mean, Sd) UCL
P	Sediment, sitewide	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	428	428	100	0.997	55500	1800		2800	2800	95% Chebyshev (Mean, Sd) UCL
P	Sediment, sitewide	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	428	428	100	0.412	51400	1300		2200	2200	95% Chebyshev (Mean, Sd) UCL
P	Sediment, sitewide	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	428	428	100	0.62	51500	1300		2200	2200	95% Chebyshev (Mean, Sd) UCL
P	Sediment, sitewide	OC Pesticides	Dieldrin	µg/kg	427	419	98.1	0.015	152	5.9	1.4	8.3	8.3	95% KM (Chebyshev) UCL
P	Sediment, sitewide	OC Pesticides	Total DDx	µg/kg	427	424	99.3	0.317	2800	140	5.3	190	190	95% KM (Chebyshev) UCL

Sitewide sediment EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
I	Sediment, sitewide	Metals	Antimony	mg/kg	426	423	99.3	0.03	11.8	0.98	0.052	1.1	1.1	95% KM (BCA) UCL
I	Sediment, sitewide	Metals	Arsenic	mg/kg	426	426	100	0.48	118	7.6		9.6	9.6	95% Chebyshev (Mean, Sd) UCL
I	Sediment, sitewide	Metals	Cadmium	mg/kg	426	426	100	0.053	46.6	3.7		4.9	4.9	95% Chebyshev (Mean, Sd) UCL
I	Sediment, sitewide	Metals	Chromium	mg/kg	426	426	100	4.03	1580	120		160	160	95% Chebyshev (Mean, Sd) UCL
I	Sediment, sitewide	Metals	Cobalt	mg/kg	423	423	100	1.8	25.6	7.2		7.5	7.5	95% Modified-t UCL
I	Sediment, sitewide	Metals	Copper	mg/kg	503	503	100	4.19	930	140		170	170	95% Chebyshev (Mean, Sd) UCL
I	Sediment, sitewide	Metals	Lead	mg/kg	422	422	100	3.94	2050	230		270	270	95% Chebyshev (Mean, Sd) UCL
I	Sediment, sitewide	Metals	Mercury	µg/kg	429	429	100	16.1	24300	2200		2900	2900	95% Chebyshev (Mean, Sd) UCL
I	Sediment, sitewide	Metals	Methyl mercury	µg/kg	137	136	99.3	0.035	23	2.9	0.089	3.9	3.9	95% KM (Chebyshev) UCL
I	Sediment, sitewide	Metals	Nickel	mg/kg	501	501	100	4.15	200	28		32	32	95% Chebyshev (Mean, Sd) UCL
I	Sediment, sitewide	Metals	Selenium	mg/kg	406	341	84	0.038	5.2	0.95	2	0.93	0.93	95% KM (BCA) UCL
I	Sediment, sitewide	Metals	Silver	mg/kg	426	426	100	0.023	20.4	2.5		3.1	3.1	95% Chebyshev (Mean, Sd) UCL
I	Sediment, sitewide	Metals	Vanadium	mg/kg	426	426	100	3.99	110	24		27	27	95% Chebyshev (Mean, Sd) UCL
I	Sediment, sitewide	Metals	Zinc	mg/kg	426	426	100	23.5	2000	420		490	490	95% Chebyshev (Mean, Sd) UCL
I	Sediment, sitewide	PAHs	Acenaphthene	µg/kg	427	423	99.1	1.3	142000	1000	12	2600	2600	95% KM (Chebyshev) UCL
I	Sediment, sitewide	PAHs	Benzo(a)pyrene	µg/kg	427	426	99.8	1.62	41000	3800	0.6	4700	4700	95% KM (Chebyshev) UCL
I	Sediment, sitewide	PAHs	Total HPAHs	µg/kg	427	427	100	6.2	510000	36000		46000	46000	95% Chebyshev (Mean, Sd) UCL
I	Sediment, sitewide	PAHs	Total LPAHs	µg/kg	427	426	99.8	0.408	749000	9800	3	18000	18000	95% KM (Chebyshev) UCL
I	Sediment, sitewide	PAHs	Total PAHs	µg/kg	427	427	100	6.2	1090000	45000		62000	62000	95% Chebyshev (Mean, Sd) UCL
I	Sediment, sitewide	PCB Congeners	Total PCB Congeners	µg/kg	429	429	100	1.34	28600	1800		2600	2600	95% Chebyshev (Mean, Sd) UCL
I	Sediment, sitewide	PCB Congeners	PCB TEQ-Bird	ng/kg	429	429	100	0.000243	7930	430		630	630	95% Chebyshev (Mean, Sd) UCL
I	Sediment, sitewide	PCB Congeners	PCB TEQ-Fish	ng/kg	429	429	100	0.000122	33.2	2.2		3.1	3.1	95% Chebyshev (Mean, Sd) UCL
I	Sediment, sitewide	PCB Congeners	PCB TEQ-Mammal	ng/kg	429	429	100	0.000729	267	22		30	30	95% Chebyshev (Mean, Sd) UCL
I	Sediment, sitewide	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/kg	428	428	100	0.0595	51600	1300		2300	2300	95% Chebyshev (Mean, Sd) UCL
I	Sediment, sitewide	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/kg	428	428	100	0.037	51400	1300		2200	2200	95% Chebyshev (Mean, Sd) UCL
I	Sediment, sitewide	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/kg	428	428	100	0.0567	51400	1300		2200	2200	95% Chebyshev (Mean, Sd) UCL
I	Sediment, sitewide	PCDDs/PCDFs	Total TEQ-Bird	ng/kg	428	428	100	0.997	55500	1800		2800	2800	95% Chebyshev (Mean, Sd) UCL
I	Sediment, sitewide	PCDDs/PCDFs	Total TEQ-Fish	ng/kg	428	428	100	0.412	51400	1300		2200	2200	95% Chebyshev (Mean, Sd) UCL
I	Sediment, sitewide	PCDDs/PCDFs	Total TEQ-Mammal	ng/kg	428	428	100	0.62	51500	1300		2200	2200	95% Chebyshev (Mean, Sd) UCL
I	Sediment, sitewide	OC Pesticides	Dieldrin	µg/kg	427	419	98.1	0.015	152	5.9	1.4	8.3	8.3	95% KM (Chebyshev) UCL
I	Sediment, sitewide	OC Pesticides	Total DDx	µg/kg	427	424	99.3	0.317	2800	140	5.3	190	190	95% KM (Chebyshev) UCL

Surface water EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
AR, F, P, Z	Surface water, < RM 13	Metals	Arsenic (dissolved)	µg/l	200	192	96	0.4	1.93	1	0.5	1.1	1.1	95% KM (BCA) UCL
AR, F, P, Z	Surface water, < RM 13	Metals	Arsenic (total)	µg/l	200	196	98	0.52	3.02	1.3	0.5	1.3	1.3	95% KM (BCA) UCL
AR, F, P, Z	Surface water, < RM 13	Metals	Cadmium (dissolved)	µg/l	320	272	85	0.004	0.149	0.046	0.02	0.043	0.043	95% KM (BCA) UCL
AR, F, P, Z	Surface water, < RM 13	Metals	Cadmium (total)	µg/l	320	319	99.7	0.018	0.939	0.12	0.02	0.13	0.13	95% KM (BCA) UCL
AR, F, P, Z	Surface water, < RM 13	Metals	Chromium (dissolved)	µg/l	200	194	97	0.18	5.46	0.83	0.2	0.89	0.89	95% KM (BCA) UCL
AR, F, P, Z	Surface water, < RM 13	Metals	Chromium (total)	µg/l	200	198	99	0.4	27.4	3.3	0.2	3.7	3.7	95% KM (BCA) UCL
AR, F, P, Z	Surface water, < RM 13	Metals	Copper (dissolved)	µg/l	320	320	100	1.11	9.26	2.51		2.61	2.61	95% Modified-t UCL
AR, F, P, Z	Surface water, < RM 13	Metals	Copper (total)	µg/l	320	320	100	1.38	43.7	6.75		8.14	8.14	95% Chebyshev (Mean, Sd) UCL
AR, F, P, Z	Surface water, < RM 13	Metals	Lead (dissolved)	µg/l	320	320	100	0.07	9.97	0.85		1.2	1.2	95% Chebyshev (Mean, Sd) UCL
AR, F, P, Z	Surface water, < RM 13	Metals	Lead (total)	µg/l	320	320	100	0.07	61.2	6.8		8.7	8.7	95% Chebyshev (Mean, Sd) UCL
AR, F, P, Z	Surface water, < RM 13	Metals	Mercury (dissolved)	ng/l	320	319	99.7	0.26	91.5	6.4	0.4	9	9	95% KM (Chebyshev) UCL
AR, F, P, Z	Surface water, < RM 13	Metals	Mercury (total)	ng/l	320	320	100	1.01	995	71		95	95	95% Chebyshev (Mean, Sd) UCL
AR, F, P, Z	Surface water, < RM 13	Metals	Methyl mercury (dissolved)	ng/l	200	152	76	0.021	0.389	0.058	0.055	0.058	0.058	95% KM (BCA) UCL
AR, F, P, Z	Surface water, < RM 13	Metals	Methyl mercury (total)	ng/l	200	200	100	0.026	2.21	0.24		0.26	0.26	95% H-UCL
AR, F, P, Z	Surface water, < RM 13	Metals	Nickel (dissolved)	µg/l	200	200	100	0.75	2.6	1.4		1.4	1.4	95% Approximate Gamma UCL
AR, F, P, Z	Surface water, < RM 13	Metals	Nickel (total)	µg/l	200	200	100	0.92	7.9	2		2.2	2.2	95% Modified-t UCL
AR, F, P, Z	Surface water, < RM 13	Metals	Selenium (dissolved)	µg/l	200	56	28	0.2	3.2	0.67	1	0.54	0.54	95% KM (% Bootstrap) UCL
AR, F, P, Z	Surface water, < RM 13	Metals	Selenium (total)	µg/l	200	64	32	0.2	3.5	0.62	1	0.52	0.52	95% KM (t) UCL
AR, F, P, Z	Surface water, < RM 13	Metals	Silver (dissolved)	µg/l	200	119	59.5	0.004	0.119	0.019	0.02	0.017	0.017	95% KM (t) UCL
AR, F, P, Z	Surface water, < RM 13	Metals	Silver (total)	µg/l	200	196	98	0.012	0.448	0.072	0.02	0.078	0.078	95% KM (BCA) UCL
AR, F, P, Z	Surface water, < RM 13	Metals	Vanadium (dissolved)	µg/l	200	190	95	0.43	5.8	2.6	2	2.6	2.6	95% KM (BCA) UCL
AR, F, P, Z	Surface water, < RM 13	Metals	Vanadium (total)	µg/l	200	194	97	0.73	9.2	3.5	2	3.6	3.6	95% KM (Percentile Bootstrap) UCL
AR, F, P, Z	Surface water, < RM 13	Metals	Zinc (dissolved)	µg/l	200	200	100	1.54	18.5	7.1		7.5	7.5	95% Approximate Gamma UCL
AR, F, P, Z	Surface water, < RM 13	Metals	Zinc (total)	µg/l	200	200	100	3.03	106	17		22	22	95% Chebyshev (Mean, Sd) UCL
AR, F, P, Z	Surface water, < RM 13	Butyltin	Tributyltin	µg/l	200	2	1	0.013	0.026	0.02	0.05		0.026	Maximum detect
AR, F, P, Z	Surface water, < RM 13	PAHs	Anthracene	ng/l	200	190	95	1.81	140	13.6	10	15	15	95% KM (BCA) UCL
AR, F, P, Z	Surface water, < RM 13	PAHs	Benzo(a)anthracene	ng/l	200	193	96.5	3.76	316	37.6	11.3	41.1	41.1	95% KM (BCA) UCL
AR, F, P, Z	Surface water, < RM 13	PAHs	Benzo(a)pyrene	ng/l	200	181	90.5	7.14	560	61.9	29.2	65.7	65.7	95% KM (BCA) UCL
AR, F, P, Z	Surface water, < RM 13	PAHs	Fluoranthene	ng/l	200	200	100	14.9	583	109		120	120	95% H-UCL
AR, F, P, Z	Surface water, < RM 13	PAHs	Pyrene	ng/l	200	200	100	19.2	587	112		123	123	95% H-UCL
AR, F, P, Z	Surface water, < RM 13	PAHs	Total HPAHs	ng/l	200	200	100	45.9	4550	595		674	674	95% H-UCL
AR, F, P, Z	Surface water, < RM 13	PAHs	Total LPAHs	ng/l	200	200	100	5.93	420	129		140	140	95% Approximate Gamma UCL
AR, F, P, Z	Surface water, < RM 13	PAHs	Total PAHs	ng/l	200	200	100	55.7	4970	720		820	820	95% H-UCL
AR, F, P, Z	Surface water, < RM 13	SVOCs	Bis-(2-ethylhexyl)phthalate	µg/l	167	18	10.8	1.2	6	2.5	2.9	1.7	1.7	95% KM (% Bootstrap) UCL
AR, F, P, Z	Surface water, < RM 13	SVOCs	Butylbenzylphthalate	µg/l	168	48	28.6	0.14	25	0.84	1.1	0.74	0.74	95% KM (% Bootstrap) UCL
AR, F, P, Z	Surface water, < RM 13	PCB Congeners	Total PCB Congeners	ng/l	320	320	100	0.0485	183	20.8		25.5	25.5	95% Chebyshev (Mean, Sd) UCL
AR, F, P, Z	Surface water, < RM 13	PCB Congeners	PCB TEQ-Bird	ng/l	320	320	100	3.56E-08	0.0333	0.0034		0.00432	0.00432	95% Chebyshev (Mean, Sd) UCL
AR, F, P, Z	Surface water, < RM 13	PCB Congeners	PCB TEQ-Fish	ng/l	320	320	100	1.39E-08	0.000335	2.51E-05		3.35E-05	0.0000335	95% Chebyshev (Mean, Sd) UCL
AR, F, P, Z	Surface water, < RM 13	PCB Congeners	PCB TEQ-Mammal	ng/l	320	320	100	8.31E-08	0.0085	0.000379		0.000559	0.000559	95% Chebyshev (Mean, Sd) UCL
AR, F, P, Z	Surface water, < RM 13	PCDDs/PCDFs	2,3,7,8-TCDD	ng/l	320	273	85.3	0.000617	1.87	0.0215	0.00521	0.0541	0.0541	95% KM (Chebyshev) UCL
AR, F, P, Z	Surface water, < RM 13	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/l	320	316	98.8	6.35E-07	1.88	0.0211	0.00227	0.0721	0.0721	97.5% KM (Chebyshev) UCL
AR, F, P, Z	Surface water, < RM 13	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/l	320	316	98.8	6.35E-07	1.88	0.0203	0.00227	0.0713	0.0713	97.5% KM (Chebyshev) UCL
AR, F, P, Z	Surface water, < RM 13	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/l	320	316	98.8	1.91E-06	1.88	0.0206	0.00227	0.0716	0.0716	97.5% KM (Chebyshev) UCL
AR, F, P, Z	Surface water, < RM 13	PCDDs/PCDFs	Total TEQ-Bird	ng/l	320	320	100	0.00116	1.91	0.0243		0.0605	0.0605	95% Chebyshev (Mean, Sd) UCL
AR, F, P, Z	Surface water, < RM 13	PCDDs/PCDFs	Total TEQ-Fish	ng/l	320	320	100	0.000718	1.88	0.0201		0.0559	0.0559	95% Chebyshev (Mean, Sd) UCL
AR, F, P, Z	Surface water, < RM 13	PCDDs/PCDFs	Total TEQ-Mammal	ng/l	320	320	100	0.000863	1.88	0.0206		0.0564	0.0564	95% Chebyshev (Mean, Sd) UCL
AR, F, P, Z	Surface water, < RM 13	OC Pesticides	4,4'-DDE	ng/l	200	184	92	0.22	8.26	1.1	0.4	1.2	1.2	95% KM (BCA) UCL
AR, F, P, Z	Surface water, < RM 13	OC Pesticides	4,4'-DDT	ng/l	200	148	74	0.0509	3.82	0.45	1.9	0.41	0.41	95% KM (BCA) UCL

Surface water EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
AR, F, P, Z	Surface water, < RM 13	OC Pesticides	Dieldrin	ng/l	200	179	89.5	0.16	3.18	1.1	0.63	1.1	1.1	95% KM (t) UCL
AR, F, P, Z	Surface water, < RM 13	OC Pesticides	Hexachlorobenzene	ng/l	200	46	23	0.0836	2.57	0.403	1.1	0.19	0.19	95% KM (% Bootstrap) UCL
AR, F, P, Z	Surface water, < RM 13	OC Pesticides	Total Chlordane	ng/l	200	200	100	0.0967	15.9	2.52		3.01	3.01	95% H-UCL
AR, F, P, Z	Surface water, < RM 13	OC Pesticides	Total DDx	ng/l	200	199	99.5	0.216	21.1	2.93	0.123	3.25	3.25	95% KM (BCA) UCL
AR, F, P, Z	Surface water, < RM 13	Wet chemistry	Cyanide	mg/l	200	11	5.5	0.003	0.031	0.009	0.01	0.01	0.01	95% GROS Approximate Gamma UCL
AR, F, P, Z	Surface water, ≥ RM 4	Metals	Arsenic (dissolved)	µg/l	98	90	91.8	0.4	1.93	0.93	0.5	0.96	0.96	95% KM (BCA) UCL
AR, F, P, Z	Surface water, ≥ RM 4	Metals	Arsenic (total)	µg/l	98	94	95.9	0.6	3.02	1.2	0.5	1.3	1.3	95% KM (BCA) UCL
AR, F, P, Z	Surface water, ≥ RM 4	Metals	Cadmium (dissolved)	µg/l	154	113	73.4	0.004	0.149	0.038	0.02	0.035	0.035	95% KM (BCA) UCL
AR, F, P, Z	Surface water, ≥ RM 4	Metals	Cadmium (total)	µg/l	154	153	99.4	0.018	0.897	0.15	0.02	0.17	0.17	95% KM (BCA) UCL
AR, F, P, Z	Surface water, ≥ RM 4	Metals	Chromium (dissolved)	µg/l	98	98	100	0.18	5.46	1.1		1.2	1.2	95% H-UCL
AR, F, P, Z	Surface water, ≥ RM 4	Metals	Chromium (total)	µg/l	98	96	98	0.4	27.4	4.2	0.2	4.8	4.8	95% KM (BCA) UCL
AR, F, P, Z	Surface water, ≥ RM 4	Metals	Copper (dissolved)	µg/l	154	154	100	1.36	9.26	2.94		3.1	3.1	95% Modified-t UCL
AR, F, P, Z	Surface water, ≥ RM 4	Metals	Copper (total)	µg/l	154	154	100	1.68	41.7	8.69		11	11	95% Chebyshev (Mean, Sd) UCL
AR, F, P, Z	Surface water, ≥ RM 4	Metals	Lead (dissolved)	µg/l	154	154	100	0.098	9.97	1.2		1.8	1.8	95% Chebyshev (Mean, Sd) UCL
AR, F, P, Z	Surface water, ≥ RM 4	Metals	Lead (total)	µg/l	154	154	100	0.104	48.7	9.28		12.2	12.2	95% Chebyshev (Mean, Sd) UCL
AR, F, P, Z	Surface water, ≥ RM 4	Metals	Mercury (dissolved)	ng/l	154	154	100	0.29	91.5	8.1		13	13	95% Chebyshev (Mean, Sd) UCL
AR, F, P, Z	Surface water, ≥ RM 4	Metals	Mercury (total)	ng/l	154	154	100	3.09	407	86		120	120	95% Chebyshev (Mean, Sd) UCL
AR, F, P, Z	Surface water, ≥ RM 4	Metals	Methyl mercury (dissolved)	ng/l	98	90	91.8	0.022	0.389	0.071	0.055	0.079	0.079	95% KM (BCA) UCL
AR, F, P, Z	Surface water, ≥ RM 4	Metals	Methyl mercury (total)	ng/l	98	98	100	0.063	2.21	0.32		0.44	0.44	95% Chebyshev (Mean, Sd) UCL
AR, F, P, Z	Surface water, ≥ RM 4	Metals	Nickel (dissolved)	µg/l	98	98	100	0.87	2.6	1.3		1.4	1.4	95% Modified-t UCL
AR, F, P, Z	Surface water, ≥ RM 4	Metals	Nickel (total)	µg/l	98	98	100	1.01	7.9	2.21		2.39	2.39	95% Modified-t UCL
AR, F, P, Z	Surface water, ≥ RM 4	Metals	Selenium (dissolved)	µg/l	98	48	49	0.2	3.2	0.66	1	0.62	0.62	95% KM (% Bootstrap) UCL
AR, F, P, Z	Surface water, ≥ RM 4	Metals	Selenium (total)	µg/l	98	44	44.9	0.2	3.5	0.72	1	0.67	0.67	95% KM (% Bootstrap) UCL
AR, F, P, Z	Surface water, ≥ RM 4	Metals	Silver (dissolved)	µg/l	98	48	49	0.004	0.119	0.032	0.02	0.026	0.026	95% GROS Approximate Gamma UCL
AR, F, P, Z	Surface water, ≥ RM 4	Metals	Silver (total)	µg/l	98	94	95.9	0.022	0.448	0.089	0.02	0.1	0.1	95% KM (BCA) UCL
AR, F, P, Z	Surface water, ≥ RM 4	Metals	Vanadium (dissolved)	µg/l	98	97	99	0.43	5.6	2	2	2.2	2.2	95% KM (BCA) UCL
AR, F, P, Z	Surface water, ≥ RM 4	Metals	Vanadium (total)	µg/l	98	97	99	0.73	7.6	3	2	3.3	3.3	95% KM (BCA) UCL
AR, F, P, Z	Surface water, ≥ RM 4	Metals	Zinc (dissolved)	µg/l	98	98	100	2.1	18.5	6.8		8.5	8.5	95% Chebyshev (Mean, Sd) UCL
AR, F, P, Z	Surface water, ≥ RM 4	Metals	Zinc (total)	µg/l	98	98	100	3.03	106	22		29	29	95% Chebyshev (Mean, Sd) UCL
AR, F, P, Z	Surface water, ≥ RM 4	Butyltin	Tributyltin	µg/l	98	1	1	0.026	0.026		0.05		0.026	Maximum detect
AR, F, P, Z	Surface water, ≥ RM 4	PAHs	Anthracene	ng/l	98	98	100	2.41	120	15.6		17.2	17.2	95% H-UCL
AR, F, P, Z	Surface water, ≥ RM 4	PAHs	Benzo(a)anthracene	ng/l	98	98	100	6.65	316	49.9		56.6	56.6	95% Approximate Gamma UCL
AR, F, P, Z	Surface water, ≥ RM 4	PAHs	Benzo(a)pyrene	ng/l	98	96	98	9.67	560	82	23.1	95.3	95.3	95% KM (BCA) UCL
AR, F, P, Z	Surface water, ≥ RM 4	PAHs	Fluoranthene	ng/l	98	98	100	25.5	583	145		161	161	95% Approximate Gamma UCL
AR, F, P, Z	Surface water, ≥ RM 4	PAHs	Pyrene	ng/l	98	98	100	23.2	587	146		165	165	95% H-UCL
AR, F, P, Z	Surface water, ≥ RM 4	PAHs	Total HPAHs	ng/l	98	98	100	117	4550	829		961	961	95% H-UCL
AR, F, P, Z	Surface water, ≥ RM 4	PAHs	Total LPAHs	ng/l	98	98	100	46.4	420	164		178	178	95% Approximate Gamma UCL
AR, F, P, Z	Surface water, ≥ RM 4	PAHs	Total PAHs	ng/l	98	98	100	166	4970	990		1100	1100	95% Approximate Gamma UCL
AR, F, P, Z	Surface water, ≥ RM 4	SVOCs	Bis-(2-ethylhexyl)phthalate	µg/l	90	14	15.6	1.2	6	2.4	2.3	1.8	1.8	95% KM (t) UCL
AR, F, P, Z	Surface water, ≥ RM 4	SVOCs	Butylbenzylphthalate	µg/l	91	26	28.6	0.14	25	1.2	1.1	1.1	1.1	95% KM (% Bootstrap) UCL
AR, F, P, Z	Surface water, ≥ RM 4	PCB Congeners	Total PCB Congeners	ng/l	154	154	100	1.96	183	25.8		34	34	95% Chebyshev (Mean, Sd) UCL
AR, F, P, Z	Surface water, ≥ RM 4	PCB Congeners	PCB TEQ-Bird	ng/l	154	154	100	0.000194	0.0333	0.00441		0.00609	0.00609	95% Chebyshev (Mean, Sd) UCL
AR, F, P, Z	Surface water, ≥ RM 4	PCB Congeners	PCB TEQ-Fish	ng/l	154	154	100	3.72E-06	0.000335	3.47E-05		5.08E-05	0.0000508	95% Chebyshev (Mean, Sd) UCL
AR, F, P, Z	Surface water, ≥ RM 4	PCB Congeners	PCB TEQ-Mammal	ng/l	154	154	100	5.63E-05	0.0085	0.00056		0.000917	0.000917	95% Chebyshev (Mean, Sd) UCL
AR, F, P, Z	Surface water, ≥ RM 4	PCDDs/PCDFs	2,3,7,8-TCDD	ng/l	154	139	90.3	0.000996	1.87	0.0375	0.00521	0.108	0.108	95% KM (Chebyshev) UCL
AR, F, P, Z	Surface water, ≥ RM 4	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/l	154	154	100	9.46E-07	1.88	0.0366		0.111	0.111	95% Chebyshev (Mean, Sd) UCL
AR, F, P, Z	Surface water, ≥ RM 4	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/l	154	154	100	9.46E-07	1.88	0.0357		0.11	0.11	95% Chebyshev (Mean, Sd) UCL
AR, F, P, Z	Surface water, ≥ RM 4	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/l	154	154	100	2.84E-06	1.88	0.0361		0.11	0.11	95% Chebyshev (Mean, Sd) UCL
AR, F, P, Z	Surface water, ≥ RM 4	PCDDs/PCDFs	Total TEQ-Bird	ng/l	154	154	100	0.00116	1.91	0.0411		0.116	0.116	95% Chebyshev (Mean, Sd) UCL
AR, F, P, Z	Surface water, ≥ RM 4	PCDDs/PCDFs	Total TEQ-Fish	ng/l	154	154	100	0.000718	1.88	0.0357		0.11	0.11	95% Chebyshev (Mean, Sd) UCL
AR, F, P, Z	Surface water, ≥ RM 4	PCDDs/PCDFs	Total TEQ-Mammal	ng/l	154	154	100	0.000863	1.88	0.0365		0.11	0.11	95% Chebyshev (Mean, Sd) UCL

Surface water EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
AR, F, P, Z	Surface water, ≥ RM 4	OC Pesticides	4,4'-DDE	ng/l	98	93	94.9	0.29	8.26	1.5	0.4	1.7	1.7	95% KM (BCA) UCL
AR, F, P, Z	Surface water, ≥ RM 4	OC Pesticides	4,4'-DDT	ng/l	98	87	88.8	0.0619	3.82	0.61	1.9	0.66	0.66	95% KM (BCA) UCL
AR, F, P, Z	Surface water, ≥ RM 4	OC Pesticides	Dieldrin	ng/l	98	98	100	0.412	3.18	1.4		1.5	1.5	95% Modified-t UCL
AR, F, P, Z	Surface water, ≥ RM 4	OC Pesticides	Hexachlorobenzene	ng/l	98	20	20.4	0.119	1.74	0.441	1	0.2	0.2	95% Approximate Gamma KM-UCL
AR, F, P, Z	Surface water, ≥ RM 4	OC Pesticides	Total Chlordane	ng/l	98	98	100	0.875	15.9	3.85		4.32	4.32	95% H-UCL
AR, F, P, Z	Surface water, ≥ RM 4	OC Pesticides	Total DDx	ng/l	98	98	100	0.26	21.1	4.02		4.78	4.78	95% H-UCL
AR, F, P, Z	Surface water, ≥ RM 4	Wet chemistry	Cyanide	mg/l	98	10	10.2	0.003	0.014	0.007	0.01	0.0068	0.0068	95% KM (Percentile Bootstrap) UCL
I	Surface water, near-bottom, < RM 13	Metals	Arsenic (dissolved)	µg/l	100	96	96	0.4	1.93	1.1	0.5	1.1	1.1	95% GROS Approximate Gamma UCL
I	Surface water, near-bottom, < RM 13	Metals	Arsenic (total)	µg/l	100	98	98	0.52	3.02	1.4	0.5	1.4	1.4	95% GROS Approximate Gamma UCL
I	Surface water, near-bottom, < RM 13	Metals	Cadmium (dissolved)	µg/l	160	138	86.2	0.01	0.149	0.051	0.02	0.049	0.049	95% KM (t) UCL
I	Surface water, near-bottom, < RM 13	Metals	Cadmium (total)	µg/l	160	160	100	0.034	0.939	0.15		0.2	0.2	95% Chebyshev (Mean, Sd) UCL
I	Surface water, near-bottom, < RM 13	Metals	Chromium (dissolved)	µg/l	100	98	98	0.21	5.46	0.81	0.2	0.92	0.92	95% KM (BCA) UCL
I	Surface water, near-bottom, < RM 13	Metals	Chromium (total)	µg/l	100	100	100	0.7	27.4	4		4.5	4.5	95% H-UCL
I	Surface water, near-bottom, < RM 13	Metals	Copper (dissolved)	µg/l	160	160	100	1.11	9.26	2.54		2.7	2.7	95% Modified-t UCL
I	Surface water, near-bottom, < RM 13	Metals	Copper (total)	µg/l	160	160	100	1.38	43.7	7.97		10.4	10.4	95% Chebyshev (Mean, Sd) UCL
I	Surface water, near-bottom, < RM 13	Metals	Lead (dissolved)	µg/l	160	160	100	0.07	9.97	0.89		1.4	1.4	95% Chebyshev (Mean, Sd) UCL
I	Surface water, near-bottom, < RM 13	Metals	Lead (total)	µg/l	160	160	100	0.07	61.2	8.4		10	10	95% H-UCL
I	Surface water, near-bottom, < RM 13	Metals	Mercury (dissolved)	ng/l	160	159	99.4	0.28	91.5	7.9	0.4	12	12	95% KM (Chebyshev) UCL
I	Surface water, near-bottom, < RM 13	Metals	Mercury (total)	ng/l	160	160	100	3.09	995	92		140	140	95% Chebyshev (Mean, Sd) UCL
I	Surface water, near-bottom, < RM 13	Metals	Methyl mercury (dissolved)	ng/l	100	69	69	0.021	0.389	0.064	0.055	0.065	0.065	95% KM (BCA) UCL
I	Surface water, near-bottom, < RM 13	Metals	Methyl mercury (total)	ng/l	100	100	100	0.026	2.21	0.28		0.34	0.34	95% H-UCL
I	Surface water, near-bottom, < RM 13	Metals	Nickel (dissolved)	µg/l	100	100	100	0.75	2.6	1.4		1.4	1.4	95% Student's-t UCL
I	Surface water, near-bottom, < RM 13	Metals	Nickel (total)	µg/l	100	100	100	0.92	7.9	2.2		2.4	2.4	95% Modified-t UCL
I	Surface water, near-bottom, < RM 13	Metals	Selenium (dissolved)	µg/l	100	27	27	0.2	1.8	0.47	1	0.49	0.49	95% KM (% Bootstrap) UCL
I	Surface water, near-bottom, < RM 13	Metals	Selenium (total)	µg/l	100	29	29	0.2	2	0.45	1	0.47	0.47	95% KM (% Bootstrap) UCL
I	Surface water, near-bottom, < RM 13	Metals	Silver (dissolved)	µg/l	100	62	62	0.004	0.119	0.019	0.02	0.019	0.019	95% KM (BCA) UCL
I	Surface water, near-bottom, < RM 13	Metals	Silver (total)	µg/l	100	99	99	0.015	0.448	0.088	0.02	0.1	0.1	95% KM (BCA) UCL
I	Surface water, near-bottom, < RM 13	Metals	Vanadium (dissolved)	µg/l	100	94	94	0.43	5.6	2.7	2	2.8	2.8	95% KM (t) UCL
I	Surface water, near-bottom, < RM 13	Metals	Vanadium (total)	µg/l	100	95	95	0.75	9.2	3.9	2	4.1	4.1	95% KM (Percentile Bootstrap) UCL
I	Surface water, near-bottom, < RM 13	Metals	Zinc (dissolved)	µg/l	100	100	100	1.54	18.5	7.2		7.8	7.8	95% Approximate Gamma UCL
I	Surface water, near-bottom, < RM 13	Metals	Zinc (total)	µg/l	100	100	100	6.98	106	20		27	27	95% Chebyshev (Mean, Sd) UCL
I	Surface water, near-bottom, < RM 13	Butyltin	Tributyltin	µg/l	100	0	0				0.05		0.05	Maximum DL
I	Surface water, near-bottom, < RM 13	PAHs	Anthracene	ng/l	100	95	95	1.81	140	16.4	10	19.5	19.5	95% KM (BCA) UCL
I	Surface water, near-bottom, < RM 13	PAHs	Benzo(a)anthracene	ng/l	100	95	95	3.89	316	48.2	11.3	55.7	55.7	95% KM (BCA) UCL
I	Surface water, near-bottom, < RM 13	PAHs	Benzo(a)pyrene	ng/l	100	93	93	7.52	560	78.1	29.2	89.6	89.6	95% KM (BCA) UCL
I	Surface water, near-bottom, < RM 13	PAHs	Fluoranthene	ng/l	100	100	100	14.9	583	125		143	143	95% Approximate Gamma UCL
I	Surface water, near-bottom, < RM 13	PAHs	Pyrene	ng/l	100	100	100	23.2	587	130		147	147	95% Approximate Gamma UCL
I	Surface water, near-bottom, < RM 13	PAHs	Total HPAHs	ng/l	100	100	100	45.9	4550	727		849	849	95% Approximate Gamma UCL
I	Surface water, near-bottom, < RM 13	PAHs	Total LPAHs	ng/l	100	100	100	9.15	420	142		160	160	95% Approximate Gamma UCL
I	Surface water, near-bottom, < RM 13	PAHs	Total PAHs	ng/l	100	100	100	55.7	4970	870		1000	1000	95% Approximate Gamma UCL
I	Surface water, near-bottom, < RM 13	SVOCs	Bis-(2-ethylhexyl)phthalate	µg/l	84	10	11.9	1.2	4.8	2.4	2.9	1.7	1.7	95% KM (Percentile Bootstrap) UCL
I	Surface water, near-bottom, < RM 13	SVOCs	Butylbenzylphthalate	µg/l	85	26	30.6	0.14	25	1.3	1.1	1.2	1.2	95% KM (BCA) UCL
I	Surface water, near-bottom, < RM 13	PCB Congeners	Total PCB Congeners	ng/l	160	160	100	0.0499	183	24.5		32.9	32.9	95% Chebyshev (Mean, Sd) UCL
I	Surface water, near-bottom, < RM 13	PCB Congeners	PCB TEQ-Bird	ng/l	160	160	100	1.34E-07	0.0303	0.00404		0.00551	0.00551	95% Chebyshev (Mean, Sd) UCL
I	Surface water, near-bottom, < RM 13	PCB Congeners	PCB TEQ-Fish	ng/l	160	160	100	1.39E-08	0.000335	3.02E-05		4.53E-05	0.0000453	95% Chebyshev (Mean, Sd) UCL
I	Surface water, near-bottom, < RM 13	PCB Congeners	PCB TEQ-Mammal	ng/l	160	160	100	8.31E-08	0.0085	0.000477		0.000812	0.000812	95% Chebyshev (Mean, Sd) UCL
I	Surface water, near-bottom, < RM 13	PCDDs/PCDFs	2,3,7,8-TCDD	ng/l	160	135	84.4	0.000996	1.83	0.0241	0.0026	0.0704	0.0704	95% KM (Chebyshev) UCL
I	Surface water, near-bottom, < RM 13	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/l	160	157	98.1	6.51E-07	1.84	0.0238	0.00227	0.0953	0.0953	97.5% KM (Chebyshev) UCL
I	Surface water, near-bottom, < RM 13	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/l	160	157	98.1	6.51E-07	1.84	0.0227	0.00227	0.0943	0.0943	97.5% KM (Chebyshev) UCL
I	Surface water, near-bottom, < RM 13	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/l	160	157	98.1	1.95E-06	1.84	0.023	0.00227	0.0945	0.0945	97.5% KM (Chebyshev) UCL
I	Surface water, near-bottom, < RM 13	PCDDs/PCDFs	Total TEQ-Bird	ng/l	160	160	100	0.00127	1.86	0.0274		0.0782	0.0782	95% Chebyshev (Mean, Sd) UCL

Surface water EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
I	Surface water, near-bottom, < RM 13	PCDDs/PCDFs	Total TEQ-Fish	ng/l	160	160	100	0.000855	1.84	0.0224		0.0726	0.0726	95% Chebyshev (Mean, Sd) UCL
I	Surface water, near-bottom, < RM 13	PCDDs/PCDFs	Total TEQ-Mammal	ng/l	160	160	100	0.000946	1.84	0.023		0.0732	0.0732	95% Chebyshev (Mean, Sd) UCL
I	Surface water, near-bottom, < RM 13	OC Pesticides	4,4'-DDE	ng/l	100	91	91	0.24	8.26	1.4	0.201	1.5	1.5	95% KM (BCA) UCL
I	Surface water, near-bottom, < RM 13	OC Pesticides	4,4'-DDT	ng/l	100	73	73	0.0509	3.82	0.56	0.41	0.54	0.54	95% KM (BCA) UCL
I	Surface water, near-bottom, < RM 13	OC Pesticides	Dieldrin	ng/l	100	88	88	0.16	3.18	1.1	0.63	1.1	1.1	95% GROS Approximate Gamma UCL
I	Surface water, near-bottom, < RM 13	OC Pesticides	Hexachlorobenzene	ng/l	100	25	25	0.0836	2.57	0.402	1.1	0.21	0.21	95% KM (% Bootstrap) UCL
I	Surface water, near-bottom, < RM 13	OC Pesticides	Total Chlordane	ng/l	100	100	100	0.0967	15.9	2.91		3.42	3.42	95% Approximate Gamma UCL
I	Surface water, near-bottom, < RM 13	OC Pesticides	Total DDx	ng/l	100	99	99	0.216	21.1	3.54	0.123	4.17	4.17	95% KM (BCA) UCL
I	Surface water, near-bottom, < RM 13	Wet chemistry	Cyanide	mg/l	100	7	7	0.003	0.031	0.01	0.01	0.0078	0.0078	95% KM (Percentile Bootstrap) UCL
I	Surface water, near-bottom, ≥ RM 4	Metals	Arsenic (dissolved)	µg/l	49	45	91.8	0.4	1.93	0.92	0.5	0.97	0.97	95% KM (t) UCL
I	Surface water, near-bottom, ≥ RM 4	Metals	Arsenic (total)	µg/l	49	47	95.9	0.6	3.02	1.3	0.5	1.4	1.4	95% GROS Adjusted Gamma UCL
I	Surface water, near-bottom, ≥ RM 4	Metals	Cadmium (dissolved)	µg/l	77	56	72.7	0.01	0.149	0.042	0.02	0.04	0.04	95% KM (BCA) UCL
I	Surface water, near-bottom, ≥ RM 4	Metals	Cadmium (total)	µg/l	77	77	100	0.034	0.897	0.19		0.27	0.27	95% Chebyshev (Mean, Sd) UCL
I	Surface water, near-bottom, ≥ RM 4	Metals	Chromium (dissolved)	µg/l	49	49	100	0.28	5.46	1		1.2	1.2	95% H-UCL
I	Surface water, near-bottom, ≥ RM 4	Metals	Chromium (total)	µg/l	49	49	100	0.7	27.4	5		8	8	95% Chebyshev (Mean, Sd) UCL
I	Surface water, near-bottom, ≥ RM 4	Metals	Copper (dissolved)	µg/l	77	77	100	1.36	9.26	2.97		3.26	3.26	95% Modified-t UCL
I	Surface water, near-bottom, ≥ RM 4	Metals	Copper (total)	µg/l	77	77	100	2.53	41.7	10.4		14.3	14.3	95% Chebyshev (Mean, Sd) UCL
I	Surface water, near-bottom, ≥ RM 4	Metals	Lead (dissolved)	µg/l	77	77	100	0.098	9.97	1.3		2.2	2.2	95% Chebyshev (Mean, Sd) UCL
I	Surface water, near-bottom, ≥ RM 4	Metals	Lead (total)	µg/l	77	77	100	0.755	48.7	11.5		14.8	14.8	95% H-UCL
I	Surface water, near-bottom, ≥ RM 4	Metals	Mercury (dissolved)	ng/l	77	77	100	0.45	91.5	9.6		18	18	95% Chebyshev (Mean, Sd) UCL
I	Surface water, near-bottom, ≥ RM 4	Metals	Mercury (total)	ng/l	77	77	100	3.09	397	110		160	160	95% Chebyshev (Mean, Sd) UCL
I	Surface water, near-bottom, ≥ RM 4	Metals	Methyl mercury (dissolved)	ng/l	49	43	87.8	0.022	0.389	0.075	0.055	0.12	0.12	95% KM (Chebyshev) UCL
I	Surface water, near-bottom, ≥ RM 4	Metals	Methyl mercury (total)	ng/l	49	49	100	0.075	2.21	0.37		0.44	0.44	95% H-UCL
I	Surface water, near-bottom, ≥ RM 4	Metals	Nickel (dissolved)	µg/l	49	49	100	0.87	2.6	1.4		1.4	1.4	95% Adjusted Gamma UCL
I	Surface water, near-bottom, ≥ RM 4	Metals	Nickel (total)	µg/l	49	49	100	1.04	7.9	2.44		2.76	2.76	95% Modified-t UCL
I	Surface water, near-bottom, ≥ RM 4	Metals	Selenium (dissolved)	µg/l	49	24	49	0.2	1.8	0.46	1	0.5	0.5	95% KM (% Bootstrap) UCL
I	Surface water, near-bottom, ≥ RM 4	Metals	Selenium (total)	µg/l	49	19	38.8	0.3	2	0.55	1	0.58	0.58	95% KM (t) UCL
I	Surface water, near-bottom, ≥ RM 4	Metals	Silver (dissolved)	µg/l	49	24	49	0.004	0.119	0.031	0.02	0.027	0.027	95% Adjusted Gamma KM-UCL
I	Surface water, near-bottom, ≥ RM 4	Metals	Silver (total)	µg/l	49	48	98	0.024	0.448	0.11	0.02	0.16	0.16	95% KM (Chebyshev) UCL
I	Surface water, near-bottom, ≥ RM 4	Metals	Vanadium (dissolved)	µg/l	49	48	98	0.43	5.6	2.1	2	2.9	2.9	95% KM (Chebyshev) UCL
I	Surface water, near-bottom, ≥ RM 4	Metals	Vanadium (total)	µg/l	49	48	98	0.75	7.6	3.4	2	3.7	3.7	95% KM (t) UCL
I	Surface water, near-bottom, ≥ RM 4	Metals	Zinc (dissolved)	µg/l	49	49	100	2.1	18.5	7		8.2	8.2	95% H-UCL
I	Surface water, near-bottom, ≥ RM 4	Metals	Zinc (total)	µg/l	49	49	100	8	106	26		39	39	95% Chebyshev (Mean, Sd) UCL
I	Surface water, near-bottom, ≥ RM 4	Butyltin	Tributyltin	µg/l	49	0	0				0.05		0.05	Maximum DL
I	Surface water, near-bottom, ≥ RM 4	PAHs	Anthracene	ng/l	49	49	100	2.41	120	17.8		20.6	20.6	95% H-UCL
I	Surface water, near-bottom, ≥ RM 4	PAHs	Benzo(a)anthracene	ng/l	49	49	100	6.65	316	62.1		75.4	75.4	95% Adjusted Gamma UCL
I	Surface water, near-bottom, ≥ RM 4	PAHs	Benzo(a)pyrene	ng/l	49	49	100	9.67	560	102		134	134	95% H-UCL
I	Surface water, near-bottom, ≥ RM 4	PAHs	Fluoranthene	ng/l	49	49	100	26.1	583	169		199	199	95% Adjusted Gamma UCL
I	Surface water, near-bottom, ≥ RM 4	PAHs	Pyrene	ng/l	49	49	100	23.8	587	171		199	199	95% Adjusted Gamma UCL
I	Surface water, near-bottom, ≥ RM 4	PAHs	Total HPAHs	ng/l	49	49	100	117	4550	1010		1220	1220	95% Adjusted Gamma UCL
I	Surface water, near-bottom, ≥ RM 4	PAHs	Total LPAHs	ng/l	49	49	100	48.9	420	184		206	206	95% Student's-t UCL
I	Surface water, near-bottom, ≥ RM 4	PAHs	Total PAHs	ng/l	49	49	100	166	4970	1200		1400	1400	95% Adjusted Gamma UCL
I	Surface water, near-bottom, ≥ RM 4	SVOCs	Bis-(2-ethylhexyl)phthalate	µg/l	45	7	15.6	1.2	3.9	2.3	2.1	1.8	1.8	95% KM (Percentile Bootstrap) UCL
I	Surface water, near-bottom, ≥ RM 4	SVOCs	Butylbenzylphthalate	µg/l	46	16	34.8	0.14	25	1.8	1	1.9	1.9	95% KM (BCA) UCL
I	Surface water, near-bottom, ≥ RM 4	PCB Congeners	Total PCB Congeners	ng/l	77	77	100	2.05	183	31.2		38.9	38.9	95% H-UCL
I	Surface water, near-bottom, ≥ RM 4	PCB Congeners	PCB TEQ-Bird	ng/l	77	77	100	0.000194	0.0303	0.00523		0.00681	0.00681	95% H-UCL
I	Surface water, near-bottom, ≥ RM 4	PCB Congeners	PCB TEQ-Fish	ng/l	77	77	100	3.72E-06	0.000335	4.27E-05		5.07E-05	0.0000507	95% H-UCL
I	Surface water, near-bottom, ≥ RM 4	PCB Congeners	PCB TEQ-Mammal	ng/l	77	77	100	6.11E-05	0.0085	0.000731		0.00139	0.00139	95% Chebyshev (Mean, Sd) UCL
I	Surface water, near-bottom, ≥ RM 4	PCDDs/PCDFs	2,3,7,8-TCDD	ng/l	77	71	92.2	0.000996	1.83	0.0402	0.0026	0.141	0.141	95% KM (Chebyshev) UCL
I	Surface water, near-bottom, ≥ RM 4	PCDDs/PCDFs	PCDD/PCDF TEQ-Bird	ng/l	77	77	100	9.46E-07	1.84	0.0404		0.144	0.144	95% Chebyshev (Mean, Sd) UCL
I	Surface water, near-bottom, ≥ RM 4	PCDDs/PCDFs	PCDD/PCDF TEQ-Fish	ng/l	77	77	100	9.46E-07	1.84	0.0392		0.143	0.143	95% Chebyshev (Mean, Sd) UCL

Surface water EPCs

Assessment groups	EPC group	LOE requiring EPCs	COPEC	Units	N	# Detects	Detect Freq (%)	Min Detect	Max Detect	Mean Detect	Max DL	UCL	Selected EPC	Selected EPC Type
I	Surface water, near-bottom, ≥ RM 4	PCDDs/PCDFs	PCDD/PCDF TEQ-Mammal	ng/l	77	77	100	2.84E-06	1.84	0.0396		0.144	0.144	95% Chebyshev (Mean, Sd) UCL
I	Surface water, near-bottom, ≥ RM 4	PCDDs/PCDFs	Total TEQ-Bird	ng/l	77	77	100	0.00135	1.86	0.0456		0.151	0.151	95% Chebyshev (Mean, Sd) UCL
I	Surface water, near-bottom, ≥ RM 4	PCDDs/PCDFs	Total TEQ-Fish	ng/l	77	77	100	0.00111	1.84	0.0392		0.143	0.143	95% Chebyshev (Mean, Sd) UCL
I	Surface water, near-bottom, ≥ RM 4	PCDDs/PCDFs	Total TEQ-Mammal	ng/l	77	77	100	0.00118	1.84	0.0402		0.144	0.144	95% Chebyshev (Mean, Sd) UCL
I	Surface water, near-bottom, ≥ RM 4	OC Pesticides	4,4'-DDE	ng/l	49	46	93.9	0.29	8.26	1.9	0.153	2.9	2.9	95% KM (Chebyshev) UCL
I	Surface water, near-bottom, ≥ RM 4	OC Pesticides	4,4'-DDT	ng/l	49	44	89.8	0.0982	3.82	0.78	0.41	0.95	0.95	95% Adjusted Gamma KM-UCL
I	Surface water, near-bottom, ≥ RM 4	OC Pesticides	Dieldrin	ng/l	49	49	100	0.412	3.18	1.5		1.6	1.6	95% Student's-t UCL
I	Surface water, near-bottom, ≥ RM 4	OC Pesticides	Hexachlorobenzene	ng/l	49	11	22.4	0.154	1.04	0.437	1	0.23	0.23	95% KM (Percentile Bootstrap) UCL
I	Surface water, near-bottom, ≥ RM 4	OC Pesticides	Total Chlordane	ng/l	49	49	100	0.881	15.9	4.64		5.69	5.69	95% H-UCL
I	Surface water, near-bottom, ≥ RM 4	OC Pesticides	Total DDx	ng/l	49	49	100	0.443	21.1	5.03		6.77	6.77	95% H-UCL
I	Surface water, near-bottom, ≥ RM 4	Wet chemistry	Cyanide	mg/l	49	6	12.2	0.003	0.014	0.007	0.01	0.0075	0.0075	95% KM (t) UCL

Appendix D. Derivation of Surface Water TRVs for Benthic Invertebrates, Zooplankton, and Fish

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Acronyms

ACR	acute-to-chronic ratio
AWQC	ambient water quality criteria
BBP	butyl benzyl phthalate
BEHP	bis(2-ethylhexyl)phthalate
BERA	baseline ecological risk assessment
BLM	Biotic Ligand Model
CEQG	Canadian Environmental Quality Guidelines
CCC	criterion continuous concentration
CCME	Canadian Council of Ministers of the Environment
CEQG	Canadian Environmental Quality Guidelines
CMC	criterion maximum concentration
CF	conversion factor
COI	chemical of interest
COPEC	chemical of potential ecological concern
DDD	dichlorodiphenyldichloroethane
DDE	dichlorodiphenyldichloroethylene
DDT	dichlorodiphenyltrichloroethane
DOC	dissolved organic carbon
EC10	concentration that causes a non-lethal effect in 10% of an exposed population
EC20	concentration that causes a non-lethal effect in 20% of an exposed population
EC50	concentration that causes a non-lethal effect in 50% of an exposed population
ESL	ecological screening level
FAV	final acute value
FCV	final chronic value
FDA	US Food and Drug Administration
FRV	final residue value
GMAV	genus mean acute value
LC10	concentration that is lethal to 10% of an exposed population
LC20	concentration that is lethal to 20% of an exposed population

LC50	concentration that is lethal to 50% of an exposed population
LOAEL	lowest-observed-adverse-effect level
LOEC	lowest-observed-effect concentration
LOEL	lowest-observed-effect level
LPRSA	Lower Passaic River Study Area
MATC	maximum allowable toxicant concentration
NJDEP	New Jersey Department of Environmental Protection
NOEC	no-observed-effect concentration
NOEL	no-observed-effect level
ORNL	Oak Ridge National Laboratory
PAH	polycyclic aromatic hydrocarbon
PCB	polychlorinated biphenyl
PCDD/PCDF	polychlorinated dibenzodioxins/polychlorinated dibenzofurans
ppt	parts per thousand
RCRA	Resource Conservation and Recovery Act
SLERA	screening level ecological risk assessment
SMAV	species mean acute value
SMCV	species mean chronic value
SMV	species mean value
SSD	species sensitivity distribution
SVOC	semi-volatile organic compound
TBT	tributyltin
TCDD	tetrachlorodibenzo-*p*-dioxin
TEQ	toxic equivalent
total DDx	sum of all six DDT isomers (2,4′-DDD, 4,4′-DDD, 2,4′-DDE, 4,4′-DDE, 2,4′-DDT and 4,4′-DDT)
TRV	toxicity reference value
TSV	toxicity screening value
USEPA	US Environmental Protection Agency
UV	ultraviolet
WQG	Water Quality Guidelines
WQS	water quality standard

1 Introduction

This appendix details the methods for the derivation of surface water toxicity reference values (TRVs) that were used to evaluate various ecological receptors in the baseline ecological risk assessment (BERA) of the Lower Passaic River Study Area (LPRSA). Surface water toxicity screening values (TSVs) were refined from the screening-level ecological risk assessment (SLERA) for use in the BERA to ensure that the effect thresholds used in the BERA for determining the potential for risk were based on current toxicity data and relevant to the receptors being evaluated.

1.1 Toxicity Screening Values

In the SLERA (Appendix A), conservatively protective TSVs were used to identify chemicals of potential ecological concern (COPECs) for four aquatic receptor groups: benthic invertebrates, fish, aquatic plants, and zooplankton. Both freshwater and saltwater TSVs were selected based on chronic screening values, when available. The most conservative threshold value was selected from four sources:

1. New Jersey Department of Environmental Protection (NJDEP) ecological screening values for fresh and marine waters (NJDEP 2009b)
2. US Environmental Protection Agency (USEPA) chronic ambient water quality criteria (AWQC)
3. Oak Ridge National Laboratory (ORNL) Tier II values (Suter and Tsao 1996)
4. Canadian Council of Ministers of the Environment (CCME) Water Quality Guidelines for the Protection of Aquatic Life (Canadian Council of Ministers of the Environment 2016)

TSVs were also developed for use in the SLERA (Appendix A) to identify surface water COPECs for amphibians, reptiles, and aquatic plants. Amphibian-specific TSVs were based on concentrations representing observed sub-chronic effects for the most sensitive freshwater species based on a search of available data from scientific literature. The risk assessment for amphibians and reptiles, including the selection of amphibian-specific TRVs, is presented in Appendix N. Aquatic plant-specific TSVs used in a secondary screen (Appendix O) were based on the lowest effects levels for the most sensitive freshwater and saltwater species based on available data. Aquatic-plant specific TRVs were developed for the BERA in Appendix O.

A total of 27 surface water COPECs (including polychlorinated biphenyl [PCB] toxic equivalent [TEQ] and polychlorinated dibenzodioxins/polychlorinated dibenzofurans [PCDD/PCDF] TEQs for fish) were identified in the SLERA (Table 1-1).

Table 1-1. Summary of surface water COPECs

COPECS		
Metals		
Cadmium	Lead	Silver
Chromium	Mercury	Zinc
Copper	Selenium	
Butyltins		
TBT		
PCBs		
Total PCBs	PCB TEQ-fish	
PCDDs/PCDFs		
2,3,7,8-TCDD	PCDD TEQ-fish	Total TEQ-fish
Pesticides		
4,4'-DDE	Total DDx	Total Chlordane
4,4-DDT	Dieldrin	Hexachlorobenzene
PAHs		
Anthracene	Benzo(a)pyrene	Pyrene
Benzo(a)anthracene	Fluoranthene	
SVOCs		
Bis-(2-ethylhexyl)phthalate	Butylbenzyl phthalate	
Other		
Cyanide		

COPEC – chemical of potential ecological concern
DDD – dichlorodiphenyldichloroethane
DDE – dichlorodiphenyldichloroethylene
DDT – dichlorodiphenyltrichloroethane
PAH – polycyclic aromatic hydrocarbon
PCB – polychlorinated biphenyl
PCDD/PCDF – polychlorinated dibenzodioxins/polychlorinated dibenzofurans
SVOC – semivolatile organic compound
TBT – tributyltin
TCDD – tetrachlorodibenzo-*p*-dioxin
TEQ – toxic equivalent
total DDX – sum of all six DDT isomers (2,4′-DDD, 4,4′-DDD, 2,4′-DDE, 4,4′-DDE, 2,4′-DDT and 4,4′-DDT)

1.2 Toxicity Reference Values

For the BERA, TRVs were developed for each surface water COPEC identified in the SLERA. If aquatic life-based criteria were not available from existing USEPA AWQC or from the published literature based on the USEPA approach, then TRVs were derived for the purpose of this BERA in a manner generally consistent with the USEPA AWQC methods (Stephan et al. 1985). The sections below describe the process for selecting a TRV for each COPEC (Section 1.2.1), the method for deriving a TRV using species

sensitivity distributions (SSDs)[1] when an acceptable value based on the AWQC approach was not available (Section 1.2.2), and the acceptability criteria for the use of toxicity data when deriving a TRV using AWQC methods (Section 1.2.3).

1.2.1 TRV selection process

Acute and chronic surface water TRVs for the evaluation of risks to benthic invertebrates, zooplankton, and fish were selected using the following approach for each COPEC:

1. The USEPA AWQC were selected as the BERA TRVs unless the available AWQC were based on the protection of wildlife or human health, in which case the original AWQC documents were reviewed to identify the criteria relevant to aquatic life (i.e., the final acute value [FAV] and final chronic value [FCV]). . The FAV and FCV are typically based on SSDs. If an FAV and an FCV had been developed by USEPA, these values provided the basis for the acute and chronic TRVs selected for the BERA. Consistent with Stephan et al. (1985), the FAV was divided by two to provide the acute TRV (to estimate a "low effect" concentration, as the FAV is based on EC50 values). Chronic toxicity data were often insufficient (i.e., did not meet USEPA's "eight family rule") to derive an FCV directly, so an acute-to-chronic ratio (ACR) was applied to the FAV to provide the FCV; an ACR is the ratio of acute and chronic toxicity values, and in deriving FCVs, a chemical-specific ACR is used. The resulting FCV was selected as the chronic TRV.[2]
2. In cases where updated criteria have been developed following the USEPA AWQC approach using new data and improved methods, these values were selected as TRVs. Such updated criteria have been published for copper and saltwater (Chadwick et al. 2008);, lead and saltwater (Church et al. 2017), lead and freshwater (DeForest et al. 2017), silver and freshwater (HydroQual et al. 2007), and zinc and freshwater (DeForest and Van Genderen 2012). The new data and methods used to develop these criteria were all based on SSDs, with the exception of the criteria for copper and saltwater (Chadwick et al. 2008), which were based on the most sensitive endpoint evaluated.
3. If AWQC, or published values using the AWQC approach, were unavailable for a COPEC, and if data were sufficient, FAVs and FCVs were derived by developing SSDs in a manner consistent with the AWQC methodology outlined

[1] An SSD is a statistical model that can be used to calculate a chemical concentration protective of a predetermined percentage of a group of species. SSDs are intended to indicate both the total range and distribution of species sensitivities in natural communities, even when the actual range of sensitivities is unknown (Stephan 2002).

[2] In calculatiing an ACR, the acute value is median LC50 (concentration that is lethal to 50% of an exposed population), and the chronic value is the no-observed-effect concentration (NOEC) or maximum allowable toxicant concentration (MATC) (the geometric mean of the NOEC and lowest-observed-effect-concentration [LOEC]) (Stephan et al. 1985).

by Stephan et al. (1985), with some modifications.[3] The AWQC methodology and modifications used in this evaluation are described in Section 1.2.2. Acute or chronic data for a minimum of five species were required to develop an acute or chronic SSD. When an SSD was developed using acute toxicity data, the FAV was the 5th percentile concentration of the best-fit distribution identified using @RISK, based on the Anderson-Darling statistic. The FAV divided by two provided the acute TRV. When chronic toxicity data were sufficient (i.e., a minimum of five species) to develop an SSD, the FCV was the 5th percentile concentration for the best-fit distribution, which was selected as the chronic TRV. In most cases, insufficient chronic toxicity data were available, so the FCV was derived from the FAV using an appropriate ACR. As noted, USEPA uses a chemical-specific ACR to derive FCVs, but an ACR also may be identified based on chemical class or chemical mode of action. Consistent with AWQC methodology, if there was an acute or chronic toxicity value for a recreationally or commercially important species (e.g., rainbow trout or salmon), then the lowest toxicity value was selected as basis for the TRV.

4. When data were insufficient to develop a chronic or acute SSD (e.g., data were not available for at least five species), then the acute and chronic TRVs were based on the lowest toxicity values available from the literature. The acute TRV was selected as the lowest acute toxicity value divided by a factor of two. The chronic TRV was selected as the lowest chronic toxicity value (i.e., LOEC or MATC). If chronic toxicity data were unavailable or unacceptable, then the chronic TRV was derived from the lowest acute toxicity value using an appropriate ACR.

For some COPECs, TRVs incorporate toxicity data using a biotic ligand model (BLM). The BLM is a tool that can mechanistically predict the bioavailability of a variety of metals under the large range of water chemistry conditions that are observed in nature. The BLM approach considers the effect of water chemistry on metals toxicity, and TRVs are developed on a sample-specific basis. BLM-based models were used in the derivation of surface water TRVs for copper (freshwater and estuarine), lead (freshwater), silver (freshwater), and zinc (freshwater).

1.2.2 Species sensitivity distributions

SSDs were developed in a manner consistent with the AWQC methodology outlined by Stephan et al. (1985). However, when toxicity data were limited, some modifications were made to the methodology (i.e., certain criteria were relaxed) in order to allow for a larger dataset to use in this evaluation. The AWQC methodology requires that data

[3] The modifications to the AWQC methodology included the following: a) use of @RISK software to model the distribution of available acute toxicity values and select the 5th percentile of the best-fit curve as the basis of the FCV, and b) use of ACRs for organic chemicals obtained or derived from sources other than USEPA.

must meet the "eight family" rule. For freshwater criteria, at least eight different families should be represented by at least one freshwater species, such that all of the following are included:

- Family Salmonidae
- A second fish family
- A third family in the phylum Chordata (e.g., other fish family or amphibian, etc.)
- A planktonic crustacean (e.g., cladoceran, copepod, etc.)
- A benthic crustacean (e.g., ostracod, isopod, amphipod, crayfish, etc.)
- An insect (e.g., mayfly, dragonfly, damselfly, stonefly, midge, etc.)
- Another family in a phylum besides Arthropoda or Chordata
- A family in any order of insect or any phylum not already represented

For saltwater criteria, at least eight different families should be represented by at least one saltwater species such that all of the following are included:

- Two families in the phylum Chordata
- A family in a phylum besides Arthropoda or Chordata
- Either the Mysidae or Penaeidae family
- Three families not in the phylum Chordata
- A family not already represented

The "eight family" rule was followed if sufficient data were available; otherwise, a simple rule of a minimum of five species was required to develop an acute or chronic SSD for this evaluation. SSD-based TRVs were derived using the same methods (described below), regardless of the number of species or families represented by the SSD. The five species were not required to be from different families, although they were typically from different genera. Of the SSDs presented in Attachment D1, anthracene, butyl benzyl phthalate (BBP), benzo(a)pyrene, dichlorodiphenyldichloroethylene (DDE), and hexachlorobenzene were represented by fewer than eight families, and only benzo(a)pyrene, DDE, and hexachlorobenzene were represented by fewer than five families. The use of five species rather than eight families in the derivation of SSD values is a potentially significant source of uncertainty. It is unknown whether this uncertainty would result in more or less conservative SSD-based TRVs.

Acute and chronic toxicity data for various fish and invertebrate species meeting the TRV selection criteria outlined in Section 1.2.3 were considered in developing the SSDs. For each species represented in an acute or chronic toxicity dataset by at least one toxicity value, the geometric mean of all toxicity values (e.g., LC50s and EC50s [concentration that causes a non-lethal effect in 50% of an exposed population] or

LOECs) for all toxicity endpoints (i.e., survival, growth, or reproduction) was calculated to determine the species mean acute value (SMAV) or species mean chronic value (SMCV).[4] In this evaluation, these values are referred to as species mean values (SMVs).

SMVs were assigned numerical ranks (e.g., "1" for the lowest SMV), then assigned a percentile value calculated using Equation 1:

$$\boldsymbol{Percentile\ Rank = Rank \times \left(\frac{100}{n+1}\right)} \qquad \textbf{Equation 1}$$

Where: n = number of SMVs

The SMVs and corresponding percentile values were then plotted with effect concentrations on the x-axis and percentile values on the y-axis. In the @RISK program, the best-fit distribution was selected based on the Anderson-Darling goodness-of-fit test, which generally provides a better fit to the low end (i.e., lower tail) of the distribution.[5] For SSDs based on acute toxicity data, the FAV was selected as the 5th percentile of the best-fitting distribution. If an SSD based on chronic toxicity data could not be developed, the FCV was derived from the FAV using an ACR. ACRs were obtained from either the original AWQC document specific to a given COPEC, or from an alternative source when an appropriate chemical-specific ACR could be identified. The ACRs used for each TRV derivation are summarized in Table 1-2 and further described in Section 2. When the lowest-ranked SMV was lower than the 5th percentile and represented a recreationally and/or commercially important species (e.g., largemouth bass), the acute or chronic SMV was selected as the FAV or FCV (as applicable).

Table 1-2. Surface water acute-to-chronic ratios

Chemical of Potential Ecological Concern	Acute-Chronic Ratio	Source
Metals		
Cadmium	8.291[a]	USEPA (2015)
Chromium	2.971[b]	USEPA (1996a)
Copper	3.22[b]	USEPA (2007a)
Mercury	3.731[a,b]	USEPA (1984)
Selenium	8.314[a]	EPA (1987)
Silver	5.19[b]	HydroQual et al. (2007)
	5.536[a]	
Zinc	2.208[a]	USEPA (1987)

[4] Stephan et al. (1985) uses the genus mean acute value (GMAV) as the geometric mean of SMAVs available for a genus. In limited datasets, the SMAVs are equivalent to the GMAVs when there is only one species per genus.

[5] Stephan et al. (1985) calculates the FAV from the four lowest-ranked GMAVs; the @RISK program was selected in order to better fit the entire distribution of data, rather than just the four lowest values.

Chemical of Potential Ecological Concern	Acute-Chronic Ratio	Source
Butyltins		
Tributyltin	12.69[a]	USEPA (2003b)
Polychlorinated Biphenyls		
Total PCBs	8.4[a,b]	USEPA (1980f)
Polychlorinated Dibenzodioxins/ Polychlorinated Dibenzofurans		
2,3,7,8-TCDD	8.3 [a,b]	Raimondo et al. (2007)
Pesticides		
4,4′-DDE	3.6 [a,b]	Raimondo et al. (2007)
4,4′-DDT		
Total DDx		
Total chlordane	14 [a,b]	USEPA (1980b)
Dieldrin	8.5 [a]	USEPA (1980a)
Polycyclic Aromatic Hydrocarbons		
Anthracene	5.09 [a,b]	DiToro et al. (2000)
Benzo(a)pyrene		
Fluoranthene		
Pyrene		
Semi-volatile Organic Compounds		
BEHP	6.9 [a,b]	DeFoe et al. (1990)
Butylbenzylphthalate		
Other		
Cyanide	8.6[b]	Gensemer et al. (2006b), USEPA (1985)
	6.5[a]	Gensemer et al. (2006b),

[a] Acute-chronic ratio applied to saltwater acute data.
[b] Acute-chronic ratio applied to freshwater acute data.

ACR – acute-to-chronic ratio
BEHP – bis(2-ethylhexyl)phthalate
COPEC – chemical of potential ecological concern
DDD – dichlorodiphenyldichloroethane
DDE – dichlorodiphenyldichloroethylene
DDT – dichlorodiphenyltrichloroethane
PAH – polycyclic aromatic hydrocarbon
PCB – polychlorinated biphenyl
PCDD/PCDF – polychlorinated dibenzodioxins/polychlorinated dibenzofurans
SVOC – semivolatile organic compound
TBT – tributyltin
TCDD – tetrachlorodibenzo-*p*-dioxin
total DDX – sum of all six DDT isomers (2,4′-DDD, 4,4′-DDD, 2,4′-DDE, 4,4′-DDE, 2,4′-DDT and 4,4′-DDT)
USEPA – US Environmental Protection Agency

1.2.3 Toxicity data

This section summarizes the acceptability criteria for identifying the toxicity data used to derive BERA TRVs for COPECs that did not have USEPA AWQC or values derived

using the AWQC methodology from the published literature. In order to define the most current toxicity dataset available, aquatic toxicity datasets were compiled for each COPEC using the USEPA's ECOTOX database (USEPA 2016c). Datasets were limited to include only those data relevant to aquatic species.[6]

For COPECs with freshwater and/or saltwater AWQC, aquatic toxicity data published at least two years prior to the published date of the AWQC document were exported from the ECOTOX database (USEPA 2016c). For all other COPECs, ECOTOX data published between 1978 and March 2015 were reviewed.

The ECOTOX query parameters were limited to:

- Relevant test organisms (i.e., crustaceans, fish, "other invertebrates," mollusks, worms)
- Laboratory tests only
- Saltwater and freshwater media
- Growth, population, mortality, reproduction, and behavioral effect measurements

Acute toxicity data were selected for further review for potential inclusion in TRV derivation if they met the following requirements:

- Measured effects were for growth, mortality, reproduction, and behavior.[7]
- Tests were conducted with any species except brine shrimp.[8]
- Data were from studies that used controls, and controls were not noted as "unsatisfactory" in the ECOTOX database.
- Results were reported as 96-hr LC50s for fish, bivalves, and other aquatic invertebrates. If LC50s were limited or not available, 96-hr EC50s were retained for review.
- Results were reported as 48- to 96-hour LC50s for daphnids/cladocerans.[9] If LC50s were limited or not available, 48- to 96-hour EC50s were retained for review.

[6] Some TSVs (e.g., for total PCBs, 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD), and other organic chemicals of interest [COIs]) used in the SLERA were protective of wildlife or human health (i.e., a 304(a) aquatic life criterion using the final residue value [FRV] procedure issued in 1980 or 1986, which is no longer used by USEPA to derive chronic criteria).

[7] Behavioral effect measurements were not typically considered an acceptable standard endpoint for TRV development, but some toxicity data for behavioral effects that result in mortality (e.g., immobilization in fish) were considered on a case-by-case basis for inclusion in SSDs.

[8] The inclusion of all species is a modification from Stephan et al. (1985), which recommends only North American species, in order to augment the datasets for COPECs for which data are already limited.

[9] Exposures greater than 24 hrs with single-celled organisms were not considered acute exposures and were included for further evaluation as chronic toxicity data.

Chronic toxicity data were reviewed as follows:

- Measured effects were for growth, mortality, reproduction, and behavior.[10]
- Tests were conducted with any species except brine shrimp.
- Data were from studies that used controls, and controls were not noted as "unsatisfactory" in the ECOTOX database.
- Data were from flow-through exposures for all test organisms; renewal exposures were considered acceptable for daphnids.
- Data were from studies with reported measured chemical analyses; data from studies for which target concentrations were reported based on nominal concentrations rather than analytically measured were retained for review, if data were limited.
- Results represented NOEC/no-observed-effect level (NOEL) and LOEC/lowest-observed-effect level (LOEL) values; if data were limited, other effect levels, such as LC10/EC10 (concentration that is lethal to 10% of an exposed population/concentration that causes a non-lethal effect in 10% of an exposed population) and LC20/EC20 (concentration that is lethal to 20% of an exposed population/concentration that causes a non-lethal effect in 20% of an exposed population), were retained.
- Life cycle, partial life cycle, or early life stage tests were preferred for all test organisms, if test type was reported, with the following minimum exposure times:
  - Fish life cycle - at least 24 days (90 days for salmonids)
  - Daphnid life cycle - at least seven days, or three broods
  - Mysid life cycle - at least seven days past first brood
  - Fish early life stage - 28 to 32 days (60 days post-hatch for salmonids)

If data were extremely limited, then the alternative LC50s or EC50s for non-standard endpoints (e.g., behavior) or exposure types (e.g., sub-chronic) and studies with unmeasured chemistry or unsatisfactory controls were considered. The toxicity data used to develop the SSDs for the COPECs presented in Section 2 are compiled in Attachment D1.

[10] Behavioral effect measurements were not typically considered an acceptable standard endpoint for TRV development, but some toxicity data for behavioral effects that result in mortality (e.g., immobilization in fish) were considered on a case by case basis for inclusion in SSDs.

2 Benthic Invertebrates, Zooplankton, and Fish

The following sections present the derivation methods for the BERA TRVs selected to evaluate surface water COPECs. Acute and chronic TRVs were developed using all available and acceptable toxicity data for benthic invertebrate, zooplankton, and fish species. All available data were used due (primarily) to the paucity of toxicity data to derive TRVs for each of these ecological receptor groups. The selected TRVs were determined to be appropriately conservative for use in a BERA in that they represented the most sensitive species.[11]

Table 2-1 provides a summary of the selected TRVs, with the TSVs used in the SLERA for comparison.

[11] Separate chronic saltwater TRVs were selected for 2,3,7,8-tetrachlorodibenzo-*p*-dioxin (TCDD) based on fish and benthic invertebrate toxicity data, per USEPA recommendation.

Table 2-1. Summary of surface water TSVs and TRVs

COPEC	Media	TSV (µg/L)	TRVs		
			Acute	Chronic	TRV Basis
Metals[a]					
Cadmium	saltwater	0.12	33	7.9	dissolved saltwater AWQC from USEPA (2016a)
	freshwater	0.09	1.4–6.5	0.59–2.0	CMC and CCC values derived using equations from USEPA (2016a) and site-specific hardness concentrations; TRV ranges reflect range of mean sample-specific hardness values (see Table 2-2)
Chromium	saltwater	1.5	1,100	50	saltwater AWQC for dissolved chromium(VI) reported by USEPA (2017)
	freshwater	1	16	11	freshwater AWQC for dissolved chromium(VI) from USEPA (1996a), converted to dissolved chromium using USEPA-recommended conversion factor (USEPA 2017c)
Copper	saltwater	3.1[b]	0.80–11.2[c,d]	0.80–11.2[c,d]	sample-specific CMC based on saltwater BLM developed for most sensitive species (Chadwick et al. 2008); CMC assumed to be protective of chronic toxicity
	freshwater	2	14.3–100[c,d]	8.9–62.1[c,d]	sample-specific CCC and CMC (using ACR) based on freshwater BLM from USEPA (2007b)
Lead	saltwater	8.1	100	9.7	proposed acute and chronic saltwater criteria from Church et al. (2017) based on acute and chronic SSDs
	freshwater	2.5	192–890[c,d]	7.4–42.3[c,d]	sample-specific CCC and CMC (using ACR) based on freshwater BLM developed by DeForest et al. (2017)
Mercury	saltwater	0.016	1.8	0.94	saltwater AWQC from USEPA (1984), converted to dissolved mercury
	freshwater	0.026	1.4	0.21	acute AWQC from USEPA (1996a), converted to dissolved mercury using USEPA metals-specific conversion factor (USEPA 2017c); chronic TRV is lowest LOEC from (USEPA 2016c)

COPEC	Media	TSV (µg/L)	TRVs		
			Acute	Chronic	TRV Basis
Selenium	saltwater	71	290	71	saltwater AWQC (USEPA 2017c; U.S. Environmental Protection Agency 1999)
	freshwater	1	na	3.1	dissolved selenium CCC from USEPA (2016b)
Silver	saltwater	0.12[e]	5.54	2.0	5th percentile of saltwater SSD based on acute toxicity data; chronic value derived using an ACR
	freshwater	0.12	1.8	0.69	acute and chronic values based on a proposed saltwater BLM from HydroQual et al. (2007)
Zinc	saltwater	81[b]	75	19	5th percentiles of saltwater SSDs based on acute and chronic toxicity data
	freshwater	30	195–1,660[c,d]	44.8–229[c,d]	Sample-specific CCC and CMC based on freshwater BLM from DeForest and Van Genderen (2012)
Butyltins					
TBT	saltwater	0.0074	0.42	0.066	USEPA-calculated saltwater FAV and FCV from USEPA (2003b)
PCBs					
Total PCBs	saltwater	0.03	4.6	0.16	5th percentile of saltwater SSD based on acute toxicity data; lowest chronic LOEC (*C. variegatus* reproduction)[f]
	freshwater	0.014	1.2	0.27	updated USEPA-calculated FAV and FCV from USEPA (1980f) and USEPA (2016c); chronic value derived using an ACR
PCDDs/PCDFs					
2,3,7,8-TCDD (fish)	saltwater	3.00×10^{-9} [e]	0.025	0.006	lowest sub-chronic LOEC for a saltwater species (*D. rerio*) divided by 2; chronic value derived using an ACR
	freshwater	3.00×10^{-9}	0.0041	9.8×10^{-4} [f]	lowest acute LC50 for a freshwater species (*O. latipes*); chronic value derived using an ACR
2,3,7,8-TCDD (invertebrates)	saltwater	3.00×10^{-9} [e]	0.025[g]	1.65×10^{-5}	lowest chronic LOEC for a saltwater invertebrate species (*Crasseotrea virginica*); acute value based on lowest sub-chronic LOEC for a saltwater fish species (*D. rerio*) divided by 2[g]

COPEC	Media	TSV (µg/L)	TRVs		
			Acute	Chronic	TRV Basis
	freshwater	3.00×10^{-9}	0.0041	9.8×10^{-4} [f]	lowest acute LC50 for a freshwater species (*O. latipes*); chronic value derived using an ACR
Pesticides					
4,4′-DDE	saltwater	4.51×10^{-9} [e]	1.25	0.30	lowest acute and chronic toxicity values for saltwater species (*Nitocra spinipes*)
	freshwater	4.51×10^{-9}	2.40	1.40	5th percentile of freshwater SSD based on acute toxicity data; chronic value derived using an ACR
4,4′-DDT	saltwater	0.001	0.037	0.020	updated USEPA-calculated saltwater FAV and FCV from USEPA (1980c) and USEPA (2016c); FCV derived using an ACR for DDT-type chemicals
	freshwater	0.001	0.42	0.23	updated USEPA-calculated freshwater FAV and FCV from USEPA (1980c) and USEPA (2016c); FCV derived using an ACR for DDT-type chemicals
Total DDx	saltwater	0.001	0.037	0.020	same as 4,4′-DDT
	freshwater	0.001	0.42	0.23	same as 4,4′-DDT
Total chlordane	saltwater	0.004	0.045	0.0064	USEPA-calculated saltwater FAV and FCV from USEPA (1980b)
	freshwater	0.0043	1.2	0.17	USEPA-calculated freshwater FAV and FCV from USEPA (1980b)
Dieldrin	saltwater	0.0019	0.36	0.084	USEPA-calculated saltwater FAV and FCV from USEPA (1980a)
Hexachlorobenzene	saltwater	0.0003[e]	71	23	lowest acute LC50 for a saltwater species (*Solea solea*); chronic value derived using an ACR
	freshwater	0.0003	180	57	5th percentile of freshwater SSD based on acute toxicity data; chronic value derived using an ACR
PAHs					
Anthracene	saltwater	0.012[e]	34.5	13.5	lowest acute LC50 for a saltwater species (*Mulinia lateralis*); chronic value derived using an ACR
	freshwater	0.012	0.26	0.10	5th percentile of freshwater SSD based on acute toxicity data; chronic value derived using an ACR

COPEC	Media	TSV (µg/L)	TRVs		
			Acute	Chronic	TRV Basis
Benzo(a)anthracene	saltwater	0.018[e]	0.48	0.19	same as freshwater TRVs[h]
	freshwater	0.018	0.48	0.19	lowest acute LC50 for a freshwater species (*D. magna*); chronic value derived using an ACR
Benzo(a)pyrene	saltwater	0.014[e]	0.51	0.20	lowest acute LC50 for a saltwater species (*D. pulex*); chronic value derived using an ACR
	freshwater	0.014	2.03	0.80	5th percentile of freshwater SSD based on acute toxicity data; chronic value derived using an ACR
Fluoranthene	saltwater	0.04[e]	3.02	1.19	5th percentile of saltwater SSD based on acute toxicity data; chronic value derived using an ACR
	freshwater	0.04	13.9	5.46	5th percentile of freshwater SSD based on acute toxicity data; chronic value derived using an ACR
Pyrene	saltwater	0.025[e]	0.46	0.18	lowest acute EC50 for a saltwater species (*M. lateralis*); chronic value derived using an ACR
	freshwater	0.025	2.2	0.84	lowest acute EC50 for a freshwater species (*D. magna*); chronic value derived using an ACR
SVOCs					
BEHP	saltwater	0.3[e]	500	100	lowest acute LC50 for a saltwater species (*C. aggregata*); lowest chronic LOEC for a saltwater species (*Oryzias melastigma*)
	freshwater	0.3	24.1	7.0	5th percentile of freshwater SSD based on acute toxicity data; chronic value derived using an ACR
Butylbenzylphthalate	saltwater	19[e]	245	71	lowest acute LC50 for a saltwater species (*C. aggregata*); chronic value derived using an ACR
	freshwater	19	107	30.9	5th percentile of freshwater SSD based on acute toxicity data; chronic value derived using an ACR
Other					
Cyanide	saltwater	1	6.8	2.1	5th percentile of saltwater SSD based on acute toxicity data; chronic value derived using an ACR
	freshwater	5	32.3	7.5	5th percentile of saltwater SSD based on acute toxicity data; chronic value derived using an ACR

[a] TSVs and TRVs for metals are based on the dissolved chemical form unless otherwise noted.

[b] TRV-based total chemical form.

[c] For COPECs with BLM-based TRVs, the distinction between freshwater and saltwater was based on 3.5 ppt salinity.

[d] As they are sample specific, BLM-based TRVs are a range of values (i.e., each individual sample has a corresponding BLM-based TRV).

[e] The freshwater TSV was used to as a surrogate saltwater TSV due to lack of data; a saltwater TSV for this chemical or chemical form was not available.

[f] No acute estuarine TRV was selected for invertebrates. Rationale is provided in Section 2.3.

[g] Due to lack of acceptable toxicity data for freshwater invertebrate species, the same freshwater TRV was used in both the fish and benthic invertebrate assessments.

[h] Due to a lack of acceptable toxicity data for saltwater species, the selected freshwater TRV will be used as a surrogate saltwater TRV.

ACR – acute to chronic ratio
AWQC – ambient water quality criteria
BEHP – bis(2-ethylhexyl)phthalate
BLM – Biotic Ligand Model
CCC – criterion continuous concentration
CMC – criterion maximum concentration
COPEC – chemical of potential ecological concern
DDD – dichlorodiphenyldichloroethane
DDE – dichlorodiphenyldichloroethylene
DDT – dichlorodiphenyltrichloroethane
EC50 – concentration that causes a non-lethal effect in 50% of an exposed population
FAV – final acute value
FCV – final chronic value
LC50 – concentration that is lethal to 50% of an exposed population
LOEC – lowest-observed-effect concentration
PAH – polycyclic aromatic hydrocarbon
PCB – polychlorinated biphenyl
PCDD – polychlorinated dibenzodioxin
PCDF – polychlorinated dibenzofuran
ppt – parts per thousand
RM – river mile
SSD – species sensitivity distribution
SVOC – semi-volatile organic compound
TBT – tributyltin
TCDD – tetrachlorodibenzo-*p*-dioxin
TEQ – toxic equivalent
total DDx – sum of all six DDT isomers (2,4′-DDD, 4,4′-DDD, 2,4′-DDE, 4,4′-DDE, 2,4′-DDT and 4,4′-DDT)
TRV – toxicity reference value
TSV – toxicity screening value
USEPA – US Environmental Protection Agency

2.1 METALS AND BUTYLTINS

TRVs for surface water were derived for seven metals (i.e., cadmium, chromium, copper, lead, mercury, silver, and zinc) and tributyltin (TBT) in freshwater and/or saltwater. Available toxicity data were compiled for each metal and SSDs were developed if data were sufficient.

2.1.1 Cadmium

Cadmium was identified as a COPEC based on freshwater and saltwater TSVs of 0.09 and 0.12 µg/L, respectively. The TSVs are CCME Water Quality Guidelines (WQGs) for long-term (i.e., chronic) exposure to total cadmium in surface waters (CCME 2014). Both CCME TSVs are based on CCME's default hardness of 50 mg/$CaCO_3L^{-1}$. The lowest hardness concentration detected in the LPRSA was 76.9 mg/L as $CaCO_3$; as cadmium toxicity is greater at lower hardness, these TSVs were considered appropriately conservative screening values.

The freshwater value was established as a WQG in 2014 based on the 5th percentile of an SSD generated using data for 36 aquatic species, including amphibians and plants/algae (CCME 2014). The saltwater (i.e., marine) value was established as a WQG in 1996 based on a 20-day lowest-observed-adverse-effect level (LOAEL) for 17% increased mortality of mysid shrimp (*M. bahia*) multiplied by a safety factor[12] of 0.1 (CCREM 2008).

2.1.1.1 Freshwater

The TRVs selected for the BERA were based on the criterion maximum concentration (CMC) and criterion continuous concentration (CCC) for dissolved cadmium in freshwater, as presented in (USEPA 2016a). The acute and chronic toxicity datasets compiled by USEPA to calculate the freshwater FAV and FCV represented freshwater species in 75 and 20 genera, respectively. The FAV selected by USEPA was equal to the SMAV for rainbow trout (3.727 µg/L total cadmium), in order to be protective of rainbow trout and all other species, including salmonids.

[12] Safety factors (or uncertainty factors) are "unitless numbers that are used to account for various uncertainties that are associated with deriving guidelines" and are commonly applied in the development of Canadian Environmental Quality Guidelines (CEQGs) (CCME 1999b).

From the FAV, USEPA calculated freshwater CMC and CCC for dissolved cadmium at hardness concentrations ranging from 25 to 400 mg/L as $CaCO_3$ using the following equations:

$$\mathbf{CMC = e^{(0.9789 \times \ln(hardness) - 3.866)} \times (1.136672 - (\ln[hardness] \times CF)} \qquad \textbf{Equation 2-1}$$

Where:

CMC = dissolved criterion maximum concentration

Hardness = hardness value with units of mg/L as $CaCO_3$

CF = conversion factor from total to dissolved of 0.041838

$$\mathbf{CCC = e^{(0.7977 \times \ln(hardness) - 3.909)} \times (1.101672 - (\ln[hardness] \times CF)} \qquad \textbf{Equation 2-2}$$

Where:

CCC = dissolved criterion continuous concentration

Hardness = hardness value with units of mg/L as $CaCO_3$

CF = conversion factor from total to dissolved of 0.041838

Hardness in the freshwater portion of the LPRSA ranged from 76.9 to 3,510 mg/L as $CaCO_3$, with an average hardness of 490 mg/L. Because of the variability of hardness concentrations in the LPRSA, Equations 2-1 and 2-2 were used to calculate location-specific acute and chronic freshwater TRVs (Table 2-2). Cadmium toxicity decreases with increased hardness (USEPA 2016a). Therefore, the CMC and CCC values adjusted to 400 mg/L as $CaCO_3$ were determined to be sufficiently conservative to calculate chronic and acute TRVs, respectively, for LPRSA locations with average hardness concentrations greater than 400 mg/L as $CaCO_3$ (Table 2-2).

Table 2-2. Acute and chronic TRVs for dissolved cadmium at each LPRSA water sampling location

Reach	RM	Average Hardness (mg/L as CaCO3)	Acute TRV[a] (µg/L)	Chronic TRV[a] (µg/L)
3	4.13	2,330	6.5	2.0
3	4.25	872	6.5	2.0
3	4.26	2,280	6.5	2.0
3	4.48	579	6.5	2.0
3	4.67	1,178	6.5	2.0
4	6.5	785	6.5	2.0
4	6.66	104	1.9	0.74
4	6.67	77	1.4	0.59
4	6.71	667	6.5	2.0

Reach	RM	Average Hardness (mg/L as CaCO3)	Acute TRV[a] (µg/L)	Chronic TRV[a] (µg/L)
4	6.72	1,050	6.5	2.0
4	7.7	675	6.5	2.0
5	9	440	6.5	2.0
6	10.21	158	2.8	1.0
6	10.22	89	1.6	0.66
6	10.23	123	2.2	0.84

[a] Acute and chronic TRVs are the CMC and CCC, respectively, calculated using the site-specific hardness value if the value is < 400 mg/L (as $CaCO_3$) and using a hardness of 400 mg/L (as $CaCO_3$) if the site-specific value is > 400 mg/L (as $CaCO_3$).

CCC – criterion continuous concentration

CMC – criterion maximum concentration

RM – river mile

TRV – toxicity reference value

2.1.1.2 Saltwater

The saltwater TRVs selected for the BERA were also based on the CMC and CCC for dissolved cadmium in saltwater (USEPA 2016a)The acute toxicity dataset compiled by USEPA represented saltwater species in 79 genera. The CMC was derived by dividing the FAV of 66.25 µg/L by 2. Since the chronic toxicity dataset represented only two saltwater species in one genus, the CCC was derived by dividing the FAV by an ACR of 8.291, which is based on the geometric mean of seven genus-level ACRs for one saltwater invertebrate species, two freshwater invertebrate species, and four freshwater fish species. The resulting CMC of 33 µg/L and CCC of 7.9 µg/L were selected as the acute and chronic freshwater TRVs, respectively.

2.1.2 Chromium

Chromium was identified as a COPEC based on a freshwater TSV of 1.0 µg/L and a saltwater TSV of 1.5 µg/L, which are both CCME WQG values for total hexavalent chromium, or chromium(VI). The freshwater WQG was based on a 14-day LOEC for an invertebrate species (*C. dubia*) and a safety factor of 0.1; the marine WQG was derived from a 15-day IC50 for reduced growth of a dinoflagellate species (CCME 1999a).

2.1.2.1 Freshwater

The freshwater AWQC for chromium(VI), which were last updated by USEPA in 1995, were selected as the basis for the acute and chronic TRVs (USEPA 1996a). The CMC and CCC for total recoverable chromium, which were selected as the acute and chronic TRVs, respectively, were 16 and 11 µg/L. The CMC and CCC were derived from acute toxicity data for 28 freshwater genera; invertebrate species are generally more sensitive that fish species, with cladoceran species being the most sensitive. The CCC was calculated from the CMC with an ACR of 2.917. USEPA determined the CMC and CCC

to be sufficiently protective of commercially or recreationally important fish or invertebrate species.

2.1.2.2 Saltwater

The saltwater AWQC for chromium (VI) were selected as the basis for the acute and chronic BERA TRVs. The CMC and CCC derived for saltwater species were 1,100 µg/L and 50 µg/L, respectively (USEPA 2017). The CMC was derived from acute toxicity data for 12 marine invertebrate species, and the CCC was based on life-cycle or partial life-cycle data for 3 marine worm species.

2.1.3 Copper

Copper was identified as a COPEC based on freshwater and saltwater TSVs of 2 and 3.1 µg/L, respectively. The freshwater TSV is a CCME WQG established in 1987 for waters with a hardness up to 82 mg/$CaCO_3L^{-1}$, which is the recommended default for waters of unknown hardness (CCREM 2008). The saltwater TSV for copper of 3.1 µg/L is the AWQC for dissolved copper in saltwater adopted as an NJDEP ecological screening criterion (NJDEP 2009a).

2.1.3.1 Freshwater

The freshwater AWQC for copper, based upon the BLM, were selected as the basis for the acute and chronic TRVs (USEPA 2007a). The BLM approach considers the effect of water chemistry on copper toxicity (Di Toro et al. 2001; Santore et al. 2001), so TRVs were developed on a sample-specific basis.

To derive freshwater AWQC for copper, USEPA (2007a) assembled a database of acute toxicity data of acceptable quality for 27 genera, representing 38 species. The effect concentrations that comprised this database were associated with copper exposures under a wide range of water chemistry conditions. The copper BLM was used to normalize the effect concentrations by accounting for the effects of water chemistry in the actual toxicity tests, and then predicting all effect concentrations (for all species) for a specified water chemistry condition. The normalization procedure required the derivation of critical accumulation concentrations, which are a function of organism sensitivity, for each effect concentration in the toxicity database. The critical accumulation is the predicted concentration of copper sorbed to the biotic ligand that causes a specific toxic effect (e.g., 50% reduction in survival). Using the critical accumulation for each observed effect concentration, the BLM was used to predict the dissolved copper concentrations required to achieve the critical accumulations under a standard water chemistry condition: This represents the BLM-normalized SSD. From the BLM-normalized SSD, the 5th percentile value of the SSD (FAV) was estimated using a triangular distribution fit to the four most sensitive GMAVs following USEPA methods (Stephan et al. 1985). The critical accumulation associated with the FAV was then derived using the BLM in speciation mode. With this critical accumulation, FAVs

can be calculated for sample- or site-specific chemistry of interest. The CMC (or acute TRV) is the BLM-calculated FAV divided by two.

In USEPA (2007a), there were insufficient chronic data to derive an FCV directly from an SSD. As an alternative (US Environmental Protection Agency 1985b), the CMC (or chronic TRV) is the BLM-calculated FAV divided by the ACR of 3.22. The final ACR was derived from the geometric mean of ACRs from three invertebrate species and three fish species. Sample-specific water chemistry was used to calculate acute and chronic copper TRVs in the freshwater segment of the LPRSA. For samples with missing major ion data, BLM inputs were estimated from regressions with salinity; for samples with missing pH and temperature data, TRVs were calculated using the event-, station-, and depth-specific minimum, maximum, and mean values. The ranges of acute and chronic freshwater copper TRVs, based on the parameterization described above, were 14.3 to 100 µg/L and 8.9 to 62.1 µg/L, respectively. For near-bottom surface water samples, the ranges of acute and chronic TRVs were 14.3 to 76.1 µg/L and 8.9 to 47.2 µg/L, respectively. These ranges are used to evaluate risks of surface water exposure to benthic invertebrates.

2.1.3.2 Saltwater

A saltwater BLM, described in Chadwick et al. (2008), was developed to predict the toxicity of copper to the sensitive larval stages of several marine invertebrates. The most sensitive endpoint evaluated was the larval development of *Mytilus galloprovincialis*. In addition to evaluating larval development EC50s, copper accumulation was reported. The saltwater BLM was able to characterize the observed copper accumulation and predict effect concentrations. Because the saltwater BLM was capable of predicting effect concentrations for *M. galloprovincialis*, the BLM was selected as the basis for the acute and chronic TRVs. Using 44 GMAVs, representing 52 species, USEPA (2003a) derived an FAV of 12.3 µg/L, using the four lowest GMAVs. However, the FAV was lowered to 6.19 µg/L to be protective of *Mytilus sp.,* which had the lowest SMAV in the SSD. Application of the saltwater BLM, calibrated to *M. galloprovincialis*, therefore provides toxicity predictions for the most sensitive genera (and potentially the most sensitive species) in the saltwater copper SSD. On a sample-specific basis, saltwater BLM predictions represent FAVs. Accordingly, CMCs or acute TRVs would be calculated by dividing the sample-specific FAVs by two.

In derivation of copper CCCs for saltwater species, only one chronic copper value was available (USEPA 2003a), and it was for the relatively insensitive sheepshead minnow (*Cyprinodon variegatus*). While the sheepshead minnow is relatively insensitive, it provides an ACR of 1.48. A more recent study by Arnold et al. (2011), which used the relatively sensitive rotifer (*Brachionus plicatilus*), can be used to derive an ACR of 1.70. Both of these ACRs are less than two, indicating that the CMC (derived from the most sensitive species in the acute saltwater SSD) is likely to be protective of chronic endpoints. Therefore, the chronic TRVs used in this evaluation are equivalent to the sample-specific acute BLM-based saltwater TRVs.

Sample-specific water chemistry was used to calculate saltwater TRVs in the saltwater segment of the LPRSA. Inputs for the saltwater BLM include salinity, dissolved organic carbon (DOC), pH, and temperature, but if individual ion measurements were available, they could be used in place of salinity. For samples with missing pH and temperature data, TRVs were calculated using the event-, station-, and depth-specific minimum, maximum, and mean values. The range of acute/chronic saltwater copper TRVs, based on the parameterization described above, was 0.8 to 11.2 µg/L. For near-bottom surface water samples, the range of acute/chronic TRVs was 1.0 to 11.2 µg/L; this range is used to evaluate risks to benthic invertebrates from surface water exposure.

2.1.4 Lead

Lead was identified as a COPEC based on freshwater and saltwater TSVs of 2.5 and 8.1 µg/L, respectively. The TSVs are chronic AWQC (i.e., CCC) (USEPA 1980d; US Environmental Protection Agency 1985a). Both TSVs are expressed in terms of dissolved lead. The freshwater TSV is based on a hardness-specific criterion and assumes a water hardness of 100 mg/L $CaCO_3$. The saltwater TSV is not based on a hardness-specific criterion; rather it represents a conservative estimate of chronic toxicity across a range of hardness concentrations (and other water quality parameters).

2.1.4.1 Freshwater

DeForest et al. (2017) recently developed a freshwater lead BLM to derive site-specific and time-variable criteria, and this BLM was used to calculate sample-specific lead TRVs for LPRSA freshwater samples. The freshwater lead BLM works similarly to the freshwater copper BLM (Section 2.1.3). Currently there are 32 genera representing 37 species in the freshwater lead BLM database. For LPRSA samples with missing major ion data, BLM inputs were estimated from regressions with salinity; for samples with missing pH and temperature data, TRVs were calculated using the event-, station-, and depth-specific minimum, maximum, mean, and median values (to address uncertainties associated with each statistic). Ultimately, the analysis of freshwater lead in surface waters was not affected by the selected statistic used to estimate water quality parameters for BLM inputs.

The ranges of acute and chronic freshwater lead TRVs, based on the parameterization described above, were 192 to 890 µg/L and 7.4 to 42.3 µg/L, respectively. For near-bottom surface water samples, acute and chronic TRVs ranged from 196 to 761 µg/L and 7.5 to 35 µg/L, respectively. These ranges are based only on LPRSA samples with < 3.5 parts per thousand (ppt) salinity, which is the definition of freshwater provided by the NJDEP (2011). In the BERA, BLM-based freshwater TRVs will only be compared to surface water lead concentrations at stations with salinity < 3.5 ppt; all other stations will be compared to the saltwater lead criteria (described in the following section). Because BLM-based TRVs are heavily influenced by water quality parameters (i.e., model inputs), it was decided to be more appropriate to apply

sample-specific TRVs to "freshwater" LPRSA locations defined by measured salinities rather than samples within generalized salinity zones (as was done for non-BLM-based TRVs).

2.1.4.2 Saltwater

Church et al. (2017) recently developed updated saltwater lead criteria based on saltwater acute and chronic toxicity data from US Environmental Protection Agency (1985a) and USEPA (2013), as well as data provided by the International Lead Association (formerly the International Lead Zinc Research Organization) and obtained through literature searches. Criteria were developed following USEPA methods (Stephan et al. 1985) (with minor deviations such as the inclusion of non-North American species). The acute and chronic criteria proposed by Church et al. (2017) were selected as the acute and chronic saltwater TRVs for the BERA. The methods used by Church et al. (2017) deviate from those generally applied throughout this document (Section 1.2.2), but both sets of methods are consistent with (Stephan et al. 1985).

Acute toxicity data were available for 54 species of fish and invertebrates from 49 genera. A triangular distribution was fit to the four most sensitive GMAVs (using the total number GMAVs); this approach, although different from the methods described in Section 1.2.2, is consistent with USEPA methods (Stephan et al. 1985). The predicted 5th percentile value of the distribution was calculated as 203.6 µg/L, which, when divided by two and rounded, resulted in an selected acute TRV of 100 µg/L dissolved lead, which is more stringent than the current USEPA acute AWQC of 210 µg/L (US Environmental Protection Agency 1985a). The proposed updated criterion was selected as the acute saltwater TRV.

Chronic toxicity was available for 21 species in 17 genera; the dataset also satisfied the diversity criterion (8 families from various taxa). A triangular distribution was fit to the four most sensitive GMCVs (using the total number GMCVs), consistent with US Environmental Protection Agency (1985a) methods. The predicted 5th percentile value of the distribution was calculated as 9.7 µg/L dissolved lead, which is equivalent to a FCV. The current USEPA chronic AWQC for saltwater lead is 8.1 µg/L (US Environmental Protection Agency 1985a). The proposed updated criterion of 9.7 µg/L was selected as the chronic saltwater TRV.

2.1.5 Mercury

Mercury was identified as a COPEC based on freshwater and saltwater TSVs of 0.026 and 0.016 µg/L, respectively. The TSVs are CCME WQG for inorganic mercury. The freshwater value is based on a LOAEL for a juvenile fish species (*P. promelas*); the saltwater value is based on a LOAEL for an algae species (*Emiliana huxleyi*). Both LOAELs were multiplied by a safety factor of 0.1 to derive the WQG (CCME 2003).

2.1.5.1 Freshwater

The freshwater AWQC for mercury (II), which were last updated by USEPA in 1995, were selected as the basis for the acute and chronic TRVs (USEPA 1996a). The CMC and CCC for total recoverable mercury are 1.7 and 0.91 µg/L, respectively. The CMC was based on an FAV of 3.388 µg/L divided by two. The CCC was derived from the FAV using an ACR of 3.731, which was based on the geometric mean of ACRs for two invertebrate species. USEPA concluded that the CCC may not be adequately protective of important fish species due to estimated chronic values for rainbow trout, coho salmon, and bluegill that were more than a factor of two lower than the CCC. The lowest estimated chronic value in USEPA (1996a) is 0.25 µg/L for bluegill (based on an acute value of 160 µg/L and an ACR of > 646.2 for fathead minnow), which is similar to the lowest acceptable chronic toxicity identified from the ECOTOX database, a 30-day growth LOEC of 0.23 µg/L for early life stage fathead minnow from Call et al. (1983). As such, the LOEC of 0.23 µg/L was selected as the basis of the chronic TRV. Using USEPA's CF of 0.85 for mercury, the CMC and LOEC were converted to the dissolved mercury criteria of 1.4 and 0.21 µg/L, which were selected as the acute and chronic TRVs, respectively.

2.1.5.2 Saltwater

The saltwater TRVs selected for the BERA were based on the saltwater CMC (2.1 µg/L) and CCC (1.1 µg/L) for mercury (II) derived in USEPA (1984). The CMC was derived from an FAV of 4.125 µg/L, based on acute toxicity data for 29 genera of saltwater fish and invertebrates. The CCC was derived from the FAV using the ACR of 3.731. Using USEPA's CF of 0.85, the CMC and CCC were converted to dissolved mercury concentrations, providing the acute TRV of 1.8 µg/L and the chronic TRV of 0.94 µg/L. Both of these values are lower than the lowest acceptable toxicity values identified from the ECOTOX database, and as such were determined to be appropriately conservative for the BERA.

2.1.6 Selenium

Selenium was identified as a COPEC based on freshwater and saltwater TSVs of 1 and 71 µg/L, respectively. The freshwater TSV is a WQG from CCREM (1987); the saltwater TSV is the chronic criterion from EPA (1987).

2.1.6.1 Freshwater

USEPA's revised chronic criterion of 3.1 µg/L was selected as the chronic TRV (USEPA 2016b). An acute criterion has not been selected by USEPA due the limited acute aquatic toxicity data available for selenium, and the protectiveness of the chronic criterion for bioaccumulation and reproductive toxicity (USEPA 2016b). As with other USEPA AWQC, the chronic selenium criterion is intended to be protective of fish, amphibians, and invertebrates. The chronic criterion is a dissolved selenium concentration derived from fish tissue concentrations, as fish are the most sensitive species, and the available

fish tissue data "provide the most robust and direct information on potential effects in fish" (USEPA 2016b).

2.1.6.2 Saltwater

The acute and chronic saltwater AWQC for selenium (USEPA 2017) were selected as the basis of the acute and chronic BERA TRVs. These values are 290 and 71 µg/L, respectively. USEPA derived a CMC (294 µg/L, later rounded to 290 µg/L) from acute toxicity data for 15 saltwater species, and the CCC was calculated using an ACR of 8.314.

2.1.7 Silver

Silver was identified as a COPEC based on a TSV of 0.12 µg/L, which is a USEPA Resource Conservation and Recovery Act (RCRA) ecological screening level (ESL) for total silver based on a Minnesota water quality standard (WQS) (USEPA 2003c). Although specific to freshwater, the TSV was also used to screen estuarine surface water data in the SLERA.

2.1.7.1 Freshwater

Acute freshwater toxicity data were available for six invertebrate and eight fish species, sufficient data to develop an SSD for dissolved silver (Table 2-3). The toxicity data included in the SSD are provided in Attachment D1. However, as for other metals discussed (i.e., copper and lead), water quality characteristics can strongly influence the bioavailability of silver to freshwater organisms. A simple SSD does not account for water quality characteristics influencing bioavailability. An unpublished report proposed a silver criterion based on the BLM, which can be used to model metal bioavailability as a function of water quality characteristics (HydroQual et al. 2007). Assuming a DOC concentration of 2 mg/L, which is similar to the 10th percentile DOC concentration in the LPRSA, the proposed BLM-based acute value is 3.6 µg/L. Because the BLM-based values more appropriately account for the influence of water quality characteristics on silver bioavailability to freshwater organisms, and because they are derived following a method that is more consistent with recent USEPA guidance, these values were used as the basis for the BERA TRVs. Dividing the acute value by two provides the acute TRV of 1.8 µg/L. Dividing the acute value by an ACR of 5.19 from HydroQual et al. (2007) provides the chronic TRV of 0.69 µg/L.

Table 2-3. Ranked freshwater SMAVs for silver

Species (Common Name)	Species Type	SMAV (µg/L)	Rank	Cumulative Percent Frequency
Ceriodaphnia dubia (cladoceran)	invertebrate	0.52	1	7%
Daphnia magna (cladoceran)	invertebrate	1.73	2	13%
Fundulus heteroclitus (mummichog)	fish	3.80	3	20%
Pimephales promelas (fathead minnow)	fish	7.75	4	27%
Rhinichthys osculus (speckled dace)	fish	8.16	5	33%
Cottus bairdi (mottled sculpin)	fish	8.49	6	40%
Oncorhynchus mykiss (rainbow trout)	fish	9.89	7	47%
Danio rerio (zebrafish)	fish	10.3	8	53%
Lepomis macrochirus (bluegill)	fish	13.0	9	60%
Ictalurus punctatus (channel catfish)	fish	17.3	10	67%
Nephelopsis obscura (leech)	invertebrate	29.0	11	73%
Aplexa hypnorum (snail)	invertebrate	141	12	80%
Tanytarsus dissimilis (midge)	invertebrate	420	13	87%
Orconectes immunis (crayfish)	invertebrate	560	14	93%

SMAV – species mean acute value

2.1.7.2 Saltwater

Acute data were sufficient to develop a saltwater SSD for 11 invertebrate and 12 fish species (Figure 2-1; Table 2-4). The toxicity data included in the SSD are provided in Attachment D1. A Gamma distribution was determined to provide the best fit across all SMAVs. The acute 5th percentile of the distribution is 11.1 µg/L. Dividing the 5th percentile by 2 provides the acute TRV of 5.54 µg/L. Dividing the FAV by a silver ACR of 5.536 from HydroQual et al. (2007) provides the chronic TRV of 2.0 µg/L.

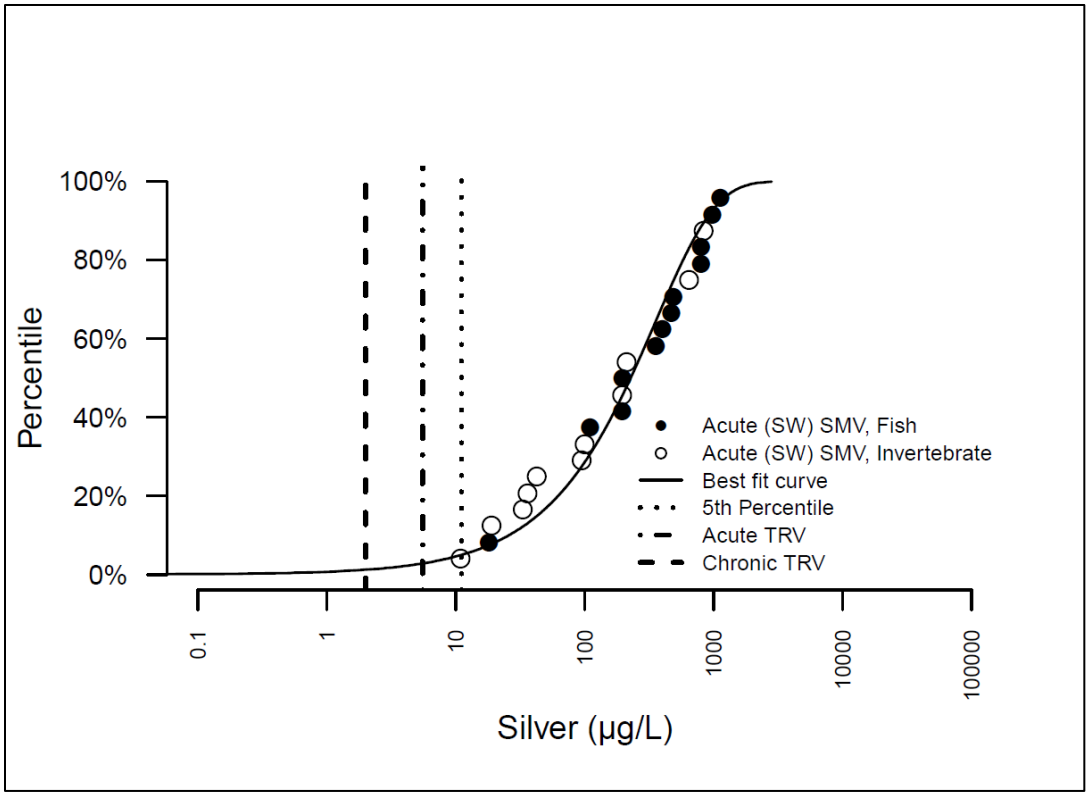

Figure 2-1. Acute saltwater SSD for silver

Table 2-4. Ranked saltwater SMAVs for silver

Species (Common Name)	Species Type	SMAV (µg/L)	Percentile Rank
Diadema antillarum (long-spined sea urchin)	invertebrate	11.0	4%
Paralichthys dentatus (summer flounder)	fish	18.1	8%
Crassostrea gigas (Pacific oyster)	invertebrate	19.0	13%
Cancer magister (Dungeness crab)	invertebrate	33.1	17%
Arbacia punctulata (sea urchin)	invertebrate	36.0	21%
Acartia tonsa (copepod)	invertebrate	42.6	25%
Tigriopus brevicornis (copepod)	invertebrate	95.0	29%
Loligo opalescens (squid)	invertebrate	> 100	33%
Menidia menidia (Atlantic silverside)	fish	110.1	38%
Menidia beryllina (inland silverside)	fish	> 195	42%
Americamysis bahia (mysid)	invertebrate	196	46%
Pseudopleuronectes americanus (winter flounder)	fish	196.3	50%
Neanthes areanaceodentata (polychaete)	invertebrate	> 212	54%
Cymatogaster aggregata (shiner perch)	fish	356	58%
Oncorhynchus mykiss (rainbow trout)	fish	401.5	63%
Oligocottus maculosus (tidepool sculpin)	fish	468.8	67%
Oncorhynchus kisutch (coho salmon)	fish	487.5	71%

Species (Common Name)	Species Type	SMAV (µg/L)	Percentile Rank
Hediste diversicolor (polychaete)	invertebrate	647	75%
Paraphrys vetulus (English sole)	fish	800.0	79%
Scorpaenichthys marmoratus (cabezon)	fish	> 800	83%
Crangon spp. (sand shrimp)	invertebrate	> 838	88%

SMAV – species mean acute value

2.1.8 Zinc

Zinc was identified as a COPEC based on freshwater and saltwater TSVs of 30 and 81 µg/L, respectively. The freshwater TSV is a CCME WQG based on a 95th percentile concentration of soluble zinc at a hardness of 10 mg/L as $CaCO_3$, which is protective of salmonids (CCREM 2008). The saltwater TSV is a chronic AWQC for dissolved zinc, derived from an FAV based on 28 genera of saltwater fish and invertebrates USEPA (1987). The FAV (190.2 µg/L) was slightly lower than the acute value for the most sensitive species, which was an early life stage fish, *Scorpaenicthys marmoratus* (cabezon, or sculpin). The CCC (86 µg/L) was derived from the FAV using an ACR of 2.208, which was based on two freshwater fish and two freshwater invertebrate species. The CMC and CCC for dissolved zinc were derived using USEPA's CF of 0.946.

2.1.8.1 Freshwater

The unified zinc BLM described by DeForest and Van Genderen (2012) was selected as the basis for acute and chronic zinc TRVs. This version of the zinc BLM uses a single set of biotic ligand parameters to characterize the effects of water chemistry on zinc toxicity to a variety of freshwater organisms (including invertebrates and fish) under both acute and chronic exposures. In addition to deriving a version of the zinc BLM that was highly predictive of acute and chronic zinc toxicity, DeForest and Van Genderen (2012) applied USEPA methods (US Environmental Protection Agency 1985b) to evaluate the 5th percentiles of BLM-normalized acute and chronic SSDs that had been updated with recent toxicity data. The acute SSD contained 68 genera, representing 96 species, and the chronic SSD contained 16 genera, representing 20 species. The BLM critical accumulations (i.e., sensitivity parameters) associated with the 5th percentiles of the BLM-normalized acute and chronic SSDs can be used to calculate BLM-predicted effect concentrations that are analogous to FAVs and FCVs. To derive sample-specific TRVs, the unified zinc BLM was applied to calculate values analogous to the CMC and CCC, wherein the CMC was the 5th percentile of the BLM-normalized acute SSD divided by two, and the CCC was the 5th percentile of the BLM-normalized chronic SSD.

Sample-specific zinc TRVs were calculated in the freshwater segment of the LPRSA. For samples with missing major ion data, BLM inputs were estimated from regressions with salinity, and for samples with missing pH and temperature data, TRVs were calculated using the event-, station-, and depth-specific minimum, maximum, and mean values. The ranges of acute and chronic freshwater zinc TRVs, based on the parameterization

described above, were 195 to 1,660 µg/L and 44.8 to 229 µg/L, respectively. For near-bottom surface water samples, acute and chronic TRVs ranged from 210 to 1,660 µg/L and 52 to 229 µg/L, respectively.

2.1.8.2 Saltwater

Sufficient acute and chronic toxicity data were available to develop acute and chronic SSDs. The toxicity data used in the acute SSD represented 107 invertebrate and 18 fish species and are provided in Attachment D1 (Figure 2-2; Table 2-5). The Pearson 6 distribution was determined to provide the best-fit curve, the 5th percentile of which is 149.5 µg/L. The 5th percentile divided by two provided the acute TRV of 75 µg/L.

The data used in the chronic SSD represented 11 invertebrate species (Figure 2-3, Table 2-6). The log-logistic distribution was determined to provide the best-fit curve, the 5th percentile of which is 19 µg/L. The 5th percentile was selected as the chronic TRV.

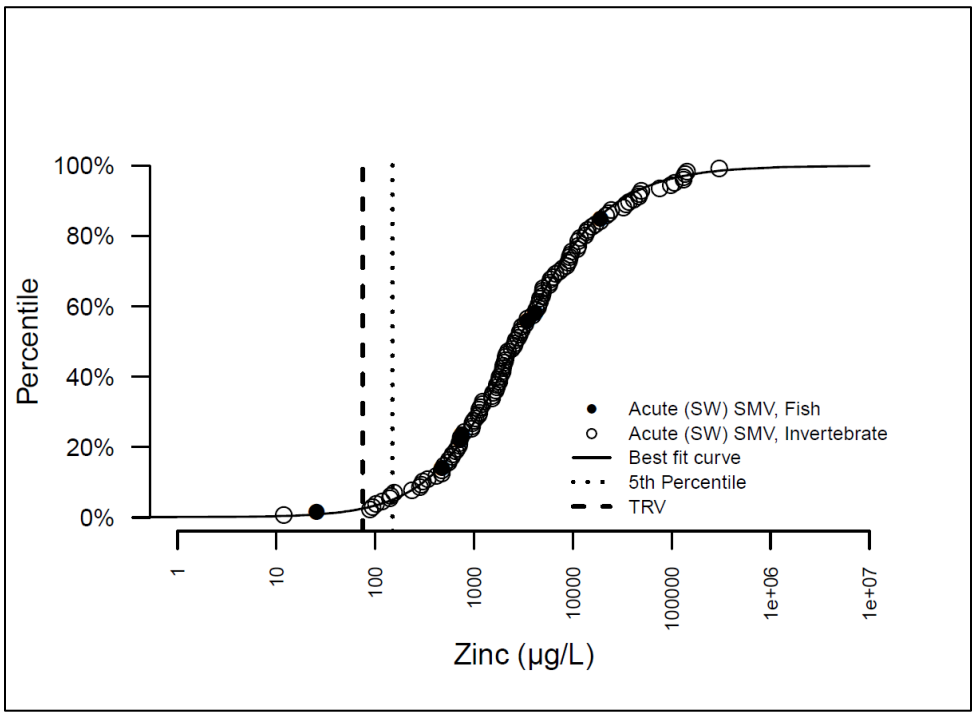

Figure 2-2. Acute saltwater SSD for zinc

Table 2-5. Ranked saltwater SMAVs for zinc

Species (Common Name)	Species Type	SMAV (µg/L)	Percentile Rank
Strombus gigas (pink or queen conch)	invertebrate	11.9	0.8%
Limanda punctatissima (sand flounder)	fish	25.5	1.6%
Chasmagnathus granulata (crab)	invertebrate	88.6	2.4%
Crassostrea cucullata (oyster)	invertebrate	94.6	3.1%
Acanthomysis costata (mysid)	invertebrate	102	3.9%
Nanosesarma sp. (crab)	invertebrate	118	4.7%

Species (Common Name)	Species Type	SMAV (µg/L)	Percentile Rank
Engraulis japonicus (Japanese anchovy)	fish	141	5.5%
Macrophthalmus erato (mangrove crab)	invertebrate	144	6.3%
Decapoda (crayfish/crab order)	invertebrate	156	7.1%
Heteropanope sp. (crab)	invertebrate	237	7.9%
Penaeus chinensis (fleshy prawn)	invertebrate	284	8.7%
Litopenaeus schmitti (southern white shrimp)	invertebrate	293	9.4%
Homarus americanus (American lobster)	invertebrate	304	10%
Mysidopsis juniae (shrimp)	invertebrate	340	11%
Americamysis bahia (opossum shrimp)	invertebrate	418	12%
Crassostrea gigas (Pacific oyster)	invertebrate	473	13%
Crassostrea margaritacea (oyster)	invertebrate	473	13%
Cynoglossus joyneri (red tongue sole)	fish	473	14%
Hyale longicornis (amphipod)	invertebrate	500	15%
Cancer magister (Dungeness or edible crab)	invertebrate	554	16%
Mysidopsis bigelowi (shrimp)	invertebrate	559	17%
Ostrea sp. (oyster)	invertebrate	598	17%
Quinquelaophonte sp. (Copepod)	invertebrate	610	18%
Melita matilda (amphipod)	invertebrate	650	19%
Tigriopus brevicornis (harpacticoid copepod)	invertebrate	677	20%
Neomysis integer (opossum shrimp)	invertebrate	708	20%
Melita awa (amphipod)	invertebrate	710	21%
Rachycentron canadum (cobia)	fish	724	22%
Tenagomysis novaezealandiae (opossum shrimp)	invertebrate	734	23%
Menidia beryllina (inland silverside)	fish	751	24%
Elasmopus rapax (scud)	invertebrate	800	24%
Dinophilus gyrociliatus (archiannelid)	invertebrate	946	25%
Metapenaeus dobsoni (kadal shrimp)	invertebrate	955	26%
Penaeus merguiensis (banana prawn)	invertebrate	961	27%
Penaeus duorarum (northern pink shrimp)	invertebrate	993	28%
Haliotis diversicolor ssp. *supertexta* (Taiwan abalone)	invertebrate	1,041	28%
Perna viridis (green mussel)	invertebrate	1,110	29%
Chaetocorophium lucasi (amphipod)	invertebrate	1,130	30%
Acartia clausi (calanoid copepod)	invertebrate	1,130	31%
*Hydroides elegans (*tubeworm)	invertebrate	1,168	31%
Echinogammarus olivii (scud)	invertebrate	1,230	32%
Ophionereis dubia (bristle star)	invertebrate	1,230	33%
Neanthes arenaceodentata (polychaete worm)	invertebrate	1,528	34%
Perna perna (brown mussel)	invertebrate	1,528	35%
Grandidierella japonica (scud)	invertebrate	1,560	35%
Nassarius festivus (snail)	invertebrate	1,665	36%

Species (Common Name)	Species Type	SMAV (µg/L)	Percentile Rank
Nereis grubei (polychaete)	invertebrate	1,703	37%
Ophryotrocha labronica (polychaete)	invertebrate	1,703	38%
Corophium insidiosum (scud)	invertebrate	1,797	39%
Nitocra spinipes (harpacticoid copepod)	invertebrate	1,806	39%
Loligo opalescens (California market squid)	invertebrate	1,816	40%
Leptocheirus plumulosus (amphipod)	invertebrate	1,908	41%
Idotea balthica (aquatic sowbug, isopod)	invertebrate	1,950	42%
Litopenaeus vannamei (white shrimp)	invertebrate	1,968	43%
Robertsonia propinqua (marine harpacticoid copepod)	invertebrate	1,981	43%
Metapenaeus sp. (penaeid shrimp)	invertebrate	2,034	44%
Perna indica (brown mussel)	invertebrate	2,076	45%
Leptodius exaratus (pebble crab)	invertebrate	2,091	46%
Argopecten irradians (bay scallop)	invertebrate	2,129	46%
Modiolus philippinarum (Philippine horse mussel)	invertebrate	2,211	47%
Lithodes santolla (southern king crab)	invertebrate	2,403	48%
Ophryotrocha diadema (polychaete)	invertebrate	2,554	49%
Penaeus monodon (jumbo tiger prawn)	invertebrate	2,592	50%
Pectinaria californiensis (cone worm)	invertebrate	2,649	50%
Spisula solidissima (surf clam)	invertebrate	2,791	51%
Soletellina alba (sunset clam)	invertebrate	2,900	52%
Tigriopus japonicus (harpacticoid copepod)	invertebrate	2,900	53%
Melita plumulosa (amphipod)	invertebrate	3,044	54%
Penaeus indicus (Indian prawn)	invertebrate	3,048	54%
Farfantepenaeus paulensis (pink shrimp)	invertebrate	3,311	55%
Menidia menidia (Atlantic silverside)	fish	3,444	56%
Eurythoe sp. (bristle worm)	invertebrate	3,481	57%
Morula granulata (gastropod)	invertebrate	3,935	57%
Cyprinodon variegatus (sheepshead minnow)	fish	4,146	58%
Nerita albicilla (snail [blotched nerite])	invertebrate	4,266	59%
Mysella anomala (bivalve)	invertebrate	4,450	60%
Corophium colo (amphipod)	invertebrate	4,500	61%
Tellina deltoidalis (bivalve)	invertebrate	4,636	61%
Pleuronectes americanus (winter flounder)	fish	4,656	62%
Capitella capitata (polychaete worm)	invertebrate	4,893	63%
Corophium volutator (scud)	invertebrate	4,971	64%
Planaxis sulcatus (grooved snail)	invertebrate	4,976	65%
Paphia textile (clam)	invertebrate	5,014	65%
Sphaeroma serratum (aquatic sowbug)	invertebrate	5,790	66%
Nephtys australiensis (annelid)	invertebrate	5,850	67%
Crangon crangon (common shrimp, sand shrimp)	invertebrate	5,960	68%

Species (Common Name)	Species Type	SMAV (µg/L)	Percentile Rank
Donax trunculus (wedge clam)	invertebrate	6,338	69%
Ctenodrilus serratus (polychaete worm)	invertebrate	6,717	69%
Mugil cephalus (striped mullet)	fish	7,313	70%
Mytilopsis sallei (Santo Domingo falsemussel)	invertebrate	7,909	71%
Allorchestes compressa (scud, amphipod)	invertebrate	8,629	72%
Crassostrea sp. (oyster)	invertebrate	8,949	72%
Boleophthalmus sp. (goby)	fish	9,215	73%
Turbo coronatus (whelk)	invertebrate	9,309	74%
Scrobicularia plana (bivalve)	invertebrate	9,460	75%
Diogenes pugilator (hermit crab)	invertebrate	9,796	76%
Astropecten sp. (starfish)	invertebrate	11,087	76%
Choromytilus meridionalis (black mussel)	invertebrate	11,352	77%
Clibanarius longitarsus (hermit crab)	invertebrate	11,352	79%
Elasmopus bampo (scud)	invertebrate	11,825	80%
Palaemon elegans (rockpool prawn)	invertebrate	13,361	80%
Parophrys vetulus (English sole)	fish	13,717	81%
Carcinus maenas (green crab)	invertebrate	14,067	82%
Babylonia areolata (maculated ivory whelk)	invertebrate	15,647	83%
Nerita chamaeleon (snail)	invertebrate	16,971	83%
Paralichthys olivaceus (hirame, flounder)	fish	18,920	84%
Platichthys flesus (starry, European flounder)	fish	18,920	85%
Portunus pelagicus (crab)	invertebrate	21,685	86%
Monhystera disjuncta (nematode)	invertebrate	23,272	87%
Terapon jarbua (tigerfish)	fish	24,404	87%
Cirolana bovina (sowbug)	invertebrate	32,500	88%
Alburnus alburnus (bleak)	fish	34,640	89%
Uca triangularis (fiddler crab)	invertebrate	36,941	90%
Penaeus setiferus (northern white shrimp)	invertebrate	41,501	91%
Nereis diversicolor (polychaete worm)	invertebrate	46,732	91%
Ilyoplax gangetica (crab)	invertebrate	47,300	92%
Mystus gulio (catfish)	fish	49,192	93%
Crassostrea rhizophorae (mangrove oyster)	invertebrate	75,680	94%
Fundulus heteroclitus (mummichog)	fish	98,101	94%
Scylla serrata (crab)	invertebrate	106,773	95%
Ozius rugulosus (portunid crab)	invertebrate	131,872	96%
Eurythoe complanata (fireworm)	invertebrate	132,062	97%
Rivulus marmoratus (mangrove killifish)	fish	137,311	98%
Uca annulipes (fiddler crab)	invertebrate	142,800	98%
Macoma balthica (balthica macoma or clam)	invertebrate	303,145	99%

SMAV – species mean acute value

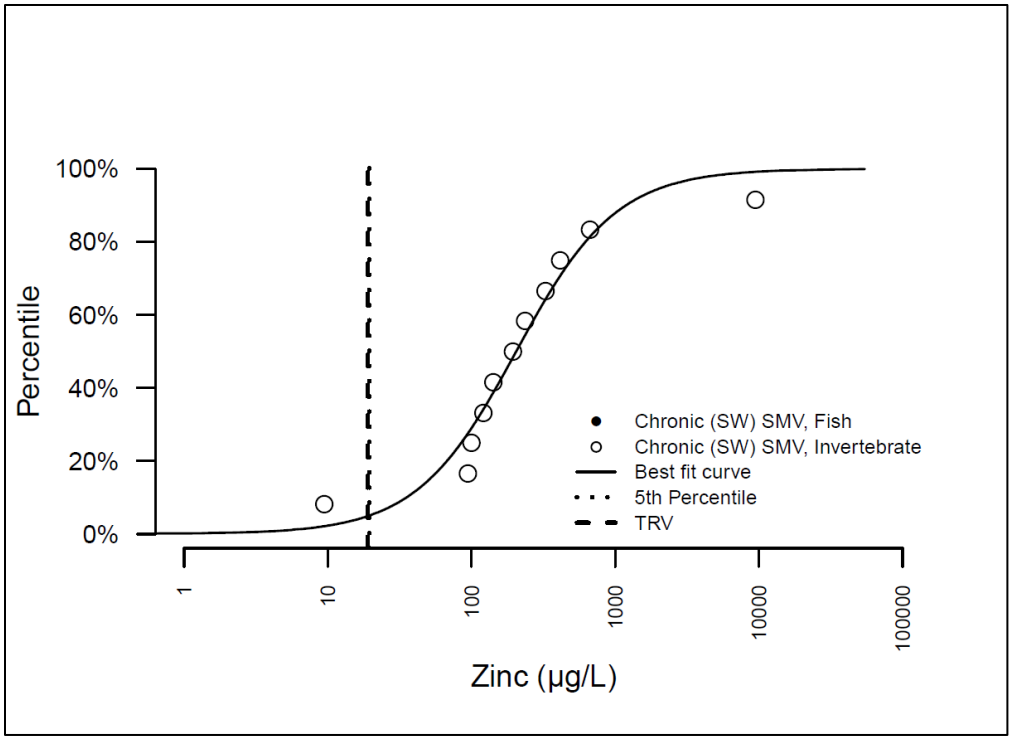

Figure 2-3.Chronic saltwater SSD for zinc

Table 2-6. Ranked saltwater SMCVs for zinc

Species (Common Name)	Species Type	SMCV (µg/L)	Percentile Rank
Acanthomysis costata (mysid)	invertebrate	9.5	8%
Anthopleura sola (sea anemone)	invertebrate	94.6	17%
Farfantepenaeus paulensis (pink shrimp)	invertebrate	100	25%
Allorchestes compressa (scud, amphipod)	invertebrate	121	33%
Haliotis diversicolor ssp. *supertexta* (Taiwan abalone)	invertebrate	142	42%
Aiptasia pulchella (sea anemone)	invertebrate	194	50%
Penaeus japonicus (kuruma shrimp)	invertebrate	237	58%
Litopenaeus vannamei (white shrimp)	invertebrate	328	67%
Corophium volutator (scud)	invertebrate	414	75%
Marisa cornuarietis (snail)	invertebrate	669	83%
Chasmagnathus granulata (crab)	invertebrate	9,460	92%

SMCV – species mean chronic value

2.1.9 Tributyltin

TBT was identified as a COPECs based on a saltwater TSV of 0.0074 µg/L, which is a chronic AWQC (USEPA 2003b). The saltwater value is based on the lowest chronic toxicity value for reproductive effects (e.g., imposex) on *N. lapillus*.

2.1.9.1 Saltwater

Acute and chronic saltwater toxicity data were insufficient to develop an SSD. The FCV derived by USEPA was 0.0658 µg/L (based on an FAV of 0.835 µg/L and an ACR of 12.69), which was concluded to be inadequately protective of species that show sensitivity to non-standard endpoints (i.e., *N. lapillus*) at lower concentrations. For the purposes of the AWQC, lowering the saltwater criterion to consider these other effects on exceptionally sensitive species is reasonable. However, it is an overly protective value for evaluating the effects of direct toxicity on benthic invertebrates, zooplankton, and fish in the estuarine portion of the LPRSA. Thus, the saltwater FAV of 0.835 µg/L, as derived by USEPA, was divided by 2 to provide the acute TRV of 0.42 µg/L, and the FCV of 0.066 µg/L was selected as the chronic TRV.

2.2 PCBs

Total PCBs were identified as a COPEC based on freshwater and saltwater TSVs of 0.014 and 0.030 µg/L, respectively, which are values from USEPA's AWQC document (1980f) that were adopted as NJDEP ecological screening criteria (NJDEP 2009a). These criteria are FRVs that are protective of mink and are thus not appropriate values for predicting risk to aquatic organisms. The toxicity data presented in the PCB AWQC document (USEPA 1980f) were insufficient to derive a FAV or FCV.

Toxicity data were compiled for both mixtures and individual PCB congeners (Attachment D1). The mixtures tested included the different Aroclors and Capacitor 21. The toxicities of these mixtures are assumed to be reasonably representative of the toxicities of mixtures that may be observed in the field. The toxicity of individual congeners (209 total) can be highly variable; consequently, the toxicity of one congener to a species may substantially under- or over-represent the toxicity of other congeners. Among the data compiled in this evaluation, toxicity data for multiple PCB congeners were available for a given species. It was assumed that the mean toxicity values for the congeners tested were adequately representative of a "typical" PCB mixture. Use of available toxicity data to develop freshwater and saltwater PCB TRVs is discussed below.

2.2.1 Freshwater

Acute toxicity data for fish and invertebrate species were sufficient to develop an SSD. A freshwater acute SSD for 10 invertebrate and 15 fish species was developed (Figure 2-4; Table 2-7). The PCB toxicity data included in the SSD are provided in Attachment D1. The lognormal distribution was determined to provide the best fit across all fish and invertebrate SMAVs. The 5th percentile of the lognormal distribution was 4.5 µg/L. However, the SMAV of 2.3 µg/L for largemouth bass (*Micropterus salmoides*), a recreationally important species included in the dataset, was lower than the calculated 5th percentile. Therefore, consistent with AWQC guidelines, the largemouth bass SMAV of 2.3 µg/L was used to derive the FAV and FCV. The SMAV of 2.3 µg/L was divided by 2 to provide the acute TRV. Dividing the largemouth bass SMAV by an

ACR of 8.4 provides an FCV of 0.27 µg/L, which was selected as the chronic TRV. The ACR was obtained from USEPA's PCB AWQC document (1980f), wherein species ACRs were identified for an amphipod and fathead minnow (11 and 6.4, respectively). The final ACR (8.4) is the geometric mean of these two values.

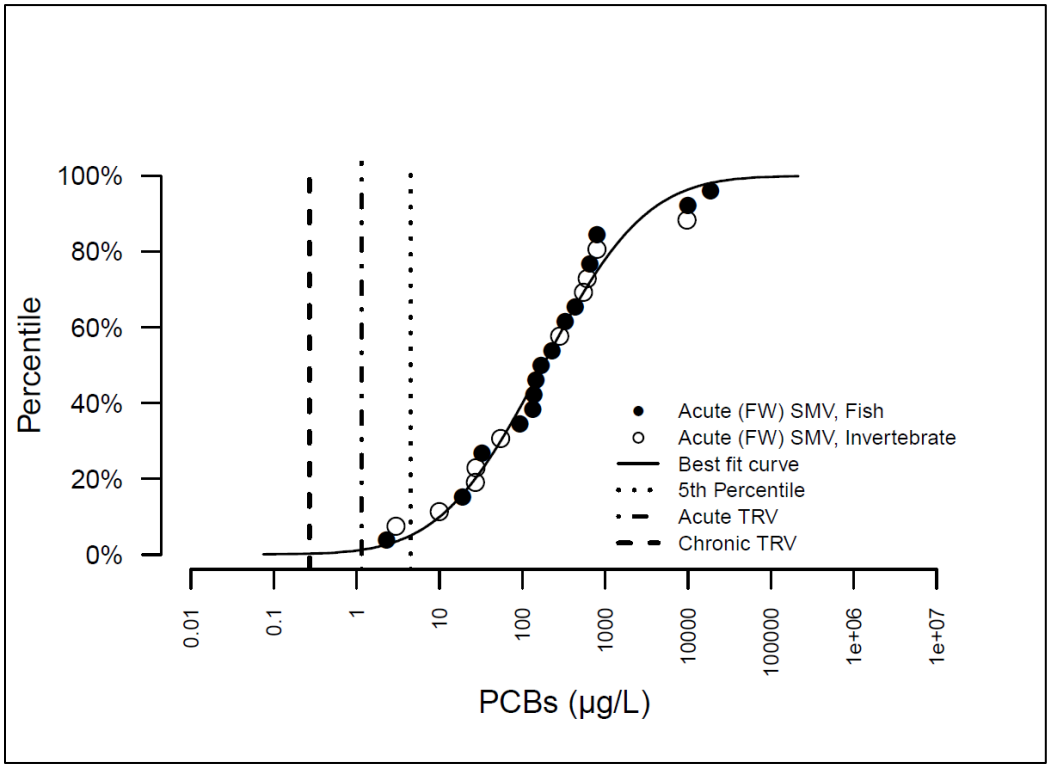

Figure 2-4. Acute freshwater SSD for PCBs

Table 2-7. Ranked freshwater SMAVs for PCBs

Species (Common Name)	Species Type	SMAV (µg/L)	Percentile Rank
Micropterus salmoides (largemouth bass)	fish	2.3	4%
Palaemonetes kadiakensis (grass shrimp)	invertebrate	3	8%
Gammarus fasciatus (amphipod)	invertebrate	10	12%
Lepomis microlophus (redear sunfish)	fish	19	15%
Daphnia magna (cladoceran)	invertebrate	27.3	19%
Gammarus pseudolimnaeus (amphipod)	invertebrate	27.7	23%
Pimephales promelas (fathead minnow)	fish	32.6	27%
Orconectes nais (freshwater crayfish)	invertebrate	54.8	31%
Oncorhynchus mykiss (rainbow trout)	fish	93.9	35%
Salmo salar (Atlantic salmon)	fish	134	38%
Salmo trutta (brown trout)	fish	138	42%
Perca flavescens (yellow perch)	fish	146	46%
Ictalurus punctatus (channel catfish)	fish	168	50%

Species (Common Name)	Species Type	SMAV (µg/L)	Percentile Rank
Lepomis macrochirus (bluegill)	fish	229	54%
Ischnura verticalis (damselfly)	invertebrate	283	58%
Catostomus catostomus (white longnose sucker)	fish	330	62%
Catostomus commersoni (white sucker)	fish	435	65%
Procambarus sp. (crayfish)	invertebrate	550	69%
Pteronarcella badia (stonefly)	invertebrate	610	73%
Salvelinus namaycush (lake trout)	fish	654	77%
Macromia sp. (dragonfly)	invertebrate	800	81%
Salvelinus fontinalis (brook trout)	fish	800	85%
Hydra oligactis (hydra)	invertebrate	9,721	88%
*Coregonus hoyi (*bloater)	fish	10,000	92%
Oncorhynchus clarki (cutthroat trout)	fish	18,666	96%

PCB – polychlorinated biphenyl
SMAV – species mean acute value

2.2.2 Saltwater

Toxicity data were sufficient to develop a saltwater SSD for 10 invertebrate and 1 fish species, but did not meet the 8 family rule for saltwater species (Figure 2-5; Table 2-8). The PCB toxicity tests used in the SSD are included in Attachment D1. The Levy distribution was determined to provide the best fit across all fish and invertebrate SMAVs. The 5th percentile of the lognormal distribution is 9.1 µg/L. Dividing the 5th percentile concentration by 2 results in the acute TRV of 4.6 µg/L. Dividing the 5th percentile concentration by an ACR of 8.4 from USEPA (1980f) results in a chronic value of 1.1 µg/L. However, the lowest chronic value that meets AWQC acceptability criteria reported by USEPA (1980f) is lower than this SSD-derived chronic value. Partial flow-through life cycle tests of Aroclor 1254 with two saltwater fish species, sheepshead minnow and pinfish, resulted in LOECs of 0.16 and 15 µg/L, respectively (Hansen et al. 1974; Schimmel et al. 1974). The lowest LOEC of 0.16 µg/ L, associated with reduced fry survival following flow-through exposure of early life stage sheepshead minnow for 28 days (Schimmel et al. 1974), was selected as the chronic TRV for saltwater.

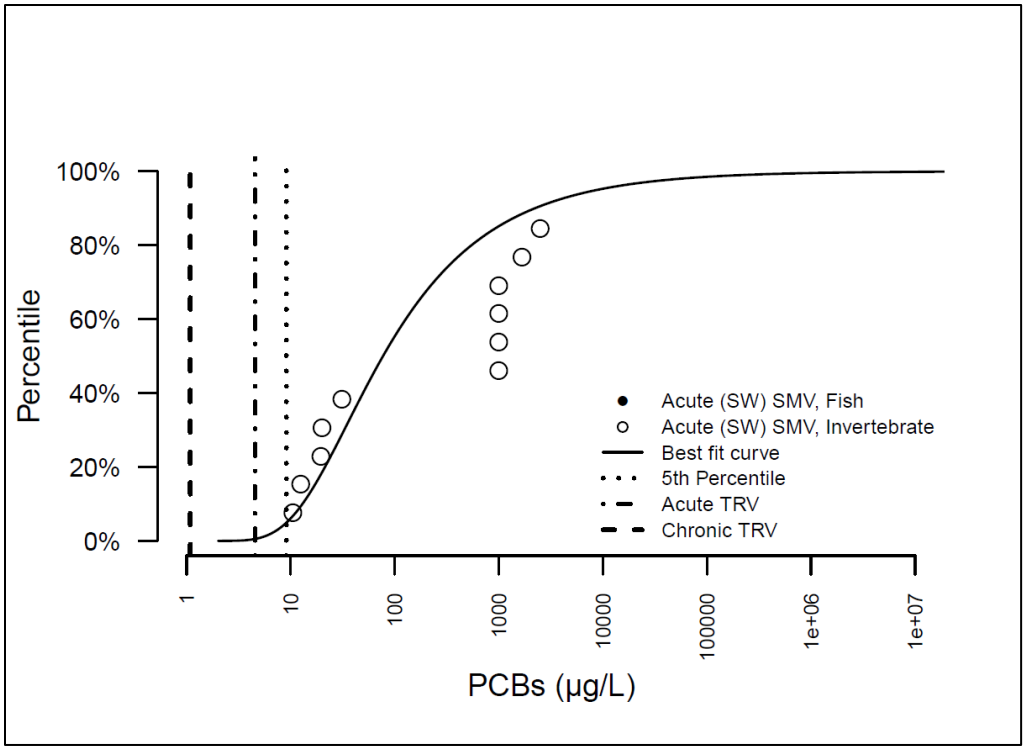

Figure 2-5. Acute saltwater SSD for PCBs

Table 2-8. Ranked saltwater SMAVs for PCBs

Species (Common Name)	Species Type	SMAV (µg/L)	Percentile Rank
Penaeus aztecus (brown shrimp)	invertebrate	10.5	8%
Palaemonetes pugio (daggerblade grass shrimp)	invertebrate	12.5	15%
Crassostrea virginica (American or Virginia oyster)	invertebrate	19.5	23%
Ampelisca abdita (amphipod)	invertebrate	20	31%
*Americamysis b*ahia (opossum shrimp)	invertebrate	31.1	38%
Ophryotrocha labronica (polychaete)	invertebrate	1,000	46%
Nereis grubei (polychaete)	invertebrate	1,000	54%
Capitella capitata (polychaete worm)	invertebrate	1,000	62%
Neanthes arenaceodentata (polychaete worm)	invertebrate	1,000	69%
Cyprinodon variegatus (sheepshead minnow)	fish	1,670	77%
Tigriopus japonicus (harpacticoid copepod)	invertebrate	2,500	85%

PCB – polychlorinated biphenyl
SMAV – species mean acute value

2.3 PCDDs/PCDFs

2,3,7,8-TCDD was identified as a COPECs based on a freshwater TSV of 3.0 x 10^{-9} µg/L. This TSV is a wildlife-based RCRA ESL (USEPA 2003c), and thus is not appropriate for assessing risk to aquatic organisms. The freshwater TSV was also used to screen

estuarine surface water data because a saltwater TSV was not available. Toxicity data from the literature for 2,3,7,8-TCDD were limited to freshwater fish species, and were insufficient for developing either an acute or a chronic SSD, so the lowest acceptable acute and chronic toxicity values were selected as the basis for the BERA TRVs.

2.3.1 Freshwater

The lowest acute toxicity value for a freshwater species was a 72-hr LC50 of 0.0081 µg/L for early life stage Japanese medaka (*O. latipes)* from Kim and Cooper (1999); this value was divided by 2 to provide the acute TRV of 0.0041 µg/L for freshwater. The lowest chronic toxicity value was a 28-day early life stage static renewal LC50 of 0.0017 µg/L for fathead minnow (*P. promelas*) (Adams et al. 1986).

A recent study by Chen (2015) on the sublethal effects of 2,3,7,8-TCDD on zebrafish (*D. rerio*) embryos reported increased accumulated mortality rates in embryos exposed to 0.05 and 0.010 µg/L 2,3,78,-TCDD at 72 hours post-fertilization after two weeks. Chen (2015) also reported cardiac toxicity and reduced heart size at 2,3,7,8-TCDD concentrations as low as 0.01 µg/L.

Applying an ACR of 8.3 (derived by Raimondo et al. (2007)) to the acute LC50 from Kim and Cooper (1999) provides a chronic value of 9.8×10^{-4} µg/L.[13] Since the derived chronic value is lower than both the chronic LC50 from Adams et al. (1986) and the lowest sublethal LOEC reported by Chen (2015) this value was selected as a conservative chronic freshwater TRV.

2.3.2 Saltwater

A 14-day early life stage static LOEC of 0.05 µg/L for zebrafish (*D. rerio*) was selected as the basis of the chronic saltwater TRV (Chen 2008). Since this LOEC is not considered to be a chronic toxicity value following USEPA guidelines (Stephan et al. 1985), but rather a sub-chronic value, an acute value of 0.025 µg/L was derived by dividing the LOEC by two. A chronic value of 0.006 µg/L was derived by dividing the LOEC by the ACR of 8.3 derived by Raimondo et al. (2007). The chronic value is lower than the lowest NOEC of 0.025 µg/L reported by Chen (2008).

Studies conducted by Wintermyer and Cooper (2003, 2007) on early life stage eastern oyster (*C. virginica*) indicate invertebrate sensitivity to low (i.e., sublethal) doses of 2,3,7,8-TCDD. While a value applicable to direct surface water exposure could not be derived from Wintermyer and Cooper (2007), as direct injection of 2,3,7,8-TCDD was the route of exposure used in that study, a LOEC of 1.65×10^{-5} µg/L was derived from Wintermyer and Cooper (2003). This LOEC was for reduced fertilization rates and increased egg mortality rates in eastern oyster 48 hours following a 2-hour static exposure to 2,3,7,8-TCDD.

[13] The ACR of 8.3 is the overall median value of 456 aquatic invertebrate and fish ACRs analyzed by Raimondo et al. (2007).

The acute value of 0.025 µg/L and the chronic value of 0.006 µg/L based on the zebrafish LC50 from Chen (2008) were selected as the acute and chronic estuarine TRVs, respectively, for the fish assessment. Since the USEPA guidelines (Stephan et al. 1985) consider 48-hr toxicity data from embryo-larval growth and development tests with mollusks to be representative of chronic toxicity for this type of invertebrate, the LOEC of 1.65×10^{-5} µg/L was selected as the chronic estuarine TRV for the benthic assessment. Due to a lack of available acute saltwater data, the acute value of 0.025 µg/L based on zebrafish studies (Chen 2008) was selected as the TRV for the benthic assessment.

There is uncertainty associated with both of these TRVs because chemical concentrations were not measured (target concentrations were reported, rather than measured empirical concentrations) and short static exposures (e.g., two hours or less) were used. No studies with measured concentrations, static renewal exposure, or flow-through exposure were identified for saltwater species. The data from static tests may not reflect actual toxicity due to volatility, solubility, bioconcentration, and the adsorption characteristics of 2,3,7,8-TCDD.

2.4 PESTICIDES

TRVs for surface water were derived for six pesticides (i.e., 4,4′-DDE, 4,4′-dichlorodiphenyltrichloroethane [DDT], total DDx [sum of all six DDT isomers (2,4′-dichlorodiphenyldichloroethane [DDD], 4,4′-DDD, 2,4′-DDE, 4,4′-DDE, 2,4′-DDT and 4,4′-DDT)], total chlordane, dieldrin, and hexachlorobenzene).

2.4.1 4,4′-DDE

4,4′-DDE was identified as a COPEC based on a TSV of 4.51×10^{-9} µg/L, based on data from freshwater areas of the LPRSA. This TSV is a wildlife-based RCRA ESL, which is not appropriate for predicting risk to aquatic organisms. The freshwater TSV was also used to screen estuarine surface water data because a saltwater TSV was not available.

2.4.1.1 Freshwater

Acute toxicity data were sufficient to develop an SSD for two invertebrate and three fish species (Figure 2-6; Table 2-9). The toxicity data included in the SSD are provided in Attachment D1. The 5th percentile concentration of the best-fit curve was 4.87 µg/L. Dividing the 5th percentile value by 2 provided the acute freshwater TRV of 2.4 µg/L. Applying an ACR of 3.6 for DDT-type chemicals from Raimondo et al. (2007) provided the chronic TRV of 1.4 µg/L, which is lower than the lowest chronic toxicity value identified in ECOTOX.

2.4.1.2 Saltwater

Saltwater acute and chronic toxicity data for 4,4′-DDE were insufficient to develop an SSD. The lowest acceptable acute toxicity value identified in ECOTOX was an LC50 of 2.5 µg/L for *Nitocra spinipes*, a harpacticoid copepod, from Bengtsson (1978). Dividing the LC50 by 2 provided the acute TRV of 1.25 µg/L. The lowest chronic toxicity value—

a 14-day EC50 for reproduction of 0.3 µg/L for the same species, also from Bengtsson (1978)—is similar to the LC50 divided by the ACR of 3.6. As such, the 14-day EC50 was selected as the chronic saltwater TRV.

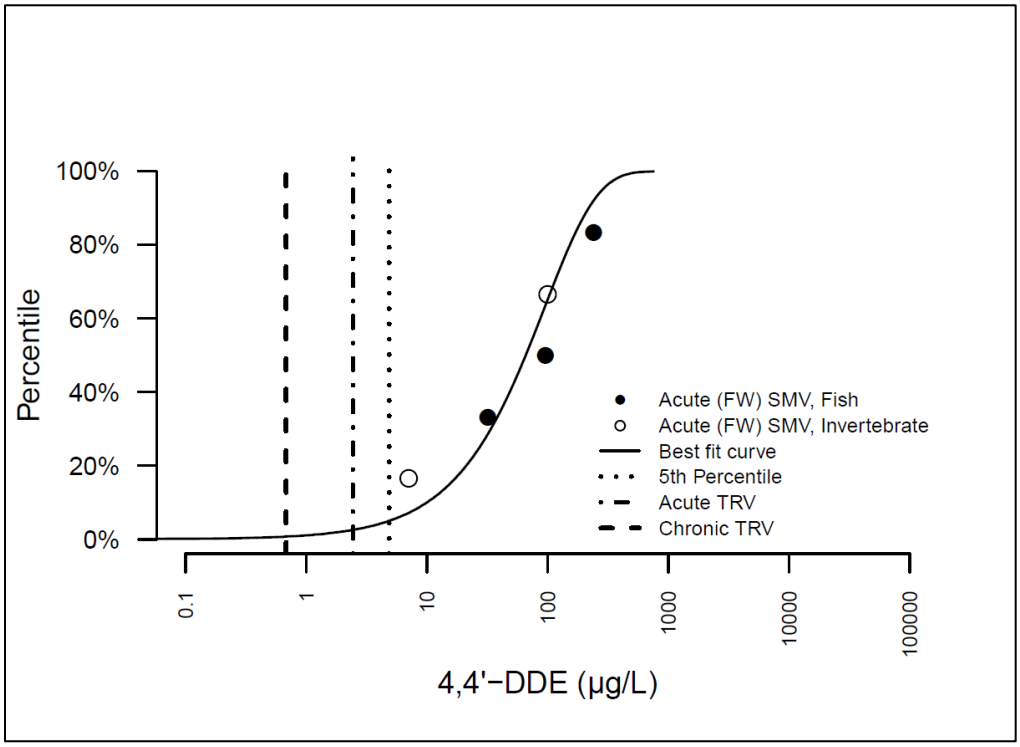

Figure 2-6. Acute freshwater SSD for 4,4′-DDE

Table 2-9. Ranked freshwater SMAVs for 4,4′-DDE

Species (Common Name)	Species Type	SMAV (µg/L)	Percentile Rank
Hyalella azteca (scud)	invertebrate	7.1	17%
Oncorhynchus mykiss (rainbow trout)	fish	32.0	33%
Salmo salar (Atlantic salmon)	fish	96.0	50%
Daphnia magna (cladoceran)	invertebrate	100.0	67%
Lepomis macrochirus (bluegill)	fish	240.0	83%

DDE – dichlorodiphenyldichloroethane
SMAV – species mean acute value

2.4.2 Total DDx and 4,4′-DDT

Total DDx and 4,4′-DDT were identified as COPECs based on a freshwater TSV of 0.001 µg/L. The freshwater TSV was also used to screen estuarine surface water data because a saltwater TSV was not available. This TSV is the AWQC (USEPA 1980c) adopted as NJDEP ecological screening criteria; it is an FRV that is protective of brown pelicans and is thus not an appropriate value for predicting risk to aquatic organisms.

2.4.2.1 Freshwater

The AWQC document for DDx reports a calculated freshwater FAV of 1.1 µg/L for 4,4′-DDT. A single ACR of 65 was identified in USEPA (1980c). Suter and Tsao (1996) recommend an ACR of 17.9 when fewer than 3 ACRs are available; however, Raimondo et al. (2007) report ACRs ranging from 3 to 5 (median 3.6) in 4 studies of chemicals with a DDT-like mode of action. Since acute toxicity data were sufficient to develop an SSD, (Figure 2-7), the 5th percentile value (assuming a Pearson 6 distribution) of 0.90 µg/L provided the basis for the acute and chronic TRVs. The acute toxicity data included in the SSD represented 42 fish and 27 invertebrate species (Table 2-10; Attachment D1). The 5th percentile divided by two provided the acute TRV of 0.45 µg/L; dividing it by the ACR of 3.6 provided the chronic TRV of 0.25 µg/L.

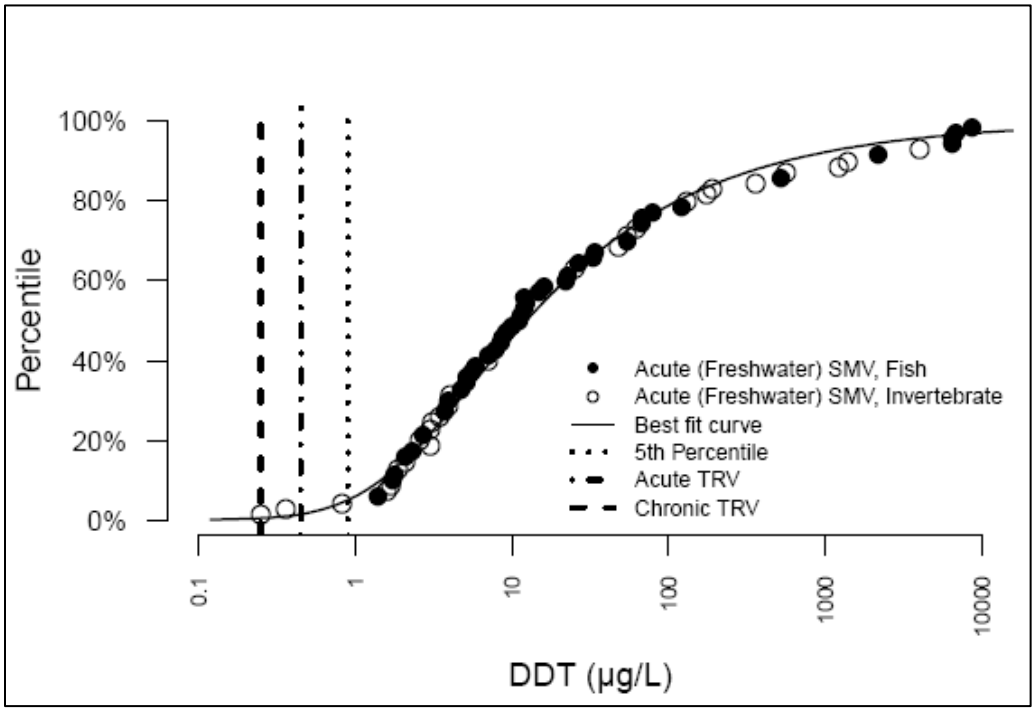

Figure 2-7. Acute freshwater SSD for 4,4′-DDT

Table 2-10. Ranked freshwater SMAVs for 4,4′-DDT.

Species (Common Name)	Species Type	SMAV (µg/L)	Percentile Rank
Hyalella azteca (Scud)	invertebrate	0.25	1%
Daphnia pulex (Water flea)	invertebrate	0.36	3%
Ceriodaphnia dubia (Water flea)	invertebrate	0.83	4%
Micropterus salmoides (Largemouth bass)	fish	1.4	6%
Orconectes nais (Crayfish)	invertebrate	1.6	7%
Gammarus fasciatus (Scud)	invertebrate	1.7	9%
Clarias batrachus (Walking catfish)	fish	1.75	10%
Salmo salar (Atlantic salmon)	fish	1.8	11%

Species (Common Name)	Species Type	SMAV (µg/L)	Percentile Rank
Pteronarcella badia (Stonefly)	invertebrate	1.9	13%
Gammarus lacustris (Scud)	invertebrate	2.1	14%
Esox lucius (Northern pike)	fish	2.1	16%
Perca flavescens (Yellow perch)	fish	2.3	17%
Daphnia magna (Water flea)	invertebrate	3	19%
Simocephalus serrulatus (Cladoceran)	invertebrate	2.6	20%
Oncorhynchus clarkii (Cutthroat trout)	fish	2.7	21%
Procambarus acutus (Crayfish)	invertebrate	3	23%
Palaemonetes kadiakensis (Glass shrimp)	invertebrate	3.1	24%
Claassenia sabulosa (Stonefly)	invertebrate	3.5	26%
Sander vitreus (Walleye)	fish	3.7	27%
Echinogammarus tibaldii (Scud)	invertebrate	3.9	29%
Lepomis gibbosus (Pumpkinseed)	fish	3.9	30%
Caecidotea brevicauda (Aquatic sowbug)	invertebrate	4.0	31%
Lepomis macrochirus (Bluegill)	fish	4.7	33%
Salmo trutta (Brown trout)	fish	5.1	34%
Lepomis cyanellus (Green sunfish)	fish	5.2	36%
Pomoxis nigromaculatus (Black crappie)	fish	5.6	37%
Notropis blennius (River shiner)	fish	5.8	39%
Gammarus italicus (Scud)	invertebrate	7.0	40%
Oncorhynchus mykiss (Rainbow trout)	fish	7.1	41%
Lepomis megalotis (Longear sunfish)	fish	7.8	43%
Salvelinus fontinalis (Brook trout)	fish	8.5	44%
Lepomis microlophus (Redear sunfish)	fish	8.7	46%
Salvelinus namaycush (Lake trout)	fish	9.3	47%
Aplodinotus grunniens (Freshwater drum)	fish	10	49%
Oreochromis mossambicus (Mozambique tilapia)	fish	11	50%
Oncorhynchus tshawytscha (Chinook salmon)	fish	11.5	51%
Oncorhynchus kisutch (Coho salmon)	fish	12	53%
Ameiurus melas (Black bullhead)	fish	12.2	54%
Cyprinus carpio (Common carp)	fish	12	56%
Ictalurus punctatus (Channel catfish)	fish	15	57%
Tilapia zillii (Tilapia)	fish	16	59%
Gambusia affinis (Western mosquitofish)	fish	22	60%
Oryzias latipes (Japanese medaka)	fish	23	61%
Ephemeralia grandis (Mayfly)	invertebrate	25	63%
Pimephales promelas (Fathead minnow)	fish	27	64%
Poecilia reticulata (Guppy)	fish	33	66%
Carassius auratus (Goldfish)	fish	34	67%
Hydropsyche californica (Caddisfly)	invertebrate	48	69%

Species (Common Name)	Species Type	SMAV (µg/L)	Percentile Rank
Ptychocheilus oregonensis (Northern squawfish)	fish	54	70%
Cypridopsis vidua (Seed shrimp)	invertebrate	54	71%
Paratelphusa jacquemontii (Crab)	invertebrate	62	73%
Culaea inconstens (Brook stickleback)	fish	67	74%
Chrosomus eos (Northern redbelly dace)	fish	68	76%
Tilapia spilurus (Cichlid)	fish	80	77%
Channa punctata (Snake-head catfish)	fish	121	79%
Lumbriculus variegatus (Oligochaete, worm)	invertebrate	130	80%
Arctopsyche grandis (Caddisfly)	invertebrate	175	81%
Pteronarcys californica (Stonefly)	invertebrate	192	83%
Hesperoperla pacifica (Stonefly)	invertebrate	362	84%
Ptychocheilus lucius (Colorado squawfish)	fish	527	86%
Barytelphusa cunicularis (Crab)	invertebrate	560	87%
Polycelis felina (Planarian)	invertebrate	1,230	89%
Viviparus bengalensis (Snail)	invertebrate	1,390	90%
Gila cypha (Humpback chub)	fish	2,166	91%
Tubifex tubifex (Tubificid worm)	invertebrate	4,000	93%
Cirrhinus mrigala (Carp, hawk fish)	fish	6,400	94%
Labeo rohita (Rohu)	fish	6,400	96%
Gibelion catla (Catla)	fish	6,800	97%
Heteropneustes fossilis (Indian catfish)	fish	8,588	99%

AWQC – ambient water quality criteria
DDT – dichlorodiphenyltrichloroethane
SMAV – species mean acute value
USEPA – US Environmental Protection Agency

2.4.2.2 Saltwater

Acute toxicity data for fish and invertebrate species were sufficient to develop an SSD. The toxicity data included in the SSD (provided in Attachment D1) represented 18 invertebrate and 14 fish species (Figure 2-8; Table 2-11). The log-logistic distribution was determined to provide the best fit across all fish and invertebrate SMAVs. The 5th percentile of the lognormal distribution is 0.068 µg/L. The 5th percentile value divided by 2 provides the acute TRV of 0.034 µg/L. Applying an ACR of 3.6 for DDT-type chemicals from Raimondo et al. (2007) provides the chronic TRV of 0.019 µg/L.

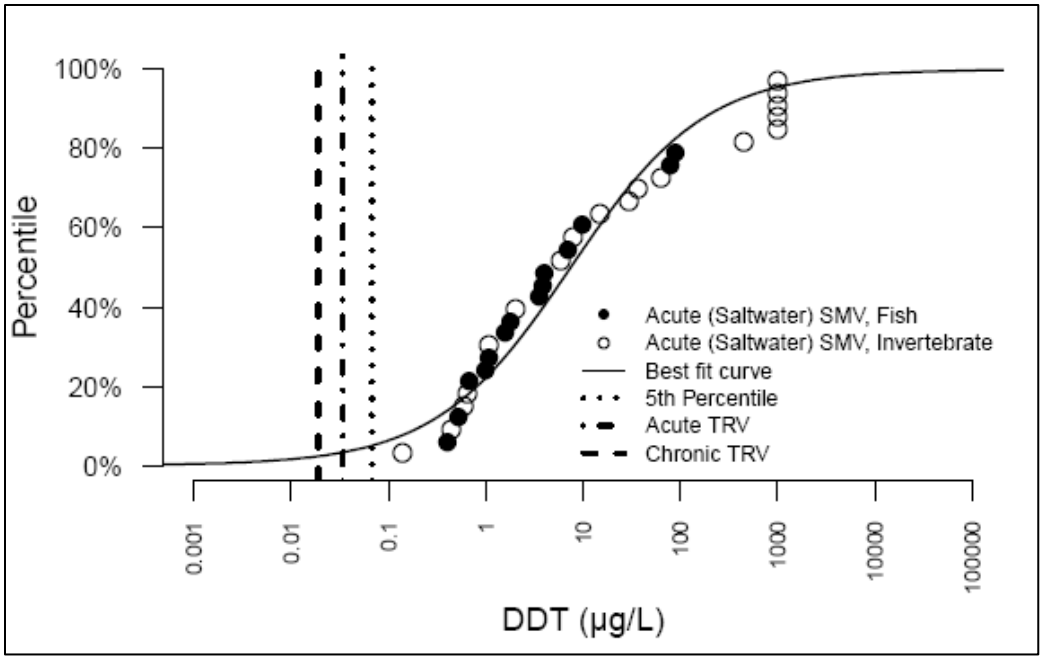

Figure 2-8. Acute saltwater SSD for 4,4′-DDT

Table 2-11. Ranked saltwater SMAVs for 4,4′-DDT.

Species (Common Name)	Species Type	SMAV (µg/L)	Percentile Rank
Penaeus aztecus (brown shrimp)	invertebrate	0.14	3%
Menidia menidia (Atlantic silverside)	fish	0.40	6%
Americamysis bahia (opossum shrimp)	invertebrate	0.45	9%
Morone saxatilis (striped bass)	fish	0.53	12%
Crangon septemspinosa (bay shrimp, sand shrimp)	invertebrate	0.60	15%
Palaemonetes vulgaris (grass shrimp)	invertebrate	0.66	18%
Oncorhynchus tshawytscha (Chinook salmon)	fish	0.68	21%
Fundulus majalis (striped killifish)	fish	1.0	24%
Micrometrus minimus (dwarf perch)	fish	1.1	27%
Cancer magister (Dungeness crab)	invertebrate	1.1	30%
Mugil cephalus (striped mullet)	fish	1.6	33%
Cymatogaster aggregata (shiner perch)	fish	1.8	36%
Elasmopus bampo (scud)	invertebrate	2.0	39%
Terapon jarbua (tigerfish)	fish	3.6	42%
Fundulus heteroclitus (mummichog)	fish	3.9	45%
Angullaria rostrea (American eel)	fish	4.0	48%
Pagurus longicarpus (hermit crab)	invertebrate	6.0	52%
Thalasoma bifasciatum (bluehead)	fish	7.0	55%
Crassostrea virginica (eastern oyster)	invertebrate	7.9	58%
Liza macrolepis (borneo mullet)	fish	10	61%

Species (Common Name)	Species Type	SMAV (µg/L)	Percentile Rank
Nanosesarma sp. (crab)	invertebrate	15	64%
Nitocra spinipes (harpacticoid copepod)	invertebrate	30	67%
Penaeus indicus (Indian prawn)	invertebrate	37	70%
Metapenaeus monoceros (sand shrimp)	invertebrate	63	73%
Alburnus alburnus (bleak)	fish	80	76%
Sphoeroides maculatus (northern puffer)	fish	89	79%
Ruditapes decussatus (clam)	invertebrate	457	82%
Capitella capitata (polychaete worm)	invertebrate	1,000	85%
Eurythoe complanata (fireworm)	invertebrate	1,000	88%
Neanthes arenaceodentata (polychaete worm)	invertebrate	1,000	91%
Nereis grubei (polychaete)	invertebrate	1,000	94%
Ophryotrocha labronica (polychaete)	invertebrate	1,000	97%

AWQC – ambient water quality criteria
DDT – dichlorodiphenyltrichloroethane
SMAV – species mean acute value
USEPA – US Environmental Protection Agency

2.4.3 Total chlordane

Total chlordane was identified as a COPEC based on freshwater and saltwater TSVs of 0.0043 and 0.004 µg/L, respectively. These TSVs are USEPA AWQC (USEPA 1980b) adopted as NJDEP ecological screening criteria (NJDEP 2009a). Both values are FRVs derived using a US Food and Drug Administration (FDA) action level for edible fish (protective of human health) and bioconcentration factors. These FRVs are lower than the calculated FCVs of 0.17 µg/L for freshwater and 0.0064 µg/L for saltwater, which are based on FAVs. The use of FRVs is not applicable to assess direct toxicity of total chlordane to aquatic species, because FRVs are protective of human health and are based on accumulation data.

2.4.3.1 Freshwater

Freshwater toxicity data for total chlordane is limited. In USEPA (1980b), a freshwater FAV of 2.4 µg/L was derived based on acute toxicity data for four invertebrate and nine fish species. Dividing the FAV by 2 provided the acute TRV of 1.2 µg/L. The FCV of 0.17 µg/L, which was derived from the FAV using an ACR of 14, was selected as the chronic freshwater TRV.

2.4.3.2 Saltwater

Saltwater toxicity data for total chlordane is limited. In USEPA (1980b), a saltwater FAV of 0.09 µg/L was derived based on acute toxicity data for four invertebrate and four fish species. Dividing the FAV by 2 provided the acute TRV of 0.045 µg/L. The FCV of 0.0064 µg/L, which was derived from the FAV using an ACR of 14, was selected as the chronic saltwater TRV.

2.4.4 Dieldrin

Dieldrin was identified as a COPEC based on a saltwater TSV of 0.0019 µg/L, which is a USEPA AWQC (1980a) that was adopted as an NJDEP ecological screening criterion. This criterion is an FRV derived using an FDA action level for edible fish (protective of human health) and bioconcentration factors. The use of FRVs is not applicable for assessing direct toxicity of total chlordane to aquatic species, because FRVs are protective of human health and are based on accumulation data.

2.4.4.1 Saltwater

Saltwater toxicity data for dieldrin is limited. In USEPA (1980a), a saltwater FAV of 0.71 µg/L was derived based on acute toxicity data for 8 invertebrate and 13 fish species. Dividing the FAV by 2 provided the acute TRV of 0.36 µg/L. The FCV of 0.084 µg/L, which was derived from the FAV using an ACR of 8.5, was selected as the chronic saltwater TRV.

2.4.5 Hexachlorobenzene

Hexachlorobenzene was identified as a COPEC based on a saltwater TSV of 0.0003 µg/L, a wildlife toxicity-based Michigan WQS adopted as a RCRA ESL (USEPA 2003c). The saltwater TSV was also used to screen freshwater surface water data because a freshwater TSV was not available. This value is not appropriate for the characterization of surface water risk to aquatic receptors, as it does not represent effects caused by direct, chronic toxicity to aquatic species.

2.4.5.1 Freshwater

Freshwater acute toxicity data from ECOTOX were sufficient to develop an SDD for nine fish species (Figure 2-9; Table 2-12). The toxicity data included in the SSD are provided in Attachment D1. A lognormal distribution provided the best-fit curve. The 5th percentile of the lognormal distribution was 355 µg/L. The 5th percentile divided by 2 provided the acute TRV of 180 µg/L. An ACR of 6.2 for chemicals that have an uncoupling mode of action was selected from Raimondo et al. (2007); this median ACR was based on 22 invertebrate and fish ACRs. The chronic toxicity values identified in ECOTOX ranged from 1.8 to 63 µg/L for freshwater fish and invertebrate species (Table 2-13). The 5th percentile divided by the ACR of 6.2 provided the chronic TRV of 57 µg/L.

2.4.5.2 Saltwater

Saltwater toxicity data were insufficient to develop acute or chronic SSDs. The lowest acceptable acute toxicity value was a 96-hr LC50 of 142 µg/L for a fish species, *Solea solea* (Dover sole), which was divided by 2 to provide the acute saltwater TRV of 71 µg/L (Furay and Smith 1995). The chronic TRV of 23 µg/L was derived from the acute TRV using the ACR of 6.2.

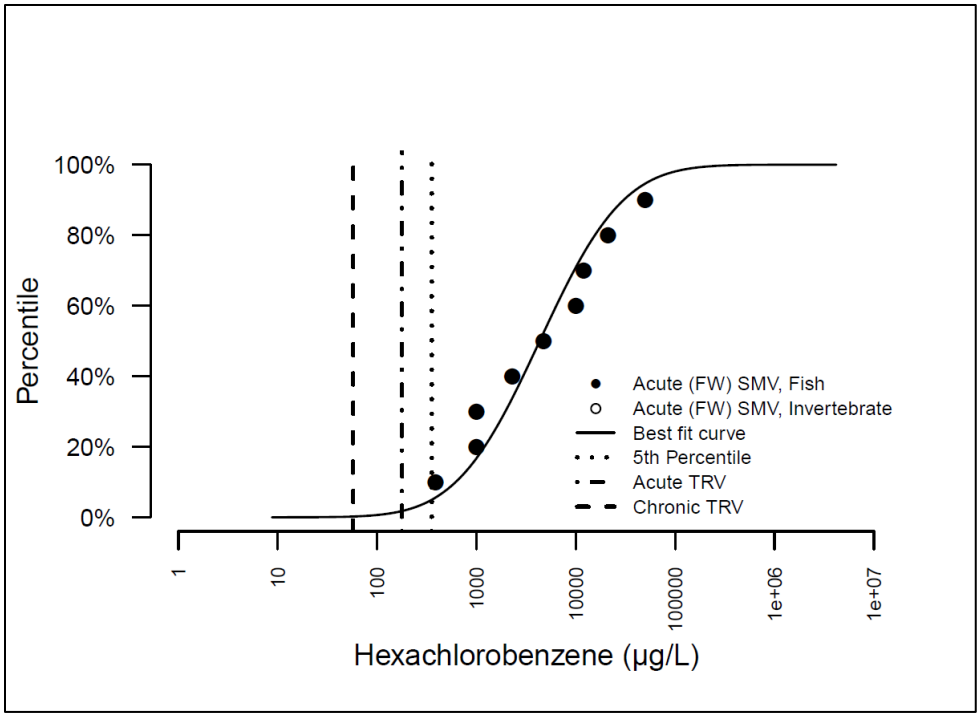

Figure 2-9. Acute freshwater SSD for hexachlorobenzene

Table 2-12. Ranked freshwater SMAVs for hexachlorobenzene

Species (Common Name)	Species Type	SMAV (µg/L)	Percentile Rank
Salmo trutta (brown trout)	fish	387	6%
Oncorhynchus tshawytsche (Chinook salmon)	fish	1,000	17%
Salvelinus fontinalis (brook trout)	fish	1,000	17%
Oncorhynchus mykiss (rainbow trout)	fish	2,300	34%
Lepomis macrochirus (bluegill)	fish	4,726	52%
Pimephales promelas (fathead minnow)	fish	10,000	71%
Micropterus salmoides (largemouth bass)	fish	12,000	75%
Ictalurus punctatus (channel catfish)	fish	21,142	85%
Oncorhynchus kisutch (coho salmon)	fish	50,000	95%

SMAV – species mean acute value

Table 2-13. Chronic freshwater NOECs and LOECs for hexachlorobenzene

Species	Concentration (ug/L)	Type	Endpoint	Duration	Source
Gammarus lacustris (amphipod)	1.8	NOEC	survival	28	Nebeker et al. (1989)
Gammarus lacustris (amphipod)	3.3	LOEC	survival	28	
Hyalella azteca (amphipod)	3.8	NOEC	survival	30	
Hyalella azteca (amphipod)	4.5	NOEC	survival	30	
Lumbriculus variegatus (oligochaete worm)	4.7	NOEC	growth	49	

Species	Concentration (ug/L)	Type	Endpoint	Duration	Source
Lumbriculus variegatus (oligochaete worm)	5	NOEC	survival	49	
Pimephales promelas (fathead minnow)	4.76	NOEC	growth	32	Ahmad et al. (1984)
Pimephales promelas (fathead minnow)	4.76	NOEC	survival	32	
Pimephales promelas (fathead minnow)	4.8	NOEC	growth, survival	32	Carlson and Kosian (1987)

LOEC – lowest-observed-effect concentration
NOEC – no-observed-effect concentration

2.5 POLYCYCLIC AROMATIC HYDROCARBONS

Surface water TRVs were derived for five polycyclic aromatic hydrocarbons (PAHs) (i.e., anthracene, benzo[a]anthracene, benzo[a]pyrene, fluoranthene, and pyrene).

2.5.1 Anthracene

Anthracene was identified as a COPEC based on a freshwater TSV of 0.012 µg/L, which is an interim CCME WQG. The freshwater value was derived from a 15-minute median lethal time, or time until death (LT_{50}) for an invertebrate (*D. pulex*) multiplied by a safety factor of 0.01 (CCME 1999c).

2.5.1.1 Freshwater

Acute freshwater data were sufficient for an SSD based on two invertebrate and four fish species (Figure 2-10; Table 2-14). The toxicity data included in the SSD are provided in Attachment D1. A log-logistic distribution provided the best-fit curve. The 5th percentile of the distribution was 0.52 µg/L, which was divided by 2 to provide the acute TRV of 0.26 µg/L. An ACR of 5.09 based on 35 ACRs for 6 species and 20 individual PAHs was selected to derive the chronic TRV (DiToro et al. 2000). The lowest chronic freshwater toxicity values were a 35-day reproductive LOEC and NOEC for fathead minnow of 6.9 and 6.08 µg/L, respectively. The 5th percentile value divided by the ACR of 5.09 provided the chronic TRV of 0.10 µg/L, which was lower than the lowest chronic toxicity values.

2.5.1.2 Saltwater

Acute and chronic toxicity data for saltwater species were insufficient to develop SSDs for anthracene. The lowest acute toxicity value for a saltwater species was a 96-hr LC50 of 68.9 µg/L for *Mulina lateralis* (dwarf surf clam) from Pelletier et al. (1997) as cited in ECOTOX. The lowest chronic toxicity value in ECOTOX was a 162-day LOEC of 95 µg/L for reduced population abundance of a polychaete worm, *Capitella capitata*, from Bauer et al. (1988). Dividing the lowest acute toxicity value by 2 provided the acute TRV of 34.5 µg/L. The ACR of 5.09 was applied to the acute toxicity value to provide a more conservative chronic TRV of 13.5 µg/L.

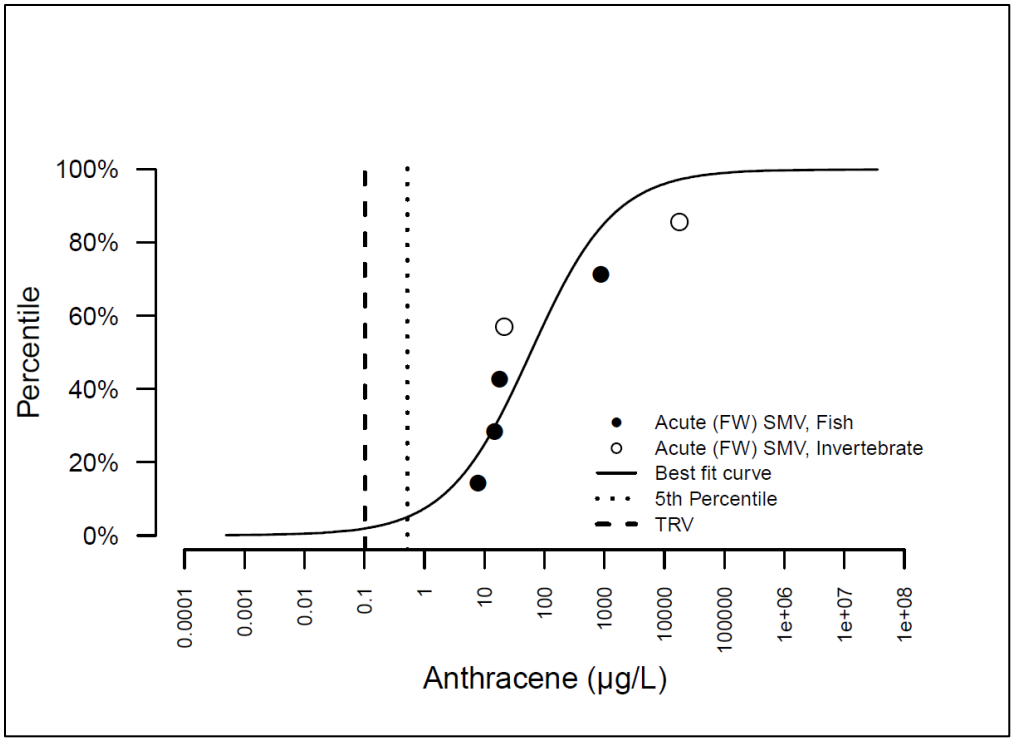

Figure 2-10. Acute freshwater SSD for anthracene

Table 2-14. Ranked freshwater SMAVs for anthracene

Species (Common Name)	Species Type	SMAV (µg/L)	Percentile Rank
Lepomis macrochirus (bluegill)	fish	7.8	14%
Pimephales promelas (fathead Minnow)	fish	14.8	29%
Poecilia reticulata (guppy)	fish	17.9	43%
Hyalella azteca (scud)	invertebrate	21.4	57%
Lepomis sp. (sunfish)	fish	874	71%
Daphnia magna (cladoceran)	invertebrate	17,823	86%

SMAV – species mean acute value

2.5.2 Benzo(a)anthracene

Benzo(a)anthracene was identified as a COPEC based on a TSV of 0.018 µg/L, which is an interim CCME WQG. The freshwater value was derived by multiplying an acute LC50 for an invertebrate (*D. magna*) by a safety factor of 0.01 (CCME 1999c).

2.5.2.1 Freshwater

Acute freshwater toxicity data were insufficient for the development of an SSD. The lowest acute toxicity value for a freshwater species that met the data acceptability criteria was a 48-hr LC50 of 0.96 µg/L for *D. magna* from Lampi et al. (2005), as reported in ECOTOX. In this study, *D. magna* were exposed to simulated solar radiation, which can be assumed to be similar to potential ultraviolet (UV) radiation in the field (CCME

1999c). The LC50 value was divided by 2 to provide the acute freshwater TRV of 0.48 µg/L. No other applicable chronic toxicity values for fish or invertebrates were available, so the chronic TRV of 0.19 µg/L was calculated by dividing the LC50 by the ACR of 5.09.

2.5.2.2 Saltwater

Due to the lack of saltwater toxicity data, the freshwater acute and chronic TRVs were selected as surrogate saltwater TRVs.

2.5.3 Benzo(a)pyrene

Benzo(a)pyrene was identified as a COPEC based on a TSV of 0.014 µg/L, which is a Tier II-derived RCRA ESL (USEPA 2003c) based on a single acute LC50 value for *D. pulex* (Trucco et al. 1983).

2.5.3.1 Freshwater

Acute toxicity data were available for three invertebrate and two fish species (Table 2-15, Figure 2-11). The toxicity data included in the SSD are provided in Attachment D1. A Pearson 5 distribution provided the best-fit curve, and the 5th percentile of the distribution was 4.07 µg/L. Dividing the 5th percentile by 2 provided the acute TRV of 2.03 µg/L. The chronic TRV of 0.80 µg/L was derived by dividing the 5th percentile by the ACR of 5.09.

2.5.3.2 Saltwater

Toxicity data were insufficient to develop acute or chronic SSDs for saltwater species. The lowest acute toxicity value for a saltwater species was an LC50 of 1.02 µg/L for *D. magna* from Weinstein and Garner (2008), as reported in ECOTOX. The LC50 divided by 2 provided the acute saltwater TRV of 0.51 µg/L. No chronic data for saltwater species were available, so the chronic saltwater TRV of 0.20 µg/L was derived by dividing the LC50 by the ACR of 5.09.

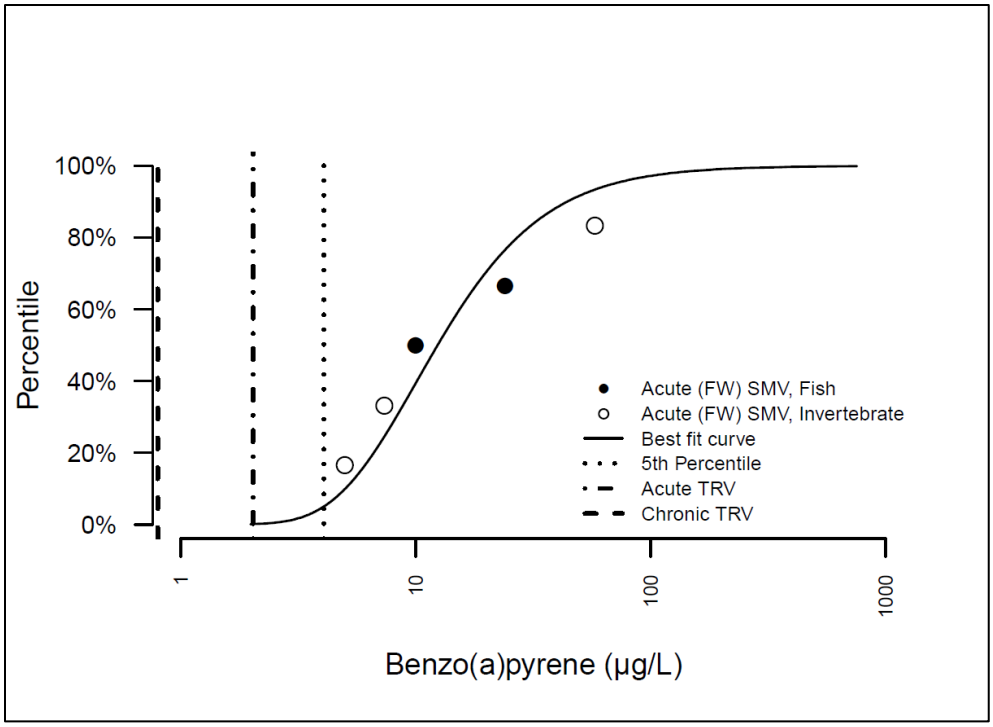

Figure 2-11. Acute freshwater SSD for benzo(a)pyrene

Table 2-15. Ranked freshwater SMAVs for benzo(a)pyrene

Species (Common Name)	Species Type	SMAV (µg/L)	Percentile Rank
Daphnia pulex (cladoceran)	invertebrate	5	17%
Daphnia magna (cladoceran)	invertebrate	7.4	33%
Danio rerio (zebra danio)	fish	10	50%
Zacco platypus (oikawa)	fish	24	67%
Eurytemora affinis (calanoid copepod)	invertebrate	58	83%

SMAV – species mean acute value

2.5.4 Fluoranthene

Fluoranthene was identified as a COPEC based on a TSV of 0.04 µg/L, which is an interim CCME WQG. The freshwater value was derived by multiplying an acute 1-hr LC50 for *D. magna* exposed to UV radiation by a safety factor of 0.01 (CCME 1999c).

2.5.4.1 Freshwater

Acute toxicity data were available for ten invertebrate and four fish species (Table 2-16, Figure 2-12). The data included in the SSD are provided in Attachment D1. A Pearson 5 distribution provided the best-fit curve, and the 5th percentile of the distribution was 26.4 µg/L. Dividing the 5th percentile by 2 provided the acute TRV of 13.2 µg/L. Dividing the 5th percentile by the ACR of 5.09 provided the chronic TRV of 5.20 µg/L.

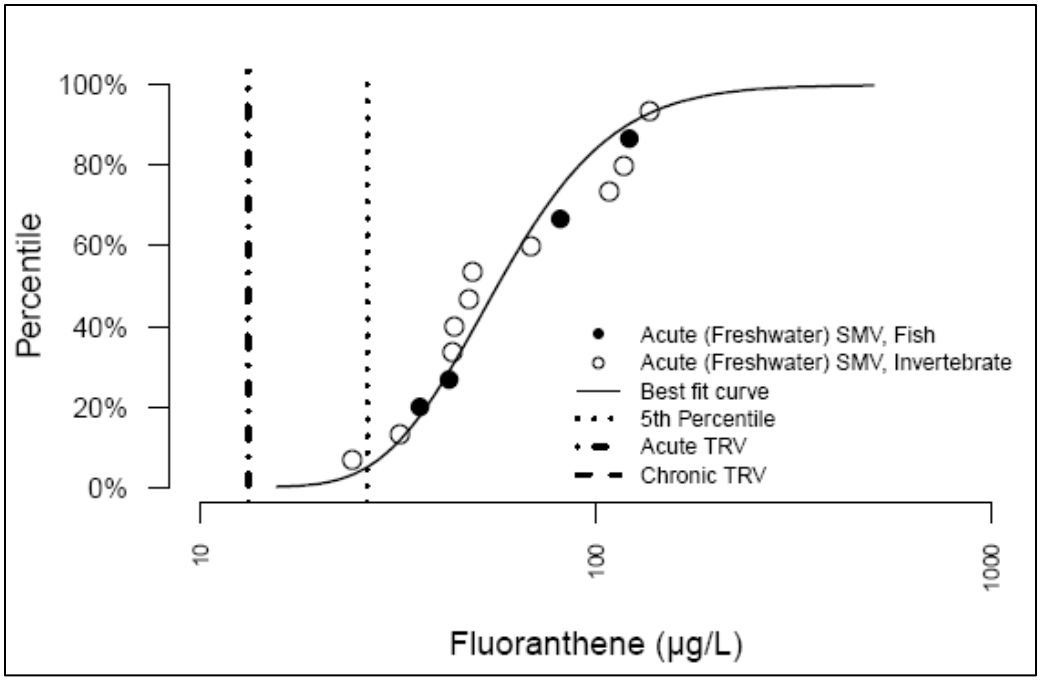

Figure 2-12. Acute freshwater SSD for fluoranthene

Table 2-16. Ranked freshwater SMAVs for fluoranthene

Species (Common Name)	Species Type	SMAV (µg/L)	Percentile Rank
Hydra americana (hydra)	Invertebrate	24	7%
Gammarus minus (scud)	Invertebrate	32	13%
Ictalurus punctatus (channel catfish)	Fish	36	20%
Oncorhynchus mykiss (rainbow trout)	Fish	43	27%
Ceriodaphnia dubia (cladoceran)	Invertebrate	43	33%
Hyalella azteca (scud)	Invertebrate	44	40%
Physella virgata (snail)	Invertebrate	48	47%
Lumbriculus variegatus (oligochaete worm)	Invertebrate	49	53%
Tisbe battagliai (harpacticoid copepod)	Invertebrate	68.3	60%
Lepomis macrochirus (bluegill)	Fish	81	67%
Gammarus pseudolimnaeus (scud)	Invertebrate	108	73%
Daphnia magna (cladoceran)	Invertebrate	117	80%
Pimephales promelas (fathead minnow)	Fish	122	87%
Physa heterostropha (snail)	Invertebrate	137	93%

SMAAV – species mean acute value

2.5.4.2 Saltwater

Acute toxicity data were available for 16 invertebrate and 3 fish species (Table 2-17, Figure 2-13). The data included in the SSD are provided in Attachment D1. A Pearson 5 distribution provided the best-fit curve, and the 5th percentile of the distribution was

6.03 µg/L. Dividing the 5th percentile by 2 provided the acute TRV of 3.02 µg/L. Dividing the 5th percentile by the ACR of 5.09 provided the chronic TRV of 1.19 µg/L.

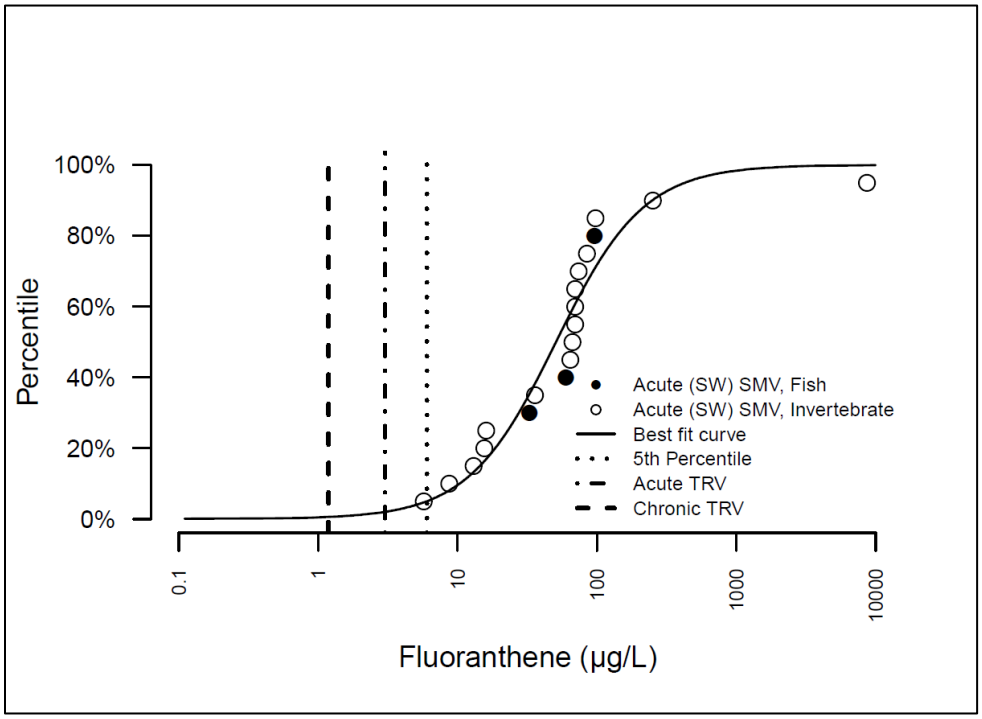

Figure 2-13. Acute saltwater SSD for fluoranthene

Table 2-17. Ranked saltwater SMAVs for fluoranthene

Species (Common Name)	Species Type	SMAV (µg/L)	Percentile Rank
Arbacia punctulata (purple-spined sea urchin)	invertebrate	5.7	5%
Palaemonetes pugio (daggerblade grass shrimp)	invertebrate	8.7	10%
Americamysis bahia (opossum shrimp)	invertebrate	13.1	15%
Homarus americanus (American lobster)	invertebrate	15.6	20%
Palaemonetes sp. (grass shrimp, freshwater prawn)	invertebrate	16.1	25%
Pleuronectes americanus (winter flounder)	fish	32.8	30%
Grandidierella japonica (scud)	invertebrate	36	35%
Menidia beryllina (inland silverside)	fish	60.0	40%
Mulinia lateralis (clam)	invertebrate	64.5	45%
Ampelisca abdita (amphipod)	invertebrate	67	50%
Eohaustorius estuarius (amphipod)	invertebrate	70	55%
Excirolana sp. (isopod)	invertebrate	70	60%
Rhepoxynius abronius (amphipod)	invertebrate	70	65%
Emerita analoga (Pacific sand crab)	invertebrate	74	70%
Corophium insidiosum (scud)	invertebrate	85	75%
Cyprinodon variegatus (sheepshead minnow)	fish	96.0	80%
Leptocheirus plumulosus (amphipod)	invertebrate	98.0	85%

Species (Common Name)	Species Type	SMAV (µg/L)	Percentile Rank
Neanthes arenaceodentata (polychaete worm)	invertebrate	252	90%
Ruditapes decussatus (clam)	invertebrate	8,667	95%

SMAV – specie mean acute value

2.5.5 Pyrene

Pyrene was identified as a COPEC based on a TSV of 0.25 µg/L, which is an interim CCME WQG. The freshwater value was based on an acute LC50 for mosquito larvae (*A. aegypti*) multiplied by a safety factor of 0.01 (CCME 1999c).

2.5.5.1 Freshwater

Chronic and acute toxicity data were only available for invertebrates and were insufficient to develop SSDs for freshwater species. The lowest acute toxicity value for a freshwater species was a 48-hr mortality EC50 of 4.3 µg/L for *D. magna* from Lampi et al. (2005) that was divided by 2 to provide the acute TRV of 2.2 µg/L. The lowest chronic toxicity value was a 14-day LC50 of 27.1 µg/L for *Gammarus pulex* from Boxall and Maltby (1997). The next lowest chronic toxicity value for a freshwater species was a 16-day LC50 of 55 µg/L for an amphipod (*Hyalella azteca*) (Lee et al. 2001). However, this value was uncertain because it was based on the toxicity of a mixture of PAHs in which pyrene was identified as the primary contributor to toxicity. Given the difference between the acute TRV and the lowest chronic toxicity value, dividing the acute EC50 by the ACR of 5.09 provided a more conservative chronic TRV of 0.84 µg/L.

2.5.5.2 Saltwater

Chronic and acute toxicity data were only available for invertebrates and were insufficient to develop SSDs for saltwater species. Acceptable acute data were available for a single invertebrate species, *M. lateralis* (clam). The lowest acute toxicity value was a 96-hr EC50 of 0.91 µg/L for juvenile clam growth, which was divided by 2 to provide the acute saltwater TRV of 0.46 µg/L (Pelletier et al. 1997). The lowest chronic toxicity values for saltwater species were unmeasured concentrations from renewal tests: a 15-day NOEL and LOEL of 40 µg/L for reduced food intake by bivalves *M. edulis* and *M. galloprovincialis,* respectively. The same study reported a 7-day LOEL of 20 µg/L (USEPA 2016c). As there was uncertainty regarding this TRV because exposure concentrations were not measured, and it represented a non-standard endpoint (e.g., feeding behavior) that was assumed to have implications for successful growth and survival, a more conservative chronic TRV of 0.18 µg/L was derived from the EC50 using the ACR of 5.09.

2.6 SVOCs

TRVs for surface water were derived for two semivolatile organic compounds (SVOCs): bis(2-ethylhexyl) phthalate (BEHP) and butylbenzyl phthalate.

2.6.1 BEHP

BEHP was identified as a COPEC based on a TSV of 0.3 µg/L, which is a RCRA ESL based on USEPA's AWQC for phthalate esters adjusted by an uncertainty factor of 10 (USEPA 2003c). The original AWQC for phthalate esters is neither an FCV nor a chronic FRV, as data were extremely limited when the criterion was derived (USEPA 1980e). The lowest chronic value for fish exposed to BEHP reported by USEPA (1980e) was a SMAV of 8.4 µg/L for an early life stage test with rainbow trout; this SMAV was the geometric mean of the NOEC and LOEC of 5 and 14 µg/L, respectively (Mehrle and Mayer 1976). More recent data showed evidence of less sensitivity to BEHP among fish species. A more applicable value representative of direct toxicity of BEHP was derived for the BERA based on an updated set of toxicity data published after 1980 (data presented in USEPA (1980e) were not included).

2.6.1.1 Freshwater

Acute freshwater toxicity data were sufficient for an SSD with 4 invertebrate and 12 fish species (Figure 2-14; Table 2-18). The toxicity data included in the SSD are provided in Attachment D1. A log logistic distribution provided the best-fit curve. The 5th percentile of the distribution was 48.2 µg/L, which was divided by 2 to provide the acute TRV of 24.1 µg/L. The ACR of 6.9 used to derive an FCV was based on the geometric mean of a Japanese medaka ACR and a rainbow trout ACR from BEHP data presented by DeFoe et al. (1990) (Table 2-19). The 5th percentile concentration divided by the ACR provided a chronic TRV of 7.0 µg/L. The selected chronic TRV was lower than the lowest bounded chronic values for freshwater species reported in ECOTOX, which were a 21-day NOEC and LOEC for *D. magna* of 77 and 160 µg/L, respectively, from Rhodes et al. (1995).

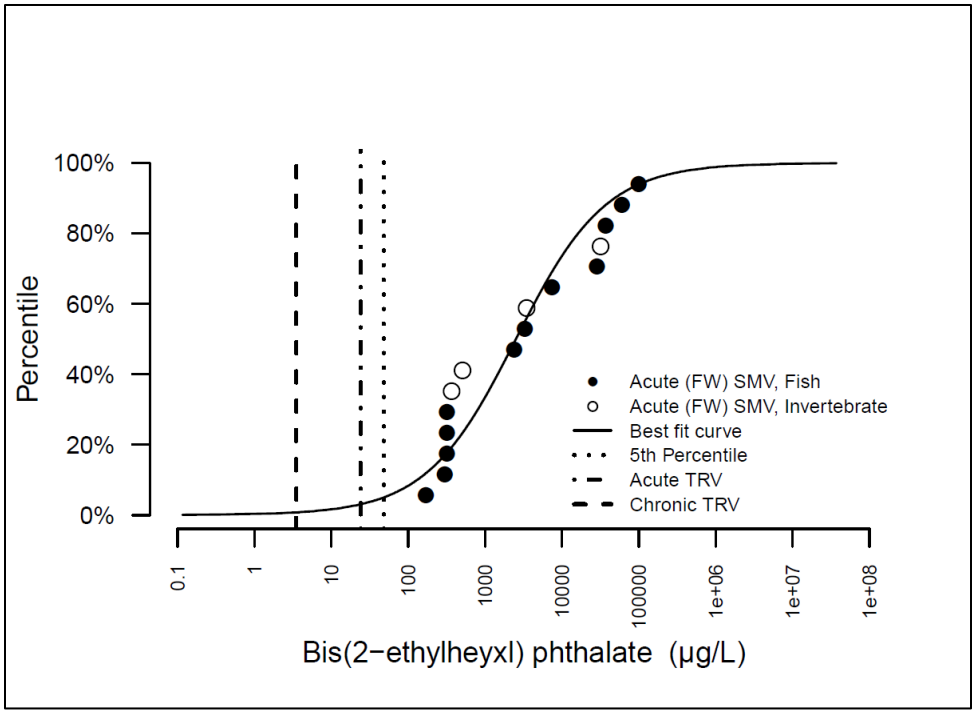

Figure 2-14. Acute freshwater SSD for BEHP

Table 2-18. Ranked freshwater SMAVs for BEHP

Species (Common Name)	Species Type	SMAV (µg/L)	Percentile Rank
Cyprinodon variegatus (sheepshead minnow)	fish	170	6%
Gasterosteus aculeatus (threespine stickleback)	fish	300	12%
Danio rerio (zebra danio)	fish	320	18%
Jordanella floridae (flagfish)	fish	320	24%
Oryzias latipes (Japanese medaka)	fish	320	29%
Americamysis bahia (opossum shrimp)	invertebrate	370	35%
Eurytemora affinis (calanoid copepod)	invertebrate	511	41%
Ictalurus punctatus (channel catfish)	fish	2,399	47%
Pimephales promelas (fathead minnow)	fish	3,300	53%
Daphnia magna (cladoceran)	invertebrate	3,479	59%
Lepomis macrochirus (bluegill)	fish	7,450	65%
Oncorhynchus mykiss (rainbow trout)	fish	28,568	71%
Gammarus pseudolimnaeus (scud)	invertebrate	32,000	76%
Micropterus salmoides (largemouth bass)	fish	37,217	82%
Carassius auratus (goldfish)	fish	60,327	88%
Oncorhynchus kisutch (silver salmon)	fish	100,000	94%

BEHP – bis(2-ethylhexyl)phthalate
SMAV – species mean acute value

Table 2-19. BEHP ACR derivation

Species	LC50 or NOEC/LOEC (µg/L)	Value Type	ACR	Geomean	Median
Oncorhynchus mykiss (rainbow trout)	502	acute	39	6.9	20
	19,500	chronic			
Oryzias latipes (rainbow trout)	544	acute	1.2		
	670	chronic			

Source: DeFoe et al. (1990)
ACR – acute-to-chronic ratio
BEHP – bis(2-ethylhexyl)phthalate
LC50 – concentration that is lethal to 50% of an exposed population
LOEC – lowest-observed-effect concentration
NOEC – no-observed-effect concentration

2.6.1.2 Saltwater

Acute saltwater toxicity data were insufficient to develop an SSD. The lowest acute toxicity values for a saltwater species were LC50s of 1,000 µg/L for two invertebrate species (*A. abdita* and *A. bahia*) (Ho et al. 1997); however, both LC50s were based on exposure to contaminated sediment porewater. The only chronic toxicity value based on measured chemistry for a saltwater species was a 28-day LC50 of 125,000 µg/L for *A. bahia* (opossum shrimp) from Horne et al. (1983). The overall lowest chronic value was a 180-day LOEC of 100 µg/L for reproduction of Indian medaka (*O. melastigma*) from Ye et al. (2014), as reported in ECOTOX. In the absence of other data, the LC50 of 1,000 µg/L was divided by 2 to provide the acute TRV of 500 µg/L, and the LOEC of 100 µg/L was selected as the chronic TRV.

2.6.2 Butyl benzyl phthalate

BBP was identified as a COPEC based on a TSV of 19 µg/L, which is a secondary chronic Tier II value (Suter and Tsao 1996). The Tier II value was calculated using ECOTOX data following Great Lakes water quality Tier II methodology (USEPA 1996b). The underlying data used in the calculation were unknown.

2.6.2.1 Freshwater

Acute freshwater toxicity data were sufficient for an SSD for four invertebrate and four fish species (Figure 2-15; Table 2-20). The toxicity data included in the SSD are provided in Attachment D1. A Weibull distribution provided the best-fit curve. The 5th percentile of the distribution was 213 µg/L, which was divided by 2 to provide the acute freshwater TRV of 107 µg/L. The mode of action for phthalate toxicity is expected to be similar to that of BEHP, so the BEHP ACR of 6.9 (Table 2-20) was applied to the 5th percentile concentration, providing a chronic TRV of 30.9 µg/L.

2.6.2.2 Saltwater

Toxicity data for saltwater species were limited. The lowest acute toxicity values for a saltwater species were a 165-hour LC50 of 490 µg/L and a 96-hour LC50 of 510 µg/L for shiner perch (*C. aggregate*) from Ozretich et al. (1983), as reported in ECOTOX. The 165-hour LC50 value was divided by 2 to provide the acute saltwater TRV of 245 µg/L. Given the lack of acceptable chronic saltwater toxicity data for BBP, the chronic saltwater TRV of 71 µg/L was derived from the LC50 of 490 µg/L using the freshwater BEHP ACR of 6.9.

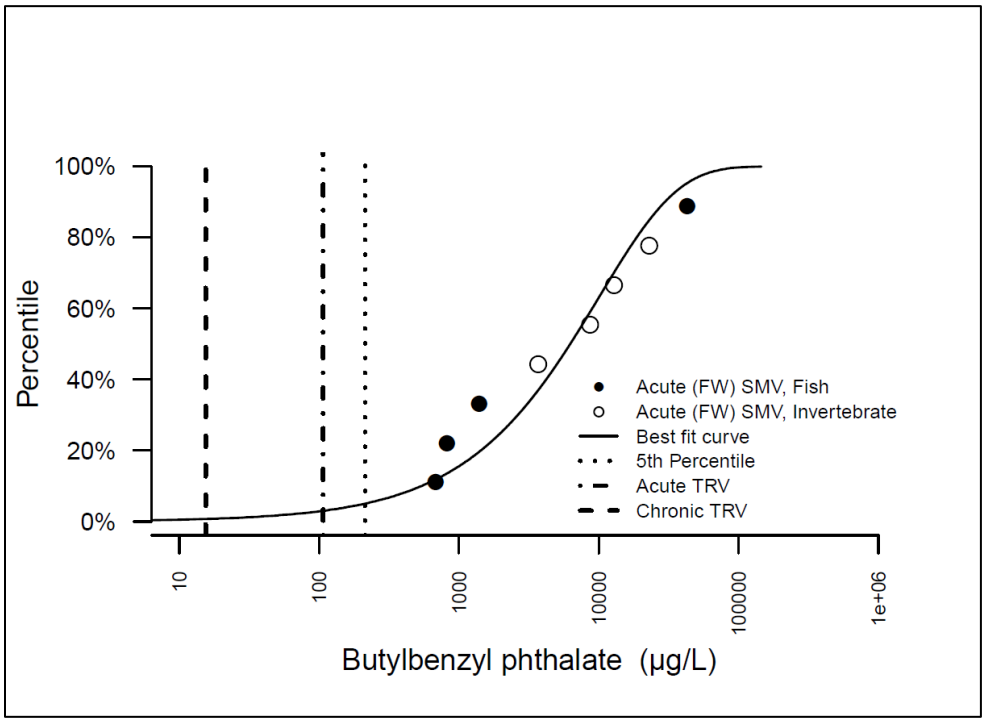

Figure 2-15. Acute freshwater SSD for BBP

Table 2-20. Ranked freshwater SMAVs for BBP

Species (Common Name)	Species Type	SMAV (µg/L)	Percentile Rank
Cyprinodon variegatus (sheepshead minnow)	fish	680	11%
Oncorhynchus mykiss (rainbow trout)	fish	820	22%
Pimephales promelas (fathead minnow)	fish	1,395	33%
Moina macrocopa (cladoceran)	invertebrate	3,690	44%
Gammarus minus (scud)	invertebrate	8,680	56%
Daphnia magna (cladoceran)	invertebrate	12,869	67%
Physa heterostropha (pond snail)	invertebrate	23,000	78%
Lepomis macrochirus (bluegill)	fish	43,000	89%

BBP – butyl benzyl phthalate
SMAV – species mean acute value

2.7 CYANIDE

Cyanide was identified as a COPEC based on freshwater and saltwater TSVs of 5.0 and 1.0 µg/L, respectively. The freshwater TSV is a CCME WQG established in 1987 for free cyanide based on a recommended guideline value from the early 1980s (CCREM 2008). The saltwater TSV is an AWQC that was adopted as a NJDEP ecological screening criterion (NJDEP 2009b; USEPA 1985).

2.7.1 Freshwater

Acute toxicity data were sufficient to develop a freshwater SSD for 24 invertebrate and 11 fish species (Figure 2-16; Table 2-21). The toxicity data included in the SSD are provided in Attachment D1. The inverse Gaussian distribution was determined to provide the best fit across all SMAVs. The 5th percentile concentration of the SSD was 64.6 µg/L, which was divided by 2 to provide the acute TRV of 32.3 µg/L. Division of the 5th percentile value by an ACR of 8.6 (Gensemer et al. 2006a) provided the chronic TRV of 7.5 µg/L.

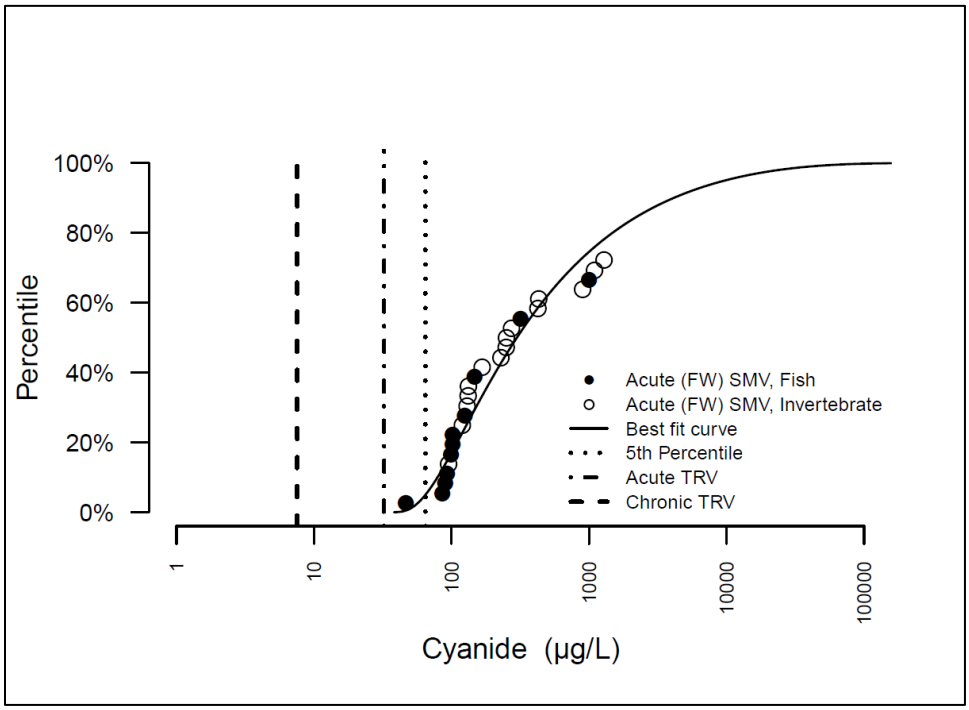

Figure 2-16. Acute freshwater SSD for cyanide

Table 2-21. Ranked freshwater SMAVs for cyanide.

Species (Common Name)	Species Type	SMAV (µg/L)	Percentile Rank
Oncorhynchus mykiss (rainbow trout)	fish	46.5	3%
Salvelinus fontinalis (brook trout)	fish	85.8	6%
Salmo salar (Atlantic salmon)	fish	90	8%
Perca flavescens (yellow perch)	fish	92.6	11%

Species (Common Name)	Species Type	SMAV (µg/L)	Percentile Rank
Daphnia pulex (cladoceran)	invertebrate	95.6	14%
Lepomis macrochirus (bluegill sunfish)	fish	99.2	17%
Pomoxis nigromaculatus (black crappie)	fish	102	19%
Micropterus salmoides (largemouth bass)	fish	102	22%
Daphnia magna (cladoceran)	invertebrate	120	25%
Pimephales promelas (fathead minnow)	fish	125	28%
Cyclops viridis (copepod)	invertebrate	130	31%
Daphnia spp. (cladoceran)	invertebrate	132	33%
Diaptomus sp. (copepod)	invertebrate	133	36%
Poecilia reticulata (guppy)	fish	147	39%
Gammarus pseudolimnaeus (amphipod)	invertebrate	167	42%
Ranatra sp. (water scorpion)	invertebrate	229	44%
Corixa sp. (water boatman)	invertebrate	250	47%
Dytiscus sp. (aquatic beetle)	invertebrate	251	50%
Nepa sp. (water scorpion)	invertebrate	273	53%
Carassius auratus (goldfish)	fish	318	56%
Pteronarcys dorsata (stonefly)	invertebrate	426	58%
Physa heterostropha (snail)	invertebrate	432	61%
Gammarus fasciatus (amphipod)	invertebrate	900	64%
Cyprinus carpio (carp)	fish	1,000	67%
Villosa iris (rainbow mussel)	invertebrate	1,100	69%
Planorbis exustrus (snail)	invertebrate	1,287	72%
Pila globosa (snail)	invertebrate	1,292	75%
Lymnaea luteola (snail)	invertebrate	1,324	78%
Viviparus bengalensis (snail)	invertebrate	1,549	81%
Asellus intermedius (isopod)	invertebrate	1,700	83%
Dugesia tigrina (planarian)	invertebrate	2,100	86%
Asellus communis (isopod)	invertebrate	2,326	89%
Tanytarsus dissimilis (midge)	invertebrate	2,490	92%
Lumbriculus variegatus (oligochaete)	invertebrate	11,000	94%
Helisoma trivolvis (snail)	invertebrate	50,000	97%

SMAV – species mean acute value

2.7.2 Saltwater

Acute data were sufficient to develop a saltwater SSD for 13 invertebrate and 3 fish species (Figure 2-17; Table 2-22). The toxicity data included in the SSD are provided in Attachment D1. The Pearson V distribution was determined to provide the best fit across all SMAVs. The 5th percentile concentration of the Pearson 6 distribution was 12.2 µg/L, which was divided by 2 to provide the acute TRV of 6.1 µg/L. Division of the

5th percentile value by an ACR of 6.5 (Gensemer et al. 2006a) provided the chronic TRV of 1.9 µg/L.

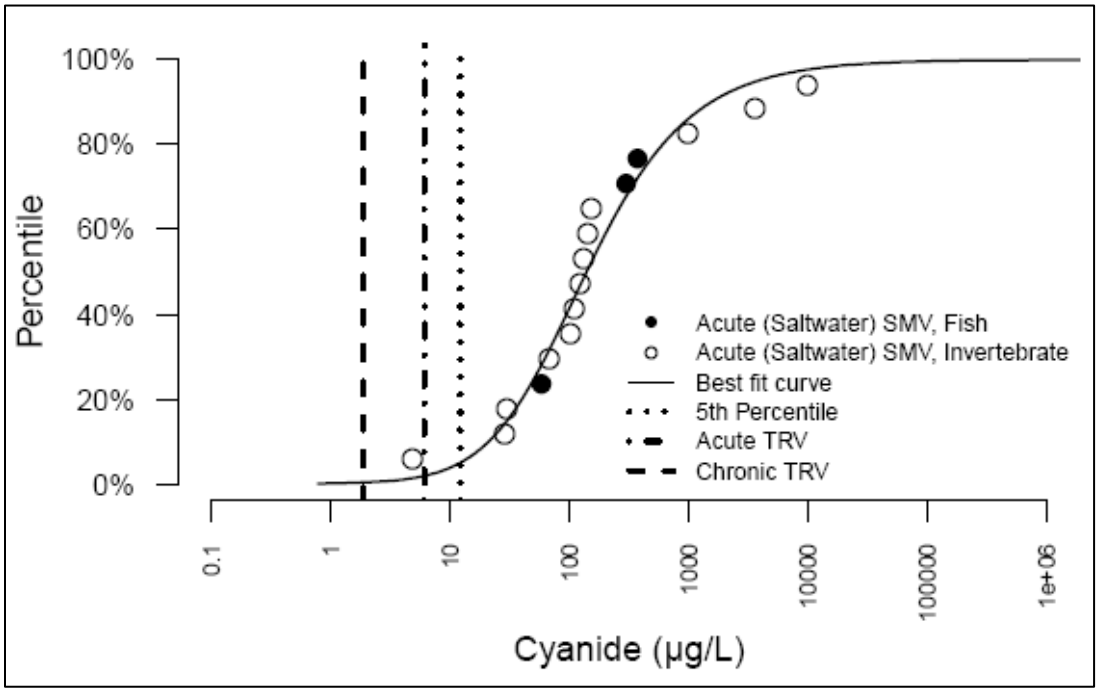

Figure 2-17. Acute saltwater SSD for cyanide

Table 2-22. Ranked saltwater SMAVs for cyanide.

Species	Species Type	SMAV (µg/L)	Percentile Rank
Cancer irroratus (rock crab)	invertebrate	4.89	6%
Chlamys asperrimus (doughboy scallop)	invertebrate	28.6	12%
Acartia clausi (copepod)	invertebrate	30	18%
Menidia menidia (Atlantic silverside)	fish	59	24%
Cancer magister (Dungeness crab)	invertebrate	68.5	29%
Americamysis bahia (mysid)	invertebrate	103	35%
Penaeus monodon (banana prawn)	invertebrate	110	41%
Americamysis bigelowi (mysid)	invertebrate	124	47%
Cancer oregonensis (Oregon cancer crab)	invertebrate	131	53%
Cancer gracilis (slender crab)	invertebrate	144	59%
Cancer productus (red crab)	invertebrate	153	65%
Cyprinodon variegatus (sheepshead minnow)	fish	300	71%
Pseudopleuronectes americanus (winter flounder)	fish	372	76%
Ampelisca abdita (amphipod)	invertebrate	996	82%
Dinophilus gyrociliatus (archiannelid)	invertebrate	3,560	88%
Crepidula fornicata (Atlantic slippershell)	invertebrate	10,000	94%

SMAV – species mean acute value

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Attachment D1. Toxicity Data Used in Surface Water Species Sensitivity Distributions

Table D1-1a. Zinc saltwater acute toxicity data used to develop a species sensitivity distribution for fish, b

Species Common Name	Species Scientific Name	Control	Chemical Analysis	Study Type	Organism Lifestage	Exposure Type
Pink Or Queen Conch	Strombus gigas	M	U	NR	NH	NR
Pink Or Queen Conch	Strombus gigas	M	U	NR	VE	NR
Sand Flounder	Limanda punctatissima	C	M	NR	PQ	S
Inland Silverside	Menidia beryllina	I	U	NR	NR	R
Crab	Chasmagnathus granulata	C	U	NC	YO	R
Mysid	Acanthomysis costata	C	U	NR	JV	R
Mysid	Acanthomysis costata	C	U	NR	JV	R
Mysid	Acanthomysis costata	C	U	NR	JV	R
Mysid	Acanthomysis costata	C	U	NR	JV	R
Mysid	Acanthomysis costata	C	U	NR	JV	R
Mysid	Acanthomysis costata	C	U	NR	JV	S
Mysid	Acanthomysis costata	C	U	NR	JV	S
Mysid	Acanthomysis costata	C	U	NR	JV	S
Mysid	Acanthomysis costata	C	U	NR	JV	R
Mysid	Acanthomysis costata	C	U	NR	JV	S
Mysid	Acanthomysis costata	C	U	NR	JV	R
Oyster	Crassostrea cucullata	K	U	NR	NR	R
Oyster	Crassostrea margaritacea	K	U	NR	NR	R
Pacific Oyster	Crassostrea gigas	K	U	NR	NR	R
Crab	Nanosesarma sp.	C	U	NR	LV	R
Mysid	Acanthomysis costata	C	U	NR	JV	S
Japanese Anchovy	Engraulis japonicus	C	M	NR	PQ	S
Mysid	Acanthomysis costata	C	U	NR	JV	S
Mangrove Crab	Macrophthalmus erato	M	U	NC	IN	F
Crayfish/Crab Order	Decapoda	C	U	NR	LV	R
Crab	Chasmagnathus granulata	C	U	NC	YO	R
American Lobster	Homarus americanus	U	U	NR	LV	S
Cabezon	Perna perna	C	U	NR	LV	S
Mysid	Acanthomysis costata	C	U	NR	JV	S
Crab	Heteropanope sp.	C	U	NR	LV	R
Mysid	Acanthomysis costata	S	NR	NR	NR	NR
American Lobster	Homarus americanus	U	U	NR	LV	S
Calanoid Copepod	Acartia clausi	S	U	NR	AD	S
Fleshy Prawn	Penaeus chinensis	I	U	NR	LV	S
Green Mussel	Perna viridis	I	U	NR	NR	R
Opossum Shrimp	Americamysis bahia	S	U	NR	JV	S
Southern White Shrimp	Litopenaeus schmitti	C	U	NC	LV	S
Mysid	Acanthomysis costata	C	U	NR	NR	S
Shrimp	Mysidopsis juniae	S	U	NR	NR	S
Shrimp	Mysidopsis juniae	S	U	NR	NR	S
Shrimp	Mysidopsis juniae	S	U	NR	NR	S
Banana Prawn	Penaeus merguiensis	C	U	NC	JV	R
Shrimp	Mysidopsis juniae	S	U	NR	NR	S
American Lobster	Homarus americanus	U	U	NR	LV	S
Copepod	Quinquelaophonte sp.	C	U	NR	AD	S
Shrimp	Mysidopsis juniae	S	U	NR	NR	S
Green Mussel	Perna viridis	C	U	NR	NR	R
Banana Prawn	Penaeus merguiensis	C	U	NC	JV	R
Red Tongue Sole	Cynoglossus joyneri	I	U	NR	LV	S
Amphipod	Hyale longicornis	C	M	NC	JV	S
Opossum Shrimp	Americamysis bahia	S	M	NR	JV	S
Opossum Shrimp	Neomysis integer	C	M	NC	JV	R
Opossum Shrimp	Americamysis bahia	S	M	NR	JV	S
American Lobster	Homarus americanus	S	U	NR	LV	S
Dungeness Or Edible Crab	Cancer magister	C	U	NR	ZO	S

Shrimp	Mysidopsis bigelowi	S	M	NR	JV	S
Kadal Shrimp	Metapenaeus dobsoni	I	U	NR	JV	R
Oyster	Ostrea sp.	NR	NR	NR	NR	NR
Amphipod	Melita sp.	C	M	NC	JV	S
Copepod	Quinquelaophonte sp.	C	U	NR	AD	S
Amphipod	Melita plumulosa	C	M	NC	JV	S
Amphipod	Melita matilda	C	M	NC	JV	S
Opossum Shrimp	Tenagomysis novaezealandiae	C	U	NC	NR	S
Cobia	Rachycentron canadum	C	U	NC	LV	R
Amphipod	Melita awa	C	M	NC	JV	S
Harpacticoid Copepod	Tigriopus brevicornis	C	U	NC	AD	R
Opossum Shrimp	Tenagomysis novaezealandiae	C	U	NC	NR	S
Scud	Elasmopus rapax	NR	U	NR	NR	R
Cobia	Rachycentron canadum	C	U	NC	JV	R
Cobia	Rachycentron canadum	C	U	NC	YO	R
Opossum Shrimp	Tenagomysis novaezealandiae	C	U	NC	NR	S
Harpacticoid Copepod	Nitocra spinipes	C	M	NR	NR	S
Calanoid Copepod	Acartia clausi	S	U	NR	AD	S
Bivalve	Tellina deltoidalis	C	M	NC	NR	S
Scud	Corophium volutator	C	U	NC	AD	S
Archiannelid	Dinophilus gyrociliatus	C	U	NC	NR	R
Opossum Shrimp	Neomysis integer	C	M	NC	JV	R
Northern Pink Shrimp	Penaeus duorarum	S	U	NR	PV	S
Copepod	Quinquelaophonte sp.	C	U	NR	AD	S
Scud	Corophium volutator	C	U	NC	AD	S
Taiwan Abalone	Haliotis diversicolor ssp. supertexta	C	M	NC	NR	R
Amphipod	Chaetocorophium lucasi	C	M	NC	JV	S
Harpacticoid Copepod	Tigriopus japonicus	NR	U	NR	NU	R
Brown Mussel	Perna indica	S	U	NR	NR	S
Brown Mussel	Perna indica	C	U	NR	NR	R
Banana Prawn	Penaeus merguiensis	C	U	NC	JV	R
Tubeworm	Hydroides elegans	C	U	NC	AD	R
Bristle Star	Ophionereis dubia	C	U	NC	NR	R
Harpacticoid Copepod	Nitocra spinipes	I	U	NR	NR	F
Scud	Echinogammarus olivii	C	U	NR	NR	S
Polychaete Worm	Neanthes arenaceodentata	I	U	NR	NR	S
Harpacticoid Copepod	Nitocra spinipes	I	U	NR	AD	S
Brown Mussel	Perna indica	C	U	NR	NR	R
Polychaete Worm	Neanthes arenaceodentata	S	U	NR	NR	S
Scud	Grandidierella japonica	C	M	NC	AD	S
Scud	Corophium volutator	C	U	NC	AD	S
Indian Prawn	Penaeus indicus	C	U	NR	JV	R
Kadal Shrimp	Metapenaeus dobsoni	I	U	NR	JV	R
Marine Harpacticoid Copepod	Robertsonia propinqua	C	U	NC	NU	S
Sheepshead Minnow	Cyprinodon variegatus	S	U	NR	NR	R
Snail	Nassarius festivus	C	U	NC	NR	S
Calanoid Copepod	Acartia clausi	S	U	NR	AD	S
Polychaete Worm	Neanthes arenaceodentata	S	U	NR	AD	S
Polychaete	Nereis grubei	S	U	NR	NR	S
Polychaete	Ophryotrocha labronica	S	U	NR	NR	S
Polychaete Worm	Neanthes arenaceodentata	I	U	NR	NR	S
Scud	Corophium insidiosum	C	U	NR	NR	NR
Amphipod	Leptocheirus plumulosus	C	NR	NC	NR	S
California Market Squid	Loligo opalescens	C	U	NR	LV	S
Aquatic Sowbug, Isopod	Idotea balthica	C	M	NR	AD	R
Marine Harpacticoid Copepod	Robertsonia propinqua	C	U	NR	AD	S
Scud, Amphipod	Allorchestes compressa	S	U	NR	NR	F
White Shrimp	Litopenaeus vannamei	C	U	NC	PV	R
Penaeid Shrimp	Metapenaeus sp.	C	U	NC	NR	R
Pebble Crab	Leptodius exaratus	C	U	NC	NR	R
Bay Scallop	Argopecten irradians	C	U	NR	JV	R
Philippine Horse Mussel	Modiolus philippinarum	C	U	NR	AD	R
Harpacticoid Copepod	Nitocra spinipes	I	U	NR	NR	F

Oyster	Crassostrea margaritacea	C	U	NR	NR	R
Pacific Oyster	Crassostrea gigas	C	U	NC	NR	R
Polychaete Worm	Capitella capitata	S	U	NR	NR	S
Southern King Crab	Lithodes santolla	C	U	NC	ZO	R
Marine Harpacticoid Copepod	Robertsonia propinqua	C	U	NC	AD	S
Polychaete	Ophryotrocha diadema	I	U	NR	NR	S
Atlantic Silverside	Menidia menidia	C	U	NR	LV	S
Jumbo Tiger Prawn	Penaeus monodon	C	U	NR	PV	R
Harpacticoid Copepod	Nitocra spinipes	I	U	NR	NR	F
Cone Worm	Pectinaria californiensis	S	U	NR	NR	S
Sunset Clam	Soletellina alba	C	M	NC	NR	S
Surf Clam	Spisula solidissima	C	U	NR	JV	R
Atlantic Silverside	Menidia menidia	C	U	NR	LV	S
Scud	Corophium volutator	C	U	NC	AD	S
Scud	Corophium volutator	C	U	NC	AD	S
Pink Shrimp	Farfantepenaeus paulensis	C	U	NC	PV	R
Amphipod	Melita sp.	C	M	NC	AD	S
Scud	Corophium volutator	C	U	NC	AD	S
Bristle Worm	Eurythoe sp.	C	U	NC	NR	R
Atlantic Silverside	Menidia menidia	C	U	NR	LV	S
Green Mussel	Perna viridis	C	U	NC	NR	R
Calanoid Copepod	Acartia clausi	S	U	NR	AD	S
Green Mussel	Perna viridis	C	U	NR	JV	R
Gastropod	Morula granulata	C	U	NR	NR	R
Atlantic Silverside	Menidia menidia	C	U	NR	LV	S
Harpacticoid Copepod	Nitocra spinipes	C	U	NR	AD	S
Bivalve	Mysella anomala	C	M	NC	NR	S
Scud	Corophium volutator	C	U	NC	AD	S
Bivalve	Mysella anomala	C	M	NC	NR	S
Amphipod	Corophium colo	C	M	NC	AD	S
Snail	Nerita albicilla	C	U	NR	NR	R
Scud	Corophium volutator	C	U	NC	AD	S
Banana Prawn	Penaeus merguiensis	C	U	NC	JV	R
Winter Flounder	Pleuronectes americanus	C	U	NR	LV	S
Goby	Boleophthalmus sp.	C	U	NC	NR	R
Atlantic Silverside	Menidia menidia	C	U	NR	LV	S
Grooved Snail	Planaxis sulcatus	C	U	NC	NR	R
Clam	Paphia textile	C	U	NR	NR	S
Maculated Ivory Whelk	Babylonia areolata	C	M	NR	LV	NR
Annelid	Nephtys australiensis	C	M	NC	NR	S
Annelid	Nephtys australiensis	C	M	NC	NR	S
Aquatic Sowbug	Sphaeroma serratum	C	U	NR	NR	S
Indian Prawn	Penaeus indicus	C	U	NC	PV	R
Common Shrimp, Sand Shrimp	Crangon crangon	C	U	NC	NR	R
Scud	Corophium volutator	C	U	NC	AD	S
Hermit Crab	Diogenes pugilator	C	U	NC	AD	S
Clam	Donax trunculus	C	U	NC	NR	R
Polychaete Worm	Ctenodrilus serratus	I	U	NR	NR	S
Striped Mullet	Mugil cephalus	C	U	NR	FI	R
Harpacticoid Copepod	Tigriopus japonicus	C	U	NC	AD	R
Bivalve	Tellina deltoidalis	C	M	NC	NR	S
Santo Domingo Falsemussel	Mytilopsis sallei	C	U	NC	NR	R
Scud	Corophium volutator	C	U	NC	AD	S
Rockpool Prawn	Palaemon elegans	C	U	NR	IT	S
Hermit Crab	Diogenes pugilator	C	U	NC	AD	S
Oyster	Crassostrea sp.	C	U	NC	NR	R
Oyster	Crassostrea sp.	C	U	NC	NR	R
Scud	Corophium volutator	C	U	NC	AD	S
Whelk	Turbo coronatus	C	U	NC	NR	R
Bivalve	Scrobicularia plana	C	U	NC	NR	R
Polychaete Worm	Capitella capitata	S	U	NR	NR	S
Scud	Corophium volutator	C	U	NC	AD	S
Tigerfish	Terapon jarbua	I	U	NR	JV	S

Sheepshead Minnow	Cyprinodon variegatus	C	M	NR	FY	R
Starfish	Astropecten sp.	C	U	NC	NR	R
Hermit Crab	Clibanarius longitarsus	NR	U	NR	IT	R
Scud	Corophium volutator	C	U	NC	AD	S
Black Mussel	Choromytilus meridionalis	C	U	NR	NR	R
Brown Mussel	Perna indica	C	U	NR	NR	R
Crab	Portunus pelagicus	C	U	NR	IM	S
Rockpool Prawn	Palaemon elegans	C	U	NR	NR	S
Crab	Portunus pelagicus	C	U	NR	IM	S
Scud	Elasmopus bampo	C	U	NR	NR	NR
Maculated Ivory Whelk	Babylonia areolata	C	M	NR	AD	S
Bivalve	Tellina deltoidalis	C	M	NR	AD	S
Brown Mussel	Perna perna	C	U	NC	NR	NR
Scud	Corophium volutator	C	U	NC	AD	S
English Sole	Parophrys vetulus	C	NR	NC	LV	S
Green Crab	Carcinus maenas	C	U	NC	NR	S
Scud	Corophium volutator	C	U	NC	AD	S
Maculated Ivory Whelk	Babylonia areolata	C	M	NR	JV	NR
Scud	Corophium volutator	C	U	NC	AD	S
Maculated Ivory Whelk	Babylonia areolata	C	M	NR	AD	NR
Snail	Nerita chamaeleon	C	U	NR	NR	R
Maculated Ivory Whelk	Babylonia areolata	C	M	NR	AD	S
Crab	Portunus pelagicus	C	U	NR	MA	S
Hermit Crab	Diogenes pugilator	C	U	NC	AD	S
Goby	Boleophthalmus sp.	C	U	NR	NR	NR
Hirame, Flounder	Paralichthys olivaceus	I	U	NR	LV	S
Starry, European Flounder	Platichthys flesus	C	U	NC	NR	R
Inland Silverside	Menidia beryllina	S	U	NR	NR	R
Crab	Portunus pelagicus	C	U	NR	MA	S
Maculated Ivory Whelk	Babylonia areolata	C	M	NR	AD	S
Nematode	Monhystera disjuncta	I	U	NR	JV	S
Rockpool Prawn	Palaemon elegans	C	U	NR	IT	S
Maculated Ivory Whelk	Babylonia areolata	C	M	NR	AD	S
Maculated Ivory Whelk	Babylonia areolata	C	M	NR	AD	S
Fiddler Crab	Uca annulipes	C	U	NC	NR	R
Crab	Scylla serrata	NR	U	NR	NR	R
Bleak	Alburnus alburnus	C	U	NR	NR	S
Sowbug	Cirolana bovina	C	M	NR	AD	R
Fiddler Crab	Uca triangularis	S	U	NR	IM	R
Scud, Amphipod	Allorchestes compressa	C	U	NC	AD	R
Bleak	Alburnus alburnus	C	U	NR	NR	S
Northern White Shrimp	Penaeus setiferus	C	U	NR	JV	NR
Polychaete Worm	Nereis diversicolor	C	U	NC	NR	R
Crab	Ilyoplax gangetica	NR	U	NR	NR	NR
Catfish	Mystus gulio	C	U	NR	NR	NR
Balthica Macoma Or Clam	Macoma balthica	I	U	NR	NR	R
Tigerfish	Terapon jarbua	C	U	NR	NR	NR
Amphipod	Melita plumulosa	C	M	NC	JV	S
Mangrove Oyster	Crassostrea rhizophorae	I	U	NR	NR	S
Mummichog	Fundulus heteroclitus	C	U	NR	LV	S
Crab	Portunus pelagicus	C	U	NR	LV	R
Mangrove Rivulus	Rivulus marmoratus	I	M	NR	NR	F
Mummichog	Fundulus heteroclitus	I	M	NR	NR	F
Portunid Crab	Ozius rugulosus	C	U	NR	IM	NR
Fireworm	Eurythoe complanata	NR	U	NR	SI	S
Balthica Macoma Or Clam	Macoma balthica	I	U	NR	NR	R
Mangrove Rivulus	Rivulus marmoratus	I	M	NR	NR	F
Balthica Macoma Or Clam	Macoma balthica	I	U	NR	NR	R
Balthica Macoma Or Clam	Macoma balthica	I	U	NR	NR	R
Balthica Macoma Or Clam	Macoma balthica	I	U	NR	NR	R
Crab	Scylla serrata	C	U	NR	MA	S
Balthica Macoma Or Clam	Macoma balthica	I	U	NR	NR	R
Fiddler Crab	Uca annulipes	C	U	NC	NR	R

Balthica Macoma Or Clam	Macoma balthica	I	U	NR	NR	R
Balthica Macoma Or Clam	Macoma balthica	I	U	NR	NR	R
Balthica Macoma Or Clam	Macoma balthica	I	U	NR	NR	R

* Total and dissolved zinc concentrations were included in the calculation of SMAVs

Table D1-1b. Summary of zinc saltwater acute toxicity data used to develop a species sensitivity distributi

Species Scientific Name	SMAV	Rank	Percentile
Strombus gigas	12	1	0.00787402
Limanda punctatissima	26	2	0.01574803
Chasmagnathus granulata	89	3	0.02362205
Crassostrea cucullata	95	4	0.03149606
Acanthomysis costata	102	5	0.03937008
Nanosesarma sp.	118	6	0.04724409
Engraulis japonicus	141	7	0.05511811
Macrophthalmus erato	144	8	0.06299213
Decapoda	156	9	0.07086614
Heteropanope sp.	237	10	0.07874016
Penaeus chinensis	284	11	0.08661417
Litopenaeus schmitti	293	12	0.09448819
Homarus americanus	304	13	0.1023622
Mysidopsis juniae	340	14	0.11023622
Americamysis bahia	418	15	0.11811024
Crassostrea gigas	473	16	0.12598425
Crassostrea margaritacea	473	17	0.13385827
Cynoglossus joyneri	473	18	0.14173228
Hyale longicornis	500	19	0.1496063
Cancer magister	554	20	0.15748031
Mysidopsis bigelowi	559	21	0.16535433
Ostrea sp.	598	22	0.17322835
Quinquelaophonte sp.	610	23	0.18110236
Melita matilda	650	24	0.18897638
Tigriopus brevicornis	677	25	0.19685039
Neomysis integer	708	26	0.20472441
Melita awa	710	27	0.21259843
Rachycentron canadum	724	28	0.22047244
Tenagomysis novaezealandiae	734	29	0.22834646
Menidia beryllina	751	30	0.23622047
Elasmopus rapax	800	31	0.24409449
Dinophilus gyrociliatus	946	32	0.2519685
Metapenaeus dobsoni	955	33	0.25984252
Penaeus merguiensis	961	34	0.26771654
Penaeus duorarum	993	35	0.27559055
Haliotis diversicolor ssp. supertexta	1041	36	0.28346457
Perna viridis	1110	37	0.29133858
Chaetocorophium lucasi	1130	38	0.2992126
Acartia clausi	1130	39	0.30708661
Hydroides elegans	1168	40	0.31496063
Echinogammarus olivii	1230	41	0.32283465
Ophionereis dubia	1230	42	0.33070866
Neanthes arenaceodentata	1528	43	0.33858268
Perna perna	1528	44	0.34645669
Grandidierella japonica	1560	45	0.35433071
Nassarius festivus	1665	46	0.36220472
Nereis grubei	1703	47	0.37007874
Ophryotrocha labronica	1703	48	0.37795276
Corophium insidiosum	1797	49	0.38582677
Nitocra spinipes	1806	50	0.39370079
Loligo opalescens	1816	51	0.4015748
Leptocheirus plumulosus	1908	52	0.40944882
Idotea balthica	1950	53	0.41732283
Litopenaeus vannamei	1968	54	0.42519685
Robertsonia propinqua	1981	55	0.43307087

Metapenaeus sp.	2034	56	0.44094488
Perna indica	2076	57	0.4488189
Leptodius exaratus	2091	58	0.45669291
Argopecten irradians	2129	59	0.46456693
Modiolus philippinarum	2211	60	0.47244094
Lithodes santolla	2403	61	0.48031496
Ophryotrocha diadema	2554	62	0.48818898
Penaeus monodon	2592	63	0.49606299
Pectinaria californiensis	2649	64	0.50393701
Spisula solidissima	2791	65	0.51181102
Soletellina alba	2900	66	0.51968504
Tigriopus japonicus	2900	67	0.52755906
Melita plumulosa	3044	68	0.53543307
Penaeus indicus	3048	69	0.54330709
Farfantepenaeus paulensis	3311	70	0.5511811
Menidia menidia	3444	71	0.55905512
Eurythoe sp.	3481	72	0.56692913
Morula granulata	3935	73	0.57480315
Cyprinodon variegatus	4146	74	0.58267717
Nerita albicilla	4266	75	0.59055118
Mysella anomala	4450	76	0.5984252
Corophium colo	4500	77	0.60629921
Tellina deltoidalis	4636	78	0.61417323
Pleuronectes americanus	4656	79	0.62204724
Capitella capitata	4893	80	0.62992126
Corophium volutator	4971	81	0.63779528
Planaxis sulcatus	4976	82	0.64566929
Paphia textile	5014	83	0.65354331
Sphaeroma serratum	5790	84	0.66141732
Nephtys australiensis	5850	85	0.66929134
Crangon crangon	5960	86	0.67716535
Donax trunculus	6338	87	0.68503937
Ctenodrilus serratus	6717	88	0.69291339
Mugil cephalus	7313	89	0.7007874
Mytilopsis sallei	7909	90	0.70866142
Allorchestes compressa	8629	91	0.71653543
Crassostrea sp.	8949	92	0.72440945
Boleophthalmus sp.	9215	93	0.73228346
Turbo coronatus	9309	94	0.74015748
Scrobicularia plana	9460	95	0.7480315
Diogenes pugilator	9796	96	0.75590551
Astropecten sp.	11087	97	0.76377953
Choromytilus meridionalis	11352	98	0.77165354
Clibanarius longitarsus	11352	100	0.78740157
Elasmopus bampo	11825	101	0.79527559
Palaemon elegans	13361	102	0.80314961
Parophrys vetulus	13717	103	0.81102362
Carcinus maenas	14067	104	0.81889764
Babylonia areolata	15647	105	0.82677165
Nerita chamaeleon	16971	106	0.83464567
Paralichthys olivaceus	18920	107	0.84251969
Platichthys flesus	18920	108	0.8503937
Portunus pelagicus	21685	109	0.85826772
Monhystera disjuncta	23272	110	0.86614173
Terapon jarbua	24404	111	0.87401575
Cirolana bovina	32500	112	0.88188976
Alburnus alburnus	34640	113	0.88976378
Uca triangularis	36941	114	0.8976378
Penaeus setiferus	41501	115	0.90551181
Nereis diversicolor	46732	116	0.91338583
Ilyoplax gangetica	47300	117	0.92125984
Mystus gulio	49192	118	0.92913386
Crassostrea rhizophorae	75680	119	0.93700787

Fundulus heteroclitus	98101	120	0.94488189
Scylla serrata	106773	121	0.95275591
Ozius rugulosus	131872	122	0.96062992
Eurythoe complanata	132062	123	0.96850394
Rivulus marmoratus	137311	124	0.97637795
Uca annulipes	142800	125	0.98425197
Macoma balthica	303145	126	0.99212598

enthic invertebrates, and zooplankton

Observed Duration Mean (Days)	Endpoint	Effect	Trend	Effect Measurement	Concentration Type*	Conc 1 Mean (Standardized)	Conc 1 Units (Standardized)	Conversion (ug/L)	Publication Year
4	LC50	MOR	INC	MORT	T	8.9	ug/L	8.9	2012
4	LC50	MOR	INC	MORT	T	17.7	ug/L	17.7	2012
4	LC50	MOR	INC	MORT	T	27	ug/L	27	2004
4	LC50	MOR	NR	MORT	T	30	ug/L	30	1993
4	LC50	MOR	INC	MORT	T	51	ug/L	51	2006
4	LC50	MOR	INC	MORT	T	62.8	ug/L	62.8	1989
4	LC50	MOR	INC	MORT	T	70.2	ug/L	70.2	1989
4	LC50	MOR	INC	MORT	T	73.2	ug/L	73.2	1989
4	LC50	MOR	INC	MORT	T	78.8	ug/L	78.8	1989
4	LC50	MOR	INC	MORT	T	80.7	ug/L	80.7	1989
4	LC50	MOR	NR	MORT	T	81	ug/L	81	1989
4	LC50	MOR	NR	MORT	T	87	ug/L	87	1989
4	LC50	MOR	NR	MORT	T	88	ug/L	88	1989
4	LC50	MOR	INC	MORT	T	88.4	ug/L	88.4	1989
4	LC50	MOR	NR	MORT	T	89	ug/L	89	1989
4	LC50	MOR	INC	MORT	T	93.6	ug/L	93.6	1989
4	LC50	MOR	INC	MORT	T	100	ug/L	100	1982
4	LC50	MOR	INC	MORT	T	100	ug/L	100	1982
4	LC50	MOR	INC	MORT	T	100	ug/L	100	1982
4	LC50	MOR	INC	MORT	T	125	ug/L	125	1996
4	LC50	MOR	NR	MORT	T	138	ug/L	138	1989
4	LC50	MOR	INC	MORT	T	149	ug/L	149	2004
4	LC50	MOR	NR	MORT	T	151	ug/L	151	1989
4	LC50	MOR	NR	MORT	T	152	ug/L	152	2000
4	LC50	MOR	INC	MORT	T	165	ug/L	165	1996
4	LC50	MOR	INC	MORT	T	172.1	ug/L	172.1	2003
4	LC50	MOR	NR	MORT	T	175	ug/L	175	1985
4	LC50	MOR	INC	MORT	T	191.4	ug/L	191.4	1983
4	LC50	MOR	NR	MORT	T	212	ug/L	212	1989
4	LC50	MOR	INC	MORT	T	250	ug/L	250	1996
4	LC50	MOR	INC	MORT	T	260	ug/L	260	1988
4	LC50	MOR	NR	MORT	T	282	ug/L	282	1985
4	LC50	MOR	INC	MORT	T	294.2	ug/L	294.2	1985
4	LC50	MOR	NR	MORT	T	300	ug/L	300	1988
4	LC50	MOR	NR	MORT	T	300	ug/L	300	1983
4	LC50	MOR	INC	MORT	T	303	ug/L	303	1994
4	LC50	MOR	INC	MORT	T	310	ug/L	310	2007
4	LC50	MOR	NR	MORT	T	320	ug/L	320	1989
4	LC50	MOR	NR	MORT	T	340	ug/L	340	1993
4	LC50	MOR	NR	MORT	T	350	ug/L	350	1993
4	LC50	MOR	NR	MORT	T	360	ug/L	360	1993
4	LC50	MOR	INC	MORT	T	370	ug/L	370	1982
4	LC50	MOR	NR	MORT	T	370	ug/L	370	1993
4	LC50	MOR	NR	MORT	T	375	ug/L	375	1985
4	LC50	MOR	INC	MORT	T	380	ug/L	380	2012
4	LC50	MOR	NR	MORT	T	380	ug/L	380	1993
4	LC50	MOR	INC	MORT	T	400	ug/L	400	1993
4	LC50	MOR	INC	MORT	T	500	ug/L	500	1982
4	LC50	MOR	INC	MORT	F	500	ug/L	500	1987
4	LC50	MOR	INC	MORT	D	500	ug/L	500	2006
4	LC50	MOR	NR	MORT	T	520.8	ug/L	520.8	1985
4	LC50	MOR	INC	MORT	T	540	ug/L	540	2003
4	LC50	MOR	NR	MORT	T	547.2	ug/L	547.2	1985
4	LC50	MOR	NR	MORT	T	575	ug/L	575	1985
4	LC50	MOR	INC	MORT	T	586.1	ug/L	586.1	1983

4	LC50	MOR	NR	MORT	T	591.3 ug/L	591.3	1985
4	LC50	MOR	NR	MORT	T	600 ug/L	600	1986
4	LC50	MOR	INC	MORT	T	632 ug/L	632	1994
4	LC50	MOR	INC	MORT	D	640 ug/L	640	2006
4	LC50	MOR	INC	MORT	T	640 ug/L	640	2012
4	LC50	MOR	INC	MORT	D	640 ug/L	640	2006
4	LC50	MOR	INC	MORT	D	650 ug/L	650	2006
4	LC50	MOR	INC	MORT	T	680 ug/L	680	1997
4	LC50	MOR	INC	MORT	T	685 ug/L	685	2005
4	LC50	MOR	INC	MORT	D	710 ug/L	710	2006
4	LC50	MOR	INC	MORT	T	715.2 ug/L	715.2	2001
4	LC50	MOR	INC	MORT	T	780 ug/L	780	1997
4	LC50	MOR	INC	MORT	D	800 ug/L	800	2010
4	LC50	MOR	INC	MORT	T	804 ug/L	804	2005
4	LC50	MOR	INC	MORT	T	815 ug/L	815	2005
4	LC50	MOR	INC	MORT	T	880 ug/L	880	1997
4	LC50	MOR	INC	MORT	T	890 ug/L	890	2010
4	LC50	MOR	INC	MORT	T	950 ug/L	950	1985
4	LC50	MOR	INC	MORT	D	970 ug/L	970	2004
4	LC50	MOR	NR	MORT	T	1000 ug/L	1000	1985
4	LC50	MOR	INC	MORT	T	1000 ug/L	1000	2003
4	LC50	MOR	INC	MORT	T	1037 ug/L	1037	2003
4	LC50	MOR	INC	MORT	T	1050 ug/L	1050	1994
4	LC50	MOR	INC	MORT	T	1100 ug/L	1100	2012
4	LC50	MOR	NR	MORT	T	1100 ug/L	1100	1985
4	LC50	MOR	INC	MORT	T	1100 ug/L	1100	2002
4	LC50	MOR	INC	MORT	D	1130 ug/L	1130	2006
4	LC50	MOR	INC	MORT	D	1140 ug/L	1140	2010
4	LC50	MOR	INC	MORT	T	1142.09 ug/L	1142.09	1986
4	LC50	MOR	INC	MORT	T	1142.3 ug/L	1142.3	1987
4	LC50	MOR	INC	MORT	T	1200 ug/L	1200	1982
4	LC50	MOR	INC	MORT	T	1234.53 ug/L	1234.53	2008
4	LC50	MOR	INC	MORT	T	1300 ug/L	1300	1999
4	LC50	MOR	NR	MORT	T	1300 ug/L	1300	1987
4	LC50	MOR	INC	MORT	T	1300 ug/L	1300	1999
4	LC50	MOR	INC	MORT	T	1400 ug/L	1400	1984
4	LC50	MOR	NR	MORT	T	1450 ug/L	1450	1978
4	LC50	MOR	INC	MORT	T	1480.2 ug/L	1480.2	1987
4	LC50	MOR	NR	MORT	T	1500 ug/L	1500	1991
4	LC50	MOR	INC	MORT	D	1560 ug/L	1560	2006
4	LC50	MOR	NR	MORT	T	1600 ug/L	1600	1985
4	LC50	MOR	INC	MORT	T	1668.16 ug/L	1668.16	1995
4	LC50	MOR	NR	MORT	T	1700 ug/L	1700	1986
4	LC50	MOR	INC	MORT	T	1700 ug/L	1700	2008
4	LC50	MOR	NR	MORT	T	1700 ug/L	1700	1993
4	LC50	MOR	INC	MORT	T	1760 ug/L	1760	2002
4	LC50	MOR	INC	MORT	T	1783 ug/L	1783	1985
4	LC50	MOR	NR	MORT	T	1800 ug/L	1800	1978
4	LC50	MOR	NR	MORT	T	1800 ug/L	1800	1991
4	LC50	MOR	NR	MORT	T	1800 ug/L	1800	1991
4	LC50	MOR	INC	MORT	T	1800 ug/L	1800	1984
4	LC50	MOR	INC	MORT	T	1900 ug/L	1900	1993
4	LC50	MOR	INC	MORT	D	14 uM	1908.2	2004
4	LC50	MOR	INC	MORT	T	1920 ug/L	1920	1983
4	LC50	MOR	INC	MORT	D	1950 ug/L	1950	1997
4	LC50	MOR	INC	MORT	T	2000 ug/L	2000	2012
4	LC50	MOR	NR	MORT	T	2000 ug/L	2000	1988
4	LC50	MOR	INC	MORT	T	2080 ug/L	2080	2003
4	LC50	MOR	INC	MORT	T	2150 ug/L	2150	1999
4	LC50	MOR	INC	MORT	T	2210 ug/L	2210	1999
4	LC50	MOR	INC	MORT	T	2250 ug/L	2250	1988
4	LC50	MOR	INC	MORT	T	2337 ug/L	2337	2012
4	LC50	MOR	NR	MORT	T	2400 ug/L	2400	1987

4	LC50	MOR	INC	MORT	T	2500 ug/L	2500	1981
4	LC50	MOR	INC	MORT	T	2500 ug/L	2500	1981
4	LC50	MOR	NR	MORT	T	2500 ug/L	2500	1991
4	LC50	MOR	INC	MORT	T	2540 ug/L	2540	2003
4	LC50	MOR	INC	MORT	T	2700 ug/L	2700	2008
4	LC50	MOR	NR	MORT	T	2700 ug/L	2700	1978
4	LC50	MOR	INC	MORT	T	2728 ug/L	2728	1985
4	LC50	MOR	INC	MORT	T	2740 ug/L	2740	2012
4	LC50	MOR	NR	MORT	T	2800 ug/L	2800	1987
4	LC50	MOR	NR	MORT	T	2800 ug/L	2800	1991
4	LC50	MOR	INC	MORT	D	2900 ug/L	2900	2004
4	LC50	MOR	INC	MORT	T	2950 ug/L	2950	1988
4	LC50	MOR	INC	MORT	T	3060 ug/L	3060	1985
4	LC50	MOR	NR	MORT	T	3200 ug/L	3200	1985
4	LC50	MOR	NR	MORT	T	3400 ug/L	3400	1985
4	LC50	MOR	INC	MORT	T	3500 ug/L	3500	2000
4	LC50	MOR	INC	MORT	D	3530 ug/L	3530	2006
4	LC50	MOR	NR	MORT	T	3600 ug/L	3600	1985
4	LC50	MOR	INC	MORT	T	3680 ug/L	3680	1999
4	LC50	MOR	INC	MORT	T	3703 ug/L	3703	1985
4	LC50	MOR	INC	MORT	T	3850 ug/L	3850	1999
4	LC50	MOR	INC	MORT	T	4090 ug/L	4090	1985
4	LC50	MOR	INC	MORT	T	4110 ug/L	4110	2012
4	LC50	MOR	INC	MORT	T	4160 ug/L	4160	1997
4	LC50	MOR	INC	MORT	T	4170 ug/L	4170	1985
4	LC50	MOR	NR	MORT	T	4300 ug/L	4300	1979
4	LC50	MOR	INC	MORT	D	4400 ug/L	4400	2004
4	LC50	MOR	NR	MORT	T	4400 ug/L	4400	1985
4	LC50	MOR	INC	MORT	D	4500 ug/L	4500	2004
4	LC50	MOR	INC	MORT	D	4500 ug/L	4500	2006
4	LC50	MOR	INC	MORT	T	4510 ug/L	4510	1995
4	LC50	MOR	NR	MORT	T	4600 ug/L	4600	1985
4	LC50	MOR	INC	MORT	T	4800 ug/L	4800	1982
4	LC50	MOR	INC	MORT	T	4922 ug/L	4922	1985
4	LC50	MOR	INC	MORT	T	4960 ug/L	4960	1999
4	LC50	MOR	INC	MORT	T	4960 ug/L	4960	1985
4	LC50	MOR	INC	MORT	T	5260 ug/L	5260	1999
4	LC50	MOR	INC	MORT	T	5300 ug/L	5300	1983
4	LC50	MOR	INC	MORT	T	5490 ug/L	5490	2014
4	LC50	MOR	INC	MORT	D	5800 ug/L	5800	2004
4	LC50	MOR	INC	MORT	D	5900 ug/L	5900	2004
4	LC50	MOR	INC	MORT	T	6120 ug/L	6120	1999
4	LC50	MOR	INC	MORT	T	6223.1 ug/L	6223.1	2000
4	LC50	MOR	INC	MORT	T	6300 ug/L	6300	1985
4	LC50	MOR	NR	MORT	T	6500 ug/L	6500	1985
4	LC50	MOR	INC	MORT	T	6500 ug/L	6500	1998
4	LC50	MOR	INC	MORT	T	6700 ug/L	6700	2003
4	LC50	MOR	NR	MORT	T	7100 ug/L	7100	1978
4	LC50	MOR	INC	MORT	T	7730 ug/L	7730	2012
4	LC50	MOR	INC	MORT	T	7800 ug/L	7800	2007
4	LC50	MOR	INC	MORT	D	7900 ug/L	7900	2004
4	LC50	MOR	INC	MORT	T	8360 ug/L	8360	1995
4	LC50	MOR	NR	MORT	T	8500 ug/L	8500	1985
4	LC50	MOR	INC	MORT	T	8710 ug/L	8710	2000
4	LC50	MOR	INC	MORT	T	8990 ug/L	8990	2012
4	LC50	MOR	INC	MORT	T	9420 ug/L	9420	2006
4	LC50	MOR	INC	MORT	T	9500 ug/L	9500	2006
4	LC50	MOR	INC	MORT	T	9790 ug/L	9790	1998
4	LC50	MOR	INC	MORT	T	9840 ug/L	9840	1999
4	LC50	MOR	INC	MORT	T	10000 ug/L	10000	1985
4	LC50	MOR	NR	MORT	T	10700 ug/L	10700	1978
4	LC50	MOR	NR	MORT	T	11000 ug/L	11000	1985
4	LC50	MOR	NR	MORT	T	11000 ug/L	11000	1983

4	LC50	MOR	INC	MORT	T	11300	ug/L	11300	1999
4	LC50	MOR	INC	MORT	T	11720	ug/L	11720	1999
4	LC50	MOR	INC	MORT	T	12000	ug/L	12000	2011
4	LC50	MOR	NR	MORT	T	12000	ug/L	12000	1985
4	LC50	MOR	INC	MORT	T	12000	ug/L	12000	1981
4	LC50	MOR	INC	MORT	T	12000	ug/L	12000	1981
4	LC50	MOR	INC	MORT	T	12160	ug/L	12160	1985
4	LC50	MOR	INC	MORT	T	12300	ug/L	12300	1999
4	LC50	MOR	INC	MORT	T	12490	ug/L	12490	1985
4	LC50	MOR	INC	MORT	T	12500	ug/L	12500	1993
4	LC50	MOR	INC	MORT	T	12700	ug/L	12700	2014
4	LC50	MOR	INC	MORT	D	13000	ug/L	13000	2010
4	LC50	MOR	DEC	MORT	T	100	uM	13630	2006
4	LC50	MOR	INC	MORT	T	14120	ug/L	14120	1998
4	LC50	MOR	INC	MORT	T	14500	ug/L	14500	1990
4	LC50	MOR	INC	MORT	T	14870	ug/L	14870	2007
4	LC50	MOR	NR	MORT	T	15000	ug/L	15000	1985
4	LC50	MOR	INC	MORT	T	15190	ug/L	15190	2014
4	LC50	MOR	NR	MORT	T	16000	ug/L	16000	1985
4	LC50	MOR	INC	MORT	T	17520	ug/L	17520	2014
4	LC50	MOR	INC	MORT	T	17940	ug/L	17940	1995
4	LC50	MOR	INC	MORT	T	18430	ug/L	18430	2014
4	LC50	MOR	INC	MORT	T	18620	ug/L	18620	1985
4	LC50	MOR	INC	MORT	T	19000	ug/L	19000	1998
4	LC50	MOR	INC	MORT	T	19130	ug/L	19130	1994
4	LC50	MOR	NR	MORT	T	20000	ug/L	20000	1987
4	LC50	MOR	INC	MORT	T	20000	ug/L	20000	1985
4	LC50	MOR	NR	MORT	T	21000	ug/L	21000	1993
4	LC50	MOR	INC	MORT	T	22380	ug/L	22380	1985
4	LC50	MOR	INC	MORT	T	22410	ug/L	22410	2014
4	LC50	MOR	NR	MORT	T	24600	ug/L	24600	1991
4	LC50	MOR	INC	MORT	T	26300	ug/L	26300	2000
4	LC50	MOR	INC	MORT	T	26730	ug/L	26730	2014
4	LC50	MOR	INC	MORT	T	27340	ug/L	27340	2014
4	LC50	MOR	NR	MORT	T	31930	ug/L	31930	1987
4	LC50	MOR	INC	MORT	T	32000	ug/L	32000	1999
4	LC50	MOR	NR	MORT	T	32000	ug/L	32000	1979
4	LC50	MOR	INC	MORT	D	32500	ug/L	32500	1997
4	LC50	MOR	NR	MORT	T	39050	ug/L	39050	1987
4	LC50	MOR	INC	MORT	T	41600	ug/L	41600	1997
4	LC50	MOR	NR	MORT	T	41900	ug/L	41900	1979
4	LC50	MOR	INC	MORT	T	43870	ug/L	43870	1997
4	LC50	MOR	INC	MORT	T	49400	ug/L	49400	1985
4	LC50	MOR	INC	MORT	T	50000	ug/L	50000	1992
4	LC50	MOR	INC	MORT	T	52000	ug/L	52000	1994
4	LC50	MOR	NR	MORT	T	60000	ug/L	60000	1985
4	LC50	MOR	INC	MORT	T	60500	ug/L	60500	1994
4	LC50	MOR	INC	MORT	T	62740	ug/L	62740	2009
4	LC50	MOR	NR	MORT	T	80000	ug/L	80000	1980
4	LC50	MOR	INC	MORT	T	83041	ug/L	83041	1985
4	LC50	MOR	INC	MORT	T	100000	ug/L	100000	1986
4	LC50	MOR	NR	MORT	T	119300	ug/L	119300	1993
4	LC50	MOR	NR	MORT	T	129500	ug/L	129500	1993
4	LC50	MOR	INC	MORT	T	139400	ug/L	139400	1988
4	LC50	MOR	INC	MORT	T	139600	ug/L	139600	1996
4	LC50	MOR	NR	MORT	T	140000	ug/L	140000	1985
4	LC50	MOR	NR	MORT	T	176600	ug/L	176600	1993
4	LC50	MOR	NR	MORT	T	180000	ug/L	180000	1985
4	LC50	MOR	NR	MORT	T	210000	ug/L	210000	1985
4	LC50	MOR	NR	MORT	T	250000	ug/L	250000	1985
4	LC50	MOR	INC	MORT	T	398100	ug/L	398100	1986
4	LC50	MOR	NR	MORT	T	700000	ug/L	700000	1985
4	LC50	MOR	INC	MORT	T	713630	ug/L	713630	1987

4	LC50	MOR	NR	MORT	T	750000 ug/L	750000	1985
4	LC50	MOR	NR	MORT	T	900000 ug/L	900000	1985
4	LC50	MOR	NR	MORT	T	950000 ug/L	950000	1985

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Stringer,T.J., C.N. Glover, V. Keesing, G.L. Northcott, and L.A. Tremblay
Ahsanullah,M., M.C. Mobley, and P. Rankin
Frias-Espericueta,M.G., D. Voltolina, and J.I. Osuna-Lopez
Kidwai,S., and M. Ahmed
Kidwai,S., and M. Ahmed
Nelson,D.A., J.E. Miller, and A. Calabrese
Ramakritinan,C.M., R. Chandurvelan, and A.K. Kumaraguru
Bengtsson,B.E., and B. Bergstrom

Watling,H.
Watling,H.
Reish,D.J., and J.A. Lemay
Amin,O.A., L.I. Comoglio, and E.M. Rodriguez
Hack,L.A., L.A. Tremblay, S.D. Wratten, G. Forrester, and V. Keesing
Reish,D.J.
Cardin,J.A.
Rajkumar,J.S.I.
Bengtsson,B.E., and B. Bergstrom
Reish,D.J., and J.A. Lemay
King,C.K., M.C. Dowse, S.L. Simpson, and D.F. Jolley
Nelson,D.A., J.E. Miller, and A. Calabrese
Cardin,J.A.
Bryant,V., D.M. Newbery, D.S. McLusky, and R. Campbell
Bryant,V., D.M. Newbery, D.S. McLusky, and R. Campbell
Santos,M.H.S., N. Troca da Cunha, and A. Bianchini
King,C.K., S.A. Gale, and J.L. Stauber
Bryant,V., D.M. Newbery, D.S. McLusky, and R. Campbell
Kidwai,S., and M. Ahmed
Cardin,J.A.
Kidwai,S., and M. Ahmed
Lussier,S., and J.A. Cardin
Rajkumar,J.S.I.
Devi,V.U.
Cardin,J.A.
Linden,E., B.E. Bengtsson, O. Svanberg, and G. Sundstrom
King,C.K., M.C. Dowse, S.L. Simpson, and D.F. Jolley
Bryant,V., D.M. Newbery, D.S. McLusky, and R. Campbell
King,C.K., M.C. Dowse, S.L. Simpson, and D.F. Jolley
King,C.K., S.A. Gale, R.V. Hyne, J.L. Stauber, S.L. Simpson, and C.W. Hickey
Kumar,K.P., and V.U. Devi
Bryant,V., D.M. Newbery, D.S. McLusky, and R. Campbell
Denton,R.W., and C. Burdon-Jones
Cardin,J.A.
Kidwai,S., and M. Ahmed
Cardin,J.A.
Kidwai,S., and M. Ahmed
Kulkarni,K.M.
Vedamanikam,V.J., and T. Hayimad
King,C.K., M.C. Dowse, S.L. Simpson, and D.F. Jolley
King,C.K., M.C. Dowse, S.L. Simpson, and D.F. Jolley
Bat,L., A. Gundogdu, M. Sezgin, M. Culha, G. Gonlugur, and M. Akbulut
Chinni,S., and P.R. Yallapragda
Amiard,J.C., C. Amiard-Triquet, and C. Metayer
Bryant,V., D.M. Newbery, D.S. McLusky, and R. Campbell
Bat,L., M. Culha, M. Akbulut, A. Gundogdu, and M. Sezgin
Neuberger-Cywiak,L., Y. Achituv, and E.M. Garcia
Reish,D.J.
Rajkumar,J.S.I.
Lee,K.W., S. Raisuddin, D.S. Hwang, H.G. Park, and J.S. Lee
King,C.K., M.C. Dowse, S.L. Simpson, and D.F. Jolley
Devi,V.U.
Bryant,V., D.M. Newbery, D.S. McLusky, and R. Campbell
Lorenzon,S., M. Francese, and E.A. Ferrero
Ramakritinan,C.M., R. Chandurvelan, and A.K. Kumaraguru
Suryawanshi,G.D., and Z.A. Langekar
Suryawanshi,G.D., and Z.A. Langekar
Bat,L., D. Raffaelli, and I.L. Marr
Kidwai,S., and M. Ahmed
Amiard,J.C., C. Amiard-Triquet, and C. Metayer
Reish,D.J.
Bryant,V., D.M. Newbery, D.S. McLusky, and R. Campbell
Krishnakumari,L., P.K. Varshney, S.N. Gajbhiye, K. Govindan, and V.R. Nair

Moreau,C.J., P.L. Klerks, and C.N. Haas
Kidwai,S., and M. Ahmed
Lyla,P.S., and S.A. Khan
Bryant,V., D.M. Newbery, D.S. McLusky, and R. Campbell
Watling,H.
Watling,H.
Hilmy,A.M., N.F. Abdel-Hamid, and K.S. Ghazaly
Bat,L., A. Gundogdu, M. Sezgin, M. Culha, G. Gonlugur, and M. Akbulut
Hilmy,A.M., N.F. Abdel-Hamid, and K.S. Ghazaly
Reish,D.J.
Hajimad,T., and V.J. Vedamanikam
King,C.K., M.C. Dowse, and S.L. Simpson
Franco,J.L., D.B.B. Trivella, R. Trevisan, D.F. Dinslaken, M.R.F. Marques, A.C.D. Bainy, and A.L. Dafre
Bat,L., D. Raffaelli, and I.L. Marr
Shenker,J.M., and G.N. Cherr
Elumalai,M., C. Antunes, and L. Guilhermino
Bryant,V., D.M. Newbery, D.S. McLusky, and R. Campbell
Vedamanikam,V.J., and T. Hayimad
Bryant,V., D.M. Newbery, D.S. McLusky, and R. Campbell
Vedamanikam,V.J., and T. Hayimad
Kumar,K.P., and V.U. Devi
Hajimad,T., and V.J. Vedamanikam
Hilmy,A.M., N.F. Abdel-Hamid, and K.S. Ghazaly
Bat,L., M. Culha, M. Akbulut, A. Gundogdu, and M. Sezgin
Mukhopadhyay,M.K., B.B. Ghosh, and M.M. Bacchi
Cui,K., Y. Liu, and L. Hou
Amiard,J.C., C. Amiard-Triquet, and C. Metayer
Lewis,W.M.
Hilmy,A.M., N.F. Abdel-Hamid, and K.S. Ghazaly
Hajimad,T., and V.J. Vedamanikam
Vranken,G., R. Vanderhaeghen, and C. Heip
Lorenzon,S., M. Francese, and E.A. Ferrero
Hajimad,T., and V.J. Vedamanikam
Hajimad,T., and V.J. Vedamanikam
Devi,V.U.
Narayanan,K.R., P.S. Lyla, and S.A. Khan
Linden,E., B.E. Bengtsson, O. Svanberg, and G. Sundstrom
Ramadan,S.E., A.N. Khalil, N.M. Dowidar, and S.F. Elsonbaty
Devi,V.U.
Gulec,I., B. Leonard, and D.A. Holdway
Linden,E., B.E. Bengtsson, O. Svanberg, and G. Sundstrom
Vanegas,C., S. Espina, A.V. Botello, and S. Villanueva
Amiard,J.C., C. Amiard-Triquet, and C. Metayer
Savant,K.B., and G.K. Amte
Mukhopadhyay,M.K., B.B. Ghosh, and M.M. Bacchi
Bryant,V., D.M. Newbery, D.S. McLusky, and R. Campbell
Mukhopadhyay,M.K., B.B. Ghosh, and M.M. Bacchi
Ungherese,G., and A. Ugolini
Chung,K.S.
Cardin,J.A.
El-Rayis,O.A.M., and A.A. Ezzat
Lin,H.C., and W.A. Dunson
Lin,H.C., and W.A. Dunson
Rao,K.S., A.K. Khan, S.M. Alam, and R. Nagabhushanam
Marcano,L., O. Nusetti, J. Rodriguez-Grau, and J. Vilas
Bryant,V., D.M. Newbery, D.S. McLusky, and R. Campbell
Lin,H.C., and W.A. Dunson
Bryant,V., D.M. Newbery, D.S. McLusky, and R. Campbell
Bryant,V., D.M. Newbery, D.S. McLusky, and R. Campbell
Bryant,V., D.M. Newbery, D.S. McLusky, and R. Campbell
Nagabhushanam,R., K. Sambasivarao, and R. Sarojini
Bryant,V., D.M. Newbery, D.S. McLusky, and R. Campbell
Baby,K.V., and N.R. Menon

Bryant,V., D.M. Newbery, D.S. McLusky, and R. Campbell
Bryant,V., D.M. Newbery, D.S. McLusky, and R. Campbell
Bryant,V., D.M. Newbery, D.S. McLusky, and R. Campbell

Table D1-2. Distribution fitting results for the zinc saltwater acute species sensitivity distribut

	Input	BetaGeneral	Expon	Gamma
Fit				
Function	taGeneral(0.31946,4.1552,0,306918)		RiskExpon(15104)	mma(0.39928,37828)
Method		MLE (Approximate)	MLE	MLE
Rankings By Fit Statistic [10 Valid Fits]				
Akaike (AIC)		#7	#8	#4
Bayesian (BIC)		#7	#8	#4
Chi-Sq Statistic		#7	#8	#5
K-S Statistic		#5	#8	#4
A-D Statistic		#5	#8	#4
Parameters - [* Values unavailable without running a bootstrap]				
Num. Est. Parameters		3.00	1.00	2.00
Fitted Parameter #1		alpha1	beta	alpha
Fitted Value		0.32	15,104.17	0.40
95% Lower Limit*		N/A	N/A	N/A
95% Upper Limit*		N/A	N/A	N/A
Conf. Interval Width*		N/A	N/A	N/A
Fitted Parameter #2		alpha2		beta
Fitted Value		4.16		37,828.67
95% Lower Limit*		N/A		N/A
95% Upper Limit*		N/A		N/A
Conf. Interval Width*		N/A		N/A
Fitted Parameter #3		Max		
Fitted Value		306,918.37		
95% Lower Limit*		N/A		
95% Upper Limit*		N/A		
Conf. Interval Width*		N/A		
Distribution Statistics				
Minimum	11.87	-	-	-
Maximum	303,145.24	306,918.37	+Infinity	+Infinity
Mean	15,104.17	21,911.83	15,104.17	15,104.17
Mode	73.0000 [est]	-	-	-
Median	2,592.04	6,820.89	10,469.41	5,466.77
Std. Deviation	38,265.83	33,774.32	15,104.17	23,903.36
Skewness	4.75	2.41	2.00	3.17
Kurtosis	31.05	9.72	9.00	18.03
Percentiles				
5%	140.95	4.79	774.74	15.47
10%	303.83	41.98	1,591.38	87.90
15%	500.00	149.50	2,454.71	243.37
20%	676.58	368.53	3,370.40	502.69
25%	946.00	743.18	4,345.20	885.39
30%	1,130.00	1,321.00	5,387.28	1,411.64

35%	1,527.95	2,154.14	6,506.62	2,103.75
40%	1,806.40	3,301.18	7,715.60	2,987.76
45%	2,075.57	4,829.82	9,029.83	4,095.39
50%	2,592.04	6,820.89	10,469.41	5,466.77
55%	3,047.99	9,374.41	12,060.80	7,154.39
60%	4,449.72	12,618.99	13,839.81	9,229.36
65%	4,975.96	16,727.17	15,856.69	11,791.79
70%	6,716.60	21,942.12	18,185.01	14,989.31
75%	9,308.64	28,627.41	20,938.82	19,052.61
80%	11,825.00	37,370.00	24,309.22	24,371.89
85%	18,920.00	49,225.26	28,654.42	31,686.43
90%	36,941.30	66,440.29	34,778.63	42,676.96
95%	98,100.75	95,630.44	45,248.05	62,795.56
Information Criteria				
Akaike (AIC)		2,587.98	2,657.71	2,553.30
Bayesian (BIC)		2,596.27	2,660.51	2,558.85
Chi-Squared Test - [* Values unavailable without running a bootstrap]				
Chi-Sq Statistic		59.03	138.52	38.49
P-Value*		N/A	N/A	N/A
Cr. Value @ 0.750*		N/A	N/A	N/A
Cr. Value @ 0.500*		N/A	N/A	N/A
Cr. Value @ 0.250*		N/A	N/A	N/A
Cr. Value @ 0.150*		N/A	N/A	N/A
Cr. Value @ 0.100*		N/A	N/A	N/A
Cr. Value @ 0.050*		N/A	N/A	N/A
Cr. Value @ 0.025*		N/A	N/A	N/A
Cr. Value @ 0.010*		N/A	N/A	N/A
Cr. Value @ 0.005*		N/A	N/A	N/A
Cr. Value @ 0.001*		N/A	N/A	N/A
Chi-Sq Test (Binning Information)				
Bin #1 : Minimum		-	-	-
Bin #1 : Maximum		23.72	1,314.23	55.64
Bin #1 : Input		1.00	42.00	2.00
Bin #1 : Fit		10.42	10.42	10.42
Bin #2 : Minimum		23.72	1,314.23	55.64
Bin #2 : Maximum		208.00	2,753.82	317.30
Bin #2 : Input		8.00	22.00	11.00
Bin #2 : Fit		10.42	10.42	10.42
Bin #3 : Minimum		208.00	2,753.82	317.30
Bin #3 : Maximum		743.18	4,345.20	885.39
Bin #3 : Input		20.00	11.00	18.00
Bin #3 : Fit		10.42	10.42	10.42
Bin #4 : Minimum		743.18	4,345.20	885.39
Bin #4 : Maximum		1,844.60	6,124.21	1,853.11
Bin #4 : Input		22.00	11.00	20.00
Bin #4 : Fit		10.42	10.42	10.42
Bin #5 : Minimum		1,844.60	6,124.21	1,853.11

Bin #5 : Maximum		3,764.65	8,141.09	3,330.35
Bin #5 : Input		21.00	4.00	19.00
Bin #5 : Fit		10.42	10.42	10.42
Bin #6 : Minimum		3,764.65	8,141.09	3,330.35
Bin #6 : Maximum		6,820.89	10,469.41	5,466.77
Bin #6 : Input		16.00	6.00	13.00
Bin #6 : Fit		10.42	10.42	10.42
Bin #7 : Minimum		6,820.89	10,469.41	5,466.77
Bin #7 : Maximum		11,451.16	13,223.23	8,489.24
Bin #7 : Input		11.00	4.00	7.00
Bin #7 : Fit		10.42	10.42	10.42
Bin #8 : Minimum		11,451.16	13,223.23	8,489.24
Bin #8 : Maximum		18,327.70	16,593.63	12,777.87
Bin #8 : Input		6.00	4.00	10.00
Bin #8 : Fit		10.42	10.42	10.42
Bin #9 : Minimum		18,327.70	16,593.63	12,777.87
Bin #9 : Maximum		28,627.41	20,938.82	19,052.61
Bin #9 : Input		5.00	3.00	7.00
Bin #9 : Fit		10.42	10.42	10.42
Bin #10 : Minimum		28,627.41	20,938.82	19,052.61
Bin #10 : Maximum		44,828.18	27,063.04	28,954.53
Bin #10 : Input		4.00	3.00	3.00
Bin #10 : Fit		10.42	10.42	10.42
Bin #11 : Minimum		44,828.18	27,063.04	28,954.53
Bin #11 : Maximum		74,211.33	37,532.45	47,827.29
Bin #11 : Input		3.00	3.00	6.00
Bin #11 : Fit		10.42	10.42	10.42
Bin #12 : Minimum		74,211.33	37,532.45	47,827.29
Bin #12 : Maximum		306,918.37	+Infinity	+Infinity
Bin #12 : Input		8.00	12.00	9.00
Bin #12 : Fit		10.42	10.42	10.42
Anderson-Darling Test - [* Values unavailable without running a bootstrap]				
A-D Statistic		9.71	44.62	6.05
P-Value*		N/A	N/A	N/A
Cr. Value @ 0.750*		N/A	N/A	N/A
Cr. Value @ 0.500*		N/A	N/A	N/A
Cr. Value @ 0.250*		N/A	N/A	N/A
Cr. Value @ 0.150*		N/A	N/A	N/A
Cr. Value @ 0.100*		N/A	N/A	N/A
Cr. Value @ 0.050*		N/A	N/A	N/A
Cr. Value @ 0.025*		N/A	N/A	N/A
Cr. Value @ 0.010*		N/A	N/A	N/A
Cr. Value @ 0.005*		N/A	N/A	N/A
Cr. Value @ 0.001*		N/A	N/A	N/A
Kolmogorov-Smirnov Test - [* Values unavailable without running a bootstrap]				
K-S Statistic		0.21	0.38	0.18
P-Value*		N/A	N/A	N/A

	Cr. Value @ 0.750*		N/A	N/A	N/A
	Cr. Value @ 0.500*		N/A	N/A	N/A
	Cr. Value @ 0.250*		N/A	N/A	N/A
	Cr. Value @ 0.150*		N/A	N/A	N/A
	Cr. Value @ 0.100*		N/A	N/A	N/A
	Cr. Value @ 0.050*		N/A	N/A	N/A
	Cr. Value @ 0.025*		N/A	N/A	N/A
	Cr. Value @ 0.010*		N/A	N/A	N/A
	Cr. Value @ 0.005*		N/A	N/A	N/A
	Cr. Value @ 0.001*		N/A	N/A	N/A

ion of fish, benthic invertebrates, and zooplankton

InvGauss	LogLogistic	Lognorm	Pearson6	Triang	Uniform
gauss(15104,497.25)	tic(0,2825.8,0.95676)	rm(16260.7,89555.5)	567,0.86163,2060.2)	ng(0,11.873,306023)	iskUniform(0,305589)
MLE	MLE	MLE	MLE (Modified)	MLE	MLE (Bias Corrected)
#5	#2	#1	#3	#9	#10
#6	#2	#1	#3	#9	#10
#6	#2	#3	#1	#9	#10
#7	#2	#3	#1	#9	#10
#7	#2	#3	#1	#9	#10
2.00	2.00	2.00	3.00	2.00	1.00
mu	beta	mu	alpha1	M. likely	Max
15,104.17	2,825.76	16,260.70	1.06	11.87	305,589.96
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
lambda	alpha	sigma	alpha2	Max	
497.25	0.96	89,555.50	0.86	306,023.98	
N/A	N/A	N/A	N/A	N/A	
N/A	N/A	N/A	N/A	N/A	
N/A	N/A	N/A	N/A	N/A	
			beta		
			2,060.25		
			N/A		
			N/A		
			N/A		
-	-	-	-	-	-
+Infinity	+Infinity	+Infinity	+Infinity	306,023.98	305,589.96
15,104.17	+Infinity	16,260.69	+Infinity	102,011.95	152,794.98
165.73	-	92.71	62.80	11.87	-
1,015.26	2,825.76	2,904.97	2,746.15	89,636.55	152,794.98
83,245.21	+Infinity	89,555.54	+Infinity	72,129.15	88,216.22
16.53	+Infinity	183.58	+Infinity	0.57	-
458.63	+Infinity	1,028,235.41	+Infinity	2.40	1.80
127.61	130.19	137.19	149.45	7,754.49	15,279.50
180.30	284.29	269.25	307.14	15,709.77	30,559.00
234.29	461.06	424.36	481.87	23,889.28	45,838.49
294.18	663.54	609.20	678.41	32,313.12	61,117.99
363.18	896.29	830.76	902.02	41,004.58	76,397.49
444.79	1,165.54	1,097.62	1,159.25	49,990.92	91,676.99

543.39	1,479.58	1,420.88	1,458.57	59,304.35	106,956.48
664.96	1,849.63	1,815.24	1,811.33	68,983.42	122,235.98
818.05	2,291.11	2,300.67	2,233.15	79,074.93	137,515.48
1,015.26	2,825.76	2,904.97	2,746.15	89,636.55	152,794.98
1,276.05	3,485.17	3,668.01	3,382.71	100,740.84	168,074.48
1,631.71	4,317.03	4,648.90	4,192.22	112,481.18	183,353.97
2,135.32	5,396.74	5,939.18	5,253.67	124,981.26	198,633.47
2,882.94	6,850.84	7,688.30	6,701.49	138,411.00	213,912.97
4,063.51	8,908.84	10,158.00	8,783.56	153,014.96	229,192.47
6,092.74	12,033.91	13,852.34	12,010.03	169,168.55	244,471.97
10,043.40	17,318.53	19,886.11	17,614.41	187,503.70	259,751.46
19,473.56	28,087.08	31,341.88	29,477.41	209,252.58	275,030.96
53,438.06	61,331.63	61,512.21	68,522.19	237,596.27	290,310.46

2,573.01	2,507.34	2,506.98	2,509.17	3,010.06	3,159.53
2,578.57	2,512.90	2,512.54	2,517.46	3,015.62	3,162.33

38.87	3.93	4.31	2.97	849.11	1,043.22
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A

-	-	-	-	-	-
162.93	230.50	223.04	252.93	13,034.01	25,465.83
9.00	9.00	9.00	10.00	100.00	110.00
10.42	10.42	10.42	10.42	10.42	10.42
162.93	230.50	223.04	252.93	13,034.01	25,465.83
253.44	525.50	482.35	544.72	26,669.00	50,931.66
1.00	10.00	9.00	9.00	10.00	7.00
10.42	10.42	10.42	10.42	10.42	10.42
253.44	525.50	482.35	544.72	26,669.00	50,931.66
363.18	896.29	830.76	902.02	41,004.58	76,397.49
4.00	12.00	13.00	12.00	3.00	1.00
10.42	10.42	10.42	10.42	10.42	10.42
363.18	896.29	830.76	902.02	41,004.58	76,397.49
508.30	1,369.30	1,306.05	1,353.49	56,161.29	101,863.32
5.00	11.00	11.00	11.00	4.00	1.00
10.42	10.42	10.42	10.42	10.42	10.42
508.30	1,369.30	1,306.05	1,353.49	56,161.29	101,863.32

711.97	1,987.94	1,965.75	1,943.34	72,298.84	127,329.15
8.00	13.00	11.00	10.00	-	1.00
10.42	10.42	10.42	10.42	10.42	10.42
711.97	1,987.94	1,965.75	1,943.34	72,298.84	127,329.15
1,015.26	2,825.76	2,904.97	2,746.15	89,636.55	152,794.98
8.00	10.00	14.00	12.00	1.00	4.00
10.42	10.42	10.42	10.42	10.42	10.42
1,015.26	2,825.76	2,904.97	2,746.15	89,636.55	152,794.98
1,499.95	4,016.69	4,292.95	3,899.10	108,490.18	178,260.81
7.00	8.00	8.00	8.00	2.00	-
10.42	10.42	10.42	10.42	10.42	10.42
1,499.95	4,016.69	4,292.95	3,899.10	108,490.18	178,260.81
2,350.73	5,831.38	6,461.39	5,684.28	129,344.38	203,726.64
18.00	11.00	12.00	11.00	-	-
10.42	10.42	10.42	10.42	10.42	10.42
2,350.73	5,831.38	6,461.39	5,684.28	129,344.38	203,726.64
4,063.51	8,908.84	10,158.00	8,783.56	153,014.96	229,192.47
13.00	7.00	9.00	8.00	4.00	-
10.42	10.42	10.42	10.42	10.42	10.42
4,063.51	8,908.84	10,158.00	8,783.56	153,014.96	229,192.47
8,387.38	15,194.86	17,495.38	15,342.03	181,092.64	254,658.30
17.00	12.00	9.00	12.00	-	-
10.42	10.42	10.42	10.42	10.42	10.42
8,387.38	15,194.86	17,495.38	15,342.03	181,092.64	254,658.30
25,791.47	34,641.42	37,834.84	36,924.84	217,684.18	280,124.13
20.00	9.00	8.00	9.00	-	-
10.42	10.42	10.42	10.42	10.42	10.42
25,791.47	34,641.42	37,834.84	36,924.84	217,684.18	280,124.13
+Infinity	+Infinity	+Infinity	+Infinity	306,023.98	305,589.96
15.00	13.00	12.00	13.00	1.00	1.00
10.42	10.42	10.42	10.42	10.42	10.42

13.73	0.22	0.31	0.16	250.06	328.63
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A

0.25	0.04	0.05	0.03	0.74	0.80
N/A	N/A	N/A	N/A	N/A	N/A

N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A

Levy
RiskLevy(0,481.3986)
MLE
#6
#5
#4
#6
#6
1.00
c
481.40
N/A
N/A
N/A
-
+Infinity
+Infinity
160.47
1,058.17
+Infinity
+Infinity
+Infinity
125.32
177.93
232.31
293.11
363.79
448.15

551.14
679.63
843.59
1,058.17
1,347.26
1,750.57
2,338.02
3,242.36
4,741.39
7,500.20
13,459.76
30,486.07
122,426.63

2,575.00
2,577.79

34.65
N/A
N/A
N/A
N/A
N/A
N/A
N/A
N/A
N/A
N/A
N/A

-
160.54
9.00
10.42
160.54
251.69
1.00
10.42
251.69
363.79
4.00
10.42
363.79
514.37
5.00
10.42
514.37

729.73
9.00
10.42
729.73
1,058.17
8.00
10.42
1,058.17
1,599.99
9.00
10.42
1,599.99
2,594.78
18.00
10.42
2,594.78
4,741.39
16.00
10.42
4,741.39
10,871.67
17.00
10.42
10,871.67
43,970.73
18.00
10.42
43,970.73
+Infinity
11.00
10.42

11.66
N/A
N/A
N/A
N/A
N/A
N/A
N/A
N/A
N/A
N/A
N/A

0.24
N/A

N/A
N/A
N/A
N/A
N/A
N/A
N/A
N/A
N/A
N/A

Table D1-3. Zinc saltwater chronic toxicity data used to develop a species sensitivity distribution for fish, be

Species Common Name	Species Scientific Name	Control	Chemical Analysis	Study Type	Organism Lifestage	Exposure Type
Crab	Chasmagnathus granulata	C	U	NC	NR	R
Kuruma Shrimp	Penaeus japonicus	NR	U	NC	LV	R
Mysid	Acanthomysis costata	C	U	NR	JV	R
Pink Shrimp	Farfantepenaeus paulensis	C	U	NC	PV	R
Scud	Corophium volutator	C	U	NC	JV	NR
Scud	Corophium volutator	C	U	NR	NE	R
Scud	Corophium volutator	C	U	NR	NE	R
Scud	Corophium volutator	C	U	NC	JV	NR
Scud	Corophium volutator	C	U	NR	NE	R
Scud, Amphipod	Allorchestes compressa	C	M	NR	JV	F
Scud, Amphipod	Allorchestes compressa	C	M	NR	JV	F
Sea Anemone	Anthopleura sola	M	U	NC	NR	R
Sea Anemone	Aiptasia pulchella	C	M	NR	AD	R
Sea Anemone	Aiptasia pulchella	C	M	NR	AD	R
Snail	Marisa cornuarietis	C	U	NC	EM	R
Snail	Marisa cornuarietis	C	U	NC	EM	R
Taiwan Abalone	Haliotis diversicolor ssp. supertexta	C	M	NC	NR	R
White Shrimp	Litopenaeus vannamei	C	U	NC	PV	R
White Shrimp	Litopenaeus vannamei	C	U	NC	PV	R

Table D1-3b. Summary of zinc saltwater chronic toxicity data used to develop a species sensitivity distributi

Species Scientific Name	SMCV	Rank	Percentile
Acanthomysis costata	9.5	1	0.083
Anthopleura sola	95	2	0.167
Farfantepenaeus paulensis	100	3	0.250
Allorchestes compressa	121	4	0.333
Haliotis diversicolor ssp. supertexta	142	5	0.417
Aiptasia pulchella	194	6	0.500
Penaeus japonicus	237	7	0.583
Litopenaeus vannamei	328	8	0.667
Corophium volutator	414	9	0.750
Marisa cornuarietis	669	10	0.833
Chasmagnathus granulata	9460	11	0.917

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Observed Duration Mean (Days)	Endpoint	Effect	Trend	Effect Measurement	Concentration Type	Conc 1 Mean (Standardized)	Conc 1 Units (Standardized)	EPA CF (sw)	Dissolved Conc (ug/L)
14	LOEL	MOR	DEC	HTCH	T	10000	ug/L	0.946	9460
40	LOEL	GRO	DEC	LGTH	T	250	ug/L	0.946	236.5
24	LOEC	MOR	INC	SURV	T	10	ug/L	0.946	9.46
35	LOEL	GRO	DEC	WGHT	T	106	ug/L	0.946	100.276
18	LOEC	GRO	CHG	LGTH	T	200	ug/L	0.946	189.2
63	LOEC	GRO	DEC	LGTH	T	200	ug/L	0.946	189.2
23	LOEC	GRO	DEC	LGTH	T	500	ug/L	0.946	473
100	LOEC	MOR	DEC	SVVS	T	800	ug/L	0.946	756.8
23	LOEC	GRO	DEC	SPGR	T	1000	ug/L	0.946	946
40	LOEC	MOR	DEC	SURV	D	99	ug/L		99
40	LOEC	GRO	DEC	WGHT	D	148	ug/L		148
42	LOEL	MOR	INC	MORT	T	100	ug/L	0.946	94.6
28	LOEC	REP	DEC	PROG	D	140	ug/L		140
28	LOEC	REP	DEC	PROG	D	270	ug/L		270
14	LOEC	MOR	DEC	HTCH	T	500	ug/L	0.946	473
14	LOEC	MOR	DEC	HTCH	T	1000	ug/L	0.946	946
28	LOEC	GRO	DEC	LGTH	T	150	ug/L	0.946	141.9
14	LOEC	GRO	DEC	LGTH	T	200	ug/L	0.946	189.2
21	LOEC	GRO	DEC	LGTH	T	600	ug/L	0.946	567.6

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SMV	Publication Year	Author
9460	2004	Lavolpe,M., L. Lopez Greco, D. Kesselman, and E. Rodriguez
236.5	1988	Liao,I.C., and C.S. Hsieh
9.46	1996	Hunt,J.W., B.S. Anderson, S. Tudor, M.D. Stephenson, H.M. Puckett, F.H. Palmer, and M.W. Reeve
100.276	2000	Santos,M.H.S., N. Troca da Cunha, and A. Bianchini
413.7282088	1999	Conradi,M., and M.H. Depledge
	2012	Fabrega,J., R. Tantra, A. Amer, B. Stolpe, J. Tomkins, T. Fry, J.R. Lead, C.R. Tyler, and T.S. Galloway
	2012	Fabrega,J., R. Tantra, A. Amer, B. Stolpe, J. Tomkins, T. Fry, J.R. Lead, C.R. Tyler, and T.S. Galloway
	1999	Conradi,M., and M.H. Depledge
	2012	Fabrega,J., R. Tantra, A. Amer, B. Stolpe, J. Tomkins, T. Fry, J.R. Lead, C.R. Tyler, and T.S. Galloway
121.045446	1991	Ahsanullah,M., and A.R. Williams
	1991	Ahsanullah,M., and A.R. Williams
94.6	2003	Mitchelmore,C.L., E.A. Verde, A.H. Ringwood, and V.M. Weis
194.422221	2014	Howe,P.L., A.J. Reichelt-Brushett, and M.W. Clark
	2014	Howe,P.L., A.J. Reichelt-Brushett, and M.W. Clark
668.923015	2009	Sawasdee,B., and H.R. Kohler
	2009	Sawasdee,B., and H.R. Kohler
141.9	2004	Tsai,J.W., Y.H. Chou, B.C. Chen, H.M. Liang, and C.M. Liao
327.7040128	2005	Wu,J.P., and H.C. Chen
	2005	Wu,J.P., and H.C. Chen

Table D1-4. Distribution fitting results for the zinc saltwater chronic species sensitivity distrib

	Input	Expon	Gamma	InvGauss
Fit				
Function		RiskExpon(1069.9)	mma(0.4146,2580.5)	gauss(1069.9,74.465)
Method		MLE	MLE	MLE
Rankings By Fit Statistic [9 Valid Fits]				
Akaike (AIC)		#7	#6	#4
Bayesian (BIC)		#7	#6	#5
Chi-Sq Statistic		#7 (Tie)	#6	#5
K-S Statistic		#7	#6	#5
A-D Statistic		#7	#6	#5
Parameters - [* Values unavailable without running a bootstrap]				
Num. Est. Parameters		1.00	2.00	2.00
Fitted Parameter #1		beta	alpha	mu
Fitted Value		1,069.87	0.41	1,069.87
95% Lower Limit*		N/A	N/A	N/A
95% Upper Limit*		N/A	N/A	N/A
Conf. Interval Width*		N/A	N/A	N/A
Fitted Parameter #2			beta	lambda
Fitted Value			2,580.49	74.47
95% Lower Limit*			N/A	N/A
95% Upper Limit*			N/A	N/A
Conf. Interval Width*			N/A	N/A
Fitted Parameter #3				
Fitted Value				
95% Lower Limit*				
95% Upper Limit*				
Conf. Interval Width*				
Distribution Statistics				
Minimum	9.46	-	-	-
Maximum	9,460.00	+Infinity	+Infinity	+Infinity
Mean	1,069.87	1,069.87	1,069.87	1,069.87
Mode	73.4669 [est]	-	-	24.81
Median	194.42	741.58	404.11	140.93
Std. Deviation	2,788.81	1,069.87	1,661.56	4,055.26
Skewness	3.29	2.00	3.11	11.37
Kurtosis	13.87	9.00	17.47	218.51
Percentiles				
5%	9.46	54.88	1.41	18.82
10%	94.60	112.72	7.49	26.44
15%	94.60	173.87	19.99	34.19
20%	100.28	238.73	40.22	42.71
25%	100.28	307.78	69.45	52.44
30%	121.05	381.60	108.97	63.84

35%	121.05	460.88	160.24	77.47
40%	141.90	546.52	225.01	94.09
45%	141.90	639.61	305.39	114.73
50%	194.42	741.58	404.11	140.93
55%	236.50	854.30	524.75	174.98
60%	236.50	980.31	672.16	220.45
65%	327.70	1,123.17	853.23	283.23
70%	327.70	1,288.09	1,078.08	373.57
75%	413.73	1,483.15	1,362.57	510.68
80%	413.73	1,721.89	1,733.51	734.29
85%	668.92	2,029.67	2,241.69	1,139.00
90%	668.92	2,463.46	3,002.55	2,004.92
95%	9,460.00	3,205.04	4,390.29	4,589.52
Information Criteria				
Akaike (AIC)		177.90	172.51	167.41
Bayesian (BIC)		177.85	171.80	166.71
Chi-Squared Test - [* Values unavailable without running a bootstrap]				
Chi-Sq Statistic		7.36	2.27	0.82
P-Value*		N/A	N/A	N/A
Cr. Value @ 0.750*		N/A	N/A	N/A
Cr. Value @ 0.500*		N/A	N/A	N/A
Cr. Value @ 0.250*		N/A	N/A	N/A
Cr. Value @ 0.150*		N/A	N/A	N/A
Cr. Value @ 0.100*		N/A	N/A	N/A
Cr. Value @ 0.050*		N/A	N/A	N/A
Cr. Value @ 0.025*		N/A	N/A	N/A
Cr. Value @ 0.010*		N/A	N/A	N/A
Cr. Value @ 0.005*		N/A	N/A	N/A
Cr. Value @ 0.001*		N/A	N/A	N/A
Chi-Sq Test (Binning Information)				
Bin #1 : Minimum		-	-	-
Bin #1 : Maximum		741.58	404.11	140.93
Bin #1 : Input		10.00	8.00	4.00
Bin #1 : Fit		5.50	5.50	5.50
Bin #2 : Minimum		741.58	404.11	140.93
Bin #2 : Maximum		+Infinity	+Infinity	+Infinity
Bin #2 : Input		1.00	3.00	7.00
Bin #2 : Fit		5.50	5.50	5.50
Anderson-Darling Test - [* Values unavailable without running a bootstrap]				
A-D Statistic		5.27	1.45	0.90
P-Value*		N/A	N/A	N/A
Cr. Value @ 0.750*		N/A	N/A	N/A
Cr. Value @ 0.500*		N/A	N/A	N/A
Cr. Value @ 0.250*		N/A	N/A	N/A
Cr. Value @ 0.150*		N/A	N/A	N/A
Cr. Value @ 0.100*		N/A	N/A	N/A
Cr. Value @ 0.050*		N/A	N/A	N/A

	Cr. Value @ 0.025*		N/A	N/A	N/A
	Cr. Value @ 0.010*		N/A	N/A	N/A
	Cr. Value @ 0.005*		N/A	N/A	N/A
	Cr. Value @ 0.001*		N/A	N/A	N/A
Kolmogorov-Smirnov Test - [* Values unavailable without running a bootstrap]					
	K-S Statistic		0.50	0.31	0.31
	P-Value*		N/A	N/A	N/A
	Cr. Value @ 0.750*		N/A	N/A	N/A
	Cr. Value @ 0.500*		N/A	N/A	N/A
	Cr. Value @ 0.250*		N/A	N/A	N/A
	Cr. Value @ 0.150*		N/A	N/A	N/A
	Cr. Value @ 0.100*		N/A	N/A	N/A
	Cr. Value @ 0.050*		N/A	N/A	N/A
	Cr. Value @ 0.025*		N/A	N/A	N/A
	Cr. Value @ 0.010*		N/A	N/A	N/A
	Cr. Value @ 0.005*		N/A	N/A	N/A
	Cr. Value @ 0.001*		N/A	N/A	N/A

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LogLogistic	Lognorm	Pearson6	Triang	Uniform	Levy
stic(0,204.82,1.2506)	norm(779.15,2636.7)	1.5636,1.0861,128.9)	Triang(0,9.46,10337)	RiskUniform(0,10406)	RiskLevy(0,69.6198)
MLE	MLE	MLE (Modified)	MLE	MLE (Bias Corrected)	MLE
#1	#3	#5	#8	#9	#2
#1	#2	#4	#8	#9	#3
#1 (Tie)	#1 (Tie)	#1 (Tie)	#7 (Tie)	#7 (Tie)	#1 (Tie)
#1	#3	#2	#8	#9	#4
#1	#3	#2	#8	#9	#4
2.00	2.00	3.00	2.00	1.00	1.00
beta	mu	alpha1	M. likely	Max	c
204.82	779.15	1.56	9.46	10,406.00	69.62
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
alpha	sigma	alpha2	Max		
1.25	2,636.70	1.09	10,337.67		
N/A	N/A	N/A	N/A		
N/A	N/A	N/A	N/A		
N/A	N/A	N/A	N/A		
		beta			
		128.90			
		N/A			
		N/A			
		N/A			
-	-	-	-	-	-
+Infinity	+Infinity	+Infinity	10,337.67	10,406.00	+Infinity
873.94	779.15	2,341.97	3,449.04	5,203.00	+Infinity
35.40	17.73	34.82	9.46	-	23.21
204.82	220.80	206.35	3,031.18	5,203.00	153.03
+Infinity	2,636.74	+Infinity	2,435.50	3,003.95	+Infinity
+Infinity	48.91	+Infinity	0.57	-	+Infinity
+Infinity	28,367.59	+Infinity	2.40	1.80	+Infinity
19.45	16.20	20.63	266.37	520.30	18.12
35.35	28.85	35.43	534.98	1,040.60	25.73
51.17	42.58	50.17	811.17	1,560.90	33.60
67.60	58.02	65.70	1,095.61	2,081.20	42.39
85.08	75.65	82.53	1,389.08	2,601.50	52.61
104.02	96.01	101.14	1,692.51	3,121.80	64.81

124.85	119.74	122.06	2,006.99	3,642.10	79.71
148.10	147.66	145.94	2,333.81	4,162.40	98.29
174.45	180.85	173.65	2,674.56	4,682.70	122.00
204.82	220.80	206.35	3,031.18	5,203.00	153.03
240.47	269.56	245.70	3,406.12	5,723.30	194.84
283.25	330.16	294.17	3,802.55	6,243.60	253.17
336.00	407.14	355.57	4,224.62	6,763.90	338.12
403.28	507.77	436.22	4,678.09	7,284.20	468.91
493.04	644.43	547.29	5,171.20	7,804.50	685.70
620.57	840.32	710.85	5,716.64	8,324.80	1,084.68
819.87	1,145.00	977.49	6,335.74	8,845.10	1,946.55
1,186.87	1,689.89	1,495.43	7,070.11	9,365.40	4,408.89
2,157.20	3,008.99	2,978.94	8,027.15	9,885.70	17,705.31

164.39	165.63	168.42	198.98	205.95	165.10
163.69	164.93	166.19	198.27	205.90	165.05

0.09	0.09	0.09	7.36	7.36	0.09
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A

-	-	-	-	-	-
204.82	220.80	206.35	3,031.18	5,203.00	153.03
6.00	6.00	6.00	10.00	10.00	5.00
5.50	5.50	5.50	5.50	5.50	5.50
204.82	220.80	206.35	3,031.18	5,203.00	153.03
+Infinity	+Infinity	+Infinity	10,337.67	10,406.00	+Infinity
5.00	5.00	5.00	1.00	1.00	6.00
5.50	5.50	5.50	5.50	5.50	5.50

0.37	0.54	0.40	17.07	22.83	0.87
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A

N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A

0.18	0.21	0.19	0.78	0.84	0.30
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A

Table D1-5a. Silver freshwater acute toxicity data used to develop a species sensitivity distı

Species	Lifestage	Method	Ag Form	EC50 (ug/L)	SMAV (ug/L)
Aplexa hypnorum (snail)	Adult	R,M	Nitrate	241	141.4
Aplexa hypnorum (snail)	-	F,M	Nitrate	83	-
Ceriodaphnia dubia (cladoceran)	<24 hr	S,M	Nitrate	0.4	0.52
Ceriodaphnia dubia (cladoceran)	<24 hr	S,M	Nitrate	0.76	-
Ceriodaphnia dubia (cladoceran)	<24 hr	S,M	Nitrate	1.28	-
Ceriodaphnia dubia (cladoceran)	<24 hr	S,M	Nitrate	0.34	-
Ceriodaphnia dubia (cladoceran)	<24 hr	S,M	Nitrate	3.24	-
Ceriodaphnia dubia (cladoceran)	<24 hr	S,M	Nitrate	1.45	-
Ceriodaphnia dubia (cladoceran)	<24 hr	S,M	Nitrate	4.24	-
Ceriodaphnia dubia (cladoceran)	<24 hr	S,M	Nitrate	1.15	-
Ceriodaphnia dubia (cladoceran)	<24 hr	S,M	Nitrate	9.52	-
Ceriodaphnia dubia (cladoceran)	<24 hr	S,M	Nitrate	1.69	-
Ceriodaphnia dubia (cladoceran)	<24 hr	S,M	Nitrate	0.25	-
Ceriodaphnia dubia (cladoceran)	<24 hr	S,M	Nitrate	0.33	-
Ceriodaphnia dubia (cladoceran)	<24 hr	S,M	Nitrate	1.62	-
Ceriodaphnia dubia (cladoceran)	<24 hr	S,M	Nitrate	0.52	-
Ceriodaphnia dubia (cladoceran)	<24 hr	S,M	Nitrate	0.5	-
Ceriodaphnia dubia (cladoceran)	<24 hr	S,M	Nitrate	0.69	-
Ceriodaphnia dubia (cladoceran)	<24 hr	S,M	Nitrate	0.2	-
Ceriodaphnia dubia (cladoceran)	<24 hr	S,M	Nitrate	0.3	-
Ceriodaphnia dubia (cladoceran)	<24 hr	S,M	Nitrate	0.33	-
Ceriodaphnia dubia (cladoceran)	<24 hr	S,M	Nitrate	0.38	-
Ceriodaphnia dubia (cladoceran)	<24 hr	S,M	Nitrate	0.15	-
Ceriodaphnia dubia (cladoceran)	<24 hr	S,M	Nitrate	0.14	-
Ceriodaphnia dubia (cladoceran)	<24 hr	S,M	Nitrate	0.16	-
Ceriodaphnia dubia (cladoceran)	<24 hr	S,M	Nitrate	0.21	-
Ceriodaphnia dubia (cladoceran)	<24 hr	S,M	Nitrate	0.18	-
Ceriodaphnia dubia (cladoceran)	<24 hr	S,M	Nitrate	0.11	-
Ceriodaphnia dubia (cladoceran)	<24 hr	S,M	Nitrate	0.18	-
Ceriodaphnia dubia (cladoceran)	<24 hr	S,M	Nitrate	0.45	-
Ceriodaphnia dubia (cladoceran)	<24 hr	S,M	Nitrate	0.42	-
Ceriodaphnia dubia (cladoceran)	<24 hr	S,M	Nitrate	0.25	-
Ceriodaphnia dubia (cladoceran)	<24 hr	S,M	Nitrate	0.58	-
Ceriodaphnia dubia (cladoceran)	<24 hr	S,M	Nitrate	0.59	-
Ceriodaphnia dubia (cladoceran)	<24 hr	S,M	Nitrate	0.355	-
Ceriodaphnia dubia (cladoceran)	<24 hr	S,M	Nitrate	1.018	-
Ceriodaphnia dubia (cladoceran)	<24 hr	S,M	Nitrate	0.428	-
Ceriodaphnia dubia (cladoceran)	<24 hr	S,M	Nitrate	0.866	-
Ceriodaphnia dubia (cladoceran)	<24 hr	S,M	Nitrate	0.16	-
Ceriodaphnia dubia (cladoceran)	<24 hr	S,M	Nitrate	0.22	-
Ceriodaphnia dubia (cladoceran)	<24 hr	S,M	Nitrate	0.33	-
Ceriodaphnia dubia (cladoceran)	<24 hr	S,M	Nitrate	0.30	-
Ceriodaphnia dubia (cladoceran)	<24 hr	S,M	Nitrate	0.86	-
Ceriodaphnia dubia (cladoceran)	<24 hr	S,M	Nitrate	5.74	-
Ceriodaphnia dubia (cladoceran)	<24 hr	S,M	Nitrate	0.51	-
Ceriodaphnia dubia (cladoceran)	<24 hr	S,M	Nitrate	0.20	-
Ceriodaphnia dubia (cladoceran)	<24 hr	S,M	Nitrate	0.19	-
Ceriodaphnia dubia (cladoceran)	<24 hr	S,M	Nitrate	0.54	-
Ceriodaphnia dubia (cladoceran)	<24 hr	S,M	Nitrate	6.43	-
Cottus bairdi (mottled sculpin)	81 mm	F,M	Nitrate	5.3	8.5
Cottus bairdi (mottled sculpin)	81 mm	F,M	Nitrate	13.6	-
Danio rerio (zebrafish)	Adult	S,M	Nitrate	10.3	10.3
Daphnia magna (cladoceran)	<24 hr	S,M	Nitrate	0.63	1.7
Daphnia magna (cladoceran)	<24 hr	S,M	Nitrate	0.66	-
Daphnia magna (cladoceran)	<24 hr	S,M	Nitrate	1.1	-
Daphnia magna (cladoceran)	<24 hr	S,M	Nitrate	0.6	-
Daphnia magna (cladoceran)	<24 hr	S,M	Nitrate	1.1	-
Daphnia magna (cladoceran)	<24 hr	S,M	Nitrate	1	-

Daphnia magna (cladoceran)	<24 hr	S,M	Nitrate	1.3	-
Daphnia magna (cladoceran)	<24 hr	S,M	Nitrate	0.58	-
Daphnia magna (cladoceran)	<24 hr	S,M	Nitrate	35	-
Daphnia magna (cladoceran)	<24 hr	F,M	Nitrate	0.9	-
Daphnia magna (cladoceran)	<24 hr	R,M	Nitrate	0.23	-
Daphnia magna (cladoceran)	<24 hr	R,M	Nitrate	1.35	-
Daphnia magna (cladoceran)	<24 hr	R,M	Nitrate	1.41	-
Daphnia magna (cladoceran)	<24 hr	R,M	Nitrate	1.72	-
Daphnia magna (cladoceran)	<24 hr	R,M	Nitrate	2.12	-
Daphnia magna (cladoceran)	<24 hr	R,M	Nitrate	3.56	-
Daphnia magna (cladoceran)	<24 hr	R,M	Nitrate	1.56	-
Daphnia magna (cladoceran)	<24 hr	R,M	Nitrate	2.33	-
Daphnia magna (cladoceran)	<24 hr	R,M	Nitrate	3.69	-
Daphnia magna (cladoceran)	<24 hr	R,M	Nitrate	2.84	-
Daphnia magna (cladoceran)	<24 hr	R,M	Nitrate	16.65	-
Daphnia magna (cladoceran)	<24 hr	R,M	Nitrate	2.08	-
Daphnia magna (cladoceran)	<24 hr	R,M	Nitrate	9.14	-
Daphnia magna (cladoceran)	<24 hr	R,M	Nitrate	1.41	-
Daphnia magna (cladoceran)	<24 hr	R,M	Nitrate	1.97	-
Daphnia magna (cladoceran)	<24 hr	R,M	Nitrate	2.14	-
Daphnia magna (cladoceran)	<24 hr	R,M	Nitrate	1.29	-
Daphnia magna (cladoceran)	<24 hr	R,M	Nitrate	2.54	-
Daphnia magna (cladoceran)	<24 hr	R,M	Nitrate	1.85	-
Daphnia magna (cladoceran)	<24 hr	R,M	Nitrate	6.12	-
Daphnia magna (cladoceran)	<24 hr	R,M	Nitrate	7.57	-
Daphnia magna (cladoceran)	<24 hr	R,M	Nitrate	13.91	-
Fundulus heteroclitus (mummichog)	7 d	R,M	Nitrate	3.8	3.8
Ictalurus punctatus (channel catfish)	14.2 g	F,M	Nitrate	17.3	17.3
Lepomis macrochirus (bluegill)	Juvenile	F,M	Nitrate	13	13
Nephelopsis obscura (leech)		F,M	Nitrate	29	29
Oncorhynchus mykiss (rainbow trout)	Larva	S,M	Nitrate	19.92	9.9
Oncorhynchus mykiss (rainbow trout)	Larva	S,M	Nitrate	31.8	-
Oncorhynchus mykiss (rainbow trout)	Juvenile, 0.2 g	S,M	Nitrate	10.9	-
Oncorhynchus mykiss (rainbow trout)	Juvenile, 0.3 g	S,M	Nitrate	8.5	-
Oncorhynchus mykiss (rainbow trout)	1-4 g	R,M	Nitrate	11.8	-
Oncorhynchus mykiss (rainbow trout)	Juvenile, 2.2 g	S,M	Nitrate	7.5	-
Oncorhynchus mykiss (rainbow trout)	Juvenile, 2.2 g	S,M	Nitrate	9.2	-
Oncorhynchus mykiss (rainbow trout)	Juvenile, 2.2 g	S,M	Nitrate	18.5	-
Oncorhynchus mykiss (rainbow trout)	Juvenile, 2.2 g	S,M	Nitrate	25.6	-
Oncorhynchus mykiss (rainbow trout)	Juvenile, 2.2 g	S,M	Nitrate	18.4	-
Oncorhynchus mykiss (rainbow trout)	Juvenile, 2.2 g	S,M	Nitrate	27.7	-
Oncorhynchus mykiss (rainbow trout)	Juvenile, 2.2 g	S,M	Nitrate	9.9	-
Oncorhynchus mykiss (rainbow trout)	Juvenile, 2.2 g	S,M	Nitrate	10.5	-
Oncorhynchus mykiss (rainbow trout)	2.2 g	R,M	Nitrate	11.8	-
Oncorhynchus mykiss (rainbow trout)	69 mm	F,M	Nitrate	5.3	-
Oncorhynchus mykiss (rainbow trout)	146 mm	F,M	Nitrate	6.2	-
Oncorhynchus mykiss (rainbow trout)	173 mm	F,M	Nitrate	8.1	-
Oncorhynchus mykiss (rainbow trout)	167 mm	F,M	Nitrate	13	-
Oncorhynchus mykiss (rainbow trout)	Juvenile, 0.2 g	F,M	Nitrate	9.2	-
Oncorhynchus mykiss (rainbow trout)	Juvenile, 0.2 g	F,M	Nitrate	8.6	-
Oncorhynchus mykiss (rainbow trout)	Juvenile, 0.4 g	F,M	Nitrate	9.7	-
Oncorhynchus mykiss (rainbow trout)	Larva	F,M	Nitrate	17.87	-
Oncorhynchus mykiss (rainbow trout)	Juvenile	F,M	Nitrate	6	-
Oncorhynchus mykiss (rainbow trout)	22±3-d old	F,M	Nitrate	1.48	-
Oncorhynchus mykiss (rainbow trout)	22±3-d old	F,M	Nitrate	3.39	-
Oncorhynchus mykiss (rainbow trout)	22±3-d old	F,M	Nitrate	2.421	-
Oncorhynchus mykiss (rainbow trout)	22±3-d old	F,M	Nitrate	3.764	-
Oncorhynchus mykiss (rainbow trout)	22±3-d old	F,M	Nitrate	5.571	-
Oncorhynchus mykiss (rainbow trout)	22±3-d old	F,M	Nitrate	17.07	-
Oncorhynchus mykiss (rainbow trout)	22±3-d old	F,M	Nitrate	9.462	-
Oncorhynchus mykiss (rainbow trout)	22±3-d old	F,M	Nitrate	28.42	-
Oncorhynchus mykiss (rainbow trout)	22±3-d old	F,M	Nitrate	3.579	-
Orconectes immunis (crayfish)		F,M	Nitrate	560	560

Pimephales promelas (fathead minnow)	-	S,M	Nitrate	30.43	7.8
Pimephales promelas (fathead minnow)	-	S,M	Nitrate	22.66	-
Pimephales promelas (fathead minnow)	Juvenile, 0.3 g	S,M	Nitrate	9.4	-
Pimephales promelas (fathead minnow)	Juvenile, 0.1 g	S,M	Nitrate	9.7	-
Pimephales promelas (fathead minnow)	0.15 g	S,M	Nitrate	14	-
Pimephales promelas (fathead minnow)	28-d old	S,M	Nitrate	19.8	-
Pimephales promelas (fathead minnow)	28-d old	S,M	Nitrate	19.6	-
Pimephales promelas (fathead minnow)	28-d old	S,M	Nitrate	21.1	-
Pimephales promelas (fathead minnow)	28-d old	S,M	Nitrate	24.3	-
Pimephales promelas (fathead minnow)	28-d old	S,M	Nitrate	21.8	-
Pimephales promelas (fathead minnow)	28-d old	S,M	Nitrate	26.2	-
Pimephales promelas (fathead minnow)	28-d old	S,M	Nitrate	23.8	-
Pimephales promelas (fathead minnow)	28-30-d old	S,M	Nitrate	10.4	-
Pimephales promelas (fathead minnow)	28-30-d old	S,M	Nitrate	5.31	-
Pimephales promelas (fathead minnow)	28-30-d old	S,M	Nitrate	8.29	-
Pimephales promelas (fathead minnow)	28-30-d old	S,M	Nitrate	13.37	-
Pimephales promelas (fathead minnow)	28-30-d old	S,M	Nitrate	3.1	-
Pimephales promelas (fathead minnow)	28-30-d old	S,M	Nitrate	5.79	-
Pimephales promelas (fathead minnow)	28-30-d old	S,M	Nitrate	8.93	-
Pimephales promelas (fathead minnow)	28-30-d old	S,M	Nitrate	4.58	-
Pimephales promelas (fathead minnow)	28-30-d old	S,M	Nitrate	16.11	-
Pimephales promelas (fathead minnow)	28-30-d old	S,M	Nitrate	19.84	-
Pimephales promelas (fathead minnow)	28-30-d old	S,M	Nitrate	7.8	-
Pimephales promelas (fathead minnow)	28-30-d old	S,M	Nitrate	8.1	-
Pimephales promelas (fathead minnow)	28-30-d old	S,M	Nitrate	5	-
Pimephales promelas (fathead minnow)	28-30-d old	S,M	Nitrate	106	-
Pimephales promelas (fathead minnow)	Juvenile, 0.1 g	F,M	Nitrate	5.6	-
Pimephales promelas (fathead minnow)	Juvenile, 0.2 g	F,M	Nitrate	7.4	-
Pimephales promelas (fathead minnow)	Juvenile, 0.2 g	F,M	Nitrate	10.98	-
Pimephales promelas (fathead minnow)	Juvenile, 0.2 g	F,M	Nitrate	11.75	-
Pimephales promelas (fathead minnow)	0.15 g	F,M	Nitrate	6.7	-
Pimephales promelas (fathead minnow)	Juvenile	F,M	Nitrate	9	-
Pimephales promelas (fathead minnow)	<24 hr	S,M	Nitrate	4.5	-
Pimephales promelas (fathead minnow)	<24 hr	S,M	Nitrate	16.8	-
Pimephales promelas (fathead minnow)	<24 hr	S,M	Nitrate	13.4	-
Pimephales promelas (fathead minnow)	<24 hr	S,M	Nitrate	10.1	-
Pimephales promelas (fathead minnow)	<24 hr	S,M	Nitrate	11.5	-
Pimephales promelas (fathead minnow)	<24 hr	S,M	Nitrate	12.4	-
Pimephales promelas (fathead minnow)	<24 hr	S,M	Nitrate	15.2	-
Pimephales promelas (fathead minnow)	<24 hr	S,M	Nitrate	23.3	-
Pimephales promelas (fathead minnow)	<24 hr	S,M	Nitrate	18.3	-
Pimephales promelas (fathead minnow)	<24 hr	S,M	Nitrate	3.1	-
Pimephales promelas (fathead minnow)	<24 hr	S,M	Nitrate	7.2	-
Pimephales promelas (fathead minnow)	<24 hr	S,M	Nitrate	6.7	-
Pimephales promelas (fathead minnow)	<24 hr	S,M	Nitrate	9	-
Pimephales promelas (fathead minnow)	7 d	S,M	Nitrate	3.37	-
Pimephales promelas (fathead minnow)	7 d	S,M	Nitrate	5.23	-
Pimephales promelas (fathead minnow)	7 d	S,M	Nitrate	2.44	-
Pimephales promelas (fathead minnow)	7 d	S,M	Nitrate	6.02	-
Pimephales promelas (fathead minnow)	7 d	S,M	Nitrate	20.9	-
Pimephales promelas (fathead minnow)	7 d	S,M	Nitrate	44	-
Pimephales promelas (fathead minnow)	7 d	S,M	Nitrate	16	-
Pimephales promelas (fathead minnow)	7 d	S,M	Nitrate	20.2	-
Pimephales promelas (fathead minnow)	7 d	S,M	Nitrate	44.1	-
Pimephales promelas (fathead minnow)	7 d	S,M	Nitrate	2.49	-
Pimephales promelas (fathead minnow)	7 d	S,M	Nitrate	2.96	-
Pimephales promelas (fathead minnow)	7 d	S,M	Nitrate	1.99	-
Pimephales promelas (fathead minnow)	7 d	S,M	Nitrate	2.2	-
Pimephales promelas (fathead minnow)	1 d	S,M	Nitrate	1.2	-
Pimephales promelas (fathead minnow)	4 d	S,M	Nitrate	1.2	-
Pimephales promelas (fathead minnow)	7 d	S,M	Nitrate	3.4	-
Pimephales promelas (fathead minnow)	27 d	S,M	Nitrate	5.9	-
Pimephales promelas (fathead minnow)	4 d	S,M	Nitrate	2.4	-

Pimephales promelas (fathead minnow)	4 d	S,M	Nitrate	2.2	-
Pimephales promelas (fathead minnow)	4 d	S,M	Nitrate	2.8	-
Pimephales promelas (fathead minnow)	4 d	S,M	Nitrate	6.1	-
Pimephales promelas (fathead minnow)	4 d	S,M	Nitrate	5.4	-
Pimephales promelas (fathead minnow)	4 d	S,M	Nitrate	6.8	-
Pimephales promelas (fathead minnow)	4 d	S,M	Nitrate	9.8	-
Pimephales promelas (fathead minnow)	4 d	S,M	Nitrate	8.5	-
Pimephales promelas (fathead minnow)	4 d	S,M	Nitrate	8.5	-
Pimephales promelas (fathead minnow)	4 d	S,M	Nitrate	2.7	-
Pimephales promelas (fathead minnow)	4 d	S,M	Nitrate	2.3	-
Pimephales promelas (fathead minnow)	4 d	S,M	Nitrate	3.2	-
Pimephales promelas (fathead minnow)	4 d	S,M	Nitrate	9.7	-
Pimephales promelas (fathead minnow)	4 d	S,M	Nitrate	9.1	-
Pimephales promelas (fathead minnow)	4 d	S,M	Nitrate	8.7	-
Pimephales promelas (fathead minnow)	4 d	S,M	Nitrate	12.3	-
Pimephales promelas (fathead minnow)	4 d	S,M	Nitrate	11.2	-
Pimephales promelas (fathead minnow)	4 d	S,M	Nitrate	8.4	-
Pimephales promelas (fathead minnow)	4 d	S,M	Nitrate	2	-
Pimephales promelas (fathead minnow)	4 d	S,M	Nitrate	2.1	-
Pimephales promelas (fathead minnow)	4 d	S,M	Nitrate	2.8	-
Pimephales promelas (fathead minnow)	4 d	S,M	Nitrate	4.2	-
Pimephales promelas (fathead minnow)	4 d	S,M	Nitrate	4.4	-
Pimephales promelas (fathead minnow)	4 d	S,M	Nitrate	4.2	-
Pimephales promelas (fathead minnow)	4 d	S,M	Nitrate	3.6	-
Pimephales promelas (fathead minnow)	4 d	S,M	Nitrate	5.6	-
Pimephales promelas (fathead minnow)	4 d	S,M	Nitrate	4.3	-
Pimephales promelas (fathead minnow)	4 d	S,M	Nitrate	5.5	-
Pimephales promelas (fathead minnow)	4 d	S,M	Nitrate	5.6	-
Pimephales promelas (fathead minnow)	4 d	S,M	Nitrate	5.5	-
Pimephales promelas (fathead minnow)	4 d	S,M	Nitrate	8.9	-
Pimephales promelas (fathead minnow)	4 d	S,M	Nitrate	8.4	-
Pimephales promelas (fathead minnow)	4 d	S,M	Nitrate	9	-
Pimephales promelas (fathead minnow)	4 d	S,M	Nitrate	9.8	-
Pimephales promelas (fathead minnow)	4 d	S,M	Nitrate	10.2	-
Pimephales promelas (fathead minnow)	4 d	S,M	Nitrate	13.4	-
Pimephales promelas (fathead minnow)	4 d	R,M	Nitrate	2.3	-
Rhinichthys osculus (speckled dace)	68 mm	F,M	Nitrate	4.9	8.2
Rhinichthys osculus (speckled dace)	68 mm	F,M	Nitrate	13.6	-
Tanytarsus dissimilis (midge)	Larva	F,M	Nitrate	420	420

Table D1-5b. Summary of silver freshwater acute toxicity data used to develop a species se

Species	SMAV (Diss., µg/L)	Rank	Percentile
Orconectes immunis (crayfish)	560	14	0.93
Tanytarsus dissimilis (midge)	420	13	0.87
Aplexa hypnorum (snail)	141.4	12	0.80
Nephelopsis obscura (leech)	29	11	0.73
Ictalurus punctatus (channel catfish)	17.3	10	0.67
Lepomis macrochirus (bluegill)	13	9	0.60
Danio rerio (zebrafish)	10.3	8	0.53
Oncorhynchus mykiss (rainbow trout)	9.9	7	0.47
Cottus bairdi (mottled sculpin)	8.5	6	0.40
Rhinichthys osculus (speckled dace)	8.2	5	0.33
Pimephales promelas (fathead minnow)	7.8	4	0.27
Fundulus heteroclitus (mummichog)	3.8	3	0.20
Daphnia magna (cladoceran)	1.7	2	0.13
Ceriodaphnia dubia (cladoceran)	0.52	1	0.07

ribution for fish, benthic invertebrates, and zooplankton

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nsitivity distribution for fish, benthic invertebrates, and zooplankton

Table D1-6. Distribution fitting results for the silver freshwater acute species sensitivity distri

	Input	BetaGeneral	Expon	Gamma
Fit				
Function	taGeneral(0.29666,1.3284,0,615.89)		RiskExpon(87.955)	mma(0.3802,231.34)
Method		MLE (Modified)	MLE	MLE
Rankings By Fit Statistic [10 Valid Fits]				
Akaike (AIC)		#7	#8	#6
Bayesian (BIC)		#7	#8	#6
Chi-Sq Statistic		#6 (Tie)	#9	#1
K-S Statistic		#7	#8	#6
A-D Statistic		#7	#8	#6
Parameters - [* Values unavailable without running a bootstrap]				
Num. Est. Parameters		3.00	1.00	2.00
Fitted Parameter #1		alpha1	beta	alpha
Fitted Value		0.30	87.96	0.38
95% Lower Limit*		N/A	N/A	N/A
95% Upper Limit*		N/A	N/A	N/A
Conf. Interval Width*		N/A	N/A	N/A
Fitted Parameter #2		alpha2		beta
Fitted Value		1.33		231.34
95% Lower Limit*		N/A		N/A
95% Upper Limit*		N/A		N/A
Conf. Interval Width*		N/A		N/A
Fitted Parameter #3		Max		
Fitted Value		615.89		
95% Lower Limit*		N/A		
95% Upper Limit*		N/A		
Conf. Interval Width*		N/A		
Distribution Statistics				
Minimum	0.52	-	-	-
Maximum	560.00	615.89	+Infinity	+Infinity
Mean	87.96	112.43	87.96	87.96
Mode	8.5730 [est]	-	-	-
Median	10.09	41.67	60.97	30.03
Std. Deviation	176.16	146.84	87.96	142.64
Skewness	2.24	1.47	2.00	3.24
Kurtosis	7.07	4.24	9.00	18.78
Percentiles				
5%	0.52	0.02	4.51	0.06
10%	1.73	0.18	9.27	0.40
15%	3.80	0.71	14.29	1.16
20%	3.80	1.87	19.63	2.48
25%	7.75	3.97	25.30	4.49
30%	8.16	7.34	31.37	7.31

35%	8.16	12.37	37.89	11.09
40%	8.49	19.46	44.93	16.00
45%	9.89	29.06	52.58	22.23
50%	9.89	41.67	60.97	30.03
55%	10.30	57.86	70.23	39.72
60%	13.00	78.27	80.59	51.73
65%	17.30	103.67	92.34	66.68
70%	17.30	134.99	105.90	85.45
75%	29.00	173.42	121.93	109.46
80%	141.43	220.56	141.56	141.05
85%	141.43	278.76	166.86	184.71
90%	420.00	351.96	202.52	250.63
95%	560.00	448.49	263.49	371.88
Information Criteria				
Akaike (AIC)		149.09	155.68	144.87
Bayesian (BIC)		148.61	155.99	145.05
Chi-Squared Test - [* Values unavailable without running a bootstrap]				
Chi-Sq Statistic		3.57	13.86	1.00
P-Value*		N/A	N/A	N/A
Cr. Value @ 0.750*		N/A	N/A	N/A
Cr. Value @ 0.500*		N/A	N/A	N/A
Cr. Value @ 0.250*		N/A	N/A	N/A
Cr. Value @ 0.150*		N/A	N/A	N/A
Cr. Value @ 0.100*		N/A	N/A	N/A
Cr. Value @ 0.050*		N/A	N/A	N/A
Cr. Value @ 0.025*		N/A	N/A	N/A
Cr. Value @ 0.010*		N/A	N/A	N/A
Cr. Value @ 0.005*		N/A	N/A	N/A
Cr. Value @ 0.001*		N/A	N/A	N/A
Chi-Sq Test (Binning Information)				
Bin #1 : Minimum		-	-	-
Bin #1 : Maximum		10.49	35.66	9.72
Bin #1 : Input		8.00	11.00	6.00
Bin #1 : Fit		4.67	4.67	4.67
Bin #2 : Minimum		10.49	35.66	9.72
Bin #2 : Maximum		113.40	96.63	72.46
Bin #2 : Input		3.00	-	5.00
Bin #2 : Fit		4.67	4.67	4.67
Bin #3 : Minimum		113.40	96.63	72.46
Bin #3 : Maximum		615.89	+Infinity	+Infinity
Bin #3 : Input		3.00	3.00	3.00
Bin #3 : Fit		4.67	4.67	4.67
Anderson-Darling Test - [* Values unavailable without running a bootstrap]				
A-D Statistic		1.68	7.67	1.36
P-Value*		N/A	N/A	N/A
Cr. Value @ 0.750*		N/A	N/A	N/A
Cr. Value @ 0.500*		N/A	N/A	N/A

	Cr. Value @ 0.250*		N/A	N/A	N/A
	Cr. Value @ 0.150*		N/A	N/A	N/A
	Cr. Value @ 0.100*		N/A	N/A	N/A
	Cr. Value @ 0.050*		N/A	N/A	N/A
	Cr. Value @ 0.025*		N/A	N/A	N/A
	Cr. Value @ 0.010*		N/A	N/A	N/A
	Cr. Value @ 0.005*		N/A	N/A	N/A
	Cr. Value @ 0.001*		N/A	N/A	N/A
Kolmogorov-Smirnov Test - [* Values unavailable without running a bootstrap]					
	K-S Statistic		0.34	0.54	0.30
	P-Value*		N/A	N/A	N/A
	Cr. Value @ 0.750*		N/A	N/A	N/A
	Cr. Value @ 0.500*		N/A	N/A	N/A
	Cr. Value @ 0.250*		N/A	N/A	N/A
	Cr. Value @ 0.150*		N/A	N/A	N/A
	Cr. Value @ 0.100*		N/A	N/A	N/A
	Cr. Value @ 0.050*		N/A	N/A	N/A
	Cr. Value @ 0.025*		N/A	N/A	N/A
	Cr. Value @ 0.010*		N/A	N/A	N/A
	Cr. Value @ 0.005*		N/A	N/A	N/A
	Cr. Value @ 0.001*		N/A	N/A	N/A

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InvGauss	LogLogistic	Lognorm	Pearson6	Triang	Uniform
gauss(87.955,4.1841)	tic(0,13.289,0.96065)	norm(88.342,500.32)	.586,0.71242,4.1893)	ang(0,0.5219,609.52)	iskUniform(0,603.08)
MLE	MLE	MLE	MLE (Modified)	MLE	MLE (Bias Corrected)
#4	#3	#2	#5	#9	#10
#4	#3	#2	#5	#9	#10
#2 (Tie)	#2 (Tie)	#6 (Tie)	#2 (Tie)	#8	#10
#5	#1	#3	#2	#9	#10
#5	#2	#3	#1	#9	#10
2.00	2.00	2.00	3.00	2.00	1.00
mu	beta	mu	alpha1	M. likely	Max
87.96	13.29	88.34	1.59	0.52	603.08
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
lambda	alpha	sigma	alpha2	Max	
4.18	0.96	500.32	0.71	609.52	
N/A	N/A	N/A	N/A	N/A	
N/A	N/A	N/A	N/A	N/A	
N/A	N/A	N/A	N/A	N/A	
			beta		
			4.19		
			N/A		
			N/A		
			N/A		
-	-	-	-	-	-
+Infinity	+Infinity	+Infinity	+Infinity	609.52	603.08
87.96	+Infinity	88.34	+Infinity	203.35	301.54
1.39	-	0.46	1.43	0.52	-
8.28	13.29	15.36	12.59	178.71	301.54
403.27	+Infinity	500.32	+Infinity	143.60	174.09
13.75	+Infinity	198.64	+Infinity	0.57	-
318.32	+Infinity	1,272,345.32	+Infinity	2.40	1.80
1.07	0.62	0.71	1.01	15.69	30.15
1.50	1.35	1.40	1.77	31.53	60.31
1.95	2.18	2.21	2.56	47.81	90.46
2.44	3.14	3.18	3.42	64.58	120.62
3.01	4.23	4.35	4.40	81.89	150.77
3.68	5.50	5.76	5.51	99.78	180.92

4.48	6.98	7.47	6.82	118.32	211.08
5.47	8.71	9.56	8.37	137.59	241.23
6.70	10.78	12.14	10.26	157.68	271.38
8.28	13.29	15.36	12.59	178.71	301.54
10.36	16.38	19.43	15.55	200.82	331.69
13.16	20.27	24.67	19.41	224.19	361.85
17.09	25.31	31.58	24.62	249.08	392.00
22.84	32.10	40.97	31.97	275.82	422.15
31.77	41.70	54.24	42.97	304.89	452.31
46.76	56.26	74.15	60.89	337.05	482.46
75.01	80.85	106.75	94.01	373.56	512.62
139.10	130.86	168.84	170.43	416.86	542.77
349.82	284.85	333.13	460.21	473.29	572.92

139.52	138.90	138.85	141.43	173.46	181.59
139.71	139.09	139.03	140.95	173.65	181.90

1.86	1.86	3.57	1.86	13.00	17.71
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A

-	-	-	-	-	-
4.20	6.46	6.86	6.36	112.06	201.03
3.00	3.00	3.00	3.00	11.00	12.00
4.67	4.67	4.67	4.67	4.67	4.67
4.20	6.46	6.86	6.36	112.06	201.03
18.75	27.34	34.38	26.78	257.76	402.05
7.00	7.00	8.00	7.00	1.00	-
4.67	4.67	4.67	4.67	4.67	4.67
18.75	27.34	34.38	26.78	257.76	402.05
+Infinity	+Infinity	+Infinity	+Infinity	609.52	603.08
4.00	4.00	3.00	4.00	2.00	2.00
4.67	4.67	4.67	4.67	4.67	4.67

0.80	0.51	0.57	0.40	17.57	23.95
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A

N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A

0.27	0.16	0.19	0.17	0.69	0.74
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A

Levy
RiskLevy(0,3.9941)
MLE
#1
#1
#2 (Tie)
#4
#4
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N/A
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N/A
-
+Infinity
+Infinity
1.33
8.78
+Infinity
+Infinity
+Infinity
1.04
1.48
1.93
2.43
3.02
3.72

4.57
5.64
7.00
8.78
11.18
14.52
19.40
26.90
39.34
62.23
111.67
252.94
1,015.75

137.41
137.72

1.86
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4.27
21.53
7.00
4.67
21.53
+Infinity
4.00
4.67

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Table D1-7a. Silver saltwater acute toxicity data used to develop a species sensitivity distribution for

Species	Lifestage	Method	Chemical	Salinity (ppt)	EC50 (µg/L)
Acartia tonsa (copepod)	Adult	S,M	Silver nitrate	30	37.8
Acartia tonsa (copepod)	Adult	R,M	Silver nitrate	30	154.6
Acartia tonsa (copepod)	Adult	R,M	Silver nitrate	15	79.2
Acartia tonsa (copepod)	Adult	R,M	Silver nitrate	5	7.1
Americamysis bahia (mysid)	Juvenile	F,M	Silver nitrate	30	249
Americamysis bahia (mysid)	Juvenile	F,M	Silver nitrate	28	256
Americamysis bahia (mysid)	Juvenile	F,M	Silver nitrate	28	300
Americamysis bahia (mysid)	Juvenile	F,M	Silver nitrate	28	86
Americamysis bahia (mysid)	Juvenile	F,M	Silver nitrate	28	313
Americamysis bahia (mysid)	Juvenile	F,M	Silver nitrate	28	65
Americamysis bahia (mysid)	Juvenile	F,M	Silver nitrate	28	132
Americamysis bahia (mysid)	Juvenile	F,M	Silver nitrate	20	280
Americamysis bahia (mysid)	Juvenile	F,M	Silver nitrate	20	260
Americamysis bahia (mysid)	Juvenile	F,M	Silver nitrate	20	260
Arbacia punctulata (sea urchin)	Embryo, larva	S,M	Silver nitrate	30	36.0
Cancer magister (Dungeness crab)	Zoea	S,M	Silver nitrate	30	33.1
Crangon spp. (sand shrimp)	Adult	F,M	Silver nitrate	30.1	>838
Crassostrea gigas (Pacific oyster)	Embryo, larva	S,M	Silver nitrate	30	19.0
Cymatogaster aggregata (shiner perch)	Adult	F,M	Silver nitrate	29.3	355.6
Cyprinodon variegatus (sheepshead minnow)	Juvenile	S,M	Silver nitrate	30	1376
Cyprinodon variegatus (sheepshead minnow)	Juvenile	F,M	Silver nitrate	28	441
Cyprinodon variegatus (sheepshead minnow)	Juvenile	F,M	Silver nitrate	28	898
Cyprinodon variegatus (sheepshead minnow)	Juvenile	F,M	Silver nitrate	28	1356
Cyprinodon variegatus (sheepshead minnow)	Juvenile	F,M	Silver nitrate	28	1510
Cyprinodon variegatus (sheepshead minnow)	Juvenile	F,M	Silver nitrate	28	1876
Diadema antillarum (long-spined sea urchin)	Embryo, larva	S,M	Silver nitrate	33	6.0
Diadema antillarum (long-spined sea urchin)	Embryo, larva	S,M	Silver nitrate	33	20.0
Hediste diversicolor (polychaete)	Adult	R,M	Silver nitrate	16	647
Loligo opalescens (squid)	Larva	S,M	Silver nitrate	30	>100
Menidia beryllina (inland silverside)	embryo	F,M	Silver nitrate	30	>570
Menidia beryllina (inland silverside)	embryo	F,M	Silver nitrate	20	130
Menidia beryllina (inland silverside)	embryo	F,M	Silver nitrate	10	>100
Menidia menidia (Atlantic silverside)	Larva	F,M	Silver nitrate	32	110.1
Neanthes areanaceodentata (polychaete)		F,M	Silver nitrate	30	151
Neanthes areanaceodentata (polychaete)		F,M	Silver nitrate	30	145
Neanthes areanaceodentata (polychaete)		F,M	Silver nitrate	30	260
Neanthes areanaceodentata (polychaete)		F,M	Silver nitrate	30	>357
Oligocottus maculosus (tidepool sculpin)	Juvenile, 1.33 g	R,M	Silver nitrate	25	331
Oligocottus maculosus (tidepool sculpin)	Juvenile, 1.33 g	R,M	Silver nitrate	32	664
Oncorhynchus kisutch (coho salmon)	Smolt	F,M	Silver nitrate	28.6	487.5
Oncorhynchus mykiss (rainbow trout)	25 g	S,M	Silver nitrate	25	401.5
Opsanus beta (Gulf toadfish)	Adult	R,M	Silver nitrate	33	>980
Paralichthys dentatus (summer flounder)	Embryo	F,M	Silver nitrate	30	47.7
Paralichthys dentatus (summer flounder)	Embryo	F,M	Silver nitrate	30	8
Paralichthys dentatus (summer flounder)	Embryo	F,M	Silver nitrate	30	15.5
Paraphrys vetulus (English sole)	Juvenile	F,M	Silver nitrate	29.5	800
Pseudopleuronectes americanus (winter flounder)	Embryo	F,M	Silver nitrate	30	196.3
Scorpaenichthys marmoratus (cabezon)	Larva	S,M	Silver nitrate	27	>800
Tigriopus brevicornis (copepod)	Adult	S,M	Silver nitrate	34.5	95

Table D1-7b. Summary of silver saltwater acute toxicity data used to develop a species sensitivity dis

Species	SMAV (µg/L)	Rank	Percentile
Diadema antillarum (long-spined sea urchin)	11.0	1	0.042
Paralichthys dentatus (summer flounder)	18.1	2	0.083
Crassostrea gigas (Pacific oyster)	19.0	3	0.125
Cancer magister (Dungeness crab)	33.1	4	0.167
Arbacia punctulata (sea urchin)	36.0	5	0.208
Acartia tonsa (copepod)	42.6	6	0.250

Tigriopus brevicornis (copepod)	95.0	7	0.292
Loligo opalescens (squid)	>100	8	0.333
Menidia menidia (Atlantic silverside)	110.1	9	0.375
Menidia beryllina (inland silverside)	>195	10	0.417
Americamysis bahia (mysid)	196	11	0.458
Pseudopleuronectes americanus (winter flounder)	196.3	12	0.500
Neanthes areanaceodentata (polychaete)	>212	13	0.542
Cymatogaster aggregata (shiner perch)	356	14	0.583
Oncorhynchus mykiss (rainbow trout)	401.5	15	0.625
Oligocottus maculosus (tidepool sculpin)	468.8	16	0.667
Oncorhynchus kisutch (coho salmon)	487.5	17	0.708
Hediste diversicolor (polychaete)	647	18	0.750
Paraphrys vetulus (English sole)	800.0	19	0.792
Scorpaenichthys marmoratus (cabezon)	>800	20	0.833
Crangon spp. (sand shrimp)	>838	21	0.875
Opsanus beta (Gulf toadfish)	>980	22	0.917
Cyprinodon variegatus (sheepshead minnow)	1131	23	0.958

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SMAV (µg/L)	Reference
42.6	Lussier and Cardin 1985
-	Pedroso et al. 2007
-	Pedroso et al. 2007
-	Pedroso et al. 2007
196	Lussier et al. 1985
-	Schimmel 1981
-	Schimmel 1981
-	Schimmel 1981
-	Schimmel 1981
-	Schimmel 1981
-	Schimmel 1981
-	Ward and Kramer 2002
-	Ward and Kramer 2002
-	Ward and Kramer 2002
36.0	Ward et al. 2006b (48 h test)
33.1	Dinnel et al. 1983, 1989
>838	Dinnel et al. 1983, 1989
19.0	Dinnel et al. 1983
356	Dinnel et al. 1983, 1989
1131	Cardin 1986
-	Schimmel 1981
-	Schimmel 1981
-	Schimmel 1981
-	Schimmel 1981
-	Schimmel 1981
11.0	Bielmyer et al. 2005
	Bielmyer et al. 2005 (& pers. comm.)
647	Mouneyrac et al. 2003
>100	Dinnel et al. 1983, 1989
>195	Ward et al., 2004c, 2006a
	Ward et al., 2004b, 2006a
	Ward et al., 2004a, 2006a
110.1	Cardin 1986
>212	Pesch and Hoffman 1983
-	Pesch and Hoffman 1983
-	Pesch and Hoffman 1983
-	Pesch and Hoffman 1983
468.8	Shaw et al. 1998
-	Shaw et al. 1998
487.5	Dinnel et al. 1983, 1989
401.5	Ferguson and Hogstrand 1998
>980	Wood et al. 2004
18.1	Cardin 1986
-	Cardin 1986
-	Cardin 1986
800.0	Dinnel et al. 1983
196.3	Cardin 1986
>800	Dinnel et al. 1983, 1989
95.0	Pavillon et al. 2002

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Table D1-8. Distribution fitting results for the silver saltwater acute species sensitivity distribu

	Input	BetaGeneral	Expon	Gamma
Fit				
Function	etaGeneral(0.48113,0.79683,0,1131)		RiskExpon(355.38)	nma(0.83451,425.86)
Method		MLE (Approximate)	MLE	MLE
Rankings By Fit Statistic [10 Valid Fits]				
Akaike (AIC)			#1	#2
Bayesian (BIC)			#1	#2
Chi-Sq Statistic		#6	#1 (Tie)	#1 (Tie)
K-S Statistic		#6	#5	#1
A-D Statistic			#5	#1
Parameters - [* Values unavailable without running a bootstrap]				
Num. Est. Parameters		3.00	1.00	2.00
Fitted Parameter #1		alpha1	beta	alpha
Fitted Value		0.48	355.38	0.83
95% Lower Limit*		N/A	N/A	N/A
95% Upper Limit*		N/A	N/A	N/A
Conf. Interval Width*		N/A	N/A	N/A
Fitted Parameter #2		alpha2		beta
Fitted Value		0.80		425.86
95% Lower Limit*		N/A		N/A
95% Upper Limit*		N/A		N/A
Conf. Interval Width*		N/A		N/A
Fitted Parameter #3		Max		
Fitted Value		1,131.01		
95% Lower Limit*		N/A		
95% Upper Limit*		N/A		
Conf. Interval Width*		N/A		
Distribution Statistics				
Minimum	10.95	-	-	-
Maximum	1,131.01	1,131.01	+Infinity	+Infinity
Mean	355.38	425.81	355.38	355.38
Mode	16.0131 [est]	-	-	-
Median	196.30	340.66	246.33	227.47
Std. Deviation	348.82	363.07	355.38	389.03
Skewness	0.88	0.47	2.00	2.19
Kurtosis	2.53	1.85	9.00	10.19
Percentiles				
5%	18.08	2.98	18.23	11.09
10%	19.00	12.56	37.44	25.92
15%	33.10	29.11	57.76	43.06
20%	36.00	52.78	79.30	62.25
25%	42.58	83.59	102.24	83.51
30%	95.00	121.51	126.76	106.92

35%	110.10	166.41	153.09	132.69
40%	194.96	218.10	181.54	161.09
45%	195.98	276.29	212.46	192.52
50%	196.30	340.66	246.33	227.47
55%	212.32	410.75	283.78	266.63
60%	355.60	486.03	325.63	310.95
65%	401.50	565.84	373.09	361.77
70%	487.50	649.36	427.87	421.05
75%	647.00	735.59	492.67	491.87
80%	800.00	823.24	571.97	579.37
85%	800.00	910.61	674.20	693.26
90%	838.00	995.22	818.30	855.36
95%	980.00	1,072.89	1,064.63	1,135.49
Information Criteria				
Akaike (AIC)		---	318.36	320.24
Bayesian (BIC)		---	319.30	321.91
Chi-Squared Test - [* Values unavailable without running a bootstrap]				
Chi-Sq Statistic		2.87	1.57	1.57
P-Value*		N/A	N/A	N/A
Cr. Value @ 0.750*		N/A	N/A	N/A
Cr. Value @ 0.500*		N/A	N/A	N/A
Cr. Value @ 0.250*		N/A	N/A	N/A
Cr. Value @ 0.150*		N/A	N/A	N/A
Cr. Value @ 0.100*		N/A	N/A	N/A
Cr. Value @ 0.050*		N/A	N/A	N/A
Cr. Value @ 0.025*		N/A	N/A	N/A
Cr. Value @ 0.010*		N/A	N/A	N/A
Cr. Value @ 0.005*		N/A	N/A	N/A
Cr. Value @ 0.001*		N/A	N/A	N/A
Chi-Sq Test (Binning Information)				
Bin #1 : Minimum		-	-	-
Bin #1 : Maximum		52.78	79.30	62.25
Bin #1 : Input		6.00	6.00	6.00
Bin #1 : Fit		4.60	4.60	4.60
Bin #2 : Minimum		52.78	79.30	62.25
Bin #2 : Maximum		218.10	181.54	161.09
Bin #2 : Input		7.00	3.00	3.00
Bin #2 : Fit		4.60	4.60	4.60
Bin #3 : Minimum		218.10	181.54	161.09
Bin #3 : Maximum		486.03	325.63	310.95
Bin #3 : Input		3.00	4.00	4.00
Bin #3 : Fit		4.60	4.60	4.60
Bin #4 : Minimum		486.03	325.63	310.95
Bin #4 : Maximum		823.24	571.97	579.37
Bin #4 : Input		4.00	4.00	4.00
Bin #4 : Fit		4.60	4.60	4.60
Bin #5 : Minimum		823.24	571.97	579.37

Bin #5 : Maximum		1,131.01	+Infinity	+Infinity
Bin #5 : Input		3.00	6.00	6.00
Bin #5 : Fit		4.60	4.60	4.60
Anderson-Darling Test - [* Values unavailable without running a bootstrap]				
A-D Statistic		---	0.70	0.40
P-Value*		N/A	N/A	N/A
Cr. Value @ 0.750*		N/A	N/A	N/A
Cr. Value @ 0.500*		N/A	N/A	N/A
Cr. Value @ 0.250*		N/A	N/A	N/A
Cr. Value @ 0.150*		N/A	N/A	N/A
Cr. Value @ 0.100*		N/A	N/A	N/A
Cr. Value @ 0.050*		N/A	N/A	N/A
Cr. Value @ 0.025*		N/A	N/A	N/A
Cr. Value @ 0.010*		N/A	N/A	N/A
Cr. Value @ 0.005*		N/A	N/A	N/A
Cr. Value @ 0.001*		N/A	N/A	N/A
Kolmogorov-Smirnov Test - [* Values unavailable without running a bootstrap]				
K-S Statistic		0.17	0.15	0.11
P-Value*		N/A	N/A	N/A
Cr. Value @ 0.750*		N/A	N/A	N/A
Cr. Value @ 0.500*		N/A	N/A	N/A
Cr. Value @ 0.250*		N/A	N/A	N/A
Cr. Value @ 0.150*		N/A	N/A	N/A
Cr. Value @ 0.100*		N/A	N/A	N/A
Cr. Value @ 0.050*		N/A	N/A	N/A
Cr. Value @ 0.025*		N/A	N/A	N/A
Cr. Value @ 0.010*		N/A	N/A	N/A
Cr. Value @ 0.005*		N/A	N/A	N/A
Cr. Value @ 0.001*		N/A	N/A	N/A

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InvGauss	LogLogistic	Lognorm	Triang	Uniform	Weibull
gauss(355.38,81.489)	stic(0,193.21,1.2026)	norm(460.49,1119.3)	ang(0,10.954,1248.8)	iskUniform(0,1182.4)	ibull(0.89893,338.39)
MLE	MLE	MLE	MLE	MLE (Bias Corrected)	MLE
#7	#6	#5	#4	#9	#3
#7	#6	#5	#4	#9	#3
#8	#1 (Tie)	#1 (Tie)	#7	#10	#1 (Tie)
#8	#3	#4	#9	#10	#2
#7	#3	#4	#8	#9	#2
2.00	2.00	2.00	2.00	1.00	2.00
mu	beta	mu	M. likely	Max	alpha
355.38	193.21	460.49	10.95	1,182.42	0.90
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
lambda	alpha	sigma	Max		beta
81.49	1.20	1,119.30	1,248.78		338.39
N/A	N/A	N/A	N/A		N/A
N/A	N/A	N/A	N/A		N/A
N/A	N/A	N/A	N/A		N/A
-	-	-	-	-	-
+Infinity	+Infinity	+Infinity	1,248.78	1,182.42	+Infinity
355.38	999.90	460.49	419.91	591.21	356.28
27.01	26.56	25.36	10.95	-	-
117.32	193.21	175.20	369.64	591.21	225.08
742.16	+Infinity	1,119.34	293.06	341.34	397.04
6.27	+Infinity	21.65	0.57	-	2.35
68.42	+Infinity	3,077.60	2.40	1.80	11.56
19.31	16.70	17.80	36.97	59.12	12.43
26.59	31.08	29.50	69.29	118.24	27.68
33.74	45.67	41.47	102.52	177.36	44.83
41.35	61.01	54.37	136.75	236.48	63.79
49.77	77.50	68.59	172.06	295.61	84.62
59.32	95.51	84.51	208.57	354.73	107.49

70.34	115.47	102.54	246.41	413.85	132.60
83.26	137.91	123.19	285.73	472.97	160.28
98.66	163.52	147.12	326.73	532.09	190.93
117.32	193.21	175.20	369.64	591.21	225.08
140.34	228.30	208.64	414.75	650.33	263.46
169.31	270.69	249.17	462.45	709.45	307.03
206.68	323.30	299.35	513.24	768.57	357.19
256.35	390.87	363.20	567.80	827.70	416.00
324.92	481.72	447.47	627.13	886.82	486.65
424.63	611.92	564.52	692.76	945.94	574.55
580.88	817.48	740.12	767.25	1,005.06	689.88
857.74	1,201.03	1,040.63	855.62	1,064.18	855.77
1,489.79	2,235.65	1,724.43	970.77	1,123.30	1,146.81

325.11	324.36	322.66	321.40	327.66	320.35
326.78	326.03	324.33	323.07	328.60	322.02

6.35	1.57	1.57	6.35	19.39	1.57
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A

-	-	-	-	-	-
41.35	61.01	54.37	136.75	236.48	63.79
5.00	6.00	6.00	9.00	13.00	6.00
4.60	4.60	4.60	4.60	4.60	4.60
41.35	61.01	54.37	136.75	236.48	63.79
83.26	137.91	123.19	285.73	472.97	160.28
1.00	3.00	3.00	4.00	3.00	3.00
4.60	4.60	4.60	4.60	4.60	4.60
83.26	137.91	123.19	285.73	472.97	160.28
169.31	270.69	249.17	462.45	709.45	307.03
3.00	4.00	4.00	2.00	2.00	4.00
4.60	4.60	4.60	4.60	4.60	4.60
169.31	270.69	249.17	462.45	709.45	307.03
424.63	611.92	564.52	692.76	945.94	574.55
6.00	4.00	4.00	3.00	3.00	4.00
4.60	4.60	4.60	4.60	4.60	4.60
424.63	611.92	564.52	692.76	945.94	574.55

+Infinity	+Infinity	+Infinity	1,248.78	1,182.42	+Infinity
8.00	6.00	6.00	5.00	2.00	6.00
4.60	4.60	4.60	4.60	4.60	4.60

1.53	0.55	0.59	2.56	7.22	0.43
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A

0.24	0.12	0.14	0.26	0.39	0.12
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A

Levy
RiskLevy(0,66.289)
MLE
#8
#8
#9
#7
#6
1.00
c
66.29
N/A
N/A
N/A
-
+Infinity
+Infinity
22.10
145.71
+Infinity
+Infinity
+Infinity
17.26
24.50
31.99
40.36
50.09
61.71

75.89
93.59
116.16
145.71
185.52
241.05
321.95
446.48
652.89
1,032.78
1,853.42
4,197.96
16,858.25

327.45
328.39

11.13
N/A
N/A
N/A
N/A
N/A
N/A
N/A
N/A
N/A
N/A
N/A

-
40.36
5.00
4.60
40.36
93.59
1.00
4.60
93.59
241.05
7.00
4.60
241.05
1,032.78
9.00
4.60
1,032.78

+Infinity
1.00
4.60

0.95
N/A
N/A
N/A
N/A
N/A
N/A
N/A
N/A
N/A
N/A
N/A

0.19
N/A
N/A
N/A
N/A
N/A
N/A
N/A
N/A
N/A
N/A
N/A

Table D1-9a. Cyanide freshwater acute toxicity data used to develop a species sensitivity distribution for fish, b

Species	Age/Size	Cyanide Form	Exposure Duration	Acute or Chronic	Analytical Method	pH
Asellus communis (isopod)	NR	NaCN	96-hr	Acute	See ECOTO	8
Asellus intermedius (isopod)	0.012 g	NaCN	96-hr	Acute	U	6.5-8.5
Carassius auratus (goldfish)	Juvenile	NaCN	96-hr	Acute	See ECOTO	7.74
Corixa sp. (water boatman)	NR	NaCN	96-hr	Acute	U	7
Corixa sp. (water boatman)	NR	NaCN	96-hr	Acute	U	7
Corixa sp. (water boatman)	NR	NaCN	96-hr	Acute	U	7
Cyclops viridis (copepod)	NR	NaCN	96-hr	Acute	U	7
Cyclops viridis (copepod)	NR	NaCN	96-hr	Acute	U	7
Cyclops viridis (copepod)	NR	NaCN	96-hr	Acute	U	7
Cyprinus carpio (carp)	NR	NaCN	96-hr	Acute	-	7.2
Daphnia magna (cladoceran)	NR	NaCN	48-hr	Acute	U	-
Daphnia magna (cladoceran)	NR	KCN	96-hr	Acute	U	-
Daphnia magna (cladoceran)	1st & 2nd instar	NaCN	96-hr	Acute	U	6.5-8.5
Daphnia pulex (cladoceran)	NR	KCN	48-hr	Acute	M	8.5
Daphnia pulex (cladoceran)	>=6-d	KCN	48-hr	Acute	U	8.25-9.25
Daphnia spp. (cladoceran)	NR	NaCN	96-hr	Acute	U	7
Daphnia spp. (cladoceran)	NR	NaCN	96-hr	Acute	U	7
Daphnia spp. (cladoceran)	NR	NaCN	96-hr	Acute	U	7
Diaptomus sp. (copepod)	NR	NaCN	96-hr	Acute	U	7
Diaptomus sp. (copepod)	NR	NaCN	96-hr	Acute	U	7
Diaptomus sp. (copepod)	NR	NaCN	96-hr	Acute	U	7
Dugesia tigrina (planarian)	0.006 g	NaCN	96-hr	Acute	U	6.5-8.5
Dytiscus sp. (aquatic beetle)	NR	NaCN	96-hr	Acute	U	7
Dytiscus sp. (aquatic beetle)	NR	NaCN	96-hr	Acute	U	7
Dytiscus sp. (aquatic beetle)	NR	NaCN	96-hr	Acute	U	7
Gammarus fasciatus (amphipod)	0.007 g	NaCN	96-hr	Acute	U	6.5-8.5
Gammarus pseudolimnaeus (amphipod)	NR	NaCN	96-hr	Acute	See ECOTO	8
Helisoma trivolvis (snail)	0.180 g	NaCN	96-hr	Acute	U	6.5-8.5
Lepomis macrochirus (bluegill sunfish)	Juvenile	KCN	96-hr	Acute	U	-
Lepomis macrochirus (bluegill sunfish)	3.88 cm, 0.96 g	KCN	96-hr	Acute	U	-
Lepomis macrochirus (bluegill sunfish)	6.09 cm, 2.80 g	KCN	96-hr	Acute	U	-
Lepomis macrochirus (bluegill sunfish)	14.24 cm, 54.26 g	KCN	96-hr	Acute	U	-
Lepomis macrochirus (bluegill sunfish)	Juvenile	KCN	96-hr	Acute	See ECOTO	-
Lepomis macrochirus (bluegill sunfish)	Juvenile	NaCN	96-hr	Acute	M	-
Lepomis macrochirus (bluegill sunfish)	Fry	NaCN	96-hr	Acute	See ECOTO	-
Lepomis macrochirus (bluegill sunfish)	Fry	NaCN	96-hr	Acute	See ECOTO	-
Lepomis macrochirus (bluegill sunfish)	Fry	NaCN	96-hr	Acute	See ECOTO	-
Lepomis macrochirus (bluegill sunfish)	Fry	NaCN	96-hr	Acute	See ECOTO	-
Lepomis macrochirus (bluegill sunfish)	Juvenile	NaCN	96-hr	Acute	See ECOTO	-
Lepomis macrochirus (bluegill sunfish)	Juvenile	NaCN	96-hr	Acute	See ECOTO	-
Lepomis macrochirus (bluegill sunfish)	Juvenile	NaCN	96-hr	Acute	See ECOTO	-
Lepomis macrochirus (bluegill sunfish)	Juvenile	NaCN	96-hr	Acute	See ECOTO	-
Lepomis macrochirus (bluegill sunfish)	Juvenile	NaCN	96-hr	Acute	See ECOTO	-
Lepomis macrochirus (bluegill sunfish)	Juvenile	NaCN	96-hr	Acute	See ECOTO	-
Lepomis macrochirus (bluegill sunfish)	Juvenile	NaCN	96-hr	Acute	See ECOTO	-
Lepomis macrochirus (bluegill sunfish)	Juvenile	NaCN	96-hr	Acute	See ECOTO	-
Lepomis macrochirus (bluegill sunfish)	Juvenile	NaCN	96-hr	Acute	See ECOTO	-
Lumbriculus variegatus (oligochaete)	0.006 g	NaCN	96-hr	Acute	U	6.5-8.5
Lymnaea luteola (snail)	NR	NaCN	96-hr	Acute	U	7
Lymnaea luteola (snail)	NR	NaCN	96-hr	Acute	U	7
Lymnaea luteola (snail)	NR	NaCN	96-hr	Acute	U	7
Micropterus salmoides (largemouth bass)	Juvenile	NaCN	96-hr	Acute	See ECOTO	-
Nepa sp. (water scorpion)	NR	NaCN	96-hr	Acute	U	7
Nepa sp. (water scorpion)	NR	NaCN	96-hr	Acute	U	7
Nepa sp. (water scorpion)	NR	NaCN	96-hr	Acute	U	7
Oncorhynchus mykiss (rainbow trout)	Fry	NaCN	96-hr	Acute	U	7.5

Oncorhynchus mykiss (rainbow trout)	Juvenile	NR	96-hr	Acute	See ECOTO	8.06
Oncorhynchus mykiss (rainbow trout)	Juvenile	NR	96-hr	Acute	See ECOTO	8.1
Oncorhynchus mykiss (rainbow trout)	Juvenile	NR	96-hr	Acute	See ECOTO	7.82
Oncorhynchus mykiss (rainbow trout)	Juvenile	NaCN	96-hr	Acute	U	8
Oncorhynchus mykiss (rainbow trout)	Juvenile	NaCN	96-hr	Acute	U	8
Oncorhynchus mykiss (rainbow trout)	Juvenile	NaCN	96-hr	Acute	U	8
Oncorhynchus mykiss (rainbow trout)	Juvenile	NaCN	96-hr	Acute	U	8
Oncorhynchus mykiss (rainbow trout)	Juvenile	NaCN	96-hr	Acute	U	8
Oncorhynchus mykiss (rainbow trout)	Fingerling	KCN	96-hr	Acute	See ECOTO	7.34
Oncorhynchus mykiss (rainbow trout)	Fingerling	KCN	96-hr	Acute	See ECOTO	7.34
Oncorhynchus mykiss (rainbow trout)	Fingerling	KCN	96-hr	Acute	See ECOTO	7.34
Oncorhynchus mykiss (rainbow trout)	Juvenile	KCN	96-hr	Acute	U	-
Oncorhynchus mykiss (rainbow trout)	Juvenile	NaCN	96-hr	Acute	See ECOTO	-
Perca flavescens (yellow perch)	Embryo	NaCN	96-hr	Acute	See ECOTO	-
Perca flavescens (yellow perch)	Fry	NaCN	96-hr	Acute	See ECOTO	-
Perca flavescens (yellow perch)	Fry	NaCN	96-hr	Acute	See ECOTO	-
Perca flavescens (yellow perch)	Juvenile	NaCN	96-hr	Acute	See ECOTO	-
Perca flavescens (yellow perch)	Juvenile	NaCN	96-hr	Acute	See ECOTO	-
Perca flavescens (yellow perch)	Juvenile	NaCN	96-hr	Acute	See ECOTO	-
Perca flavescens (yellow perch)	Juvenile	NaCN	96-hr	Acute	See ECOTO	-
Perca flavescens (yellow perch)	Juvenile	NaCN	96-hr	Acute	See ECOTO	-
Perca flavescens (yellow perch)	Juvenile	NaCN	96-hr	Acute	See ECOTO	-
Physa heterostropha (snail)	NR	KCN	96-hr	Acute	U	-
Pila globosa (snail)	NR	NaCN	96-hr	Acute	U	7
Pila globosa (snail)	NR	NaCN	96-hr	Acute	U	7
Pila globosa (snail)	NR	NaCN	96-hr	Acute	U	7
Pimephales promelas (fathead minnow)	Juvenile	NaCN	96-hr	Acute	See ECOTO	6.83
Pimephales promelas (fathead minnow)	Juvenile	NaCN	96-hr	Acute	See ECOTO	7.559
Pimephales promelas (fathead minnow)	Juvenile	NaCN	96-hr	Acute	See ECOTO	8.286
Pimephales promelas (fathead minnow)	Juvenile	NaCN	96-hr	Acute	See ECOTO	8.672
Pimephales promelas (fathead minnow)	Juvenile	NaCN	96-hr	Acute	See ECOTO	6.5-7.5
Pimephales promelas (fathead minnow)	0.2-0.5 g	NaCN	96-hr	Acute	U	6.5-8.5
Pimephales promelas (fathead minnow)	Juvenile	NaCN	96-hr	Acute	M	-
Pimephales promelas (fathead minnow)	Juvenile	NaCN	96-hr	Acute	M	-
Pimephales promelas (fathead minnow)	Fry	NaCN	96-hr	Acute	See ECOTO	-
Pimephales promelas (fathead minnow)	Fry	NaCN	96-hr	Acute	See ECOTO	-
Pimephales promelas (fathead minnow)	Fry	NaCN	96-hr	Acute	See ECOTO	-
Pimephales promelas (fathead minnow)	Fry	NaCN	96-hr	Acute	See ECOTO	-
Pimephales promelas (fathead minnow)	Fry	NaCN	96-hr	Acute	See ECOTO	-
Pimephales promelas (fathead minnow)	Juvenile	NaCN	96-hr	Acute	See ECOTO	-
Pimephales promelas (fathead minnow)	Juvenile	NaCN	96-hr	Acute	See ECOTO	-
Pimephales promelas (fathead minnow)	Juvenile	NaCN	96-hr	Acute	See ECOTO	-
Pimephales promelas (fathead minnow)	Juvenile	NaCN	96-hr	Acute	See ECOTO	-
Pimephales promelas (fathead minnow)	Juvenile	NaCN	96-hr	Acute	See ECOTO	-
Pimephales promelas (fathead minnow)	Juvenile	NaCN	96-hr	Acute	See ECOTO	-
Pimephales promelas (fathead minnow)	Juvenile	NaCN	96-hr	Acute	See ECOTO	-
Pimephales promelas (fathead minnow)	Juvenile	NaCN	96-hr	Acute	See ECOTO	-
Pimephales promelas (fathead minnow)	Juvenile	NaCN	96-hr	Acute	See ECOTO	-
Pimephales promelas (fathead minnow)	Juvenile	NaCN	96-hr	Acute	See ECOTO	-
Pimephales promelas (fathead minnow)	Juvenile	NaCN	96-hr	Acute	See ECOTO	-
Pimephales promelas (fathead minnow)	Juvenile	NaCN	96-hr	Acute	See ECOTO	-
Pimephales promelas (fathead minnow)	Juvenile	NaCN	96-hr	Acute	See ECOTO	-
Pimephales promelas (fathead minnow)	Juvenile	NaCN	96-hr	Acute	See ECOTO	-
Pimephales promelas (fathead minnow)	Juvenile	NaCN	96-hr	Acute	See ECOTO	-
Planorbis exustrus (snail)	NR	NaCN	96-hr	Acute	U	7
Planorbis exustrus (snail)	NR	NaCN	96-hr	Acute	U	7
Planorbis exustrus (snail)	NR	NaCN	96-hr	Acute	U	7
Poecilia reticulata (guppy)	Adult	KCN	96-hr	Acute	See ECOTO	7
Pomoxis nigromaculatus (black crappie)	NR	NaCN	96-hr	Acute	See ECOTO	-
Pteronarcys dorsata (stonefly)	22 mm, 0.39 g	NaCN	96-hr	Acute	-	7.3
Ranatra sp. (water scorpion)	NR	NaCN	96-hr	Acute	U	7
Ranatra sp. (water scorpion)	NR	NaCN	96-hr	Acute	U	7
Ranatra sp. (water scorpion)	NR	NaCN	96-hr	Acute	U	7

Salmo salar (Atlantic salmon)	Juvenile	KCN	96-hr	Acute	See ECOTO -	
Salvelinus fontinalis (brook trout)	Adult	NaCN	96-hr	Acute	See ECOTO	7.83
Salvelinus fontinalis (brook trout)	Sac fry	NaCN	96-hr	Acute	See ECOTO -	
Salvelinus fontinalis (brook trout)	Sac fry	NaCN	96-hr	Acute	See ECOTO -	
Salvelinus fontinalis (brook trout)	Sac fry	NaCN	96-hr	Acute	See ECOTO -	
Salvelinus fontinalis (brook trout)	Sac fry	NaCN	96-hr	Acute	See ECOTO -	
Salvelinus fontinalis (brook trout)	Swim-up fry	NaCN	96-hr	Acute	See ECOTO -	
Salvelinus fontinalis (brook trout)	Swim-up fry	NaCN	96-hr	Acute	See ECOTO -	
Salvelinus fontinalis (brook trout)	Swim-up fry	NaCN	96-hr	Acute	See ECOTO -	
Salvelinus fontinalis (brook trout)	Swim-up fry	NaCN	96-hr	Acute	See ECOTO -	
Salvelinus fontinalis (brook trout)	Swim-up fry	NaCN	96-hr	Acute	See ECOTO -	
Salvelinus fontinalis (brook trout)	Juvenile	NaCN	96-hr	Acute	See ECOTO -	
Salvelinus fontinalis (brook trout)	Juvenile	NaCN	96-hr	Acute	See ECOTO -	
Salvelinus fontinalis (brook trout)	Juvenile	NaCN	96-hr	Acute	See ECOTO -	
Salvelinus fontinalis (brook trout)	Juvenile	NaCN	96-hr	Acute	See ECOTO -	
Salvelinus fontinalis (brook trout)	Juvenile	NaCN	96-hr	Acute	See ECOTO -	
Salvelinus fontinalis (brook trout)	Juvenile	NaCN	96-hr	Acute	See ECOTO -	
Salvelinus fontinalis (brook trout)	Juvenile	NaCN	96-hr	Acute	See ECOTO -	
Salvelinus fontinalis (brook trout)	Juvenile	NaCN	96-hr	Acute	See ECOTO -	
Salvelinus fontinalis (brook trout)	Juvenile	NaCN	96-hr	Acute	See ECOTO -	
Salvelinus fontinalis (brook trout)	Juvenile	NaCN	96-hr	Acute	See ECOTO -	
Salvelinus fontinalis (brook trout)	Juvenile	NaCN	96-hr	Acute	See ECOTO -	
Salvelinus fontinalis (brook trout)	Juvenile	NaCN	96-hr	Acute	See ECOTO -	
Tanytarsus dissimilis (midge)	3rd or 4th instar	NaCN	48-hr	Acute	See ECOTO 7.6-9.2	
Villosa iris (rainbow mussel)	Juvenile	NaCN	96-hr	Acute	M	8.29
Viviparus bengalensis (snail)	NR	NaCN	96-hr	Acute	U	7
Viviparus bengalensis (snail)	NR	NaCN	96-hr	Acute	U	7
Viviparus bengalensis (snail)	NR	NaCN	96-hr	Acute	U	7

Table D1-9b. Summary of cyanide freshwater acute toxicity data used to develop a species sensitivity distribut

Species	SMAV(µg/L)	Rank	Percentile
Oncorhynchus mykiss (rainbow trout)	47	1	0.028
Salvelinus fontinalis (brook trout)	86	2	0.056
Salmo salar (Atlantic salmon)	90	3	0.083
Perca flavescens (yellow perch)	93	4	0.111
Daphnia pulex (cladoceran)	96	5	0.139
Lepomis macrochirus (bluegill sunfish)	99	6	0.167
Pomoxis nigromaculatus (black crappie)	102	7	0.194
Micropterus salmoides (largemouth bass)	102	8	0.222
Daphnia magna (cladoceran)	120	9	0.250
Pimephales promelas (fathead minnow)	125	10	0.278
Cyclops viridis (copepod)	130	11	0.306
Daphnia spp. (cladoceran)	132	12	0.333
Diaptomus sp. (copepod)	133	13	0.361
Poecilia reticulata (guppy)	147	14	0.389
Gammarus pseudolimnaeus (amphipod)	167	15	0.417
Ranatra sp. (water scorpion)	229	16	0.444
Corixa sp. (water boatman)	250	17	0.472
Dytiscus sp. (aquatic beetle)	251	18	0.500
Nepa sp. (water scorpion)	273	19	0.528
Carassius auratus (goldfish)	318	20	0.556
Pteronarcys dorsata (stonefly)	426	21	0.583
Physa heterostropha (snail)	432	22	0.611
Gammarus fasciatus (amphipod)	900	23	0.639
Cyprinus carpio (carp)	1000	24	0.667
Villosa iris (rainbow mussel)	1100	25	0.694
Planorbis exustrus (snail)	1287	26	0.722
Pila globosa (snail)	1292	27	0.750
Lymnaea luteola (snail)	1324	28	0.778
Viviparus bengalensis (snail)	1549	29	0.806

Asellus intermedius (isopod)	1700	30	0.833
Dugesia tigrina (planarian)	2100	31	0.861
Asellus communis (isopod)	2326	32	0.889
Tanytarsus dissimilis (midge)	2490	33	0.917
Lumbriculus variegatus (oligochaete)	11000	34	0.944
Helisoma trivolvis (snail)	>50,000	35	0.972

benthic invertebrates, and zooplankton

Temp. (°C)	Endpoint	Effect	As Test Compound Conc. (µg/L)	As CN- (ug/L)	SMAV (µg/L)
18	LC50	Mortality	-	2326	2326
20	LC50	Mortality	3,200	1,700	1700
25	LC50	Mortality	-	318	318
21.5	LC50	Mortality	-	247	250
26.5	LC50	Mortality	-	251	
31.4	LC50	Mortality	-	252	
31.4	LC50	Mortality	-	78	130
26.5	LC50	Mortality	-	167	
21.5	LC50	Mortality	-	169	
24	LC50	Mortality	-	1000	1000
-	LETC	Immobilization	3400	1800	120
21-25	LC50	Mortality	400	160	
20	LC50	Mortality	170	90	
20	LC50	Mortality	-	110	96
21	LC50	Mortality	-	83	
31.4	LC50	Mortality	-	80	132
26.5	LC50	Mortality	-	169	
21.5	LC50	Mortality	-	172	
31.4	LC50	Mortality	-	82	133
21.5	LC50	Mortality	-	166	
26.5	LC50	Mortality	-	172	
20	LC50	Mortality	4,000	2,100	2100
21.5	LC50	Mortality	-	246	251
26.5	LC50	Mortality	-	249	
31.4	LC50	Mortality	-	259	
20	LC50	Mortality	1,700	900	900
18	LC50	Mortality	-	167	167
20	LC50	Mortality	>100,000	>50,000	>50,000
18	LC50	Mortality	-	180	99
20	LC50	Mortality	-	220	
20	LC50	Mortality	-	180	
20	LC50	Mortality	-	230	
-	LC50	Mortality	-	160	
25	LC50	Mortality	-	150	
-	LC50	Mortality	-	364	
-	LC50	Mortality	-	232	
-	LC50	Mortality	-	279	
-	LC50	Mortality	-	273	
-	LC50	Mortality	-	81	
-	LC50	Mortality	-	85.7	
-	LC50	Mortality	-	74	
-	LC50	Mortality	-	100	
-	LC50	Mortality	-	107	
-	LC50	Mortality	-	99	
-	LC50	Mortality	-	113	
-	LC50	Mortality	-	121	
-	LC50	Mortality	-	126	
20	LC50	Mortality	21,000	11,000	11000
21.5	LC50	Mortality	-	1,316	1324
26.5	LC50	Mortality	-	1,342	
31.4	LC50	Mortality	-	1,315	
-	LC50	Mortality	-	102	102
31.4	LC50	Mortality	-	241	273
21.5	LC50	Mortality	-	289	
26.5	LC50	Mortality	-	293	
12	LC50	Mortality	-	90	47

	6	LC50	Mortality	-		27	
	12	LC50	Mortality	-		40	
	18	LC50	Mortality	-		65	
	12	LC50	Mortality	-		46.3	
	12	LC50	Mortality	-		52.1	
	12	LC50	Mortality	-		54.1	
	12	LC50	Mortality	-		62.1	
	12	LC50	Mortality	-		74.8	
	12	LC50	Mortality		55	53	
	12	LC50	Mortality		55	53	
	12	LC50	Mortality		43	42	
-		LC50	Mortality	-		97	
-		LC50	Mortality	-		57	
-		LC50	Mortality	-		281	93
-		LC50	Mortality	-		288	
-		LC50	Mortality	-		330	
-		LC50	Mortality	-		88.9	
-		LC50	Mortality	-		93	
-		LC50	Mortality	-		74.7	
-		LC50	Mortality	-		94.7	
-		LC50	Mortality	-		101	
-		LC50	Mortality	-		107	
	18	LC50	Mortality	-		432	432
	21.5	LC50	Mortality	-		1,571	1292
	26.5	LC50	Mortality	-		1,539	
	31.4	LC50	Mortality	-		891	
	20	LC50	Mortality	-		120	125
	20	LC50	Mortality	-		113	
	20	LC50	Mortality	-		128	
	20	LC50	Mortality	-		128	
	20	LC50	Mortality	-		230	
	20	LC50	Mortality		320	170	
	25	LC50	Mortality	-		350	
	25	LC50	Mortality	-		230	
-		LC50	Mortality	-		120	
-		LC50	Mortality	-		98.7	
-		LC50	Mortality	-		81.8	
-		LC50	Mortality	-		110	
-		LC50	Mortality	-		116	
-		LC50	Mortality	-		119	
-		LC50	Mortality	-		126	
-		LC50	Mortality	-		81.5	
-		LC50	Mortality	-		124	
-		LC50	Mortality	-		137	
-		LC50	Mortality	-		131	
-		LC50	Mortality	-		105	
-		LC50	Mortality	-		119	
-		LC50	Mortality	-		131	
-		LC50	Mortality	-		122	
-		LC50	Mortality	-		161	
-		LC50	Mortality	-		188	
-		LC50	Mortality	-		175	
-		LC50	Mortality	-		163	
-		LC50	Mortality	-		169	
	21.5	LC50	Mortality	-		1,581	1287
	26.5	LC50	Mortality	-		1,549	
	31.4	LC50	Mortality	-		870	
	25	LC50	Mortality	-		147	147
-		LC50	Mortality	-		102	102
-		EC50	Ability to detach from substrate	-		426	426
	31.4	LC50	Mortality	-		228	229
	21.5	LC50	Mortality	-		229	
	26.5	LC50	Mortality	-		231	

-	LC50	Mortality	-	90	90
15.4	LC50	Mortality	-	156	86
-	LC50	Mortality	-	105	
-	LC50	Mortality	-	342	
-	LC50	Mortality	-	507	
-	LC50	Mortality	-	252	
-	LC50	Mortality	-	84	
-	LC50	Mortality	-	54.4	
-	LC50	Mortality	-	86.5	
-	LC50	Mortality	-	104	
-	LC50	Mortality	-	90.3	
-	LC50	Mortality	-	73.5	
-	LC50	Mortality	-	83	
-	LC50	Mortality	-	75	
-	LC50	Mortality	-	86.4	
-	LC50	Mortality	-	91.9	
-	LC50	Mortality	-	99	
-	LC50	Mortality	-	96.7	
-	LC50	Mortality	-	112	
-	LC50	Mortality	-	52	
-	LC50	Mortality	-	60.2	
-	LC50	Mortality	-	66.8	
-	LC50	Mortality	-	71.4	
-	LC50	Mortality	-	97	
-	LC50	Mortality	-	143	
20	LC50	Mortality	-	2490	2490
20.4	LC50	Mortality	-	1,100	1100
21.5	LC50	Mortality	-	1,539	1549
26.5	LC50	Mortality	-	1,576	
31.4	LC50	Mortality	-	1,531	

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Marking et al. 1984
Marking et al. 1984
Marking et al. 1984
Marking et al. 1984
Marking et al. 1984
McGeachy and Leduc 1988
McGeachy and Leduc 1988
McGeachy and Leduc 1988
Skibba 1981
Smith et al. 1978
Smith et al. 1978
Smith et al. 1978
Smith et al. 1978
Smith et al. 1978
Smith et al. 1978
Smith et al. 1978
Smith et al. 1978
Smith et al. 1978
Smith et al. 1978
Cairns and Scheier 1958; Patrick et al. 1968
Sarkar 1990
Sarkar 1990
Sarkar 1990
Broderius et al. 1977
Broderius et al. 1977
Broderius et al. 1977
Broderius et al. 1977
Doudoroff 1956
Ewell et al. 1986
Henderson et al. 1961
Henderson et al. 1961
Smith et al. 1978
Smith et al. 1978
Smith et al. 1978
Smith et al. 1978
Smith et al. 1978
Smith et al. 1978
Smith et al. 1978
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Smith et al. 1978
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Smith et al. 1978
Smith et al. 1978
Smith et al. 1978
Smith et al. 1978
Smith et al. 1978
Sarkar 1990
Sarkar 1990
Sarkar 1990
Anderson and Weber 1975
Smith et al. 1979
Call and Brooke 1982
Sarkar 1990
Sarkar 1990
Sarkar 1990

Tryland and Grande 1983
Cardwell et al. 1976
Smith et al. 1978
Smith et al. 1978
Smith et al. 1978
Smith et al. 1978
Smith et al. 1978
Smith et al. 1978
Smith et al. 1978
Smith et al. 1978
Smith et al. 1978
Smith et al. 1978
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Smith et al. 1978
Smith et al. 1978
Smith et al. 1978
Smith et al. 1978
Smith et al. 1978
Smith et al. 1978
Smith et al. 1978
Smith et al. 1978
Smith et al. 1978
Smith et al. 1978
Call et al. 1983
Pandolfo et al. 2012
Sarkar 1990
Sarkar 1990
Sarkar 1990

Table D1-10. Distribution fitting results for the cyanide freshwater acute species sensitivity di

	Input	Levy	InvGauss	Pearson5
Fit				
Function	RiskLevy(30.6593,127.5435)		9.97,RiskShift(29.137))	048,RiskShift(24.355))
Method		MLE	MLE	MLE (Modified)
Rankings By Fit Statistic [13 Valid Fits]				
Akaike (AIC)		#1	#2	#3
Bayesian (BIC)		#1	#2	#3
Chi-Sq Statistic		#3	#2	#1
K-S Statistic		#3	#1	#4
A-D Statistic		#4	#1	#2
Parameters - [* Values unavailable without running a bootstrap]				
Num. Est. Parameters		2	3	3
Fitted Parameter #1		a	mu	alpha
Fitted Value		30.6593	2311.2977	0.67814
95% Lower Limit*		N/A	N/A	N/A
95% Upper Limit*		N/A	N/A	N/A
Conf. Interval Width*		N/A	N/A	N/A
Fitted Parameter #2		c	lambda	beta
Fitted Value		127.5435	139.9713	98.0484
95% Lower Limit*		N/A	N/A	N/A
95% Upper Limit*		N/A	N/A	N/A
Conf. Interval Width*		N/A	N/A	N/A
Fitted Parameter #3			Shift Factor	Shift Factor
Fitted Value			29.1368	24.355
95% Lower Limit*			N/A	N/A
95% Upper Limit*			N/A	N/A
Conf. Interval Width*			N/A	N/A
Distribution Statistics				
Minimum	46.5401	30.6593	29.1368	24.355
Maximum	50000	+Infinity	+Infinity	+Infinity
Mean	2340.4345	+Infinity	2340.4345	+Infinity
Mode	95.8250 [est]	73.1738	75.7749	82.782
Median	251.2724	311.0138	298.8945	277.6136
Std. Deviation	8505.3762	+Infinity	9392.1367	+Infinity
Skewness	5.5093	+Infinity	12.1907	+Infinity
Kurtosis	34.3552	+Infinity	250.6899	+Infinity
Percentiles				
5%	85.7972	63.8612	64.6391	66.3497
10%	92.6389	77.8009	79.0968	81.5281
15%	99.285	92.2076	93.8143	96.3858
20%	102	108.3173	110.0301	112.231
25%	119.9335	127.0419	128.5902	129.8402
30%	130.0866	149.3934	150.3807	149.9501

	35%	132.7853	176.6808	176.5009	173.4245
	40%	147	210.7225	208.4241	201.3849
	45%	229.3299	254.1642	248.2177	235.3746
	50%	251.2724	311.0138	298.8945	277.6136
	55%	318	387.6069	365.0097	331.4322
	60%	432	494.4607	453.7405	402.0588
	65%	900	650.1028	576.9573	498.156
	70%	1100	889.7008	755.4991	635.0695
	75%	1291.5092	1286.8612	1028.8381	842.4578
	80%	1324.2746	2017.7898	1479.7118	1184.8929
	85%	1700	3596.7353	2308.297	1829.8148
	90%	2326	8107.7481	4120.5384	3355.8202
	95%	11000	32466.8098	9724.2803	9387.6398
Information Criteria					
	Akaike (AIC)		545.3916	545.7684	546.1828
	Bayesian (BIC)		548.1273	549.6603	550.0746
Chi-Squared Test - [* Values unavailable without running a bootstrap]					
	Chi-Sq Statistic		15.2	14.4	8.8
	P-Value*		N/A	N/A	N/A
	Cr. Value @ 0.750*		N/A	N/A	N/A
	Cr. Value @ 0.500*		N/A	N/A	N/A
	Cr. Value @ 0.250*		N/A	N/A	N/A
	Cr. Value @ 0.150*		N/A	N/A	N/A
	Cr. Value @ 0.100*		N/A	N/A	N/A
	Cr. Value @ 0.050*		N/A	N/A	N/A
	Cr. Value @ 0.025*		N/A	N/A	N/A
	Cr. Value @ 0.010*		N/A	N/A	N/A
	Cr. Value @ 0.005*		N/A	N/A	N/A
	Cr. Value @ 0.001*		N/A	N/A	N/A
Chi-Sq Test (Binning Information)					
	Bin #1 : Minimum		30.6593	29.1368	24.355
	Bin #1 : Maximum		90.0673	91.6412	94.2236
	Bin #1 : Input		3	3	4
	Bin #1 : Fit		5	5	5
	Bin #2 : Minimum		90.0673	91.6412	94.2236
	Bin #2 : Maximum		142.5684	143.7666	143.9025
	Bin #2 : Input		10	10	9
	Bin #2 : Fit		5	5	5
	Bin #3 : Minimum		142.5684	143.7666	143.9025
	Bin #3 : Maximum		234.178	230.0335	219.9464
	Bin #3 : Input		3	3	2
	Bin #3 : Fit		5	5	5
	Bin #4 : Minimum		234.178	230.0335	219.9464
	Bin #4 : Maximum		428.8618	399.716	359.2407
	Bin #4 : Input		5	4	5
	Bin #4 : Fit		5	5	5
	Bin #5 : Minimum		428.8618	399.716	359.2407

Bin #5 : Maximum		982.2359	821.4495	685.2489
Bin #5 : Input		2	2	2
Bin #5 : Fit		5	5	5
Bin #6 : Minimum		982.2359	821.4495	685.2489
Bin #6 : Maximum		3966.6456	2482.3414	1968.9452
Bin #6 : Input		10	10	8
Bin #6 : Fit		5	5	5
Bin #7 : Minimum		3966.6456	2482.3414	1968.9452
Bin #7 : Maximum		+Infinity	+Infinity	+Infinity
Bin #7 : Input		2	3	5
Bin #7 : Fit		5	5	5
Anderson-Darling Test - [* Values unavailable without running a bootstrap]				
A-D Statistic		0.7193	0.5728	0.6149
P-Value*		N/A	N/A	N/A
Cr. Value @ 0.750*		N/A	N/A	N/A
Cr. Value @ 0.500*		N/A	N/A	N/A
Cr. Value @ 0.250*		N/A	N/A	N/A
Cr. Value @ 0.150*		N/A	N/A	N/A
Cr. Value @ 0.100*		N/A	N/A	N/A
Cr. Value @ 0.050*		N/A	N/A	N/A
Cr. Value @ 0.025*		N/A	N/A	N/A
Cr. Value @ 0.010*		N/A	N/A	N/A
Cr. Value @ 0.005*		N/A	N/A	N/A
Cr. Value @ 0.001*		N/A	N/A	N/A
Kolmogorov-Smirnov Test - [* Values unavailable without running a bootstrap]				
K-S Statistic		0.123	0.1111	0.1319
P-Value*		N/A	N/A	N/A
Cr. Value @ 0.750*		N/A	N/A	N/A
Cr. Value @ 0.500*		N/A	N/A	N/A
Cr. Value @ 0.250*		N/A	N/A	N/A
Cr. Value @ 0.150*		N/A	N/A	N/A
Cr. Value @ 0.100*		N/A	N/A	N/A
Cr. Value @ 0.050*		N/A	N/A	N/A
Cr. Value @ 0.025*		N/A	N/A	N/A
Cr. Value @ 0.010*		N/A	N/A	N/A
Cr. Value @ 0.005*		N/A	N/A	N/A
Cr. Value @ 0.001*		N/A	N/A	N/A

istribution of fish, benthic invertebrates, and zooplankton

Lognorm	Pareto	Expon	Laplace	ExtValue	Triang
70.2,RiskShift(44.226))	Pareto(0.46041,46.54)	(2293.9,RiskShift(-19))	(251.2724,3126.1717)	tvalue(631.19,1917.1)	ng(46.54,46.54,51193)
MLE (Modified)	MLE	MLE (Bias Corrected)	MLE	MLE	MLE
#4	#5	#6	#7	#8	#9
#4	#5	#6	#7	#8	#9
#5	#4	#8	#9	#7	#11
#2	#5	#9	#10	#7	#12
#3		#9	#5	#6	
3	2	2	2	2	3
mu	theta	beta	mu	a	Min
1711.6	0.46041	2293.8943	251.2724	631.1861	46.5401
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
sigma	a	Shift Factor	sigma	b	M. likely
9870.2	46.54	-18.9997	3126.1717	1917.1375	46.5401
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
Shift Factor					Max
44.2256					51193.5763
N/A					N/A
N/A					N/A
N/A					N/A
44.2256	46.5401	-18.9997	-Infinity	-Infinity	46.5401
+Infinity	+Infinity	+Infinity	+Infinity	+Infinity	51193.5763
1755.7952	+Infinity	2274.8946	251.2724	1737.7879	17095.5522
52.7625	46.5401	-18.9997	251.2724	631.1861	46.5401
336.6607	209.7318	1571.0067	251.2724	1333.8418	15027.1602
9870.2062	+Infinity	2293.8943	3126.1717	2458.8244	12055.472
209.0766	+Infinity	2	0	1.1395	0.5657
1460868.512	+Infinity	9	6	5.4	2.4
57.5043	52.025	98.6617	-4838.6776	-1472.2755	1341.612
70.5137	58.5077	222.6862	-3306.45	-967.7688	2671.2373
85.9006	66.2414	353.8016	-2410.1543	-596.4279	4038.3389
104.3321	75.5642	492.868	-1774.2224	-281.1509	5446.2764
126.5199	86.9349	640.9126	-1280.9553	4.9833	6898.9437
153.3455	100.9891	799.1749	-877.9267	275.3141	8400.8957

185.9518	118.6259	969.1708	-537.1709	537.9735	9957.5174
225.8585	141.1506	1152.7803	-241.9947	798.7853	11575.2524
275.1333	170.5138	1352.3752	18.369	1062.5625	13261.9191
336.6607	209.7318	1571.0067	251.2724	1333.8418	15027.1602
414.5827	263.6631	1812.6926	484.1757	1617.4329	16883.1014
515.056	340.5278	2082.8744	744.5395	1918.9791	18845.3503
647.6305	455.1044	2389.1813	1039.7156	2245.7054	20934.5816
827.9352	636.091	2742.7867	1380.4714	2607.6215	23179.1908
1083.4025	945.1501	3161.0131	1783.5	3019.7465	25620.0582
1467.004	1534.5786	3672.8808	2276.7671	3506.7774	28319.9264
2096.256	2866.5257	4332.7931	2912.699	4114.5499	31384.4144
3297.3498	6915.5337	5262.8872	3808.9947	4945.4498	35019.4633
6484.4943	31164.6503	6852.8936	5341.2224	6325.4589	39756.7513

547.7604	549.5322	618.0354	661.9647	665.8856	725.9925
551.6523	552.2679	620.7711	664.7004	668.6213	729.8844

21.6	18.2	55.2	74.8	35.2	172.2
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A

44.2256	46.5401	-18.9997	-Infinity	-Infinity	46.5401
83.5312	65.0483	334.6057	-2518.0068	-645.1095	3840.6222
1	0	20	0	0	32
5	5	5	5	5	5
83.5312	65.0483	334.6057	-2518.0068	-645.1095	3840.6222
145.147	96.6535	752.8321	-985.7791	199.1563	7966.4411
12	4	2	0	15	0
5	5	5	5	5	5
145.147	96.6535	752.8321	-985.7791	199.1563	7966.4411
252.7062	156.93	1264.6998	-89.4834	948.8615	12530.0512
5	9	3	0	8	1
5	5	5	5	5	5
252.7062	156.93	1264.6998	-89.4834	948.8615	12530.0512
454.4234	293.1383	1924.6121	592.0282	1744.0937	17709.9813
4	5	5	22	7	0
5	5	5	5	5	5
454.4234	293.1383	1924.6121	592.0282	1744.0937	17709.9813

891.6005	707.2002	2854.7062	1488.3239	2719.4083	23854.3355
0	3	3	6	3	0
5	5	5	5	5	5
891.6005	707.2002	2854.7062	1488.3239	2719.4083	23854.3355
2219.9528	3186.9772	4444.7126	3020.5515	4215.8973	31861.8137
9	11	0	5	0	0
5	5	5	5	5	5
2219.9528	3186.9772	4444.7126	3020.5515	4215.8973	31861.8137
+Infinity	+Infinity	+Infinity	+Infinity	+Infinity	51193.5763
4	2	2	2	2	1
5	5	5	5	5	5

0.7149	---	16.5245	6.7919	7.1317	---
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A

0.1211	0.2169	0.4501	0.4558	0.3017	0.8496
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A

Normal	Uniform	ExtValueMin	Gamma
Normal(2340.4,8505.4)	niform(-1422.7,51469)	017.4649,16534.7307)	875.5,RiskShift(46.54))
MLE (Bias Corrected)	MLE (Bias Corrected)	MLE	MLE
#10	#11	#12	
#10	#11	#12	
#10	#12 (Tie)	#12 (Tie)	#6
#8	#13	#11	#6
#7	#10	#8	
2	2	2	3
mu	Min	a	alpha
2340.4345	-1422.6793	8017.4649	0.34344
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
sigma	Max	b	beta
8505.3762	51469.2194	16534.7307	6875.5337
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
			Shift Factor
			46.5401
			N/A
			N/A
			N/A
-Infinity	-1422.6793	-Infinity	46.5401
+Infinity	51469.2194	+Infinity	+Infinity
2340.4345	25023.2701	-1526.6407	2407.902
2340.4345	-1422.6793	8017.4649	46.5401
2340.4345	25023.2701	1957.2724	752.3736
8505.3762	15268.576	21206.616	4029.3452
0	0	-1.1395	3.4127
3	1.8	5.4	20.4701
-11649.6645	1221.9157	-41093.9136	47.3426
-8559.6437	3866.5106	-29191.7528	52.5818
-6474.8214	6511.1055	-22025.4925	66.2426
-4817.8707	9155.7005	-16783.6388	92.1986
-3396.3546	11800.2954	-12583.1449	134.3755
-2119.7892	14444.8903	-9028.6922	196.9041

-936.8611	17089.4853	-5907.2749	284.303
185.6221	19734.0802	-3089.36	401.7161
1271.6375	22378.6751	-488.6146	555.2367
2340.4345	25023.2701	1957.2724	752.3736
3409.2315	27667.865	4296.974	1002.7488
4495.2469	30312.4599	6571.9727	1319.1985
5617.73	32957.0549	8821.3958	1719.6086
6800.6581	35601.6498	11086.7533	2230.1784
8077.2236	38246.2447	13418.2744	2891.7182
9498.7397	40890.8397	15886.0951	3773.1517
11155.6904	43535.4346	18605.2637	5005.1071
13240.5127	46180.0295	21807.9667	6884.9882
16330.5334	48824.6245	26159.1845	10380.0697

736.0925	765.6954	778.3341	---
738.8282	768.4311	781.0698	---

86.4	183.2	183.2	28.6
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

-Infinity	-1422.6793	-Infinity	46.5401
-6739.6545	6133.3063	-22899.5832	63.6286
0	33	0	0
5	5	5	5
-6739.6545	6133.3063	-22899.5832	63.6286
-2473.1732	13689.2918	-9992.8192	176.708
0	1	0	14
5	5	5	5
-2473.1732	13689.2918	-9992.8192	176.708
809.3616	21245.2773	-1581.026	484.5784
22	0	0	7
5	5	5	5
809.3616	21245.2773	-1581.026	484.5784
3871.5074	28801.2628	5277.6107	1129.3793
11	0	33	3
5	5	5	5
3871.5074	28801.2628	5277.6107	1129.3793

7154.0421	36357.2484	11743.591	2401.4685
0	0	1	7
5	5	5	5
7154.0421	36357.2484	11743.591	2401.4685
11420.5234	43913.2339	19025.128	5223.1901
1	0	0	1
5	5	5	5
11420.5234	43913.2339	19025.128	5223.1901
+Infinity	51469.2194	+Infinity	+Infinity
1	1	1	2
5	5	5	5

10.0202	66.7538	10.8934	---
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

0.4358	0.8689	0.4607	0.2216
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

Table D1-11a. Cyanide saltwater acute toxicity data used to develop a species sensitivity distribution for fish,

Species	Age/Size	Cyanide Form	Exposure Duration	Analytical Method	pH
Acartia clausi (copepod)	NR	KCN	96-hr	U	-
Americamysis bahia (mysid)	Post-larvae	NR	96-hr	See ECOTOX for more information	7.8-8.2
Americamysis bahia (mysid)	NR	KCN	96-hr	U	-
Americamysis bigelowi (mysid)	NR	KCN	96-hr	U	-
Ampelisca abdita (amphipod)	NR	NR	96-hr	U	-
Ampelisca abdita (amphipod)	NR	NR	96-hr	U	-
Ampelisca abdita (amphipod)	NR	NR	96-hr	U	-
Cancer gracilis (slender crab)	Zoeae	NaCN	96-hr	See ECOTOX for more information	7.7
Cancer gracilis (slender crab)	Zoeae	NaCN	96-hr	See ECOTOX for more information	7.7
Cancer irroratus (rock crab)	Larva	KCN	96-hr	M	-
Cancer irroratus (rock crab)	Larva	KCN	96-hr	M	-
Cancer magister (Dungeness crab)	Zoeae	NaCN	96-hr	See ECOTOX for more information	7.7
Cancer magister (Dungeness crab)	Zoeae	NaCN	96-hr	See ECOTOX for more information	7.7
Cancer oregonensis (Oregon cancer crab)	Zoeae	NaCN	96-hr	See ECOTOX for more information	7.7
Cancer oregonensis (Oregon cancer crab)	Zoeae	NaCN	96-hr	See ECOTOX for more information	7.7
Cancer productus (red crab)	Zoeae	NaCN	96-hr	See ECOTOX for more information	7.7
Cancer productus (red crab)	Zoeae	NaCN	96-hr	See ECOTOX for more information	7.7
Chlamys asperrimus (doughboy scallop)	Larva	NaCN	48-hr	See ECOTOX for more information	8.01
Crepidula fornicata (Atlantic slippershell)	NR	NR	96-hr	U	-
Cyprinodon variegatus (sheepshead minnow)	NR	NR	96-hr	M	-
Dinophilus gyrociliatus (archiannelid)	Juvenile	NaCN	96-hr	U	-
Dinophilus gyrociliatus (archiannelid)	Juvenile	NaCN	96-hr	U	-
Menidia menidia (Atlantic silverside)	NR	KCN	96-hr	M	-
Penaeus monodon (banana prawn)	Post-larvae	NaCN	96-hr	See ECOTOX for more information	7.25
Pseudopleuronectes americanus (winter flounder)	1-d old larvae	NaCN	96-hr	U	-

Table D1-11b. Summary of cyanide salthwater acute toxicity data used to develop a species sensitivity distrib

Species	SMAV(µg/L)	Rank	Percentile
Cancer irroratus (rock crab)	4.9	1	0.059
Chlamys asperrimus (doughboy scallop)	29	2	0.118
Acartia clausi (copepod)	30	3	0.176
Menidia menidia (Atlantic silverside)	59	4	0.235
Cancer magister (Dungeness crab)	68	5	0.294
Americamysis bahia (mysid)	103	6	0.353
Penaeus monodon (banana prawn)	110	7	0.412
Americamysis bigelowi (mysid)	124	8	0.471
Cancer oregonensis (Oregon cancer crab)	131	9	0.529
Cancer gracilis (slender crab)	144	10	0.588
Cancer productus (red crab)	153	11	0.647
Cyprinodon variegatus (sheepshead minnow)	300	12	0.706
Pseudopleuronectes americanus (winter flounder)	372	13	0.765
Ampelisca abdita (amphipod)	996	14	0.824
Dinophilus gyrociliatus (archiannelid)	3560	15	0.882
Crepidula fornicata (Atlantic slippershell)	>10,000	16	0.941

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Temp. (°C)	Endpoint	Effect	As Test Compound Conc. (µg/L)	As CN- (ug/L)	SMAV (µg/L)	Reference
-	LC50	Mortality	-	30	30	Gentile 1980
20-25	LC50	Mortality	-	113	103	Lussier et al. 1985
-	LC50	Mortality	-	93		Gentile 1980
-	LC50	Mortality	-	124	124	Gentile 1980
-	LC50	Mortality	-	1220	996	Scott et al. Manuscript
-	LC50	Mortality	-	1150		Scott et al. Manuscript
-	LC50	Mortality	-	704		Scott et al. Manuscript
10	LC50	Mortality	-	153	144	Brix et al. 2000
10	LC50	Mortality	-	135		Brix et al. 2000
-	LC50	Mortality	-	4.2	4.9	Johns and Gentile 1981
-	LC50	Mortality	-	5.7		Johns and Gentile 1981
10	LC50	Mortality	-	51	68	Brix et al. 2000
10	LC50	Mortality	-	92		Brix et al. 2000
10	LC50	Mortality	-	111	131	Brix et al. 2000
10	LC50	Mortality	-	154		Brix et al. 2000
10	LC50	Mortality	-	219	153	Brix et al. 2000
10	LC50	Mortality	-	107		Brix et al. 2000
18	EC50	Development	-	28.6	29	Pablo et al. 1997b
-	LC50	Mortality	-	>10,000	>10,000	Gardner and Nelson 1981
-	LC50	Mortality	-	300	300	Schimmel et al. 1981
21	LC50	Mortality	5,937	3,152	3560	Carr et al. 1986
21	LC50	Mortality	7,574	4,021		Carr et al. 1986
-	LC50	Mortality	-	59	59	Gardner and Berry 1981
26.5	LC50	Mortality	-	110	110	Pablo et al. 1997c
5	LC50	Mortality	-	372	372	Cardin 1980

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Table D1-12. Distribution fitting results for the cyanide saltwater acute species sensitivity dist

	Input	LogLogistic	Levy	Lognorm
Fit				
Function	RiskLoglogistic(0,143.5,1.0378)		RiskLevy(0,44.4837)	norm(813.27,3953.8)
Method		MLE	MLE	MLE
Rankings By Fit Statistic [10 Valid Fits]				
Akaike (AIC)		#1	#2	#3
Bayesian (BIC)		#1	#2	#3
Chi-Sq Statistic		#1 (Tie)	#5 (Tie)	#3
K-S Statistic		#2	#3	#4
A-D Statistic		#2	#4	#3
Parameters - [* Values estimated using a bootstrap with 1000 resamples.]				
Num. Est. Parameters		2.00	1.00	2.00
Fitted Parameter #1		beta	c	mu
Fitted Value		143.50	44.48	813.27
95% Lower Limit*		61.27	24.72	204.08
95% Upper Limit*		348.73	103.63	3,299.22
Conf. Interval Width*		287.47	78.91	3,095.14
Fitted Parameter #2		alpha		sigma
Fitted Value		1.04		3,953.80
95% Lower Limit*		0.73		357.30
95% Upper Limit*		1.74		53,480.40
Conf. Interval Width*		1.00		53,123.10
Fitted Parameter #3				
Fitted Value				
95% Lower Limit*				
95% Upper Limit*				
Conf. Interval Width*				
Distribution Statistics				
Minimum	4.89	-	-	-
Maximum	10,000.00	+Infinity	+Infinity	+Infinity
Mean	1,011.43	3,804.69	+Infinity	813.27
Mode	21.5813 [est]	3.08	14.83	6.65
Median	127.37	143.50	97.78	163.85
Std. Deviation	2,551.27	+Infinity	+Infinity	3,953.81
Skewness	3.36	+Infinity	+Infinity	129.49
Kurtosis	14.76	+Infinity	+Infinity	400,034.40
Percentiles				
5%	4.89	8.41	11.58	8.62
10%	28.60	17.27	16.44	16.53
15%	30.00	26.98	21.47	25.63
20%	59.00	37.73	27.09	36.32
25%	59.00	49.79	33.62	48.99
30%	68.50	63.43	41.41	64.09

35%	102.51	79.03	50.93	82.21
40%	110.00	97.09	62.80	104.11
45%	124.00	118.27	77.95	130.85
50%	124.00	143.50	97.78	163.85
55%	130.74	174.12	124.49	205.19
60%	143.72	212.10	161.76	257.88
65%	153.08	260.57	216.05	326.59
70%	300.00	324.67	299.61	418.92
75%	300.00	413.62	438.13	548.03
80%	372.00	545.75	693.06	739.15
85%	995.89	763.40	1,243.75	1,047.56
90%	3,560.00	1,192.20	2,817.07	1,624.55
95%	10,000.00	2,449.29	11,312.85	3,112.88
Information Criteria				
Akaike (AIC)		231.52	231.72	232.13
Bayesian (BIC)		232.14	232.21	232.75
Av. LogL		(7.08)	(7.17)	(7.10)
Chi-Squared Test - [* Values estimated using a bootstrap with 1000 resamples.]				
Chi-Sq Statistic		0.13	2.38	0.88
P-Value*		0.61	0.20	0.26
Cr. Value @ 0.750*		0.13	0.50	0.13
Cr. Value @ 0.500*		0.50	0.88	0.88
Cr. Value @ 0.250*		0.88	2.00	1.63
Cr. Value @ 0.150*		1.63	3.13	1.63
Cr. Value @ 0.100*		2.00	3.50	2.38
Cr. Value @ 0.050*		3.13	4.63	3.13
Cr. Value @ 0.025*		3.50	6.13	3.50
Cr. Value @ 0.010*		3.88	6.13	5.38
Cr. Value @ 0.005*		5.38	6.50	6.13
Cr. Value @ 0.001*		6.13	11.38	6.13
Chi-Sq Test (Binning Information)				
Bin #1 : Minimum		-	-	-
Bin #1 : Maximum		73.59	47.53	75.79
Bin #1 : Input		5.00	3.00	5.00
Bin #1 : Fit		5.33	5.33	5.33
Bin #2 : Minimum		73.59	47.53	75.79
Bin #2 : Maximum		279.85	239.77	354.25
Bin #2 : Input		6.00	8.00	7.00
Bin #2 : Fit		5.33	5.33	5.33
Bin #3 : Minimum		279.85	239.77	354.25
Bin #3 : Maximum		+Infinity	+Infinity	+Infinity
Bin #3 : Input		5.00	5.00	4.00
Bin #3 : Fit		5.33	5.33	5.33
Anderson-Darling Test - [* Values estimated using a bootstrap with 1000 resamples.]				
A-D Statistic		0.40	0.74	0.51
P-Value*		0.30	0.28	0.20
Cr. Value @ 0.750*		0.24	0.35	0.26

	Cr. Value @ 0.500*		0.32	0.52	0.34
	Cr. Value @ 0.250*		0.42	0.78	0.46
	Cr. Value @ 0.150*		0.49	1.01	0.55
	Cr. Value @ 0.100*		0.55	1.18	0.63
	Cr. Value @ 0.050*		0.64	1.45	0.72
	Cr. Value @ 0.025*		0.71	1.78	0.84
	Cr. Value @ 0.010*		0.86	2.10	0.95
	Cr. Value @ 0.005*		0.92	2.35	1.05
	Cr. Value @ 0.001*		1.04	3.43	1.15
Kolmogorov-Smirnov Test - [* Values estimated using a bootstrap with 1000 resamples.]					
	K-S Statistic		0.17	0.20	0.20
	P-Value*		0.10	0.34	0.08
	Cr. Value @ 0.750*		0.12	0.15	0.12
	Cr. Value @ 0.500*		0.13	0.17	0.15
	Cr. Value @ 0.250*		0.15	0.21	0.17
	Cr. Value @ 0.150*		0.16	0.23	0.19
	Cr. Value @ 0.100*		0.17	0.25	0.19
	Cr. Value @ 0.050*		0.18	0.28	0.21
	Cr. Value @ 0.025*		0.20	0.30	0.23
	Cr. Value @ 0.010*		0.21	0.33	0.25
	Cr. Value @ 0.005*		0.22	0.34	0.27
	Cr. Value @ 0.001*		0.23	0.38	0.28

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InvGauss	Pearson6	Gamma	BetaGeneral	Expon	Triang
vgauss(1011.4,46.53)	6025,0.79808,54.671)	nma(0.36666,2758.5)	4558,1.0427,0,10109)	RiskExpon(1011.4)	iang(0,4.8929,10655)
MLE	MLE (Modified)	MLE	MLE (Modified)	MLE	MLE
#4	#5	#6	#7	#8	#9
#5	#4	#6	#7	#8	#9
#5 (Tie)	#1 (Tie)	#4	#7	#8	#9 (Tie)
#5	#1	#6	#7	#8	#9
#5	#1	#6	#7	#8	#9
2.00	3.00	2.00	3.00	1.00	2.00
mu	alpha1	alpha	alpha1	beta	M. likely
1,011.43	1.60	0.37	0.25	1,011.43	4.89
120.66	N/A	0.23	N/A	586.11	13.54
4,686.08	N/A	0.79	N/A	1,594.97	6,013.58
4,565.42	N/A	0.55	N/A	1,008.85	6,000.05
lambda	alpha2	beta	alpha2		Max
46.53	0.80	2,758.52	1.04		10,655.32
26.78	N/A	689.67	N/A		6,690.18
119.15	N/A	6,126.58	N/A		12,143.71
92.36	N/A	5,436.90	N/A		5,453.53
	beta		Max		
	54.67		10,109.67		
	N/A		N/A		
	N/A		N/A		
	N/A		N/A		
-	-	-	-	-	-
+Infinity	+Infinity	+Infinity	10,109.67	+Infinity	10,655.32
1,011.43	+Infinity	1,011.43	1,927.13	1,011.43	3,553.40
15.51	18.32	-	-	-	4.89
92.40	139.85	329.92	568.13	701.07	3,122.60
4,715.62	+Infinity	1,670.35	2,625.09	1,011.43	2,510.91
13.99	+Infinity	3.30	1.45	2.00	0.57
329.06	+Infinity	19.36	4.02	9.00	2.40
11.87	12.22	0.57	0.05	51.88	272.18
16.75	21.16	3.76	0.81	106.57	549.12
21.72	30.29	11.39	4.21	164.38	833.86
27.22	40.16	25.04	13.59	225.69	1,127.10
33.54	51.13	46.28	33.72	290.97	1,429.66
40.99	63.59	76.71	70.85	360.75	1,742.49

49.95	77.99	118.07	132.75	435.71	2,066.70
60.95	94.91	172.37	228.72	516.67	2,403.64
74.74	115.16	241.99	369.67	604.67	2,754.94
92.40	139.85	329.92	568.13	701.07	3,122.60
115.60	170.65	439.99	838.33	807.64	3,509.15
147.00	210.09	577.36	1,196.32	926.77	3,917.85
191.02	262.31	749.27	1,660.13	1,061.83	4,352.99
255.60	334.36	966.32	2,249.96	1,217.74	4,820.50
356.00	439.47	1,245.08	2,988.55	1,402.14	5,328.88
525.00	605.33	1,613.53	3,901.81	1,627.84	5,891.21
844.41	900.24	2,124.73	5,019.95	1,918.81	6,529.48
1,572.62	1,545.06	2,899.39	6,380.00	2,328.91	7,286.58
3,987.30	3,783.98	4,329.64	8,033.36	3,029.98	8,273.26

233.64	233.91	241.31	248.48	255.70	286.39
234.26	234.23	241.94	248.80	256.18	287.01
(7.15)	(7.06)	(7.39)	(7.52)	(7.92)	(8.80)

2.38	0.13	1.63	3.50	16.63	21.13
0.14	N/A	0.16	N/A	-	-
0.50	N/A	0.13	N/A	0.50	0.50
0.88	N/A	0.88	N/A	0.88	0.88
1.63	N/A	1.63	N/A	1.63	2.00
2.38	N/A	2.00	N/A	2.38	2.38
3.13	N/A	2.38	N/A	3.13	3.50
3.88	N/A	3.13	N/A	3.88	4.63
5.38	N/A	3.88	N/A	5.38	6.13
6.13	N/A	5.38	N/A	6.50	6.50
7.63	N/A	5.38	N/A	6.50	7.63
11.38	N/A	6.13	N/A	9.88	9.13

-	-	-	-	-	-
46.76	72.94	102.95	108.82	410.10	1,957.28
3.00	5.00	6.00	6.00	13.00	14.00
5.33	5.33	5.33	5.33	5.33	5.33
46.76	72.94	102.95	108.82	410.10	1,957.28
209.72	283.64	815.94	1,841.68	1,111.17	4,504.88
8.00	6.00	7.00	8.00	1.00	1.00
5.33	5.33	5.33	5.33	5.33	5.33
209.72	283.64	815.94	1,841.68	1,111.17	4,504.88
+Infinity	+Infinity	+Infinity	10,109.67	+Infinity	10,655.32
5.00	5.00	3.00	2.00	2.00	1.00
5.33	5.33	5.33	5.33	5.33	5.33

0.81	0.32	1.66	2.61	9.18	27.18
0.14	N/A	0.00	N/A	-	N/A
0.32	N/A	0.27	N/A	0.35	N/A

0.44	N/A	0.36	N/A	0.50	N/A
0.65	N/A	0.50	N/A	0.75	N/A
0.79	N/A	0.60	N/A	0.91	N/A
0.96	N/A	0.68	N/A	1.04	N/A
1.18	N/A	0.83	N/A	1.29	N/A
1.41	N/A	0.99	N/A	1.51	N/A
1.70	N/A	1.07	N/A	1.86	N/A
2.10	N/A	1.18	N/A	2.12	N/A
2.76	N/A	1.38	N/A	3.16	N/A

0.21	0.16	0.30	0.36	0.55	0.74
0.18	N/A	0.00	N/A	-	-
0.14	N/A	0.13	N/A	0.14	0.15
0.17	N/A	0.15	N/A	0.17	0.18
0.20	N/A	0.18	N/A	0.20	0.22
0.22	N/A	0.19	N/A	0.22	0.24
0.23	N/A	0.21	N/A	0.23	0.26
0.26	N/A	0.23	N/A	0.26	0.29
0.29	N/A	0.25	N/A	0.27	0.32
0.32	N/A	0.27	N/A	0.30	0.35
0.33	N/A	0.28	N/A	0.32	0.36
0.36	N/A	0.30	N/A	0.36	0.41

Uniform	Normal	Uniform	ExtValueMin
RiskUniform(0,10666)	kNormal(1012.1,2551)	niform(-661.45,10666)	2529.0826,3812.3666)
MLE (Bias Corrected)	MLE (Bias Corrected)	MLE (Bias Corrected)	MLE
#10	#11	#12	#13
#10	#11	#12	#13
#9 (Tie)	#11 (Tie)	#10	#11 (Tie)
#10	#9	#12	#7
#10	#8	#11	#9
1.00	2	2	2
Max	mu	Min	a
10,666.67	1012.0889	-661.4476	2529.0826
9,043.21	N/A	N/A	N/A
11,363.75	N/A	N/A	N/A
2,320.54	N/A	N/A	N/A
	sigma	Max	b
	2551.0254	10666.3405	3812.3666
	N/A	N/A	N/A
	N/A	N/A	N/A
	N/A	N/A	N/A
-	-Infinity	-661.4476	-Infinity
10,666.67	+Infinity	10666.3405	+Infinity
5,333.33	1012.0889	5002.4464	328.5249
-	1012.0889	-661.4476	2529.0826
5,333.33	1012.0889	5002.4464	1131.801
3,079.20	2551.0254	3270.0508	4889.5502
-	0	0	-1.1395
1.80	3	1.8	5.4
533.33	-3183.9745	-95.0582	-8794.3907
1,066.67	-2257.1817	471.3312	-6050.1427
1,600.00	-1631.879	1037.7206	-4397.8381
2,133.33	-1134.9082	1604.11	-3189.2386
2,666.67	-708.5516	2170.4994	-2220.7424
3,200.00	-325.6701	2736.8888	-1401.2022

3,733.33	29.1266	3303.2782	-681.5057
4,266.67	365.794	3869.6676	-31.787
4,800.00	691.5236	4436.057	567.8596
5,333.33	1012.0889	5002.4464	1131.801
5,866.67	1332.6542	5568.8358	1671.2594
6,400.00	1658.3838	6135.2252	2195.7995
6,933.33	1995.0512	6701.6146	2714.4427
7,466.67	2349.848	7268.004	3236.7599
8,000.00	2732.7294	7834.3935	3774.3321
8,533.33	3159.0861	8400.7829	4343.3307
9,066.67	3656.0568	8967.1723	4970.2818
9,600.00	4281.3595	9533.5617	5708.7201
10,133.33	5208.1523	10099.9511	6711.9682
299.08	300.3451	303.6435	313.5285
299.57	300.9672	304.2656	314.1506
(9.27)			
	21.5	21.125	21.5
21.13	N/A	N/A	N/A
-	N/A	N/A	N/A
0.50	N/A	N/A	N/A
1.63	N/A	N/A	N/A
2.38	N/A	N/A	N/A
3.50	N/A	N/A	N/A
3.88	N/A	N/A	N/A
6.13	N/A	N/A	N/A
6.50	N/A	N/A	N/A
7.63	N/A	N/A	N/A
7.63	N/A	N/A	N/A
11.38			
	-Infinity	-661.4476	-Infinity
-	-86.7074	3114.4817	-912.4187
3,555.56	0	14	0
14.00	5.3333	5.3333	5.3333
5.33	-86.7074	3114.4817	-912.4187
3,555.56	2110.8852	6890.4111	2887.6274
7,111.11	14	1	14
1.00	5.3333	5.3333	5.3333
5.33	2110.8852	6890.4111	2887.6274
7,111.11	+Infinity	10666.3405	+Infinity
10,666.67	2	1	2
1.00	5.3333	5.3333	5.3333
5.33			
	3.9005	18.0843	4.0609
35.89	N/A	N/A	N/A
-	N/A	N/A	N/A
0.44	N/A	N/A	N/A

0.66	N/A	N/A	N/A
1.06	N/A	N/A	N/A
1.42	N/A	N/A	N/A
1.64	N/A	N/A	N/A
2.15	N/A	N/A	N/A
2.76	N/A	N/A	N/A
3.79	N/A	N/A	N/A
4.03	N/A	N/A	N/A
4.69			
	0.4116	0.7287	0.403
0.78	N/A	N/A	N/A
-	N/A	N/A	N/A
0.16	N/A	N/A	N/A
0.19	N/A	N/A	N/A
0.24	N/A	N/A	N/A
0.26	N/A	N/A	N/A
0.28	N/A	N/A	N/A
0.32	N/A	N/A	N/A
0.35	N/A	N/A	N/A
0.39	N/A	N/A	N/A
0.41	N/A	N/A	N/A
0.43			

Table D1-13a. Anthracene freshwater acute toxicity data used to develop a species sensitivity distribution for

Species Common Name	Species Scientific Name	Organism Lifestage	Observed Duration Mean (Days)	Endpoint	Effect Measurement	Concentration (µg/L)	SMAV
Bluegill	Lepomis macrochirus	Juvenile	4	LC50	Mortality	1.27	7.8
Bluegill	Lepomis macrochirus	Juvenile	4	LC50	Mortality	3.74	-
Bluegill	Lepomis macrochirus	Juvenile	4	LC50	Mortality	6.78	-
Bluegill	Lepomis macrochirus	Juvenile	4	LC50	Mortality	7.47	-
Bluegill	Lepomis macrochirus	Juvenile	4	LC50	Mortality	7.97	-
Bluegill	Lepomis macrochirus	Juvenile	4	LC50	Mortality	8.27	-
Bluegill	Lepomis macrochirus	NR	4	LC50	Mortality	4.5	-
Bluegill	Lepomis macrochirus	NR	4	LC50	Mortality	46	-
Bluegill	Lepomis macrochirus	Juvenile	4	LC50	Mortality	2.78	-
Bluegill	Lepomis macrochirus	Juvenile	4	LC50	Mortality	11.92	-
Bluegill	Lepomis macrochirus	Juvenile	4	LC50	Mortality	18.23	-
Bluegill	Lepomis macrochirus	Juvenile	4	LC50	Mortality	26.47	-
Fathead Minnow	Pimephales promelas	NR	4	NOEC	Change in activity	21.4	21.4
Fathead Minnow	Pimephales promelas	NR	4	NOEC	Change in activity	21.4	-
Fathead Minnow	Pimephales promelas	NR	4	LOEC	Change in activity	21.4	-
Guppy	Poecilia reticulata	NR	4	LC50	Mortality	17823	17823
Scud	Hyalella azteca	Juvenile	4	EC50	Mortality	874	874
Sunfish	Lepomis sp.	NR	4	LC50	Mortality	11.92	18
Sunfish	Lepomis sp.	NR	4	LC50	Mortality	18.23	-
Sunfish	Lepomis sp.	NR	4	LC50	Mortality	26.47	-
Water Flea	Daphnia magna	Neonate	2	EC50	Mortality	11	15
Water Flea	Daphnia magna	Neonate	2	EC50	Mortality	20	-

Table D1-13b. Summary of anthracene freshwater acute toxicity data used to develop a species sensitivity dist

Species Common Name	Species Scientific Name	SMAV	Rank	Percentile
Bluegill	Lepomis macrochirus	7.8	1	0.143
Fathead Minnow	Pimephales promelas	15	2	0.286
Guppy	Poecilia reticulata	18	3	0.429
Scud	Hyalella azteca	21	4	0.571
Sunfish	Lepomis sp.	874	5	0.714
Water Flea	Daphnia magna	17823	6	0.857

fish, benthic invertebrates, and zooplankton

Publication Year	Author
1991	McCloskey,J.T., and J.T. Oris
1991	McCloskey,J.T., and J.T. Oris
1991	McCloskey,J.T., and J.T. Oris
1991	McCloskey,J.T., and J.T. Oris
1991	McCloskey,J.T., and J.T. Oris
1991	McCloskey,J.T., and J.T. Oris
1986	Oris,J.T.,Jr.
1986	Oris,J.T.,Jr.
1985	Oris,J.T., J.P. Giesy, P.M. Allred, D.F. Grant, and P.F. Landrum
1984	Oris,J.T., J.P. Giesy, P.M. Allred, D.F. Grant, and P.F. Landrum
1984	Oris,J.T., J.P. Giesy, P.M. Allred, D.F. Grant, and P.F. Landrum
1984	Oris,J.T., J.P. Giesy, P.M. Allred, D.F. Grant, and P.F. Landrum
1993	Hall,A.T.
1993	Hall,A.T.
1993	Hall,A.T.
2000	Traczewska,T.M.
2009	Isherwood,D.M.
1985	Oris,J.T.,Jr.
1985	Oris,J.T.,Jr.
1985	Oris,J.T.,Jr.
2005	Lampi,M.A., J. Gurska, K.I.C. McDonald, F. Xie, X.D. Huang, D.G. Dixon, and B.M. Greenberg
2005	Lampi,M.A., J. Gurska, K.I.C. McDonald, F. Xie, X.D. Huang, D.G. Dixon, and B.M. Greenberg

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Table D1-14. Distribution fitting results for the anthracene freshwater acute species sensitivity d

	Input	BetaGeneral	Expon	InvGauss	LogLogistic
Fit					
Function	eneral(0.13651,0.27884,0,17822)		RiskExpon(3126.4)	uss(3126.4,20.191)	(0,59.383,0.62137)
Method		MLE (Approximate)	MLE	MLE	MLE
Rankings By Fit Statistic [9 Valid Fits]					
Akaike (AIC)			#6	#2	#4
Bayesian (BIC)			#6	#2	#4
Chi-Sq Statistic		#6 (Tie)	#6 (Tie)	#1 (Tie)	#1 (Tie)
K-S Statistic		#5	#7	#2	#1
A-D Statistic			#6	#3	#1
Parameters - [* Values unavailable without running a bootstrap]					
Num. Est. Parameters		3	1	2	2
Fitted Parameter #1		alpha1	beta	mu	beta
Fitted Value		0.13651	3126.4396	3126.4396	59.3828
95% Lower Limit*		N/A	N/A	N/A	N/A
95% Upper Limit*		N/A	N/A	N/A	N/A
Conf. Interval Width*		N/A	N/A	N/A	N/A
Fitted Parameter #2		alpha2		lambda	alpha
Fitted Value		0.27884		20.191	0.62137
95% Lower Limit*		N/A		N/A	N/A
95% Upper Limit*		N/A		N/A	N/A
Conf. Interval Width*		N/A		N/A	N/A
Fitted Parameter #3		Max			
Fitted Value		17823			
95% Lower Limit*		N/A			
95% Upper Limit*		N/A			
Conf. Interval Width*		N/A			
Distribution Statistics					
Minimum	7.8223	0	0	0	0
Maximum	17823	17823	+Infinity	+Infinity	+Infinity
Mean	3126.4396	5857.7229	3126.4396	3126.4396	+Infinity
Mode	3.2018 [est]	0	0	6.7303	0
Median	19.6586	1373.6489	2167.0828	43.7237	59.3828
Std. Deviation	7207.995	7037.1145	3126.4396	38904.1619	+Infinity
Skewness	2.4372	0.7187	2	37.3308	+Infinity
Kurtosis	8.9515	1.7911	9	2325.6474	+Infinity
Percentiles					
5%	7.8223	6.83E-05	160.3654	5.2413	0.5196
10%	7.8223	0.011	329.4033	7.4345	1.7296
15%	7.8223	0.2135	508.1056	9.6974	3.6416
20%	14.8148	1.7565	697.6448	12.2236	6.3787
25%	14.8148	9.0046	899.4206	15.1548	10.1345
30%	14.8148	34.2076	1115.1227	18.647	15.1864

35%	17.9173	105.5459	1346.8168	22.9015	21.9277
40%	17.9173	278.9723	1597.0655	28.1963	30.922
45%	17.9173	652.2058	1869.1013	34.9345	42.9937
50%	17.9173	1373.6489	2167.0828	43.7237	59.3828
55%	21.4	2628.3704	2496.4861	55.519	82.0194
60%	21.4	4573.465	2864.7277	71.8956	114.0393
65%	21.4	7211.5587	3282.2055	95.6051	160.8158
70%	873.6835	10266.6712	3764.1483	131.8159	232.2023
75%	873.6835	13212.3123	4334.1657	191.1947	347.9516
80%	873.6835	15521.7189	5031.8105	298.7779	552.8276
85%	17823	16953.199	5931.2311	525.4772	968.3519
90%	17823	17614.5162	7198.8933	1144.0203	2038.8099
95%	17823	17805.5159	9365.9762	4107.0007	6786.2615
Information Criteria					
Akaike (AIC)		---	111.5718	88.784	92.1351
Bayesian (BIC)		---	110.3636	84.3675	87.7186
Chi-Squared Test - [* Values unavailable without running a bootstrap]					
Chi-Sq Statistic		2.6667	2.6667	0.6667	0.6667
P-Value*		N/A	N/A	N/A	N/A
Cr. Value @ 0.750*		N/A	N/A	N/A	N/A
Cr. Value @ 0.500*		N/A	N/A	N/A	N/A
Cr. Value @ 0.250*		N/A	N/A	N/A	N/A
Cr. Value @ 0.150*		N/A	N/A	N/A	N/A
Cr. Value @ 0.100*		N/A	N/A	N/A	N/A
Cr. Value @ 0.050*		N/A	N/A	N/A	N/A
Cr. Value @ 0.025*		N/A	N/A	N/A	N/A
Cr. Value @ 0.010*		N/A	N/A	N/A	N/A
Cr. Value @ 0.005*		N/A	N/A	N/A	N/A
Cr. Value @ 0.001*		N/A	N/A	N/A	N/A
Chi-Sq Test (Binning Information)					
Bin #1 : Minimum		0	0	0	0
Bin #1 : Maximum		1373.6489	2167.0828	43.7237	59.3828
Bin #1 : Input		5	5	4	4
Bin #1 : Fit		3	3	3	3
Bin #2 : Minimum		1373.6489	2167.0828	43.7237	59.3828
Bin #2 : Maximum		17823	+Infinity	+Infinity	+Infinity
Bin #2 : Input		1	1	2	2
Bin #2 : Fit		3	3	3	3
Anderson-Darling Test - [* Values unavailable without running a bootstrap]					
A-D Statistic		---	11.0359	0.7024	0.6614
P-Value*		N/A	N/A	N/A	N/A
Cr. Value @ 0.750*		N/A	N/A	N/A	N/A
Cr. Value @ 0.500*		N/A	N/A	N/A	N/A
Cr. Value @ 0.250*		N/A	N/A	N/A	N/A
Cr. Value @ 0.150*		N/A	N/A	N/A	N/A
Cr. Value @ 0.100*		N/A	N/A	N/A	N/A
Cr. Value @ 0.050*		N/A	N/A	N/A	N/A

Cr. Value @ 0.025*		N/A	N/A	N/A	N/A
Cr. Value @ 0.010*		N/A	N/A	N/A	N/A
Cr. Value @ 0.005*		N/A	N/A	N/A	N/A
Cr. Value @ 0.001*		N/A	N/A	N/A	N/A
Kolmogorov-Smirnov Test - [* Values unavailable without running a bootstrap]					
K-S Statistic		0.3853	0.6598	0.3331	0.3201
P-Value*		N/A	N/A	N/A	N/A
Cr. Value @ 0.750*		N/A	N/A	N/A	N/A
Cr. Value @ 0.500*		N/A	N/A	N/A	N/A
Cr. Value @ 0.250*		N/A	N/A	N/A	N/A
Cr. Value @ 0.150*		N/A	N/A	N/A	N/A
Cr. Value @ 0.100*		N/A	N/A	N/A	N/A
Cr. Value @ 0.050*		N/A	N/A	N/A	N/A
Cr. Value @ 0.025*		N/A	N/A	N/A	N/A
Cr. Value @ 0.010*		N/A	N/A	N/A	N/A
Cr. Value @ 0.005*		N/A	N/A	N/A	N/A
Cr. Value @ 0.001*		N/A	N/A	N/A	N/A

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Lognorm	Pearson6	Triang	Uniform	Levy
n(4729.3,237776.6)	1342,5.5699,67942)	ng(0,7.8223,20811)	skUniform(0,21387)	RiskLevy(0,20.0614)
MLE	MLE (Modified)	MLE	ILE (Bias Corrected)	MLE
#3	#5	#8	#7	#1
#3	#5	#7	#8	#1
#1 (Tie)	#1 (Tie)	#6 (Tie)	#6 (Tie)	#1 (Tie)
#4	#6	#8	#9	#3
#4	#5	#7	#8	#2
2	3	2	1	1
mu	alpha1	M. likely	Max	c
4729.3	0.21342	7.8223	21387.6	20.0614
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A
sigma	alpha2	Max		
237776.6	5.5699	20811.9462		
N/A	N/A	N/A		
N/A	N/A	N/A		
N/A	N/A	N/A		
	beta			
	67942.6554			
	N/A			
	N/A			
	N/A			
0	0	0	0	0
+Infinity	+Infinity	20811.9462	21387.6	+Infinity
4729.3184	3173.0315	6939.9228	10693.8	+Infinity
0.0372	0	7.8223	0	6.6871
94.0464	343.5352	6098.4438	10693.8	44.0973
237776.6067	7950.427	4904.5012	6174.0683	+Infinity
127240.9306	7.2718	0.5657	0	+Infinity
4.09256E+13	136.6645	2.4	1.8	+Infinity
0.9413	0.00692	530.7827	1069.38	5.2224
2.6025	0.178	1071.7112	2138.76	7.4149
5.1686	1.1903	1627.8861	3208.14	9.681
8.9167	4.583	2200.6742	4277.52	12.2149
14.2358	13.0463	2791.6596	5346.9	15.1601
21.6691	30.6924	3402.6954	6416.28	18.6758

31.9829	63.3439	4035.9723	7485.66	22.9679
46.2758	118.8815	4694.1119	8555.04	28.3223
66.1574	207.7209	5380.2947	9624.42	35.1553
94.0464	343.5352	6098.4438	10693.8	44.0973
133.692	544.4167	6853.4922	11763.18	56.1447
191.1305	834.8358	7651.7896	12832.56	72.9518
276.5455	1249.0889	8501.7469	13901.94	97.4329
408.1716	1837.7059	9414.9162	14971.32	135.1195
621.3018	2680.2694	10407.9289	16040.7	197.5893
991.9281	3913.8619	11506.3102	17110.08	312.5579
1711.2305	5806.4824	12753.029	18179.46	560.9118
3398.5417	8997.3173	14231.8679	19248.84	1270.4538
9396.1497	15726.5143	16159.1282	20318.22	5101.9163

91.9047	105.4864	122.9701	122.6468	83.8226
87.4882	92.8617	118.5536	121.4386	82.6144

0.6667	0.6667	2.6667	2.6667	0.6667
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A

0	0	0	0	0
94.0464	343.5352	6098.4438	10693.8	44.0973
4	4	5	5	4
3	3	3	3	3
94.0464	343.5352	6098.4438	10693.8	44.0973
+Infinity	+Infinity	20811.9462	21387.6	+Infinity
2	2	1	1	2
3	3	3	3	3

0.7095	0.8929	16.1948	18.3728	0.6616
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A

N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A

0.3682	0.3889	0.7515	0.7925	0.3337
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A

Table D1-15a. Benzo(a)pyrene freshwater acute toxicity data used to develop a species sensitivity distribution

Species Common Name	Species Scientific Name	Organism Lifestage	Observed Duration Mean (Days)	Endpoint	Effect	Concentration (µg/L)	SMAV	Publication Year
Zebra Danio	Danio rerio	Embryo	4.8333	NOEC	Reproduction	10	10	2013
Water Flea	Daphnia magna	Neonate	2	EC50	Mortality	1.0	7.4	2005
Water Flea	Daphnia magna	Neonate	2	EC50	Mortality	1.6	-	2005
Water Flea	Daphnia magna	Neonate	2	LC50	Mortality	250	-	1999
Water Flea	Daphnia pulex	NR	4	LC50	Mortality	5.0	5.0	1983
Calanoid Copepod	Eurytemora affinis	Nauplii	4	LC50	Mortality	58	58	2005
Oikawa	Zacco platypus	NR	4	NOEC	Growth	24	24	2013

Table D1-15b. Summary of benzo(a)pyrene freshwater acute toxicity data used to develop a species sensitivity

Species Common Name	Species Scientific Name	SMAV	Rank	Percentile
Water Flea	Daphnia pulex	5.0	1	0.166666667
Water Flea	Daphnia magna	7.4	2	0.333333333
Zebra Danio	Danio rerio	10	3	0.5
Oikawa	Zacco platypus	24	4	0.666666667
Calanoid Copepod	Eurytemora affinis	58	5	0.833333333

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Table D1-16. Distribution fitting results for the benzo(a)pyrene freshwater acute species sensitiv

	Input	BetaGeneral	Expon	Gamma	InvGauss
Fit					
Function	eneral(0.84535,1.7898,0,70.933)		RiskExpon(20.872)	ma(1.3649,15.292)	uss(20.872,19.591)
Method		MLE (Modified)	MLE	MLE	MLE
Rankings By Fit Statistic [11 Valid Fits]					
Akaike (AIC)		#11	#1	#9	#5
Bayesian (BIC)		#11	#3	#7	#2
Chi-Sq Statistic		#1 (Tie)	#1 (Tie)	#1 (Tie)	#1 (Tie)
K-S Statistic		#8	#3	#7	#4
A-D Statistic		#8	#5	#7	#3
Parameters - [* Values unavailable without running a bootstrap]					
Num. Est. Parameters		3	1	2	2
Fitted Parameter #1		alpha1	beta	alpha	mu
Fitted Value		0.84535	20.872	1.3649	20.872
95% Lower Limit*		N/A	N/A	N/A	N/A
95% Upper Limit*		N/A	N/A	N/A	N/A
Conf. Interval Width*		N/A	N/A	N/A	N/A
Fitted Parameter #2		alpha2		beta	lambda
Fitted Value		1.7898		15.2924	19.5908
95% Lower Limit*		N/A		N/A	N/A
95% Upper Limit*		N/A		N/A	N/A
Conf. Interval Width*		N/A		N/A	N/A
Fitted Parameter #3		Max			
Fitted Value		70.9334			
95% Lower Limit*		N/A			
95% Upper Limit*		N/A			
Conf. Interval Width*		N/A			
Distribution Statistics					
Minimum	5	0	0	0	0
Maximum	58	70.9334	+Infinity	+Infinity	+Infinity
Mean	20.872	22.7552	20.872	20.872	20.872
Mode	6.3250 [est]	0	0	5.5796	5.9921
Median	10	19.236	14.4674	16.0536	13.8199
Std. Deviation	22.0282	17.3662	20.872	17.8657	21.5437
Skewness	1.6941	0.6317	2	1.7119	3.0965
Kurtosis	5.6764	2.4276	9	7.3961	18.9809
Percentiles					
5%	5	1.1219	1.0706	2.0787	3.6702
10%	5	2.5697	2.1991	3.599	4.755
15%	5	4.1932	3.3921	5.0327	5.7272
20%	5	5.9585	4.6575	6.4498	6.6831
25%	7.3601	7.8523	6.0045	7.884	7.6637
30%	7.3601	9.8697	7.4445	9.3581	8.6956

35%	7.3601	12.011	8.9913	10.8917	9.8018
40%	7.3601	14.2803	10.662	12.5041	11.0058
45%	10	16.6849	12.4781	14.2163	12.3342
50%	10	19.236	14.4674	16.0536	13.8199
55%	10	21.9487	16.6665	18.0472	15.5051
60%	24	24.8436	19.1248	20.2383	17.4473
65%	24	27.9489	21.9119	22.6836	19.7274
70%	24	31.3039	25.1293	25.4648	22.4659
75%	24	34.9653	28.9348	28.7078	25.853
80%	24	39.0203	33.5922	32.622	30.215
85%	58	43.6141	39.5967	37.5982	36.1801
90%	58	49.0259	48.0596	44.5097	45.2054
95%	58	55.9593	62.527	56.1282	62.1442
Information Criteria					
Akaike (AIC)		70.4876	43.7174	50.1117	48.7538
Bayesian (BIC)		45.3159	41.9935	43.3306	41.9727
Chi-Squared Test - [* Values unavailable without running a bootstrap]					
Chi-Sq Statistic		0.2	0.2	0.2	0.2
P-Value*		N/A	N/A	N/A	N/A
Cr. Value @ 0.750*		N/A	N/A	N/A	N/A
Cr. Value @ 0.500*		N/A	N/A	N/A	N/A
Cr. Value @ 0.250*		N/A	N/A	N/A	N/A
Cr. Value @ 0.150*		N/A	N/A	N/A	N/A
Cr. Value @ 0.100*		N/A	N/A	N/A	N/A
Cr. Value @ 0.050*		N/A	N/A	N/A	N/A
Cr. Value @ 0.025*		N/A	N/A	N/A	N/A
Cr. Value @ 0.010*		N/A	N/A	N/A	N/A
Cr. Value @ 0.005*		N/A	N/A	N/A	N/A
Cr. Value @ 0.001*		N/A	N/A	N/A	N/A
Chi-Sq Test (Binning Information)					
Bin #1 : Minimum		0	0	0	0
Bin #1 : Maximum		19.236	14.4674	16.0536	13.8199
Bin #1 : Input		3	3	3	3
Bin #1 : Fit		2.5	2.5	2.5	2.5
Bin #2 : Minimum		19.236	14.4674	16.0536	13.8199
Bin #2 : Maximum		70.9334	+Infinity	+Infinity	+Infinity
Bin #2 : Input		2	2	2	2
Bin #2 : Fit		2.5	2.5	2.5	2.5
Anderson-Darling Test - [* Values unavailable without running a bootstrap]					
A-D Statistic		0.4904	0.3014	0.3691	0.2659
P-Value*		N/A	N/A	N/A	N/A
Cr. Value @ 0.750*		N/A	N/A	N/A	N/A
Cr. Value @ 0.500*		N/A	N/A	N/A	N/A
Cr. Value @ 0.250*		N/A	N/A	N/A	N/A
Cr. Value @ 0.150*		N/A	N/A	N/A	N/A
Cr. Value @ 0.100*		N/A	N/A	N/A	N/A
Cr. Value @ 0.050*		N/A	N/A	N/A	N/A

Cr. Value @ 0.025*		N/A	N/A	N/A	N/A
Cr. Value @ 0.010*		N/A	N/A	N/A	N/A
Cr. Value @ 0.005*		N/A	N/A	N/A	N/A
Cr. Value @ 0.001*		N/A	N/A	N/A	N/A
Kolmogorov-Smirnov Test - [* Values unavailable without running a bootstrap]					
K-S Statistic		0.2969	0.2193	0.2788	0.2415
P-Value*		N/A	N/A	N/A	N/A
Cr. Value @ 0.750*		N/A	N/A	N/A	N/A
Cr. Value @ 0.500*		N/A	N/A	N/A	N/A
Cr. Value @ 0.250*		N/A	N/A	N/A	N/A
Cr. Value @ 0.150*		N/A	N/A	N/A	N/A
Cr. Value @ 0.100*		N/A	N/A	N/A	N/A
Cr. Value @ 0.050*		N/A	N/A	N/A	N/A
Cr. Value @ 0.025*		N/A	N/A	N/A	N/A
Cr. Value @ 0.010*		N/A	N/A	N/A	N/A
Cr. Value @ 0.005*		N/A	N/A	N/A	N/A
Cr. Value @ 0.001*		N/A	N/A	N/A	N/A

ity distribution of fish, benthic invertebrates, and zooplankton

LogLogistic	Lognorm	Pearson5	Triang	Uniform	Weibull
ic(0,12.829,1.8775)	norm(20.471,22.24)	on5(1.7291,17.473)	kTriang(0,5,70.857)	RiskUniform(0,72.5)	bull(1.1347,21.967)
MLE	MLE	MLE	MLE	ILE (Bias Corrected)	MLE
#7	#6	#4	#8	#3	#10
#5	#4	#1	#6	#10	#8
#1 (Tie)	#1 (Tie)	#1 (Tie)	#1 (Tie)	#11	#1 (Tie)
#2	#5	#1	#10	#11	#6
#2	#4	#1	#10	#11	#6
2	2	2	2	1	2
beta	mu	alpha	M. likely	Max	alpha
12.8288	20.471	1.7291	5	72.5	1.1347
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
alpha	sigma	beta	Max		beta
1.8775	22.24	17.4731	70.8567		21.967
N/A	N/A	N/A	N/A		N/A
N/A	N/A	N/A	N/A		N/A
N/A	N/A	N/A	N/A		N/A
0	0	0	0	0	0
+Infinity	+Infinity	+Infinity	70.8567	72.5	+Infinity
21.5794	20.4715	23.9667	25.2856	36.25	20.9892
6.8152	6.3591	6.4026	5	0	3.359
12.8288	13.8643	12.3963	22.5536	36.25	15.9036
+Infinity	22.2398	+Infinity	16.1441	20.9289	18.5366
+Infinity	4.5413	+Infinity	0.5555	0	1.655
+Infinity	54.5818	+Infinity	2.4	1.8	6.9234
2.6736	3.2451	4.0659	4.2088	3.625	1.6032
3.9805	4.4723	5.0193	6.0512	7.25	3.0234
5.0927	5.5528	5.8439	7.8771	10.875	4.4296
6.1308	6.5949	6.6365	9.7575	14.5	5.8573
7.1459	7.6434	7.4371	11.6977	18.125	7.327
8.1694	8.7264	8.2713	13.7036	21.75	8.8553

9.2255	9.8664	9.1604	15.7826	25.375	10.4582
10.337	11.0856	10.1264	17.9433	29	12.1529
11.5283	12.4084	11.1944	20.1959	32.625	13.9599
12.8288	13.8643	12.3963	22.5536	36.25	15.9036
14.2759	15.491	13.7745	25.0323	39.875	18.0158
15.9212	17.3395	15.3885	27.6531	43.5	20.3382
17.8393	19.4822	17.3266	30.4434	47.125	22.9287
20.1455	22.0274	19.727	33.4413	50.75	25.8712
23.0309	25.1484	22.8222	36.7012	54.375	29.2944
26.8445	29.1468	27.0431	40.3071	58	33.4124
32.3165	34.6167	33.3043	44.4	61.625	38.6232
41.3462	42.9802	44.0287	49.2549	65.25	45.8122
61.5571	59.2331	69.1925	55.5819	68.875	57.7695

49.6579	49.2366	48.6895	49.854	46.1692	50.2516
42.8768	42.4555	41.9084	43.0729	44.4453	43.4704

0.2	0.2	0.2	0.2	1.8	0.2
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A

0	0	0	0	0	0
12.8288	13.8643	12.3963	22.5536	36.25	15.9036
3	3	3	3	4	3
2.5	2.5	2.5	2.5	2.5	2.5
12.8288	13.8643	12.3963	22.5536	36.25	15.9036
+Infinity	+Infinity	+Infinity	70.8567	72.5	+Infinity
2	2	2	2	1	2
2.5	2.5	2.5	2.5	2.5	2.5

0.263	0.2855	0.2311	0.9486	1.8278	0.3431
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A

N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A

0.2148	0.2443	0.2063	0.3937	0.469	0.264
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A

Levy
RiskLevy(0,10.1056)
MLE
#2
#9
#1 (Tie)
#9
#9
1
c
10.1056
N/A
N/A
N/A
0
+Infinity
+Infinity
3.3685
22.2132
+Infinity
+Infinity
+Infinity
2.6307
3.7351
4.8766
6.153
7.6366
9.4076

11.5696
14.2668
17.7088
22.2132
28.2818
36.7481
49.08
68.0639
99.5319
157.4451
282.5487
639.967
2569.9933

45.397
43.6732

0.2
N/A
N/A
N/A
N/A
N/A
N/A
N/A
N/A
N/A
N/A
N/A

0
22.2132
3
2.5
22.2132
+Infinity
2
2.5

0.7402
N/A
N/A
N/A
N/A
N/A
N/A
N/A

N/A
N/A
N/A
N/A

0.3236
N/A
N/A
N/A
N/A
N/A
N/A
N/A
N/A
N/A
N/A
N/A

Table D1-17a. Fluorene freshwater acute toxicity data used to develop a species sensitivity distribution fo

Species Common Name	Species Scientific Name	Organism Lifestage	Exposure Type	Observed Duration Mean (Days)	Endpoint	Effect
Water Flea	Ceriodaphnia dubia	Neonate	S	2	LC50	Mortality
Water Flea	Ceriodaphnia dubia	Neonate	R	4	MATC	Reproduction
Water Flea	Ceriodaphnia dubia	Neonate	R	4	MATC	Reproduction
Water Flea	Daphnia magna	NR	R	3	LC50	Mortality
Water Flea	Daphnia magna	NR	R	2	LC50	Mortality
Water Flea	Daphnia magna	Neonate	NR	2	EC50	Mortality
Water Flea	Daphnia magna	NR	R	2	LC50	Mortality
Water Flea	Daphnia magna	Neonate	NR	2	EC50	Mortality
Water Flea	Daphnia magna	Instar	S	2	IC50	Feeding behavior
Water Flea	Daphnia magna	NR	R	3	LC50	Mortality
Water Flea	Daphnia magna	NR	R	2	LC50	Mortality
Water Flea	Daphnia magna	NR	S	2	LC50	Mortality
Water Flea	Daphnia magna	NR	S	2	LC50	Mortality
Water Flea	Daphnia magna	NR	R	2	EC50	Mortality
Water Flea	Daphnia magna	NR	R	2	LC50	Mortality
Water Flea	Daphnia magna	NR	F	2	LC50	Mortality
Water Flea	Daphnia magna	NR	F	2	LC50	Mortality
Water Flea	Daphnia magna	NR	S	2	LC50	Mortality
Water Flea	Daphnia magna	NR	S	2	NOEC	Mortality
Water Flea	Daphnia magna	NR	S	2	LC50	Mortality
Scud	Gammarus minus	NR	S	4	LC50	Mortality
Scud	Gammarus pseudolimnaeus	Adult	F	4	LC50	Mortality
Scud	Gammarus pseudolimnaeus	Adult	F	4	LC50	Mortality
Scud	Hyalella azteca	NR	R	4	LC50	Mortality
Scud	Hyalella azteca	NR	F	4	LC50	Mortality
Hydra	Hydra americana	NR	F	4	LC50	Mortality
Hydra	Hydra americana	NR	F	4	LC50	Mortality
Hydra	Hydra americana	NR	F	4	LC50	Mortality
Hydra	Hydra americana	NR	F	4	LC50	Mortality
Channel Catfish	Ictalurus punctatus	NR	S	4	LC50	Mortality
Bluegill	Lepomis macrochirus	Juvenile	F	4	EC50	Loss of equilibrium
Bluegill	Lepomis macrochirus	Juvenile	F	4	LC50	Mortality
Bluegill	Lepomis macrochirus	Juvenile	F	4	LC50	Mortality
Bluegill	Lepomis macrochirus	Juvenile	F	4	LC50	Mortality
Bluegill	Lepomis macrochirus	Juvenile	F	4	LC50	Mortality
Bluegill	Lepomis macrochirus	Young of the y	S	4	LC50	Mortality
Oligochaete, Worm	Lumbriculus variegatus	Adult	F	4	LC50	Mortality
Oligochaete, Worm	Lumbriculus variegatus	Adult	F	4	LC50	Mortality
Oligochaete, Worm	Lumbriculus variegatus	Adult	F	4	LC50	Mortality
Oligochaete, Worm	Lumbriculus variegatus	Adult	F	4	LC50	Mortality
Rainbow Trout	Oncorhynchus mykiss	NR	S	4	LC50	Mortality
Rainbow Trout	Oncorhynchus mykiss	NR	F	4	LC50	Mortality
Rainbow Trout	Oncorhynchus mykiss	NR	F	4	LC50	Mortality
Rainbow Trout	Oncorhynchus mykiss	Fingerling	F	4	LC50	Mortality
Rainbow Trout	Oncorhynchus mykiss	NR	F	4	LC50	Mortality
Pond Snail, Pneumonate Snail	Physa heterostropha	Immature	S	4	LC50	Mortality
Snail	Physella virgata	Adult	F	4	LC50	Mortality
Snail	Physella virgata	Adult	F	4	LC50	Mortality
Snail	Physella virgata	Adult	F	4	LC50	Mortality
Snail	Physella virgata	Adult	F	4	LC50	Mortality
Fathead Minnow	Pimephales promelas	NR	F	4	LC50	Mortality
Fathead Minnow	Pimephales promelas	NR	F	4	LC50	Mortality
Fathead Minnow	Pimephales promelas	NR	F	4	LC50	Mortality
Fathead Minnow	Pimephales promelas	NR	F	4	LC50	Mortality
Fathead Minnow	Pimephales promelas	NR	F	4	LC50	Mortality

Fathead Minnow	Pimephales promelas	NR	S	4	LC50	Mortality
Fathead Minnow	Pimephales promelas	NR	S	4	LC50	Mortality
Fathead Minnow	Pimephales promelas	NR	S	4	LC50	Mortality
Fathead Minnow	Pimephales promelas	NR	F	4	LC50	Mortality
Fathead Minnow	Pimephales promelas	NR	S	4	LC50	Mortality
Fathead Minnow	Pimephales promelas	NR	F	4	LC50	Mortality
Harpacticoid Copepod	Tisbe battagliai	Nauplii	R	4	LC50	Mortality

Table D1-17b. Summary of fluorene freshwater acute toxicity data used to develop a species sensitivity d

Species Common Name	Species Scientific Name	SMAV	Rank	Percentile
Hydra	Hydra americana	24	1	0.0667
Scud	Gammarus minus	32	2	0.133
Channel Catfish	Ictalurus punctatus	36	3	0.200
Rainbow Trout	Oncorhynchus mykiss	43	4	0.267
Water Flea	Ceriodaphnia dubia	43	5	0.333
Scud	Hyalella azteca	44	6	0.400
Snail	Physella virgata	48	7	0.467
Oligochaete, Worm	Lumbriculus variegatus	49	8	0.533
Harpacticoid Copepod	Tisbe battagliai	68.3	9	0.600
Bluegill	Lepomis macrochirus	81	10	0.667
Scud	Gammarus pseudolimnaeus	108	11	0.733
Water Flea	Daphnia magna	117	12	0.800
Fathead Minnow	Pimephales promelas	122	13	0.867
Pond Snail, Pneumonate Snail	Physa heterostropha	137	14	0.933

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Concentration (ug/L)	Units	SMAV	Publication Year
45	ug/L	43	1991
35.6	ug/L	-	1991
51.1	ug/L	-	1991
73.7	ug/L	117	2000
1.6	ug/L	-	1999
3.98	ug/L	-	2005
8.7	ug/L	-	1999
11.4	ug/L	-	2005
70	ug/L	-	2002
75.22	ug/L	-	2000
78	ug/L	-	1999
100	ug/L	-	1982
105.7	ug/L	-	1996
117	ug/L	-	1993
117	ug/L	-	1999
150	ug/L	-	1982
260	ug/L	-	1982
510	ug/L	-	1982
8800	ug/L	-	1980
320000	ug/L	-	1980
32	ug/L	32	1983
108	ug/L	108	1993
108	ug/L	-	1999
43.8	ug/L	44	1993
44	ug/L	-	1999
70.1	ug/L	24	1993
2.2	ug/L	-	1999
32	ug/L	-	1999
70	ug/L	-	1999
36	ug/L	36	1990
43.5	ug/L	81	1993
10	ug/L	-	1999
12.3	ug/L	-	1999
117	ug/L	-	1993
117	ug/L	-	1999
4000	ug/L	-	1981
178	ug/L	49	1993
1.2	ug/L	-	1999
148	ug/L	-	1999
178	ug/L	-	1999
187	ug/L	43	1982
7.7	ug/L	-	1999
12	ug/L	-	1999
90.5	ug/L	-	1993
91	ug/L	-	1999
137	ug/L	137	1983
178	ug/L	48	1993
2	ug/L	-	1999
82	ug/L	-	1999
178	ug/L	-	1999
212	ug/L	122	1993
6.83	ug/L	-	1995
12.2	ug/L	-	1999
17	ug/L	-	1999
66	ug/L	-	1982

95	ug/L	-	1983
95	ug/L	-	1983
98	ug/L	-	1982
212	ug/L	-	1999
4200	ug/L	-	1982
5500	ug/L	-	1982
68.3	ug/L	68.3	2002

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Spehar,R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox
Brooke,L.T.
Spehar,R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox
Spehar,R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox
Spehar,R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox
Gendusa,A.C.
Brooke,L.T.
Spehar,R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox
Spehar,R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox
Brooke,L.T.
Spehar,R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox
Buccafusco,R.J., S.J. Ells, and G.A. LeBlanc
Brooke,L.T.
Spehar,R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox
Spehar,R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox
Spehar,R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox
Birge,W.J., J.A. Black, S.T. Ballard, and W.E. McDonnell
Spehar,R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox
Spehar,R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox
Brooke,L.T.
Spehar,R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox
Horne,J.D., and B.R. Oblad
Brooke,L.T.
Spehar,R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox
Spehar,R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox
Spehar,R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox
Brooke,L.T.
Diamond,S.A.
Spehar,R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox
Spehar,R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox
Turner,L.W.

Horne,J.D., and B.R. Oblad
Horne,J.D., and B.R. Oblad
Turner,L.W.
Spehar,R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox
Turner,L.W.
Turner,L.W.
Barata,C., D.J. Baird, M. Medina, A. Albalat, and A.M.V.M. Soares

, and zooplankton

Table D1-18. Distribution fitting results for the fluorene freshwater acute species sensitivity distrib

	Input	Triang	InvGauss	Pearson5	Lognorm
Fit					
Function	RiskTriang(0,42.721,159.38)		ss(68.043,213.989)	son5(3.8952,201.1)	rm(68.021,38.976)
Method		MLE	MLE	MLE	MLE
Rankings By Fit Statistic [11 Valid Fits]					
Akaike (AIC)		#1	#2	#3	#4
Bayesian (BIC)		#1	#2	#3	#4
Chi-Sq Statistic		#6 (Tie)	#1 (Tie)	#1 (Tie)	#1 (Tie)
K-S Statistic		#6	#4	#1	#5
A-D Statistic		#6	#3	#1	#5
Parameters - [* Values estimated using a bootstrap with 1000 resamples.]					
Num. Est. Parameters		2.00	2.00	2.00	2.00
Fitted Parameter #1		M. likely	mu	alpha	mu
Fitted Value		42.72	68.04	3.90	68.02
95% Lower Limit*		5.37	50.16	2.21	50.22
95% Upper Limit*		136.81	92.04	10.58	93.06
Conf. Interval Width*		131.44	41.88	8.38	42.84
Fitted Parameter #2		Max	lambda	beta	sigma
Fitted Value		159.38	213.99	201.10	38.98
95% Lower Limit*		97.41	123.10	114.21	18.93
95% Upper Limit*		178.63	590.00	553.70	67.32
Conf. Interval Width*		81.22	466.90	439.49	48.39
Fitted Parameter #3					
Fitted Value					
95% Lower Limit*					
95% Upper Limit*					
Conf. Interval Width*					
Distribution Statistics					
Minimum	24.24	-	-	-	-
Maximum	137.00	159.38	+Infinity	+Infinity	+Infinity
Mean	68.04	67.37	68.04	69.46	68.02
Mode	4.4464 [est]	42.72	42.93	41.08	44.43
Median	48.22	62.96	58.87	56.37	59.02
Std. Deviation	37.93	33.68	38.37	50.45	38.98
Skewness	0.73	0.40	1.69	6.15	1.91
Kurtosis	1.95	2.40	7.77	+Infinity	10.09
Percentiles					
5%	24.24	18.45	25.10	26.45	24.57
10%	32.00	26.09	30.02	30.74	29.81
15%	36.00	31.96	33.99	34.20	33.97
20%	36.00	36.90	37.59	37.33	37.69
25%	42.72	41.26	41.03	40.33	41.20
30%	43.42	45.30	44.41	43.31	44.63

35%	43.42	49.45	47.83	46.34	48.06
40%	43.90	53.76	51.34	49.49	51.57
45%	47.74	58.26	55.00	52.81	55.20
50%	47.74	62.96	58.87	56.37	59.02
55%	48.70	67.91	63.02	60.26	63.11
60%	68.30	73.14	67.55	64.58	67.55
65%	81.50	78.71	72.59	69.50	72.47
70%	81.50	84.70	78.29	75.22	78.04
75%	108.00	91.20	84.94	82.10	84.54
80%	117.48	98.40	92.98	90.78	92.42
85%	117.48	106.57	103.26	102.45	102.53
90%	121.59	116.26	117.66	120.06	116.83
95%	137.00	128.89	142.26	154.00	141.78
Information Criteria					
Akaike (AIC)		140.51	140.97	141.16	141.37
Bayesian (BIC)		140.69	141.16	141.35	141.56
Av. LogL		(4.84)	(4.85)	(4.86)	(4.87)
Chi-Squared Test - [* Values estimated using a bootstrap with 1000 resamples.]					
Chi-Sq Statistic		2.71	1.00	1.00	1.00
P-Value*		0.09	0.23	0.22	0.22
Cr. Value @ 0.750*		0.14	0.14	0.14	0.14
Cr. Value @ 0.500*		1.00	0.57	0.57	0.57
Cr. Value @ 0.250*		1.86	1.00	1.00	1.00
Cr. Value @ 0.150*		2.29	1.86	1.86	1.86
Cr. Value @ 0.100*		2.71	2.29	2.29	2.29
Cr. Value @ 0.050*		4.00	2.71	2.71	2.71
Cr. Value @ 0.025*		4.43	4.00	4.43	4.43
Cr. Value @ 0.010*		5.29	4.43	4.43	4.43
Cr. Value @ 0.005*		6.14	4.43	5.29	5.29
Cr. Value @ 0.001*		7.00	7.00	7.00	7.00
Chi-Sq Test (Binning Information)					
Bin #1 : Minimum		-	-	-	-
Bin #1 : Maximum		48.05	46.68	45.32	46.92
Bin #1 : Input		7.00	6.00	6.00	6.00
Bin #1 : Fit		4.67	4.67	4.67	4.67
Bin #2 : Minimum		48.05	46.68	45.32	46.92
Bin #2 : Maximum		80.66	74.40	71.30	74.24
Bin #2 : Input		2.00	3.00	3.00	3.00
Bin #2 : Fit		4.67	4.67	4.67	4.67
Bin #3 : Minimum		80.66	74.40	71.30	74.24
Bin #3 : Maximum		159.38	+Infinity	+Infinity	+Infinity
Bin #3 : Input		5.00	5.00	5.00	5.00
Bin #3 : Fit		4.67	4.67	4.67	4.67
Anderson-Darling Test - [* Values estimated using a bootstrap with 1000 resamples.]					
A-D Statistic		0.59	0.48	0.42	0.51
P-Value*		N/A	0.24	0.31	0.19
Cr. Value @ 0.750*		N/A	0.26	0.26	0.26

Cr. Value @ 0.500*		N/A	0.35	0.34	0.34
Cr. Value @ 0.250*		N/A	0.47	0.46	0.45
Cr. Value @ 0.150*		N/A	0.57	0.55	0.55
Cr. Value @ 0.100*		N/A	0.64	0.62	0.61
Cr. Value @ 0.050*		N/A	0.77	0.72	0.71
Cr. Value @ 0.025*		N/A	0.89	0.85	0.84
Cr. Value @ 0.010*		N/A	1.07	0.98	0.95
Cr. Value @ 0.005*		N/A	1.17	1.13	1.11
Cr. Value @ 0.001*		N/A	1.27	1.19	1.17
Kolmogorov-Smirnov Test - [* Values estimated using a bootstrap with 1000 resamples.]					
K-S Statistic		0.23	0.21	0.18	0.21
P-Value*		0.19	0.11	0.21	0.07
Cr. Value @ 0.750*		0.14	0.13	0.13	0.13
Cr. Value @ 0.500*		0.17	0.16	0.15	0.15
Cr. Value @ 0.250*		0.21	0.18	0.18	0.18
Cr. Value @ 0.150*		0.24	0.20	0.19	0.19
Cr. Value @ 0.100*		0.26	0.21	0.21	0.21
Cr. Value @ 0.050*		0.28	0.23	0.23	0.22
Cr. Value @ 0.025*		0.31	0.26	0.25	0.24
Cr. Value @ 0.010*		0.32	0.27	0.26	0.26
Cr. Value @ 0.005*		0.34	0.30	0.28	0.28
Cr. Value @ 0.001*		0.35	0.31	0.30	0.30

ıution of fish, benthic invertebrates, and zooplankton

Gamma	Uniform	LogLogistic	Weibull	Pearson6	Expon
ma(3.6727,18.527)	kUniform(0,147.54)	tic(0,57.611,3.086)	ɔull(2.0105,77.331)	.8952,0.00022115)	RiskExpon(68.043)
MLE	LE (Bias Corrected)	MLE	MLE	MLE (Modified)	MLE
#5	#6	#7	#8	#9	#10
#5	#6	#7	#8	#9	#10
#6 (Tie)	#8	#1 (Tie)	#9 (Tie)	#1 (Tie)	#9 (Tie)
#7	#8	#3	#9	#2	#10
#7	#9	#4	#8	#2	#10
2.00	1.00	2.00	2.00	3.00	1.00
alpha	Max	beta	alpha	alpha1	beta
3.67	147.54	57.61	2.01	909,306.60	68.04
2.15	122.85	N/A	1.43	N/A	37.40
9.65	158.66	N/A	3.55	N/A	111.26
7.50	35.81	N/A	2.12	N/A	73.86
beta		alpha	beta	alpha2	
18.53		3.09	77.33	3.90	
6.41		N/A	56.59	N/A	
33.90		N/A	99.83	N/A	
27.48		N/A	43.25	N/A	
				beta	
				0.00	
				N/A	
				N/A	
				N/A	
-	-	-	-	-	-
+Infinity	147.54	+Infinity	+Infinity	+Infinity	+Infinity
68.04	73.77	68.91	68.53	69.46	68.04
49.52	-	46.33	54.92	41.08	-
61.98	73.77	57.61	64.44	56.37	47.16
35.51	42.59	53.03	35.65	50.45	68.04
1.04	-	38.71	0.62	6.15	2.00
4.63	1.80	+Infinity	3.23	+Infinity	9.00
21.85	7.38	22.19	17.65	26.45	3.49
28.32	14.75	28.27	25.25	30.74	7.17
33.39	22.13	32.84	31.32	34.20	11.06
37.86	29.51	36.76	36.67	37.33	15.18
42.01	36.88	40.35	41.61	40.33	19.57
46.00	44.26	43.78	46.31	43.31	24.27

49.92	51.64	47.14	50.87	46.34	29.31
53.85	59.02	50.52	55.37	49.49	34.76
57.85	66.39	53.98	59.87	52.81	40.68
61.98	73.77	57.61	64.44	56.37	47.16
66.30	81.15	61.48	69.14	60.26	54.33
70.89	88.52	65.70	74.04	64.58	62.35
75.85	95.90	70.41	79.22	69.50	71.43
81.32	103.28	75.81	84.81	75.22	81.92
87.51	110.65	82.25	90.97	82.10	94.33
94.75	118.03	90.28	97.98	90.78	109.51
103.68	125.41	101.07	106.33	102.45	129.09
115.65	132.78	117.42	117.09	120.06	156.67
134.95	140.16	149.58	133.46	154.00	203.84

142.05	142.17	142.66	142.93	144.47	148.50
142.24	142.47	142.84	143.12	143.98	148.80
(4.89)	(4.99)	(4.91)	(4.92)	(4.86)	(5.22)

2.71	4.00	1.00	5.29	1.00	5.29
0.05	0.09	N/A	0.01	N/A	0.02
0.14	0.57	N/A	0.14	N/A	0.57
0.57	1.00	N/A	0.57	N/A	1.00
1.00	2.71	N/A	1.00	N/A	1.86
1.86	3.57	N/A	1.86	N/A	2.29
2.29	4.00	N/A	2.29	N/A	2.71
2.71	5.29	N/A	2.71	N/A	4.43
4.43	6.14	N/A	4.43	N/A	5.29
4.43	7.00	N/A	4.43	N/A	6.14
5.29	9.57	N/A	5.29	N/A	7.00
7.00	9.57	N/A	7.00	N/A	7.00

-	-	-	-	-	-
48.62	49.18	46.02	49.36	45.32	27.59
7.00	8.00	6.00	8.00	6.00	1.00
4.67	4.67	4.67	4.67	4.67	4.67
48.62	49.18	46.02	49.36	45.32	27.59
77.61	98.36	72.12	81.03	71.30	74.75
2.00	2.00	3.00	1.00	3.00	8.00
4.67	4.67	4.67	4.67	4.67	4.67
77.61	98.36	72.12	81.03	71.30	74.75
+Infinity	147.54	+Infinity	+Infinity	+Infinity	+Infinity
5.00	4.00	5.00	5.00	5.00	5.00
4.67	4.67	4.67	4.67	4.67	4.67

0.61	0.87	0.50	0.66	0.42	1.63
0.10	0.33	N/A	0.07	N/A	0.02
0.26	0.42	N/A	0.26	N/A	0.34

0.34	0.64	N/A	0.34	N/A	0.47
0.46	1.04	N/A	0.45	N/A	0.71
0.55	1.40	N/A	0.54	N/A	0.88
0.62	1.69	N/A	0.60	N/A	1.03
0.72	2.14	N/A	0.70	N/A	1.28
0.85	2.72	N/A	0.85	N/A	1.56
0.99	3.43	N/A	0.97	N/A	1.92
1.13	3.71	N/A	1.04	N/A	2.07
1.19	4.47	N/A	1.12	N/A	2.94

0.24	0.24	0.20	0.25	0.18	0.30
0.04	0.29	N/A	0.02	N/A	0.02
0.13	0.17	N/A	0.13	N/A	0.15
0.15	0.20	N/A	0.15	N/A	0.18
0.18	0.25	N/A	0.18	N/A	0.21
0.19	0.28	N/A	0.19	N/A	0.23
0.21	0.30	N/A	0.20	N/A	0.25
0.23	0.34	N/A	0.22	N/A	0.28
0.25	0.37	N/A	0.24	N/A	0.30
0.26	0.41	N/A	0.25	N/A	0.33
0.28	0.44	N/A	0.26	N/A	0.34
0.30	0.47	N/A	0.28	N/A	0.38

Levy
iskLevy(0,51.6268)
MLE
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59.11
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144.48
187.74
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347.72
508.48
804.35
1,443.47
3,269.43
13,129.45
158.12
158.42
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7.43
0.00
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2.71
2.71
4.43
5.29
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7.00
8.71
-
55.16
8.00
4.67
55.16
278.27
6.00
4.67
278.27
+Infinity
-
4.67
3.47
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0.53
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1.47
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0.38
0.40

Table D1-19a. Fluorene saltwater acute toxicity data used to develop a species sensitivity distribution for fi

Species Common Name	Species Scientific Name	Organism Lifestage	Observed Duration Mean (Days)	Endpoint	Effect Measurement	Conc 1 Mean (Standardized)
Opossum Shrimp	Americamysis bahia	JV	4	LC50	Mortality	21
Opossum Shrimp	Americamysis bahia	JV	4	LC50	Mortality	43
Opossum Shrimp	Americamysis bahia	NR	4	LC50	Mortality	1.4
Opossum Shrimp	Americamysis bahia	NR	4	LC50	Mortality	2.8
Opossum Shrimp	Americamysis bahia	NR	4	LC50	Mortality	12
Opossum Shrimp	Americamysis bahia	NR	4	LC50	Mortality	22
Opossum Shrimp	Americamysis bahia	NR	4	LC50	Mortality	31
Opossum Shrimp	Americamysis bahia	NR	4	LC50	Mortality	58
Opossum Shrimp	Americamysis bahia	NR	4	LC50	Mortality	0.8
Opossum Shrimp	Americamysis bahia	NR	4	LC50	Mortality	40
Opossum Shrimp	Americamysis bahia	JV	4	LC50	Mortality	35
Amphipod	Ampelisca abdita	JV	4	LC50	Mortality	67
Purple-Spined Sea Urchin	Arbacia punctulata	MX	4	LC50	Mortality	1
Purple-Spined Sea Urchin	Arbacia punctulata	MX	4	LC50	Mortality	33
Scud	Corophium insidiosum	NR	4	LC50	Mortality	85
Sheepshead Minnow	Cyprinodon variegatus	JV	4	LC50	Mortality	560000
Sheepshead Minnow	Cyprinodon variegatus	NR	4	LC50	Mortality	0.8
Sheepshead Minnow	Cyprinodon variegatus	NR	4	LC50	Mortality	0.9
Sheepshead Minnow	Cyprinodon variegatus	NR	4	LC50	Mortality	127
Sheepshead Minnow	Cyprinodon variegatus	NR	4	LC50	Mortality	159
Pacific Sand Crab	Emerita analoga	JV	4	LC50	Mortality	74
Amphipod	Eohaustorius estuarius	NR	4	LC50	Mortality	70
Isopod	Excirolana sp.	NR	4	LC50	Mortality	70
Scud	Grandidierella japonica	NR	4	LC50	Mortality	36
American Lobster	Homarus americanus	LV	4	LC50	Mortality	0.6
American Lobster	Homarus americanus	LV	4	LC50	Mortality	13
American Lobster	Homarus americanus	LV	4	LC50	Mortality	24
American Lobster	Homarus americanus	LV	4	LC50	Mortality	317
Amphipod	Leptocheirus plumulosus	NR	4	LC50	Mortality	98
Inland Silverside	Menidia beryllina	NR	4	LC50	Mortality	2.3
Inland Silverside	Menidia beryllina	NR	4	LC50	Mortality	21
Inland Silverside	Menidia beryllina	NR	4	LC50	Mortality	30
Inland Silverside	Menidia beryllina	NR	4	LC50	Mortality	49
Inland Silverside	Menidia beryllina	NR	4	LC50	Mortality	103
Inland Silverside	Menidia beryllina	NR	4	LC50	Mortality	616
Inland Silverside	Menidia beryllina	NR	4	LC50	Mortality	620
Clam	Mulinia lateralis	JV	4	LC50	Mortality	1.8
Clam	Mulinia lateralis	JV	4	LC50	Mortality	3310
Clam	Mulinia lateralis	MX	4	LC50	Mortality	45
Polychaete Worm	Neanthes arenaceodentata	IM	4	LC50	Mortality	500
Polychaete Worm	Neanthes arenaceodentata	AD	4	LC50	Mortality	127
Daggerblade Grass Shrimp	Palaemonetes pugio	LV	4	LC50	Mortality	32.45
Daggerblade Grass Shrimp	Palaemonetes pugio	LV	4	LC50	Mortality	2.35
Grass Shrimp,Freshwater Prawn	Palaemonetes sp.	NR	4	LC50	Mortality	3.3
Grass Shrimp,Freshwater Prawn	Palaemonetes sp.	NR	4	LC50	Mortality	6.5
Grass Shrimp,Freshwater Prawn	Palaemonetes sp.	NR	4	LC50	Mortality	22
Grass Shrimp,Freshwater Prawn	Palaemonetes sp.	NR	4	LC50	Mortality	142
Winter Flounder	Pleuronectes americanus	NR	4	LC50	Mortality	0.1
Winter Flounder	Pleuronectes americanus	NR	4	LC50	Mortality	188
Winter Flounder	Pleuronectes americanus	NR	4	LC50	Mortality	1880
Amphipod	Rhepoxynius abronius	NR	4	LC50	Mortality	70
Clam	Ruditapes decussatus	LV	4	LC50	Mortality	8666.6

Table D1-19b. Summary of fluorene saltwater acute toxicity data used to develop a species sensitivity distri

Species Common Name	Species Scientific Name	SMAV	Rank	Percentile

Purple-Spined Sea Urchin	Arbacia punctulata	5.7	1	0.05
Daggerblade Grass Shrimp	Palaemonetes pugio	8.7	2	0.10
Opossum Shrimp	Americamysis bahia	13	3	0.15
American Lobster	Homarus americanus	16	4	0.20
Grass Shrimp,Freshwater Prawn	Palaemonetes sp.	16	5	0.25
Winter Flounder	Pleuronectes americanus	33	6	0.30
Scud	Grandidierella japonica	36	7	0.35
Inland Silverside	Menidia beryllina	60	8	0.40
Clam	Mulinia lateralis	64	9	0.45
Amphipod	Ampelisca abdita	67	10	0.50
Amphipod	Eohaustorius estuarius	70	11	0.55
Isopod	Excirolana sp.	70	12	0.60
Amphipod	Rhepoxynius abronius	70	13	0.65
Pacific Sand Crab	Emerita analoga	74	14	0.70
Scud	Corophium insidiosum	85	15	0.75
Sheepshead Minnow	Cyprinodon variegatus	96	16	0.80
Amphipod	Leptocheirus plumulosus	98	17	0.85
Polychaete Worm	Neanthes arenaceodentata	252	18	0.90
Clam	Ruditapes decussatus	8667	19	0.95

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Units	SMAV	Publication Year	Author
ug/L	13	1982	Turner,L.W.
ug/L	-	1982	Turner,L.W.
ug/L	-	1999	Spehar,R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox
ug/L	-	1999	Spehar,R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox
ug/L	-	1999	Spehar,R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox
ug/L	-	1999	Spehar,R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox
ug/L	-	1999	Spehar,R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox
ug/L	-	1999	Spehar,R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox
ug/L	-	1999	Spehar,R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox
ug/L	-	1978	Syracuse Research Corp.
ug/L	-	1982	Turner,L.W.
ug/L	67	1999	Spehar,R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox
ug/L	5.7	1999	Spehar,R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox
ug/L	-	1999	Spehar,R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox
ug/L	85	1997	Boese,B.L., J.O. Lamberson, R.C. Swartz, and R.J. Ozretich
ug/L	96	1981	Heitmuller,P.T., T.A. Hollister, and P.R. Parrish
ug/L	-	1999	Spehar,R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox
ug/L	-	1999	Spehar,R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox
ug/L	-	1999	Spehar,R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox
ug/L	-	1999	Spehar,R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox
ug/L	74	1997	Boese,B.L., J.O. Lamberson, R.C. Swartz, and R.J. Ozretich
ug/L	70	1997	Boese,B.L., J.O. Lamberson, R.C. Swartz, and R.J. Ozretich
ug/L	70	1997	Boese,B.L., J.O. Lamberson, R.C. Swartz, and R.J. Ozretich
ug/L	36	1997	Boese,B.L., J.O. Lamberson, R.C. Swartz, and R.J. Ozretich
ug/L	16	1999	Spehar,R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox
ug/L	-	1999	Spehar,R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox
ug/L	-	1999	Spehar,R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox
ug/L	-	1999	Spehar,R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox
ug/L	98	1997	Boese,B.L., J.O. Lamberson, R.C. Swartz, and R.J. Ozretich
ug/L	60	1999	Spehar,R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox
ug/L	-	1999	Spehar,R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox
ug/L	-	1999	Spehar,R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox
ug/L	-	1999	Spehar,R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox
ug/L	-	1999	Spehar,R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox
ug/L	-	1999	Spehar,R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox
ug/L	-	1999	Spehar,R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox
ug/L	64	1997	Pelletier,M.C., R.M. Burgess, K.T. Ho, A. Kuhn, R.A. McKinney, and S.A. Ryba
ug/L	-	1997	Pelletier,M.C., R.M. Burgess, K.T. Ho, A. Kuhn, R.A. McKinney, and S.A. Ryba
ug/L	-	1999	Spehar,R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox
ug/L	252	1978	Rossi,S.S., and J.M. Neff
ug/L	-	1999	Spehar,R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox
ug/L	8.7	2008	Chung,K.W., A.R. Chandler, and P.B. Key
ug/L	-	2008	Weinstein,J.E., and T.R. Garner
ug/L	16	1999	Spehar,R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox
ug/L	-	1999	Spehar,R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox
ug/L	-	1999	Spehar,R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox
ug/L	-	1999	Spehar,R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox
ug/L	33	1999	Spehar,R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox
ug/L	-	1999	Spehar,R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox
ug/L	-	1999	Spehar,R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox
ug/L	70	1997	Boese,B.L., J.O. Lamberson, R.C. Swartz, and R.J. Ozretich
ug/L	8667	2014	Fathallah,S.

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Table D1-20. Distribution fitting results for the fluorene saltwater acute species sensitivity distribu

	Input	Expon	InvGauss	LogLogistic	Lognorm
Fit					
Function		RiskExpon(515.85)	uss(515.85,29.107)	stic(0,50.887,1.381)	orm(177.23,522.67)
Method		MLE	MLE	MLE	MLE
Rankings By Fit Statistic [8 Valid Fits]					
Akaike (AIC)		#6	#3	#2	#5
Bayesian (BIC)		#6	#3	#2	#5
Chi-Sq Statistic		#6	#1 (Tie)	#1 (Tie)	#1 (Tie)
K-S Statistic		#6	#4	#1	#3
A-D Statistic		#6	#4	#1	#3
Parameters - [* Values unavailable without running a bootstrap]					
Num. Est. Parameters		1	2	2	2
Fitted Parameter #1		beta	mu	beta	mu
Fitted Value		515.8461	515.8461	50.8866	177.23
95% Lower Limit*		N/A	N/A	N/A	N/A
95% Upper Limit*		N/A	N/A	N/A	N/A
Conf. Interval Width*		N/A	N/A	N/A	N/A
Fitted Parameter #2			lambda	alpha	sigma
Fitted Value			29.107	1.381	522.67
95% Lower Limit*			N/A	N/A	N/A
95% Upper Limit*			N/A	N/A	N/A
Conf. Interval Width*			N/A	N/A	N/A
Fitted Parameter #3					
Fitted Value					
95% Lower Limit*					
95% Upper Limit*					
Conf. Interval Width*					
Distribution Statistics					
Minimum	5.7446	0	0	0	0
Maximum	8666.6	+Infinity	+Infinity	+Infinity	+Infinity
Mean	515.8461	515.8461	515.8461	151.8826	177.2251
Mode	9.0000 [est]	0	9.6989	13.499	5.8684
Median	67	357.5573	56.5699	50.8866	56.9103
Std. Deviation	1974.5495	515.8461	2171.6073	+Infinity	522.6699
Skewness	4.3534	2	12.6294	+Infinity	34.4987
Kurtosis	21.9658	9	268.8359	+Infinity	10947.7231
Percentiles					
5%	5.7446	26.4594	7.3956	6.0343	4.7694
10%	8.7326	54.3498	10.4135	10.366	8.2468
15%	13.0578	83.8348	13.4886	14.491	11.9327
20%	15.6078	115.1077	16.88	18.6482	16.0053
25%	16.0892	148.3997	20.7656	22.9672	20.5906
30%	32.8175	183.9894	25.3322	27.5513	25.8177

35%	36	222.2177	30.8126	32.5032	31.839
40%	59.9806	263.5074	37.519	37.9395	38.8463
45%	64.4819	308.3919	45.8909	44.0044	47.0904
50%	67	357.5573	56.5699	50.8866	56.9103
55%	70	411.9071	70.5289	58.8453	68.7779
60%	70	472.665	89.3051	68.2521	83.3744
65%	70	541.5466	115.4495	79.6676	101.7238
70%	74	621.0647	153.4593	93.9865	125.4483
75%	85	715.1145	211.8955	112.7457	157.2946
80%	95.9719	830.2223	308.8163	138.8582	202.3571
85%	98	978.6219	488.2705	178.6934	271.4208
90%	251.9921	1187.7795	885.0847	249.8022	392.7337
95%	8666.6	1545.3368	2134.3957	429.1247	679.0733
Information Criteria					
Akaike (AIC)		277.576	224.9852	223.8871	227.8374
Bayesian (BIC)		278.2852	226.1241	225.0259	228.9763
Chi-Squared Test - [* Values unavailable without running a bootstrap]					
Chi-Sq Statistic		42.2632	9	9	9
P-Value*		N/A	N/A	N/A	N/A
Cr. Value @ 0.750*		N/A	N/A	N/A	N/A
Cr. Value @ 0.500*		N/A	N/A	N/A	N/A
Cr. Value @ 0.250*		N/A	N/A	N/A	N/A
Cr. Value @ 0.150*		N/A	N/A	N/A	N/A
Cr. Value @ 0.100*		N/A	N/A	N/A	N/A
Cr. Value @ 0.050*		N/A	N/A	N/A	N/A
Cr. Value @ 0.025*		N/A	N/A	N/A	N/A
Cr. Value @ 0.010*		N/A	N/A	N/A	N/A
Cr. Value @ 0.005*		N/A	N/A	N/A	N/A
Cr. Value @ 0.001*		N/A	N/A	N/A	N/A
Chi-Sq Test (Binning Information)					
Bin #1 : Minimum		0	0	0	0
Bin #1 : Maximum		148.3997	20.7656	22.9672	20.5906
Bin #1 : Input		17	5	5	5
Bin #1 : Fit		4.75	4.75	4.75	4.75
Bin #2 : Minimum		148.3997	20.7656	22.9672	20.5906
Bin #2 : Maximum		357.5573	56.5699	50.8866	56.9103
Bin #2 : Input		1	2	2	2
Bin #2 : Fit		4.75	4.75	4.75	4.75
Bin #3 : Minimum		357.5573	56.5699	50.8866	56.9103
Bin #3 : Maximum		715.1145	211.8955	112.7457	157.2946
Bin #3 : Input		0	10	10	10
Bin #3 : Fit		4.75	4.75	4.75	4.75
Bin #4 : Minimum		715.1145	211.8955	112.7457	157.2946
Bin #4 : Maximum		+Infinity	+Infinity	+Infinity	+Infinity
Bin #4 : Input		1	2	2	2
Bin #4 : Fit		4.75	4.75	4.75	4.75
Anderson-Darling Test - [* Values unavailable without running a bootstrap]					

A-D Statistic		18.2936	1.1491	0.7634	1.1205
P-Value*		N/A	N/A	N/A	N/A
Cr. Value @ 0.750*		N/A	N/A	N/A	N/A
Cr. Value @ 0.500*		N/A	N/A	N/A	N/A
Cr. Value @ 0.250*		N/A	N/A	N/A	N/A
Cr. Value @ 0.150*		N/A	N/A	N/A	N/A
Cr. Value @ 0.100*		N/A	N/A	N/A	N/A
Cr. Value @ 0.050*		N/A	N/A	N/A	N/A
Cr. Value @ 0.025*		N/A	N/A	N/A	N/A
Cr. Value @ 0.010*		N/A	N/A	N/A	N/A
Cr. Value @ 0.005*		N/A	N/A	N/A	N/A
Cr. Value @ 0.001*		N/A	N/A	N/A	N/A
Kolmogorov-Smirnov Test - [* Values unavailable without running a bootstrap]					
K-S Statistic		0.7217	0.2761	0.1881	0.2539
P-Value*		N/A	N/A	N/A	N/A
Cr. Value @ 0.750*		N/A	N/A	N/A	N/A
Cr. Value @ 0.500*		N/A	N/A	N/A	N/A
Cr. Value @ 0.250*		N/A	N/A	N/A	N/A
Cr. Value @ 0.150*		N/A	N/A	N/A	N/A
Cr. Value @ 0.100*		N/A	N/A	N/A	N/A
Cr. Value @ 0.050*		N/A	N/A	N/A	N/A
Cr. Value @ 0.025*		N/A	N/A	N/A	N/A
Cr. Value @ 0.010*		N/A	N/A	N/A	N/A
Cr. Value @ 0.005*		N/A	N/A	N/A	N/A
Cr. Value @ 0.001*		N/A	N/A	N/A	N/A

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Pearson6	Triang	Uniform	Levy
58,0.97414,7.9338)	ıg(0,5.7446,9125.4)	kUniform(0,9148.1)	RiskLevy(0,27.5524)
MLE (Modified)	MLE	ILE (Bias Corrected)	MLE
#4	#7	#8	#1
#4	#7	#8	#1
#1 (Tie)	#7 (Tie)	#7 (Tie)	#5
#2	#7	#8	#5
#2	#7	#8	#5
3	2	1	1
alpha1	M. likely	Max	c
4.3458	5.7446	9148.0778	27.5524
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
alpha2	Max		
0.97414	9125.3572		
N/A	N/A		
N/A	N/A		
N/A	N/A		
beta			
7.9338			
N/A			
N/A			
N/A			
0	0	0	0
+Infinity	9125.3572	9148.0778	+Infinity
+Infinity	3043.7006	4574.0389	+Infinity
13.4463	5.7446	0	9.1841
47.5934	2674.7866	4574.0389	60.5631
+Infinity	2150.1906	2640.8226	+Infinity
+Infinity	0.5657	0	+Infinity
+Infinity	2.4	1.8	+Infinity
8.1532	233.8592	457.4039	7.1724
11.6067	471.0086	914.8078	10.1837
14.8432	714.8421	1372.2117	13.2959
18.1569	965.959	1829.6156	16.7759
21.6966	1225.0539	2287.0194	20.8209
25.5823	1492.9391	2744.4233	25.6493

29.9396	1770.5751	3201.8272	31.544
34.9188	2059.1111	3659.2311	38.8978
40.7147	2359.9417	4116.635	48.2823
47.5934	2674.7866	4574.0389	60.5631
55.9351	3005.8086	5031.4428	77.109
66.3078	3355.7914	5488.8467	100.1919
79.6033	3728.4226	5946.2506	133.8142
97.3105	4128.7667	6403.6544	185.573
122.1177	4564.115	6861.0583	271.3689
159.4247	5045.6581	7318.4622	429.2665
221.9029	5592.2342	7775.8661	770.3555
347.8628	6240.5743	8233.27	1744.8393
731.2433	7085.5077	8690.6739	7006.9639

225.8613	331.1321	348.8447	223.5134
227.0946	332.271	349.5538	224.2226

9	49.4211	49.4211	9.4211
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

0	0	0	0
21.6966	1225.0539	2287.0194	20.8209
5	18	18	5
4.75	4.75	4.75	4.75
21.6966	1225.0539	2287.0194	20.8209
47.5934	2674.7866	4574.0389	60.5631
2	0	0	3
4.75	4.75	4.75	4.75
47.5934	2674.7866	4574.0389	60.5631
122.1177	4564.115	6861.0583	271.3689
10	0	0	10
4.75	4.75	4.75	4.75
122.1177	4564.115	6861.0583	271.3689
+Infinity	9125.3572	9148.0778	+Infinity
2	1	1	1
4.75	4.75	4.75	4.75

0.8013	53.1804	63.8873	1.3387
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

0.2025	0.8935	0.9198	0.2988
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

Table D1-21a. Benzylbutylphthalate freshwater acute toxicity data used to develop a species sensitivity distri

Species Common Name	Species Scientific Name	Control	Organism Lifestage	Exposure Type	Observed Duration Mean (Days)	Endpoint	Effect
Sheepshead Minnow	Cyprinodon variegatus	C	JV	S	4	LC50	Mortality
Water Flea	Daphnia magna	I	NR	S	2	LC50	Mortality
Water Flea	Daphnia magna	M	NR	S	2	LC50	Mortality
Scud	Gammarus minus	M	NR	S	4	LC50	Mortality
Bluegill	Lepomis macrochirus	C	YY	S	4	LC50	Mortality
Water Flea	Moina macrocopa	C	NB	S	2	LC50	Mortality
Rainbow Trout	Oncorhynchus mykiss	C	JV	F	4	LC50	Mortality
Pond Snail, Pneumonate Snail	Physa heterostropha	M	IM	S	4	LC50	Mortality
Fathead Minnow	Pimephales promelas	C	JV	F	4	LC50	Mortality
Fathead Minnow	Pimephales promelas	C	JV	S	4	LC50	Mortality
Fathead Minnow	Pimephales promelas	I	NR	F	4	LC50	Mortality

Table D1-21b. Summary of Benzylbutylphthalate freshwater acute toxicity data used to develop a species sen

Species Common Name	Species Scientific Name	SMAV	Rank	Percentile
Sheepshead Minnow	Cyprinodon variegatus	680	1	0.11
Rainbow Trout	Oncorhynchus mykiss	820	2	0.22
Fathead Minnow	Pimephales promelas	1395	3	0.33
Water Flea	Moina macrocopa	3690	4	0.44
Scud	Gammarus minus	8680	5	0.56
Water Flea	Daphnia magna	12869	6	0.67
Pond Snail, Pneumonate Snail	Physa heterostropha	23000	7	0.78
Bluegill	Lepomis macrochirus	43000	8	0.89

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Conc 1 Mean (Standardized)	Units	SMAV	Publication Year
680	ug/L	680	1995
1800	ug/L	12869	1986
92000	ug/L	-	1980
8680	ug/L	8680	1983
43000	ug/L	43000	1981
3690	ug/L	3690	2011
820	ug/L	820	1995
23000	ug/L	23000	1983
1500	ug/L	1395	1995
780	ug/L	-	1995
2320	ug/L	-	1980

sitivity distribution for fish, benthic

es, and zooplankton

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Horne,J.D., and B.R. Oblad
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Horne,J.D., and B.R. Oblad
Adams,W.J., G.R. Biddinger, K.A. Robillard, and J.W. Gorsuch
Adams,W.J., G.R. Biddinger, K.A. Robillard, and J.W. Gorsuch
Gledhill,W.E., R.G. Kaley, W.J. Adams, O. Hicks, P.R. Michael, V.W. Saeger, and G.A. LeBlanc

invertebrates, and zooplankton

Table D1-22. Distribution fitting results for the benzylbutylphthalate freshwater acute species

	Input	Expon	InvGauss	LogLogistic
Fit				
Function		RiskExpon(11766)	gauss(11766,2455.7)	stic(0,4919.9,1.1036)
Method		MLE	MLE	MLE
Rankings By Fit Statistic [9 Valid Fits]				
Akaike (AIC)		#2	#3	#6
Bayesian (BIC)		#2	#3	#6
Chi-Sq Statistic		#1 (Tie)	#7	#1 (Tie)
K-S Statistic		#7	#6	#2
A-D Statistic		#7	#6	#2
Parameters - [* Values unavailable without running a bootstrap]				
Num. Est. Parameters		1.00	2.00	2.00
Fitted Parameter #1		beta	mu	beta
Fitted Value		11,766.69	11,766.69	4,919.89
95% Lower Limit*		N/A	N/A	N/A
95% Upper Limit*		N/A	N/A	N/A
Conf. Interval Width*		N/A	N/A	N/A
Fitted Parameter #2			lambda	alpha
Fitted Value			2,455.69	1.10
95% Lower Limit*			N/A	N/A
95% Upper Limit*			N/A	N/A
Conf. Interval Width*			N/A	N/A
Fitted Parameter #3				
Fitted Value				
95% Lower Limit*				
95% Upper Limit*				
Conf. Interval Width*				
Distribution Statistics				
Minimum	680.00	-	-	-
Maximum	43,000.00	+Infinity	+Infinity	+Infinity
Mean	11,766.69	11,766.69	11,766.69	48,166.02
Mode	38.0000 [est]	-	814.64	321.59
Median	6,185.00	8,156.05	3,647.42	4,919.89
Std. Deviation	14,774.49	11,766.69	25,756.97	+Infinity
Skewness	1.63	2.00	6.57	+Infinity
Kurtosis	5.39	9.00	74.87	+Infinity
Percentiles				
5%	680.00	603.55	586.54	341.42
10%	680.00	1,239.74	809.60	671.93
15%	820.00	1,912.31	1,029.56	1,021.81
20%	820.00	2,625.66	1,264.72	1,400.99
25%	820.00	3,385.07	1,525.82	1,818.19
30%	1,394.95	4,196.88	1,822.75	2,283.15

35%	1,394.95	5,068.89	2,166.78	2,807.74
40%	3,690.00	6,010.73	2,572.01	3,407.23
45%	3,690.00	7,034.56	3,057.04	4,101.94
50%	3,690.00	8,156.05	3,647.42	4,919.89
55%	8,680.00	9,395.79	4,379.36	5,900.95
60%	8,680.00	10,781.71	5,306.14	7,104.12
65%	12,868.57	12,352.93	6,509.24	8,620.93
70%	12,868.57	14,166.77	8,119.65	10,601.72
75%	12,868.57	16,312.10	10,361.53	13,312.85
80%	23,000.00	18,937.76	13,652.02	17,277.35
85%	23,000.00	22,322.82	18,866.95	23,688.60
90%	43,000.00	27,093.80	28,234.97	36,023.56
95%	43,000.00	35,249.85	50,005.82	70,896.26
Information Criteria				
Akaike (AIC)		168.64	170.44	171.93
Bayesian (BIC)		168.05	168.20	169.69
Chi-Squared Test - [* Values unavailable without running a bootstrap]				
Chi-Sq Statistic		-	0.50	-
P-Value*		N/A	N/A	N/A
Cr. Value @ 0.750*		N/A	N/A	N/A
Cr. Value @ 0.500*		N/A	N/A	N/A
Cr. Value @ 0.250*		N/A	N/A	N/A
Cr. Value @ 0.150*		N/A	N/A	N/A
Cr. Value @ 0.100*		N/A	N/A	N/A
Cr. Value @ 0.050*		N/A	N/A	N/A
Cr. Value @ 0.025*		N/A	N/A	N/A
Cr. Value @ 0.010*		N/A	N/A	N/A
Cr. Value @ 0.005*		N/A	N/A	N/A
Cr. Value @ 0.001*		N/A	N/A	N/A
Chi-Sq Test (Binning Information)				
Bin #1 : Minimum		-	-	-
Bin #1 : Maximum		8,156.05	3,647.42	4,919.89
Bin #1 : Input		4.00	3.00	4.00
Bin #1 : Fit		4.00	4.00	4.00
Bin #2 : Minimum		8,156.05	3,647.42	4,919.89
Bin #2 : Maximum		+Infinity	+Infinity	+Infinity
Bin #2 : Input		4.00	5.00	4.00
Bin #2 : Fit		4.00	4.00	4.00
Anderson-Darling Test - [* Values unavailable without running a bootstrap]				
A-D Statistic		0.74	0.41	0.28
P-Value*		N/A	N/A	N/A
Cr. Value @ 0.750*		N/A	N/A	N/A
Cr. Value @ 0.500*		N/A	N/A	N/A
Cr. Value @ 0.250*		N/A	N/A	N/A
Cr. Value @ 0.150*		N/A	N/A	N/A
Cr. Value @ 0.100*		N/A	N/A	N/A
Cr. Value @ 0.050*		N/A	N/A	N/A

	Cr. Value @ 0.025*		N/A	N/A	N/A
	Cr. Value @ 0.010*		N/A	N/A	N/A
	Cr. Value @ 0.005*		N/A	N/A	N/A
	Cr. Value @ 0.001*		N/A	N/A	N/A
Kolmogorov-Smirnov Test - [* Values unavailable without running a bootstrap]					
	K-S Statistic		0.26	0.21	0.18
	P-Value*		N/A	N/A	N/A
	Cr. Value @ 0.750*		N/A	N/A	N/A
	Cr. Value @ 0.500*		N/A	N/A	N/A
	Cr. Value @ 0.250*		N/A	N/A	N/A
	Cr. Value @ 0.150*		N/A	N/A	N/A
	Cr. Value @ 0.100*		N/A	N/A	N/A
	Cr. Value @ 0.050*		N/A	N/A	N/A
	Cr. Value @ 0.025*		N/A	N/A	N/A
	Cr. Value @ 0.010*		N/A	N/A	N/A
	Cr. Value @ 0.005*		N/A	N/A	N/A
	Cr. Value @ 0.001*		N/A	N/A	N/A

; sensitivity distribution of fish, benthic invertebrates, and zooplankton

Lognorm	Pearson6	Triang	Uniform	Weibull	Levy
rm(14203.7,38903.2)	.4406,1.1026,3267.1)	kTriang(0,680,49564)	RiskUniform(0,49142)	eibull(0.77056,10069)	RiskLevy(0,2031.681)
MLE	MLE (Modified)	MLE	MLE (Bias Corrected)	MLE	MLE
#4	#9	#7	#8	#5	#1
#4	#7	#8	#9	#5	#1
#1 (Tie)	#1 (Tie)	#8	#9	#1 (Tie)	#1 (Tie)
#3	#5	#8	#9	#4	#1
#3	#5	#8	#9	#1	#4
2.00	3.00	2.00	1.00	2.00	1.00
mu	alpha1	M. likely	Max	alpha	c
14,203.70	1.44	680.00	49,142.86	0.77	2,031.68
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
sigma	alpha2	Max		beta	
38,903.20	1.10	49,564.38		10,069.21	
N/A	N/A	N/A		N/A	
N/A	N/A	N/A		N/A	
N/A	N/A	N/A		N/A	
	beta				
	3,267.11				
	N/A				
	N/A				
	N/A				
-	-	-	-	-	-
+Infinity	+Infinity	49,564.38	49,142.86	+Infinity	+Infinity
14,203.68	45,858.26	16,748.13	24,571.43	11,732.13	+Infinity
572.97	684.64	680.00	-	-	677.23
4,871.29	4,626.18	14,758.32	24,571.43	6,257.84	4,465.86
38,903.16	+Infinity	11,603.13	14,186.32	15,405.01	+Infinity
28.76	+Infinity	0.57	-	2.99	+Infinity
6,667.49	+Infinity	2.40	1.80	17.53	+Infinity
439.11	426.08	1,587.53	2,457.14	213.28	528.88
747.13	752.92	2,867.15	4,914.29	542.83	750.93
1,069.39	1,082.86	4,182.83	7,371.43	952.65	980.42
1,422.04	1,432.74	5,537.81	9,828.57	1,437.51	1,237.04
1,815.93	1,813.49	6,935.83	12,285.71	1,998.90	1,535.31
2,261.84	2,235.49	8,381.29	14,742.86	2,642.11	1,891.35

2,772.22	2,710.55	9,879.36	17,200.00	3,375.59	2,326.02
3,362.62	3,253.33	11,436.25	19,657.14	4,211.17	2,868.28
4,053.26	3,883.10	13,059.47	22,114.29	5,164.79	3,560.28
4,871.29	4,626.18	14,758.32	24,571.43	6,257.84	4,465.86
5,854.43	5,519.99	16,544.45	27,028.57	7,519.29	5,685.93
7,056.85	6,619.84	18,432.89	29,485.71	8,989.25	7,388.04
8,559.76	8,011.55	20,443.54	31,942.86	10,725.03	9,867.31
10,491.25	9,836.26	22,603.72	34,400.00	12,812.00	13,683.95
13,067.37	12,344.36	24,952.78	36,857.14	15,384.75	20,010.44
16,686.94	16,028.18	27,551.10	39,314.29	18,672.82	31,653.64
22,189.76	22,012.97	30,500.32	41,771.43	23,115.16	56,805.17
31,760.76	33,582.83	33,998.64	44,228.57	29,721.17	128,662.53
54,040.40	66,462.33	38,557.74	46,685.71	41,819.98	516,685.82

171.05	177.40	174.61	175.51	171.38	168.22
168.81	171.64	172.37	174.92	169.14	167.64

-	-	2.00	4.50	-	-
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A

-	-	-	-	-	-
4,871.29	4,626.18	14,758.32	24,571.43	6,257.84	4,465.86
4.00	4.00	6.00	7.00	4.00	4.00
4.00	4.00	4.00	4.00	4.00	4.00
4,871.29	4,626.18	14,758.32	24,571.43	6,257.84	4,465.86
+Infinity	+Infinity	49,564.38	49,142.86	+Infinity	+Infinity
4.00	4.00	2.00	1.00	4.00	4.00
4.00	4.00	4.00	4.00	4.00	4.00

0.29	0.32	2.73	4.88	0.26	0.32
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A

N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A

0.18	0.18	0.37	0.49	0.18	0.17
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A

Table D1-23a. Bis(2-ethylhexyl)phthalate freshwater acute toxicity data used to develop a species sensitivity d

Species Common Name	Species Scientific Name	Organism Lifestage	Observed Duration Mean (Days)	Endpoint	Effect	Conc 1 Mean (Standardized)	Units	SMAV
Opossum Shrimp	Americamysis bahia	NR	4	LC50	Mortality	370	ug/L	370
Goldfish	Carassius auratus	MX	4	LC50	Mortality	6180	ug/L	60327
Goldfish	Carassius auratus	EG	4	LC50	Mortality	186000	ug/L	-
Goldfish	Carassius auratus	EG	4	LC50	Mortality	191000	ug/L	-
Sheepshead Minnow	Cyprinodon variegatus	JV	4	LC50	Mortality	170	ug/L	170
Zebra Danio	Danio rerio	NR	4	LC50	Mortality	320	ug/L	320
Water Flea	Daphnia magna	NR	2	LC50	Mortality	11000	ug/L	3479
Water Flea	Daphnia magna	NR	2	NOEC	Mortality	1100	ug/L	-
Calanoid Copepod	Eurytemora affinis	NU	4	LC50	Mortality	511	ug/L	511
Scud	Gammarus pseudolimnaeus	IM	4	LC50	Mortality	32000	ug/L	32000
Threespine Stickleback	Gasterosteus aculeatus	NR	4	LC50	Mortality	300	ug/L	300
Channel Catfish	Ictalurus punctatus	MX	4	LC50	Mortality	690	ug/L	2399
Channel Catfish	Ictalurus punctatus	NR	4	LC50	Mortality	200	ug/L	-
Channel Catfish	Ictalurus punctatus	NR	4	LC50	Mortality	100000	ug/L	-
Flagfish	Jordanella floridae	NR	4	LC50	Mortality	320	ug/L	320
Bluegill	Lepomis macrochirus	JV	4	LC50	Mortality	200	ug/L	7450
Bluegill	Lepomis macrochirus	YY	4	LC50	Mortality	770000	ug/L	-
Bluegill	Lepomis macrochirus	NR	4	LC50	Mortality	200	ug/L	-
Bluegill	Lepomis macrochirus	NR	4	LC50	Mortality	100000	ug/L	-
Largemouth Bass	Micropterus salmoides	MX	4	LC50	Mortality	32900	ug/L	37217
Largemouth Bass	Micropterus salmoides	MX	4	LC50	Mortality	42100	ug/L	-
Coho Salmon	Oncorhynchus kisutch	NR	4	LC50	Mortality	100000	ug/L	100000
Rainbow Trout	Oncorhynchus mykiss	JV	4	LC50	Mortality	320	ug/L	28568
Rainbow Trout	Oncorhynchus mykiss	MX	4	LC50	Mortality	139500	ug/L	-
Rainbow Trout	Oncorhynchus mykiss	MX	4	LC50	Mortality	149200	ug/L	-
Rainbow Trout	Oncorhynchus mykiss	NR	4	LC50	Mortality	100000	ug/L	-
Japanese Medaka	Oryzias latipes	NR	4	LC50	Mortality	320	ug/L	320
Fathead Minnow	Pimephales promelas	JV	4	LC50	Mortality	670	ug/L	3300
Fathead Minnow	Pimephales promelas	JV	4	LC50	Mortality	160	ug/L	-
Fathead Minnow	Pimephales promelas	NR	4	LC50	Mortality	1106200	ug/L	-
Fathead Minnow	Pimephales promelas	FI	4	LC50	Mortality	1000	ug/L	-

Table D1-23b. Summary of bis(2-ethylhexyl)phthalate freshwater acute toxicity data used to develop a species

Species Common Name	Species Scientific Name	SMAV	Rank	Percentile
Sheepshead Minnow	Cyprinodon variegatus	170	1	0.059
Threespine Stickleback	Gasterosteus aculeatus	300	2	0.118
Zebra Danio	Danio rerio	320	3	0.176
Flagfish	Jordanella floridae	320	4	0.235
Japanese Medaka	Oryzias latipes	320	5	0.294
Opossum Shrimp	Americamysis bahia	370	6	0.353
Calanoid Copepod	Eurytemora affinis	511	7	0.412
Channel Catfish	Ictalurus punctatus	2399	8	0.471
Fathead Minnow	Pimephales promelas	3300	9	0.529
Water Flea	Daphnia magna	3479	10	0.588
Bluegill	Lepomis macrochirus	7450	11	0.647
Rainbow Trout	Oncorhynchus mykiss	28568	12	0.706
Scud	Gammarus pseudolimnaeus	32000	13	0.765
Largemouth Bass	Micropterus salmoides	37217	14	0.824
Goldfish	Carassius auratus	60327	15	0.882
Silver Salmon	Oncorhynchus kisutch	100000	16	0.941

istribution for fish, benthic invertebrates, and zooplankton

Publication Year	Author
1995	Adams,W.J., G.R. Biddinger, K.A. Robillard, and J.W. Gorsuch
1978	Birge,W.J., J.A. Black, and A.G. Westerman
1979	Birge,W.J., J.A. Black, and D.M. Bruser
1979	Birge,W.J., J.A. Black, and D.M. Bruser
1995	Adams,W.J., G.R. Biddinger, K.A. Robillard, and J.W. Gorsuch
1984	Canton,J.H., D.M.M. Adema, and D. De Zwart
1980	LeBlanc,G.A.
1980	LeBlanc,G.A.
2005	Forget-Leray,J., I. Landriau, C. Minier, and F. Leboulenger
1986	Mayer,F.L.,Jr., and M.R. Ellersieck
1989	Van den Dikkenberg,R.P., H.H. Canton, L.A.M. Mathijssen-Spiekman, and C.J. Roghair
1978	Birge,W.J., J.A. Black, and A.G. Westerman
1986	Mayer,F.L.,Jr., and M.R. Ellersieck
1986	Mayer,F.L.,Jr., and M.R. Ellersieck
1981	Adema,D.M.M., J.H. Canton, W. Slooff, and A.O. Hanstveit
1995	Adams,W.J., G.R. Biddinger, K.A. Robillard, and J.W. Gorsuch
1981	Buccafusco,R.J., S.J. Ells, and G.A. LeBlanc
1986	Mayer,F.L.,Jr., and M.R. Ellersieck
1986	Mayer,F.L.,Jr., and M.R. Ellersieck
1978	Birge,W.J., J.A. Black, and A.G. Westerman
1978	Birge,W.J., J.A. Black, and A.G. Westerman
1986	Mayer,F.L.,Jr., and M.R. Ellersieck
1995	Adams,W.J., G.R. Biddinger, K.A. Robillard, and J.W. Gorsuch
1978	Birge,W.J., J.A. Black, and A.G. Westerman
1978	Birge,W.J., J.A. Black, and A.G. Westerman
1986	Mayer,F.L.,Jr., and M.R. Ellersieck
1981	Adema,D.M.M., J.H. Canton, W. Slooff, and A.O. Hanstveit
1995	Adams,W.J., G.R. Biddinger, K.A. Robillard, and J.W. Gorsuch
1995	Adams,W.J., G.R. Biddinger, K.A. Robillard, and J.W. Gorsuch
1982	Birge,W.J., J.A. Black, S.T. Ballard, and W.E. McDonnell
1986	Mayer,F.L.,Jr., and M.R. Ellersieck

sensitivity distribution for fish, benthic invertebrates, and zooplankton

Table D1-24. Distribution fitting results for the bis(2-ethylhexyl)phthalate freshwater acute sp

	Input	BetaGeneral	Expon	InvGauss
Fit				
Function	taGeneral(0.31281,1.6539,0,118854)		RiskExpon(17315)	gauss(17315,678.32)
Method		MLE (Modified)	MLE	MLE
Rankings By Fit Statistic [9 Valid Fits]				
Akaike (AIC)		#5	#7	#2
Bayesian (BIC)		#5	#7	#2
Chi-Sq Statistic		#1 (Tie)	#7	#6
K-S Statistic		#4	#7	#5
A-D Statistic		#5	#7	#6
Parameters - [* Values unavailable without running a bootstrap]				
Num. Est. Parameters		3.00	1.00	2.00
Fitted Parameter #1		alpha1	beta	mu
Fitted Value		0.31	17,315.57	17,315.57
95% Lower Limit*		N/A	N/A	N/A
95% Upper Limit*		N/A	N/A	N/A
Conf. Interval Width*		N/A	N/A	N/A
Fitted Parameter #2		alpha2		lambda
Fitted Value		1.65		678.32
95% Lower Limit*		N/A		N/A
95% Upper Limit*		N/A		N/A
Conf. Interval Width*		N/A		N/A
Fitted Parameter #3		Max		
Fitted Value		118,854.66		
95% Lower Limit*		N/A		
95% Upper Limit*		N/A		
Conf. Interval Width*		N/A		
Distribution Statistics				
Minimum	170.00	-	-	-
Maximum	100,000.00	118,854.66	+Infinity	+Infinity
Mean	17,315.57	18,903.92	17,315.57	17,315.57
Mode	36.6667 [est]	-	-	226.07
Median	2,849.28	7,020.64	12,002.24	1,366.57
Std. Deviation	28,463.24	25,236.53	17,315.57	87,485.82
Skewness	2.03	1.62	2.00	15.16
Kurtosis	7.05	4.93	9.00	385.91
Percentiles				
5%	170.00	4.33	888.17	173.62
10%	300.00	39.72	1,824.38	245.07
15%	320.00	145.27	2,814.11	318.19
20%	320.00	364.74	3,863.86	399.16
25%	320.00	745.56	4,981.38	492.32
30%	320.00	1,338.73	6,176.03	602.30

35%	370.00	2,199.30	7,459.25	734.94
40%	511.00	3,387.31	8,845.24	898.15
45%	2,398.61	4,969.31	10,351.89	1,103.17
50%	2,398.61	7,020.64	12,002.24	1,366.57
55%	3,299.95	9,628.75	13,826.61	1,713.77
60%	3,478.51	12,898.29	15,866.09	2,185.46
65%	7,449.68	16,958.94	18,178.27	2,850.22
70%	28,567.57	21,978.33	20,847.47	3,831.27
75%	28,567.57	28,184.55	24,004.47	5,368.66
80%	32,000.00	35,909.31	27,868.33	7,984.04
85%	37,216.80	45,681.59	32,849.71	13,001.07
90%	60,326.98	58,473.77	39,870.57	24,702.76
95%	100,000.00	76,617.12	51,872.81	65,097.42
Information Criteria				
Akaike (AIC)		334.98	346.59	326.80
Bayesian (BIC)		335.30	347.07	327.42
Chi-Squared Test - [* Values unavailable without running a bootstrap]				
Chi-Sq Statistic		0.88	7.63	5.38
P-Value*		N/A	N/A	N/A
Cr. Value @ 0.750*		N/A	N/A	N/A
Cr. Value @ 0.500*		N/A	N/A	N/A
Cr. Value @ 0.250*		N/A	N/A	N/A
Cr. Value @ 0.150*		N/A	N/A	N/A
Cr. Value @ 0.100*		N/A	N/A	N/A
Cr. Value @ 0.050*		N/A	N/A	N/A
Cr. Value @ 0.025*		N/A	N/A	N/A
Cr. Value @ 0.010*		N/A	N/A	N/A
Cr. Value @ 0.005*		N/A	N/A	N/A
Cr. Value @ 0.001*		N/A	N/A	N/A
Chi-Sq Test (Binning Information)				
Bin #1 : Minimum		-	-	-
Bin #1 : Maximum		1,879.14	7,020.86	687.77
Bin #1 : Input		7.00	10.00	7.00
Bin #1 : Fit		5.33	5.33	5.33
Bin #2 : Minimum		1,879.14	7,020.86	687.77
Bin #2 : Maximum		18,515.82	19,023.10	3,133.56
Bin #2 : Input		4.00	1.00	1.00
Bin #2 : Fit		5.33	5.33	5.33
Bin #3 : Minimum		18,515.82	19,023.10	3,133.56
Bin #3 : Maximum		118,854.66	+Infinity	+Infinity
Bin #3 : Input		5.00	5.00	8.00
Bin #3 : Fit		5.33	5.33	5.33
Anderson-Darling Test - [* Values unavailable without running a bootstrap]				
A-D Statistic		1.03	8.26	1.35
P-Value*		N/A	N/A	N/A
Cr. Value @ 0.750*		N/A	N/A	N/A
Cr. Value @ 0.500*		N/A	N/A	N/A

	Cr. Value @ 0.250*		N/A	N/A	N/A
	Cr. Value @ 0.150*		N/A	N/A	N/A
	Cr. Value @ 0.100*		N/A	N/A	N/A
	Cr. Value @ 0.050*		N/A	N/A	N/A
	Cr. Value @ 0.025*		N/A	N/A	N/A
	Cr. Value @ 0.010*		N/A	N/A	N/A
	Cr. Value @ 0.005*		N/A	N/A	N/A
	Cr. Value @ 0.001*		N/A	N/A	N/A
Kolmogorov-Smirnov Test - [* Values unavailable without running a bootstrap]					
	K-S Statistic		0.22	0.44	0.22
	P-Value*		N/A	N/A	N/A
	Cr. Value @ 0.750*		N/A	N/A	N/A
	Cr. Value @ 0.500*		N/A	N/A	N/A
	Cr. Value @ 0.250*		N/A	N/A	N/A
	Cr. Value @ 0.150*		N/A	N/A	N/A
	Cr. Value @ 0.100*		N/A	N/A	N/A
	Cr. Value @ 0.050*		N/A	N/A	N/A
	Cr. Value @ 0.025*		N/A	N/A	N/A
	Cr. Value @ 0.010*		N/A	N/A	N/A
	Cr. Value @ 0.005*		N/A	N/A	N/A
	Cr. Value @ 0.001*		N/A	N/A	N/A

ɔecies sensitivity distribution of fish, benthic invertebrates, and zooplankton

LogLogistic	Lognorm	Pearson6	Triang	Uniform	Levy
tic(0,2522.3,0.74418)	ɔrm(29258,305677.1)	).44327,1.487,27753)	Triang(0,170,104481)	iskUniform(0,106666)	RiskLevy(0,652.7497)
MLE	MLE	MLE (Modified)	MLE	MLE (Bias Corrected)	MLE
#4	#3	#6	#8	#9	#1
#4	#3	#6	#8	#9	#1
#3 (Tie)	#3 (Tie)	#1 (Tie)	#8	#9	#3 (Tie)
#2	#3	#6	#8	#9	#1
#1	#2	#3	#8	#9	#4
2.00	2.00	3.00	2.00	1.00	1.00
beta	mu	alpha1	M. likely	Max	c
2,522.29	29,258.00	0.44	170.00	106,666.67	652.75
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
alpha	sigma	alpha2	Max		
0.74	305,677.10	1.49	104,481.81		
N/A	N/A	N/A	N/A		
N/A	N/A	N/A	N/A		
N/A	N/A	N/A	N/A		
		beta			
		27,753.53			
		N/A			
		N/A			
		N/A			
-	-	-	-	-	-
+Infinity	+Infinity	+Infinity	104,481.81	106,666.67	+Infinity
+Infinity	29,257.95	25,262.16	34,883.94	53,333.33	+Infinity
-	25.31	-	170.00	-	217.58
2,522.29	2,787.69	4,340.10	30,662.14	53,333.33	1,434.82
+Infinity	305,677.10	+Infinity	24,606.59	30,792.01	+Infinity
+Infinity	1,171.74	+Infinity	0.57	-	+Infinity
+Infinity	149,938,940.27	+Infinity	2.40	1.80	+Infinity
48.25	78.75	19.88	2,728.42	5,333.33	169.92
131.68	173.14	95.30	5,442.33	10,666.67	241.26
245.19	294.59	239.51	8,232.74	16,000.00	315.00
391.53	449.45	463.24	11,106.50	21,333.33	397.44
576.31	645.75	777.77	14,071.55	26,666.67	493.27
807.83	894.15	1,196.47	17,137.20	32,000.00	607.66

1,097.82	1,208.88	1,736.14	20,314.44	37,333.33	747.32
1,462.75	1,609.40	2,418.64	23,616.42	42,666.67	921.54
1,926.13	2,122.79	3,273.23	27,059.09	48,000.00	1,143.87
2,522.29	2,787.69	4,340.10	30,662.14	53,333.33	1,434.82
3,302.97	3,660.85	5,675.94	34,450.32	58,666.67	1,826.81
4,349.31	4,828.65	7,363.52	38,455.49	64,000.00	2,373.67
5,795.08	6,428.46	9,528.74	42,719.84	69,333.33	3,170.22
7,875.33	8,691.22	12,373.38	47,301.34	74,666.67	4,396.45
11,039.08	12,034.34	16,244.16	52,283.42	80,000.00	6,429.06
16,248.79	17,290.70	21,796.42	57,794.15	85,333.33	10,169.86
25,947.10	26,379.73	30,454.67	64,049.11	90,666.67	18,250.68
48,313.75	44,885.08	46,104.70	71,468.65	96,000.00	41,337.41
131,867.18	98,680.04	85,467.54	81,137.98	101,333.33	166,003.67

330.73	328.95	335.40	363.15	372.76	324.78
331.35	329.57	335.71	363.77	373.25	325.26

1.63	1.63	0.88	9.13	16.63	1.63
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A

-	-	-	-	-	-
993.76	1,095.52	1,541.58	19,242.20	35,555.56	697.45
7.00	7.00	7.00	11.00	13.00	7.00
5.33	5.33	5.33	5.33	5.33	5.33
993.76	1,095.52	1,541.58	19,242.20	35,555.56	697.45
6,401.89	7,093.61	10,388.30	44,208.30	71,111.11	3,518.37
3.00	3.00	4.00	3.00	2.00	3.00
5.33	5.33	5.33	5.33	5.33	5.33
6,401.89	7,093.61	10,388.30	44,208.30	71,111.11	3,518.37
+Infinity	+Infinity	+Infinity	104,481.81	106,666.67	+Infinity
6.00	6.00	5.00	2.00	1.00	6.00
5.33	5.33	5.33	5.33	5.33	5.33

0.79	0.84	0.94	17.16	23.84	1.01
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A

N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A

0.20	0.22	0.23	0.56	0.62	0.19
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A

Table D1-25a. Bis(2-ethylhexyl)phthalate saltwater acute toxicity data used to develop a species sensitiv

Species Common Name	Species Scientific Name	Control	Chemical Analysis	Organism Lifestage
Opossum Shrimp	Americamysis bahia	NR	M	NR
Amphipod	Ampelisca abdita	NR	M	NR
Sheepshead Minnow	Cyprinodon variegatus	M	U	JV
Harpacticoid Copepod	Nitocra spinipes	C	U	AD
Harpacticoid Copepod	Nitocra spinipes	I	U	NR

Table D1-25b. Summary of bis(2-ethylhexyl)phthalate saltwater acute toxicity data used to develop a spe

Species Common Name	Species Scientific Name	Conc 1 Mean (Standardized)	Rank	Percentile
Amphipod	Ampelisca abdita	1000	1	0.200
Opossum Shrimp	Americamysis bahia	1000	2	0.400
Harpacticoid Copepod	Nitocra spinipes	547723	3	0.600
Sheepshead Minnow	Cyprinodon variegatus	550000	4	0.800

Note: insufficient species data are available to develop an acute saltwater SSD for bis(2-ethylhexyl)phthalate

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Exposure Type	Observed Duration Mean (Days)	Endpoint	Effect	Trend	Effect Measurement	Concentration Type	Conc 1 Mean (Standardized)	Units	SMAV (ug/L)
R	4	LC50	MOR	INC	MORT	A	1000	ug/L	1000
R	4	LC50	MOR	INC	MORT	A	1000	ug/L	1000
S	4	LC50	MOR	INC	MORT	A	550000	ug/L	550000
S	4	LC50	MOR	NR	MORT	F	300000	ug/L	547723
S	4	LC50	MOR	NR	MORT	F	1000000	ug/L	

ecies sensitivity distribution for fish, benthic invertebrates, and zooplankton

Publication Year	Author
1997	Ho,K.T., R.A. McKinney, A. Kuhn, M.C. Pelletier, and R.M. Burgess
1997	Ho,K.T., R.A. McKinney, A. Kuhn, M.C. Pelletier, and R.M. Burgess
1981	Heitmuller,P.T., T.A. Hollister, and P.R. Parrish
1979	Linden,E., B.E. Bengtsson, O. Svanberg, and G. Sundstrom
1983	Bengtsson,B.E., and M. Tarkpea

Table D1-26a. DDE freshwater acute toxicity data used to develop a species sensitivity distribution for fish, ben

Species Common Name	Species Scientific Name	Organism Lifestage	Observed Duration Mean (Days)	Endpoint	Effect	Conc 1 Mean (Standardized)	Units	SMAV	Publication Year
Water Flea	Daphnia magna	AD	6	NOEL	Reprod	100	ug/L	100	2002
Scud	Hyalella azteca	NR	4	LC50	Mortali	4.57	ug/L	7.1	2012
Scud	Hyalella azteca	JV	4	LC50	Mortali	10.99	ug/L	-	2000
Bluegill	Lepomis macrochirus	NR	4	LC50	Mortali	240	ug/L	240	1986
Rainbow Trout	Oncorhynchus mykiss	NR	4	LC50	Mortali	32	ug/L	32	1986
Atlantic Salmon	Salmo salar	NR	4	LC50	Mortali	96	ug/L	96	1986

Table D1-26b. Summary of DDE freshwater acute toxicity data used to develop a species sensitivity distribution

Species Common Name	Species Scientific Name	SMAV	Rank	Percentile
Scud	Hyalella azteca	7.1	1	0.167
Rainbow Trout	Oncorhynchus mykiss	32	2	0.333
Atlantic Salmon	Salmo salar	96	3	0.500
Water Flea	Daphnia magna	100	4	0.667
Bluegill	Lepomis macrochirus	240	5	0.833

thic invertebrates, and zooplankton

Author
Kashian,D.R., and S.I. Dodson
Ding,Y., P.F. Landrum, J. You, A.D. Harwood, and M.J. Lydy
Lotufo,G.R., P.F. Landrum, M.L. Gedeon, E.A. Tigue, and L.R. Herche
Mayer,F.L.,Jr., and M.R. Ellersieck
Mayer,F.L.,Jr., and M.R. Ellersieck
Mayer,F.L.,Jr., and M.R. Ellersieck

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Table D1-27. Distribution fitting results for the DDE freshwater acute species sensitivity distri

	Input	BetaGeneral	Expon	Gamma
Fit				
Function	skBetaGeneral(0.40683,0.359,0,240)		RiskExpon(95.017)	mma(1.0629,89.391)
Method		MLE (Approximate)	MLE	MLE
Rankings By Fit Statistic [10 Valid Fits]				
Akaike (AIC)			#1	#6
Bayesian (BIC)			#1	#5
Chi-Sq Statistic		#9 (Tie)	#1 (Tie)	#1 (Tie)
K-S Statistic		#9	#3	#2
A-D Statistic			#1	#2
Parameters - [* Values unavailable without running a bootstrap]				
Num. Est. Parameters		3.00	1.00	2.00
Fitted Parameter #1		alpha1	beta	alpha
Fitted Value		0.41	95.02	1.06
95% Lower Limit*		N/A	N/A	N/A
95% Upper Limit*		N/A	N/A	N/A
Conf. Interval Width*		N/A	N/A	N/A
Fitted Parameter #2		alpha2		beta
Fitted Value		0.36		89.39
95% Lower Limit*		N/A		N/A
95% Upper Limit*		N/A		N/A
Conf. Interval Width*		N/A		N/A
Fitted Parameter #3		Max		
Fitted Value		240.00		
95% Lower Limit*		N/A		
95% Upper Limit*		N/A		
Conf. Interval Width*		N/A		
Distribution Statistics				
Minimum	7.09	-	-	-
Maximum	240.00	240.00	+Infinity	+Infinity
Mean	95.02	127.49	95.02	95.02
Mode	94.4293 [est]	-	-	5.63
Median	96.00	135.82	65.86	67.42
Std. Deviation	90.48	90.13	95.02	92.16
Skewness	1.19	(0.12)	2.00	1.94
Kurtosis	4.65	1.42	9.00	8.64
Percentiles				
5%	7.09	0.67	4.87	5.65
10%	7.09	3.64	10.01	11.17
15%	7.09	9.76	15.44	16.85
20%	7.09	19.41	21.20	22.79
25%	32.00	32.68	27.33	29.03
30%	32.00	49.32	33.89	35.65

35%	32.00	68.81	40.93	42.71
40%	32.00	90.36	48.54	50.29
45%	96.00	113.04	56.80	58.48
50%	96.00	135.82	65.86	67.42
55%	96.00	157.71	75.87	77.26
60%	100.00	177.82	87.06	88.22
65%	100.00	195.44	99.75	100.60
70%	100.00	210.10	114.40	114.84
75%	100.00	221.60	131.72	131.64
80%	100.00	229.96	152.92	152.14
85%	240.00	235.45	180.26	178.49
90%	240.00	238.52	218.79	215.52
95%	240.00	239.78	284.65	278.59
Information Criteria				
Akaike (AIC)		---	58.87	65.53
Bayesian (BIC)		---	57.15	58.75
Chi-Squared Test - [* Values unavailable without running a bootstrap]				
Chi-Sq Statistic		1.80	0.20	0.20
P-Value*		N/A	N/A	N/A
Cr. Value @ 0.750*		N/A	N/A	N/A
Cr. Value @ 0.500*		N/A	N/A	N/A
Cr. Value @ 0.250*		N/A	N/A	N/A
Cr. Value @ 0.150*		N/A	N/A	N/A
Cr. Value @ 0.100*		N/A	N/A	N/A
Cr. Value @ 0.050*		N/A	N/A	N/A
Cr. Value @ 0.025*		N/A	N/A	N/A
Cr. Value @ 0.010*		N/A	N/A	N/A
Cr. Value @ 0.005*		N/A	N/A	N/A
Cr. Value @ 0.001*		N/A	N/A	N/A
Chi-Sq Test (Binning Information)				
Bin #1 : Minimum		-	-	-
Bin #1 : Maximum		135.82	65.86	67.42
Bin #1 : Input		4.00	2.00	2.00
Bin #1 : Fit		2.50	2.50	2.50
Bin #2 : Minimum		135.82	65.86	67.42
Bin #2 : Maximum		240.00	+Infinity	+Infinity
Bin #2 : Input		1.00	3.00	3.00
Bin #2 : Fit		2.50	2.50	2.50
Anderson-Darling Test - [* Values unavailable without running a bootstrap]				
A-D Statistic		---	0.23	0.25
P-Value*		N/A	N/A	N/A
Cr. Value @ 0.750*		N/A	N/A	N/A
Cr. Value @ 0.500*		N/A	N/A	N/A
Cr. Value @ 0.250*		N/A	N/A	N/A
Cr. Value @ 0.150*		N/A	N/A	N/A
Cr. Value @ 0.100*		N/A	N/A	N/A
Cr. Value @ 0.050*		N/A	N/A	N/A

	Cr. Value @ 0.025*		N/A	N/A	N/A
	Cr. Value @ 0.010*		N/A	N/A	N/A
	Cr. Value @ 0.005*		N/A	N/A	N/A
	Cr. Value @ 0.001*		N/A	N/A	N/A
Kolmogorov-Smirnov Test - [* Values unavailable without running a bootstrap]					
	K-S Statistic		0.38	0.24	0.23
	P-Value*		N/A	N/A	N/A
	Cr. Value @ 0.750*		N/A	N/A	N/A
	Cr. Value @ 0.500*		N/A	N/A	N/A
	Cr. Value @ 0.250*		N/A	N/A	N/A
	Cr. Value @ 0.150*		N/A	N/A	N/A
	Cr. Value @ 0.100*		N/A	N/A	N/A
	Cr. Value @ 0.050*		N/A	N/A	N/A
	Cr. Value @ 0.025*		N/A	N/A	N/A
	Cr. Value @ 0.010*		N/A	N/A	N/A
	Cr. Value @ 0.005*		N/A	N/A	N/A
	Cr. Value @ 0.001*		N/A	N/A	N/A

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InvGauss	LogLogistic	Lognorm	Triang	Uniform	Weibull
gauss(95.017,34.646)	stic(0,62.537,1.4093)	norm(115.33,210.53)	ang(0,7.0869,299.91)	RiskUniform(0,300)	eibull(1.0656,97.292)
MLE	MLE	MLE	MLE	MLE (Bias Corrected)	MLE
#9	#8	#7	#4	#2	#5
#9	#7	#6	#2	#3	#4
#1 (Tie)	#1 (Tie)	#1 (Tie)	#1 (Tie)	#9 (Tie)	#1 (Tie)
#8	#4	#7	#6	#10	#1
#8	#4	#5	#7	#9	#3
2.00	2.00	2.00	2.00	1.00	2.00
mu	beta	mu	M. likely	Max	alpha
95.02	62.54	115.33	7.09	300.00	1.07
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
lambda	alpha	sigma	Max		beta
34.65	1.41	210.53	299.91		97.29
N/A	N/A	N/A	N/A		N/A
N/A	N/A	N/A	N/A		N/A
N/A	N/A	N/A	N/A		N/A
-	-	-	-	-	-
+Infinity	+Infinity	+Infinity	299.91	300.00	+Infinity
95.02	176.24	115.33	102.33	150.00	94.91
11.38	17.78	12.79	7.09	-	7.11
41.55	62.54	55.41	90.36	150.00	68.98
157.35	+Infinity	210.53	69.87	86.60	89.12
4.97	+Infinity	11.56	0.56	-	1.82
44.14	+Infinity	568.04	2.40	1.80	7.85
7.80	7.74	7.56	11.07	15.00	5.99
10.59	13.15	11.74	18.77	30.00	11.77
13.26	18.26	15.80	26.69	45.00	17.68
16.04	23.38	20.00	34.85	60.00	23.81
19.06	28.68	24.49	43.27	75.00	30.22
22.41	34.28	29.37	51.97	90.00	36.98

26.19	40.31	34.75	60.99	105.00	44.14
30.53	46.90	40.78	70.36	120.00	51.80
35.58	54.24	47.59	80.13	135.00	60.04
41.55	62.54	55.41	90.36	150.00	68.98
48.71	72.11	64.52	101.11	165.00	78.77
57.46	83.38	75.31	112.48	180.00	89.63
68.39	97.03	88.36	124.59	195.00	101.83
82.40	114.09	104.56	137.59	210.00	115.81
101.00	136.36	125.40	151.74	225.00	132.19
126.84	167.24	153.52	167.38	240.00	152.06
165.29	214.13	194.36	185.13	255.00	177.44
229.32	297.33	261.52	206.19	270.00	212.81
364.46	505.24	406.02	233.64	285.00	272.42

66.69	66.53	66.25	64.94	60.37	65.51
59.90	59.75	59.47	58.16	58.65	58.73

0.20	0.20	0.20	0.20	1.80	0.20
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A

-	-	-	-	-	-
41.55	62.54	55.41	90.36	150.00	68.98
2.00	2.00	2.00	2.00	4.00	2.00
2.50	2.50	2.50	2.50	2.50	2.50
41.55	62.54	55.41	90.36	150.00	68.98
+Infinity	+Infinity	+Infinity	299.91	300.00	+Infinity
3.00	3.00	3.00	3.00	1.00	3.00
2.50	2.50	2.50	2.50	2.50	2.50

0.53	0.29	0.32	0.52	1.32	0.25
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A

N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A

0.34	0.25	0.28	0.26	0.47	0.23
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A

Levy
RiskLevy(0,25.3886)
MLE
#3
#8
#1 (Tie)
#5
#6
1.00
c
25.39
N/A
N/A
N/A
-
+Infinity
+Infinity
8.46
55.81
+Infinity
+Infinity
+Infinity
6.61
9.38
12.25
15.46
19.19
23.64

29.07
35.84
44.49
55.81
71.05
92.32
123.31
171.00
250.06
395.56
709.86
1,607.81
6,456.70
61.57
59.85
0.20
N/A
N/A
N/A
N/A
N/A
N/A
N/A
N/A
N/A
N/A
N/A
-
55.81
2.00
2.50
55.81
+Infinity
3.00
2.50
0.41
N/A
N/A
N/A
N/A
N/A
N/A
N/A

N/A
N/A
N/A
N/A

0.26
N/A
N/A
N/A
N/A
N/A
N/A
N/A
N/A
N/A
N/A
N/A

Table D1-28a. DDT freshwater acute toxicity data used to develop a species sensitivity distributio

Species Common Name	Species Scientific Name	Organism Lifestage	Observed Duration Mean (Days)	Endpoint	Effect
Black bullhead	Ameiurus melas	-	4	LC50	Mortality
Black bullhead	Ameiurus melas	-	4	LC50	Mortality
Freshwater drum	Aplodinotus grunniens	-	-	-	-
Caddisfly	Arctopsyche grandis	-	4	LC50	Mortality
Sowbug	Asellus brevicaudus	-	-	-	-
Crab	Barytelphusa cunicularis	-	4	LC50	Mortality
Aquatic sowbug	Caecidotea brevicauda	MA	4	LC50	Mortality
Goldfish	Carassius auratus	-	-	-	-
Goldfish	Carassius auratus	-	4	LC50	Mortality
Goldfish	Carassius auratus	-	4	LC50	Mortality
Goldfish	Carassius auratus	-	4	LC50	Mortality
Goldfish	Carassius auratus	-	4	LC50	Mortality
Goldfish	Carassius auratus	-	4	LC50	Mortality
Goldfish	Carassius auratus	-	4	LC50	Mortality
Goldfish	Carassius auratus	-	4	LC50	Mortality
Goldfish	Carassius auratus	-	4	LC50	Mortality
Goldfish	Carassius auratus	-	4	LC50	Mortality
Goldfish	Carassius auratus	-	4	LC50	Mortality
Water flea	Ceriodaphnia dubia	-	2	LC50	Mortality
Snake-head catfish	Channa punctata	JV	4	LC50	Mortality
Northern redbelly dace	Chrosomus eos	-	-	-	-
Carp, hawk fish	Cirrhinus mrigala	FI	4	LC50	Mortality
Stonefly	Claassenia sabulosa	-	4	LC50	Mortality
Walking catfish	Clarias batrachus	-	4	LC50	Mortality
Brook stickleback	Culaea inconstens	-	4	LC50	Mortality
Seed shrimp	Cypridopsis vidua	-	-	-	-
Common carp	Cyprinus carpio	EG	4	LC50	Mortality
Common carp	Cyprinus carpio	-	-	-	-
Common carp	Cyprinus carpio	-	4	LC50	Mortality
Common carp	Cyprinus carpio	-	4	LC50	Mortality
Common carp	Cyprinus carpio	-	4	LC50	Mortality
Common carp	Cyprinus carpio	-	4	LC50	Mortality
Common carp	Cyprinus carpio	-	4	LC50	Mortality
Common carp	Cyprinus carpio	-	4	LC50	Mortality
Common carp	Cyprinus carpio	-	4	LC50	Mortality
Water flea	Daphnia magna	-	-	-	-
Water flea	Daphnia magna	-	2	LC50	Mortality
Water flea	Daphnia magna	-	2	LC50	Mortality
Water flea	Daphnia pulex	-	2	LC50	Mortality
Scud	Echinogammarus tibaldii	AD	4	LC50	Mortality
Mayfly	Ephemeralia grandis	-	-	-	-
Northern pike	Esox lucius	-	4	LC50	Mortality
Northern pike	Esox lucius	-	4	LC50	Mortality
Western mosquitofish	Gambusia affinis	-	4	LC50	Mortality
Western mosquitofish	Gambusia affinis	FY	4	LC50	Mortality
Western mosquitofish	Gambusia affinis	FY	4	LC50	Mortality
Scud	Gammarus fasciatus	MA	4	LC50	Mortality
Scud	Gammarus fasciatus	MA	4	LC50	Mortality
Scud	Gammarus fasciatus	MA	4	LC50	Mortality
Scud	Gammarus fasciatus	-	4	LC50	Mortality
Scud	Gammarus fasciatus	-	4	LC50	Mortality
Scud	Gammarus fasciatus	-	4	LC50	Mortality
Scud	Gammarus italicus	AD	4	LC50	Mortality
Scud	Gammarus lacustris	-	4	LC50	Mortality
Scud	Gammarus lacustris	MA	4	LC50	Mortality

Scud	Gammarus lacustris	-		4	LC50	Mortality
Catla	Gibelion catla	FI		4	LC50	Mortality
Humpback chub	Gila cypha	JV		4	LC50	Mortality
Humpback chub	Gila cypha	JV		4	LC50	Mortality
Stonefly	Hesperoperla pacifica	-		4	LC50	Mortality
Stonefly	Hesperoperla pacifica	Naid		4	LC50	Mortality
Indian catfish	Heteropneustes fossilis	-		4	LC50	Mortality
Indian catfish	Heteropneustes fossilis	-		4	LC50	Mortality
Scud	Hyalella azteca	-		4	LC50	Mortality
Scud	Hyalella azteca	JV		4	LC50	Mortality
Caddisfly	Hydropsyche californica	-		4	LC50	Mortality
Black bullhead	Ictalurus melas	-		4	LC50	Mortality
Black bullhead	Ictalurus melas	-		4	LC50	Mortality
Black bullhead	Ictalurus melas	-		4	LC50	Mortality
Black bullhead	Ictalurus melas	-		4	LC50	Mortality
Black bullhead	Ictalurus melas	-		4	LC50	Mortality
Channel catfish	Ictalurus punctatus	-		4	LC50	Mortality
Channel catfish	Ictalurus punctatus	-	-		-	-
Channel catfish	Ictalurus punctatus	-		4	LC50	Mortality
Channel catfish	Ictalurus punctatus	-		4	LC50	Mortality
Channel catfish	Ictalurus punctatus	-		4	LC50	Mortality
Channel catfish	Ictalurus punctatus	-		4	LC50	Mortality
Channel catfish	Ictalurus punctatus	-		4	LC50	Mortality
Channel catfish	Ictalurus punctatus	-		4	LC50	Mortality
Channel catfish	Ictalurus punctatus	-		4	LC50	Mortality
Channel catfish	Ictalurus punctatus	-		4	LC50	Mortality
Rohu	Labeo rohita	FI		4	LC50	Mortality
Green sunfish	Lepomis cyanellus	-		4	LC50	Mortality
Green sunfish	Lepomis cyanellus	-		4	LC50	Mortality
Green sunfish	Lepomis cyanellus	-		4	LC50	Mortality
Green sunfish	Lepomis cyanellus	-		4	LC50	Mortality
Green sunfish	Lepomis cyanellus	-		4	LC50	Mortality
Green sunfish	Lepomis cyanellus	-		4	LC50	Mortality
Green sunfish	Lepomis cyanellus	-		4	LC50	Mortality
Green sunfish	Lepomis cyanellus	-		4	LC50	Mortality
Green sunfish	Lepomis cyanellus	-		4	LC50	Mortality
Green sunfish	Lepomis cyanellus	-		4	LC50	Mortality
Green sunfish	Lepomis cyanellus	-		4	LC50	Mortality
Pumpkinseed	Lepomis gibbosus	-		4	LC50	Mortality
Pumpkinseed	Lepomis gibbosus	-		4	LC50	Mortality
Pumpkinseed	Lepomis gibbosus	-		4	LC50	Mortality
Pumpkinseed	Lepomis gibbosus	-		4	LC50	Mortality
Pumpkinseed	Lepomis gibbosus	-		4	LC50	Mortality
Bluegill	Lepomis macrochirus	-		2	LC50	Mortality
Bluegill	Lepomis macrochirus	-	-		-	-
Bluegill	Lepomis macrochirus	-		4	LC50	Mortality
Bluegill	Lepomis macrochirus	-		4	LC50	Mortality
Bluegill	Lepomis macrochirus	-		4	LC50	Mortality
Bluegill	Lepomis macrochirus	-		4	LC50	Mortality
Bluegill	Lepomis macrochirus	-		4	LC50	Mortality
Bluegill	Lepomis macrochirus	-		4	LC50	Mortality
Bluegill	Lepomis macrochirus	-		4	LC50	Mortality
Bluegill	Lepomis macrochirus	-		4	LC50	Mortality
Bluegill	Lepomis macrochirus	-		4	LC50	Mortality
Bluegill	Lepomis macrochirus	-		4	LC50	Mortality
Bluegill	Lepomis macrochirus	-		4	LC50	Mortality
Bluegill	Lepomis macrochirus	-		4	LC50	Mortality
Bluegill	Lepomis macrochirus	-		4	LC50	Mortality
Bluegill	Lepomis macrochirus	-		4	LC50	Mortality
Bluegill	Lepomis macrochirus	-		4	LC50	Mortality
Bluegill	Lepomis macrochirus	-		4	LC50	Mortality
Bluegill	Lepomis macrochirus	-		4	LC50	Mortality
Bluegill	Lepomis macrochirus	-		4	LC50	Mortality

Bluegill	Lepomis macrochirus	-		4	LC50	Mortality
Bluegill	Lepomis macrochirus	-		4	LC50	Mortality
Longear sunfish	Lepomis megalotis	-		4	LC50	Mortality
Longear sunfish	Lepomis megalotis	-		4	LC50	Mortality
Redear sunfish	Lepomis microlophus	-		4	LC50	Mortality
Redear sunfish	Lepomis microlophus	-		4	LC50	Mortality
Oligochaete, worm	Lumbriculus variegatus	-		4	LC50	Mortality
Largemouth bass	Micropterus salmoides	-	-	-		-
Largemouth bass	Micropterus salmoides	-		4	LC50	Mortality
Largemouth bass	Micropterus salmoides	-		4	LC50	Mortality
Largemouth bass	Micropterus salmoides	-		4	LC50	Mortality
River shiner	Notropis blennius	-		4	LC50	Mortality
Cutthroat trout	Oncorhynchus clarkii	-		4	LC50	Mortality
Cutthroat trout	Oncorhynchus clarkii	-		4	LC50	Mortality
Cutthroat trout	Oncorhynchus clarkii	-		4	LC50	Mortality
Cutthroat trout	Oncorhynchus clarkii	-		4	LC50	Mortality
Coho salmon	Oncorhynchus kisutch	-	-	-		-
Coho salmon	Oncorhynchus kisutch	-	-	-		-
Coho salmon	Oncorhynchus kisutch	-		4	LC50	Mortality
Coho salmon	Oncorhynchus kisutch	-		4	LC50	Mortality
Coho salmon	Oncorhynchus kisutch	-		4	LC50	Mortality
Coho salmon	Oncorhynchus kisutch	-		4	LC50	Mortality
Coho salmon	Oncorhynchus kisutch	-	-	-		-
Rainbow trout	Oncorhynchus mykiss	-		4	LC50	Mortality
Rainbow trout	Oncorhynchus mykiss	-		4	LC50	Mortality
Rainbow trout	Oncorhynchus mykiss	-		4	LC50	Mortality
Rainbow trout	Oncorhynchus mykiss	-		4	LC50	Mortality
Rainbow trout	Oncorhynchus mykiss	-		4	LC50	Mortality
Rainbow trout	Oncorhynchus mykiss	-		4	LC50	Mortality
Rainbow trout	Oncorhynchus mykiss	-		4	LC50	Mortality
Rainbow trout	Oncorhynchus mykiss	-		4	LC50	Mortality
Rainbow trout	Oncorhynchus mykiss	-		4	LC50	Mortality
Rainbow trout	Oncorhynchus mykiss	-		4	LC50	Mortality
Rainbow trout	Oncorhynchus mykiss	-		4	LC50	Mortality
Rainbow trout	Oncorhynchus mykiss	-		4	LC50	Mortality
Rainbow trout	Oncorhynchus mykiss	-		4	LC50	Mortality
Rainbow trout	Oncorhynchus mykiss	-		4	LC50	Mortality
Rainbow trout	Oncorhynchus mykiss	-		4	LC50	Mortality
Rainbow trout	Oncorhynchus mykiss	-		4	LC50	Mortality
Rainbow trout	Oncorhynchus mykiss	-		4	LC50	Mortality
Rainbow trout	Oncorhynchus mykiss	-		4	LC50	Mortality
Rainbow trout	Oncorhynchus mykiss	Fry		4	LC50	Mortality
Chinook salmon	Oncorhynchus tshawytscha	-	-	-		-
Crayfish	Orconectes nais	IM		4	LC50	Mortality
Crayfish	Orconectes nais	IM		4	LC50	Mortality
Crayfish	Orconectes nais	IM		4	LC50	Mortality
Crayfish	Orconectes nais	IM		4	LC50	Mortality
Crayfish	Orconectes nais	IM		4	LC50	Mortality
Crayfish	Orconectes nais	IM		4	LC50	Mortality
Crayfish	Orconectes nais	MA		4	LC50	Mortality
Crayfish	Orconectes nais	-	-	-		-
Crayfish	Orconectes nais	-	-	-		-
Crayfish	Orconectes nais	-	-	-		-
Crayfish	Orconectes nais	-	-	-		-
Crayfish	Orconectes nais	-	-	-		-
Crayfish	Orconectes nais	-	-	-		-
Crayfish	Orconectes nais	-		4	LC50	Mortality
Crayfish	Orconectes nais	-	-	-		-
Mozambique tilapia	Oreochromis mossambicus	-		4	LC50	Mortality
Mozambique tilapia	Oreochromis mossambicus	-		4	LC50	Mortality
Mozambique tilapia	Oreochromis mossambicus	-		4	LC50	Mortality
Japanese medaka	Oryzias latipes	PV		4	LC50	Mortality

Japanese medaka	Oryzias latipes	SF		4	LC50	Mortality
Japanese medaka	Oryzias latipes	AD		4	LC50	Mortality
Japanese medaka	Oryzias latipes	AD		4	LC50	Mortality
Japanese medaka	Oryzias latipes	AD		4	LC50	Mortality
Japanese medaka	Oryzias latipes	AD		4	LC50	Mortality
Glass shrimp	Palaemonetes kadiakensis	IN		2	LC50	Mortality
Glass shrimp	Palaemonetes kadiakensis	MA		4	LC50	Mortality
Glass shrimp	Palaemonetes kadiakensis	MA		4	LC50	Mortality
Glass shrimp	Palaemonetes kadiakensis	-	-	-		-
Glass shrimp	Palaemonetes kadiakensis	-	-	-		-
Crab	Paratelphusa jacquemontii	IT		4	LC50	Mortality
Yellow perch	Perca flavescens	-	-	-		-
Yellow perch	Perca flavescens	-		4	LC50	Mortality
Yellow perch	Perca flavescens	-		4	LC50	Mortality
Yellow perch	Perca flavescens	-		4	LC50	Mortality
Yellow perch	Perca flavescens	-		4	LC50	Mortality
Fathead minnow	Pimephales promelas	-		1	LC50	Mortality
Fathead minnow	Pimephales promelas	-		4	LC50	Mortality
Fathead minnow	Pimephales promelas	-	-	-		-
Fathead minnow	Pimephales promelas	-		2	LC50	Mortality
Fathead minnow	Pimephales promelas	-	-	-		-
Fathead minnow	Pimephales promelas	-		4	LC50	Mortality
Fathead minnow	Pimephales promelas	-		4	LC50	Mortality
Fathead minnow	Pimephales promelas	-		4	LC50	Mortality
Fathead minnow	Pimephales promelas	-		4	LC50	Mortality
Fathead minnow	Pimephales promelas	-		4	LC50	Mortality
Guppy	Poecilia reticulata	-	-	-		-
Guppy	Poecilia reticulata	-		4	LC50	Mortality
Planarian	Polycelis felina	-		4	LC50	Mortality
Black crappie	Pomoxis nigromaculatus	-		4	LC50	Mortality
Crayfish	Procambarus acutus	-	-	-		-
Stonefly	Pteronarcella badia	-	-	-		-
Stonefly	Pteronarcys californica	Naiad		4	LC50	Mortality
Stonefly	Pteronarcys californica	-		4	LC50	Mortality
Stonefly	Pteronarcys californica	-	-	-		-
Colorado squawfish	Ptychocheilus lucius	JV		4	LC50	Mortality
Colorado squawfish	Ptychocheilus lucius	JV		4	LC50	Mortality
Colorado squawfish	Ptychocheilus lucius	JV		4	LC50	Mortality
Colorado squawfish	Ptychocheilus lucius	JV		4	LC50	Mortality
Colorado squawfish	Ptychocheilus lucius	JV		4	LC50	Mortality
Colorado squawfish	Ptychocheilus lucius	PV		4	LC50	Mortality
Colorado squawfish	Ptychocheilus lucius	JV		4	LC50	Mortality
Northern squawfish	Ptychocheilus oregonensis	JV		4	LC50	Mortality
Northern squawfish	Ptychocheilus oregonensis	JV		4	LC50	Mortality
Northern squawfish	Ptychocheilus oregonensis	JV		4	LC50	Mortality
Northern squawfish	Ptychocheilus oregonensis	PV		4	LC50	Mortality
Atlantic salmon	Salmo salar	-		4	LC50	Mortality
Brown trout	Salmo trutta	-		4	LC50	Mortality
Brown trout	Salmo trutta	-	-	-		-
Brown trout	Salmo trutta	-		4	LC50	Mortality
Brown trout	Salmo trutta	-		4	LC50	Mortality
Brook trout	Salvelinus fontinalis	-		4	LC50	Mortality
Brook trout	Salvelinus fontinalis	-		4	LC50	Mortality
Brook trout	Salvelinus fontinalis	-		4	LC50	Mortality
Brook trout	Salvelinus fontinalis	-		4	LC50	Mortality
Brook trout	Salvelinus fontinalis	-		4	LC50	Mortality
Brook trout	Salvelinus fontinalis	-		4	LC50	Mortality
Lake trout	Salvelinus namaycush	-		4	LC50	Mortality
Lake trout	Salvelinus namaycush	-		4	LC50	Mortality
Walleye	Sander vitreus	-		4	LC50	Mortality
Walleye	Sander vitreus	-		4	LC50	Mortality
Cladoceran	Simocephalus serrulatus	-	-	-		-
Cladoceran	Simocephalus serrulatus	-	-	-		-

Cichlid	Tilapia spilurus	-	4	LC50	Mortality
Tilapia	Tilapia zillii	FY	4	LC50	Mortality
Tilapia	Tilapia zillii	FY	4	LC50	Mortality
Tilapia	Tilapia zillii	FY	4	LC50	Mortality
Tilapia	Tilapia zillii	FY	4	LC50	Mortality
Tubificid worm	Tubifex tubifex	-	4	LC50	Mortality
Snail	Viviparus bengalensis	-	4	LC50	Mortality

Table D1-28b. Summary of DDT freshwater acute toxicity data used to develop a species sensitivit

Species Common Name	Species Scientific Name	SMAV (ug/L)	Rank	Percentile
Scud	Hyalella azteca	0.25	1	0.014
Water flea	Daphnia pulex	0.36	2	0.028
Water flea	Ceriodaphnia dubia	0.83	3	0.042
Largemouth bass	Micropterus salmoides	1.4	4	0.056
Crayfish	Orconectes nais	1.6	5	0.069
Scud	Gammarus fasciatus	1.7	6	0.083
Walking catfish	Clarias batrachus	1.75	7	0.097
Atlantic salmon	Salmo salar	1.8	8	0.111
Stonefly	Pteronarcella badia	1.9	9	0.125
Scud	Gammarus lacustris	2.1	10	0.139
Northern pike	Esox lucius	2.1	11	0.153
Yellow perch	Perca flavescens	2.3	12	0.167
Water flea	Daphnia magna	3	13	0.181
Cladoceran	Simocephalus serrulatus	2.6	14	0.194
Cutthroat trout	Oncorhynchus clarkii	2.7	15	0.208
Crayfish	Procambarus acutus	3	16	0.222
Glass shrimp	Palaemonetes kadiakensis	3.1	17	0.236
Stonefly	Claassenia sabulosa	3.5	18	0.250
Walleye	Sander vitreus	3.7	19	0.264
Scud	Echinogammarus tibaldii	3.9	20	0.278
Pumpkinseed	Lepomis gibbosus	3.9	21	0.292
Sowbug	Asellus brevicaudus	4.0	22	0.306
Aquatic sowbug	Caecidotea brevicauda	4.0	23	0.319
Bluegill	Lepomis macrochirus	4.7	24	0.333
Black bullhead	Ameiurus melas	4.9	25	0.347
Brown trout	Salmo trutta	5.1	26	0.361
Green sunfish	Lepomis cyanellus	5.2	27	0.375
Black crappie	Pomoxis nigromaculatus	5.6	28	0.389
River shiner	Notropis blennius	5.8	29	0.403
Scud	Gammarus italicus	7.0	30	0.417
Rainbow trout	Oncorhynchus mykiss	7.1	31	0.431
Longear sunfish	Lepomis megalotis	7.8	32	0.444
Brook trout	Salvelinus fontinalis	8.5	33	0.458
Redear sunfish	Lepomis microlophus	8.7	34	0.472
Lake trout	Salvelinus namaycush	9.3	35	0.486
Freshwater drum	Aplodinotus grunniens	10	36	0.500
Mozambique tilapia	Oreochromis mossambicus	11	37	0.514
Chinook salmon	Oncorhynchus tshawytscha	11.5	38	0.528
Coho salmon	Oncorhynchus kisutch	12	39	0.542
Common carp	Cyprinus carpio	12	40	0.556
Channel catfish	Ictalurus punctatus	15	41	0.569
Tilapia	Tilapia zillii	16	42	0.583
Black bullhead	Ictalurus melas	18	43	0.597
Western mosquitofish	Gambusia affinis	22	44	0.611
Japanese medaka	Oryzias latipes	23	45	0.625
Mayfly	Ephemeralia grandis	25	46	0.639
Fathead minnow	Pimephales promelas	27	47	0.653
Guppy	Poecilia reticulata	33	48	0.667
Goldfish	Carassius auratus	34	49	0.681
Caddisfly	Hydropsyche californica	48	50	0.694
Northern squawfish	Ptychocheilus oregonensis	54	51	0.708

Seed shrimp	Cypridopsis vidua	54	52	0.722
Crab	Paratelphusa jacquemontii	62	53	0.736
Brook stickleback	Culaea inconstens	67	54	0.750
Northern redbelly dace	Chrosomus eos	68	55	0.764
Cichlid	Tilapia spilurus	80	56	0.778
Snake-head catfish	Channa punctata	121	57	0.792
Oligochaete, worm	Lumbriculus variegatus	130	58	0.806
Caddisfly	Arctopsyche grandis	175	59	0.819
Stonefly	Pteronarcys californica	192	60	0.833
Stonefly	Hesperoperla pacifica	362	61	0.847
Colorado squawfish	Ptychocheilus lucius	527	62	0.861
Crab	Barytelphusa cunicularis	560	63	0.875
Planarian	Polycelis felina	1230	64	0.889
Snail	Viviparus bengalensis	1390	65	0.903
Humpback chub	Gila cypha	2166	66	0.917
Tubificid worm	Tubifex tubifex	4000	67	0.931
Carp, hawk fish	Cirrhinus mrigala	6400	68	0.944
Rohu	Labeo rohita	6400	69	0.958
Catla	Gibelion catla	6800	70	0.972
Indian catfish	Heteropneustes fossilis	8588	71	0.986

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Conc 1 Mean (Standardized)	Units	SMAV (ug/L)	Publication Year	AWQC AUTHOR
4.8	ug/L	4.9	1986	Mayer and Ellersieck
5.1	ug/L	-	1986	Mayer and Ellersieck
10	ug/L	10	1966	Marking
175	ug/L	175	1965	Gaufin, et al.
4	ug/L	4	1972	Sanders
560	ug/L	560	1987	Rao and Nagabhushanam
4	ug/L	4	1986	Mayer and Ellersieck
36	ug/L	-	1959	Henderson et al.
21	ug/L	-	1970	Macek and McAllister
76	ug/L	-	1966	Marking
180	ug/L	-	1966	Marking
21	ug/L	-	1966	Marking
27	ug/L	-	1966	Marking
32	ug/L	-	1966	Marking
35	ug/L	-	1966	Marking
40	ug/L	-	1966	Marking
14.7	ug/L	34	1986	Mayer and Ellersieck
15.5	ug/L	-	1986	Mayer and Ellersieck
0.83	ug/L	0.83	1993	Brooke
121	ug/L	121	1992	Chari
68	ug/L	68	1966	Marking
6400	ug/L	6400	1986	Kulshrestha et al.
3.5	ug/L	3.5	1968	Sanders and Cope
1.75	ug/L	1.75	1984	Kudesia and Bali
67	ug/L	67	1966	Marking
54	ug/L	54	1970	Macek and Sanders
350	ug/L	-	1986	Kulshrestha and Arora
10	ug/L	-	1970	Macek and McAllister
4	ug/L	-	1966	Marking
6	ug/L	-	1966	Marking
6.9	ug/L	-	1966	Marking
9.2	ug/L	-	1966	Marking
11.3	ug/L	-	1966	Marking
12	ug/L	-	1966	Marking
9.7	ug/L	3	1986	Mayer and Ellersieck
4	ug/L	-	1970	Macek and Sanders
1.48	ug/L	-	1965	Priester
3	ug/L	2	1986	Ziegenfuss et al.
0.36	ug/L	0.36	1966	Sanders and Cope
3.9	ug/L	3.9	1997	Pantani et al.
25	ug/L	25	1965	Gaufin, et al.
1.7	ug/L	-	1966	Marking
2.7	ug/L	10.4	1986	Mayer and Ellersieck
40	ug/L	-	1980	Joshi and Rege
9.87	ug/L	6	1986	Mayer and Ellersieck
27.69	ug/L	-	1986	Mayer and Ellersieck
0.8	ug/L	1.7	1986	Mayer and Ellersieck
1.8	ug/L	-	1986	Mayer and Ellersieck
3.2	ug/L	-	1986	Mayer and Ellersieck
0.8	ug/L	-	1972	Sanders
1.8	ug/L	-	1972	Sanders
3.2	ug/L	-	1972	Sanders
7	ug/L	7	1997	Pantani et al.
9	ug/L	-	1965	Gaufin, et al.
1	ug/L	19	1986	Mayer and Ellersieck

1	ug/L	-		1969	Sanders
6800	ug/L		6800	1986	Mayer and Ellersieck
1898	ug/L		2166	1982	Beleau and Bartosz
2471	ug/L	-		1982	Beleau and Bartosz
410	ug/L		362	1961	Gaufin, et al.
320	ug/L	-		1965	Gaufin, et al.
2950	ug/L		8588	1984	Mustafa and Murad
25000	ug/L	-		2008	Singh et al.
0.36	ug/L	-		2012	Ding et al.
0.17	ug/L		0.25	2000	Lotufo et al.
48	ug/L		48	1965	Gaufin, et al.
5	ug/L		18	1970	Macek and McAllister
17	ug/L	-		1966	Marking
20	ug/L	-		1966	Marking
23.5	ug/L	-		1966	Marking
42	ug/L	-		1966	Marking
16	ug/L	-		1970	Macek and McAllister
17.4	ug/L	-		1970	Macek and Sanders
17.5	ug/L	-		1966	Marking
17.5	ug/L	-		1966	Marking
6.9	ug/L		16	1986	Mayer and Ellersieck
7	ug/L	-		1986	Mayer and Ellersieck
16	ug/L	-		1986	Mayer and Ellersieck
17.3	ug/L	-		1986	Mayer and Ellersieck
21.5	ug/L	-		1986	Mayer and Ellersieck
22	ug/L	-		1986	Mayer and Ellersieck
6400	ug/L		6400	1986	Mayer and Ellersieck
2.8	ug/L	-		1966	Marking
3	ug/L	-		1966	Marking
3.6	ug/L	-		1966	Marking
3.9	ug/L	-		1966	Marking
4.4	ug/L	-		1966	Marking
5	ug/L	-		1966	Marking
6.4	ug/L	-		1966	Marking
6.7	ug/L	-		1966	Marking
6.5	ug/L		7	1986	Mayer and Ellersieck
9.9	ug/L	-		1986	Mayer and Ellersieck
10.9	ug/L	-		1986	Mayer and Ellersieck
1.8	ug/L	-		1966	Marking
2.8	ug/L	-		1966	Marking
3.6	ug/L	-		1966	Marking
6.7	ug/L	-		1966	Marking
7.5	ug/L		3.9	1966	Marking
21	ug/L	-		1959	Henderson et al.
8	ug/L	-		1970	Macek and McAllister
9.5	ug/L	-		1970	Macek and Sanders
1.2	ug/L	-		1966	Marking
1.7	ug/L	-		1966	Marking
2.8	ug/L	-		1966	Marking
3	ug/L	-		1966	Marking
3.6	ug/L	-		1966	Marking
4.3	ug/L	-		1966	Marking
4.6	ug/L	-		1966	Marking
7	ug/L	-		1966	Marking
7	ug/L	-		1966	Marking
9.4	ug/L	-		1966	Marking
1.6	ug/L		5	1986	Mayer and Ellersieck
2.1	ug/L	-		1986	Mayer and Ellersieck
4.3	ug/L	-		1986	Mayer and Ellersieck
5.6	ug/L	-		1986	Mayer and Ellersieck
5.8	ug/L	-		1986	Mayer and Ellersieck
6.3	ug/L	-		1986	Mayer and Ellersieck
8.6	ug/L	-		1986	Mayer and Ellersieck

3.4	ug/L	-		1979	Randall et al.
9	ug/L	-		1979	Randall et al.
4.9	ug/L		7.8	1966	Marking
12.5	ug/L	-		1966	Marking
5	ug/L	-		1970	Macek and McAllister
15	ug/L		9	1986	Mayer and Ellersieck
130	ug/L		130	1980	Bailey and Liu
2	ug/L	-		1970	Macek and McAllister
1.8	ug/L	-		1970	Macek and Sanders
0.8	ug/L	-		1966	Marking
1.5	ug/L		1.4	1986	Mayer and Ellersieck
5.8	ug/L		5.8	1986	Mayer and Ellersieck
5.5	ug/L	-		1986	Mayer and Ellersieck
7.9	ug/L	-		1986	Mayer and Ellersieck
0.85	ug/L		3.8	1971	Post and Schroeder
1.37	ug/L	-		1971	Post and Schroeder
44	ug/L		12	1961	Katz
4	ug/L	-		1970	Macek and McAllister
4	ug/L	-		1986	Mayer and Ellersieck
19.3	ug/L	-		1986	Mayer and Ellersieck
11.3	ug/L	-		1971	Post and Schroeder
18.5	ug/L	-		1971	Post and Schroeder
13	ug/L	-		1967	Schaumburg et al.
42	ug/L	-		1961	Katz
7	ug/L	-		1970	Macek and McAllister
2.4	ug/L	-		1966	Marking
4.6	ug/L	-		1966	Marking
7.2	ug/L	-		1966	Marking
7.2	ug/L	-		1966	Marking
12	ug/L	-		1966	Marking
13	ug/L	-		1966	Marking
14	ug/L	-		1966	Marking
15	ug/L	-		1966	Marking
17	ug/L	-		1966	Marking
3	ug/L		2	1986	Mayer and Ellersieck
4.1	ug/L	-		1986	Mayer and Ellersieck
4.7	ug/L	-		1986	Mayer and Ellersieck
5.8	ug/L	-		1986	Mayer and Ellersieck
7.6	ug/L	-		1986	Mayer and Ellersieck
8.7	ug/L	-		1986	Mayer and Ellersieck
11.4	ug/L	-		1986	Mayer and Ellersieck
1.7	ug/L	-		1971	Post and Schroeder
2.4	ug/L	-		1975	Tooby et al.
11.5	ug/L		11.5	1961	Katz
0.18	ug/L		1.6	1986	Mayer and Ellersieck
0.2	ug/L	-		1986	Mayer and Ellersieck
0.24	ug/L	-		1986	Mayer and Ellersieck
0.3	ug/L	-		1986	Mayer and Ellersieck
0.9	ug/L	-		1986	Mayer and Ellersieck
28	ug/L	-		1986	Mayer and Ellersieck
100	ug/L	-		1986	Mayer and Ellersieck
0.18	ug/L	-		1972	Sanders
0.2	ug/L	-		1972	Sanders
0.24	ug/L	-		1972	Sanders
0.3	ug/L	-		1972	Sanders
0.9	ug/L	-		1972	Sanders
28	ug/L	-		1972	Sanders
30	ug/L	-		1972	Sanders
100	ug/L	-		1972	Sanders
5.1	ug/L		11	1986	Mayer and Ellersieck
14	ug/L	-		1986	Mayer and Ellersieck
17	ug/L	-		1986	Mayer and Ellersieck
4.9	ug/L		23	1984	Takimoto et al.

14	ug/L	-		1984	Takimoto et al.
31.6	ug/L	-		1984	Takimoto et al.
35.6	ug/L	-		1984	Takimoto et al.
43.7	ug/L	-		1984	Takimoto et al.
48.7	ug/L	-		1984	Takimoto et al.
4.2	ug/L	-		1970	Macek and Sanders
2.3	ug/L		3.1	1986	Mayer and Ellersieck
3.5	ug/L	-		1986	Mayer and Ellersieck
2.3	ug/L	-		1972	Sanders
3.5	ug/L	-		1972	Sanders
62.129	ug/L		62.129	1991	Patil et al.
9	ug/L	-		1970	Macek and McAllister
0.6	ug/L	-		1966	Marking
0.8	ug/L	-		1966	Marking
1.5	ug/L	-		1966	Marking
9	ug/L		2.3	1986	Mayer and Ellersieck
26	ug/L	-		1959	Henderson et al.
26	ug/L	-		1959	Henderson et al.
42	ug/L	-		1959	Henderson et al.
45	ug/L	-		1959	Henderson et al.
48	ug/L	-		1977	Jarvinen et al.
19	ug/L	-		1970	Macek and McAllister
19.9	ug/L	-		1970	Macek and Sanders
12.4	ug/L		27	1986	Mayer and Ellersieck
13.2	ug/L	-		1986	Mayer and Ellersieck
58	ug/L	-		1965	Priester
56	ug/L	-		1962	King
19.5	ug/L		33	1966	Marking
1230	ug/L		1230	1974	Kouyoumjian and Uglow
5.6	ug/L		5.6	1986	Mayer and Ellersieck
3	ug/L		3	1972	Albaugh
1.9	ug/L		1.9	1968	Sanders and Cope
1800	ug/L		192	1965	Gaufin, et al.
560	ug/L	-		1961	Gaufin, et al.
7	ug/L	-		1968	Sanders and Cope
130	ug/L		527	1982	Beleau and Bartosz
138	ug/L	-		1982	Beleau and Bartosz
341	ug/L	-		1982	Beleau and Bartosz
824	ug/L	-		1982	Beleau and Bartosz
986	ug/L	-		1982	Beleau and Bartosz
1497	ug/L	-		1982	Beleau and Bartosz
1512	ug/L	-		1982	Beleau and Bartosz
34	ug/L		54	1982	Beleau and Bartosz
40	ug/L	-		1982	Beleau and Bartosz
40	ug/L	-		1982	Beleau and Bartosz
151	ug/L	-		1982	Beleau and Bartosz
1.8	ug/L		1.8	1986	Mayer and Ellersieck
17.5	ug/L	-		1962	King
2	ug/L	-		1970	Macek and McAllister
10.9	ug/L	-		1966	Marking
1.8	ug/L		5.1	1986	Mayer and Ellersieck
1.8	ug/L	-		1966	Marking
7.2	ug/L		8.5	1966	Marking
17	ug/L	-		1966	Marking
20	ug/L	-		1966	Marking
7.4	ug/L	-		1971	Post and Schroeder
11.9	ug/L	-		1971	Post and Schroeder
9.1	ug/L	-		1966	Marking
9.5	ug/L		9.3	1966	Marking
2.9	ug/L		3.7	1986	Mayer and Ellersieck
4.6	ug/L	-		1986	Mayer and Ellersieck
2.5	ug/L		2.6	1966	Sanders and Cope
2.8	ug/L	-		1966	Sanders and Cope

80	ug/L		80	1988	Parkinson and Agius
9.5	ug/L		16	1986	Mayer and Ellersieck
9.52	ug/L	-		1986	Mayer and Ellersieck
15.5	ug/L	-		1986	Mayer and Ellersieck
42	ug/L	-		1986	Mayer and Ellersieck
4000	ug/L		4000	1994	Suseela et al.
1390	ug/L		1390	1982	Panwar et al.

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Table D1-29. Distribution fitting results for the DDT freshwater acute species sensitivity distri

	Input	Pearson6	Levy	InvGauss
Fit				
Function	iskPearson6(2.835,0.44153,0.88704)		RiskLevy(0,3.6628)	gauss(577.72,3.6862)
Method		MLE (Modified)	MLE	MLE
Rankings By Fit Statistic [10 Valid Fits]				
Akaike (AIC)		#1	#2	#3
Bayesian (BIC)		#2	#1	#3
Chi-Sq Statistic		#3	#1 (Tie)	#1 (Tie)
K-S Statistic		#1	#2	#3
A-D Statistic		#1	#3	#4
Parameters - [* Values estimated using a bootstrap with 1000 resamples.]				
Num. Est. Parameters		3.00	1.00	2.00
Fitted Parameter #1		alpha1	c	mu
Fitted Value		2.84	3.66	577.72
95% Lower Limit*		N/A	2.68	41.90
95% Upper Limit*		N/A	5.29	2,900.83
Conf. Interval Width*		N/A	2.61	2,858.93
Fitted Parameter #2		alpha2		lambda
Fitted Value		0.44		3.69
95% Lower Limit*		N/A		2.74
95% Upper Limit*		N/A		5.43
Conf. Interval Width*		N/A		2.70
Fitted Parameter #3		beta		
Fitted Value		0.89		
95% Lower Limit*		N/A		
95% Upper Limit*		N/A		
Conf. Interval Width*		N/A		
Distribution Statistics				
Minimum	0.25	-	-	-
Maximum	8,587.78	+Infinity	+Infinity	+Infinity
Mean	577.72	+Infinity	+Infinity	577.72
Mode	2.6406 [est]	1.13	1.22	1.23
Median	10.67	12.34	8.05	7.98
Std. Deviation	1,731.50	+Infinity	+Infinity	7,232.37
Skewness	3.46	+Infinity	+Infinity	37.56
Kurtosis	14.27	+Infinity	+Infinity	2,353.85
Percentiles				
5%	1.44	0.90	0.95	0.96
10%	1.75	1.46	1.35	1.36
15%	2.14	2.06	1.77	1.77
20%	2.65	2.75	2.23	2.23
25%	3.50	3.57	2.77	2.77
30%	3.91	4.58	3.41	3.40

35%	5.22	5.83	4.19	4.18
40%	7.00	7.44	5.17	5.15
45%	8.66	9.53	6.42	6.38
50%	10.67	12.34	8.05	7.98
55%	12.20	16.24	10.25	10.14
60%	22.19	21.84	13.32	13.13
65%	27.18	30.29	17.79	17.46
70%	53.54	43.80	24.67	24.07
75%	67.00	67.24	36.08	34.92
80%	130.00	112.80	57.07	54.58
85%	362.22	218.26	102.41	96.01
90%	1,390.00	549.80	231.96	209.13
95%	6,400.00	2,650.06	931.51	751.64
Information Criteria				
Akaike (AIC)		730.40	733.45	735.13
Bayesian (BIC)		736.73	735.62	739.42
Av. LogL		(5.25)	(5.30)	(5.30)
Chi-Squared Test - [* Values estimated using a bootstrap with 1000 resamples.]				
Chi-Sq Statistic		7.38	7.09	7.09
P-Value*		N/A	0.54	0.53
Cr. Value @ 0.750*		N/A	5.35	5.35
Cr. Value @ 0.500*		N/A	7.38	7.38
Cr. Value @ 0.250*		N/A	10.57	10.28
Cr. Value @ 0.150*		N/A	12.30	11.72
Cr. Value @ 0.100*		N/A	13.46	13.17
Cr. Value @ 0.050*		N/A	15.49	15.49
Cr. Value @ 0.025*		N/A	18.10	17.81
Cr. Value @ 0.010*		N/A	21.00	20.42
Cr. Value @ 0.005*		N/A	22.74	21.29
Cr. Value @ 0.001*		N/A	30.86	30.86
Chi-Sq Test (Binning Information)				
Bin #1 : Minimum		-	-	-
Bin #1 : Maximum		1.46	1.35	1.36
Bin #1 : Input		4.00	3.00	3.00
Bin #1 : Fit		6.90	6.90	6.90
Bin #2 : Minimum		1.46	1.35	1.36
Bin #2 : Maximum		2.75	2.23	2.23
Bin #2 : Input		11.00	8.00	8.00
Bin #2 : Fit		6.90	6.90	6.90
Bin #3 : Minimum		2.75	2.23	2.23
Bin #3 : Maximum		4.58	3.41	3.40
Bin #3 : Input		7.00	6.00	6.00
Bin #3 : Fit		6.90	6.90	6.90
Bin #4 : Minimum		4.58	3.41	3.40
Bin #4 : Maximum		7.44	5.17	5.15
Bin #4 : Input		7.00	7.00	7.00
Bin #4 : Fit		6.90	6.90	6.90

Bin #5 : Minimum		7.44	5.17	5.15
Bin #5 : Maximum		12.34	8.05	7.98
Bin #5 : Input		9.00	6.00	6.00
Bin #5 : Fit		6.90	6.90	6.90
Bin #6 : Minimum		12.34	8.05	7.98
Bin #6 : Maximum		21.84	13.32	13.13
Bin #6 : Input		3.00	9.00	9.00
Bin #6 : Fit		6.90	6.90	6.90
Bin #7 : Minimum		21.84	13.32	13.13
Bin #7 : Maximum		43.80	24.67	24.07
Bin #7 : Input		6.00	4.00	4.00
Bin #7 : Fit		6.90	6.90	6.90
Bin #8 : Minimum		43.80	24.67	24.07
Bin #8 : Maximum		112.80	57.07	54.58
Bin #8 : Input		7.00	7.00	7.00
Bin #8 : Fit		6.90	6.90	6.90
Bin #9 : Minimum		112.80	57.07	54.58
Bin #9 : Maximum		549.80	231.96	209.13
Bin #9 : Input		6.00	8.00	8.00
Bin #9 : Fit		6.90	6.90	6.90
Bin #10 : Minimum		549.80	231.96	209.13
Bin #10 : Maximum		+Infinity	+Infinity	+Infinity
Bin #10 : Input		9.00	11.00	11.00
Bin #10 : Fit		6.90	6.90	6.90
Anderson-Darling Test - [* Values estimated using a bootstrap with 1000 resamples.]				
A-D Statistic		0.35	1.65	1.90
P-Value*		N/A	0.04	0.02
Cr. Value @ 0.750*		N/A	0.37	0.35
Cr. Value @ 0.500*		N/A	0.54	0.50
Cr. Value @ 0.250*		N/A	0.83	0.79
Cr. Value @ 0.150*		N/A	1.02	0.93
Cr. Value @ 0.100*		N/A	1.17	1.10
Cr. Value @ 0.050*		N/A	1.47	1.38
Cr. Value @ 0.025*		N/A	1.81	1.71
Cr. Value @ 0.010*		N/A	2.17	2.14
Cr. Value @ 0.005*		N/A	2.27	2.37
Cr. Value @ 0.001*		N/A	2.91	2.65
Kolmogorov-Smirnov Test - [* Values estimated using a bootstrap with 1000 resamples.]				
K-S Statistic		0.06	0.10	0.11
P-Value*		N/A	0.30	0.24
Cr. Value @ 0.750*		N/A	0.07	0.07
Cr. Value @ 0.500*		N/A	0.09	0.09
Cr. Value @ 0.250*		N/A	0.10	0.10
Cr. Value @ 0.150*		N/A	0.12	0.12
Cr. Value @ 0.100*		N/A	0.13	0.12
Cr. Value @ 0.050*		N/A	0.14	0.14
Cr. Value @ 0.025*		N/A	0.15	0.15

	Cr. Value @ 0.010*		N/A	0.16	0.16
	Cr. Value @ 0.005*		N/A	0.16	0.16
	Cr. Value @ 0.001*		N/A	0.18	0.18

bution of fish, benthic invertebrates, and zooplankton

LogLogistic	Lognorm	Gamma	BetaGeneral	Expon	Triang
istic(0,15.363,0.7251)	norm(445.75,9685.7)	amma(0.21751,2656)	18448,1.6751,0,8758)	RiskExpon(577.72)	4739,8735.6)
MLE	MLE	MLE	MLE (Approximate)	MLE	MLE
#4	#5	#6	#7	#8	#9
#4	#5	#6	#7	#8	#9
#4	#5	#6	#7	#8	#9
#4	#5	#6	#7	#8	#9
#2	#5	#6	#7	#8	#9
2.00	2.00	2.00	3.00	1.00	2.00
beta	mu	alpha	alpha1	beta	M. likely
15.36	445.75	0.22	0.18	577.72	0.25
8.54	129.48	0.17	0.14	438.96	1.23
26.51	1,446.45	0.29	0.24	718.92	755.94
17.97	1,316.97	0.12	0.11	279.96	754.71
alpha	sigma	beta	alpha2		Max
0.73	9,685.70	2,656.02	1.68		8,735.55
0.61	1,155.90	1,312.02	0.68		7,448.89
0.90	79,306.90	4,261.18	4.19		9,341.77
0.29	78,151.00	2,949.16	3.51		1,892.88
			Max		
			8,757.95		
			4,687.97		
			14,483.51		
			9,795.54		
-	-	-	-	-	-
+Infinity	+Infinity	+Infinity	8,757.95	+Infinity	8,735.55
+Infinity	445.75	577.72	868.80	577.72	2,911.93
-	0.04	-	-	-	0.25
15.36	20.49	74.13	102.46	400.44	2,558.67
+Infinity	9,685.72	1,238.72	1,548.18	577.72	2,058.96
+Infinity	10,324.43	4.29	2.35	2.00	0.57
+Infinity	50,329,269,683.43	30.58	8.34	9.00	2.40
0.26	0.35	0.00	0.00	29.63	221.31
0.74	0.85	0.04	0.02	60.87	448.40
1.40	1.56	0.29	0.15	93.89	681.89
2.27	2.54	1.07	0.71	128.91	922.35
3.38	3.84	3.00	2.38	166.20	1,170.45
4.78	5.58	6.94	6.39	206.06	1,426.97

6.54	7.88	14.12	14.74	248.87	1,692.83
8.78	10.93	26.18	30.42	295.11	1,969.12
11.65	15.00	45.27	57.71	345.38	2,257.19
15.36	20.49	74.13	102.46	400.44	2,558.67
20.26	27.99	116.38	172.56	461.31	2,875.65
26.87	38.43	176.83	278.48	529.36	3,210.78
36.08	53.32	262.12	434.19	606.50	3,567.60
49.43	75.30	381.80	658.57	695.55	3,950.96
69.90	109.29	550.60	977.91	800.88	4,367.84
103.95	165.47	793.18	1,430.74	929.80	4,828.95
168.04	268.35	1,156.16	2,078.35	1,096.00	5,352.34
318.06	493.06	1,745.85	3,032.46	1,330.24	5,973.17
891.36	1,214.74	2,910.48	4,557.96	1,730.68	6,782.25

741.70	742.20	795.05	805.83	1,017.61	1,180.46
745.98	746.49	799.34	812.17	1,019.79	1,184.75
(5.34)	(5.35)	(5.73)	(5.79)	(7.36)	(8.52)

14.33	15.78	78.68	88.83	305.93	439.26
0.04	0.03	-	-	-	-
4.48	4.77	4.77	5.35	5.35	5.64
6.80	6.80	7.09	7.67	7.67	7.67
9.41	9.70	9.70	10.28	10.28	10.57
10.86	11.14	11.43	11.72	12.01	12.01
12.01	12.30	12.59	13.17	13.46	13.46
14.04	14.62	14.62	15.78	16.07	15.49
16.36	16.36	16.65	17.81	17.52	17.81
18.97	18.97	19.55	20.42	19.55	20.71
20.42	20.71	23.32	24.19	21.58	21.58
23.61	24.77	26.51	28.54	23.03	23.03

-	-	-	-	-	-
0.74	0.85	0.04	0.02	60.87	448.40
2.00	3.00	-	-	50.00	59.00
6.90	6.90	6.90	6.90	6.90	6.90
0.74	0.85	0.04	0.02	60.87	448.40
2.27	2.54	1.07	0.71	128.91	922.35
10.00	9.00	3.00	2.00	5.00	2.00
6.90	6.90	6.90	6.90	6.90	6.90
2.27	2.54	1.07	0.71	128.91	922.35
4.78	5.58	6.94	6.39	206.06	1,426.97
11.00	13.00	24.00	25.00	3.00	2.00
6.90	6.90	6.90	6.90	6.90	6.90
4.78	5.58	6.94	6.39	206.06	1,426.97
8.78	10.93	26.18	30.42	295.11	1,969.12
9.00	10.00	17.00	18.00	-	-
6.90	6.90	6.90	6.90	6.90	6.90

8.78	10.93	26.18	30.42	295.11	1,969.12
15.36	20.49	74.13	102.46	400.44	2,558.67
8.00	6.00	9.00	9.00	1.00	1.00
6.90	6.90	6.90	6.90	6.90	6.90
15.36	20.49	74.13	102.46	400.44	2,558.67
26.87	38.43	176.83	278.48	529.36	3,210.78
4.00	6.00	4.00	4.00	1.00	-
6.90	6.90	6.90	6.90	6.90	6.90
26.87	38.43	176.83	278.48	529.36	3,210.78
49.43	75.30	381.80	658.57	695.55	3,950.96
4.00	6.00	2.00	3.00	1.00	-
6.90	6.90	6.90	6.90	6.90	6.90
49.43	75.30	381.80	658.57	695.55	3,950.96
103.95	165.47	793.18	1,430.74	929.80	4,828.95
6.00	3.00	2.00	2.00	-	1.00
6.90	6.90	6.90	6.90	6.90	6.90
103.95	165.47	793.18	1,430.74	929.80	4,828.95
318.06	493.06	1,745.85	3,032.46	1,330.24	5,973.17
4.00	3.00	2.00	1.00	1.00	-
6.90	6.90	6.90	6.90	6.90	6.90
318.06	493.06	1,745.85	3,032.46	1,330.24	5,973.17
+Infinity	+Infinity	+Infinity	8,757.95	+Infinity	8,735.55
11.00	10.00	6.00	5.00	7.00	4.00
6.90	6.90	6.90	6.90	6.90	6.90

1.49	1.98	8.24	9.82	107.79	214.97
-	-	-	N/A	-	-
0.23	0.25	0.28	N/A	0.34	0.42
0.31	0.34	0.38	N/A	0.50	0.64
0.44	0.48	0.55	N/A	0.74	1.02
0.51	0.57	0.66	N/A	0.92	1.31
0.57	0.64	0.75	N/A	1.04	1.49
0.65	0.76	0.87	N/A	1.33	2.00
0.74	0.83	1.04	N/A	1.63	2.44
0.84	0.95	1.22	N/A	2.04	2.83
1.00	1.03	1.33	N/A	2.30	3.14
1.09	1.15	1.49	N/A	2.63	4.79

0.11	0.15	0.28	0.30	0.66	0.80
0.01	-	-	-	-	-
0.06	0.06	0.07	0.07	0.07	0.08
0.07	0.07	0.08	0.08	0.08	0.09
0.08	0.09	0.09	0.10	0.10	0.12
0.08	0.09	0.10	0.11	0.11	0.13
0.09	0.10	0.11	0.12	0.12	0.14
0.09	0.11	0.12	0.13	0.13	0.15
0.10	0.11	0.13	0.14	0.14	0.16

0.11	0.12	0.14	0.15	0.15	0.18
0.11	0.13	0.14	0.16	0.16	0.19
0.12	0.14	0.16	0.16	0.18	0.20

Uniform
rm(0,8714.1)
as Corrected)
#10
#10
#10
#10
#10
1.00
Max
8,714.07
8,390.75
8,838.67
447.92
-
8,714.07
4,357.04
-
4,357.04
2,515.54
-
1.80
435.70
871.41
1,307.11
1,742.81
2,178.52
2,614.22

3,049.93
3,485.63
3,921.33
4,357.04
4,792.74
5,228.44
5,664.15
6,099.85
6,535.55
6,971.26
7,406.96
7,842.67
8,278.37

1,254.09
1,256.27
(9.07)

472.59
-
6.22
8.54
11.43
13.17
14.33
16.94
18.68
20.13
21.87
25.93

-
871.41
61.00
6.90
871.41
1,742.81
2.00
6.90
1,742.81
2,614.22
1.00
6.90
2,614.22
3,485.63
-
6.90

3,485.63
4,357.04
1.00
6.90
4,357.04
5,228.44
-
6.90
5,228.44
6,099.85
-
6.90
6,099.85
6,971.26
3.00
6.90
6,971.26
7,842.67
-
6.90
7,842.67
8,714.07
1.00
6.90

255.95
-
0.48
0.76
1.28
1.68
1.95
2.50
2.90
3.32
3.47
5.54

0.82
-
0.08
0.10
0.12
0.14
0.15
0.16
0.17

0.18
0.19
0.22

Table D1-30a. DDT saltwater acute toxicity data used to develop a species sensitivity distribution for fish, b

Species Common Name	Species Scientific Name	Organism Lifestage	Observed Duration Mean (Days)	Endpoint	Effect Measurement	Conc 1 Mean (Standardized)
Bleak	Alburnus alburnus	-	4	LC50	Mortality	80
Opossum shrimp	Americamysis bahia	-	4	LC50	Mortality	0.45
American eel	Angullaria rostrea	-	4	LC50	Mortality	4
Dungeness or edible crab	Cancer magister	ZO	4	LC50	Mortality	1.1
Polychaete worm	Capitella capitata	-	4	LC50	Mortality	1000
Sand shrimp	Crangon septemspinosa	-	-	LC50	Mortality	0.6
Eastern oyster	Crassostrea virginica	-	-	LC50	Mortality	7
Eastern oyster	Crassostrea virginica	-	-	LC50	Mortality	9
Shiner perch	Cymatogaster aggregata	-	-	LC50	Mortality	7.6
Shiner perch	Cymatogaster aggregata	-	-	LC50	Mortality	0.45
Scud	Elasmopus bampo	-	4	LC50	Mortality	2
Fireworm	Eurythoe complanata	-	4	LC50	Mortality	1000
Mummichog	Fundulus heteroclitus	-	-	LC50	Mortality	3
Mummichog	Fundulus heteroclitus	-	-	LC50	Mortality	5
Striped killifish	Fundulus majalis	-	-	LC50	Mortality	1
Borneo mullet	Liza macrolepis	-	4	LC50	Mortality	10
Borneo mullet	Liza macrolepis	-	4	LC50	Mortality	10
Atlantic silverside	Menidia menidia	-	-	LC50	Mortality	0.4
Sand shrimp	Metapenaeus monoceros	IT	4	LC50	Mortality	58
Sand shrimp	Metapenaeus monoceros	IT	4	LC50	Mortality	62
Sand shrimp	Metapenaeus monoceros	IT	4	LC50	Mortality	63
Sand shrimp	Metapenaeus monoceros	IT	4	LC50	Mortality	69
Dwarf perch	Micrometrus minimus	-	-	LC50	Mortality	4.6
Dwarf perch	Micrometrus minimus	-	-	LC50	Mortality	0.26
Striped bass	Morone saxatilis	-	-	LC50	Mortality	0.53
Striped mullet	Mugil cephalus	-	-	LC50	Mortality	0.9
Striped mullet	Mugil cephalus	-	-	LC50	Mortality	3
Crab	Nanosesarma sp.	-	4	LC50	Mortality	15
Polychaete worm	Neanthes arenaceodentata	-	4	LC50	Mortality	1000
Polychaete worm	Nereis grubei	-	4	LC50	Mortality	1000
Harpacticoid copepod	Nitocra spinipes	AD	4	LC50	Mortality	30
Chinook salmon	Oncorhynchus tshawytscha	-	-	LC50	Mortality	0.68
Polychaete worm	Ophryotrocha labronica	-	4	LC50	Mortality	1000
Hermit crab	Pagurus longicarpus	-	-	LC50	Mortality	6
Grass shrimp	Palaemonetes vulgaris	-	-	LC50	Mortality	2
Korean shrimp	Palaemonetes vulgaris	-	-	LC50	Mortality	0.86
Korean shrimp	Palaemonetes vulgaris	-	-	LC50	Mortality	0.17
Brown shrimp	Penaeus aztecus	-	-	LC50	Mortality	0.14
Indian prawn	Penaeus indicus	-	4	LC50	Mortality	37
Clam	Ruditapes decussatus	LV	4	LC50	Mortality	457.4
Northern puffer	Sphoeroides maculatus	-	-	LC50	Mortality	89
Tigerfish	Terapon jarbua	-	4	LC50	Mortality	3.6
Bluehead	Thalasoma bifasciatum	-	-	LC50	Mortality	7

Table D1-30b. Summary of DDT saltwater acute toxicity data used to develop a species sensitivity distributi

Species Common Name	Species Scientific Name	SMAV (ug/L)	Rank	Percentile
Brown shrimp	Penaeus aztecus	0.14	1	0.03030303
Atlantic silverside	Menidia menidia	0.40	2	0.060606061
Opossum shrimp	Americamysis bahia	0.45	3	0.090909091
Striped bass	Morone saxatilis	0.53	4	0.121212121
Sand shrimp	Crangon septemspinosa	0.60	5	0.151515152
Grass shrimp	Palaemonetes vulgaris	0.66	6	0.181818182
Chinook salmon	Oncorhynchus tshawytscha	0.68	7	0.212121212
Striped killifish	Fundulus majalis	1.0	8	0.242424242
Dwarf perch	Micrometrus minimus	1.1	9	0.272727273

Dungeness or edible crab	Cancer magister	1.1	10	0.303030303
Striped mullet	Mugil cephalus	1.6	11	0.333333333
Shiner perch	Cymatogaster aggregata	1.8	12	0.363636364
Scud	Elasmopus bampo	2.0	13	0.393939394
Tigerfish	Terapon jarbua	3.6	14	0.424242424
Mummichog	Fundulus heteroclitus	3.9	15	0.454545455
American eel	Angullaria rostrea	4	16	0.484848485
Hermit crab	Pagurus longicarpus	6	17	0.515151515
Bluehead	Thalasoma bifasciatum	7.0	18	0.545454545
Eastern oyster	Crassostrea virginica	7.9	19	0.575757576
Borneo mullet	Liza macrolepis	10	20	0.606060606
Crab	Nanosesarma sp.	15	21	0.636363636
Harpacticoid copepod	Nitocra spinipes	30	22	0.666666667
Indian prawn	Penaeus indicus	37	23	0.696969697
Sand shrimp	Metapenaeus monoceros	63	24	0.727272727
Bleak	Alburnus alburnus	80	25	0.757575758
Northern puffer	Sphoeroides maculatus	89	26	0.787878788
Clam	Ruditapes decussatus	457	27	0.818181818
Polychaete worm	Capitella capitata	1000	28	0.848484848
Fireworm	Eurythoe complanata	1000	29	0.878787879
Polychaete worm	Neanthes arenaceodentata	1000	30	0.909090909
Polychaete worm	Nereis grubei	1000	31	0.939393939
Polychaete worm	Ophryotrocha labronica	1000	32	0.96969697

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Units	SMAV (ug/L)	SOURCE	Publication Year	AWQC AUTHOR
ug/L	80	ECOTOX	1979	Linden et al.
ug/L	0.45	ECOTOX	1985	D'Asaro
ug/L	4	AWQC	1970a	Eisler
ug/L	1.1	ECOTOX	1983	Dinnel et al.
ug/L	1000	ECOTOX	1991	Reish et al.
ug/L	0.6	AWQC	1969	Eisler
ug/L	7.9	AWQC	undated	Lowe
ug/L	-	AWQC	undated	Lowe
ug/L	1.8	AWQC	1971	Earnest and Benvilleie
ug/L	-	AWQC	1971	Earnest and Benvilleie
ug/L	2.0	ECOTOX	1993	Reish
ug/L	1000	ECOTOX	1988	Reish et al.
ug/L	3.9	AWQC	1970a	Eisler
ug/L	-	AWQC	1970a	Eisler
ug/L	1.0	AWQC	1970a	Eisler
ug/L	10	ECOTOX	1984	Nammalwar
ug/L	-	ECOTOX	1984	Nammalwar
ug/L	0.40	AWQC	1970a	Eisler
ug/L	63	ECOTOX	1992	Reddy and Rao
ug/L	-	ECOTOX	1992	Reddy and Rao
ug/L	-	ECOTOX	1992	Reddy and Rao
ug/L	-	ECOTOX	1992	Reddy and Rao
ug/L	1.1	AWQC	1971	Reish et al.
ug/L	-	AWQC	1971	Reish et al.
ug/L	0.53	AWQC	1974	Reish et al.
ug/L	1.6	AWQC	1970b	Reish et al.
ug/L	-	AWQC	1970b	Reish et al.
ug/L	15	ECOTOX	1996	Selvakumar et al.
ug/L	1000	ECOTOX	1991	Reish et al.
ug/L	1000	ECOTOX	1991	Reish et al.
ug/L	30	ECOTOX	1979	Linden et al.
ug/L	0.68	AWQC	1970	Schoettger
ug/L	1000	ECOTOX	1991	Reish et al.
ug/L	6	AWQC	1970a	Eisler
ug/L	0.66	AWQC	1969	Eisler
ug/L	-	AWQC	1970	Schoettger
ug/L	-	AWQC	1970	Schoettger
ug/L	0.14	AWQC	1975	Schimmel and Patrick
ug/L	37	ECOTOX	1987	Babu
ug/L	457.4	ECOTOX	2014	Fathallah
ug/L	89	AWQC	1970b	Eisler
ug/L	3.6	ECOTOX	1978	Lingaraja and Venugopalan
ug/L	7.0	AWQC	1970b	Eisler

on for fish, benthic invertebrates, and zooplankton

Table D1-31. Distribution fitting results for the DDT saltwater acute species sensitivity distribu

	Input	Levy	InvGauss	Lognorm
Fit				
Function		RiskLevy(0,1.3134)	vgauss(182.06,1.323)	iorm(357.35,13498.2)
Method		MLE	MLE	MLE
Rankings By Fit Statistic [9 Valid Fits]				
Akaike (AIC)		#1	#2	#3
Bayesian (BIC)		#1	#2	#3
Chi-Sq Statistic		#4	#3	#1
K-S Statistic		#3	#4	#2
A-D Statistic		#3	#4	#2
Parameters - [* Values estimated using a bootstrap with 1000 resamples.]				
Num. Est. Parameters		1.00	2.00	2.00
Fitted Parameter #1		c	mu	mu
Fitted Value		1.31	182.06	357.35
95% Lower Limit*		0.86	7.56	44.56
95% Upper Limit*		2.31	1,335.86	2,658.53
Conf. Interval Width*		1.46	1,328.30	2,613.96
Fitted Parameter #2			lambda	sigma
Fitted Value			1.32	13,498.20
95% Lower Limit*			0.87	373.80
95% Upper Limit*			2.38	639,016.10
Conf. Interval Width*			1.51	638,642.30
Fitted Parameter #3				
Fitted Value				
95% Lower Limit*				
95% Upper Limit*				
Conf. Interval Width*				
Distribution Statistics				
Minimum	0.14	-	-	-
Maximum	1,000.00	+Infinity	+Infinity	+Infinity
Mean	182.06	+Infinity	182.06	357.35
Mode	000.0000 [est]	0.44	0.44	0.01
Median	5.00	2.89	2.86	9.46
Std. Deviation	366.75	+Infinity	2,135.69	13,498.18
Skewness	1.83	+Infinity	35.19	54,007.77
Kurtosis	4.59	+Infinity	2,067.20	###########
Percentiles				
5%	0.40	0.34	0.34	0.11
10%	0.53	0.49	0.49	0.30
15%	0.60	0.63	0.64	0.58
20%	0.68	0.80	0.80	0.98
25%	1.00	0.99	0.99	1.54
30%	1.10	1.22	1.22	2.30

35%	1.85	1.50	1.50	3.35
40%	2.00	1.85	1.85	4.78
45%	3.87	2.30	2.29	6.74
50%	4.00	2.89	2.86	9.46
55%	7.00	3.68	3.63	13.27
60%	10.00	4.78	4.70	18.72
65%	15.00	6.38	6.24	26.72
70%	37.00	8.85	8.60	38.87
75%	62.88	12.94	12.47	58.24
80%	89.00	20.46	19.45	91.38
85%	1,000.00	36.72	34.13	154.49
90%	1,000.00	83.18	73.98	299.09
95%	1,000.00	334.02	262.39	796.25
Information Criteria				
Akaike (AIC)		299.91	301.96	302.47
Bayesian (BIC)		301.24	304.48	304.99
Av. LogL		(4.65)	(4.65)	(4.66)
Chi-Squared Test - [* Values estimated using a bootstrap with 1000 resamples.]				
Chi-Sq Statistic		9.63	9.25	2.13
P-Value*		0.04	0.04	0.64
Cr. Value @ 0.750*		2.13	2.13	1.75
Cr. Value @ 0.500*		3.63	3.63	2.88
Cr. Value @ 0.250*		5.50	5.13	4.75
Cr. Value @ 0.150*		6.63	6.25	5.88
Cr. Value @ 0.100*		7.75	7.38	6.63
Cr. Value @ 0.050*		8.88	8.88	8.13
Cr. Value @ 0.025*		10.75	10.38	9.63
Cr. Value @ 0.010*		13.00	13.00	11.50
Cr. Value @ 0.005*		14.50	14.50	12.63
Cr. Value @ 0.001*		18.25	17.13	14.50
Chi-Sq Test (Binning Information)				
Bin #1 : Minimum		-	-	-
Bin #1 : Maximum		0.69	0.69	0.70
Bin #1 : Input		7.00	7.00	7.00
Bin #1 : Fit		5.33	5.33	5.33
Bin #2 : Minimum		0.69	0.69	0.70
Bin #2 : Maximum		1.40	1.40	2.96
Bin #2 : Input		3.00	3.00	6.00
Bin #2 : Fit		5.33	5.33	5.33
Bin #3 : Minimum		1.40	1.40	2.96
Bin #3 : Maximum		2.89	2.86	9.46
Bin #3 : Input		3.00	3.00	6.00
Bin #3 : Fit		5.33	5.33	5.33
Bin #4 : Minimum		2.89	2.86	9.46
Bin #4 : Maximum		7.08	6.92	30.19
Bin #4 : Input		5.00	4.00	3.00
Bin #4 : Fit		5.33	5.33	5.33

Bin #5 : Minimum		7.08	6.92	30.19
Bin #5 : Maximum		29.66	27.82	128.27
Bin #5 : Input		3.00	4.00	4.00
Bin #5 : Fit		5.33	5.33	5.33
Bin #6 : Minimum		29.66	27.82	128.27
Bin #6 : Maximum		+Infinity	+Infinity	+Infinity
Bin #6 : Input		11.00	11.00	6.00
Bin #6 : Fit		5.33	5.33	5.33
Anderson-Darling Test - [* Values estimated using a bootstrap with 1000 resamples.]				
A-D Statistic		1.96	2.25	1.02
P-Value*		0.02	0.01	0.01
Cr. Value @ 0.750*		0.36	0.34	0.25
Cr. Value @ 0.500*		0.54	0.49	0.34
Cr. Value @ 0.250*		0.80	0.73	0.47
Cr. Value @ 0.150*		1.00	0.94	0.55
Cr. Value @ 0.100*		1.16	1.08	0.64
Cr. Value @ 0.050*		1.51	1.37	0.75
Cr. Value @ 0.025*		1.78	1.65	0.85
Cr. Value @ 0.010*		2.23	2.18	0.95
Cr. Value @ 0.005*		2.50	2.40	1.06
Cr. Value @ 0.001*		2.82	3.25	1.28
Kolmogorov-Smirnov Test - [* Values estimated using a bootstrap with 1000 resamples.]				
K-S Statistic		0.18	0.18	0.13
P-Value*		0.11	0.08	0.23
Cr. Value @ 0.750*		0.10	0.10	0.09
Cr. Value @ 0.500*		0.12	0.12	0.10
Cr. Value @ 0.250*		0.15	0.15	0.12
Cr. Value @ 0.150*		0.17	0.16	0.13
Cr. Value @ 0.100*		0.18	0.18	0.14
Cr. Value @ 0.050*		0.20	0.19	0.15
Cr. Value @ 0.025*		0.22	0.21	0.17
Cr. Value @ 0.010*		0.25	0.23	0.18
Cr. Value @ 0.005*		0.25	0.24	0.18
Cr. Value @ 0.001*		0.27	0.28	0.20

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LogLogistic	Gamma	Pearson6	Expon	Triang	Uniform
tic(0,7.4671,0.62662)	amma(0.2415,753.85)	0.24639,7.43,4787.9)	RiskExpon(182.06)	Triang(0,0.14,1161.2)	rm(0,1032.3)
MLE	MLE	MLE (Modified)	MLE	MLE	as Corrected)
#4	#5	#6	#7	#8	#9
#4	#5	#6	#7	#8	#9
#2	#5 (Tie)	#5 (Tie)	#7	#8 (Tie)	#8 (Tie)
#1	#6	#5	#7	#8	#9
#1	#6	#5	#7	#8	#9
2.00	2.00	3.00	1.00	2.00	1.00
beta	alpha	alpha1	beta	M. likely	Max
7.47	0.24	0.25	182.06	0.14	1,032.26
2.94	0.17	N/A	121.72	0.64	950.02
18.69	0.38	N/A	248.31	200.51	1,064.94
15.75	0.20	N/A	126.59	199.87	114.92
alpha	beta	alpha2		Max	
0.63	753.85	7.43		1,161.19	
0.49	263.47	N/A		897.60	
0.88	1,474.16	N/A		1,273.02	
0.39	1,210.70	N/A		375.42	
		beta			
		4,787.95			
		N/A			
		N/A			
		N/A			
-	-	-	-	-	-
+Infinity	+Infinity	+Infinity	+Infinity	1,161.19	1,032.26
+Infinity	182.06	183.47	182.06	387.11	516.13
-	-	-	-	0.14	-
7.47	29.60	28.42	126.19	340.15	516.13
+Infinity	370.47	409.85	182.06	273.68	297.99
+Infinity	4.07	5.68	2.00	0.57	-
+Infinity	27.84	67.22	9.00	2.40	1.80
0.07	0.00	0.00	9.34	29.47	51.61
0.22	0.04	0.04	19.18	59.65	103.23
0.47	0.20	0.21	29.59	90.69	154.84
0.82	0.65	0.67	40.62	122.65	206.45
1.29	1.63	1.65	52.37	155.63	258.06
1.93	3.47	3.46	64.94	189.73	309.68

2.78	6.60	6.50	78.43	225.06	361.29
3.91	11.53	11.24	93.00	261.79	412.90
5.42	18.92	18.30	108.84	300.08	464.52
7.47	29.60	28.42	126.19	340.15	516.13
10.29	44.62	42.60	145.37	382.29	567.74
14.26	65.37	62.12	166.82	426.83	619.35
20.05	93.75	88.82	191.13	474.26	670.97
28.87	132.53	125.34	219.19	525.22	722.58
43.11	185.93	175.88	252.39	580.63	774.19
68.23	261.08	247.60	293.01	641.92	825.81
118.95	371.43	354.41	345.38	711.49	877.42
248.88	547.70	529.16	419.20	794.01	929.03
820.10	890.29	884.75	545.40	901.55	980.65

304.55	316.11	318.58	399.21	433.10	446.26
307.07	318.63	322.12	400.54	435.62	447.59
(4.69)	(4.87)	(4.87)	(6.20)	(6.70)	(6.94)

4.00	26.50	26.50	67.00	99.63	99.63
0.28	-	N/A	-	-	-
1.75	1.75	N/A	2.13	2.50	2.88
2.88	2.88	N/A	3.63	4.00	4.00
4.38	4.75	N/A	5.50	5.50	6.25
5.50	5.88	N/A	7.00	7.00	7.38
6.63	6.63	N/A	7.75	7.75	8.50
7.75	8.13	N/A	9.25	9.25	10.00
9.25	9.63	N/A	10.75	10.38	11.50
10.75	11.13	N/A	12.25	11.88	13.38
11.50	13.38	N/A	13.75	13.38	14.13
13.38	16.00	N/A	16.00	16.00	15.63

-	-	-	-	-	-
0.57	0.30	0.32	33.19	101.24	172.04
4.00	1.00	1.00	22.00	26.00	26.00
5.33	5.33	5.33	5.33	5.33	5.33
0.57	0.30	0.32	33.19	101.24	172.04
2.47	5.38	5.32	73.82	213.14	344.09
9.00	15.00	15.00	2.00	-	-
5.33	5.33	5.33	5.33	5.33	5.33
2.47	5.38	5.32	73.82	213.14	344.09
7.47	29.60	28.42	126.19	340.15	516.13
5.00	5.00	5.00	2.00	-	1.00
5.33	5.33	5.33	5.33	5.33	5.33
7.47	29.60	28.42	126.19	340.15	516.13
22.57	105.35	99.74	200.01	490.82	688.17
3.00	5.00	5.00	-	1.00	-
5.33	5.33	5.33	5.33	5.33	5.33

22.57	105.35	99.74	200.01	490.82	688.17
97.41	329.42	313.53	326.20	687.16	860.22
5.00	-	-	-	-	-
5.33	5.33	5.33	5.33	5.33	5.33
97.41	329.42	313.53	326.20	687.16	860.22
+Infinity	+Infinity	+Infinity	+Infinity	1,161.19	1,032.26
6.00	6.00	6.00	6.00	5.00	5.00
5.33	5.33	5.33	5.33	5.33	5.33

0.90	2.73	2.66	39.40	61.47	72.91
0.01	-	N/A	-	-	-
0.24	0.27	N/A	0.34	0.40	0.46
0.31	0.38	N/A	0.50	0.60	0.71
0.42	0.53	N/A	0.73	0.95	1.14
0.49	0.62	N/A	0.89	1.21	1.49
0.58	0.73	N/A	1.01	1.41	1.67
0.66	0.86	N/A	1.25	1.78	2.19
0.73	1.05	N/A	1.47	2.02	2.78
0.81	1.26	N/A	1.74	2.42	3.56
0.87	1.45	N/A	1.91	2.87	4.67
1.23	1.55	N/A	2.70	4.93	5.76

0.12	0.24	0.24	0.58	0.67	0.73
0.17	0.00	N/A	-	-	-
0.08	0.09	N/A	0.10	0.11	0.11
0.09	0.11	N/A	0.12	0.13	0.14
0.11	0.13	N/A	0.15	0.16	0.17
0.12	0.15	N/A	0.16	0.18	0.19
0.12	0.16	N/A	0.17	0.20	0.21
0.13	0.17	N/A	0.18	0.21	0.23
0.14	0.18	N/A	0.20	0.23	0.25
0.15	0.20	N/A	0.22	0.25	0.28
0.16	0.20	N/A	0.22	0.26	0.30
0.18	0.23	N/A	0.25	0.31	0.33

Table D1-32a. Hexachlorobenzene freshwater acute toxicity data used to develop a species sensitivity distr

Species Common Name	Species Scientific Name	Control	Exposure Type	Chemical Analysis	Endpoint	Effect	Observed Duration Mean (days)
Brook Trout	Salvelinus fontinalis	C	F	NR	LC50	Mortality	4
Coho salmon	Oncorhynchus kisutch	C	S	NR	LC50	Mortality	4
Bluegill	Lepomis macrochirus	K	S	NC	LC50	Mortality	4
Bluegill	Lepomis macrochirus	K	S	NC	LC50	Mortality	4
Bluegill	Lepomis macrochirus	C	F	NR	LC50	Mortality	4
Bluegill	Lepomis macrochirus	C	S	NR	LC50	Mortality	4
Bluegill	Lepomis macrochirus	NR	S	U	LC50	Mortality	4
Rainbow Trout	Oncorhynchus mykiss	K	S	NC	LC50	Mortality	4
Fathead Minnow	Pimephales promelas	C	S	NR	LC50	Mortality	4
Channel Catfish	Ictalurus punctatus	C	S	NR	LC50	Mortality	4
Channel Catfish	Ictalurus punctatus	C	S	NR	LC50	Mortality	4
Channel Catfish	Ictalurus punctatus	C	S	NR	LC50	Mortality	4
Largemouth Bass	Micropterus salmoides	C	S	NR	LC50	Mortality	4
Brown Trout	Salmo trutta	C	S	NR	LC50	Mortality	4
Brown Trout	Salmo trutta	C	S	NR	LC50	Mortality	4
Chinook Salmon	Oncorhynchus tshawytscha	C	F	NR	LC50	Mortality	4

Table D1-32b. Summary of hexachlorobenzene freshwater acute toxicity data used to develop a species ser

Species Common Name	Species Scientific Name	SMAV (ug/L)	Rank	Percentile
Brown Trout	Salmo trutta	387	1	0.056
Chinook Salmon	Oncorhynchus tshawytscha	1000	2	0.167
Brook Trout	Salvelinus fontinalis	1000	3	0.168
Rainbow Trout	Oncorhynchus mykiss	2300	4	0.339
Bluegill	Lepomis macrochirus	4726	5	0.523
Fathead Minnow	Pimephales promelas	10000	6	0.709
Largemouth Bass	Micropterus salmoides	12000	7	0.749
Channel Catfish	Ictalurus punctatus	21142	8	0.852
Coho salmon	Oncorhynchus kisutch	50000	9	0.946

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Conc 1 Mean (Standardized)	Units	SMAV (ug/L)	Publication Year	Author	
1000	ug/L	1000	1986	Mayer,F.L.,Jr., and M.R. Ellersieck	.
50000	ug/L	50000	1986	Mayer,F.L.,Jr., and M.R. Ellersieck	.
3400	ug/L	4726	2013	U.S. Environmental Protection Agency, and Office of Pesticide Programs	.
7600	ug/L	-	2013	U.S. Environmental Protection Agency, and Office of Pesticide Programs	.
1000	ug/L	-	1986	Mayer,F.L.,Jr., and M.R. Ellersieck	.
12000	ug/L	-	1986	Mayer,F.L.,Jr., and M.R. Ellersieck	.
7600	ug/L	-	1968	McCann,J.A.	.
2300	ug/L	2300	2013	U.S. Environmental Protection Agency, and Office of Pesticide Programs	.
10000	ug/L	10000	1986	Mayer,F.L.,Jr., and M.R. Ellersieck	.
7000	ug/L	21142	1986	Mayer,F.L.,Jr., and M.R. Ellersieck	.
13500	ug/L	-	1986	Mayer,F.L.,Jr., and M.R. Ellersieck	.
100000	ug/L	-	1986	Mayer,F.L.,Jr., and M.R. Ellersieck	.
12000	ug/L	12000	1986	Mayer,F.L.,Jr., and M.R. Ellersieck	.
300	ug/L	387	1986	Mayer,F.L.,Jr., and M.R. Ellersieck	.
500	ug/L	-	1986	Mayer,F.L.,Jr., and M.R. Ellersieck	.
1000	ug/L	1000	1986	Mayer,F.L.,Jr., and M.R. Ellersieck	.

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Table D1-33. Distribution fitting results for the hexachlorobenze freshwater acute species sen

	Input	Lognorm	Weibull	Loglogistic
Fit				
Function	RiskLognorm(13725.9,41298.9)		ibull(0.72659,9210.5)	gistic(0,4363,1.0817)
Method		MLE	MLE	MLE
Rankings By Fit Statistic [12 Valid Fits]				
Akaike (AIC)		#5	#6	#7
Bayesian (BIC)		#4	#6	#7
Chi-Sq Statistic		#1 (Tie)	#1 (Tie)	#1 (Tie)
K-S Statistic		#5	#2	#4
A-D Statistic		#1	#2	#3
Parameters - [* Values unavailable without running a bootstrap]				
Num. Est. Parameters		2.00	2.00	2.00
Fitted Parameter #1		mu	alpha	beta
Fitted Value		13,725.90	0.73	4,363.04
95% Lower Limit*		N/A	N/A	N/A
95% Upper Limit*		N/A	N/A	N/A
Conf. Interval Width*		N/A	N/A	N/A
Fitted Parameter #2		sigma	beta	alpha
Fitted Value		41,298.90	9,210.48	1.08
95% Lower Limit*		N/A	N/A	N/A
95% Upper Limit*		N/A	N/A	N/A
Conf. Interval Width*		N/A	N/A	N/A
Fitted Parameter #3				
Fitted Value				
95% Lower Limit*				
95% Upper Limit*				
Conf. Interval Width*				
Fitted Parameter #4				
Fitted Value				
95% Lower Limit*				
95% Upper Limit*				
Conf. Interval Width*				
Distribution Statistics				
Minimum	387.30	-	-	-
Maximum	50,000.00	+Infinity	+Infinity	+Infinity
Mean	11,394.98	13,725.90	11,266.82	53,939.57
Mode	527.6159 [est]	430.62	-	218.53
Median	4,725.61	4,329.04	5,561.77	4,363.04
Std. Deviation	16,016.17	41,298.91	15,792.87	+Infinity
Skewness	2.11	36.27	3.29	+Infinity
Kurtosis	7.70	12,546.13	20.92	+Infinity
Percentiles				
5%	387.30	355.77	154.51	286.79

10%	387.30	617.83	416.11	572.24
15%	1,000.00	896.58	755.55	877.66
20%	1,000.00	1,205.36	1,168.82	1,211.09
25%	1,000.00	1,553.77	1,658.03	1,580.10
30%	1,000.00	1,951.68	2,228.86	1,993.38
35%	2,300.00	2,410.85	2,890.13	2,461.72
40%	2,300.00	2,946.06	3,654.12	2,999.10
45%	4,725.61	3,576.72	4,537.29	3,624.25
50%	4,725.61	4,329.04	5,561.77	4,363.04
55%	4,725.61	5,239.61	6,757.57	5,252.44
60%	10,000.00	6,361.24	8,166.37	6,347.29
65%	10,000.00	7,773.45	9,847.89	7,732.86
70%	12,000.00	9,602.27	11,891.41	9,549.68
75%	12,000.00	12,061.41	14,438.28	12,047.42
80%	21,141.90	15,547.69	17,730.64	15,718.16
85%	21,141.90	20,902.41	22,234.09	21,689.55
90%	50,000.00	30,333.14	29,026.43	33,265.86
95%	50,000.00	52,675.91	41,695.13	66,376.37

Information Criteria

Akaike (AIC)		189.78	190.34	190.60
Bayesian (BIC)		188.18	188.73	188.99
Av. LogL		(10.21)	(10.24)	(10.26)

Chi-Squared Test - [* Values unavailable without running a bootstrap]

Chi-Sq Statistic		0.11	0.11	0.11
P-Value*		N/A	N/A	N/A
Cr. Value @ 0.750*		N/A	N/A	N/A
Cr. Value @ 0.500*		N/A	N/A	N/A
Cr. Value @ 0.250*		N/A	N/A	N/A
Cr. Value @ 0.150*		N/A	N/A	N/A
Cr. Value @ 0.100*		N/A	N/A	N/A
Cr. Value @ 0.050*		N/A	N/A	N/A
Cr. Value @ 0.025*		N/A	N/A	N/A
Cr. Value @ 0.010*		N/A	N/A	N/A
Cr. Value @ 0.005*		N/A	N/A	N/A
Cr. Value @ 0.001*		N/A	N/A	N/A

Chi-Sq Test (Binning Information)

Bin #1 : Minimum		-	-	-
Bin #1 : Maximum		4,329.04	5,561.77	4,363.04
Bin #1 : Input		4.00	5.00	4.00
Bin #1 : Fit		4.50	4.50	4.50
Bin #2 : Minimum		4,329.04	5,561.77	4,363.04
Bin #2 : Maximum		+Infinity	+Infinity	+Infinity
Bin #2 : Input		5.00	4.00	5.00
Bin #2 : Fit		4.50	4.50	4.50

Anderson-Darling Test - [* Values unavailable without running a bootstrap]

A-D Statistic		0.22	0.22	0.23
P-Value*		N/A	N/A	N/A

	Cr. Value @ 0.750*		N/A	N/A	N/A
	Cr. Value @ 0.500*		N/A	N/A	N/A
	Cr. Value @ 0.250*		N/A	N/A	N/A
	Cr. Value @ 0.150*		N/A	N/A	N/A
	Cr. Value @ 0.100*		N/A	N/A	N/A
	Cr. Value @ 0.050*		N/A	N/A	N/A
	Cr. Value @ 0.025*		N/A	N/A	N/A
	Cr. Value @ 0.010*		N/A	N/A	N/A
	Cr. Value @ 0.005*		N/A	N/A	N/A
	Cr. Value @ 0.001*		N/A	N/A	N/A
Kolmogorov-Smirnov Test - [* Values unavailable without running a bootstrap]					
	K-S Statistic		0.17	0.15	0.16
	P-Value*		N/A	N/A	N/A
	Cr. Value @ 0.750*		N/A	N/A	N/A
	Cr. Value @ 0.500*		N/A	N/A	N/A
	Cr. Value @ 0.250*		N/A	N/A	N/A
	Cr. Value @ 0.150*		N/A	N/A	N/A
	Cr. Value @ 0.100*		N/A	N/A	N/A
	Cr. Value @ 0.050*		N/A	N/A	N/A
	Cr. Value @ 0.025*		N/A	N/A	N/A
	Cr. Value @ 0.010*		N/A	N/A	N/A
	Cr. Value @ 0.005*		N/A	N/A	N/A
	Cr. Value @ 0.001*		N/A	N/A	N/A

ısitivity distribution of fish, benthic invertebrates, and zooplankton

Pearson6	Levy	Gamma	Invgauss	Expon	Kumaraswamy
87781,1.9381,14094)	iskLevy(0,1642.6303)	mma(0.63338,17990)	gauss(11394,1919.3)	RiskExpon(11394)	.93,0.26357,0,50000)
MLE (Modified)	MLE	MLE	MLE	MLE	MLE
#9	#2	#8	#4	#3	#1
#9	#2	#8	#3	#5	#1
#1 (Tie)	#1 (Tie)	#1 (Tie)	#1 (Tie)	#1 (Tie)	#11 (Tie)
#6	#1	#3	#7	#8	#11
#4	#5	#6	#7	#8	#9
3.00	1.00	2.00	2.00	1.00	4.00
alpha1	c	alpha	mu	beta	alpha1
0.88	1,642.63	0.63	11,394.98	11,394.98	0.16
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
alpha2		beta	lambda		alpha2
1.94		17,990.69	1,919.31		0.26
N/A		N/A	N/A		N/A
N/A		N/A	N/A		N/A
N/A		N/A	N/A		N/A
beta					Min
14,094.89					-
N/A					N/A
N/A					N/A
N/A					N/A
					Max
					50,000.00
					N/A
					N/A
					N/A
-	-	-	-	-	-
+Infinity	+Infinity	+Infinity	+Infinity	+Infinity	50,000.00
13,189.06	+Infinity	11,394.98	11,394.98	11,394.98	27,249.49
-	547.54	-	637.76	-	-
5,036.94	3,610.68	6,224.98	3,039.16	7,898.40	31,499.79
+Infinity	+Infinity	14,317.95	27,765.03	11,394.98	20,172.42
+Infinity	+Infinity	2.51	7.31	2.00	(0.20)
+Infinity	+Infinity	12.47	92.06	9.00	1.34
239.98	427.61	134.57	465.76	584.49	1.13

545.49	607.14	405.70	646.07	1,200.58	52.68
896.81	792.68	779.30	825.30	1,851.90	414.66
1,293.67	1,000.16	1,246.76	1,018.35	2,542.72	1,573.10
1,739.84	1,241.31	1,806.76	1,234.29	3,278.13	3,998.80
2,241.66	1,529.17	2,462.27	1,481.76	4,064.30	7,892.60
2,808.02	1,880.61	3,219.75	1,770.80	4,908.76	13,091.96
3,450.96	2,319.03	4,089.13	2,114.19	5,820.85	19,144.49
4,186.61	2,878.52	5,084.46	2,529.05	6,812.34	25,466.27
5,036.94	3,610.68	6,224.98	3,039.16	7,898.40	31,499.79
6,032.47	4,597.12	7,537.06	3,678.72	9,098.98	36,821.38
7,216.98	5,973.29	9,057.30	4,498.69	10,441.11	41,185.61
8,655.68	7,977.80	10,837.95	5,578.20	11,962.70	44,518.45
10,450.81	11,063.58	12,956.41	7,046.52	13,719.24	46,880.07
12,773.66	16,178.60	15,533.81	9,128.75	15,796.79	48,416.78
15,938.73	25,592.22	18,774.55	12,252.07	18,339.51	49,315.79
20,605.86	45,927.43	23,064.33	17,332.94	21,617.64	49,769.42
28,493.61	104,024.69	29,274.88	26,760.77	26,237.91	49,950.41
46,487.31	417,744.61	40,210.60	49,634.00	34,136.30	49,996.42

195.26	187.55	190.64	189.58	188.71	182.33
191.06	187.18	189.03	187.97	188.33	173.12
(10.25)	(10.28)	(10.26)	(10.20)	(10.34)	(9.13)

0.11	0.11	0.11	0.11	0.11	5.44
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A

-	-	-	-	-	-
5,036.94	3,610.68	6,224.98	3,039.16	7,898.40	31,499.79
5.00	4.00	5.00	4.00	5.00	8.00
4.50	4.50	4.50	4.50	4.50	4.50
5,036.94	3,610.68	6,224.98	3,039.16	7,898.40	31,499.79
+Infinity	+Infinity	+Infinity	+Infinity	+Infinity	50,000.00
4.00	5.00	4.00	5.00	4.00	1.00
4.50	4.50	4.50	4.50	4.50	4.50

0.24	0.27	0.27	0.37	0.94	2.63
N/A	N/A	N/A	N/A	N/A	N/A

N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A

0.17	0.14	0.16	0.21	0.26	0.47
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A

Triang	Uniform	BetaGeneral
riang(0,387.3,56285)	RiskUniform(0,56250)	732,0.49144,0,50000)
MLE	MLE (Bias Corrected)	MLE (Approximate)
#10	#11	
#10	#11	
#9 (Tie)	#11 (Tie)	#9 (Tie)
#10	#12	#9
#10	#11	
2.00	1.00	3.00
M. likely	Max	alpha1
387.30	56,250.00	0.31
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
Max		alpha2
56,285.15		0.49
N/A		N/A
N/A		N/A
N/A		N/A
		Max
		50,000.00
		N/A
		N/A
		N/A
-	-	-
56,285.15	56,250.00	50,000.00
18,890.82	28,125.00	19,237.39
387.30	-	-
16,622.71	28,125.00	13,495.73
13,221.13	16,237.98	18,138.36
0.57	-	0.45
2.40	1.80	1.65
1,614.24	2,812.50	8.46

3,072.40	5,625.00	80.63
4,571.65	8,437.50	301.10
6,115.69	11,250.00	765.03
7,708.78	14,062.50	1,571.25
9,355.91	16,875.00	2,815.46
11,063.01	19,687.50	4,582.19
12,837.12	22,500.00	6,935.48
14,686.83	25,312.50	9,908.89
16,622.71	28,125.00	13,495.73
18,658.05	30,937.50	17,640.87
20,809.98	33,750.00	22,235.89
23,101.17	36,562.50	27,118.93
25,562.75	39,375.00	32,080.58
28,239.57	42,187.50	36,876.37
31,200.42	45,000.00	41,245.36
34,561.14	47,812.50	44,933.28
38,547.57	50,625.00	47,717.89
43,742.79	53,437.50	49,433.93

196.83	199.45	---
195.22	199.07	---
(10.60)	(10.94)	---

2.78	5.44	2.78
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

-	-	-
16,622.71	28,125.00	13,495.73
7.00	8.00	7.00
4.50	4.50	4.50
16,622.71	28,125.00	13,495.73
56,285.15	56,250.00	50,000.00
2.00	1.00	2.00
4.50	4.50	4.50

3.99	7.19	---
N/A	N/A	N/A

N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

0.40	0.56	0.30
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Table D1-34a. PCB freshwater acute toxicity data used to develop a species sensitivity distribution f

Species Common Name	Species Scientific Name	Endpoint	Exposure Duration (Days)	Exposure Type
White, longnose sucker	Catostomus catostomus	Survival (LC50)	4	F
White sucker	Catostomus commersoni	Survival (LC50)	5	F
Bloater	Coregonus hoyi	Survival (LC50)	4	S
Water flea	Daphnia magna	Survival (LC50)	2	S
Water flea	Daphnia magna	Survival (LC50)	2	S
Water flea	Daphnia magna	Survival (LC50)	2	S
Water flea	Daphnia magna	Survival (LC50)	2	S
Water flea	Daphnia magna	Survival (LC50)	2	S
Water flea	Daphnia magna	Survival (LC50)	2	S
Water flea	Daphnia magna	Survival (LC50)	2	S
Water flea	Daphnia magna	Survival (LC50)	2	S
Water flea	Daphnia magna	Survival (LC50)	2	S
Water flea	Daphnia magna	Survival (LC50)	2	S
Water flea	Daphnia magna	Survival (LC50)	2	S
Water flea	Daphnia magna	Survival (LC50)	2	S
Water flea	Daphnia magna	Survival (LC50)	2	S
Water flea	Daphnia magna	Survival (LC50)	2	S
Water flea	Daphnia magna	Survival (LC50)	2	S
Scud	Gammarus fasciatus	Survival (LC50)	4	F
Scud	Gammarus pseudolimnaeus	Survival and reproduction	4	F
Scud	Gammarus pseudolimnaeus	Survival and reproduction	4	F
Scud	Gammarus pseudolimnaeus	Survival (LC50)	4	F
Hydra	Hydra oligactis	Survival (LC50)	3	R
Hydra	Hydra oligactis	Survival (LC50)	3	R
Channel catfish	Ictalurus punctatus	Survival (LC50)	4	F
Channel catfish	Ictalurus punctatus	Survival (LC50)	4	F
Channel catfish	Ictalurus punctatus	Survival (LC50)	4	F
Channel catfish	Ictalurus punctatus	Survival (LC50)	4	F
Damselfly	Ischnura verticalis	Survival (LC50)	4	F
Damselfly	Ischnura verticalis	Survival (LC50)	4	F
Bluegill	Lepomis macrochirus	Survival (LC50)	5	F
Bluegill	Lepomis macrochirus	Survival (LC50)	4	F
Bluegill	Lepomis macrochirus	Survival (LC50)	5	F
Bluegill	Lepomis macrochirus	Survival (LC50)	4	F
Bluegill	Lepomis macrochirus	Survival (LC50)	4	F
Redear sunfish	Lepomis microlophus	Survival (LC50/EC50)	4	F
Dragonfly	Macromia sp.	Survival (LC50)	7	S
Dragonfly	Macromia sp.	Survival (LC50)	7	S
Largemouth bass	Micropterus salmoides	Survival (LC50/EC50)	4	F
Cutthroat trout	Oncorhynchus clarki	Survival (LC50)	4	S
Cutthroat trout	Oncorhynchus clarki	Survival (LC50)	4	S
Cutthroat trout	Oncorhynchus clarki	Survival (LC50)	4	S
Cutthroat trout	Oncorhynchus clarki	Survival (LC50)	4	S
Cutthroat trout	Oncorhynchus clarki	Survival (LC50)	4	S
Cutthroat trout	Oncorhynchus clarki	Survival (LC50)	4	S
Cutthroat trout	Oncorhynchus clarki	Survival (LC50)	4	S
Cutthroat trout	Oncorhynchus clarki	Survival (LC50)	4	S
Cutthroat trout	Oncorhynchus clarki	Survival (LC50)	4	S
Cutthroat trout	Oncorhynchus clarki	Survival (LC50)	4	S
Cutthroat trout	Oncorhynchus clarki	Survival (LC50)	4	S
Rainbow trout	Oncorhynchus mykiss	Survival (LC50)	4	F
Rainbow trout	Oncorhynchus mykiss	Survival (LC50)	4	F
Rainbow trout	Oncorhynchus mykiss	Survival (LC50)	4	F
Rainbow trout	Oncorhynchus mykiss	Survival (LC50)	5	F
Rainbow trout	Oncorhynchus mykiss	Survival (LC50)	5	F
Rainbow trout	Oncorhynchus mykiss	Survival (LC50)	4	F

Rainbow trout	Oncorhynchus mykiss	Survival (LC50)	5	F
Freshwater crayfish	Orconectes nais	Survival (LC50)	7	S
Freshwater crayfish	Orconectes nais	Survival (LC50)	7	S
Grass shrimp, freshwater prawr	Palaemonetes kadiakensis	Survival (LC50)	7	F
Yellow perch	Perca flavescens	Survival (LC50)	4	F
Yellow perch	Perca flavescens	Survival (LC50)	4	F
Yellow perch	Perca flavescens	Survival (LC50)	4	F
Yellow perch	Perca flavescens	Survival (LC50)	4	F
Fathead minnow	Pimephales promelas	Survival (LC50)	4	F
Fathead minnow	Pimephales promelas	Survival (LC50)	4	F
Fathead minnow	Pimephales promelas	Survival (LC50)	4	F
Crayfish	Procambarus sp.	Survival (LC50)	4	S
Stonefly	Pteronarcella badia	Survival (LC50)	4	S
Atlantic salmon	Salmo salar	Survival (LC50)	4	F
Brown trout	Salmo trutta	Survival (LC50)	4	F
Brook trout	Salvelinus fontinalis	Survival (LC50)	4	F
Lake trout	Salvelinus namaycush	Survival (LC50)	4	S
Lake trout	Salvelinus namaycush	Survival (LC50)	4	S

Table D1-34b. Summary of PCB freshwater acute toxicity data used to develop a species sensitivity

Species (common name)	SMAV (ug/L)	Rank	Percentile
Micropterus salmoides (largemo	2.30	1	0.04
Palaemonetes kadiakensis (gras	3.00	2	0.08
Gammarus fasciatus (scud)	10.0	3	0.12
Lepomis microlophus (redear su	19.0	4	0.15
Daphnia magna (water flea)	27.3	5	0.19
Gammarus pseudolimnaeus (sc	27.7	6	0.23
Pimephales promelas (fathead	32.6	7	0.27
Orconectes nais (freshwater cra	54.8	8	0.31
Oncorhynchus mykiss (rainbow	93.9	9	0.35
Salmo salar (Atlantic salmon)	134	10	0.38
Salmo trutta (brown trout)	138	11	0.42
Perca flavescens (yellow perch)	146	12	0.46
Ictalurus punctatus (channel ca	168	13	0.50
Lepomis macrochirus (bluegill)	229	14	0.54
Ischnura verticalis (damselfly)	283	15	0.58
Catostomus catostomus (white	330	16	0.62
Catostomus commersoni (white	435	17	0.65
Procambarus sp. (crayfish)	550	18	0.69
Pteronarcella badia (stonefly)	610	19	0.73
Salvelinus namaycush (lake trou	654	20	0.77
Macromia sp. (dragonfly)	800	21	0.81
Salvelinus fontinalis (brook trou	800	22	0.85
Hydra oligactis (hydra)	9721	23	0.88
Coregonus hoyi (bloater)	10000	24	0.92
Oncorhynchus clarki (cutthroat	18666	25	0.96

'or fish, benthic invertebrates, and zooplankton

Chemical Analysis	Concentration (µg/L)	SMAV (ug/L)	Included in SMAV Calculation?	Source
M	330	330	Yes	ECOTOX
M	435	435	Yes	ECOTOX
M	10000	10000	Yes	ECOTOX
U	10	27	Yes	ECOTOX
U	710	-	Yes	ECOTOX
U	430	-	Yes	ECOTOX
U	420	-	Yes	ECOTOX
U	55	-	Yes	ECOTOX
U	160	-	Yes	ECOTOX
U	590	-	Yes	ECOTOX
U	30	-	Yes	ECOTOX
U	30	-	Yes	ECOTOX
U	8	-	Yes	ECOTOX
U	0.6	-	Yes	ECOTOX
U	1.3	-	Yes	ECOTOX
U	2	-	Yes	ECOTOX
U	0.2	-	Yes	ECOTOX
U	230	-	Yes	ECOTOX
M	10	10	Yes	AWQC
M	29	28	Yes	AWQC
M	73	-	Yes	AWQC
M	10	-	Yes	ECOTOX
U	4500	9721	Yes	ECOTOX
U	21000	-	Yes	ECOTOX
M	100	168	Yes	ECOTOX
M	100	-	Yes	ECOTOX
M	400	-	Yes	ECOTOX
M	200	-	Yes	ECOTOX
M	200	283	Yes	AWQC
M	400	-	Yes	AWQC
M	125	229	Yes	ECOTOX
M	460	-	Yes	ECOTOX
M	136	-	Yes	ECOTOX
M	400	-	Yes	ECOTOX
M	200	-	Yes	ECOTOX
M	19	19	Yes	AWQC
M	800	800	Yes	ECOTOX
M	800	-	Yes	ECOTOX
M	2.3	2.3	Yes	AWQC
M	1170	18666	Yes	ECOTOX
M	2500	-	Yes	ECOTOX
M	5420	-	Yes	ECOTOX
M	5750	-	Yes	ECOTOX
M	60900	-	Yes	ECOTOX
M	50000	-	Yes	ECOTOX
M	50000	-	Yes	ECOTOX
M	65000	-	Yes	ECOTOX
M	50000	-	Yes	ECOTOX
M	50000	-	Yes	ECOTOX
M	42500	-	Yes	ECOTOX
M	2.0	94	Yes	AWQC
M	440	-	Yes	ECOTOX
M	615	-	Yes	ECOTOX
M	67	-	Yes	ECOTOX
M	54	-	Yes	ECOTOX
M	232	-	Yes	ECOTOX

M	142	-	Yes	ECOTOX
M	30	55	Yes	ECOTOX
M	100	-	Yes	ECOTOX
M	3	3	Yes	ECOTOX
M	100	146	Yes	ECOTOX
M	150	-	Yes	ECOTOX
M	200	-	Yes	ECOTOX
M	150	-	Yes	ECOTOX
M	7.7	33	Yes	AWQC
M	300	-	Yes	AWQC
M	15	-	Yes	AWQC
M	550	550	Yes	ECOTOX
M	610	610	Yes	ECOTOX
M	134	134	Yes	ECOTOX
M	138	138	Yes	ECOTOX
M	800	800	Yes	ECOTOX
M	480	654	Yes	ECOTOX
M	890	-	Yes	ECOTOX

distribution for fish, benthic invertebrates, and zooplankton

Chemical name	PCB Congener	Study Reference
Aroclor 1016	NA	Mayer and Ellersieck 1986
Aroclor 1016	NA	Mayer and Ellersieck 1986
PCB 1254	NA	Passino and Kramer 1980
2,2',4,5,5'-Pentachloro-1,1'-biphenyl	101	Black et al. 1993
2-Chlorobiphenyl	1	Dill et al. 1982
3-Chlorobiphenyl	2	Dill et al. 1982
4-Chloro-1,1'-biphenyl	3	Dill et al. 1982
2,2',5-Trichloro-1,1'-biphenyl	18	Black et al. 1993
2,4,4'-Trichloro-1,1'-biphenyl	28	Black et al. 1993
2,4,5-Trichloro-1,1'-biphenyl	29	Zou and Fingerman 1997
2,2',4,4'-Tetrachloro-1,1-biphenyl	47	Dill et al. 1982
2,2',5,5'-Tetrachloro-1,1'-biphenyl	52	Black et al. 1993
2,3,4,5,6-Pentachloro-1,1'-biphenyl	116	Black et al. 1993
2,2',3,3',4,4'-Hexachloro-1,1'-biphenyl	128	Black et al. 1993
2,2',4,4',5,5'-Hexachloro-1,1'-biphenyl	153	Black et al. 1993
2,2',3,3',4,4',6-Heptachloro-1,1'-biphenyl	171	Black et al. 1993
2,2',3,3',4,4',5,5'-Octachloro-1,1'-biphenyl	194	Black et al. 1993
Aroclor 1242	NA	Zou and Fingerman 1997
Aroclor 1242	NA	Mayer et al. 1977
Aroclor 1248	NA	Nebeker and Puglisi 1974
Aroclor 1242	NA	Nebeker and Puglisi 1974
Aroclor 1242	NA	Mayer and Ellersieck 1986
Aroclor 1016	NA	Adams and Haileselassie 1984
PCB 1254	NA	Adams and Haileselassie 1984
Aroclor 1242	NA	Mayer and Ellersieck 1986
Aroclor 1248	NA	Mayer and Ellersieck 1986
Aroclor 1260	NA	Mayer and Ellersieck 1986
PCB 1254	NA	Mayer and Ellersieck 1986
Aroclor 1254	NA	Mayer et al. 1977
Aroclor 1242	NA	Mayer et al. 1977
Aroclor 1242	NA	Mayer and Ellersieck 1986
Aroclor 1016	NA	Mayer and Ellersieck 1986
Aroclor 1248	NA	Mayer and Ellersieck 1986
Aroclor 1260	NA	Mayer and Ellersieck 1986
PCB 1254	NA	Mayer and Ellersieck 1986
Capacitor 21	NA	Birge et al. 1979
Aroclor 1242	NA	Mayer and Ellersieck 1986
PCB 1254	NA	Mayer and Ellersieck 1986
Capacitor 21	NA	Birge et al. 1979
Aroclor 1221	NA	Mayer and Ellersieck 1986
Aroclor 1232	NA	Mayer and Ellersieck 1986
Aroclor 1242	NA	Mayer and Ellersieck 1986
Aroclor 1248	NA	Mayer and Ellersieck 1986
Aroclor 1260	NA	Mayer and Ellersieck 1986
Aroclor 1262	NA	Mayer and Ellersieck 1986
Aroclor 1268	NA	Mayer and Ellersieck 1986
Aroclor 4465	NA	Mayer and Ellersieck 1986
Aroclor 5442	NA	Mayer and Ellersieck 1986
Aroclor 5460	NA	Mayer and Ellersieck 1986
PCB 1254	NA	Mayer and Ellersieck 1986
Capacitor 21	NA	Birge et al. 1979
Aroclor 1016	NA	Mayer and Ellersieck 1986
Aroclor 1016	NA	Mayer and Ellersieck 1986
Aroclor 1242	NA	Mayer and Ellersieck 1986
Aroclor 1248	NA	Mayer and Ellersieck 1986
Aroclor 1260	NA	Mayer and Ellersieck 1986

PCB 1254	NA	Mayer and Ellersieck 1986
Aroclor 1242	NA	Mayer and Ellersieck 1986
PCB 1254	NA	Mayer and Ellersieck 1986
PCB 1254	NA	Mayer and Ellersieck 1986
Aroclor 1248	NA	Mayer and Ellersieck 1986
Aroclor 1242	NA	Mayer and Ellersieck 1986
Aroclor 1260	NA	Mayer and Ellersieck 1986
PCB 1254	NA	Mayer and Ellersieck 1986
Aroclor 1254	NA	Nebeker et al. 1974
Aroclor 1242	NA	Nebeker et al. 1974
Aroclor 1242	NA	Nebeker et al. 1974
PCB 1254	NA	Mayer and Ellersieck 1986
Aroclor 1016	NA	Mayer and Ellersieck 1986
Aroclor 1016	NA	Mayer and Ellersieck 1986
Aroclor 1016	NA	Mayer and Ellersieck 1986
Aroclor 1016	NA	Mayer and Ellersieck 1986
Aroclor 1016	NA	Mayer and Ellersieck 1986
Aroclor 1016	NA	Mayer and Ellersieck 1986

Table D1-35. Distribution fitting results for the PCB freshwater acute species sensitivity distribution of fish, b

		Input	Lognorm	LogLogistic	Pearson6	Levy	InvGauss	Expon	Triang
Fit									
	Function		kLognorm(2169.2,26373.1)	.62,0.79317)	0445,152.97)	y(0,22.6935)	757.3,22.99)	xpon(1757.3)	0,2.3,19487)
	Method		MLE	MLE	LE (Modified)	MLE	MLE	MLE	MLE
Rankings By Fit Statistic [8 Valid Fits]									
	Akaike (AIC)		#1	#2	#3	#4	#5	#6	#7
	Bayesian (BIC)		#1	#2	#3	#4	#5	#6	#7
	Chi-Sq Statistic		#1	#2 (Tie)	#2 (Tie)	#4	#5	#6	#7 (Tie)
	K-S Statistic		#3	#2	#1	#4	#5	#6	#7
	A-D Statistic		#3	#2	#1	#4	#5	#6	#7
Parameters - [* Values unavailable without running a bootstrap]									
	Num. Est. Parameters		2	2	3	1	2	1	2
	Fitted Parameter #1		mu	beta	alpha1	c	mu	beta	M. likely
	Fitted Value		2169.2	173.6192	0.76152	22.6935	1757.3494	1757.3494	2.3
	95% Lower Limit*		N/A	N/A	N/A	N/A	N/A	N/A	N/A
	95% Upper Limit*		N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Conf. Interval Width*		N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Fitted Parameter #2		sigma	alpha	alpha2		lambda		Max
	Fitted Value		26373.1	0.79317	0.70445		22.9903		19487.2217
	95% Lower Limit*		N/A	N/A	N/A		N/A		N/A
	95% Upper Limit*		N/A	N/A	N/A		N/A		N/A
	Conf. Interval Width*		N/A	N/A	N/A		N/A		N/A
	Fitted Parameter #3				beta				
	Fitted Value				152.9688				
	95% Lower Limit*				N/A				
	95% Upper Limit*				N/A				
	Conf. Interval Width*				N/A				
Distribution Statistics									
	Minimum	2.3	0	0	0	0	0	0	0
	Maximum	18666.1122	+Infinity	+Infinity	+Infinity	+Infinity	+Infinity	+Infinity	19487.2217
	Mean	1757.3494	2169.2349	+Infinity	+Infinity	+Infinity	1757.3494	1757.3494	6496.5072
	Mode	5.1000 [est]	1.195	0	0	7.5645	7.6633	0	2.3
	Median	168.1793	177.823	173.6192	172.5356	49.8827	49.0404	1218.1018	5708.4883
	Std. Deviatio	4418.8536	26373.0954	+Infinity	+Infinity	+Infinity	15364.3605	1757.3494	4592.9112
	Skewness	3.0538	1833.5374	+Infinity	+Infinity	+Infinity	26.2288	2	0.5657
	Kurtosis	12.2913	497055878	+Infinity	+Infinity	+Infinity	1149.579	9	2.4
Percentiles									
	5%	3	4.4898	4.2403	4.5203	5.9075	5.9508	90.1402	494.5484
	10%	10	10.1187	10.8775	11.6556	8.3878	8.4325	185.1552	1001.111
	15%	19	17.5075	19.491	20.7662	10.9511	10.9887	285.6025	1521.9513
	20%	27.2752	27.0683	30.2374	31.9255	13.8175	13.8375	392.1412	2058.3494
	25%	32.6013	39.3375	43.4573	45.4141	17.1491	17.1371	505.5579	2611.7886
	30%	54.7723	55.03	59.6579	61.6837	21.126	21.0608	626.8025	3184.0045

	35%	93.9291	75.1101	79.5515	81.3863	25.9812	25.8308	757.0361	3777.0485
	40%	134	100.9006	104.1332	105.4463	32.0381	31.753	897.6991	4393.3755
	45%	145.6475	134.253	134.8101	135.1854	39.7676	39.2688	1050.6085	5035.9642
	50%	168.1793	177.823	173.6192	172.5356	49.8827	49.0404	1218.1018	5708.4883
	55%	228.6964	235.5331	223.6007	220.4092	63.5107	62.1034	1403.2571	6415.5675
	60%	330	313.388	289.4719	283.376	82.5229	80.1542	1610.243	7163.1479
	65%	435	420.9957	378.9195	368.9779	110.2158	106.1328	1844.9043	7959.1063
	70%	550	574.6139	505.2751	490.4965	152.8468	145.5055	2115.8009	8814.2607
	75%	610	803.8383	693.6379	673.4024	223.5125	209.4036	2436.2036	9744.1859
	80%	653.6054	1168.1957	996.8974	972.6159	353.5646	323.478	2828.3448	10772.7856
	85%	800	1806.1373	1546.5451	1528.8187	634.5019	558.4244	3333.9027	11940.2986
	90%	9721.111	3125.0127	2771.1997	2820.1791	1437.1338	1174.023	4046.4466	13325.1848
	95%	10000	7042.9304	7108.8306	7763.6837	5771.2736	3855.9672	5264.5484	15130.0036
Information Criteria									
	Akaike (AIC)		374.7812	375.0283	377.6572	383.6281	385.6747	425.752	473.49
	Bayesian (BIC)		376.6735	376.9206	380.171	384.673	387.567	426.797	475.3823
Chi-Squared Test - [* Values unavailable without running a bootstrap]									
	Chi-Sq Statistic		2	2.8	2.8	8.4	9.2	35.2	72.8
	P-Value*		N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cr. Value @ 0.750*		N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cr. Value @ 0.500*		N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cr. Value @ 0.250*		N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cr. Value @ 0.150*		N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cr. Value @ 0.100*		N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cr. Value @ 0.050*		N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cr. Value @ 0.025*		N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cr. Value @ 0.010*		N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cr. Value @ 0.005*		N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cr. Value @ 0.001*		N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chi-Sq Test (Binning Information)									
	Bin #1 : Minimum		0	0	0	0	0	0	0
	Bin #1 : Maximum		27.0683	30.2374	31.9255	13.8175	13.8375	392.1412	2058.3494
	Bin #1 : Input		4	6	6	3	3	16	22
	Bin #1 : Fit		5	5	5	5	5	5	5
	Bin #2 : Minimum		27.0683	30.2374	31.9255	13.8175	13.8375	392.1412	2058.3494
	Bin #2 : Maximum		100.9006	104.1332	105.4463	32.0381	31.753	897.6991	4393.3755
	Bin #2 : Input		5	3	3	3	3	6	0
	Bin #2 : Fit		5	5	5	5	5	5	5
	Bin #3 : Minimum		100.9006	104.1332	105.4463	32.0381	31.753	897.6991	4393.3755
	Bin #3 : Maximum		313.388	289.4719	283.376	82.5229	80.1542	1610.243	7163.1479
	Bin #3 : Input		6	6	6	2	2	0	0
	Bin #3 : Fit		5	5	5	5	5	5	5
	Bin #4 : Minimum		313.388	289.4719	283.376	82.5229	80.1542	1610.243	7163.1479
	Bin #4 : Maximum		1168.1957	996.8974	972.6159	353.5646	323.478	2828.3448	10772.7856
	Bin #4 : Input		7	7	7	8	7	0	2
	Bin #4 : Fit		5	5	5	5	5	5	5
	Bin #5 : Minimum		1168.1957	996.8974	972.6159	353.5646	323.478	2828.3448	10772.7856

	Bin #5 : Maximum	+Infinity	+Infinity	+Infinity	+Infinity	+Infinity	+Infinity	19487.2217
	Bin #5 : Input	3	3	3	9	10	3	1
	Bin #5 : Fit	5	5	5	5	5	5	5
Anderson-Darling Test - [* Values unavailable without running a bootstrap]								
	A-D Statistic	0.3236	0.2644	0.2556	3.4126	3.7251	18.47	47.8622
	P-Value*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cr. Value @ 0.750*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cr. Value @ 0.500*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cr. Value @ 0.250*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cr. Value @ 0.150*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cr. Value @ 0.100*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cr. Value @ 0.050*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cr. Value @ 0.025*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cr. Value @ 0.010*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cr. Value @ 0.005*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cr. Value @ 0.001*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Kolmogorov-Smirnov Test - [* Values unavailable without running a bootstrap]								
	K-S Statistic	0.1307	0.1094	0.1055	0.3207	0.3276	0.5143	0.7997
	P-Value*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cr. Value @ 0.750*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cr. Value @ 0.500*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cr. Value @ 0.250*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cr. Value @ 0.150*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cr. Value @ 0.100*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cr. Value @ 0.050*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cr. Value @ 0.025*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cr. Value @ 0.010*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cr. Value @ 0.005*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cr. Value @ 0.001*	N/A	N/A	N/A	N/A	N/A	N/A	N/A

enthic invertebrates, and zooplankton

Uniform
orm(0,19443)
as Corrected)
#8
#8
#7 (Tie)
#8
#8
1
Max
19443.8669
N/A
N/A
N/A
0
19443.8669
9721.9335
0
9721.9335
5612.9609
0
1.8
972.1933
1944.3867
2916.58
3888.7734
4860.9667
5833.1601

6805.3534
7777.5468
8749.7401
9721.9335
10694.1268
11666.3201
12638.5135
13610.7068
14582.9002
15555.0935
16527.2869
17499.4802
18471.6736

495.9383
496.9832

72.8
N/A
N/A
N/A
N/A
N/A
N/A
N/A
N/A
N/A
N/A
N/A

0
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22
5
3888.7734
7777.5468
0
5
7777.5468
11666.3201
2
5
11666.3201
15555.0935
0
5
15555.0935

19443.8669
1
5

61.802
N/A
N/A
N/A
N/A
N/A
N/A
N/A
N/A
N/A
N/A
N/A

0.8389
N/A
N/A
N/A
N/A
N/A
N/A
N/A
N/A
N/A
N/A
N/A

Table D1-36a. PCB saltwater acute toxicity data used to develop a species sensitivity distribution for fish,

Species Common Name	Species Scientific Name	Control	Exposure Type	Chemical Analysis	Observed Duration Mean (Days)
Virginia Oyster	Crassostrea virginica	C	F	U	4
Virginia Oyster	Crassostrea virginica	-	F	U	4
Virginia Oyster	Crassostrea virginica	-	F	U	4
Virginia Oyster	Crassostrea virginica	-	F	U	4
Amphipod	Ampelisca abdita	-	R	M	4
Amphipod	Ampelisca abdita	-	R	M	4
Brown Shrimp	Penaeus aztecus	C	F	U	4
Daggerblade Grass Shrimp	Palaemonetes pugio	C	F	U	4
Harpacticoid Copepod	Tigriopus japonicus	V	R	U	4
Opossum Shrimp	Americamysis bahia	-	R	M	4
Opossum Shrimp	Americamysis bahia	-	R	M	4
Polychaete	Ophryotrocha labronica	S	S	U	4
Polychaete	Nereis grubei	S	S	U	4
Polychaete Worm	Capitella capitata	S	S	U	4
Polychaete Worm	Neanthes arenaceodentata	S	S	U	4
Sheepshead Minnow	Cyprinodon variegatus	I	S	U	4
Sheepshead Minnow	Cyprinodon variegatus	I	S	U	4

Table D1-36b. Summary of PCB saltwater acute toxicity data used to develop a species sensitivity distribu

Species Scientific Name	SMAV (µg/L)	Rank	Cumulative percentile
Penaeus aztecus (Brown Shrimp)	10.5	1	0.0769
Palaemonetes pugio (Daggerblade Grass Shrimp)	12.5	2	0.154
Crassostrea virginica (Virginia Oyster)	19.5	3	0.231
Ampelisca abdita (Amphipod)	20.0	4	0.308
Americamysis bahia (Opossum Shrimp)	31.1	5	0.385
Ophryotrocha labronica (Polychaete)	1000	6	0.462
Nereis grubei (Polychaete)	1000	7	0.538
Capitella capitata (Polychaete Worm)	1000	8	0.615
Neanthes arenaceodentata (Polychaete Worm)	1000	9	0.692
Tigriopus japonicus (Harpacticoid Copepod)	2500	11	0.846
Cyprinodon variegatus (Sheepshead Minnow)	1670	10	0.769

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Effect	Concentration (µg/L)	Units	SMAV (µg/L)	Chemical Name	Source	Publication Year
Growth	10.2	ug/L	20	Aroclor 1016	ECOTOX	1974
Growth	17	ug/L	-	Aroclor 1248	AWQC	undated
Growth	14	ug/L	-	Aroclor 1254	AWQC	undated
Growth	60	ug/L	-	Aroclor 1260	AWQC	undated
Mortality	10	ug/L	20	PCB 1242	ECOTOX	1997
Mortality	40	ug/L	-	PCB 1254	ECOTOX	1997
Mortality	10.5	ug/L	10.5	Aroclor 1016	ECOTOX	1974
Mortality	12.5	ug/L	13	Aroclor 1016	ECOTOX	1974
Mortality	2500	ug/L	2500	PCB 1254	ECOTOX	2007
Mortality	17	ug/L	31	PCB 1242	ECOTOX	1997
Mortality	57	ug/L	-	PCB 1254	ECOTOX	1997
Mortality	1000	ug/L	1000	PCB 1254	ECOTOX	1991
Mortality	1000	ug/L	1000	PCB 1254	ECOTOX	1991
Mortality	1000	ug/L	1000	PCB 1254	ECOTOX	1991
Mortality	1000	ug/L	1000	PCB 1254	ECOTOX	1991
Mortality	680	ug/L	1670	4-Chloro-1,1'-biphenyl	ECOTOX	1982
Mortality	4100	ug/L	-	2-Chlorobiphenyl	ECOTOX	1982

ıtion for fish, benthic invertebrates, and zooplankton

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Ho,K.T., R.A. McKinney, A. Kuhn, M.C. Pelletier, and R.M. Burgess
Reish,D.J., and J.A. Lemay
Reish,D.J., and J.A. Lemay
Reish,D.J., and J.A. Lemay
Reish,D.J., and J.A. Lemay
Dill,D.C., M.A. Mayes, C.G. Mendoza, G.U. Boggs, and J.A. Emmitte
Dill,D.C., M.A. Mayes, C.G. Mendoza, G.U. Boggs, and J.A. Emmitte

Table D1-37. Distribution fitting results for the PCB saltwater acute species sensitivity distribution of fish, be

		Input	Levy	Lognorm	InvGauss	LogLogistic	Expon	Pearson6	Triang
Fit									
	Function		RiskLevy(0,35.0822)	1.4,19717.7)	1.22,36.801)	.45,0.72148)	xpon(751.22)	5925,91.277)	10.5,2837.8)
	Method		MLE	MLE	MLE	MLE	MLE	LE (Modified)	MLE
Rankings By Fit Statistic [9 Valid Fits]									
	Akaike (AIC)		#1	#2	#3	#4	#5	#6	#7
	Bayesian (BIC)		#1	#2	#3	#4	#5	#6	#7
	Chi-Sq Statistic		#1 (Tie)	#1 (Tie)	#1 (Tie)	#1 (Tie)	#1 (Tie)	#1 (Tie)	#1 (Tie)
	K-S Statistic		#5	#3	#7	#2	#6	#4	#8
	A-D Statistic		#4	#2	#5	#1	#6	#3	#7
Parameters - [* Values unavailable without running a bootstrap]									
	Num. Est. Parameters		1	2	2	2	1	3	2
	Fitted Parameter #1		c	mu	mu	beta	beta	alpha1	M. likely
	Fitted Value		35.0822	1891.4	751.2177	196.4478	751.2177	0.79566	10.5
	95% Lower Limit*		N/A	N/A	N/A	N/A	N/A	N/A	N/A
	95% Upper Limit*		N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Conf. Interval Width*		N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Fitted Parameter #2			sigma	lambda	alpha		alpha2	Max
	Fitted Value			19717.7	36.8008	0.72148		0.56925	2837.7683
	95% Lower Limit*			N/A	N/A	N/A		N/A	N/A
	95% Upper Limit*			N/A	N/A	N/A		N/A	N/A
	Conf. Interval Width*			N/A	N/A	N/A		N/A	N/A
	Fitted Parameter #3							beta	
	Fitted Value							91.277	
	95% Lower Limit*							N/A	
	95% Upper Limit*							N/A	
	Conf. Interval Width*							N/A	
Distribution Statistics									
	Minimum	10.5	0	0	0	0	0	0	0
	Maximum	2500	+Infinity	+Infinity	+Infinity	+Infinity	+Infinity	+Infinity	2837.7683
	Mean	751.2177	+Infinity	1891.3545	751.2177	+Infinity	751.2177	+Infinity	949.4228
	Mode	14.1786 [est]	11.6941	1.6465	12.2637	0	0	0	10.5
	Median	1000	77.1144	180.593	72.6274	196.4478	520.7045	156.1302	834.8788
	Std. Deviatio	826.5838	+Infinity	19717.6961	3394.0656	+Infinity	751.2177	+Infinity	667.6344
	Skewness	0.9131	+Infinity	1164.3271	13.5543	+Infinity	2	+Infinity	0.5657
	Kurtosis	3.3576	+Infinity	147411196	309.1964	+Infinity	9	+Infinity	2.4
Percentiles									
	5%	10.5	9.1325	5.11	9.38	3.3177	38.5324	4.0557	76.9757
	10%	12.5	12.9668	11.2303	13.2217	9.346	79.1487	10.1633	150.6101
	15%	12.5	16.9295	19.1037	17.1433	17.7461	122.0871	17.9026	226.3199
	20%	19.5358	21.3606	29.1402	21.4758	28.7585	167.6294	27.4189	304.2913
	25%	19.5358	26.511	41.8612	26.4485	42.8486	216.1119	39.0384	384.7397
	30%	20	32.6591	57.9547	32.3042	60.7038	267.9405	53.2575	467.9175

	35%	20	40.1647	78.3436	39.3461	83.2944	323.6118	70.7898	554.123
	40%	31.1288	49.5283	104.2865	47.9837	111.9895	383.7413	92.6591	643.7128
	45%	31.1288	61.4774	137.5363	58.7949	148.7487	449.1058	120.3594	737.1201
	50%	1000	77.1144	180.593	72.6274	196.4478	520.7045	156.1302	834.8788
	55%	1000	98.1822	237.1289	90.7723	259.4424	599.8531	203.4488	937.6605
	60%	1000	127.5734	312.7328	115.281	344.6015	688.3339	267.9585	1046.3295
	65%	1000	170.3844	416.2924	149.5805	463.317	788.645	359.3359	1162.0308
	70%	1000	236.2883	562.7466	199.7581	635.7388	904.4457	495.3825	1286.3368
	75%	1000	345.5315	779.0944	277.5142	900.6532	1041.4089	712.0161	1421.5116
	80%	1000	546.581	1119.2032	407.8289	1341.9243	1209.0383	1091.5262	1571.0298
	85%	1669.7305	980.8865	1707.1958	652.6102	2174.6605	1425.1502	1861.2477	1740.7406
	90%	1669.7305	2221.6878	2904.0905	1205.5568	4129.2201	1729.7428	3876.6123	1942.0489
	95%	2500	8921.9025	6382.3713	3010.1538	11631.9967	2250.4472	13288.5813	2204.399
Information Criteria									
	Akaike (AIC)		166.0026	168.0516	168.532	169.6193	170.1217	174.4776	174.6604
	Bayesian (BIC)		165.956	167.3474	167.8278	168.9151	170.0752	172.2427	173.9562
Chi-Squared Test - [* Values unavailable without running a bootstrap]									
	Chi-Sq Statistic		0.0909	0.0909	0.0909	0.0909	0.0909	0.0909	0.0909
	P-Value*		N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cr. Value @ 0.750*		N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cr. Value @ 0.500*		N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cr. Value @ 0.250*		N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cr. Value @ 0.150*		N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cr. Value @ 0.100*		N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cr. Value @ 0.050*		N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cr. Value @ 0.025*		N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cr. Value @ 0.010*		N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cr. Value @ 0.005*		N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cr. Value @ 0.001*		N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chi-Sq Test (Binning Information)									
	Bin #1 : Minimum		0	0	0	0	0	0	0
	Bin #1 : Maximum		77.1144	180.593	72.6274	196.4478	520.7045	156.1302	834.8788
	Bin #1 : Input		5	5	5	5	5	5	5
	Bin #1 : Fit		5.5	5.5	5.5	5.5	5.5	5.5	5.5
	Bin #2 : Minimum		77.1144	180.593	72.6274	196.4478	520.7045	156.1302	834.8788
	Bin #2 : Maximum		+Infinity	+Infinity	+Infinity	+Infinity	+Infinity	+Infinity	2837.7683
	Bin #2 : Input		6	6	6	6	6	6	6
	Bin #2 : Fit		5.5	5.5	5.5	5.5	5.5	5.5	5.5
Anderson-Darling Test - [* Values unavailable without running a bootstrap]									
	A-D Statistic		1.6216	1.2238	2.2028	1.1219	3.902	1.2477	5.809
	P-Value*		N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cr. Value @ 0.750*		N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cr. Value @ 0.500*		N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cr. Value @ 0.250*		N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cr. Value @ 0.150*		N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cr. Value @ 0.100*		N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cr. Value @ 0.050*		N/A	N/A	N/A	N/A	N/A	N/A	N/A

	Cr. Value @ 0.025*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cr. Value @ 0.010*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cr. Value @ 0.005*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cr. Value @ 0.001*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Kolmogorov-Smirnov Test - [* Values unavailable without running a bootstrap]								
	K-S Statistic	0.3969	0.3306	0.4318	0.3093	0.414	0.336	0.4364
	P-Value*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cr. Value @ 0.750*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cr. Value @ 0.500*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cr. Value @ 0.250*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cr. Value @ 0.150*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cr. Value @ 0.100*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cr. Value @ 0.050*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cr. Value @ 0.025*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cr. Value @ 0.010*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cr. Value @ 0.005*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cr. Value @ 0.001*	N/A	N/A	N/A	N/A	N/A	N/A	N/A

nthic invertebrates, and zooplankton

Uniform	BetaGeneral
form(0,2750)	7973,0,2500)
as Corrected)	Approximate)
#8	
#8	
#9	#1 (Tie)
#9	#1
#8	
1	3
Max	alpha1
2750	0.28665
N/A	N/A
N/A	N/A
N/A	N/A
	alpha2
	0.47973
	N/A
	N/A
	N/A
	Max
	2500
	N/A
	N/A
	N/A
0	0
2750	2500
1375	935.071
0	0
1375	612.8579
793.8566	910.1799
0	0.5003
1.8	1.6827
137.5	0.222
275	2.4909
412.5	10.2357
550	27.8441
687.5	60.3254
825	112.9628

962.5	190.8767
1100	298.4752
1237.5	438.8057
1375	612.8579
1512.5	818.907
1650	1052.0204
1787.5	1303.8656
1925	1562.9456
2062.5	1815.3342
2200	2045.9052
2337.5	2239.9425
2475	2384.9396
2612.5	2472.3989

176.6703	---
176.6237	---

4.4545	0.0909
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A

0	0
1375	612.8579
9	5
5.5	5.5
1375	612.8579
2750	2500
2	6
5.5	5.5

8.0565	---
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A

N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A

0.4545	0.248
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A

LPRSA Baseline Ecological Risk Asses

This file provides toxicity and modeling data
A total of 38 tabs are provided, detailing acu

Tab color code:

Lighter blue tabs = freshwater SSD data
Dark blue tabs = @RISK output for freshwate
Lighter orange tabs = saltwater SSD data
Dark orange tabs = @RISK output for saltwat
Yellow highlights in @Risk output datasets in

Each data tab (e.g., "Zn FW_Acute Data") co
Unless otherwise indicated, all acute and chr

ECOTOX values/codes:

Column	
Control	
Chemical Analysis	
Study Type	
Organism Lifestage	
Exposure Type	
Endpoint	
Effect	
Trend	
Effect Measurement	
Concentration Type	
Conc 1 Mean (Standardized)	
Conversion	
Observed Duration Mean (Days)	
Any column	

Additional definitions:

used when developing SSDs for fish, benthic invertebrates, and zooplankton. These SSDs were used to derive TRVs for the LPRSA BERA, whic
te or chronic toxicity data from freshwater or saltwater species for several COPECs.

er SSD data

ter SSD data

ndicate the selected distribution type and 5th percentile value selected as basis for TRV(s)

ntains 2 tables; the table at the bottom of each worksheet summarizes the SMAVs/SMCVs.
ronic toxicity data were exported from the USEPA's ECOTOX database.

Value
C = concurrent, I = insufficient, K = control data presented but without methodology
M = multipe types reported by author, S = satisfactory, U = unsatisfactory
U = unmeasured, M = measured
F = flow-through, S = Static, R = renewal
AD = adult(s), FI = F1 generation, FY = fry, IM = immature organism(s), IN = instar IT = intermolt
JV = juvenile(s), LV = larva(e), MA = mature organism(s), NH = new, newly or recent hatch
NU = nauplii, PQ = pre-larvae, PV = post-larvae, SI = sexually immature organism(s), VE = veliger
YO = young organism(s), ZO = zoea
AQUA-NR = not reported , F = flow-through , R = renewal, S = static
EC10 = Effective concentration to 10% of test organisms
EC20 = Effective concentration to 20% of test organisms
EC50 = Effective concentration to 50% of test organisms
EC100 = Effective concentration to 100% of test organisms
IC10 = Inhibition concentration to 10% of test organisms
IC25 = Inhibition concentration to 25% of test organisms
IC50 = Inhibition concentration to 50% of test organisms
LC50 = Lethal concentration to 50% of test organisms
LC50* = Lethal concentration to 50% of test organisms
LOEC = Lowest Observable Effect Concentration
LOEL = Lowest-observable-effect-level
LETC = Lethal Threshold Concentration
NOEC = No Observable Effect Concentration
MATC = Maximum Acceptable Toxicant Concentration
BEH = behavior , GRO = growth, FDB = feeding behavior , MOR = mortality, REP = reproduction,
CHG = change, INC = increasing, DEC = decreasing, NEF = no effect
ACTV = activity, COND = Condition index, EQUL = equilibrium , FCND = fecundity, FDNG = feeding behavior , HTCH = hatch, MORT = mortalit
A = active ingredient, D = dissolved, F = formulation, L = labile (free metal ion), T = total
Column includes mean concentration reported in ECOTOX
Column indicates unit conversion to ug/L (e.g., from molarity)
Column includes test duration reported in ECOTOX
NA = not applicable
NC = not coded
NR = not reported

SSD -- species sensitivity distribution
COPEC -- chemical of potential ecological concern
TRV -- toxicity reference value
SMAV/SMCV -- species mean acute/chronic value

APPENDIX E. METHODS USED TO DERIVE LPSRA BERA TISSUE AND DIETARY TRVS BASED ON THE GENERAL LITERATURE

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Attachment E1. Toxicity Studies Used to Derive BERA TRVs

Attachment E2. Toxicity Studies References

Acronyms

BERA	baseline ecological risk assessment
bw	body weight
COPEC	chemical of potential ecological concern
CPG	Cooperating Parties Group
DDT	dichlorodiphenyltrichloroethane
ERA	ecological risk assessment
FFS	focused feasibility study
FIR	food ingestion rate
LOE	line of evidence
LOAEL	lowest-observed-adverse-effect level
LPR	Lower Passaic River
LPRSA	Lower Passaic River Study Area
NOAEL	no-observed-adverse-effect level
PAH	polycyclic aromatic hydrocarbon
PCB	polychlorinated biphenyl
PCDD	polychlorinated dibenzo-*p*-dioxin
PCDF	polychlorinated dibenzofuran
SLERA	screening-level ecological risk assessment
SSD	species sensitivity distribution
TRV	toxicity reference value
USEPA	US Environmental Protection Agency

1 Introduction

The screening-level toxicity reference values (TRVs) for tissue and dietary lines of evidence (LOEs) used in the screening-level ecological risk assessment (SLERA) are presented in detail in the TRV deliverable (Appendix A, Attachment A3). This appendix presents the methods used to derive all of the acceptable tissue and dietary toxicity data and individual no-observed-adverse-effect levels (NOAELs) and lowest-observed-adverse-effect level (LOAELs) used in the selection of the final baseline ecological risk assessment (BERA) TRVs.

Two sets of tissue and dietary TRVs were used in the BERA; one was based on previous documents developed by US Environmental Protection Agency (USEPA) Region 2 for the Lower Passaic River Study Area (LPRSA), and the other was based on the Cooperating Parties Group's (CPG's) comprehensive review of the primary literature and assessment of acceptability. Selected TRVs are consistent with the comments, responses, and directives received from USEPA on June 30, 2017 (USEPA 2017a), September 18, 2017 (USEPA 2017b), July 10, 2018 (USEPA 2018), January 2, 2019 (CDM 2019), and March 5, 2019 (USEPA 2019); during face-to-face meetings or conference calls on July 24, September 27, October 3, November 6, 2017, July 24, 2018, and August 16, 2018; and additional deliverables and communications between CPG and USEPA from August through December 2017, from July through September 2018, and from January through June 2019.

The set of TRVs developed by USEPA are presented in the following documents:

- USEPA's LPRSA focused feasibility study (FFS) (Louis Berger et al. 2014)
- USEPA's first draft of the LPRSA FFS (Malcolm Pirnie 2007)
- USEPA's Lower Passaic River (LPR) restoration project pathways analysis report (Battelle 2005)

The methods used by CPG to conduct the literature search for relevant studies, determine whether a toxicity study was acceptable, and derive dietary doses from food concentrations are discussed in this appendix. This appendix also describes the general approach used to derive the BERA TRVs after the NOAELs and LOAELs had been derived from acceptable studies; these methods are discussed in greater detail in the main text of the BERA. The process of identification and evaluation of effects levels from the literature described herein is consistent with the process presented in the TRV deliverable (Appendix A, Attachment A3). NOAELs and LOAELs were compiled by first conducting a comprehensive literature search for relevant toxicological studies. These studies were then evaluated to determine if they were acceptable for use in selecting TRVs to be used in BERA risk calculations. If dietary doses (i.e., in units of mg/kg body weight [bw]/day) were not calculated in the acceptable toxicity studies, they were derived from food concentrations (i.e., in mg/kg) using body weights and

food ingestion rates (FIRs). These steps are described in the following sections, along with the general approach used by CPG to derive a TRV for each chemical of potential ecological concern (COPEC) and receptor type evaluated in the LPRSA BERA using tissue or dietary LOEs.

2 Literature Search Methods

A toxicity study data search was conducted for original published toxicological studies that reported effects data based on tissue residues or dietary ingestion. Toxicological studies were identified from a thorough literature search that included the following sources:

- Environmental Residue Effects Database (USEPA/US Army Corps of Engineers electronic database)
- ECOTOX database (USEPA electronic database)
- Jarvinen and Ankley (1999) (a compilation of tissue NOAELs and LOAELs)
- US Fish and Wildlife Service Contaminant Review Series electronic database
- Oak Ridge National Laboratory database (Sample et al. 1996)
- Values used in other ecological risk assessments (ERAs) (including the draft Newark Bay screening-level risk assessment (Battelle 2007)).
- Scientific literature searches using search engines such as TOXNET

The toxicological studies available from the literature that were evaluated for the in-depth evaluation and refinement of TRVs (based on TRV acceptability requirements described below) for the BERA were compiled into a TRV dataset, presented in Attachment E1. Attachment E1 presents studies only for COPECs that were evaluated in detail, as described in the BERA.

3 Study Acceptability

The toxicity studies evaluated for use in the BERA were considered acceptable for use in TRV derivation only if they met certain requirements, as follows:

- The toxicity data were based on endpoints that directly measure survival, growth, or reproduction[1]. Adverse effects on populations may be inferred or

[1] CPG did not consider indirect effects (such as cardiac or brain development) on the reproduction endpoint during the general literature review for the derivation of TRVs. Alternate TRVs (based on USEPA's Lower Passaic River [LPR] Restoration Project FFS (Louis Berger et al. 2014; Malcolm Pirnie 2007)) did consider studies measuring endpoints with unknown potential to affect survival, growth, or reproduction (such as hepatotoxicity or cardiac development).

extrapolated from measures related to impairments of these endpoints (USEPA 1997a).

- Toxicity effect levels were representative of NOAEL and/or LOAEL concentrations or doses. Both NOAELs and LOAELs commonly provide the basis for TRVs used in ERAs in accordance with USEPA guidance (USEPA 1997a, 1998).
- The toxicity studies were conducted in a controlled environment using standardized and/or peer-reviewed experiment methods, in which a clear concentration- or dose-response relationship was reported.[2]
- The toxicity studies were based on the exposure of an organism to a single chemical or specific mixtures of related chemicals (i.e., mixtures of chemicals within the same class, such as PCBs, polychlorinated dibenzo-*p*-dioxins/polychlorinated dibenzofurans [PCDDs/ PCDFs], polycyclic aromatic hydrocarbons [PAHs], or dichlorodiphenyltrichloroethanes [DDTs] and DDT metabolites). This requirement generally excluded the use of field studies for the derivation of LOAELs.
- The toxicity data reflected a preferred exposure route relevant to the TRV type (e.g., ingestion exposure for dietary TRVs)[3] (Appendix C, USEPA 1997a).
- TRVs were not based on bioaccumulation studies that did not measure effects on an appropriate endpoint (i.e., survival, growth, or reproduction). Bioaccumulation studies that report only corresponding uptake and bioaccumulation and do not measure effects on specific endpoints are not useful for application as TRVs.
- For regulated metals, acceptable LOAELs associated with adverse effects had to be above the optimal nutritional concentration for the species.
- Unless no other data were available, TRVs for birds were not based on egg productivity or other reproductive endpoints in a domesticated species, such as chickens or Japanese quail, because these species have unnaturally high egg-laying rates and toxicological and reproductive sensitivities that are very different from those of wild bird species. Comparing toxic threshold effects on reproductive endpoints for these species with those for non-domesticated species is problematic because of differences in reproductive physiology.

[2] This principle generally precludes the use of field studies because the presence of multiple chemicals and other environmental factors may result in adverse effects that complicate the interpretation of the study results (USEPA 2003). In some cases, toxicity data based on field studies are discussed to provide additional information on how dose-response data and toxicity thresholds derived from controlled laboratory studies relate to studies conducted in the field.

[3] For dietary TRVs, if dietary ingestion-based TRVs were not available for a particular chemical, other exposure routes (e.g., gavage or injection) were considered.

- For tissue, TRVs were based on whole-body or egg tissue concentrations that were reported at the time that the effects were measured. Studies that did not report measured tissue concentrations were not considered, unless no other studies were available and a tissue concentration could be estimated through the use of water or sediment exposure concentrations and bioconcentration factors reported in the study.

Those studies considered acceptable are presented in Attachment E1, and were used in the final TRV selection process in the BERA.

4 Derivation of Dietary Dose from Dietary Concentration

NOAELs and LOAELs for fish, birds, and mammals are expressed as a daily dose in mg/kg bw/day. However, most studies reported toxicity results as the chemical concentration in food associated with adverse effects rather than as a daily dose. If the daily exposure dose was not presented in a study, it was derived using the reported concentration in food, the animal's body weight, and the FIR with the following equation:

$$TRV = \frac{C_{diet} \times FIR}{BW} \qquad \textbf{Equation E-1}$$

Where:

TRV	=	toxicity reference value (i.e., NOAEL or LOAEL) (mg/kg bw/day)
C_{diet}	=	chemical concentration in diet (mg/kg)
FIR	=	ingestion rate (kg/day)
BW	=	body weight (kg)

Dietary chemical concentrations in toxicity studies are reported as either dry weight or wet weight, depending on the study. Chemical concentrations in the diet were converted from wet weight to dry weight or from dry weight to wet weight, as necessary, to correspond with the basis of the FIR, using the percent moisture in food. The approaches used to select appropriate values for body weight, FIR, and percent moisture to be used in these calculations are detailed in the following subsections.

4.1 Body Weight

Body weight data from the primary study were used if reported. If body weight data were presented for different times during the exposure period, these data were used to generate an average body weight. If final body weights were not presented, initial body weights were used. If body weight data were presented for each dietary concentration level, average body weights were calculated by concentration level, and these weights were used to derive corresponding TRVs. If no body weight data were provided in the study or data provided were not considered representative, species-specific body weights were identified from other literature sources or toxicity studies.

4.2 FOOD INGESTION RATE

Where available, ingestion rate data reported in the primary study for the corresponding NOAEL or LOAEL doses were applied. If only an average for all individuals was provided, it was assumed to be representative and applied. If an ingestion rate was not provided in the study, it was estimated as follows:

- For fish, FIRs were determined from other literature sources for the same species; or, if no literature was available, a daily ingestion rate of 2% of the body weight was assumed as a conservative estimate based on the FIRs commonly reported for laboratory toxicity studies.[4]
- If ingestion rates were not provided for birds, data from the literature were used, or ingestion rates were calculated using the allometric equation for the appropriate bird guild or taxa from Nagy (2001). The use of allometric equations for estimating ingestion rates is consistent with the methods described by USEPA (1997b).
- Ingestion rates for mammals were calculated using the allometric equation for all laboratory mammals from USEPA (1993). Mink-specific ingestion rates were based on Bleavins and Aulerich (1981) or Schaible (1970) if no mink ingestion rate was provided in the study. The use of allometric equations for estimating ingestion rates is consistent with the methods described by USEPA (1997b).

4.3 PERCENT MOISTURE

For fish, the moisture content of food and the weight basis of the feeding rate were infrequently reported in dietary toxicity studies. If the weight basis of the dietary concentration was not reported, a commercial feed or pelleted diet was assumed to approximate a dry weight concentration; 80% moisture content was assumed when the diet consisted of organism prey, based on the moisture contents reported for various aquatic invertebrates and fish (USEPA 1997b).

For birds and mammals, food concentrations were converted, as necessary, to the corresponding basis of the FIR (i.e., wet weight or dry weight) using percent moisture data provided in the study, if available. If percent moisture content data were not reported in the study, published values were selected for the specific diet type using the National Research Council series on nutrient requirements (NRC 1994).

5 Approach for Selecting TRVs

TRVs used in the risk calculations were selected from the larger dataset of NOAELs and LOAELs in one of two ways: 1) a TRV (representing a LOAEL TRV) was derived as the 5th percentile value of a species sensitivity distribution (SSD) curve if toxicity data were

[4] Attachments E1 and E2 provide the sources of the ingestion rates used.

sufficient and the highest NOAEL below the 5th percentile SSD value was selected as the NOAEL, or 2) a study-specific NOAEL TRV and a LOAEL TRV were selected (if toxicity data were not sufficient to develop an SSD). When data were not sufficient to derive a TRV from an SSD, the lowest acceptable LOAEL and the highest NOAEL below the LOAEL from the same study were selected as the TRVs. The methods of TRV selection for tissue and dietary LOEs are described in more detail in the BERA.

All of the acceptable toxicity studies used in TRV derivation are included in Attachment E1 for the following data types: invertebrate tissue (Table E1), fish whole-body tissue (Table E2), fish dietary (Table E3), fish egg tissue (Table E4), bird dietary (Table E5), mammal dietary (Table E6), and bird egg tissue (Table E7). In addition, Table E8 presents detailed data from mink toxicity studies for polychlorinated biphenyls (PCBs). Attachment E2 presents the complete bibliography of the sources of the toxicity studies in Attachment E1.

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Attachment E1. Toxicity Studies Used to Derive BERA TRVs

Attachment E2. Toxicity Study References

BENTHIC INVERTEBRATE TISSUE TRV REFERENCES

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Table E1. TRVs for invertebrate whole-body tissue

Chemical Group	Chemical	Chemical Form	Source	NOAEL mg/kg ww	LOAEL (mg/kg ww)	ACR	Final LOAEL (mg/kg ww)	Final Species LOAEL (mg/kg ww)	Endpoint	Endpoint effect	Test Species	Species (Scientific Name)	Marine / Freshwater
Dioxins/ furans	2,3,7,8,-TCDD	2,3,7,8,-TCDD	Ashley et al. 1996	-	0.003	no	0.003	-	mortality	25% mortality	crayfish	Pacifastacus leniusculus	freshwater
Metals	Arsenic	-	Norwood et al. 2007	-	1.87	no	1.9	1.9	mortality	LD25	amphipod	Hyalella azteca	freshwater
Metals	Arsenic	-	Nelson et al. 1976	-	38.3	3.8	10.1	10.1	mortality	LC50	clam, bay scallop	Argopecten irradians	marine
Metals	Arsenic	-	Irving et al. 2008	-	0.63	no	0.63	0.63	growth	ED60	mayfly	Baetis tricaudatus	freshwater
Metals	Arsenic	-	Madsen 1992	-	21	3.8	5.5	5.5	mortality	LC50	shrimp, brown	Crangon crangon	marine
Metals	Arsenic	-	Spehar et al. 1980	3.6	4.2	no	4.2	4.2	mortality	ED16	snail	Helisoma campanulata	freshwater
Metals	Arsenic	-	Hickey and Martin unpub (2002)	-	92	no	92	92	mortality	54% mortality	snail, New Zealand mud snail	Potamopyrgus antipodarum	freshwater
Metals	Arsenic	-	Klumpp 1980	-	20	3.8	5.3	5.3	mortality	100% mortality	snail, periwinkle	Littorina littoralis	marine
Metals	Cadmium	-	Ahsanullah and Williams 1991	-	16.1	no	16.10	16	growth	reduction in biomass	amphipod	Allorchestes compressa	marine
Metals	Cadmium	-	Zanders and Rojas 1992	-	4.5	9.106	0.49	-	mortality	LC50	amphipod	Elasmopus rapax	marine
Metals	Cadmium	-	Abel and Barlocher 1988	-	48.4	9.106	5.32	3.7	mortality	50% mortality	amphipod	Elasmopus rapax	marine
Metals	Cadmium	-	Meador 1993	-	20	no	20.00	-	mortality	LD50	amphipod	Elasmopus rapax	freshwater
Metals	Cadmium	-	Wallace and Estephan 2004	-	0.9	9.106	0.10	0.10	mortality	50% mortality	amphipod	Gammarus lawrencianus	marine
Metals	Cadmium	-	Duddridge and Wainwright 1980	-	4.4	9.106	0.48	1.6	mortality	100% mortality	amphipod	Gammarus pulex	freshwater
Metals	Cadmium	-	Wright and Frain 1981	-	48.6	9.106	5.34	-	mortality	20% mortality	amphipod	Gammarus pulex	freshwater
Metals	Cadmium	-	Borgmann et al. 1991	-	6	no	6.00	6.0	mortality	significant increase in mortality	amphipod	Hyalella azteca	freshwater and br
Metals	Cadmium	-	Stanley et al. 2005	-	22	no	22.00	-	reproduction	decrease in reproduction	amphipod	Hyalella azteca	freshwater and br
Metals	Cadmium	-	King et al. 2006	-	19	9.106	2.09	2.1	mortality	46% mortality	amphipod	Melita plumulosa	marine and brack
Metals	Cadmium	-	Sundelin 1983	-	5	no	5.00	5.0	reproduction	increase in malformed eggs	amphipod	Monoporeia affinis	freshwater and br
Metals	Cadmium	-	Sundelin 1984	-	0.94	no	0.94	0.94	reproduction	increase in abnormal egg frequency	amphipod	Pontoporeia affinis	freshwater and br
Metals	Cadmium	-	Sofyan et al. 2007	-	0.20	no	0.20	0.64	reproduction	decrease in reproduction	cladoceran, water flea	Ceriodaphnia dubia	freshwater
Metals	Cadmium	-	Sofyan et al. 2007	0.12	2.08	no	2.08	-	reproduction	decrease in reproduction	cladoceran, water flea	Ceriodaphnia dubia	freshwater
Metals	Cadmium	-	Hatakeyama and Yasuno 1981	-	20.4	9.106	2.24	2.2	mortality, growth	decrease in survival, growth, and rep	cladoceran, water flea	Daphnia galeata mendotae	freshwater and sa
Metals	Cadmium	-	Marshall 1978	-	8.56	no	8.56	8.6	mortality, growth	reduced survival and growth	cladoceran, water flea	Daphnia galeata mendotae	marine
Metals	Cadmium	-	Barata et al. 2002	-	5.8	9.106	0.64	0.64	mortality	>50% mortality	cladoceran, water flea	Daphnia magna	freshwater
Metals	Cadmium	-	Heugens et al. 2006	-	2	no	2.00	-	mortality, growth	20% increase in mortality, significant	cladoceran, water flea	Daphnia magna	freshwater
Metals	Cadmium	-	Dillon and Gibson 1987	-	2.4	no	2.40	-	mortality, growth	67% mortality; decreased reproductio	cladoceran, water flea	Daphnia magna	freshwater
Metals	Cadmium	-	Ferard et al. 1983	-	6.4	no	6.40	-	reproduction	reduction in number of newborns	cladoceran, water flea	Daphnia magna	freshwater
Metals	Cadmium	-	Smolders et al. 2005	-	11	no	11.00	-	growth, reproduc	reduced body size, scope for growth,	cladoceran, water flea	Daphnia magna	marine and brack
Metals	Cadmium	-	Guan and Wang 2006	-	13.3	no	13.30	-	growth	reduction in body weight	cladoceran, water flea	Daphnia magna	freshwater
Metals	Cadmium	-	Duquesne et al. 2004	-	14	no	14.00	14	growth	significant reduction in condition inde	clam, Baltic tellin	Macoma balthica	marine
Metals	Cadmium	-	Pesch and Stewart 1980	-	245	no	245	245	growth	reduced growth, detachment of byssa	clam, bay scallop	Argopecten irradians	freshwater
Metals	Cadmium	-	Patel and Anthony 1991	-	91	9.106	9.99	10	mortality	LC50	clam, blood	Anadara granosa	marine
Metals	Cadmium	-	Hook and Fisher 2002	-	0.45	no	0.45	0.45	reproduction	decreased egg production	copepod	Acartia tonsa	marine
Metals	Cadmium	-	Jennings and Rainbow 1979	-	22.3	9.106	2.45	2.4	mortality	65% mortality	crab, European green	Carcinus maenas	marine
Metals	Cadmium	-	Weis 1978	-	31.9	9.106	3.50	3.5	mortality	20% mortality	crab, fiddler	Uca pugilator	marine
Metals	Cadmium	-	Weimin et al. 1994	-	7.4	9.106	0.81	0.81	mortality	30% mortality after 21 days	crab, soldier	Mictyris longicarpus	marine
Metals	Cadmium	-	Thorp et al. 1979	-	22.4	no	22.40	22	mortality	17% mortality	crayfish	Cambarus latimanus	freshwater
Metals	Cadmium	-	Mirenda 1986	-	28.4	9.106	3.12	3.1	mortality	25% mortality	crayfish	Orconectes virilis	marine
Metals	Cadmium	-	Postma and Davids 1995	-	2.6	no	2.60	-	mortality	increased mortality	midge	Chironomus riparius	marine and brack
Metals	Cadmium	-	Postma et al. 1994	-	7.6	no	7.60	-	mortality	reduction in survival	midge	Chironomus riparius	freshwater
Metals	Cadmium	-	Timmermans et al. 1992	-	22.6	no	22.60	-	mortality, reprod	delay onset of development; 55% mo	midge	Chironomus riparius	freshwater
Metals	Cadmium	-	Gillis et al. 2002	-	221	no	221.00	4.4	growth	reduced body weight	midge	Chironomus riparius	freshwater
Metals	Cadmium	-	Heinis et al. 1990	-	30	no	30.00	30	growth	decreased weight	midge	Glyptotendipes pallens	freshwater
Metals	Cadmium	-	Fischer 1988	-	240	no	240.00	240	growth	reduced growth of meat and shell	mussel, blue	Mytilus edulis	marine
Metals	Cadmium	-	Pavicic and Jarvenpaa 1974	-	39	no	39.00	39	mortality	20% mortality	mussel, Mediterranean	Mytilus galloprovincialis	marine
Metals	Cadmium	-	Pavicic et al. 1994	-	1600	no	1600.00	-	reproduction	increased abnormal development of s	mussel, Mediterranean	Mytilus galloprovincialis	marine
Metals	Cadmium	-	Kraak et al. 1994	-	12	no	12.00	-	behavior	decrease in filtration rate	mussel, zebra	Dreissena polymorpha	freshwater
Metals	Cadmium	-	Kraak et al. 1992	-	16	no	16.00	14	behavior	decrease in filtration rate	mussel, zebra	Dreissena polymorpha	freshwater and br
Metals	Cadmium	-	Carr et al. 1985	-	1.3	no	1.29	1.3	growth	reduced growth	mysid	Mysidopsis bahia	marine
Metals	Cadmium	-	Redeker and Blust 2004	-	25.9	9.106	2.84	-	mortality	20% mortality	oligochaete	Tubifex tubifex	marine
Metals	Cadmium	-	Gillis et al. 2002	-	3415	no	3415.00	2.8	reproduction	reduced number of young per adult	oligochaete	Tubifex tubifex	freshwater and m
Metals	Cadmium	-	Penttinen et al. 2011	-	25.4	9.106	2.79	-	mortality	LD50	oligochaete, freshwater	Lumbriculus variegatus	freshwater

Table E1. TRVs for invertebrate whole-body tissue

Chemical Group	Chemical	Chemical Form	Source	NOAEL mg/kg ww	LOAEL (mg/kg ww)	ACR	Final LOAEL (mg/kg ww)	Final Species LOAEL (mg/kg ww)	Endpoint	Endpoint effect	Test Species	Species (Scientific Name)	Marine / Freshwater
Metals	Cadmium	-	Penttinen et al. 2008	-	51.7	9.106	5.68	-	mortality	LR50	oligochaete, freshwater	Lumbriculus variegatus	marine
Metals	Cadmium	-	Carlson et al. 1991	-	650	9.106	71.38	10	mortality	40% mortality	oligochaete, freshwater	Lumbriculus variegatus	freshwater
Metals	Cadmium	-	Zaroogian and Morrison 1981	-	54	no	54.00	54	reproduction	24% increase in abnormal embryos f	oyster, eastern	Crassostrea virginica	marine
Metals	Cadmium	-	Jenkins and Sanders 1986	-	16.8	no	16.80	-	growth	decrease in growth	polychaete	Neanthes arenaceodentata	marine
Metals	Cadmium	-	Jenkins and Mason 1988	-	61.82	no	61.82	17	reproduction	-	polychaete	Neanthes arenaceodentata	saline lake
Metals	Cadmium	-	Olla et al. 1988	-	7	no	7.00	7.0	behavior	delay in burrowing time	polychaete	Nephtys caeca	freshwater
Metals	Cadmium	-	Radenac et al. 2001	-	5	no	5.00	5.0	growth	increased frequency of larval abonor	sea urchin	Paracentrotus lividus	freshwater
Metals	Cadmium	-	Zyadah and Abdel-Baky 2000	-	1.06	9.106	0.12	0.1	mortality	26.3% mortality	shrimp	Mysis sp.	freshwater and m
Metals	Cadmium	-	Jayasekara et al. 1986	6.6	5.4	no	5.40	5.4	growth	inhibition of growth	shrimp, brine	Artemia salina	marine
Metals	Cadmium	-	Vernberg et al. 1977	-	2.6	9.106	0.29	-	mortality	21% mortality	shrimp, grass	Palaemonetes pugio	marine and brack
Metals	Cadmium	-	Pesch and Stewart 1980	-	52.6	no	52.60	3.9	mortality	at least 50% mortality	shrimp, grass	Palaemonetes pugio	marine
Metals	Cadmium	-	Roast et al. 2001	-	0.22	9.106	0.02	0.024	mortality	LC50	shrimp, opposum	Neomysis integer	freshwater and m
Metals	Cadmium	-	Carlson et al. 1991	-	630	9.106	69.19	69	mortality	50% mortality	snail	Helisoma sp.	freshwater
Metals	Cadmium	-	Spehar et al. 1978	-	30	no	30.00	30	mortality	90% mortality	snail	Physa sp.	freshwater
Metals	Cadmium	-	Marigomez and Ireland 1990	-	36	no	36.00	36	growth	decrease in soft body dry weight	snail, periwinkle	Littorina littoralis	freshwater
Metals	Chromium	-	Norwood et al. 2007	1.5	3.5	no	3.5	-	mortality	50% mortality	amphipod	Hyalella azteca	freshwater and br
Metals	Chromium	-	Oshida and Word 1982	4.4	6.0	no	6.0	-	reproduction	reduction in offspring numbers	polychaete	Neanthes arenaceodentata	marine
Metals	Cobalt	-	Norwood et al. 2007	1.2	2.6	no	2.6	-	mortality	50% mortality	amphipod	Hyalella azteca	freshwater and br
Metals	Copper	-	Zyadah and Abdel-Baky 2000	-	5.9	3.22	1.8	1.8	mortality	66.7% mortality	shrimp	Mysis sp.	freshwater and m
Metals	Copper	-	Kraak et al. 1994	-	8.0	no	8.0	40	growth	reduced growth, 50% decrease in filtr	mussel, zebra	Dreissena polymorpha	freshwater
Metals	Copper	-	Roesijadi 1980	-	9.3	no	9.3	9.3	mortality	17% mortality	clam, Pacific littleneck	Protothaca staminea	marine
Metals	Copper	-	Milanovich et al. 1976	-	11	no	11	11	mortality	approximately 50% mortality	polychaete	Cirriformia spirabrancha	marine
Metals	Copper	-	Absil et al. 1996	6	13	no	13	13	mortality	28% mortality	clam, Baltic tellin	Macoma balthica	marine
Metals	Copper	-	Muyssen and Janssen 2007	-	16	no	16	30	mortality, growth	mortality, number of offspring, bioma	cladoceran, water flea	Daphnia magna	-
Metals	Copper	-	Nell and Chvojka 1992	-	19	no	19	19	growth	reduction in weight gain of spat	oyster, Sydney rock	Saccostrea glomerata	marine
Metals	Copper	-	King et al. 2006	-	22	3.22	7	14	mortality	25-45% mortality	amphipod	Melita plumulosa	freshwater and br
Metals	Copper	-	Simpson and King 2005	-	23	3.22	7.1	7.1	mortality	LC50	amphipod	Tellina tenuis	freshwater and br
Metals	Copper	-	DeSchamphlaere and Janssen 2004	-	25.6	no	26	-	growth, reprodu	reduced body weight (by biomass) ar	cladoceran, water flea	Daphnia magna	freshwater
Metals	Copper	-	King et al. 2005	-	26	3.22	8	8.0	mortality	48% mortality	amphipod	Hyale longicornis	marine
Metals	Copper	-	Ahsanullah and Ying 1995	-	26	no	26	26	growth	reduction in growth	shrimp, banana prawn	Penaeus merguiensis	brackish
Metals	Copper	-	Guven et al. 1999	-	27.9	3.22	8.7	8.6	mortality	LC50	amphipod	Gammarus pulex	freshwater
Metals	Copper	-	Prabhakara Rao et al. 1986	-	30	3.22	9.3	9.3	mortality	lethal body burden based on average	barnacle	Balanus amphitrite	marine and brack
Metals	Copper	-	Marsden 2002	-	30	no	30	30	reproduction	reduced juvenile recruitment	amphipod	Paracorophium excavatum	marine and brack
Metals	Copper	-	Prabhakara Rao et al. 1986	-	33	3.22	10	10	mortality	lethal body burden based on average	barnacle	Balanus tintinnabulum	marine
Metals	Copper	-	Hvilsom 1983	-	33.2	3.22	10	25	mortality	LC50	mussel, blue	Mytilus edulis	marine
Metals	Copper	-	Kraak et al. 1992	-	40	no	40	-	mortality, behav	24% mortality observed and reduced	mussel, zebra	Dreissena polymorpha	freshwater
Metals	Copper	-	King et al. 2004	-	44	3.22	14	14	mortality	mortality	clam	Mysella anomala	marine
Metals	Copper	-	King et al. 2004	-	50	3.22	16	15	mortality	80% mortality	white sunset-shell (bivalve)	Soletellina alba	marine
Metals	Copper	-	Calabrese et al. 1984	-	62	no	62	-	mortality	increased mortality	mussel, blue	Mytilus edulis	marine
Metals	Copper	-	Pesch et al. 1979	-	64	no	64	64	growth	43% reduction in growth	clam, bay scallop	Argopecten irradians	marine
Metals	Copper	-	DeSchamphelaere et al. 2007	-	65	no	65	-	growth, reprodu	reduced weight, number of offspring,	cladoceran, water flea	Daphnia magna	freshwater
Metals	Copper	-	Ahsanullah and Williams 1991	-	73	no	73	73	growth	reduced growth	amphipod	Allorchestes compressa	marine
Metals	Copper	-	King et al. 2004	-	74.0	3.22	23	23	mortality	LD50	clam, tellin	Tellina deltoidalis	marine
Metals	Copper	-	King et al. 2005	-	78	3.22	24	24	mortality	23% mortality	amphipod	Grandidierella japonica	marine
Metals	Copper	-	Pesch and Hoffman 1982	-	79	3.22	25	25	mortality	lethal body burden based on mean r	polychaete	Neanthes arenaceodentata	marine
Metals	Copper	-	King et al. 2005	-	88	3.22	27	27	mortality	49% mortality	amphipod	Hyale crassicornis	marine
Metals	Copper	-	King et al. 2005	-	94	3.22	29	-	mortality	50% mortality	amphipod	Melita plumulosa	freshwater and br
Metals	Copper	-	Duquesne et al. 2000	-	119	3.22	37	37	mortality	lethal to 50% of animals	amphipod	Paramoera walkeri	marine
Metals	Copper	-	Penttinen et al. 2008	-	137	3.22	43	43	mortality	LR50	oligochaete, freshwater	Lumbriculus variegatus	freshwater
Metals	Copper	-	Ahsanullah et al. 1981	-	146	3.22	45	45	mortality	LC50	shrimp, ghost shrimp	Callinassa australiensis	marine
Metals	Copper	-	Kumaraguru et al. 1980	-	201	3.22	62	62	mortality	up to 50% mortality	clam, marine	Meretrix casta	marine
Metals	Lead	-	Spehar et al. 1978	-	40	no	40	-	mortality	61% mortality	amphipod	Gammarus pseudolimnaeus	freshwater
Metals	Lead	-	MacLean et al. 1996	59	68	no	68	-	mortality	reduced survival	amphipod	Hyalella azteca	freshwater and br
Metals	Lead	-	Chinni et al. 2002	70	200	no	200	-	mortality	LD25	shrimp, Indian prawn	Penaeus indicus	marine and brack
Metals	Mercury	methyl mercuric chlori	Biesinger et al. 1982	-	1.64	no	1.64	-	reproduction	reduced no. young produced	cladoceran, water flea	Daphnia magna	freshwater
Metals	Mercury	mercuric chloride	Biesinger et al. 1982	1.53	2.33	no	2.33	-	reproduction	reduced no. young produced	cladoceran, water flea	Daphnia magna	freshwater

Table E1. TRVs for invertebrate whole-body tissue

Chemical Group	Chemical	Chemical Form	Source	NOAEL mg/kg ww	LOAEL (mg/kg ww)	ACR	Final LOAEL (mg/kg ww)	Final Species LOAEL (mg/kg ww)	Endpoint	Endpoint effect	Test Species	Species (Scientific Name)	Marine / Freshwater
Metals	Mercury	methyl mercuric chlori	Biesinger et al. 1982	2.33	18.38	no	18.38	-	mortality	35% mortality	cladoceran, water flea	Daphnia magna	freshwater
Metals	Mercury	-	Hook and Fisher 2002	0.048	0.095	no	0.095	-	reproduction	reduction in egg production	copepod	Acartia tonsa	marine
Metals	Mercury	mercuric chloride	Bianchini and Gilles 1996	-	1	no	1	-	mortality	-	crab, European green	Carcinus maenas	marine
Metals	Mercury	-	Canli and Furness 1995	0.34	-	no	-	-	mortality	NOAEC	lobster, Norway (adult)	Nephrops norvegicus	marine
Metals	Mercury	phenylmercuric acetat	Kopfler 1974	-	23	no	23	-	mortality	majority died after 19 days exposure	oyster, eastern	Crassostrea virginica	marine
Metals	Nickel	-	Borgmann et al. 2001	0.103	1.103	no	1.1	-	mortality	75% increased mortality	amphipod	Hyalella azteca	freshwater and br
Metals	Nickel	-	Borgmann et al. 2001	0.103	1.2	no	1.2	-	growth	25% reduced growth	amphipod	Hyalella azteca	freshwater and br
Metals	Selenium	-	Malchow et al. 1995	<0.05	0.51	no	0.51	-	growth	reduced body weight	midge	Chironomus decorus	freshwater
Metals	Silver	-	Naddy et al. 2007	0.59	0.49	no	0.49	0.49	growth, reprodu	EC24	cladoceran, water flea	Daphnia magna	freshwater
Metals	Vanadium	vanadate	Miramand et al. 1981	0.6	-	no	-	-	mortality	NOAEC	crab, European green	Carcinus maenas	marine
Metals	Vanadium	vanadate	Miramand et al. 1982	0.8	-	no	-	-	mortality	NOAEC	sea cucumber	Holothuria forskali	marine
Metals	Vanadium	vanadate	Miramand et al. 1982	0.74	-	no	-	-	mortality	NOAEC	sea urchin	Paracentrotus lividus	marine
Metals	Vanadium	vanadate	Miramand et al. 1981	0.58	-	no	-	-	mortality	NOAEC	shrimp	Lysmata seticaudata	marine
Metals	Zinc	-	Ahsanullah and Williams 1991	-	28	no	28	-	mortality, growth	LOED	amphipod	Allorchestes compressa	marine
Metals	Zinc	-	King et al. 2005	-	148	no	148	-	mortality	32% mortality over control	amphipod	Chaetocorophium cf lucasi	freshwater and m
Metals	Zinc	-	King et al. 2004	-	122	no	122	-	mortality	35% mortality	amphipod	Hyale crassicornis	marine
Metals	Zinc	-	King et al. 2004	-	46	no	46	-	mortality	30% mortality	amphipod	Hyale longicornis	marine
Metals	Zinc	-	Borgmann et al. 1993	-	19.5	no	19.5	-	mortality	LD25	amphipod	Hyalella azteca	freshwater and br
Metals	Zinc	-	Borgmann et al. 1993	-	27.2	no	27.2	-	mortality	38% mortality	amphipod	Hyalella azteca	freshwater and br
Metals	Zinc	-	King et al. 2004	-	28	no	28	-	mortality	30% mortality	amphipod	Melita awa	marine
Metals	Zinc	-	King et al. 2005	-	74	no	74	-	mortality	75% mortality over control	amphipod	Melita awa	marine
Metals	Zinc	-	King et al. 2006	-	43	no	43	-	mortality	approximately 30% mortality	amphipod	Melita plumulosa	freshwater and br
Metals	Zinc	-	De Schamphelaere et al. 2004	-	11.12	no	11.12	-	reproduction	LOAEL total reproduction	cladoceran, water flea	Daphnia magna	freshwater
Metals	Zinc	-	Muyssen et al. 2006	-	51	no	51	-	mortality	55% mortality	cladoceran, water flea	Daphnia magna	freshwater
Metals	Zinc	-	Farris et al. 1989	-	86.6	no	86.6	-	growth	44 to 46% reduced growth	clam, Asiatic	Corbicula sp.	freshwater and br
Metals	Zinc	-	King et al. 2004	-	80	no	80	-	mortality	15% mortality	clam, tellin	Tellina deltoidalis	marine
Metals	Zinc	-	Hook and Fisher 2002	-	34	no	34	-	reproduction	calculated as (2570 ng/g+100nmol/g)	copepod	Acartia tonsa	marine
Metals	Zinc	-	Mirenda 1986	-	35.2	no	35.2	-	mortality	23% mortality	crayfish	Orconectes virilis	freshwater
Metals	Zinc	-	Burbidge et al. 1994	-	140	no	140	-	mortality	100% mortality	mussel, blue	Mytilus edulis	marine
Metals	Zinc	-	Kraak et al. 1994	-	80	no	80	-	filtration rate	50% decrease in filtration rate	mussel, zebra	Dreissena polymorpha	freshwater
Metals	Zinc	-	Kraak et al. 1994	-	140	no	140	-	filtration rate	77% decrease in filtration rate	mussel, zebra	Dreissena polymorpha	freshwater
Metals	Zinc	-	King et al. 2004	-	80	no	80	-	mortality	70% mortality	polychaete	Nephtys australiensis	marine
Metals	Zinc	-	King et al. 2004	-	160	no	160	-	mortality	70% mortality	white sunset-shell (bivalve)	Soletellina alba	marine
PAHs	HPAH	Fluoranthene	Schuler et al. 2004	50.6	742	no	742	-	mortality	LR50	amphipod	Diporeia sp.	freshwater
PAHs	HPAH	Pyrene	Landrum et al. 1994	730	770	no	770	-	mortality	25% mortality	amphipod	Diporeia sp.	freshwater
PAHs	HPAH	Pyrene	Landrum et al. 2003	-	1,200	no	1200	-	mortality	LR50	amphipod	Diporeia sp.	freshwater
PAHs	HPAH	Fluoranthene	Schuler et al 2007	8.1	22.2	no	22.2	-	growth, reprodu	Reduced length and reduced number	amphipod	Hyalella azteca	freshwater
PAHs	HPAH	Fluoranthene	Schuler et al. 2004	50.6	162	no	162	-	mortality	LR50	amphipod	Hyalella azteca	freshwater
PAHs	HPAH	Fluoranthene	Driscoll et al. 1997	50.6	182	no	182	-	mortality	-	amphipod	Hyalella azteca	freshwater
PAHs	HPAH	Fluoranthene	Driscoll and Landrum 1997	-	222	no	222	-	mortality	50% mortality	amphipod	Hyalella azteca	freshwater
PAHs	HPAH	Pyrene	Lee et al. 2002	-	336	no	336	-	mortality	LR50	amphipod	Hyalella azteca	freshwater
PAHs	HPAH	Fluoranthene	Lotufo 1998	121	263	no	263	-	mortality	55% mortality	copepod	Coullana sp.	marine
PAHs	HPAH	Fluoranthene	Lotufo 1998	121	263	no	263	-	reproduction	reduced number of offspring	copepod	Coullana sp.	marine
PAHs	HPAH	Fluoranthene	Lotufo 1998	40.5	121	no	121	-	reproduction	reduced number of offspring	copepod	Schizopera knabeni	marine
PAHs	HPAH	Fluoranthene	Lotufo 1998	587	789	no	789	-	mortality	95% mortality	copepod	Schizopera knabeni	marine
PAHs	HPAH	Fluoranthene	Schuler et al. 2004	50.6	34.4	no	34.4	-	mortality	LR50	midge	Chironomus tentans	freshwater
PAHs	HPAH	Fluoranthene	Schuler et al 2007	28.3	42.5	no	42.5	-	growth	Reduced weight	midge	Chironomus tentans	freshwater
PAHs	HPAH	Pyrene	Kukkonen and Landrum 1994	380	465	no	465	-	mortality	17% mortality	oligochaete, freshwater	Lumbriculus variegatus	freshwater
PAHs	HPAH	Benzo(a)pyrene	Rice et al. 2000	-	23.2	no	23.2	-	growth	Reduced growth rate	polychaete	Armandia brevis	marine
PAHs	LPAH	Naphthalene	Landrum et al. 2003	50.6	640	no	640	-	mortality	LR50	amphipod	Diporeia sp.	freshwater
PAHs	LPAH	Fluorene	Landrum et al. 2003	50.6	2,040	no	2040	-	mortality	LR50	amphipod	Diporeia sp.	freshwater
PAHs	LPAH	Fluorene	Lee et al. 2002	50.6	111	no	111	-	mortality	LR50	amphipod	Hyalella azteca	freshwater
PCBs	Total PCBs	Aroclor 1242	Nebeker and Puglisi 1974	-	76	no	76	204.8	reproduction	no. young per adult	amphipod	Gammarus pseudolimnaeus	freshwater
PCBs	Total PCBs	Aroclor 1248	Nebeker and Puglisi 1974	127	552	no	552	-	reproduction	no. young per adult	amphipod	Gammarus pseudolimnaeus	freshwater
PCBs	Total PCBs	Aroclor 1268	Kwon and Fisher 2006 (unpub)	-	11.6	no	11.6	11.6	mortality	LR50	cladoceran, water flea	Daphnia magna	freshwater
PCBs	Total PCBs	Aroclor 1016	Neff and Giam 1977	-	31.9	no	31.9	31.9	mortality	≥50% mortality	horseshoe crab	Limulus polyphemus	marine

Table E1. TRVs for invertebrate whole-body tissue

Chemical Group	Chemical	Chemical Form	Source	NOAEL mg/kg ww	LOAEL (mg/kg ww)	ACR	Final LOAEL (mg/kg ww)	Final Species LOAEL (mg/kg ww)	Endpoint	Endpoint effect	Test Species	Species (Scientific Name)	Marine / Freshwater
PCBs	Total PCBs	Aroclor 1242	Kwon and Fisher 2006 (unpub)	-	89	no	89	89.0	mortality	LR50	midge	Chironomus riparius	freshwater
PCBs	Total PCBs	Aroclor 1016	Hansen et al. 1974	4	32	no	32	-	growth	shell growth rate	oyster, eastern	Crassostrea virginica	marine
PCBs	Total PCBs	Aroclor 1254	Duke et al. 1970	8.1	33	no	33	50.1	growth	shell growth rate	oyster, eastern	Crassostrea virginica	marine
PCBs	Total PCBs	Aroclor 1254	Lowe et al. 1972	101	119	no	119	-	growth	height and body weight after 6 wks	oyster, eastern	Crassostrea virginica	marine
PCBs	Total PCBs	Aroclor 1254	Rice et al. 2000	-	35.8	no	35.8	35.8	growth	Reduced growth rate	polychaete	Armandia brevis	marine
PCBs	Total PCBs	PCB mixture	Fowler et al. 1978	-	200	no	200	200.0	mortality	lethal body burden	polychaete	Nereis diversicolor	ne
PCBs	Total PCBs	Aroclor 1016	Hansen et al. 1974	3.8	42	8.4	5	5.0	mortality	43% mortality	shrimp, brown	Penaeus aztecus	marine
PCBs	Total PCBs	Aroclor 1016	Hansen et al. 1974	-	1.1	8.4	0.13	0.65	mortality	33% mortality	shrimp, grass	Palaemonetes pugio	marine
PCBs	Total PCBs	Aroclor 1254	Nimmo et al. 1974	18	27	8.4	3.2	-	mortality	45% mortality	shrimp, grass	Palaemonetes pugio	marine
PCBs	Total PCBs	Aroclor 1254	Duke et al. 1970	-	16	8.4	1.9	-	mortality	72% mortality	shrimp, pink	Penaeus duorarum	marine
PCBs	Total PCBs	Aroclor 1254	Duke et al. 1970	-	33	8.4	3.9	-	mortality	72% mortality	shrimp, pink	Penaeus duorarum	marine
PCBs	Total PCBs	Aroclor 1254	Duke et al. 1970	1.3	3.9	no	3.9	3.1	mortality	100% mortality	shrimp, pink	Penaeus duorarum	marine
Pesticides	Dieldrin	99% pure	Estenik and Collins 1979	-	4.78	7.8	0.613	-	mortality	50% mortality	midge	Chironomus riparius	freshwater
Pesticides	Dieldrin	92% pure (techniucal	Parrish et al. 1973	13.85	20	7.8	2.564	-	growth	24% reduction in shell growth	American oyster	Crassostrea virginica	marine
Pesticides	Dieldrin	92% pure (techniucal	Parrish et al. 1973	<0.01	0.08	7.8	0.010	-	mortality	25% mortality	pink shrimp	Penaeus duorarum	marine
Pesticides	Dieldrin	92% pure (techniucal	Parrish et al. 1973	-	2.1	7.8	0.269	-	mortality	20% mortality	grass shrimp	Palaemonetes pugio	marine
Pesticides	Endosulfan	Technical endosulfan	Schimmel et al. 1977	0.08	0.207	no	0.21	-	mortality	35% mortality	shrimp, grass	Palaemonetes pugio	marine
Pesticides	Heptachlor epoxide	Analytical grade (99%	Schimmel et al. 1976	0.01	0.14	no	0.14	-	mortality	30% mortality	oyster, eastern	Crassostrea virginica	marine
Pesticides	Heptachlor epoxide	Analytical grade (99%	Schimmel et al. 1976	0.55	2.5	no	2.5	-	mortality	70% mortality	shrimp, grass	Palaemonetes vulgaris	marine
Pesticides	Heptachlor epoxide	Analytical grade (99%	Schimmel et al. 1976	0.054	0.18	no	0.18	-	mortality	80% mortality	shrimp, pink	Penaeus duorarum	marine
Pesticides	Total DDx	DDT (p,p-DDT (>98%	Lotufo et al. 2000a	1.5	2.1	3.6	0.58	-	mortality	LR50	amphipod	Hyalella azteca	freshwater
Pesticides	Total DDx	DDT equivalents	Lotufo et al. 2001b	-	1.8	no	1.8	-	mortality	LR50	amphipod	Hyalella azteca	freshwater
Pesticides	Total DDx	DDT equivalents	Lotufo et al. 2001b	0.61	2.2	no	2.2	-	mortality	51% mortality	amphipod	Hyalella azteca	freshwater
Pesticides	Total DDx	DDE (p,p'-DDE)	Landrum et al. 2005	-	105	3.6	29	4.7	mortality	MLR50	amphipod	Hyalella azteca	freshwater
Pesticides	Total DDx	DDE (p,p-DDE >98%)	Lotufo et al. 2000a	49	124	3.6	34	-	mortality	LR50	amphipod	Hyalella azteca	freshwater
Pesticides	Total DDx	DDT equivalents	Lotufo et al. 2001a	-	2.7	no	2.7	2.7	mortality	LR50	amphipod	Leptocheirus plumulosus	marine
Pesticides	Total DDx	DDT equivalents	Lotufo et al. 2001a	1.85	3.74	no	3.74	-	reproduction	reduced no. neonates per female	amphipod	Leptocheirus plumulosus	marine
Pesticides	Total DDx	"DDT"	Crosby and Tucker 1971	128	266	3.6	74	74	mortality	12% mortality	cladoceran, water flea	Daphnia magna	freshwater
Pesticides	Total DDx	DDE (p,p-DDE)	Rice et al. 2000	-	43.0	no	43	43.0	growth	Reduced growth rate	polychaete	Armandia brevis	marine
Pesticides	Total DDx	DDT (p,p-DDT (98% p	Lotufo et al. 2000b	26.6	35.5	no	35.5	35.5	growth	reduced biomass	polychaete	Neanthes arenaceodentata	marine
Pesticides	Total DDx	DDT (p,p-DDT (98% p	Lotufo et al. 2000b	74.4	-	no	-	-	mortality	NOAEC	polychaete	Neanthes arenaceodentata	marine
Pesticides	Total DDx	DDT (p,p-DDT (98% p	Lotufo et al. 2000b	142	-	no	-	-	mortality, growth	NOAEC	polychaete	Neanthes arenaceodentata	marine
Pesticides	Total DDx	DDE, DDD, and DDT	Nimmo et al. 1970	0.06	0.13	no	0.13	0.13	mortality	-	shrimp, pink	Penaeus duorarum	marine

Exposure mode	Exposure duration
single injection	single dose + 45 days
water	4 weeks
water	96 hours
water	12 days
water	180 hours
combined	28 days
water	30 days
water	8 days
water	4 weeks
water	96 hours
food	18 days
water	22 weeks
water	72 hours
food	13 days
water	48 hours
water	6 weeks
water	42 days
water	12 days
water	105 days
water	60 days
food	2 weeks
food	7 days
food	6 days
water	27 days
water	24 hours
water	41 days
water	28 days
food	20 days
water	7 days
water	6 generations
water	5 weeks
water	48 hours
water	ne
food	4 hours
water	21 days
water	24 days
sediment	21 days
water	5 months
water	121 days
water	6 weeks
water and food	9 generations
water	5 weeks
sediment	10 days
water	96 hours
water	9.4 weeks
water	96 hours
water	30 days
water	11 weeks
water	10 days
water	33 days
water	48 hours
sediment	28 days
Water	48 hours

Exposure mode	Exposure duration
water	48 hours
water	10 days
water	37 weeks
water	10 to 11 weeks
Water	7 days
sediment	2 weeks
water	4 to 8 weeks
water	96 hours
water	7 weeks
water	7 days
water	6 weeks
water	17 days
water	10 days
water	28 days
water	48 hours
water	4 weeks
water	45 days
nr	4 weeks
water	96 hours
water	48 hours
water	30 days
water	24 days
water	40 days
water	21 days
water	4 weeks
sediment	10 days
sediment	10 days
water	21 days
sediment	10 days
water	2 weeks
water	96 hours
water	70 hours
sediment	28 days
water	20 hours
water	7-16 days
water	9 weeks
water	96 hours
sediment	10 days
water	21 months
water	6 weeks
water	21 days
water	4 weeks
water	96 hours
sediment	10 days
water	4 days
sediment	10 days
sediment	10 days
water	8 days
water	48 hours
water	14 days
water	96 hours
water	28 days
water	8 days
water	96 hours
water	21 days
water	21 days

Exposure mode	Exposure duration
water	21 days
food	4 hours
water	32 hours
water	30 days
water	19 days
combined	28 days
combined	28 days
food	96 hours
water	7 days
water	3 weeks
water	22 days
water	22 days
water	3 weeks
water	4 weeks
sediment	10 days
water	10 days
water	10 days
absorption	10 weeks
water	10 weeks
water	10 days
water	10 days
water	10 days
water	21 days
water	21 days
water	30 days
water	10 days
combined	4 hours
absorption	2 weeks
combined	-
absorption	10 weeks
absorption	48 hours
combined	96 hours
water	96 hours
water	28 days
sediment	28 days
water	28 days
water	28 days
water	28 days
sediment	31 days
water	30 days
water	10 days
sediment	10 days
sediment	10 days
sediment	10 days
sediment	10 days
water	10 days
water	10 days
combined	7 days
sediment	28 days
water	10 days
water	28 days
water	10 days
water	60 days
water	60 days
not specified	4 days
water	96 days

Exposure mode	Exposure duration
not specified	4 days
water	96 hours
water	24 weeks
water	24 weeks
sediment	28 days
ne	ne
water	96 hours
water	96 hours
water	16 days
water	20 days
water	20 days
water	48 hours
water	24 hours
water	96 hours
water	96 hours
water	96 hours
water	96 hours
water	96 hours
water	96 hours
water	96 hours
water	10 days
sediment	28 days
sediment	28 days
water	approx 10 days
water	10 days
sediment	28 days
sediment	28 days
water	26 hours
sediment	28 days
food	28 days
sediment	28 days
sediment	28 days
water	56 days

Table E2. TRVs for fish whole-body tissue

Chemical Group	Chemical	Chemical Form Exposure	Source	NOAEL (WB)	LOAEL (WB)	ACR	Final LOAEL (WB)	Final species LOAEL	Units (ww)	Endpoint	Test Species	Species (Scientific Name)	Lifestage	Exposure Mode
Dioxins/ furans	TEQ-fish	2,3,7,8-TCDD	Cook et al. 1991 (draft unpublished ve	-	2,200	no	2,200	2,200	ng/kg	mortality	carp	Cyprinus carpio	adult	water
Dioxins/ furans	TEQ-fish	2,3,7,8-TCDD	Schmieder et al. 1995	-	2,410	no	2,410	-	ng/kg	growth	medaka, Japanese	Oryzias latipes	juvenile	water
Dioxins/ furans	TEQ-fish	2,3,7,8-TCDD	Kim and Cooper 1998	-	1,100	no	1,100.0	1,628	ng/kg	growth	medaka, Japanese	Oryzias latipes	juvenile	water
Dioxins/ furans	TEQ-fish	2,3,7,8-TCDD	Adams et al. 1986	-	14,000	8.3	1,687	1,687	ng/kg	mortality	minnow, fathead	Pimephales promelas	juvenile	water
Dioxins/ furans	TEQ-fish	2,3,7,8-TCDD	Miller et al. 1979	125	2,170	no	2,170.0	2,170	ng/kg	mortality, growth	salmon, coho	Oncorhynchus kisutch	juvenile	water
Dioxins/ furans	TEQ-fish	2,3,7,8-TCDD	Mehrle et al. 1988	-	990	no	990	-	ng/kg	growth	trout, rainbow	Oncorhynchus mykiss	fry	water
Dioxins/ furans	TEQ-fish	2,3,7,8-TCDD	Mehrle et al. 1988	-	990	no	990	-	ng/kg	mortality	trout, rainbow	Oncorhynchus mykiss	fry	water
Dioxins/ furans	TEQ-fish	2,3,7,8-TCDD	Branson et al. 1985	-	2,580	no	2,580	726	ng/kg	growth	trout, rainbow	Oncorhynchus mykiss	10-15cm	water
Dioxins/ furans	TEQ-fish	2,3,7,8-TCDD	Fisk et al. 1997	46	85	no	85	85	ng/kg	growth	whitefish, lake	Coregonus clupeaformis	juvenile	food
Dioxins/ furans	TEQ-fish	2,3,7,8-TCDD	Heiden et al. 2005	-	12,440	no	12,440.0	12,440	ng/kg	reproduction	zebrafish	Danio rerio	juvenile	food
Dioxins/ furans	TEQ-fish	2,3,7,8-TCDD	Fisk et al. 1997	72	150	no	150	-	ng/kg	growth	trout, rainbow	Oncorhynchus mykiss	juvenile	food
Metals	Arsenic	NS	McGeachy and Dixon 1992	-	8.1	no	8.1	-	mg/kg	behavior	trout, rainbow	Oncorhynchus mykiss	immature	water
Metals	Arsenic	NS	Erickson et al. 2011	1.3	2.5	no	2.5	-	mg/kg	growth	trout, rainbow	Oncorhynchus mykiss	juvenile	water
Metals	Arsenic	NS	McGeachy and Dixon 1990	0.85	3.5	no	3.5	-	mg/kg	mortality	trout, rainbow	Oncorhynchus mykiss	juvenile	water
Metals	Cadmium	NS	Spehar 1976	-	4.0	no	4.0	4.0	mg/kg	growth	American flagfish	Jordanella floridae	immature	water
Metals	Cadmium	NS	Spehar et al. 1978	-	5.6	no	5.600	-	mg/kg	mortality	American flagfish	Jordanella floridae	immature	water
Metals	Cadmium	NS	Cearley and Coleman 1974	-	0.21	no	0.210	0.21	mg/kg	mortality, behav	bluegill	Lepomis macrochirus	3.25 g	water
Metals	Cadmium	NS	Knapen et al. 2004	-	1.4	no	1.400	1.4	mg/kg	mortality	gudgeon	Gobio gobio	adult	water
Metals	Cadmium	NS	Eisler 1971	-	31	9.1	3.4	3.4	mg/kg	mortality	mummichog	Fundulus heteroclitus	NS	water
Metals	Cadmium	NS	Peterson et al. 1983	-	0.48	no	0.480	-	mg/kg	growth	salmon, Atlantic	Salmo salar	swim up (34 to 6	water
Metals	Cadmium	NS	Rombough and Garside 1982	-	0.12	no	0.120	0.24	mg/kg	growth	salmon, Atlantic	Salmo salar	alevins	water
Metals	Cadmium	NS	Shazili 1995	-	20.4	9.1	2.2	2.2	mg/kg	mortality	seabass	Lates calcarifer	juvenile	water
Metals	Cadmium	NS	Middaugh et al. 1975	-	8.3	9.1	0.9	0.91	mg/kg	mortality	spot	Leiostomus xanthurus	larval	water
Metals	Cadmium	NS	Douben, 1989	-	2.3	9.1	0.3	0.25	mg/kg	mortality	stone loach	Nomacheilus barbatulus	NS	water
Metals	Cadmium	NS	Wright et al. 1985	-	2.9	9.1	0.32	0.32	mg/kg	mortality	striped bass	Morone saxatilis	NS	water
Metals	Cadmium	NS	Pascoe and Mattey 1977	-	0.51	no	0.510	0.51	mg/kg	mortality	three-spined stickleback	Gasterosteus aculeatus	adult	water
Metals	Cadmium	NS	Benoit et al. 1976	0.13	0.25	no	0.250	-	mg/kg	growth	trout, brook	Salvelinus fontinalis	egg	water
Metals	Cadmium	NS	Hamilton et al. 1987	-	144	no	144.000	-	mg/kg	mortality	trout, brook	Salvelinus fontinalis	immature	water
Metals	Cadmium	NS	Hansen et al. 2002	-	0.18	no	0.183	0.21	mg/kg	growth	trout, brook	Salvelinus fontinalis	fry	water
Metals	Cadmium	NS	Hollis et al. 2000	-	0.60	no	0.6	1.1	mg/kg	mortality, behav	trout, rainbow	Oncorhynchus mykiss	juvenile	water
Metals	Cadmium	NS	Pascoe et al. 1986	-	1.8	no	1.8	-	mg/kg	mortality	trout, rainbow	Oncorhynchus mykiss	adult	water
Metals	Cadmium	NS	Rehwoldt and Karimian-Teherani 1976	-	1.0	no	1.020	1.0	mg/kg	reproduction	zebrafish	Danio rerio	NS	food
Metals	Chromium	Hexavalent chromium	Roling et al. 2006	30.4	44.1	no	44.1	-	mg/kg	growth	mummichog	Fundulus heteroclitus	adult	water
Metals	Chromium	NS	Farag et al. 2006	1.28	1.30	no	1.30	-	mg/kg	mortality	salmon, Chinook	Oncorhynchus tshawytscha	juvenile	water
Metals	Chromium	Hexavalent chromium	van der Putte et al. 1981	5.5	8.7	no	8.7	-	mg/kg	mortality	trout, rainbow	Oncorhynchus mykiss	immature	water
Metals	Copper	copper sulphate	Lin et al. 2008	2.9	6.10	no	6.10	-	mg/kg	growth	grouper	Epinephelus malabaricus	juvenile	diet
Metals	Copper	copper sulfate pentah	Baker et al. 1998	-	4.59	no	4.59	-	mg/kg	growth, behavio	mullet, grey	Chelon labrosus	juvenile	diet
Metals	Copper	copper chloride dihyd	Eisler and Gardner 1973	-	26.20	no	26.20	-	mg/kg	mortality	mummichog	Fundulus heteroclitus	juvenile	water
Metals	Copper	copper sulfate pentah	Ali et al. 2003	-	3.73	no	3.73	-	mg/kg	growth	tilapia, Nile	Oreochromis niloticus	juvenile	water
Metals	Copper	copper in live pre-exp	Mount et al. 1994	3.9	4.48	no	4.48	-	mg/kg	mortality	trout, rainbow	Oncorhynchus mykiss	juvenile	diet
Metals	Lead	NS	Weber et al. 1991	-	26.2	no	26.2	-	mg/kg	behavior	minnow, fathead	Pimephales promelas	juvenile	water
Metals	Lead	NS	Holcombe et al. 1976	2.55	4.02	no	4.0	-	mg/kg	growth	trout, brook	Salvelinus fontinalis	egg-embryo	absorption
Metals	Mercury	mercuric (II) chloride	Kania and O'Hara 1974	-	0.67	no	0.67	0.67	mg/kg	behavior	mosquitofish	Gambusia affinis	not given in mas	water
Metals	Mercury	mercuric chloride	Heisinger et al. 1979	-	4.4	3.731	1.18	1.18	mg/kg	mortality	goldfish	Carassius auratus	4.5-6.5 cm	water
Metals	Mercury	mercuric chloride	Kim et al. 1977	-	3.72	3.731	1.00	1.00	mg/kg	mortality	chub, creek	Semotilus atromaculatus	not given in mas	water
Metals	Mercury	mercuric chloride	Snarski and Olson 1982	2.84	4.47	no	4.47	-	mg/kg	reproduction	minnow, fathead	Pimephales promelas	larvae-adult	water
Metals	Mercury	mercuric chloride	Snarski and Olson 1982	0.8	1.31	no	1.31	-	mg/kg	growth	minnow, fathead	Pimephales promelas	3 mos	diet
Metals	Mercury	methylmercuric (II) c	Stefansson et al. 2013	-	12	no	12	12.00	mg/kg	mortality, growth	inland silverside	Menidia beryllina	juvenile	diet
Metals	Mercury	methylmercuric (II) c	Stefansson et al. 2013	-	12	no	12	12.00	mg/kg	mortality, growth	minnow, sheepshead	Cyprinodon variegatus	juvenile	diet
Metals	Mercury	methylmercuric chlori	Drevnick and Sandheinrich 2003	-	0.864	no	0.864	1.11	mg/kg	reproduction	minnow, fathead	Pimephales promelas	juvenile (90d) th	diet
Metals	Mercury	methylmercuric chlori	Lee et al. 2011	-	14	no	14	17.55	mg/kg	mortality, growth	sturgeon, green	Acipenser medirostris	juvenile	diet
Metals	Mercury	methylmercuric chlori	Lee et al. 2011	-	22	no	22	-	mg/kg	mortality, growth	sturgeon, green	Acipenser medirostris	juvenile	diet

Table E2. TRVs for fish whole-body tissue

Chemical Group	Chemical	Chemical Form Exposure	Source	NOAEL (WB)	LOAEL (WB)	ACR	Final LOAEL (WB)	Final species LOAEL	Units (ww)	Endpoint	Test Species	Species (Scientific Name)	Lifestage	Exposure Mode
Metals	Mercury	methylmercuric chlori	Matta et al. 2001	0.2	0.47	no	0.47	0.47	mg/kg	mortality	mummichog	Fundulus heteroclitus	adult	water
Metals	Mercury	methylmercury	Hammerschmidt et al. 2002	-	0.56	no	0.56	-	mg/kg	reproduction	minnow, fathead	Pimephales promelas	juvenile and adu	diet
Metals	Mercury	methylmercury	McKim et al. 1976	2.7	3.4	no	3.4	3.40	mg/kg	reproduction	trout, brook	Salvelinus fontinalis	embryo – adult	water
Metals	Mercury	methylmercury	Niimi and Kissoon 1994	-	11.2	no	11.2	10.00	mg/kg	mortality	trout, rainbow	Oncorhynchus mykiss	juvenile	water
Metals	Mercury	methylmercury	Rodgers and Beamish 1982	-	10	no	10	-	mg/kg	growth	trout, rainbow	Oncorhynchus mykiss	fingerling	diet
Metals	Mercury	methylmercury	Sandheinrich and Miller 2006	-	0.714	no	0.714	0.54	mg/kg	reproduction	minnow, fathead	Pimephales promelas	juvenile through	diet
Metals	Mercury	methylmercury	Webber and Haines 2003	0.23	0.536	no	0.536	0.54	mg/kg	behavior	golden shiner	Notemigonus crysoleucas	not given in mas	diet
Metals	Selenium	seleno-DL-methionine	Coyle et al. (1993)	1.4	3.2	no	3.2	-	mg/kg	reproduction	bluegill	Lepomis macrochirus	larvae	maternal transfer to egg
Metals	Selenium	selenite and biologica	Hermanutz et al. 1996	1.1	5.45	no	5.45	-	mg/kg	reproduction	bluegill	Lepomis macrochirus	fry	maternal transferto eggs
Metals	Selenium	seleno-DL-methionine	Hamilton et al. 1990	1.1	2.1	no	2.1	-	mg/kg	growth	salmon, Chinook	Oncorhynchus tshawytscha	juvenile	diet
Metals	Selenium	seleno-DL-methionine	Hamilton et al. 1990	2.52	4.64	no	4.64	-	mg/kg	mortality	salmon, Chinook	Oncorhynchus tshawytscha	juvenile	diet
Metals	Selenium	seleno-L-methionine	Tashjian et al. 2006	2.94	4.5	no	4.5	-	mg/kg	growth	sturgeon, white	Acipenser transmontanus	juvenile	diet
Metals	Selenium	biologically incorporat	McDonald et al. 2010	-	9.8	no	9.8	-	mg/kg	morphology	trout, dolly varden	Salvelinus malma	larvae	food and water; materna
Metals	Silver	NS	Guadagnolo et al. 2001	0.11	0.24	no	0.24	-	mg/kg	mortality	trout, rainbow	Oncorhynchus mykiss	embryo	water
Metals	Zinc	NS	Spehar 1976	-	45	no	45	-	mg/kg	mortality, growth	American flagfish	Jordanella floridae	immature	water
Metals	Zinc	NS	Spehar et al. 1978	-	58	no	58	-	mg/kg	mortality	American flagfish	Jordanella floridae	immature	water
Metals	Zinc	NS	Pierson 1981	287	403	no	403	-	mg/kg	growth, reprodu	guppy	Poecilia reticulata	immature	water
Metals	Zinc	NS	Eisler and Gardner 1973	-	1266	no	1266	-	mg/kg	mortality	mummichog	Fundulus heteroclitus	NS	water
PCBs	Total PCBs	Aroclor 1242	Hansen et al. 1976	-	14.3	no	14.3	14.30	mg/kg	growth	catfish, channel	Ictalurus punctatus	fingerling	diet
PCBs	Total PCBs	Clophen A50	Hattula and Karlog 1972	-	250	8.4	29.76	30.12	mg/kg	mortality	goldfish	Carassius auratus	NS	water
PCBs	Total PCBs	mixture of PCB conge	Opperhuizen and Schrap 1988	-	190	no	190	190.00	mg/kg	mortality	guppy	Poecilia reticulata	juvenile	water
PCBs	Total PCBs	Clophen A50	Bengtsson 1980	-	25	no	25	25.00	mg/kg	reproduction	minnow	Phoxinus phoxinus	juvenile	diet
PCBs	Total PCBs	Aroclor 1260	DeFoe et al. 1978	-	50	no	50	50.00	mg/kg	growth	minnow, fathead	Pimephales promelas	larvae	water
PCBs	Total PCBs	Aroclor 1254	Nebeker et al. 1974	-	196	no	196	-	mg/kg	reproduction	minnow, fathead	Pimephales promelas	NS	water
PCBs	Total PCBs	Aroclor 1016	Hansen et al. 1975	57	200	8.4	23.81	-	mg/kg	mortality	minnow, sheepshead	Cyprinodon variegatus	fry	water
PCBs	Total PCBs	Aroclor 1254	Hansen et al. 1974a	1.9	9.3	no	9.3	14.97	mg/kg	reproduction	minnow, sheepshead	Cyprinodon variegatus	adult	water
PCBs	Total PCBs	Aroclor 1254	Hansen et al. 1971	-	14	8.4	1.67	13.37	mg/kg	mortality	pinfish	Lagodon rhomboides	NS	water
PCBs	Total PCBs	Aroclor 1016	Hansen et al. 1974b	-	106	no	106	-	mg/kg	mortality, behav	pinfish	Lagodon rhomboides	NS	water
PCBs	Total PCBs	Aroclor 1254	Mayer et al. 1977	32	645	no	645	645.00	mg/kg	mortality	salmon, coho	Oncorhynchus kisutch	fingerling	NS
PCBs	Total PCBs	Aroclor 1254	Hansen et al. 1971	27	46	8.4	5.48	5.54	mg/kg	mortality	spot	Leiostomus xanthurus	NS	water
PCBs	Total PCBs	Aroclor 1254	Mauck et al. 1978	31	125	no	125	125.00	mg/kg	mortality	trout, brook	Salvelinus fontinalis	fry- exposure to	water
PCBs	Total PCBs	1:2 ratio of Aroclor 12	Mayer et al. 1985	70	120	no	120	120.00	mg/kg	growth	trout, rainbow	Oncorhynchus mykiss	young	water
Pesticides	Dieldrin	NS	Shubat and Curtis 1986	0.548	5.65	no	0.2	-	mg/kg	survival	trout, rainbow	Oncorhynchus mykiss	juvenile	water
Pesticides	Dieldrin	NS	Shubat and Curtis 1986	0.12	0.2	no	0.2	-	mg/kg	growth	trout, rainbow	Oncorhynchus mykiss	juvenile	water and diet
Pesticides	Dieldrin	92% pure (techniucal	Parrish et al. 1973	34	62.4	no	62.4	-	mg/kg	mortality	minnow, sheepshead	Cyprinodon variegatus	NS	water
Pesticides	Endosulfan	tech endosulfan (sum	Schimmel et al. 1977	-	0.031	no	0.031	-	mg/kg ww	mortality	spot	Leiostomus xanthurus	adult	water
Pesticides	Endosulfan	tech endosulfan (sum	Schimmel et al. 1977	-	0.36	no	0.36	-	mg/kg ww	mortality	mullet	Mugil cephalus	adult	water
Pesticides	Endosulfan	tech endosulfan (sum	Schimmel et al. 1977	0.195	0.272	no	0.272	-	mg/kg ww	mortality	pinfish	Lagodon rhomboides	adult	water
Pesticides	Total DDx	DDT (total)	Rhead and Perkins 1984	140	200	no	200	16.832508	mg/kg ww	mortality	goldfish	Carassius auratus	9.1 g	diet and water
Pesticides	Total DDx	Technical grade DDT	Jarvinen et al. 1977	40	56.8	no	56.8	56.8	mg/kg ww	mortality	minnow, fathead	Pimephales promelas	juvenile-adult	diet
Pesticides	Total DDx	DDT (total)	Buhler et al. 1969	11.4	33.8	no	33.8	12.3	mg/kg ww	mortality	salmon, Chinook	Oncorhynchus tshawytscha	1.1 g	diet
Pesticides	Total DDx	DDT (total)	Buhler et al. 1969	-	12.3	no	12.3	33.8	mg/kg ww	mortality	salmon, coho	Oncorhynchus kisutch	juvenile	diet
Pesticides	Total DDx	DDT (total)	Hamelink et al. 1971	-	24	no	24	24	mg/kg ww	mortality	sunfish spp	Lepomis spp.	NS	water
Pesticides	Total DDx	DDT (total)	Macek 1968a	-	2.8	no	2.8	2.8	mg/kg ww	reproduction	trout, brook	Salvelinus fontinalis	NS	diet
Pesticides	Total DDx	DDT (mixture)	Allison et al. 1964 (more detailed repo	-	1.1	no	1.1	1.1	mg/kg ww	mortality	trout, cutthroat	Oncorhynchus clarkii	NS	water

ACR - Acute to chronic ratio
na - not applicable
NS - not specified

Exposure Duration
71 days
12 days
larvae exposed for 96 hrs; effect measured 4 weeks later
28 day
96 hr
~28 days
~28 days
2 and 6 hr
30 days
20 days
30 days
34 hours
28 days
11 weeks
2 generations
30 days
6 months
33 days
11 days
30 days
158 days
16 days
200 hours
12 days
120 hrs
79 days
3.5 years
30 days
55 days
30 days
29 days
6 months
30 days
134 days
4 days
8 weeks
10 weeks
96 hour
7 weeks
60 days
4 weeks
3 generations/ 3 years
60 hours
4 days
48 hours
287 days
60 days
70 days
70 days
~210 days
8 weeks
8 weeks

Exposure Duration
42 days
multi-generation
756 days
12 to 426 days
84 days
>21 days
90 days
140 days
NS
90 days
120 days
8 weeks
field-exposed
32 days
2 generations
30 days
134 days
96 hours
20 wks
5-21 days
65 days
40 days
30 days
8 months
4 weeks
28 days
14 to 35 days
42 days
~260 days
20 days
10 days prior to hatch and 118 days after hatch
90 days
96 hr; LC50 = 0.62 ug/L; LOAEL is fish residues exposed to 0.99 ug/L (mortality data were not explicitly reported for this dose); NOAEL is based on dose of 0.15 ug/L where no mortality was observed
16 weeks
96 hr
96 hr
96 hr
96 hr
38 days
266 days
64 days
64 days
90 days
156 days
612 days (mortality observed at 111 days)

Table E3. TRVs for fish diet

Chemical Group	Analyte	Chemical Form	NOAEL (mg/kg BW/day)	LOAEL (mg/kg BW/day)	Source	NOEC (mg/kg dw)	LOEC (mg/kg dw)	Prey type (organism or pellets)	Initial BW (kg)	End BW (kg)	(Initial + final BW (kg))/2
PAHs	Benzo(a)pyrene	benzo(a)pyrene	0.03	0.04	Kim et al. 2008	1.5	2.0	pellets	0.0216		0.0216
PAHs	Benzo(a)pyrene	benzo(a)pyrene		1.4	Rice et al. 2000		23.2	juvenile polychaete worms	0.034		0.034
PAHs	Benzo(a)pyrene	benzo(a)pyrene	0.21	2.3	Corrales et al. 2014	10	114	prepared diet			
PAHs	Benzo(a)pyrene	benzo(a)pyrene		3.7	Hendricks et al. 1985		1000	prepared diet	0.0033	0.36	0.18
PAHs	Benzo(a)pyrene	benzo(a)pyrene	1.9	19	Hart and Heddle 1991	100	1000	assume pellets	0.002	0.004	0.0030
PAHs	Benzo(a)pyrene	benzo(a)pyrene	13		Wu et al. 2003	81		pellets	0.0266	0.028	0.0273
PAHs	Benzo(a)pyrene	benzo(a)pyrene	0.66		Rice et al. 2000	9.4		juvenile polychaete worms	0.034		0.034
PAHs	Benzo(a)pyrene	benzo(a)pyrene	3.7		Hendricks et al. 1985	1000		prepared diet	0.0033	0.36	0.18
PAHs	Benzo(a)pyrene	benzo(a)pyrene	3.0		Alsop et al. 2007	150		pellet	0.00035	0.00075	0.00055
Metals	Cadmium	cadmium nitrate		0.01	Kim et al. 2004; Kang et al. 2005		0.5	pellets	0.0247		0.0247
Metals	Cadmium	cadmium nitrate	16	28	Szebedinsky et al 2001	786	1395	prepared food	0.005		0.005
Metals	Cadmium	cadmium nitrate	28	45	Szebedinsky et al 2001	1395	2265	prepared food	0.005		0.005
Metals	Cadmium	cadmium sulfate		68	Handy 1993		10000	pellets	0.13	0.131	0.13
Metals	Cadmium	cadmium chloride	20	200	Szczerbik et al. 2006	1000	10000	pellets	0.56	8.99	4.8
Metals	Cadmium		7.0		Lundebye et al. 1999	250		prepared diet	0.0265		0.0265
Metals	Cadmium	cadmium chloride	0.3		Hatakeyama and Yasuno 1982	171		*Moina macrocopa*		0.0000183	0.000018
Metals	Cadmium	cadmium nitrate	5.9		Baldisserotto et al. 2005	294		prepared food	0.0135	0.0206	0.0170
Metals	Cadmium	cadmium nitrate	9.4		Franklin et al. 2005	471		prepared food	0.014	0.024	0.019
Metals	Cadmium	cadmium chloride	4.1		Mount et al. 1994	69		brine shrimp	0.000182	0.00104	0.000611
Metals	Cadmium	cadmium nitrate	2.5		Kim et al. 2004	125		pellets	0.0247		0.0247
Metals	Chromium	inorganic trivalent chromium	0.12		Magzoub et al. 2010	2.5		commercial feed	0.01855	0.05353	0.03604
Metals	Chromium	trivalent chromium	0.19		Walsh et al. 1994	46					0.01615
Metals	Cobalt	cobalt chloride		1.4	Javed 2013		68	not specified in paper, dry weigh	0.0801	0.12085	0.100475
Metals	Cobalt	cobalt chloride		1.5	Javed 2013		74	not specified in paper, dry weigh	0.0807	0.11545	0.098075
Metals	Cobalt	cobalt chloride		1.6	Javed 2013		81	not specified in paper, dry weigh	0.0744	0.10617	0.09029
Metals	Cobalt	cobalt chloride		3.1	Yaqub and Javed 2012		155	prepared diet	0.00897		0.00897
Metals	Cobalt	cobalt chloride		3.4	Yaqub and Javed 2012		169	prepared diet	0.01088		0.01088
Metals	Cobalt	cobalt chloride		3.4	Yaqub and Javed 2012		172	prepared diet	0.01277		0.01277
Metals	Cobalt	cobalt chloride	83		Anadu et al 1990	1664		prepared diet	0.002	0.0033	0.00265
Metals	Copper	copper sulfate	1.0	2.0	Kang et al. 2005	50	100	pellets	0.026	0.035	0.031
Metals	Copper	copper sulphate pentahydrate		18	Lanno et al. 1985		730		0.0038	0.011	0.0075
Metals	Copper	copper sulphate pentahydrate		18	Lanno et al. 1985		796	pellets	0.0031	0.015	0.0091
Metals	Copper	copper sulfate pentahydrate		20	Lundebye et al. 1999		700	prepared diet	0.00090	0.0072	0.0041
Metals	Copper	copper sulphate	20	28	Berntssen et al. 1999a	638	868	pellets	0.00090	0.0087	0.0048
Metals	Copper	copper chloride	26	50	Mount et al. 1994	440	830	brine shrimp	0.00018	0.00128	0.00073
Metals	Copper	copper sulphate pentahydrate		60	Baker et al. 1998		2400	prepared diet	0.011	0.021	0.01615
Metals	Copper	copper sulphate pentahydra	27		Alsop et al. 2007	1368		prepared diet	0.00025	0.00078	0.00051
Metals	Copper	copper sulphate pentahydra	17		Berntssen et al. 1999b	691		pellets	0.071	0.074	0.0725
Metals	Copper		14		Erickson et al. 2003	240		oligochaetes	1.00000		1.0
Metals	Copper	copper sulfate	2.2		Handy 1992	200		pellets	0.14	0.14	0.14
Metals	Copper	copper sulfate	69		Handy 1993	10000		pellets	0.13	0.13	0.13
Metals	Copper	copper sulphate pentahydra	42		Kamunde et al. 2001	1042		pellets	37	70	53.5
Metals	Copper	copper sulphate pentahydra	6.8		Lanno et al. 1985	287			0.0038	0.025	0.014
Metals	Copper	copper sulphate pentahydra	17		Lanno et al. 1985	664		pellets	0.012	0.014	0.0128
Metals	Copper	copper sulphate pentahydra	18		Lanno et al. 1985	730		pellets	0.0038	0.011	0.0075
Metals	Copper	copper sulfate pentahydrate	14		Lundebye et al. 1999	500		prepared diet	0.00090	0.0081	0.0045

Table E3. TRVs for fish diet

Chemical Group	Analyte	Chemical Form	NOAEL (mg/kg BW/day)	LOAEL (mg/kg BW/day)	Source	NOEC (mg/kg dw)	LOEC (mg/kg dw)	Prey type (organism or pellets)	Initial BW (kg)	End BW (kg)	(Initial + final BW (kg))/2
Metals	Copper	copper sulfate	13		Miller et al. 1993	684		pellets	0.0080	0.024	0.016
Metals	Copper	copper chloride	60		Mount et al. 1994	1000		brine shrimp	0.00018	0.0010	0.00060
Metals	Mercury	methylmercury		0.0015	Alvarez et al. 2006		0.3	shrimp or marlin			0.37
Metals	Mercury	methylmercury chloride		0.04	Drevnick and Sandheinrich 2003		0.9	prepared food		0.00254	
Metals	Mercury	methylmercury chloride	0.01	0.05	Matta et al. 2001	0.5	1.9	contaminated food			0.0119
Metals	Mercury	methylmercury chloride	0.007	0.08	Gharaei et al. 2008	0.8	7.9	prepared food	0.086	0.248	0.167
Metals	Mercury	methylmercury chloride	0.08	0.16	Gharaei et al. 2008	7.9	16	prepared food	0.086	0.248	0.167
Metals	Mercury	methylmercury chloride		0.24	Penglase et al. 2014		12	prepared diet	0.00032	0.00032	0.00032
Metals	Mercury	methylmercury chloride	0.006	0.25	Houck and Cech 2004	0.5	22	commercial trout food	0.00148	0.002	0.00174
Metals	Mercury	methylmercury		0.46	Rodgers and Beamish 1982		23	commercial trout food	0.0057	0.0197	0.0127
Metals	Mercury	methylmercury chloride	0.28	0.56	Wobeser 1975	40	80	pork liver mixed with dry trout foc	0.0317		0.0317
Metals	Mercury	methylmercury chloride	0.25	0.63	Houck and Cech 2004	22	56	commercial trout food	0.00148	0.002	0.00174
Metals	Mercury	methylmercury chloride	0.63	1.3	Lee et al. 2011	25	50	prepared food, assumed dw	0.03	0.168	0.099
Metals	Mercury	methylmercury chloride	0.14	1.4	Matta et al. 2001	5.6	54	contaminated food			0.0119
Metals	Mercury	methylmercury chloride	1.3	2.5	Lee et al. 2011	50	100	prepared food, assumed dw	0.03	0.109	0.0695
Metals	Mercury	methylmercury chloride	0.20		Drevnick and Sandheinrich 2003	3.9		prepared food		0.00254	
Metals	Mercury	methylmercury	0.24		Sandheinrich and Miller 2006	3.9		dry contaminated fish food	0.00507		0.00507
Metals	Mercury	methylmercury chloride	0.84		Wobeser 1975	120		pork liver mixed with dry trout foc	0.0209		0.0209
Metals	Mercury	methylmercury chloride	1.4		Matta et al. 2001	54		contaminated food			0.0119
Metals	Mercury	methylmercury	1.5		Rodgers and Beamish 1982	95		commercial trout food	0.0057	0.0219	0.0138
Metals	Mercury	methylmercury	0.02		Webber and Haines 2003	1.0		prepared food	0.009		0.009
Metals	Mercury	methylmercury		0.05	Hammerschmidt et al. 2002		0.9	soft-moist fish food	0.0031		0.003145
Metals	Mercury	methylmercury	0.01	0.09	Friedmann et al. 1996	0.7	4.9	catfish fillets		0.041	0.041
Metals	Mercury	methylmercury	0.09		Friedmann et al. 1996	4.9		catfish fillets		0.041	0.041
Metals	Mercury	methylmercury	0.51		Hammerschmidt et al. 2002	8.5		soft-moist fish food	0.003145		0.003145
Metals	Nickel	nickel chloride		1.4	Javed 2013		70	not specified in paper, dry weight	0.0807	0.1155	0.0981
Metals	Nickel	nickel chloride		1.6	Javed 2013		79	not specified in paper, dry weight	0.0801	0.1209	0.1005
Metals	Nickel	nickel chloride		1.4	Javed 2013		72	not specified in paper, dry weight	0.0744	0.1062	0.00181
Metals	Nickel	nickel sulfate	2.9		Ptashynski et al. 2001	1500		prepared diet, diet with brine shri	0.306		
Metals	Nickel	nickel sulfate	21		Ptashynski et al. 2001	11000		prepared diet, diet without brine s	0.306		
Metals	Nickel	nickel sulfate	27		Ptashynski et al. 2001	14000		prepared diet, diet with brine shri	0.208		
Metals	Nickel	nickel sulfate	21		Ptashynski et al. 2001	11000		prepared diet, diet without brine s	0.208		
Metals	Nickel	nickel sulfate	9.4		Ptashynski et al. 2002	5500		prepared diet, 80% ww assumed	0.272	0.345	0.3085
Metals	Selenium	seleno-L-methionine	0.20	0.39	Cleveland et al. 1993	6.5	13	pellets	0.0002		0.0002
Metals	Selenium	seleno-L-methionine	0.78		Cleveland et al. 1993	26		pellets	0.0002		0.0002
Metals	Selenium	not specified		0.80	Coughlan and Velte 1989		38	red shiners	0.2202	0.2209	0.22055
Metals	Selenium	selenomethionine (SeMet)	0.19	0.36	Hamilton et al. 1990	9.6	18	pellet	0.00125	0.0053	0.003275
Metals	Selenium	selenomethionine (SeMet)	0.36	0.71	Hamilton et al. 1990	18	35	pellet	0.00594	0.0221	0.01402
Metals	Selenium	selenomethionine (SeMet)	0.71		Hamilton et al. 1990	35		pellet	0.00594	0.0221	0.01402
Metals	Selenium	selenomethionine (SeMet)	0.11	0.19	Hamilton et al. 1990	5.3	9.6	pellet	0.00125	0.0053	0.003275
Metals	Selenium	selenomethionine	0.22		Hardy et al. 2010	11	-	pellet	0.0097	0.3467	0.1782
Metals	Selenium	selenized yeast fed to worm	0.11	0.20	Knight et al. 2016	11	20	Lumbriculus	0.00028	0.0042	0.00224
Metals	Selenium	seleno-L-methionine; Na2Se	0.90	1.2	Ogle and Knight 1989	15	20	prepared diet mix (pellets)	0.00012	0.00109	0.000605
Metals	Selenium	seleno-L-methionine; Na2Se	1.8		Ogle and Knight 1989	30		prepared diet mix (pellets)	0.00011	0.00094	0.000525
Metals	Selenium	selenomethionine	0.48	1.0	Tashjian et al. 2006	21	42	pellet	0.0298	0.114	0.072
Metals	Selenium	selenized yeast	0.32	0.65	Teh et al 2004	13	26	pellet	0.0068	0.034	0.0204
Dioxins	TEQ-fish	2,3,7,8-TCDD		0.000000027	Jones et al. 2001		0.000002	fish feed	0.35	0.759	0.555
Dioxins	TEQ-fish	2,3,7,8-TCDD	0.0000028	0.0000057	Fisk et al. 1997	0.0002	0.0004	prepared diet	0.007		

Table E3. TRVs for fish diet

Chemical Group	Analyte	Chemical Form	NOAEL (mg/kg BW/day)	LOAEL (mg/kg BW/day)	Source	NOEC (mg/kg dw)	LOEC (mg/kg dw)	Prey type (organism or pellets)	Initial BW (kg)	End BW (kg)	(Initial + final BW (kg))/2
Dioxins	TEQ-fish	2,3,7,8-TCDD	0.000003	0.0000062	Fisk et al. 1997	0.0002	0.0004	prepared diet	0.007		
Dioxins	TEQ-fish	2,3,7,8-TCDD	0.0000014		Jones et al. 2001	0.0001			0.35	0.759	0.555
Dioxins	TEQ-fish	2,3,7,8-TCDD	0.000007		Walter et al. 2000	0.0005		prepared diet	0.35		
Dioxins	TEQ-fish	2,3,7,8-TCDD	0.000015		Kleeman et al. 1986	0.0005		prepared diet	0.0105	0.12	0.0653
Pesticides	Total DDx	p,p'-DDT		0.14	Macek 1968b			pellets	0.162		0.162
Pesticides	Total DDx	p,p'-DDT		0.29	Macek 1968a			pellets	0.03	0.0417	0.03585
Pesticides	Total DDx	"DDT" including DDE and DDD		0.94	Butler 1969		24	oysters, assumed 80% ww			0.0048
Pesticides	Total DDx	"DDT" including DDE and DDD		1.2	Butler 1969		20	oysters, assumed 80% ww			0.003
Pesticides	Total DDx	technical mixture of DDT	0.58	2.3	Buhler et al. 1969	18.8	75	prepared diet	0.00061	0.00078	0.000695
Pesticides	Total DDx	technical mixture of DDT		2.7	Jarvinen et al. 1976, 1977		46	dried clam	0.00012		0.00012
Pesticides	Total DDx	technical mixture of DDT	1.3	5.0	Buhler et al. 1969	50	200	prepared diet	0.00383	0.00746	0.00565
Pesticides	Total DDx	technical mixture of DDT	1.5	6.0	Buhler et al. 1969	50	200	prepared diet	0.0011	0.00341	0.00226
Pesticides	Total DDx	2,2-bis(4-chlorophenyl)-1,1-	0.50		Johnson et al. 2007	50		pellet	0.155		
Pesticides	Total DDx	^{14}C-p,p'-DDT	0.0023		Warlen et al. 1977	0.09		prepared food	0.0068	0.69	0.3484
Pesticides	Total DDx	p,p'-DDT	0.29		Macek 1968b			pellets	0.162	0.383	0.273
Pesticides	Total DDx	sum of detected DDT and it	0.05		Macek and Korn 1970	3.0		pellets			0.121
Pesticides	Total DDx	p,p'-DDT	0.29		Macek 1968a			pellets	0.03	0.0448	0.0374
Pesticides	Total DDx	sum of detected DDT and it	0.02		Rhead and Perkins 1984	0.9		prepared food	0.00455		0.00455
Pesticides	Total DDx	sum of detected DDT and it	0.14		Macek et al. 1970	1.0			0.015	0.0955	0.05525
PAHs	Total PAH	PAH mixture	6.2	18	Meador et al 2006	324	951	pellet	0.01295		0.01295
PAHs	Total PAH	PAH mixture	5.0		Palm et al. 2003	252		pellets	0.0183		0.0183
PAHs	Total PAH	PAH mixture	5.0		Palm et al. 2003	252		pellets	0.0183		0.0183
PCBs	Total PCBs	PCB-126	0.001		Quabius et al. 1997	0.05		prepared diet	0.0209	0.0256	0.02325
PCBs	Total PCBs	Aroclor 1254	0.37		Powell et al. 2003	18		pellets	0.00839	0.015	0.0117
PCBs	Total PCBs	Aroclor 1268	0.80		Matta et al. 2001	32		contaminated food			0.0119
PCBs	Total PCBs	Aroclor 1254	1.6		Lieb et al. 1974	15		pellets	0.00077	0.078	0.039
PCBs	Total PCBs	Aroclor 1260		0.05	Hugla and Thome 1999		2.5	not specified			0.469
PCBs	Total PCBs	Aroclor 1260	0.05	0.25	Hugla and Thome 1999	2.5	13	not specified			0.469
PCBs	Total PCBs	Aroclor 1254		0.40	McCarthy et al. 2003			ground shrimp			
PCBs	Total PCBs	Aroclor 1242		0.60	Hansen et al. 1976		20	pellets	0.0128	0.05	0.0314
PCBs	Total PCBs	Aroclor 1254		3.8	Hendricks et al. 1981		200	semipurified casein test diet; ass	not reported		0.36
Butyltins	Tributyltin	tributyltin chloride		0.012	Lima et al. 2015		0.6	prepared diet		0.0008285	
Butyltins	Tributyltin	tri-n-butyltin oxide	0.03	0.15	Nakayama et al. 2005	1.0	5.0	freeze-dried brine shrimp	0.0003		0.0003
Butyltins	Tributyltin	tri-n-butyltin oxide		1.0	Nakayama et al. 2004		33	commercial diet	0.0003		0.0003
Butyltins	Tributyltin	tri-n-butyltin oxide		1.0	Nirmala et al. 1999		100	commercial diet	0.00031		0.00031
Butyltins	Tributyltin	tributyltin oxide	1.0	10	Shimasaki et al. 2006	20	200	not specified	0.0457		0.0457
Butyltins	Tributyltin	tributyltin chloride	0.012		Lima et al. 2015	0.6		prepared diet		0.0008285	
Metals	Vanadium	sodium orthovanadate	0.04	0.19	Hilton and Bettger 1988	2.0	10	pellets	0.0029	0.0142	0.01
Metals	Zinc	unspecified form	19	38	Takeda and Shimma 1977	1000	2000	prepared dry food	0.0083	0.0192	0.01375

Observed feeding rate (kg-food/day)	FR (%BW/d)	Endpoint	Test Species	Lifestage	Exposure Mode	Exposure Duration	Endpoint Effect
0.000432	2.0%	growth	rockfish	juevenile	food	30 days	growth
0.0020	6.0%	growth	English sole	juvenile	food	10-12 days	
	2.0%	reproduction	zebrafish	120 d post fertilization	food	23 days	embryo mortality post fertilization at 96 hours
0.00092	0.5%	growth	rainbow trout	3 mo. old	food	18 months	reduced body weight
0.00006	1.9%	growth	rainbow trout	juvenile	food	28 days	
0.001365	5.0%	mortality, growth	areolated grouper	juvenile	food	4 weeks + 4 weeks re	survival, body length & weight
0.0024	7.0%	growth	English sole	juvenile	food	10-12 days	
0.00092	0.5%	mortality	rainbow trout	juvenile (3 mos old)	food	18 months	
0.000011	2.0%	mortality, growth, reproduct	zebrafish	juvenile	food	260 days	mortality, body weight, fertilization rate, number eggs spawned
0.000494	2.0%	growth	rockfish	juvenile	food	60 days	body weight and length growth rate; condition factor
0.000100	2.0%	mortality	rainbow trout	juvenile	food	36 days	% mortality
0.000100	2.0%	growth	rainbow trout	juvenile	food	36 days	reduced specific growth rate (weight)
0.00089	0.7%	mortality	rainbow trout		food	28 days	
0.0955	2.0%	mortality, growth, reproduct	goldfish (prussian carp)	juvenile - adult	food	3 years	
0.000742	2.8%	growth	Atlantic salmon	fry	food	4 weeks	
	5.2%	mortality	guppy		food	10-30 days	
0.000341	2.0%	mortality, growth	rainbow trout	juvenile	food	15-30 days	specific growth rate, survival
0.000380	2.0%	mortality, growth	rainbow trout	juvenile	food	28 days	growth rate, survival
0.000037	6.0%	mortality, growth	rainbow trout	fry	primarily food	60 days	100% survival, body weight and length
0.000494	2.0%	mortality	rockfish	juvenile	food	60 days	
0.0018		growth	tilapia	juvenile (fingerlings)	food	84 days	
0.0003	2.0%	growth	grey mullet	2 yrs old	food and sedim	8 weeks	
0.00201	2.0%	growth	white carp (*Cirrhina mrigala*	120 days old	food	12 weeks	growth
0.00196	2.0%	growth	Indian carp (*Catla catla*)	120 days old	food	12 weeks	growth
0.00181	2.0%	growth	rohu (*Labeo rohita*)	120 days old	food	12 weeks	growth
0.00018	2.0%	mortality	white carp (*Cirrhina mrigala*	60 day old	food	96 hours	mortality
0.00022	2.0%	mortality	rohu (*Labeo rohita*)	60 day old	food	96 hours	mortality
0.00026	2.0%	mortality	Indian carp (*Catla catla*)	60 day old	food	96 hours	mortality
0.00013	5.0%	growth	tilapia	fingerling	food	12 weeks	growth
0.00061	2.0%	growth	rockfish	juvenile	food	60 days	body weight (growth rate)
0.00019	2.5%	growth	rainbow trout		food	8 weeks	
0.00021	2.3%	growth	rainbow trout		food	16 weeks	
0.0001134	2.8%	growth	Atlantic salmon	fry	food	3 months	
0.00015	3.2%	growth	Atlantic salmon		food	3 months	
0.000044	6.0%	mortality	rainbow trout	fry	primarily food	60 days	69% and 95% surv at LOEC and NOEC
0.0004	2.5%	growth	grey mullet		food	67 days	
0.000010	2.0%	mortality, growth, reproduct	zebrafish	juvenile	food	260 days	
0.0017	2.4%	growth	Atlantic salmon	parr	food	4 weeks	length, weight, or condition factor
0.060000	6.0%	growth	channel catfish	fry	food	30 days	body weight
0.0015	1.1%	mortality	rainbow trout		food	32 days	
0.00091	0.7%	mortality	rainbow trout		food	28 days	
2.1	4.0%	mortality, growth	rainbow trout		food	28 days	
0.00034	2.4%	growth	rainbow trout		food	8 weeks	
0.00032	2.5%	mortality, growth	rainbow trout		food	24 weeks	
0.00019	2.5%	mortality	rainbow trout		food	8 weeks	
0.000126	2.8%	growth	Atlantic salmon	fry	food	3 months	

Observed feeding rate (kg-food/day)	FR (%BW/d)	Endpoint	Test Species	Lifestage	Exposure Mode	Exposure Duration	Endpoint Effect
0.00030	1.9%	growth	rainbow trout		food	42 days	
0.000036	6.0%	growth	rainbow trout	fry	primarily food	60 days	body weight and length
0.00222	0.6%	reproduction	Atlantic croaker	sexually mature	food	1 month	larval survival
0.000127	5.0%	reproduction	fathead minnow	90 days old	food	21 days	spawning success
0.00030	2.5%	mortality	mummichog	adut	food	>= 6 weeks	F0 male survival
0.0016		growth	beluga (*Huso huso*)	juvenile	food	70 days	body weight
0.0016		mortality	beluga (*Huso huso*)	juvenile	food	70 days	mortality
0.000006	2.0%	growth, survival	zebrafish	juvenile	food	150 days	decreased weight, decreased survival
0.000020	1.1%	growth	blackfish	juvenile	food	70 days	body weight
0.000254	2.0%	growth	rainbow trout	fingerling	food	12 weeks	body weight in hatchling fish
0.000222	0.7%	growth	rainbow trout	fingerling	food	105 days	body weight
0.000020	1.1%	mortality	blackfish	juvenile	food	247 days	mortality
0.002472	2.5%	growth, mortality	green sturgeon	juvenile	food	8 weeks	body weight, mortality
0.000298	2.5%	reproduction	mummichog	adut	food	>= 6 weeks	F1 fertilization success
0.001737	2.5%	growth, mortality	white sturgeon	juvenile	food	8 weeks	body weight, mortality
0.000127	5.0%	growth, mortality	fathead minnow	90 days old	food	21 days	body weight, mortality
0.000304	6.0%	mortality	fathead minnow	juvenile	food	juvenile through sexua	mortality
0.000146	0.7%	mortality	rainbow trout	fingerling	food	105 days	mortality
0.000298	2.5%	growth	mummichog	adut	food	>= 6 weeks	body weight
0.000221	1.6%	mortality	rainbow trout	fingerling	food	12 weeks	
0.00018	2.0%	mortality, growth	golden shiner		food	90 days	growth, mortality
0.00019	6.0%	reproduction	fathead minnow	juvenile and adult	food	multi-generation	spawning success
0.00074	1.8%	growth	walleye	juvenile	food	6 months	male growth
0.000736	1.8%	mortality	walleye	juvenile	food	6 months	mortality
0.000189	6.0%	mortality, growth	fathead minnow	adult	food	multi-generation	mortality, growth
0.00196	2.0%	growth	Indian carp (*Catla catla*)	120 days old	food	12 weeks	growth
0.00201	2.0%	growth	white carp (*Cirrhina mrigala*	120 days old	food	12 weeks	growth
0.00019	2.0%	growth	rohu (*Labeo rohita*)	120 days old	food	12 weeks	growth
0.000595	0.19%	growth	lake trout	2 years old	food	18 days	body weight
0.000595	0.19%	growth	lake trout	2 years old	food	18 days	body weight
0.00040	0.19%	growth	lake whitefish	3 years old	food	18 days	body weight
0.00040	0.19%	growth	lake whitefish	3 years old	food	18 days	body weight
0.00053	0.19%	growth	lake whitefish	4 years old	food	104 days	growth
0.000006	3.0%	growth	bluegill	juvenile	food	90 days	condition factor
0.000006	3.0%	mortality	bluegill	juvenile	food	90 days	
0.0046	2.1%	growth, mortality	striped bass	juvenile	food	up to 80 days	condition factor; body weight; survival
0.0000655	2.0%	growth	Chinook salmon	swim-up larvae	food	90 days	body weight, fork length
0.0002804	2.0%	growth	Chinook salmon	70-mm fingerlings	food	120 days	body weight, fork length
0.0002804	2.0%	survival	Chinook salmon	70-mm fingerlings	food	120 days	survival
0.0000655	2.0%	survival	Chinook salmon	swim-up larvae	food	90 days	survival
0.003564	2.0%	survival, mortality	cutthroat trout	juvenile to adulthood	food	124 weeks	weight, mortality
0.0000224	1.0%	growth	rainbow trout	juvenile	food	60 days	body weight
0.0000363	6.0%	growth	fathead minnow	adult	food	98 days + spawning periods	
0.0000315	6.0%	reproduction	fathead minnow	adult	food	98 days + spawning periods	
0.00169	2.4%	growth	white sturgeon	juvenile	food	4 and 8 weeks	body weight increase
0.00051	2.5%	growth, survival	splittail	7 mo old	food	5 and 9 months	mortality, growth
0.00832	1.5%	mortality	rainbow trout	adult	food	342 days	mortality; data also reported in Giesy et al. (2002)
0.000105	1.5%	growth	whitefish	juvenile	food	30 days	growth

Observed feeding rate (kg-food/day)	FR (%BW/d)	Endpoint	Test Species	Lifestage	Exposure Mode	Exposure Duration	Endpoint Effect
0.000105	1.5%	growth	rainbow trout	juvenile	food	30 days	growth
0.00832	1.5%	growth	rainbow trout	adult	food	342 days	growth
0.00525	1.5%	growth	rainbow trout		food	200 days	growth
0.00196	3.0%	growth	rainbow trout	juvenile	food	13 weeks	growth, mortality
na		reproduction	brook trout	sex mat yearlings	food	156 days	
na		growth	brook trout	under yearling	food	31 weeks	reduced growth
0.000192	4.0%	mortality	pinfish	4.8 g	food	15 days	35% mortality at 21 days
0.00018	6.0%	mortality	pinfish	3.0 g	food	21 days	44% mortality at 10 days
0.0000215	3.1%	mortality	Chinook salmon	0.61 g fingerling	food	40 days	survival
0.0000072	6.0%	mortality	fathead minnow	juvenile-adult	food	266 days	survival
0.000141	2.5%	mortality	coho salmon	3.7 g	food	60 days	survival
0.000068	3.0%	mortality	Chinook salmon	1.1 g fingerling	food	5 days	survival
0.00155	1.0%	growth, mortality, reproduct	largemouth bass	mature; 2 years old	food	120 days	% fry hatching
0.00871	2.5%	growth	Atlantic menhaden		food	48 days	growth
		mortality, growth	brook trout	sex mat yearlings	food	156 days	survival, growth
0.0018	1.5%	mortality	brook trout	juvenile	food	120 days	
		mortality	brook trout	under yearling	food	26 weeks	reduced survival during stress (starvation)
0.000091	2.0%	mortality	goldfish	9.1 g	food	58 days	survival
0.0011	2.0%	mortality, growth	rainbow trout	15 g	food	168 days	survival, growth
0.00025	1.9%	growth	Chinook Salmon	juvenile	ingestion	58 days	reduction in growth (DW), but possibly due to toxicant induced starvation
0.00037	2.0%	growth	Chinook Salmon	juvenile	food	7 weeks	
0.00037	2.0%	disease resistance	Chinook Salmon	juvenile	food	4 weeks exposure, 2 weeks immuno-challenge	
0.000465	2.0%	mortality	tilapia		food	5 days	mortality
0.00023	2.0%	growth	Chinook salmon	juvenile	food	28 days	body weight
0.00030	2.5%	mortality, growth, reproduct	mummichog	adult	food	>= 6 weeks	fertilization and hatching success, larval survival, weight, survival
0.00419		mortality, growth	rainbow trout	14-wk	food	32 weeks	
0.00938	2.0%	reproduction	barbel	adult	food	50 days	reduced fecundity at LOAEL; however, no affect on hatchability or egg weight
0.00938	2.0%	reproduction	barbel	adult	food	75 days	reduced hatchabiltiy at LOAEL; reduced fecundity at NOAEL but no affect on hatchability or egg weight
		reproduction	Atlantic croaker	adult	food	2 weeks	growth rate, impaired larval response to startle stimulus
0.00094	3.0%	growth	channel catfish	fingerling	food	20 weeks	reduced weight gain (60% of controls)
0.00684	1.9%	reproduction	rainbow trout	adult	food	2 months	offspring fry growth
0.000017	2.0%	growth, reproduction	zebrafish	larvae	food	115 days	body weight, fecundity; dose is based on tin concentration
0.000009	3.0%	reproduction	Japanese medaka	adult	food	3 weeks	reduced swim-up failure
0.000009	3.0%	reproduction	Japanese medaka	adult	food	3 weeks	reduced fertilization success
0.000003	1.0%	reproduction	Japanese medaka	adult	food	3 weeks	reduced hatching success, swim-up success, and embryonic success
0.002285	5.0%	reproduction	Japanese whiting	mature	food	30 days	reduced floating egg rate, hatchability, and no. of viable larvae
0.000017	2.0%	mortality	zebrafish	larvae	food	115 days	mortality
0.0002	1.9%	growth	rainbow trout	juvenile	food	12 weeks	body weight
0.00026	1.9%	growth	rainbow trout	fingerling	food	6 weeks	

Table E4. TRVs for fish egg tissue

Chemical Group	Chemical	Chemical Form	Source	NOEC (egg)	LOEC (egg)	Used in SSD?	Final Species LOAEL	Units (ww)	Test Species	Endpoint	Endpoint Effect	Lifestage	Exposure Mode	Exposure Duration
Metals	Mercury	inorganic Hg	Birge et al. 1979		0.06			mg/kg	Catfish	reproduction (egg exposure)	mortality	egg	water	spawning until 4 d post-hatch
Metals	Mercury	methylmercury	Fjeld et al. 1998		3.8			mg/kg	Grayling	reproduction (egg exposure)	increased fry mortality, incidence of jaw deformities	sac-fry	water	1st 10 days of develop-ment
Metals	Mercury	methylmercury	Heisinger and Green 1975	16	29			mg/kg	Japanese medaka	reproduction (egg exposure)	hatchability; offspring behavior- equilibrium loss	egg	water	16 days
Dioxins/ Furans	TEQ-fish	2,3,7,8-TCDD	Steevens et al. 2005	7.2	86			pg/g	10 fish species: brook trout, channel catfish, fathead minnow, Japanese medaka, lake herring, lake trout, northern pike, rainbow trout, white sucker, and zebrafish	reproduction (egg exposure)	SSD - NOAEL and LOAEL are 5th percentile LCL and UCL, respectively	egg	varies	varies
Dioxins/ Furans	TEQ-fish	2,3,7,8-TCDD	Walker and Peterson 1994	135	185			pg/g	Brook trout	reproduction (egg exposure)	sac-fry mortality	egg	water	48 hours
Dioxins/ Furans	TEQ-fish	2,3,7,8-TCDD	Johnson et al. 1998	84	88			pg/g	Brook trout	reproduction (egg exposure)	swim-up and juvenile mortality	egg	maternal transfer	throughout egg devl'p
Dioxins/ Furans	TEQ-fish	2,3,7,8-TCDD	Elonen et al. 1998; Spehar et al. 1997	385	855			pg/g	Channel catfish	reproduction (egg exposure)	early life-stage growth and survival	egg	water	100 days
Dioxins/ Furans	TEQ-fish	2,3,7,8-TCDD	Elonen et al. 1998; Spehar et al. 1997	235	435			pg/g	Fathead minnow	reproduction (egg exposure)	early life-stage growth and survival	egg	water	100 days
Dioxins/ Furans	TEQ-fish	2,3,7,8-TCDD	Prince and Cooper 1995		635			pg/g	Killifish (mummichog)	reproduction (egg exposure)	hatchability	egg	water	through hatch or 30d post-hatch
Dioxins/ Furans	TEQ-fish	2,3,7,8-TCDD	Elonen et al. 1998; Spehar et al. 1997	175	270			pg/g	Lake herring	reproduction (egg exposure)	early life-stage growth and survival	egg	water	100 days
Dioxins/ Furans	TEQ-fish	2,3,7,8-TCDD	Walker et al. 1991; Walker et al. 1992	34	55			pg/g	Lake trout	reproduction (egg exposure)	early life-stage and sac-fry mortality	egg	water	48 hrs
Dioxins/ Furans	TEQ-fish	2,3,7,8-TCDD	Guiney et al. 1996	35	42			pg/g	Lake trout	reproduction (egg exposure)	early life-stage mortality	egg	water	48 hours
Dioxins/ Furans	TEQ-fish	2,3,7,8-TCDD	Spitsbergen et al. 1991	15	40			pg/g	Lake trout	reproduction (egg exposure)	early life-stage mortality	egg	water	48 hrs

Table E4. TRVs for fish egg tissue

Chemical Group	Chemical	Chemical Form	Source	NOEC (egg)	LOEC (egg)	Used in SSD?	Final Species LOAEL	Units (ww)	Test Species	Endpoint	Endpoint Effect	Lifestage	Exposure Mode	Exposure Duration
Dioxins/ Furans	TEQ-fish	2,3,7,8-TCDD	Walker et al. 1991	121	226			pg/g	Lake trout	reproduction (egg exposure)	sac-fry growth (length), hatchability	egg	water	48 hrs
Dioxins/ Furans	TEQ-fish	2,3,7,8-TCDD	Walker et al. 1994	34	40			pg/g	Lake trout	reproduction (egg exposure)	sac-fry mortality	egg	water	
Dioxins/ Furans	TEQ-fish	2,3,7,8-TCDD	Walker et al. 1994	23	50			pg/g	Lake trout	reproduction (egg exposure)	sac-fry mortality	egg	maternal transfer	11 wks prior to spawning
Dioxins/ Furans	TEQ-fish	2,3,7,8-TCDD	Elonen et al. 1998; Spehar et al. 1997	455	949			pg/g	Medaka	reproduction (egg exposure)	early life-stage growth and survival	egg	water	100 days
Dioxins/ Furans	TEQ-fish	2,3,7,8-TCDD	Elonen et al. 1998; Spehar et al. 1997	1,190	1,800			pg/g	Northern pike	reproduction (egg exposure)	early life-stage growth and survival	egg	water	100 days
Dioxins/ Furans	TEQ-fish	2,3,7,8-TCDD	Giesy et al. 2002		0.76			pg/g	Rainbow trout	reproduction (egg exposure)	fry mortality	egg	maternal transfer	approx 300 days
Dioxins/ Furans	TEQ-fish	2,3,7,8-TCDD	Walker et al. 1992		279			pg/g	Rainbow trout	reproduction (egg exposure)	sac-fry mortality	egg	water	48 hours
Dioxins/ Furans	TEQ-fish	2,3,7,8-TCDD	Elonen et al. 1998; Spehar et al. 1997	848	1,220			pg/g	White sucker	reproduction (egg exposure)	early life-stage growth and survival	egg	water	100 days
Dioxins/ Furans	TEQ-fish	2,3,7,8-TCDD	Elonen et al. 1998; Spehar et al. 1997	424	2,000			pg/g	Zebra fish	reproduction (egg exposure)	early life-stage growth and survival	egg	water	100 days
PCBs	Total PCBs	Aroclor 1254	McCarthy et al. 2003		3.2			mg/kg	Atlantic croaker	reproduction (egg exposure)	reduction in larval growth rate and impaired response to startle stimulus	egg	maternal transfer to eggs	2 wks during reproduc-tion (adults)
PCBs	Total PCBs	Aroclor 1254	Freeman and Idler 1975		77.9			mg/kg	Brook trout	reproduction (egg exposure)	reduced hatchability	egg	water	21 days
PCBs	Total PCBs	Aroclor 1254	Hendricks et al. 1981		1.64			mg/kg	Rainbow trout	reproduction (egg exposure)	fry growth	egg	maternal transfer	60 days
PCBs	Total PCBs	Aroclor 1260	Hugla and Thome 1999	0.0258	0.258			mg/kg	common barbel	reproduction (egg exposure)	egg hatachability	egg	maternal transfer	50 days
PCBs	Total PCBs	Total PCBs	Nakayama et al. 2005	0.022				mg/kg	Japanese medaka	reproduction	reduced swim-up success and hatchability	egg	maternal exposure via diet	3 wks

Table E5. TRVs for bird diet

Chemical Group	Chemical	Chemical Form	NOAEL (mg/kg bw/d)	LOAEL (mg/kg bw/d)	Source	Endpoint	Test Species	Exposure Mode	FI (kg dw or L/day)	Wet or Dry?	FIR Source	Nagy bird guild	Body Weight (kg)	BW Source	% Moisture	NEC wet (ppm)	NEC dry (ppm)	LEC wet (ppm)
Metals	Cadmium	cadmium chloride	1.5		Cain et al. 1983	growth	Mallard young (females)	food	0.0883	W	2		0.8825		10%	14.6	16.222222	
Metals	Cadmium	cadmium chloride		4.0	Richardson et al. 1974	growth	Japanese quail (chicks)	food	0.0050	D	1	3	0.093	G				
Metals	Cadmium	cadmium chloride	16		DiGiulio and Scanlon 1984	growth	Mallard	food	0.122	W			1.119			150		
Metals	Cadmium	cadmium chloride	19		White and Finley 1978b	mortality	Mallard	food	0.110	W			1.153			200		
Metals	Cadmium	cadmium chloride	20		White and Finley 1978a	mortality, growth	Mallard	food	0.110	W			1.153			210		
Metals	Cadmium	cadmium chloride	1.5	20	White and Finley 1978a	reproduction	Mallard	food	0.110	W			1.153			15.2		210
Metals	Cadmium	cadmium chloride		24	Freeland and Cousins 1973	growth	Leghorn chicks	food	0.0434	D	4		0.138					
Metals	Cadmium	cadmium chloride		40	Pritzl et al. 1974	growth	Leghorn chicks	food	0.0577	D	4		0.574	A				
Metals	Cadmium	cadmium chloride		47	DiGiulio and Scanlon 1984	growth	Mallard	food	0.108	W			1.027					450
Metals	Chromium	chromium picolinate	0.10		Lien et al. 2004	reproduction	White leghorn layers (hens)	food	0.1019	W	3		1.70	C		1.6		
Metals	Chromium	Cr 3+ as $CrK(SO_4)_2$	1.0	5.0	Haseltine et al. unpub as cited in Sample 1996	reproduction	Black duck	food	0.1250	W	2		1.25	B		10		50
Metals	Chromium	Na2CrO4	7.7		Romoser et al. 1961	mortality, growth	Nichols chicks	food	0.0286	W	4		0.12	A		32.138443		
Metals	Chromium	Cr6+ (fm K_2CrO_4)		105	Chung et al. 1985	mortality, growth	broiler chicks	food	0.0295	W	4		0.254	A				900
Metals	Chromium	Cr6+ (fm $Cr_2(SO_4)_3$*$4H_2O$	465		Chung et al. 1985	mortality	broiler chicks	food	0.0295	W	4		0.254	A		4000		
Metals	Chromium	Cr6+ (fm $Cr_2(SO_4)_3$*$4H_2O$		465	Chung et al. 1985	growth	broiler chicks	food	0.0295	W	4		0.254	A				4000
Metals	Copper	Copper sulfate, copper amino acid complex	2.1		Dozier et al. 2003	mortality, growth	Broiler chicks	food	0.0295	D	4		0.254	A			18	
Metals	Copper	Copper sulfate (hydrous)	11.2		Balevi & Coskun 2004	mortality, reproduction	Hisex-Brown hens	food	0.09585	D			1.71	C	8.30%		200	
Metals	Copper	Copper sulfate	15		Lien et al. 2004	reproduction	White leghorn layers (hens)	food	0.1019	W	3		1.70	C		250		
Metals	Copper	Copper sulfate		19	Jensen and Maurice 1978	growth	chicks	food	0.044	W	5		0.591					250
Metals	Copper	Copper sulfate	16	29	Smith 1969	growth	Chicks, day-old	food	0.044	W	5		0.534	F		200		350
Metals	Copper	Copper sulfate	21	41	Poupoulis and Jensen 1976	growth	Chicks	food	0.044	W	5		0.534	F		250		500
Metals	Copper	Copper oxide	47	62	Mehring et al. 1960	mortality, growth	Chicks	food	0.044	W	5		0.534	F		570		749
Metals	Copper	Copper chloride		66	Persia et al. 2004	growth	Chicks	food	0.0509	D			0.3845	X				

Table E5. TRVs for bird diet

Chemical Group	Chemical	Chemical Form	NOAEL (mg/kg bw/d)	LOAEL (mg/kg bw/d)	Source	Endpoint	Test Species	Exposure Mode	FI (kg dw or L/day)	Wet or Dry?	FIR Source	Nagy bird guild	Body Weight (kg)	BW Source	% Moisture	NEC wet (ppm)	NEC dry (ppm)	LEC wet (ppm)
Metals	Lead	Lead nitrate	2.5		Finley et al. 1976	mortality	Mallards, first-year	food	0.1082	W	2		1.082	B		25		
Metals	Lead	Metallic lead powder	5.82		Pattee 1984	mortality, reproduction	American kestrel	food	0.0136	D	1	6	0.13		10%	50	55.555556	
Metals	Lead	Lead acetate	10.9		Kendall and Scanlon 1981	reproduction	Ringed Turtle-Dove	Drinking water	0.017	W	8		0.155	E		100		
Metals	Lead	Lead acetate	5.5	28	Morgan et al. 1975	growth	Japanese quail (chicks)	food	0.0040	D	1	3	0.0715		10%		100	
Metals	Lead	Lead acetate	75		Kendall and Scanlon 1982	growth	Ringed turtle-dove	Oral intubation										
Metals	Lead	Metallic lead powder	25	125	Hoffman et al. 1985	growth	American kestrel nestlings	Oral intubation										
Metals	Lead	Lead nitrate		400	Burger and Gochfeld 1988	mortality	Common tern (chicks)	single ip injection										
Metals	Mercury	Methylmercury dicyandiamide		0.064	Heinz 1979	reproduction	Mallard	food	0.1280	W	2		1	B				0.5
Metals	Mercury	methyl mercuric chloride		0.073	Albers et al. 2007	reproduction	American kestrel	food	0.0136	D	1	6	0.13	I				
Metals	Mercury	Methylmercury chloride		0.091	Spalding et al. 2000	growth	Great egret, one day old	food	0.185	W	7		1.02	H				0.5
Metals	Mercury	Methylmercury dicyandiamide	0.050	0.30	Heinz 1974	reproduction	Mallard	food	0.1082	W	2		1.082	B		0.5		3
Metals	Mercury	Methylmercury dicyandiamide	0.050	0.30	Heinz 1976	reproduction	Mallard	food	0.1082	W	2		1.082	B		0.5		3
Metals	Mercury	Methylmercury chloride	0.50		Heinz 1980	reproduction	Mallard	food	0.1082	W	2		1.082	B		5		
Metals	Mercury	methylmercury chloride	0.45	0.9	Hill and Shaffner 1976	reporduction	Japanese quail	food	0.0169	D	7		0.15	E	10%		4	
Metals	Mercury	methylmercury chloride		0.9	Hill and Soares 1987	mortality	Japanese quail (chicks at hatching)	food	0.0053	D	1	3	0.1	A	10%			16.0
Metals	Mercury	methyl mercuric chloride	0.63	1.26	Bennett et al. 2009	reproduction	American kestrel	food	0.0136	D	1	6	0.13	I			6	
Metals	Mercury	Methylmercury chloride	0.72	1.4	Scheuhammer 1988	mortality	Zebra finch	food	0.0034	D	1	2	0.012	B	10%	2.25	2.5	4.5
Metals	Mercury	Methylmercury chloride	0.43	1.6	Spann et al. 1986a	mortality	Northern bobwhite, 12 day old	food	0.0150	W	5		0.19	F		5.4		20
Metals	Mercury	methylmercury chloride		6.4	Hill and Soares 1987	mortality	Japanese quail	gavage										

Table E5. TRVs for bird diet

Chemical Group	Chemical	Chemical Form	NOAEL (mg/kg bw/d)	LOAEL (mg/kg bw/d)	Source	Endpoint	Test Species	Exposure Mode	FI (kg dw or L/day)	Wet or Dry?	FIR Source	Nagy bird guild	Body Weight (kg)	BW Source	% Moisture	NEC wet (ppm)	NEC dry (ppm)	LEC wet (ppm)
Metals	Mercury	methylmercury chloride		8.8	Hill and Soares 1987	mortality	Japanese quail	injection										
Metals	Nickel	nickel sulfate	15		Weber and Reid 1968	growth	Broiler chicks	food	0.067	W			0.484			111.6479		
Metals	Nickel	nickel acetate	17		Weber and Reid 1968	growth	Broiler chicks	food	0.069	W			0.467			117.94159		
Metals	Nickel	nickel sulfate		33	Weber and Reid 1968	growth	Broiler chicks	food	0.083	W			0.39					156.30706
Metals	Nickel	nickel acetate		38	Weber and Reid 1968	growth	Broiler chicks	food	0.086	W			0.376					165.11822
Metals	Nickel	nickel sulfate	77		Cain and Pafford 1981	mortality, growth	Mallard	food	0.0561	W	2		0.561		10%	774	860	
Metals	Nickel	nickel sulfate		107	Cain and Pafford 1981	mortality, growth	Mallard	food	0.0178	W	2		0.178		10%			1069
Metals	Nickel	nickel sulfate	132		Eastin and O'Shea 1981	mortality, growth, reproduction	Mallard	food	0.178	W			1.082	B	10%	800		
Metals	Selenium	sel-plex 50	0.025		Choct et al. 2004	mortality, growth	Broiler chicks	food	0.0982	D			0.993	A				0.25
Metals	Selenium	sodium selenite	0.025		Choct et al. 2004	mortality, growth	Broiler chicks	food	0.1007	D			0.993	A				0.25
Metals	Selenium	selenomethionine	0.42		Heinz et al. 1989	reproduction	Mallard	food	0.1158	W	2		1.158		11%	4.15		
Metals	Selenium	Na_2SeO_3	0.50		Heinz et al. 1987	reproduction	Mallard	food	0.104	W			1.036		9.5%	5		
Metals	Selenium	selenomethionine		0.82	Heinz et al. 1989	reproduction	Mallard	food	0.1145	W	2		1.145		11%			8.15
Metals	Selenium	Na_2SeO_3	1.0		Heinz et al. 1987	growth	Mallard	food	0.105	W			1.046		9.5%	10		
Metals	Selenium	Na_2SeO_3		1.0	Heinz et al. 1987	reproduction	Mallard	food	0.105	W			1.046		9.5%	5		10
Metals	Selenium			1.5	Hoffman et al. 1992	growth	Mallard (day-old)	food	0.108	W			1.082					15
Metals	Selenium	selenomethionine	1.6		Heinz et al. 1989	mortality, growth	Mallard	food	0.1107	W	2		1.107		11%	16.15		
Metals	Selenium	Na_2SeO_3	2.1		Heinz et al. 1988	growth	Mallard	food	0.097	W			0.459		7%	10.1		
Metals	Selenium	Na_2SeO_3	2.5		Heinz et al. 1987	mortality	Mallard	food	0.094	W			0.938		9.5%	25		
Metals	Selenium	Na_2SeO_3		2.5	Heinz et al. 1987	growth	Mallard	food	0.094	W			0.938		9.5%			25
Metals	Selenium	selenomethionine	1.0	3.2	Wiemeyer and Hoffman 1996	growth, reproduction	Screech owl	food	0.050	W			0.189		11%	3.7	8.8	12.1

Table E5. TRVs for bird diet

Chemical Group	Chemical	Chemical Form	NOAEL (mg/kg bw/d)	LOAEL (mg/kg bw/d)	Source	Endpoint	Test Species	Exposure Mode	FI (kg dw or L/day)	Wet or Dry?	FIR Source	Nagy bird guild	Body Weight (kg)	BW Source	% Moisture	NEC wet (ppm)	NEC dry (ppm)	LEC wet (ppm)
Metals	Selenium	selenomethionine		3.2	Wiemeyer and Hoffman 1996	growth	Screech owl	food	0.050	W			0.189		11%			12.1
Metals	Selenium	selenomethionine		3.2	Wiemeyer and Hoffman 1996	reproduction	Screech owl	food	0.050	W			0.189		11%			12.1
Metals	Selenium	Na_2SeO_3	4.6		Heinz et al. 1988	mortality	Mallard	food	0.075	W			0.326		7%	20.1		
Metals	Selenium	Na_2SeO_3		4.6	Heinz et al. 1988	growth	Mallard	food	0.075	W			0.326		7%			20.1
Metals	Selenium		1.50	6.0	Hoffman et al. 1992	mortality	Mallard (day-old)	food	0.108	W			1.082			15		60
Metals	Selenium	Na_2SeO_3		10	Heinz et al. 1987	mortality	Mallard	food	0.072	W			0.718		9.5%			100
Metals	Selenium	Na_2SeO_3		10	Heinz et al. 1988	mortality	Mallard	food	0.038	W			0.146		7%			40.1
Metals	Vanadium	ammonium metavanadate	1.2	2.3	Ousterhout and Berg 1981	growth	White leghorn hens	food	0.0997	W	3		1.71	C		20		40
Metals	Vanadium	ammonium metavanadate	2.0		Davis et al. 2002	reproduction	White leghorn hens	food	0.114	W			1.71	C			30	
Metals	Vanadium	vanadium sulfate	11.4		White and Dieter 1978	growth, survival	Mallard	food	0.121	W			1.17				110	
Metals	Zinc	zinc sulfate, zinc amino acid complex	17		Dozier et al. 2003	mortality, growth	Broiler chicks	food	0.0295	D	4		0.254	A			150	
Metals	Zinc	Zinc oxide, zinc sulfate, or zinc carbonate	82	124	Roberson and Schaible 1960	growth	White rock chicks	food	0.044	W	5		0.534	F		1000		1500
Metals	Zinc	Zinc sulfate	133		Stahl et al. 1990	reproduction	White leghorn hens	food and supplements	0.125	W			1.9			2028		
Metals	Zinc	Zinc carbonate		300	Gasaway and Buss 1972	mortality	Mallard (7 wk old)	food	0.1082	W	2		1.082	B				3000
Metals	Zinc	Zinc chloride		344	Persia et al. 2004	growth	Chicks	food	0.0395	D			0.2873					
Metals	Zinc	Zinc acetate	330	659	Oh et al. 1979	mortality, growth	Hubbard broiler chicks	food	0.044	W	5		0.534	F		4000		8000
PAHs	Benzo(a)pyrene	benzo(a)pyrene		1.4	Hough et al. 1993	reproduction	pigeons	weekly im injection										
PAHs	Benzo(a)pyrene	benzo(a)pyrene	33		Rigdon and Neal 1963	growth	White Rock chicken	food	0.121	W	6		1.84	G		500		
PAHs	Total PAHs	aromatic hydrocarbon mixture including individual PAHs	40		Patton and Dieter 1980	growth	Mallard	food	0.1233	W	2		1.2333333		10%			400
PAHs	Total PAHs	Petroleum hydrocarbon mixture including PAHs)	400		Patton and Dieter 1980	mortality	Mallard	food	0.1218	W	2		1.218		10%	4000	4444.4444	

Table E5. TRVs for bird diet

Chemical Group	Chemical	Chemical Form	NOAEL (mg/kg bw/d)	LOAEL (mg/kg bw/d)	Source	Endpoint	Test Species	Exposure Mode	FI (kg dw or L/day)	Wet or Dry?	FIR Source	Nagy bird guild	Body Weight (kg)	BW Source	% Moisture	NEC wet (ppm)	NEC dry (ppm)	LEC wet (ppm)
Dioxins/ furans	TEQ-bird	2,3,7,8-TCDD	0.000014	0.000143	Nosek et al. 1992	mortality, growth reproduction	Ring-necked pheasant	weekly IP injection					1.1				0.0001	
Dioxins/ furans	TEQ-bird	2,3,7,8-TCDD	0.001		Schwetz et al. 1973	growth	White leghorn, cockerels	oral intubation										
Dioxins/ furans	TEQ-bird	2,3,7,8-TCDD	0.0001	0.001	Schwetz et al. 1973	mortality	White leghorn, cockerels	oral intubation										
PCBs	Total PCBs	Aroclor 1248		0.35	Lowe and Stendell 1991	reproduction	American kestrel	food	0.0136	D	1	6	0.13	I	10%			3
PCBs	Total PCBs	Aroclor 1242	0.29	0.58	Britton and Huston 1973	reproduction	White leghorn chickens	food	0.0997	W	3		1.71	C		5		10
PCBs	Total PCBs	Aroclor 1242		0.60	Hill et al. 1975	reproduction	Japanese quail	food	0.0048	D	1	3	0.09	B	10%			10
PCBs	Total PCBs	Aroclor 1242		0.60	Hill et al. 1976	reproduction	Japanese quail	food	0.0048	D	1	3	0.09	B	10%			10
PCBs	Total PCBs	Aroclor 1248	0.061	0.61	Scott et al. 1975	reproduction	White leghorn chickens	food	0.105	W			1.71	C		1		10
PCBs	Total PCBs	Aroclor 1254	0.054		Ahmed et al. 1978	mortality, growth, reproduction	White leghorn males	food	0.0034	W			2.56			40		
PCBs	Total PCBs	Aroclor 1248	0.49		McLane and Hughes 1980	reproduction	Screech owl	food	0.0266	D	1	5	0.181	B	10%	3	3.3333333	
PCBs	Total PCBs	Aroclor 1232		1.2	Cecil et al. 1974	reproduction	White leghorn hens	food	0.0997	W	3		1.71	C				20
PCBs	Total PCBs	Aroclor 1254		1.4	Peakall et al. 1972; Peakall and Peakall 1973	reproduction	Ringed turtle-dove	food	0.0202	D	1	1	0.155	E	9%			10
PCBs	Total PCBs	Aroclor 1254		1.6	Tori and Peterle 1983	behavior	Mourning dove	food	0.0168	D	1	1	0.119	B	10%			10
PCBs	Total PCBs	Aroclor 1254		1.6	Dahlgren et al. 1972	reproduction	Ring-necked pheasant	gelatin capsule					1.135	B				1.7857143
PCBs	Total PCBs	Aroclor 1254	2.5		Custer and Heinz 1980	reproduction	Mallard	food	0.1082	W	2		1.082	B		25		
PCBs	Total PCBs	Aroclor 1254	0.29	2.9	Platonow and Reinhart 1973	reproduction	White leghorn chickens	food	0.0997	W	3		1.71	C		5		50
PCBs	Total PCBs	Aroclor 1254	3.9		Risebrough and Anderson 1975	reproduction	Mallard	food	0.1082	W	2		1.082	B		39		

Table E5. TRVs for bird diet

Chemical Group	Chemical	Chemical Form	NOAEL (mg/kg bw/d)	LOAEL (mg/kg bw/d)	Source	Endpoint	Test Species	Exposure Mode	FI (kg dw or L/day)	Wet or Dry?	FIR Source	Nagy bird guild	Body Weight (kg)	BW Source	% Moisture	NEC wet (ppm)	NEC dry (ppm)	LEC wet (ppm)
PCBs	Total PCBs	1:1:1 ratio of Aroclor 1248:1254:1260		7	Fernie et al. 2003a	reproduction	American kestrel	food										4.85
PCBs	Total PCBs	Aroclor 1254		9.5	Bird et al. 1983	reproduction	American kestrel	food										33
PCBs	Total PCBs	Aroclor 1242		15	Haseltine and Prouty 1980	reproduction	Mallard	food	0.1082	W	2		1.082	B				150
PCBs	Total PCBs	1:1:1 ratio of Aroclor 1248:1254:1260		5 to 7	Fernie et al. 2000, 2001	reproduction	American kestrel	food										
PCBs	Total PCBs	1:1:1 ratio of Aroclor 1248:1254:1260		5 to 7	Fernie et al. 2003b	reproduction	American kestrel	food										
PCBs	Total PCBs	1:1:1 ratio of Aroclor 1248:1254:1260		5 to 7	Fernie et al. 2003c	reproduction	American kestrel	food										
PCBs	Total PCBs	1:1:1 ratio of Aroclor 1248:1254:1260		5 to 7	Fisher et al. 2001	reproduction	American kestrel	food										
Pesticides	Total DDx	p,p'-DDT		0.15	Stickel and Rhodes 1970	reproduction	Quail	food	0.0048	D	1	3	0.09	B	10%			2.5
Pesticides	Total DDx	tech DDT	0.18		Davison and Sell 1974	reproduction	Mallard	food	0.1110	W			1.22			2		
Pesticides	Total DDx	p,p'-DDT	0.19		Davison and Sell 1974	reproduction	Mallard	food	0.1150	W			1.19			2		
Pesticides	Total DDx	"DDE"	0.32		Mendenhall et al. 1983	mortality	Barn owls	food	0.0539	D	1	5	0.524	B	10%	2.83	3.1444444	
Pesticides	Total DDx	"DDE"		0.32	Mendenhall et al. 1983	reproduction	Barn owls	food	0.0539	D	1	5	0.524	B	10%			2.83
Pesticides	Total DDx	"DDE"		0.35	Peakall et al. 1973	reproduction	American kestrel	food	0.0136	D	1	6	0.13	I	10%			3
Pesticides	Total DDx	p,p'-DDE		0.90	Heath et al. 1969	reproduction	Mallard	food	0.1082	W	2		1.082	B				9
Pesticides	Total DDx	p,p-DDE		1.0	Longcore and Samson 1973	reproduction	Black duck	food	0.1250	W	2		1.25	B	10%			10
Pesticides	Total DDx	p,p' DDE		1.0	Wiemeyer and Porter 1970; Porter and Wiemeyer 1972	reproduction	American kestrel	food	0.0136	D	1	6	0.13	I	10%			2.8
Pesticides	Total DDx	DDE		1.0	Kolaja 1977	reproduction	Mallard	food	0.1082	W	2		1.082	B	10%			10

Table E5. TRVs for bird diet

Chemical Group	Chemical	Chemical Form	NOAEL (mg/kg bw/d)	LOAEL (mg/kg bw/d)	Source	Endpoint	Test Species	Exposure Mode	FI (kg dw or L/day)	Wet or Dry?	FIR Source	Nagy bird guild	Body Weight (kg)	BW Source	% Moisture	NEC wet (ppm)	NEC dry (ppm)	LEC wet (ppm)
Pesticides	Total DDx	DDE		1.0	Longcore et al. 1971	reproduction	Black duck	food	0.1250	W	2		1.25	B				10
Pesticides	Total DDx	DDT		1.0	Kolaja 1977	reproduction	Mallard	food	0.1082	W	2		1.082	B	10%			10
Pesticides	Total DDx	DDE mixture	0.12	1.2	Lincer 1975	reproduction	American kestrel	food	0.0136	D	1	6	0.13	I	74%	0.3	1.1320755	3.0
Pesticides	Total DDx	DDT mixture	1.3		Greichus and Hannon 1973	mortality	Double-crested cormorant	food	0.4	W			1.5604			5		
Pesticides	Total DDx	p,p'-DDT	0.6	1.5	Stickel and Rhodes 1970	mortality	Japanese quail	food	0.0048	D	1	3	0.09	B	10%	10	11.111111	25
Pesticides	Total DDx	"DDE"		1.6	Peakall et al. 1973	reproduction	Ring dove	food	0.0168	D	1	1	0.119	B	10%			10
Pesticides	Total DDx	tech DDT	1.8		Davison and Sell 1974	mortality	Mallard	food	0.1040	W			1.1733333			20		
Pesticides	Total DDx	tech DDT		1.8	Davison and Sell 1974	reproduction	Mallard	food	0.1040	W			1.1733333					20
Pesticides	Total DDx	p,p'-DDT	1.9		Davison and Sell 1974	mortality	Mallard	food	0.1150	W			1.21			20		
Pesticides	Total DDx	p,p'-DDT		1.9	Davison and Sell 1974	reproduction	Mallard	food	0.1150	W			1.21					20
Pesticides	Total DDx	p,p'-DDT	0.90	2.3	Heath et al. 1969	reproduction	Mallard	food	0.1082	W	2		1.082	B		9	10	22.5
Pesticides	Total DDx	"DDT"- likely mixture	2.3		DeWitt 1956	reproduction	Pheasant	food	0.0464	D	1	3	1.135	B	10%	50	55.555556	
Pesticides	Total DDx	tech DDT	3.0		Shellenberger 1978	mortality, growth	Japanese quail	food	0.0048	D	1	3	0.09	B	10%	50	55.555556	
Pesticides	Total DDx	tech DDT		3.0	Shellenberger 1978	reproduction	Japanese quail	food	0.0048	D	1	3	0.09	B	10%			50
Pesticides	Total DDx	tech DDT	0.30	3.0	Stickel et al. 1966	mortality	Bald eagle	food										
Pesticides	Total DDx	DDT mixture		3.1	Greichus and Hannon 1973	mortality	Double-crested cormorant	food	0.4	W			1.5923					12.5
Pesticides	Total DDx	p,p'-DDE		3.1	Pritchard et al. 1972	reproduction	White Pekin duck	food	0.2570	D	4		3.6287392		10%			40
Pesticides	Total DDx	"DDE"		3.1	Peakall et al. 1973	reproduction	White Pekin duck	food	0.3895	D	4		5.5	D	10%			40
Pesticides	Total DDx	"DDT"- likely mixture		3.5	DeWitt 1956	mortality	Pheasant	food										50
Pesticides	Total DDx	p,p'-DDE		4.0	Haegele and Hudson 1974	reproduction	Mallard	food	0.1082	W	2		1.082	B	10%			40
Pesticides	Total DDx	"DDT"- likely mixture		4.5	Genelly and Rudd 1956	reproduction	Ring-necked pheasant	food	0.0572	W			1.135	B				90
Pesticides	Total DDx	DDE-SO_4	5.0		Kolaja 1977	reproduction	Mallard	food	0.1082	W	2		1.082	B	10%	50	55.555556	
Pesticides	Total DDx	commercial DDT	5.8		Scott et al. 1975	reproduction	White leghorn chicken	food	0.0997	W	3		1.71	C		100	100	

Table E5. TRVs for bird diet

Chemical Group	Chemical	Chemical Form	NOAEL (mg/kg bw/d)	LOAEL (mg/kg bw/d)	Source	Endpoint	Test Species	Exposure Mode	FI (kg dw or L/day)	Wet or Dry?	FIR Source	Nagy bird guild	Body Weight (kg)	BW Source	% Moisture	NEC wet (ppm)	NEC dry (ppm)	LEC wet (ppm)
Pesticides	Total DDx	p,p' DDE		5.9	Risebrough and Anderson 1975	reproduction	Mallard	food	0.174	D			1.082	B	10%			
Pesticides	Total DDx	"DDT"- likely mixture	6		DeWitt 1956	reproduction	Quail	food	0.0048	D	1	3	0.09	B	10%	100	111.11111	
Pesticides	Total DDx	p,p-DDE		6.3	Haegele and Hudson 1973	reproduction	Ring dove	food	0.0168	D	1	1	0.119	B	10%			40
Pesticides	Total DDx	DDT mixture	6.7		Greichus and Hannon 1973	growth	Double-crested cormorant	food	0.4	W			1.4934			25		
Pesticides	Total DDx	"DDT"- likely mixture	7.2		DeWitt 1956	growth	Quail	food								150		
Pesticides	Total DDx	"DDT"- likely mixture		8.9	DeWitt 1956	mortality	Quail	food										100
Pesticides	Total DDx	"DDE"		9.1	Peakall et al. 1975	reproduction	White Pekin duck (mallard-domestic)	food					5.5					250
Pesticides	Total DDx	tech DDT	16		Davison and Sell 1974	mortality, growth	Mallard	food	0.0795	W			0.98			200		
Pesticides	Total DDx	tech DDT	16		Davison and Sell 1974	growth	Mallard	food	0.1020	W			1.2466667			200		
Pesticides	Total DDx	tech DDT		16	Davison and Sell 1974	mortality	Mallard	food	0.1020	W			1.2466667					200
Pesticides	Total DDx	"DDT"- likely mixture	21		DeWitt 1956	growth	Pheasant	food								100		
Pesticides	Total DDx	p,p'-DDE	24		Davison et al. 1976	growth	Japanese quail	food	0.0140	W			0.116			200		
Pesticides	Total DDx	p,p'-DDE	24		Davison et al. 1976	reproduction	Japanese quail	food	0.0140	W			0.116			200		
Pesticides	Total DDx	p,p'-DDT	27		Davison and Sell 1974	growth	Mallard	food	0.1050	W			0.78			200		
Pesticides	Total DDx	p,p'-DDT		27	Davison and Sell 1974	mortality	Mallard	food	0.1050	W			0.78					200
Pesticides	Total DDx	p,p-DDD		34	Gill et al. 1970	mortality	Ring-necked pheasant	food	0.0023	D	1	3	0.03975		10%			522
Pesticides	Total DDx	p,p'-DDT		36	Gill et al. 1970	mortality	Ring-necked pheasant	food	0.0023	D	1	3	0.03975		10%			550
Pesticides	Total DDx	tech DDT		61	Gill et al. 1970	mortality	Ring-necked pheasant	food	0.0023	D	1	3	0.03975		10%			935
Pesticides	Total DDx	p,p'-DDE		71	Gill et al. 1970	mortality	Ring-necked pheasant	food	0.0023	D	1	3	0.03975		10%			1086

General Notes:

NC = TRV not calculated in database because more preferable studies were ava
FIR = food ingestion rate
NEC = No effect concentration in exposure medium
LEC = Low effect concentration in exposure medium
W = wet weight basis

FIR Sources:
1 - Nagy 2001
2 - Heinz et al. 1987
3 - NRC 1984
4 - NRC 1994

BW Sources:
A - NRC 1994
B - Dunning 1993
C - NRC 1984
D - Peakall et al. 1975

Nagy bird group allometric equation:
1- all birds: FI (kg/d dw) = [0.638*((bw(g))^0.685)]/1000
2- Passerines: FI = [0.630*((bw(g))^0.683)]/1000
3- Galliformes: FI = [0.088*((bw(g))^0.891)]/1000
4- Omnivorous birds: FI = [0.670*((bw(g))^0.627)]/1000

Table E5. TRVs for bird diet

Chemical Group	Chemical	Chemical Form	NOAEL (mg/kg bw/d)	LOAEL (mg/kg bw/d)	Source	Endpoint	Test Species	Exposure Mode	FI (kg dw or L/day)	Wet or Dry?	FIR Source	Nagy bird guild	Body Weight (kg)	BW Source	% Moisture	NEC wet (ppm)	NEC dry (ppm)	LEC wet (ppm)

D = dry weight basis

5 - EPA 1993
6 - Edens and Garlich 1983
7 - Sample et al 1996

E - Sample et al. 1996
F - EPA 1993
J - Birds of North American online (2006)
G - Edens and Garlich 1983
H - Arizona Game and Fish 2002
I - Pattee 1984
J - Birds of North American online (2006)
X - current study

5- Carnivorous birds: FI = [0.849*((bw(g))^0.663)]/1000
6- Eurasian Kestrel: FI =(22.1/211)*bw(kg)

LEC dry (ppm)	Exposure Duration	Effect Endpoint
	12 wks	body weight
75	6 wks	male body weight
	42 day	body weight
	90 days	
	30-90 days	body weight, adult mortality
	30-90 days	egg production
75	21 days	male body weight
400	20 days	male body weight
	42 day	body weight
	28 days	egg weight and shell thickness
	10 months (and critical lifestage)	duckling survival
	22 days	male adult mortality, male body weight
	2 wks	body weight, adult mortality
	2 wks	survival
	2 wks	body weight
	17 days	body weight, mortality
	90 days	damaged egg ratio, egg weight and survival
	28 days	egg weight and shell thickness
	28 days	growth and feed efficiency
	25 days	growth
	4 wks	growth and gizzard erosion
	10 wks	growth, mortality
500	8-22 days	body weight

LEC dry (ppm)	Exposure Duration	Effect Endpoint
	12 wks	mortality, pathologic lesions
	5-7 months	mortality, fertility, egg production, eggshell thinning
	2 wks prior to mating through breeding (11 wks)	onset of egg laying, egg production, juvenile body weight, egg fertility
500	6 wks	body weight
	7 days	Growth, ALAD activity
	10 days	Growth
	two injections at day 2 and 7	20% survival
	3 generations	egg and young production, eggshell thinning
0.7	1 mo prior to egg laying through egg laying period	number of fledglings
	14 wks	Growth
	12 months through hatching	depressed hatching success, depressed egg production, and increased duckling mortality to 1 week of age
	2 years	offspring survival, avoidance response of offspring
	>60 days	eggshell thickness
8	5 days	egg production
17.754129	5 days	hatchling mortality (16%)
12	39-49	adult mortality
5	76 days	Survival
	6 wks	Survival
		LC50- mortality

LEC dry (ppm)	Exposure Duration	Effect Endpoint
		LC50- mortality
	4 wks	body weight gain
	4 wks	body weight gain
	4 wks	body weight gain
	4 wks	body weight gain
	90 days	mortality, body weight; bill length
1187.7778	90 days	mortality, body weight; bill length
	90 days	adult mortality; body weight; hatchling weight
	~40 days	body weight
	~40 days	body weight
	~100 days	offspring growth/survival
	4 wks+laying(F0), 3 wks ducklings	embryo abnormalities
	~100 days	offspring growth/survival
	4 wks+laying(F0), 3 wks ducklings	adult growth
	4 wks before laying to 3 wks after hatching	embryo abnormalities
	4 weeks	decreased body weight at 15 ppm
	~100 d	body weight; adult mortality
	42 days	body weight
	4 wks before laying to 3 wks after hatching	adult mortality
	4 wks before laying to 3 wks after hatching	adult growth
30	~ 3 mos	body weight, hatching success, 5 day survival, clutch size, egg size and mass

LEC dry (ppm)	Exposure Duration	Effect Endpoint
30	~ 3 mos	body weight
30	~ 3 mos	hatching success, 5 day survival, clutch size, egg size and mass
	42 days	
	42 days	body weight
	4 weeks	40% mortality at 60 ppm; 0% mortality at 15 ppm
	4 wks before laying to 3 wks after hatching	adult mortality
	42 days	
	4 wks	body weight
	6 wks	egg weight, egg quality
	12 wks	body weight, survival
	17 days	body weight, mortality
	5 wks	growth
	44 wks	egg hatchability
	60 days	mortality, leg paralysis
2500	8-22 days	body weight
	5 wks	mortality, reduced growth
	5 mos	fertility, ovarian appearance
	30 days	body weight gain
444.44444	7 months	little change in body weight
	7 months	mortality

LEC dry (ppm)	Exposure Duration	Effect Endpoint
0.001	10 wks- 1/wk	body weight loss, adult mortality, egg production and embryo survival
	20-21 days	
	20-21 days	
3.3	5.5 months	eggshell weight and thickness
	6 wks + 5 wks untreated	hatchability
11.111111	45 days	eggshell thinning
11.111111	45 days	eggshell thinning
	8 wks	egg production and egg hatchability
	20 wks	fertility, hatchability, growth, mortality
	2 generations	eggshell thickness, egg production, hatching success, fledging success
	9 wks + 7 wks untreated then mated	hatchability, embryo abnormality, embryo mortality
10.989011	2 generations	hatching success in second generation
11.1	42 days (+30 days untreated following 2 wks post exposure)	reduced courtship behavior, fewer successful pair bonds formed (both statistically significant); also delay onset of nest initiation
	Once per wk for 16 wks	egg hatchability
	~ 1 month	Reproductive success
50.0	39 wks (14 wks for 50 ppm group)	hatchability
	4 months	egg production, eggshell thinning

LEC dry (ppm)	Exposure Duration	Effect Endpoint
	100 days	offspring mortality and offspring body weight
	62-69 days	decreased sperm count and sperm concentration
	12 wks	hatchability, embryo mortality, egg viability, embryo abnormalities
	100 days until eggs hatched	egg laying in second generation (exposed in ovo); also some effect on clutch size and fledgling success
	1 month prior to pairing until anticipated egg hatching	cracked eggs, embryo abnormalities;
	100 days	offspring growth rate reduced
	1 mo prior to mating through mating period	courtship behavior
2.78	26 wks+12 days	eggshell thickness
	11 mos	eggshell weight and thickness
	11 mos	eggshell weight and thickness
	2 yrs (2 nestings)	adult mortality
3.1	2 yrs (2 nestings)	eggshell breakage/ thickness; nestling mortality
3.3	14 days	eggshell thinning, egg permeability
10	2 yrs	% cracked, hatchling survival/production, shell thickness, embryonation
3	7 mos	shell thickness, egg weight, hatchability, duckling mortality
10	1 yr (2 clutches)	eggshell thickness
11.1	30 days	eggshell thinning

LEC dry (ppm)	Exposure Duration	Effect Endpoint
	reproductive period (through incubation and hatching)	eggshell thinning and cracking, embryo mortality, duckling survival
11.11	30 days	eggshell thinning
11.3	~ 5 mos	eggshell thickness
	9 wks	
27.8	26 wks+12 days	
11.1	14 days	eggshell thinning, egg permeability
	11 mos	female mortality
	11 mos	eggshell weight and thickness
	11 mos	female mortality
	11 mos	eggshell weight and thickness
25	2 yrs	shell thickness, % cracked eggs, hatchling surv/production)
	~9 mos	egg production
	4 generation	adult mortality, body weight
55.6	4 generation	fertility and hatchability
	112 days	
	9 wks	
44.4	2-3 wks	eggshell thick/breakage/ permeability, egg yolk/ shell gland weight
44.4	14 days	eggshell thinning, egg permeability
	~8 mos	
44.4	96 days	eggshell thickness (1st and 2nd reproductive season)
90	8 wks	offspring survival
	30 days	eggshell thinning
	15 wks	egg production, hatchability, strength

LEC dry (ppm)	Exposure Duration	Effect Endpoint
36.5	4 mos	eggshell thickness
	~9 mos	fertility
44.4	126 days	egg production, shell thickness, young mortality, clutch size
	9 wks	body weight
	~8 mos	body weight
	~8 mos	
	10 days	eggshell thinning
	11 wks	female mortality; body weight
	11 mos	body weight
	11 mos	female mortality
	~8 mos	body weight
	13 wks	body weight
	13 wks	egg production, thickness, weight, calcium in eggshell; number and length of clutch
	11 mos	body weight
	11 mos	female mortality
580	8 days	
611.1	8 days	
1038.9	8 days	
1206.7	8 days	

LEC dry (ppm)	Exposure Duration	Effect Endpoint

Table E6. TRVs for mammal diet

Chemical Group	Chemical	Chemical Form	NOAEL (mg/kg bw/d)	LOAEL (mg/kg bw/d)	Source	Endpoint	Test Species	Exposure Mode	FIR (kg dw or L/day)	Wet or Dry?	FIR Source	Body Weight (kg)	BW Source	% Moisture	NEC wet (ppm)	NEC dry (ppm)	LEC wet (ppm)	LEC dry (ppm)	Exposure Duration
Metals	Arsenic	Sodium arsenite-$NaAsO_2$	2.6		Byron et al. 1967	growth	Osborne-Mendel rat	food	0.025	W	1	0.302		10%	31.25	34.7			2 years
Metals	Arsenic	Sodium arsenite-$NaAsO_2$		5.4	Byron et al. 1967	growth	Osborne-Mendel rat	food	0.024	W	1	0.278		10%			62.5	69.4	2 years
Metals	Cadmium	$CdCl_2$	0.88		Loeser and Lorke 1977b	mortality, growth	Beagle dog	food	0.283	W		9.7			30				3 mos
Metals	Cadmium	$CdCl_2$	3.0		Loeser and Lorke 1977a	mortality, growth	Wistar rat	food	0.018	W	1	0.179		10%	30	33.3			3 mos
Metals	Cadmium	$CdCl_2$	3.3		Wilson et al. 1941	mortality, growth	Rat	food	0.016	W	1	0.154		10%	31	34.444			100 days
Metals	Cadmium	$CdCl_2$	13		Machemer and Lorke 1981	mortality, reproduction	Long-Evans rat	food							100				10 d
Metals	Cadmium	$CdCl_2$	3.5	13	Machemer and Lorke 1981	growth	Long-Evans rat	food							30		100		10 d (pregnancy)
Metals	Cadmium	$CdCl_2$	115		Dodds-Smith et al. 1992	growth	Shrew	food											12 wks
Metals	Cadmium	$CdCl_2$		115	Dodds-Smith et al. 1992	growth	Shrew	food											12 wks
Metals	Cadmium			189	Pond and Walker 1975	growth, reproduction	Sprague-Dawley rat	food	0.1715	W		0.18115					200		12 wks
Metals	Copper	$CuSO_4$	18		Aulerich et al. 1982	reproduction	mink	food	0.18	W	3	1.071			110.5				357 days
Metals	Copper	$CuSO_4$		26	Aulerich et al. 1982	reproduction	mink	food	0.18	W	3	1.088					160.5		357 days
Metals	Copper	$CuSO_4$	43		Aulerich et al. 1982	growth	mink	food	0.18	W	3	1.056			260.5				153-657 d
Metals	Copper	$CuSO_4$*$5H_2O$	137		NTP 1993	mortality	Rat	food							2035.8044				13 wks
Metals	Copper	$CuSO_4$*$5H_2O$	67	137	NTP 1993	growth	Rat	food							1017.9022		2035.8044		13 wks
Metals	Copper	$CuSO_4$*$5H_2O$	93	197	NTP 1993	growth	Rat	food							1017.9022		2035.8044		2 wks
Metals	Copper	copper chloride	267		Dodds-Smith et al. 1992	mortality, growth	shrew	food											weanlings for 12 wks
Metals	Copper	$CuSO_4$*$5H_2O$	305		NTP 1993	mortality	Rat	food							4071.6088				2 wks
Metals	Copper	CuSO4	220	440	Hebert et al. 1993	Growth	Fischer rat	food	0.0385	W	1	0.35	A		2000		4000		13 weeks
Metals	Copper	CuSO4	200	400	Hebert et al. 1993	Growth	mouse	food	0.006	W	1	0.030	A		1000		2000		13 weeks
Metals	Copper	$CuSO_4$*$5H_2O$	467		NTP 1993	mortality	mouse	food							2035.8044				13 wks
Metals	Copper	$CuSO_4$*$5H_2O$	227	467	NTP 1993	growth	mouse	food							1017.9022		2035.8044		13 wks
Metals	Copper	$CuSO_4$*$5H_2O$	749		NTP 1993	mortality, growth	mouse	food							4071.6088				2 wks

Table E6. TRVs for mammal diet

Chemical Group	Chemical	Chemical Form	NOAEL (mg/kg bw/d)	LOAEL (mg/kg bw/d)	Source	Endpoint	Test Species	Exposure Mode	FIR (kg dw or L/day)	Wet or Dry?	FIR Source	Body Weight (kg)	BW Source	% Moisture	NEC wet (ppm)	NEC dry (ppm)	LEC wet (ppm)	LEC dry (ppm)	Exposure Duration
Metals	Lead	Lead acetate	7.35		Iavicoli et al. 2006	reproduction	mouse	food	0.006	W	1	0.03	A	10%	40				2nd and 3rd generation through puberty
Metals	Lead	Lead acetate	11	90	Azar et al. 1973	Growth	Rat	food	0.028	W	1	0.35	A		141		1130		2 years
Metals	Lead	Lead acetate		240	Wise 1981	growth (body weight, liver and kidney weight)	mouse (female)	food	0.003	W	1	0.0137		10%			1000		8 days
Metals	Mercury	Methylmercuric chloride		0.0084	Verschuuren et al. 1976	growth	Wistar rat	food	0.016	W	1	0.16		10%			0.0798885	0.088765	3 gen
Metals	Mercury	Mercury	0.043		Wobeser et al. 1976a	growth	ranch mink	food	0.18	W	3	1.34	B	25%	0.33	0.44			145 days
Metals	Mercury	Mercury	0.051		Wobeser et al. 1976a	mortality	ranch mink	food	0.13	W	3	0.87	B		0.33				145 days
Metals	Mercury	Methylmercuric chloride	0.19		Verschuuren et al. 1976	mortality, reproduction	Wistar rat	food	0.019	W	1	0.20		10%	1.9972123	2.2191247			3 gen
Metals	Mercury	Methylmercuric chloride	0.16	0.25	Wobeser et al. 1976b	mortality, growth	mink	food	0.18	W	3	1.34	B		1.2		1.9		93 days
Metals	Mercury	methyl mercury		0.64	Aulerich et al. 1974	mortality, growth	mink	food	0.15	W		1.2					5		2 months
Metals	Nickel	$Ni(SO)_4$	8.4		Ambrose et al. 1976	growth	Wistar rat	food	0.025	W	1	0.30		10%	100	111			2 yrs
Metals	Nickel	NiCl2	20		Nation et al. 1985	growth	Sprague-Dawley rat	food											14 days + 61 days untreated
Metals	Nickel	Ni	20	80	Ambrose et al. 1976	reproduction	Wistar rat	food	0.028	W	1	0.35		10%	250		1000		3 generations
Metals	Nickel	$Ni(SO)_4$		87	Ambrose et al. 1976	growth	Wistar rat	food	0.024	W	1	0.27		10%			1000	1111	2 yrs
Metals	Nickel	nickel acetate		169	Weber and Reid 1969	growth	Webster Swiss mouse	food				0.027					1100		4 wks
Metals	Nickel	nickel acetate	210		Weber and Reid 1969	reproduction	Webster Swiss mouse	food	0.005	W	1	0.027		10%	1100	1222			weanling thru reprod
Metals	Nickel	$Ni(SO)_4$	230		Ambrose et al. 1976	mortality	Wistar rat	food	0.021	W	1	0.23		10%	2500	2778			2 yrs

Table E6. TRVs for mammal diet

Chemical Group	Chemical	Chemical Form	NOAEL (mg/kg bw/d)	LOAEL (mg/kg bw/d)	Source	Endpoint	Test Species	Exposure Mode	FIR (kg dw or L/day)	Wet or Dry?	FIR Source	Body Weight (kg)	BW Source	% Moisture	NEC wet (ppm)	NEC dry (ppm)	LEC wet (ppm)	LEC dry (ppm)	Exposure Duration
Metals	Nickel	nickel acetate		313	Weber and Reid 1969	reproduction	Webster Swiss mouse	food	0.005	W	1	0.025		10%			1600	1778	weanling thru reprod
Metals	Nickel	$Ni(SO)_4$	2500		Ambrose et al. 1976	mortality	Beagle dog	food	0.324	W	1	14.3	A	10%	2500	2778			2 yrs
Metals	Selenium	selenite	0.16		Behne et al. 1992	growth	Wistar rat	food	0.027	W	1	0.34			2				110 days
Metals	Selenium	L-selenomethionine		0.16	Behne et al. 1992	growth	Wistar rat	food	0.027	W	1	0.34					2		110 days
Metals	Selenium	Na_2SeO_3, Nano-Se, or organic seleium	0.17	0.28	Jia et al. 2005	growth	Sprague-Dawley rat	food											13 wks
Metals	Selenium	$NaSeO_3$ or seleniferous wheat	0.42		Halverson et al. 1966	growth	Sprague-Dawley rat	food	0.0128	W		0.146			4.8				6 wks
Metals	Selenium	selenomethionine	0.36		Julius et al. 1983	growth	Hamster	food	0.00655	W		0.092			5.1				21d
Metals	Selenium	$NaSeO_3$ or seleniferous wheat		0.54	Halverson et al. 1966	growth	Sprague-Dawley rat	food	0.01175	W		0.139					6.4		6 wks
Metals	Selenium	$NaSeO_3$ or seleniferous wheat	0.64		Halverson et al. 1966	mortality	Sprague-Dawley rat	food	0.01	W		0.1255			8				6 wks
Metals	Selenium	$NaSeO_3$ or seleniferous wheat		0.81	Halverson et al. 1966	mortality	Sprague-Dawley rat	food	0.0098	W		0.1155					9.6		6 wks
Metals	Selenium	selenomethionine		0.76	Julius et al. 1983	growth	Hamster	food	0.0068	W		0.091					10.1		21d
Metals	Selenium	Na_2SeO_3		3.4	Julius et al. 1983	growth	Hamster	food	0.0062	W		0.07375					40.25		21d
Metals	Selenium	Na_2SeO_3		5.8	Julius et al. 1983	mortality	Hamster	food	0.0045	W		0.062					80.25		21 d
Metals	Vanadium	vanadium sulfate	1.05		Schroeder and Balassa 1967	growth	mouse	food and drink water				0.03	A				5		lifetime (1 yr)
Metals	Vanadium	sodium meta-vanadate		2.7	Adachi et al. 2000	growth	Wistar rat	food	0.0142			0.267						50	10 weeks
Metals	Vanadium	sodium meta-vanadate		6.5	Elfant and Keen 1987	growth, reproduction	Sprague-Dawley rat	food	0.024	W	1	0.280					75		reproduction period
Metals	Zinc	zinc oxide	160	320	Schlicker and Cox 1968	reproduction	Sprague-Dawley rat	food	0.028	W	1	0.35		10%	2000	2222.2222	4000	4444	gestation
Metals	Zinc	zinc carbonate	80	400	Sutton and Nelson 1937	reproduction	Rat	food	0.028	W	1	0.35	A	10%	1000	1111.1111	5000	5556	gestation
Metals	Zinc	zinc oxide	149	433	Straube et al. 1980	growth	Ferret	food	0.17	W		0.6		76%	527	2195.8333	1527	6362.5	2wks-6 mos

Table E6. TRVs for mammal diet

Chemical Group	Chemical	Chemical Form	NOAEL (mg/kg bw/d)	LOAEL (mg/kg bw/d)	Source	Endpoint	Test Species	Exposure Mode	FIR (kg dw or L/day)	Wet or Dry?	FIR Source	Body Weight (kg)	BW Source	% Moisture	NEC wet (ppm)	NEC dry (ppm)	LEC wet (ppm)	LEC dry (ppm)	Exposure Duration
Metals	Zinc	zinc carbonate	400	799	Sutton and Nelson 1937	growth	Rat	food	0.028	W	1	0.35	A	10%	5000	5555.5556	10000	11111	gestation
Metals	Zinc	zinc oxide	433	858	Straube et al. 1980	mortality	Ferret	food	0.17	W		0.6		76%	1527	6362.5	3027	12612.5	2wks-6 mos
PAHs	Benzo(a)pyrene	benzo(a)pyrene		10	MacKenzie and Angevine 1981	reproduction	mouse	gavage											gestation (10 days)
PAHs	Benzo(a)pyrene	benzo(a)pyrene	33.3		Neal and Rigdon 1967	mortality	mouse	food	0.004	W		0.03	A		250				up to 115 days
PAHs	Benzo(a)pyrene	benzo(a)pyrene	199		Rigdon and Neal 1965	growth, reproduction	white Swiss mouse	food	0.004	W	1	0.0175		10%	900	1000			prior to or following mating
Dioxins/ furans	TEQ-mammal	2,3,7,8-TCDD	2.6E-06		Hochstein et al. 2001	reproduction	mink	food	0.18	W	2	1.089			0.000016				131 to 132 days
Dioxins/ furans	TEQ-mammal	2,3,7,8-TCDD		8.8E-06	Hochstein et al. 2001	reproduction	mink	food	0.18	W	2	1.054					0.000053		131 to 132 days
Dioxins/ furans	TEQ-mammal	2,3,7,8-TCDD	0.0000049		Hochstein et al. 1998	mortality	mink	food	0.0429	W		0.8776			0.0001				125 days
Dioxins/ furans	TEQ-mammal	2,3,7,8-TCDD	0.00000065	0.0000049	DeCaprio et al. 1986	growth	Hartley guinea pig	food							0.00001		0.000076		90 days
Dioxins/ furans	TEQ-mammal	2,3,7,8-TCDD	0.0000010	0.000010	Murray et al. 1979	reproduction	Sprague-Dawley rat	food											3 generation
Dioxins/ furans	TEQ-mammal	2,3,7,8-TCDD	0.0000049	0.0000285	DeCaprio et al. 1986	mortality	Hartley guinea pig	food							0.000076		0.00043		90 days
Dioxins/ furans	TEQ-mammal	2,3,7,8-TCDD		0.00005	Hochstein et al. 1998	mortality, growth	mink	food	0.0409	W		0.8183					0.0010		125 days
Dioxins/ furans	TEQ-mammal	2,3,7,8-TCDD	0.00010		Murray et al. 1979	growth	Sprague-Dawley rat	food											3 generation
Dioxins/ furans	TEQ-mammal	2,3,7,8-TCDD	0.00001	0.0001	Kociba et al. 1978	mortality, growth	Sprague-Dawley rat	food											2 yrs
Dioxins/ furans	TEQ-mammal	2,3,7,8-TCDD		0.00032	Van Birgelen et al. 1994	growth	Sprague-Dawley rat	food											13 wks
PCBs	Total PCBs	Clophen A50		0.089	Brunström et al. 2001	reproduction	mink	food				1.12					0.1		18 months
PCBs	Total PCBs	Aroclor 1254	0.080	0.096	Chapman 2003	reproduction	mink	food	0.16 g/g body weight						0.5		0.6		2 breeding seasons (see notes)
PCBs	Total PCBs	Aroclor 1254		0.15	Wren et al. 1987	Reproduction	mink	food	0.13	W	2	0.87	B				1		6 mos
PCBs	Total PCBs	Aroclor 1254		0.22	Ringer 1983	reproduction	mink	food	0.15	W		1.1			1		2		4 and 9 months prior to giving birth
PCBs	Total PCBs	Aroclor 1254	0.13	0.26	Aulerich and Ringer 1977	Reproduction	mink	food	0.15	W		1.1			1		2		4 months

Table E6. TRVs for mammal diet

Chemical Group	Chemical	Chemical Form	NOAEL (mg/kg bw/d)	LOAEL (mg/kg bw/d)	Source	Endpoint	Test Species	Exposure Mode	FIR (kg dw or L/day)	Wet or Dry?	FIR Source	Body Weight (kg)	BW Source	% Moisture	NEC wet (ppm)	NEC dry (ppm)	LEC wet (ppm)	LEC dry (ppm)	Exposure Duration
PCBs	Total PCBs	Clophen A50	0.27		Brunström et al. 2001	Growth	mink	food				1.12			0.3				18 months
PCBs	Total PCBs	Aroclor 1254		0.35	Aulerich et al. 1985	Reproduction	mink	food	0.13	W	2	0.93					2.5		88-102 days
PCBs	Total PCBs	mixture composition not reported		0.49	Jensen et al. 1977	Reproduction	mink	food	0.13	W	2	0.87	B				3.3		66 days
PCBs	Total PCBs	Aroclor 1242		0.94	Bleavins et al. 1980	Reproduction	mink	food	0.15	W		0.80					5		8 months
PCBs	Total PCBs	Aroclor 1254		1.27	Linzey 1987	Reproduction	mouse	food	0.003			0.0232						10	7.5-18 months
PCBs	Total PCBs	Aroclor 1254		1.49	Hornshaw et al. 1986	growth	mink	food	0.13	W	2	0.87					10		4 wks
PCBs	Total PCBs	Aroclor 1255		1.64	Kihlstrom et al. 1992	Reproduction	mink	food											3 months
PCBs	Total PCBs	Aroclor 1256	1.2	1.8	Aulerich et al. 1986	growth	mink	food											28 days
PCBs	Total PCBs	Clophen A50		2.0	Kihlstrom et al. 1992	Reproduction	mink	food											3 months
PCBs	Total PCBs	Aroclor 1254	1.5	2.4	Aulerich et al. 1986	growth	mink	food											28 days
PCBs	Total PCBs	Aroclor 1016		3.8	Bleavins et al. 1980	mortality, reproduction	mink	food	0.15	W		0.80					20		8 months

Effect Endpoint
female body weight
female body weight
female body weight; female mortality
adult mortality, growth
adult mortality; fertility, fetus weight/survival/ malformations
maternal body weight
female body weight
male body weight
pup birth weight; adult body weight
kit mortality, litter mass
kit mortality, litter mass
body weight, no statistics
body weight
body weight
body weight
reduced body weight gain in males
reduced body weight gain in males
body weight

Effect Endpoint
litter size
Offspring weight and kidney damage
reduced body weight, liver and kidney weight
juvenile growth
female, adults
body weight; increased number of stillborns in F1 generation
body weight
reduced offspring body weight
body weight
body weight
number of pups weaned

Effect Endpoint
number of pups weaned
body weight
body weight
body weight
body weight
body weight
body weight
body weight
body weight
female mortality
body weight
body weight
maternal body weight, offspring body weight gain and survival
fetal growth, number of resorptions
pregnancy, pup survival and body weight

Effect Endpoint
body weight
pup body weight, testes weight
mortality
adult body weight, embryonic development, embryonic malformations, and fertility
decreased survival in kits at 3 weeks
decreased survival in kits at 3 weeks
body weight, adult mortality
body weight
litter size and F2 postnatal survival
0% mortality at NOAEL; no statistics- 10 M and 10 F; 4 M and 4 F died at LOAEL
body weight, adult mortality
body weight
female mortality; body weight
body weight
kit growth
decrease in number of live kits per mated female; lower in kit body weight at birth.
reduced kit growth rate
number of offspring per female, decrease in pup body weight
Number of kits born alive (0% at 4 wks)

Effect Endpoint
maternal body weight
number of kits whelped and born alive (0%)
number of kits born alive
reproductive failure
reduced no. young per litter survival at 28 days
weight gain in adults
all whelps stillborn
female growth
all whelps stillborn
male and female growth
birth weight and growth rate of kits, and 25 % adult female mortality

Table E7. TRVs for bird egg tissue

Chemical Group	Chemical	Chemical Form	NOAEL	LOAEL	Units (ww)	Source	Endpoint	Test Species	Exposure Mode	Exposure Duration	Effect Endpoint
Metals	Mercury		0.50		mg/kg	Wiemeyer et al. 1984	reproduction	Bald eagle	Field study- 14 states in 1969-1979		5-year productivity
Metals	Mercury		0.52 (in 1977) and 0.51 (in 1978)		mg/kg	Haseltine et al. 1981	reproduction	red-breasted merganser	Field study- islands on Lake Michigan 1977 and 1978		hatching success
Metals	Mercury	methyl mercury chloride		0.74	mg/kg	Heinz and Hoffman 2003	reproduction	Mallard	food	reproductive period (through 2 laying periods)	embryo development (observed deformities)
Metals	Mercury	methyl mercury		0.83	mg/kg	Heinz 1979	reproduction, behavior	Mallard	food	3 generations	egg and young production, eggshell thinning, duckling response to maternal call, duckling avoidance behavior
Metals	Mercury	methyl mercury chloride		0.93	mg/kg	Heinz and Hoffman 2003	reproduction	Mallard	food	reproductive period (through 2 laying periods)	embryo development (observed deformities)
Metals	Mercury	Methyl mercury	0.79 - 1.05	5.46 - 7.39	mg/kg	Heinz 1976	reproduction	Mallard	food	2 years	offspring survival, avoidance response of offspring
Metals	Mercury	methyl mercury dicyandiamide	1.0	6.0 - 9.0	mg/kg	Heinz 1974	reproduction	Mallard	food	through hatching (12 months)	depressed hatching success, depressed egg production, and increased duckling mortality to 1 wk of age
Dioxins/ furans	TEQ-bird	TEQ	0.322		ng/g	Powell et al. 1997	reproduction	Double-crested cormorants	field	field exposure	embryo mortality, gross abnormalities, body weight
Dioxins/ furans	TEQ-bird	2,3,7,8-TCDD		1.0	ng/g	Janz and Bellward 1996	reproduction	Pigeon	injection (air cell)	single injection + 18 day incubation	hatchability
Dioxins/ furans	TEQ-bird	2,3,7,8-TCDD	0.10	1.0	ng/g	Nosek et al. 1992	reproduction	Ring-necked pheasant	injection (albumin)	single injection (effects observed up to 5 days)	embryo mortality
Dioxins/ furans	TEQ-bird	2,3,7,8-TCDD		2.0	ng/g	Janz and Bellward 1996	reproduction	Great blue heron	injection (air cell)	single injection + 28 day incubation	hatchability
Dioxins/ furans	TEQ-bird	2,3,7,8-TCDD	0.023		ng/g	Henny et al. 2003	reproduction	Osprey	Field study- Willamette River in 1993 (reference site - Cascade mountains)		productivity
Dioxins/ furans	TEQ-bird	2,3,7,8-TCDD	0.00257 - 0.00742		ng.g	Thomas and Anthony 1999, 2003	reproduction	Great Blue Heron	Field study- Lower Columbia River and Willamette River 1994- 1995 (reference site - Samish Island, Washington)		breeding behavior (nest attendance and visitation), fledging, reproductive success
Dioxins/ furans	TEQ-bird	2,3,7,8-TCDD		4.0	ng/g	Powell et al. 1997	reproduction	Double-crested cormorants	injection (yolk)	single injection + intubation period (untreated)	embryo mortality
Dioxins/ furans	TEQ-bird	2,3,7,8-TCDD		4.0	ng/g	Powell et al. 1998	reproduction	Double-crested cormorants	injection (yolk)	single injection + intubation period (untreated)	embryo mortality
Dioxins/ furans	TEQ-bird	PCB 126 (using a TEF of 0.1)		4.4	ng/g	Hoffman et al. 1998	reproduction	Common tern	injection (air cell)	single injection on day 4	embryo survival, hatching success
Dioxins/ furans	TEQ-bird	2,3,7,8-TCDD	4.6		ng/g	Augspurger et al. 2008	reproduction	wood duck	injection (yolk)	single injection	embryo mortality

Table E7. TRVs for bird egg tissue

Chemical Group	Chemical	Chemical Form	NOAEL	LOAEL	Units (ww)	Source	Endpoint	Test Species	Exposure Mode	Exposure Duration	Effect Endpoint
Dioxins/ furans	TEQ-bird	PCB 77 (using a TEF of 0.05)		5.0	ng/g	Hoffman et al. 1998	reproduction	American kestrel	injection (air cell)	single injection on day 6	embryo survival, hatching success, embryo malformation
Dioxins/ furans	TEQ-bird	2,3,7,8-TCDD	1.3	5.4	ng/g	Powell et al. 1998	reproduction	Double-crested cormorants	injection (yolk)	single injection + intubation period (untreated)	embryo mortality
Dioxins/ furans	TEQ-bird	2,3,7,8-TCDD	1.0	10	ng/g	Nosek et al. 1992	reproduction	Ring-necked pheasant	injection (yolk)	single injection (effects observed up to 5 days)	embryo mortality
Dioxins/ furans	TEQ-bird	PCB 126 (using a TEF of 0.1)		16	ng/g	Powell et al. 1997	reproduction	Double-crested cormorants	injection (yolk)	single injection + intubation period (untreated)	embryo mortality
Dioxins/ furans	TEQ-bird	PCB 126 (using a TEF of 0.1)	7.0	17.5	ng/g	Powell et al. 1998	reproduction	Double-crested cormorants	injection (yolk)	single injection + intubation period (untreated)	embryo mortality
Dioxins/ furans	TEQ-bird	PCB 126 (using a TEF of 0.1)		17.7	ng/g	Powell et al. 1998	reproduction	Double-crested cormorants	injection (yolk)	single injection + intubation period (untreated)	embryo mortality
Dioxins/ furans	TEQ-bird	PCB 126 (using a TEF of 0.1)	2.3	23	ng/g	Hoffman et al. 1998	reproduction	American kestrel	injection (air cell)	single injection on day 6	hatchability
Dioxins/ furans	TEQ-bird	PCB 126 (using a TEF of 0.1)	20	40	ng/g	Powell et al. 1997	reproduction	Double-crested cormorants	injection (yolk)	single injection + intubation period (untreated)	embryo mortality
Dioxins/ furans	TEQ-bird	2,3,7,8-TCDD	303		ng/g	Elliott and Harris 2001/2002	reproduction	Bald eagle	Field study - Vancouver BC, sites in the vicinity of bleach kraft mill		hatchability

Table E8. TRVs for mink diet and PCBs

Study	PCB Type	Study Type	Generation	Year of Maternal Exposure	Endpoint	NOAEL (food ng/kg)	LOAEL (food ng/kg)	NOAEL (dose)	LOAEL (dose)
Aulerich and Ringer 1977	Aroclor 1242	laboratory	F1	1	# live kits whelped/female	2	na	0.27	na
Aulerich and Ringer 1977	Aroclor 1254	laboratory	F1	1	# live kits whelped/female	1	2	0.14	0.27
Aulerich and Ringer 1977	Aroclor 1242	laboratory	F1	1	kit survival at 4 weeks	2	na	0.27	na
Aulerich and Ringer 1977	Aroclor 1254	laboratory	F1	1	kit survival at 4 weeks	1	2	0.14	0.27
Aulerich et al. 1985	Aroclor 1254	laboratory	F1	1	# live kits whelped/female	control	2.5	na	0.35
Aulerich et al. 1985	Aroclor 1254	laboratory	F1	1	kit survival at 3 weeks	control	2.5	na	0.35
Aulerich et al. 1985	Aroclor 1254	laboratory	F1	1	kit survival at 6 weeks	control	2.5	na	0.35
Bleavins et al. 1980	Aroclor 1242	laboratory	F1	1	# live kits whelped/female		5		0.94
Brunstrom 2001	Clophen A50	laboratory	F1 - first year	1	# live kits whelped/female	0.3 mg/mink/day	na	0.25	na
Brunstrom 2001	Clophen A50	laboratory	F1 - first year	1	kit body weight at birth	0.1 mg/mink/day	0.3 mg/mink/day	0.083	0.25
Brunstrom 2001	Clophen A50	laboratory	F1 - 2nd year	2	kit body weight at birth	0.1 mg/mink/day	0.3 mg/mink/day	0.083	0.25
Brunstrom 2001	Clophen A50	laboratory	F1 - 2nd year	2	# live kits whelped/female	0.1 mg/mink/day	0.3 mg/mink/day	0.083	0.25
Bursian 2006	fish mixture	Field study - Housatonic	F1	1	kit survival at 3 weeks	3.7	na	0.414	na
Bursian 2006	fish mixture	Field study - Housatonic	F1	1	kit body weight at birth	3.7	na	0.414	na
Bursian 2006	fish mixture	Field study - Housatonic	F1	1	kit body weight at 3 weeks	1.6	3.7	0.169	0.414
Bursian 2006	fish mixture	Field study - Housatonic	F1	1	kit body weight at 6 weeks	3.7	na	0.414	na
Bursian 2006	fish mixture	Field study - Housatonic	F1	1	juvenile body weight at 31 weeks	3.7	na	0.414	na
Bursian 2006	fish mixture	Field study - Housatonic	F1	1	# live kits whelped/female	3.7	na	0.414	na
Bursian 2006	fish mixture	Field study - Housatonic	F1	1	kit survival at 6 weeks	1.6	3.7	0.169	0.414
Bursian 2013	fish mixture	Field study - Hudson River	F1	1	kit body weight at 3 weeks	0.72	1.5	0.07	0.15
Bursian 2013	fish mixture	Field study - Hudson River	F1	1	kit survival at 3 weeks	1.5	2.8	0.15	0.27
Bursian 2013	fish mixture	Field study - Hudson River	F1	1	kit body weight at 6 weeks	0.72	1.5	0.07	0.15
Bursian 2013	fish mixture	Field study - Hudson River	F1	1	kit body weight at birth	6.1	na	0.59	na

Table E8. TRVs for mink diet and PCBs

Study	PCB Type	Study Type	Generation	Year of Maternal Exposure	Endpoint	NOAEL (food ng/kg)	LOAEL (food ng/kg)	NOAEL (dose)	LOAEL (dose)
Bursian 2013	fish mixture	Field study - Hudson River	F1	1	juvenile survival at 10 weeks	0.72	1.5	0.07	0.15
Bursian 2013	fish mixture	Field study - Hudson River	F1	1	juvenile survival at 31 weeks	0.72	1.5	0.07	0.15
Bursian 2013	fish mixture	Field study - Hudson River	F1	1	# live kits whelped/female	2.8	4.5	0.27	0.44
Bursian 2013	fish mixture	Field study - Hudson River	F1	1	kit survival at 6 weeks	1.5	2.8	0.15	0.27
Heaton et al. 1995	carp mixture	Field study - Saginaw Bay	F1	1	# live kits whelped/female	1.53	2.56	0.26	0.32
Heaton et al. 1995	carp mixture	Field study - Saginaw Bay	F1	1	kit survival at 3 weeks	control	0.72	na	0.13
Heaton et al. 1995	carp mixture	Field study - Saginaw Bay	F1	1	kit body weight at 3 weeks	control	0.72	na	0.13
Heaton et al. 1995	carp mixture	Field study - Saginaw Bay	F1	1	kit body weight at 6 weeks	control	0.72	na	0.13
Heaton et al. 1995	carp mixture	Field study - Saginaw Bay	F1	1	kit body weight at birth	0.72	1.53	0.13	0.26
Heaton et al. 1995	carp mixture	Field study - Saginaw Bay	F1	1	kit survival at 6 weeks	control	0.72	na	0.13
Hornshaw et al. 1983	fish mixture	Field study - Great Lakes	F1	1	# live kits whelped/female	0.69	1.5	0.12	0.26
Hornshaw et al. 1983	fish mixture	Field study - Great Lakes	F1 - second year of study	2	# live kits whelped/female	na	0.66	na	0.12
Hornshaw et al. 1983	fish mixture	Field study - Great Lakes	F1	1	kit body weight at 4 weeks	0.63	0.69	0.11	0.12
Hornshaw et al. 1983	fish mixture	Field study - Great Lakes	F1 - second year of study	2	kit body weight at 4 weeks		0.66		0.12
Hornshaw et al. 1983	fish mixture	Field study - Great Lakes	F1	1	kit body weight at birth	0.69	1.5	0.12	0.26
Hornshaw et al. 1983	fish mixture	Field study - Great Lakes	F1 - second year of study	2	kit body weight at birth	control	0.66		0.12
Hornshaw et al. 1983	fish mixture	Field study - Great Lakes	F1	1	kit survival at 4 weeks	na	1.5	na	0.26
Hornshaw et al. 1983	fish mixture	Field study - Great Lakes	F1 - second year of study	2	kit survival at 4 weeks	na	0.66	na	0.12
Jensen et al. 1977	mixture not reported	laboratory	F1	1	# live kits whelped/female	na	3.3	na	0.49
Kihlstrom et al. 1992	Clophen A50	laboratory	F1	1	# live kits whelped/female	control	2 mg/kg bw/day	na	2
Kihlstrom et al. 1992	Aroclor 1254	laboratory	F1	1	# live kits whelped/female	control	1.64 mg/kg bw/day	na	1.64
Restum et al. 1998	fish mixture	Field study - Saginaw Bay	F1-1	1	# live kits whelped/female	0.5	1	0.115	0.230
Restum et al. 1998	fish mixture	Field study - Saginaw Bay	F2-b	1	# live kits whelped/female	0.25	0.5	0.057	0.115
Restum et al. 1998	fish mixture	Field study - Saginaw Bay	F1-2a	2	# live kits whelped/female	1	na	0.230	na

Table E8. TRVs for mink diet and PCBs

Study	PCB Type	Study Type	Generation	Year of Maternal Exposure	Endpoint	NOAEL (food ng/kg)	LOAEL (food ng/kg)	NOAEL (dose)	LOAEL (dose)
Restum et al. 1998	fish mixture	Field study - Saginaw Bay	F1-2b	2	# live kits whelped/female	1	na	0.230	na
Restum et al. 1998	fish mixture	Field study - Saginaw Bay	F2-a	1	# live kits whelped/female	0.25	0.5	0.057	0.115
Restum et al. 1998	fish mixture	Field study - Saginaw Bay	F1-1	1	kit survival at 3 weeks	0.5	1	0.115	0.230
Restum et al. 1998	fish mixture	Field study - Saginaw Bay	F1-2a	2	kit survival at 3 weeks	0.5	1	0.115	0.230
Restum et al. 1998	fish mixture	Field study - Saginaw Bay	F1-2b	2	kit survival at 3 weeks	0.25	0.5	0.057	0.115
Restum et al. 1998	fish mixture	Field study - Saginaw Bay	F2-a	1	kit survival at 3 weeks	1	na	0.230	na
Restum et al. 1998	fish mixture	Field study - Saginaw Bay	F1-1	1	kit body weight at 3 weeks	0	0.25	0	0.057
Restum et al. 1998	fish mixture	Field study - Saginaw Bay	F1-2a	2	kit body weight at 3 weeks	1	na	0.230	na
Restum et al. 1998	fish mixture	Field study - Saginaw Bay	F1-2b	2	kit body weight at 3 weeks	0.25	0.5	0.057	0.115
Restum et al. 1998	fish mixture	Field study - Saginaw Bay	F2-a	1	kit survival at 6 weeks	0.5	na	0.115	na
Restum et al. 1998	fish mixture	Field study - Saginaw Bay	F2-b	1	kit survival at 3 weeks	0.25	0.5	0.057	0.115
Restum et al. 1998	fish mixture	Field study - Saginaw Bay	F1-1	1	kit survival at 6 weeks	0.5	1	0.115	0.230
Restum et al. 1998	fish mixture	Field study - Saginaw Bay	F1-2a	2	kit survival at 6 weeks	0.25	0.5	0.057	0.115
Restum et al. 1998	fish mixture	Field study - Saginaw Bay	F1-2b	2	kit survival at 6 weeks	0.25	0.5	0.057	0.115
Restum et al. 1998	fish mixture	Field study - Saginaw Bay	F2-b	1	kit survival at 6 weeks	0.25	0.5	0.057	0.115
Restum et al. 1998	fish mixture	Field study - Saginaw Bay	F2-a	1	kit body weight at 3 weeks	1	na	0.230	na
Restum et al. 1998	fish mixture	Field study - Saginaw Bay	F2-b	1	kit body weight at 3 weeks	0.25	0.5	0.057	0.115
Restum et al. 1998	fish mixture	Field study - Saginaw Bay	F1-1	1	kit body weight at 6 weeks	0	0.25	0	0.057
Restum et al. 1998	fish mixture	Field study - Saginaw Bay	F1-2a	2	kit body weight at 6 weeks	1	na	0.230	na
Restum et al. 1998	fish mixture	Field study - Saginaw Bay	F1-2b	2	kit body weight at 6 weeks	0.25	0.5	0.057	0.115
Restum et al. 1998	fish mixture	Field study - Saginaw Bay	F2-a	1	kit body weight at 6 weeks	0.25	0.5	0.057	0.115
Restum et al. 1998	fish mixture	Field study - Saginaw Bay	F2-b	1	kit body weight at 6 weeks	0.25	0.5	0.057	0.115
Restum et al. 1998	fish mixture	Field study - Saginaw Bay	F1-1	1	kit body weight at birth	0.25	0.5	0.057	0.115
Restum et al. 1998	fish mixture	Field study - Saginaw Bay	F1-2a	2	kit body weight at birth	0.25	0.5	0.057	0.115
Restum et al. 1998	fish mixture	Field study - Saginaw Bay	F1-2b	2	kit body weight at birth	0.25	0.5	0.057	0.115

Table E8. TRVs for mink diet and PCBs

Study	PCB Type	Study Type	Generation	Year of Maternal Exposure	Endpoint	NOAEL (food ng/kg)	LOAEL (food ng/kg)	NOAEL (dose)	LOAEL (dose)
Restum et al. 1998	fish mixture	Field study - Saginaw Bay	F2-a	1	kit body weight at birth	1	na	0.230	na
Restum et al. 1998	fish mixture	Field study - Saginaw Bay	F2-b	1	kit body weight at birth	0.25	0.5	0.057	0.115
Wren et al. 1987	Aroclor 1254	laboratory	F1	1	# live kits whelped/female	1	na	0.15	na
Wren et al. 1987	Aroclor 1254	laboratory	F1	1	kit survival at 5 weeks	1	na	0.15	na
Wren et al. 1987	Aroclor 1254	laboratory	F1	1	kit body weight at birth	1	na	0.15	0.15
Wren et al. 1987	Aroclor 1254	laboratory	F1	1	kit body weight at 3 weeks	control	1	na	0.15
Wren et al. 1987	Aroclor 1254	laboratory	F1	1	kit body weight at 6 weeks	control	1	na	0.15

diet conversion method
BW 1.1 kg (avg control and 5 ppm initial and final from paper) FIR 0.15 kg/d (Schaible 1970 as noted in paper)
BW 1.1 kg (avg control and 5 ppm initial and final from paper) FIR 0.15 kg/d (Schaible 1970 as noted in paper)
BW 1.1 kg (avg control and 5 ppm initial and final from paper) FIR 0.15 kg/d (Schaible 1970 as noted in paper)
BW 1.1 kg (avg control and 5 ppm initial and final from paper) FIR 0.15 kg/d (Schaible 1970 as noted in paper)
BW 0.93 kg (Table 2 avg initial weight for control and 2.5 ppm) FIR 0.13 kg/d (Bleavins and Aulerich 1981)
BW 0.93 kg (Table 2 avg initial weight for control and 2.5 ppm) FIR 0.13 kg/d (Bleavins and Aulerich 1981)
BW 0.93 kg (Table 2 avg initial weight for control and 2.5 ppm) FIR 0.13 kg/d (Bleavins and Aulerich 1981)
BW 0.8 kg (assumed in paper) FIR 0.15 kg/d (Schaible 1970 as noted in paper)
avg BW = 1.2 kg (Table 2)
avg BW = 1.2 kg (Table 2)
avg BW = 1.2 kg (Table 2)
avg BW = 1.2 kg (Table 2)
conversion given in paper
conversion given in paper
conversion given in paper
conversion given in paper
conversion given in paper
conversion given in paper (Table 2)
conversion given in paper (Table 2)
average daily feed intake of 0.097 kg/kg body mass given in paper
average daily feed intake of 0.097 kg/kg body mass given in paper
average daily feed intake of 0.097 kg/kg body mass given in paper
average daily feed intake of 0.097 kg/kg body mass given in paper

diet conversion method
average daily feed intake of 0.097 kg/kg body mass given in paper
average daily feed intake of 0.097 kg/kg body mass given in paper
average daily feed intake of 0.097 kg/kg body mass given in paper
average daily feed intake of 0.097 kg/kg body mass given in paper
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given in paper (Table 2)
given in paper (Table 2)
BW 0.86 kg (avg initial and final female weights of control - Table 2) FIR 0.15 kg/d (Schaible 1970)
BW 0.86 kg (avg initial and final female weights of control - Table 2) FIR 0.15 kg/d (Schaible 1970)
BW 0.86 kg (avg initial and final female weights of control - Table 2) FIR 0.15 kg/d (Schaible 1970)
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BW 0.86 kg (avg initial and final female weights of control - Table 2) FIR 0.15 kg/d (Schaible 1970)
BW 0.86 kg (avg initial and final female weights of control - Table 2) FIR 0.15 kg/d (Schaible 1970)
BW 0.87 kg and FIR 0.13 kg/d (Bleavins and Aulerich 1981)
given in paper
given in paper
BW 0.87 kg (Beavins and Aulerich 1981) FIR 0.2 kg/d (from paper)
BW 0.87 kg (Beavins and Aulerich 1981) FIR 0.2 kg/d (from paper)
BW 0.87 kg (Beavins and Aulerich 1981) FIR 0.2 kg/d (from paper)

diet conversion method
BW 0.87 kg (Beavins and Aulerich 1981) FIR 0.2 kg/d (from paper)
BW 0.87 kg (Beavins and Aulerich 1981) FIR 0.2 kg/d (from paper)
BW 0.87 kg (Beavins and Aulerich 1981) FIR 0.2 kg/d (from paper)
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BW 0.87 kg (Beavins and Aulerich 1981) FIR 0.2 kg/d (from paper)
BW 0.87 kg (Beavins and Aulerich 1981) FIR 0.2 kg/d (from paper)

diet conversion method
BW 0.87 kg (Beavins and Aulerich 1981) FIR 0.2 kg/d (from paper)
BW 0.87 kg (Beavins and Aulerich 1981) FIR 0.2 kg/d (from paper)
BW 0.87 kg and FIR 0.13 kg/d (Bleavins and Aulerich 1981)
BW 0.87 kg and FIR 0.13 kg/d (Bleavins and Aulerich 1981)
BW 0.87 kg and FIR 0.13 kg/d (Bleavins and Aulerich 1981)
BW 0.87 kg and FIR 0.13 kg/d (Bleavins and Aulerich 1981)
BW 0.87 kg and FIR 0.13 kg/d (Bleavins and Aulerich 1981)

APPENDIX F. TOXICITY PROFILES

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Table 1-1. Summary of COCs and risk drivers for the LPRSA 1

Acronyms

AH	aryl hydrocarbon
AHR	aryl hydrocarbon receptor
BERA	baseline ecological risk assessment
CDD	chlorinated dibenzo-*p*-dioxin
CDF	chlorinated dibenzofuran
COC	chemical of concern
DDD	dichlorodiphenyldichloroethane
DDE	dichlorodiphenyldichloroethylene
DDT	dichlorodiphenyltrichloroethane
FFS	focused feasibility study
HPAH	high-molecular-weight polycyclic aromatic hydrocarbon
LPAH	low-molecular-weight polycyclic aromatic hydrocarbon
LPRSA	Lower Passaic River Study Area
MFO	mixed-function oxidases
PAH	polycyclic aromatic hydrocarbon
PCB	polychlorinated biphenyl
PCDD	polychlorinated dibenzo-*p*-dioxin
PCDF	polychlorinated dibenzofuran
PCP	pentachlorophenol
TCDD	tetrachlorodibenzo-*p*-dioxin
TEQ	toxic equivalent

total DDx	sum of all six DDT isomers (2,4′-DDD, 4,4′-DDD, 2,4′-DDE, 4,4′-DDE, 2,4′-DDT and 4,4′-DDT)
USEPA	US Environmental Protection Agency

1 Introduction

This appendix presents toxicity profiles for the chemicals/chemical groups identified as risk drivers in the Lower Passaic River Study Area (LPRSA) baseline ecological risk assessment (BERA) and/or chemicals of concern (COCs) in the focused feasibility study (FFS) (Louis Berger et al. 2014) (Table 1-1).

Table 1-1. Summary of COCs and risk drivers for the LPRSA

Chemical/Chemical Group	Identified as a Risk Driver in the LPRSA BERA	Identified as a COC in USEPA's FFS
PCBs	X	X
PCDDs/PCDFs	X	X
Total TEQ (fish, bird, and mammal)	X	
Methylmercury/mercury	X	X
Total DDx	X	X
Dieldrin		X
Total PAHs		X
Copper		X
Lead		X

COC – chemical of concern
BERA – baseline ecological risk assessment
DDD – dichlorodiphenyldichloroethane
DDE – dichlorodiphenyldichloroethylene
DDT – dichlorodiphenyltrichloroethane
FFS – focused feasibility study
LPRSA – Lower Passaic River Study Area
PAH – polycyclic aromatic hydrocarbon
PCBs – polychlorinated biphenyls
PCDDs/PCDFs – polychlorinated dibenzo-*p*-dioxins /polychlorinated dibenzofurans
TEQ – toxic equivalent
total DDx – sum of all six DDT isomers (2,4′-DDD, 4,4′-DDD, 2,4′-DDE, 4,4′-DDE, 2,4′-DDT and 4,4′-DDT)
USEPA – US Environmental Protection Agency

With the exception of total toxic equivalent (TEQ), which is a combination of polychlorinated biphenyls (PCBs) and polychlorinated dibenzo-*p*-dioxins (PCDDs)/polychlorinated dibenzofurans (PCDFs), these chemicals are discussed in the following sections.

2 Polychlorinated Biphenyls

PCBs are a group of synthetic organic chemicals that can cause a number of harmful effects. PCBs are either oily liquids or solids and range from colorless to light yellow in appearance, with no known taste or odor. Some PCBs are volatile and may exist as a vapor in air. There are no known natural sources of these persistent bioaccumulative contaminants in the environment. PCBs enter the environment as mixtures containing a variety of individual chlorinated biphenyl components, known as congeners, as well as impurities. PCBs do not burn easily and are good insulating materials, and have been previously widely used as coolants and lubricants in transformers, capacitors, and other electrical equipment. The manufacture of PCBs stopped in the United States in 1977 because of evidence that PCBs persist in the environment and possibly cause harmful effects (ATSDR 2000). Once in the environment, most PCBs are known to bioaccumulate up the food chain in aquatic environments, although lower chlorinated PCBs may not bioaccumulate (Khairy et al. 2014).

Because the health effects of environmental mixtures of PCBs are difficult to evaluate, most of the available toxicological information pertains to seven types of PCB mixtures (i.e., Aroclors 1016, 1221, 1232, 1242, 1248, 1254, and 1260) that were commercially produced. These mixtures include 35% of all PCBs commercially produced and 98% of all PCBs sold in the United States since 1970 (ATSDR 2000). The potency of PCB mixtures depends on chlorine content; in general, mixtures with higher chlorine content (i.e., Aroclors 1242, 1248, 1254, and 1260) are more toxic than mixtures with lower chlorine content (i.e., Aroclors 1221 and 1232).

2.1 Fish

Adverse effects on fish reported in toxicological studies for 14 fish species (i.e., Atlantic croaker, Atlantic salmon, brook trout, channel catfish, coho salmon, common barbel, fathead minnow, goldfish, chinook salmon, pinfish, rainbow trout, mummichog, sheepshead minnow, and spot) include reduced body weight; mortality; reduced early life stage or fry growth and survival; and reduced fecundity, hatchability, and spawning success following exposure to PCBs via diet, water, or maternal transfer to eggs (Bengtsson 1980; DeFoe et al. 1978; Fisher et al. 1994; Freeman and Idler 1975; Hansen et al. 1971; 1974a; 1974b; 1975; Hattula and Karlog 1972; Hendricks et al. 1981; Hugla and Thome 1999; Lieb et al. 1974; Matta et al. 2001; Mauck et al. 1978; Mayer et al. 1977; 1985; McCarthy et al. 2003; Nebeker et al. 1974; Powell et al. 2003; van Wezel et al. 1995). Recently, behavioral effects have also been observed in fish as a result of exposure to PCBs (and dioxins and polycyclic aromatic hydrocarbons [PAHs]) (Weis et al. 2011).

2.2 BIRDS

Effects on birds from exposure to dietary PCBs include disruption of normal patterns of growth, reproduction, metabolism, and behavior (Eisler 1986). The most sensitive effects are related to reproduction, and include egg production, fertility, and hatching success (Eisler 1986). Of the bird species used to examine reproductive endpoints in laboratory studies, chickens and other galliformes, such as pheasant and quail, have been found to be the most sensitive to PCB toxicity (Kennedy et al. 1996). In other studies that evaluated the toxicity of PCBs to various wild bird species (e.g., American kestrels, screech owls, turtle doves, Japanese quail, and mallard ducks), adverse effects were observed on reproductive endpoints (e.g., fertility, hatchability, eggshell thickness, egg production, eggshell weight, embryo development, clutch size, and embryo mortality and viability) following dietary exposure to PCBs (Lowe and Stendell 1991; McLane and Hughes 1980; Hill et al. 1976; Peakall et al. 1972; Peakall and Peakall 1973; Custer and Heinz 1980; Risebrough and Anderson 1975; Fernie et al. 2000; Fernie et al. 2001; Fernie et al. 2003c; Fernie et al. 2003b; Fernie et al. 2003a; Haseltine and Prouty 1980). While causation is difficult to establish because local populations of birds are exposed to mixtures of chemicals, area-specific studies on immunotoxicity and adverse reproductive effects based on exposure to PCBs (and dioxins) have been conducted (Grasman et al. 2012); these studies have involved herring gulls and black-crowned night herons from within the Newark Bay Complex.

2.3 MAMMALS

PCBs have been reported to elicit a broad range of toxic effects in laboratory mammals under controlled exposure conditions, including lethality, hepatotoxicity, porphyria, body weight loss, dermal toxicity, thymic atrophy, immunosuppressive effects, reproductive and developmental effects, carcinogenesis, and neurotoxicity (Safe 1992, 1991, 1984; Seegal 1996; Safe 1990, 1994; Kimbrough 1985, 1987; Silberhorn et al. 1990; WHO 1993; Bolger 1993; Battershill 1994; Delzell et al. 1994). In general, the gastrointestinal tract of most mammals readily absorbs PCBs, but the absorption rate may be affected by the dose level and lipophilicity of the compound (Eisler 1986; Van den Berg et al. 1998). There is evidence to support the placental transfer of PCBs in mammals (Eisler 1986), and PCBs can also accumulate in the lipid portion of milk, resulting in exposure of suckling young.

Fertility, litter size, and offspring survival appear to be among the most sensitive *in vivo* endpoints of PCB toxicity in mammals (Golub et al. 1991; Rice and O'Keefe 1995; Hoffman et al. 1996). Reproductive success can be affected directly by toxic action on the differentiated reproductive tract, or indirectly by toxic action on systems that regulate reproduction (e.g., endocrine and central nervous systems). In laboratory studies, PCBs have been reported to elicit a broad range of direct and indirect effects associated with reproductive functions. Direct effects on the gonads and the female reproductive tract have been reported (Fuller and Hobson 1986). The precise

mechanism by which PCBs cause reproductive effects in mammals remains unclear, but reproductive success appears to be a sensitive integrated endpoint of *in vivo* toxicity.

The most comprehensive studies of PCB toxicity in a non-domesticated mammal have been conducted with mink. Mink also appear to be one of the most sensitive mammalian species tested (Fuller and Hobson 1986), and are therefore often used as a surrogate for the assessment of risk to other mammals. In studies that evaluated the toxicity to mink of dietary exposure to PCBs, adverse effects on maternal growth, kit growth, kit survival, whelping success, and reproductive success were reported for captive-bred mink (Aulerich and Ringer 1977; Jensen et al. 1977; Ringer 1983; Aulerich et al. 1985; Wren et al. 1987; Brunström et al. 2001; Chapman 2003).

3 PCDDs/PCDFs

PCDDs/PCDFs are compounds that contain from one to eight chlorine atoms attached to the carbon atoms of the parent chemical and are persistent environmental contaminants. They are commonly referred to as (polychlorinated) dioxins and furans, respectively, and cause varying harmful health and environmental effects (ATSDR 1994, 1998). One of the most toxic and widely studied PCDD/PCDF compound is 2,3,7,8-tetrachlorodibenzo-*p*-dioxin (2,3,7,8-TCDD), a dioxin with four chlorine atoms at positions 2, 3, 7, and 8 on the molecule. Similarly to dioxins, furans that contain chlorine atoms at the 2, 3, 7, and 8 positions on the parent molecule are especially harmful. Other dioxin-like chemicals (particularly coplanar PCBs) share structural and biochemical similarities with dioxins and furans, as well as a common mode of action through which they exert similar effects on humans and biota (Wenning et al. 2011). Including the coplanar PCBs, there are 29 dioxin-like compounds (17 dioxin and furan congeners and 12 PCB congeners).

In their pure form, dioxins are colorless solids or crystals that enter the environment as mixtures containing a variety of individual components and impurities. In the environment, they tend to be associated with ash, soil, or any media with high organic content. In air and water, a portion of the dioxins may be found in vapor or its dissolved state, depending on the amount of particulate matter, temperature, and other environmental factors. 2,3,7,8-TCDD is odorless, but the odors of the other dioxins are not known. Only a few furan compounds have been produced in large enough quantities for their properties, such as color, smell, taste, and toxicity, to be studied (ATSDR 1994). The few furan compounds that have been produced in such quantities are colorless solids and do not dissolve easily in water.

Dioxins are known to occur naturally, but are also produced by human activities. They are naturally produced from the incomplete combustion of organic material by forest fires or volcanic activity. Dioxins are not intentionally manufactured by industry, except in small amounts for research purposes. They are, however, unintentionally produced by industrial, municipal, and domestic incineration and combustion processes. It is believed that dioxin emissions associated with human incineration and combustion activities are the predominant environmental source (ATSDR 1998; EPA 2005). Dioxins are released to the environment primarily during combustion of fossil fuels and wood, and during incineration processes for municipal and medical solid waste and hazardous waste (ATSDR 1998). Dioxins are also produced in the manufacture of chlorinated chemicals such as chlorophenols, chlorobenzenes, and chlorobiphenyl (USEPA 2005). Additionally, dioxins have been detected at low concentrations in cigarette smoke, home-heating systems, and car exhaust. Burning materials that may contain chlorine—such as plastics, wood treated with pentachlorophenol (PCP), pesticide-treated wastes, other polychlorinated chemicals (PCBs), and bleached paper—can produce dioxins (ATSDR 1998).

Similarly to dioxins, furans are not deliberately produced other than in small amounts for laboratory research and development purposes (ATSDR 1994). Most furans are produced in very small amounts as the unwanted impurities of certain products and processes. There is no known use for furans, which are often found in association with dioxins and cause similar toxic effects (ATSDR 1994, 1998).

In aquatic environments, due to their hydrophobic nature, the majority of dioxins ultimately become associated with the organic fraction of suspended and/or bed sediments and the lipid-rich tissues of aquatic organisms (Wenning et al. 2011). Dioxins and furans have been shown to bioaccumulate via the ingestion of dioxin- and furan-laden food items and soil particles, and are primarily eliminated slowly through digestion and egg production. Field studies and models have shown that fish body burdens of dioxins and furans are largely due to dietary rather than gill surface uptake (Saloranta et al. 2006; Micheletti et al. 2008). Concentrations of dioxins and furans (particularly tetra- and penta-chlorinated dibenzo-*p*-dioxins [CDDs] and tetra- and penta-chlorinated dibenzofurans [CDFs]) tend to be highest in top predator species in food chains wherein successive stages of dietary accumulation at each trophic level result in significant biomagnification (Wenning et al. 2011; Khairy et al. 2014).

Most, if not all, toxic effects of dioxins and furans are initiated by activation of the aryl hydrocarbon (AH) receptor, a ligand-activated transcription factor that is involved in the regulation of biological responses to planar aromatic hydrocarbons (e.g., dioxins, furans, PCBs, and PAHs) (Farmahin et al. 2013a). The AH receptor (AHR) is involved in regulating xenobiotic-metabolizing enzymes such as cytochrome p450.

3.1 FISH

Dioxins and furans have been reported to generate a broad range of toxic effects in fish under controlled exposure conditions, including reduced survival, body weight loss, edema, hemorrhaging, craniofacial malformations, toxemia, and reproductive and developmental effects (Elonen et al. 1998; Fisk et al. 1997; Spehar et al. 1997; Tietge et al. 1998). Although toxicological sensitivity is species specific, teleost fish tend to be more sensitive to dioxins and furans than most other vertebrates (Walker and Peterson 1994). Recently, cardiovascular and other developmental impacts (such as swim bladder effects) in fish embryos from sublethal exposure to dioxin have been studied (Chen 2015; Yue et al. 2015; Aluru et al. 2015; Park et al. 2014). In addition, behavioral effects have been observed in fish as a result of exposure to PCDDs/PCDFs and related compounds (e.g., PCBs and PAHs) (Weis et al. 2011).

3.2 BIRDS

In birds, dioxins and furans have been reported to produce various effects under controlled exposure conditions. Some effects in laboratory testing have included mortality, body weight loss, effects on egg production and hatchability, and embryo survival (Nosek et al. 1992a; Nosek et al. 1992b; Schwetz et al. 1973; Janz and Bellward

1996; Powell et al. 1997; Powell et al. 1998; Hoffman et al. 1998). For wild birds in aquatic habitats, reported effects have included increased embryo and hatchling mortality, teratogenicity, reduced growth, edema, alternations in thyroid function, hepatic porphyria, and increased hepatic retinoid levels (Janz and Bellward 1996). Bird species sensitivity to dioxin-like compounds varies more than 1,000-fold in association with differences in the structural characteristics of the AHR (Farmahin et al. 2013b; Cohen-Barnhouse et al. 2011; Head et al. 2008). Eighty-six bird species have been grouped into three classes of sensitivity to dioxin-like compounds: 1) high sensitivity, 2) moderate sensitivity, and 3) low sensitivity (Farmahin et al. 2013b). Chickens have been demonstrated to be among the most sensitive species. Spotted sandpiper (an LPRSA focal species) is in the moderate sensitivity group, and belted kingfisher and great blue heron (also LPRSA focal species) are in the low sensitivity group. While causation is difficult to establish because local populations of birds are exposed to mixtures of chemicals, area-specific studies on immunotoxicity and adverse reproductive effects based on exposure to PCBs (and dioxins) have been conducted (Grasman et al. 2012); these studies have involved herring gulls and black-crowned night herons from within the Newark Bay Complex.

3.3 MAMMALS

As with PCBs, the most comprehensive studies of dioxin toxicity in a non-domesticated mammal have been conducted with mink, which has been shown to be highly sensitive to dioxins. In mink, dioxins (including 2,3,7,8-TCDD) and furans have been shown, under controlled exposure conditions, to have adverse effects on reproduction (e.g., fertility, litter size, and offspring survival); these effects are similar to those caused by PCBs (Hochstein et al. 2001). Similar effects have been reported in less sensitive mammals such as guinea pigs and rats, and there is evidence that dioxins and furans also have adverse impacts on developmental toxicity, hepatotoxicity, endocrine disruption, immunotoxicity, adult mortality, and body weight (Hochstein et al. 1998; Kennedy et al. 1996; Van Birgelen et al. 1994). Studies evaluating the toxicity of 2,3,7,8-TCDD to mammals (e.g., guinea pigs, rats, or mink) have reported adverse effects on growth, reproduction, and survival following exposure to dietary 2,3,7,8-TCDD (Kociba et al. 1978; Murray et al. 1979; DeCaprio et al. 1986; Van Birgelen et al. 1994; Hochstein et al. 2001).

3.4 INVERTEBRATES

The toxic effects of 2,3,7,8-TCDD exposure on the Eastern oyster have been well studied by Wintermyer and Cooper (2003). Similarly, the toxic effects of dioxin exposure on crabs have been reported by Weis et al. (2011) and Reichmuth et al. (2009); both of these studies evaluated behavior endpoints.

4 Methylmercury

Mercury is a naturally occurring metal that is present in various forms, including elemental mercury, inorganic mercury (primarily as mercuric salts), and organic mercury (primarily methylmercury). Elemental and inorganic mercury can enter the environment as by-products of industrial and commercial operations (e.g., mining, emissions from coal-fired power plants, and incineration of waste containing mercury), as well as through natural processes (e.g., weathering of rocks that contain mercury). In addition, before the 1970s (i.e., when the health effects of methylmercury were unknown), methylmercury was used as a fungicide to protect seed grain (ATSDR 1999b).

Recycling of mercury in the environment often involves elemental mercury volatilizing from surface soils and waters, followed by atmospheric transport and deposition back to surface soils and waters. Mercury can also be associated with air particulates, but it is unlikely to be transported long distances (ATSDR 1999b).

Mercury can be transformed into methylmercury by microorganisms in soil, sediment, and water. Methylmercury is important with regard to ecological risks because it is soluble and mobile, and rapidly bioaccumulates in aquatic organisms and concentrates in the tissues of carnivorous fish and other organisms. It is also known to be more toxic and bioaccumulative than elemental and inorganic mercury (ATSDR 1999b; USEPA 2015).

4.1 Fish

Adverse effects on five fish species (i.e., fathead minnow, golden shiner, walleye, mummichog, and rainbow trout) resulting from exposure to methylmercury in toxicological studies included effects on growth, survival, and reproduction. Specifically, reduced survival was observed in male mummichog and rainbow trout, and reduction of growth and abnormalities in gonadal development were observed in juvenile walleye (Friedmann et al. 1996; Hammerschmidt et al. 2002; Matta et al. 2001; Rodgers and Beamish 1982; Webber and Haines 2003; Sandheinrich and Miller 2006). The exposure of mummichog, golden shiner, mosquitofish, and largemouth bass to methylmercury resulted in increased mortality due to observed behavioral effects (e.g., altered male behavior and altered predator avoidance) that increased predation (Webber and Haines 2003; Kania and O'Hara 1974; Matta et al. 2001). These laboratory studies indicate possible ecologically significant behavior alterations but have not been confirmed in wild fish studies.

4.2 Birds

In laboratory studies, adverse effects on reproduction, growth, survival, and behavior as a result of dietary exposure to mercury were observed. Specifically, effects included

reduced egg production, altered behavior of offspring, altered avoidance response, altered motivation to hunt prey, altered thermoregulation, and altered learning response behaviors in mallards, young great egrets, Japanese quail, zebra finch, bobwhites, pigeons, and American kestrels (Heinz 1974, 1975, 1976, 1979; Hill and Soares 1987; Peakall and Lincer 1972). Chronic effects on birds of dietary mercury exposure include adverse effects on growth, development, reproduction, metabolism, and behavior (Eisler 1987a).

4.3 MAMMALS

Exposure of mammals to mercury has been reported to adversely affect reproduction, growth, development, behavior, blood and serum chemistry, motor coordination, vision, hearing, histology, and metabolism (Eisler 1987a). Adverse effects on growth, reproduction, behavior, and survival have been observed in mammals after dietary mercury exposure. These effects have included a reduction in growth in lab rats and mink (Verschuuren et al. 1976) and significantly reduced growth and increased mortality in mink (Wobeser et al. 1976b; Aulerich et al. 1974). In addition, various studies have noted other effects, including increased adult mortality, depressed growth, altered offspring behavior, reduced whelping success, reproductive effects, changes to blood and serum chemistry, and decreased motor coordination in mink and rats (Dansereau et al. 1999; Hughes and Annau 1976; Aulerich et al. 1974; Verschuuren et al. 1976; Wobeser et al. 1976a, b; Schroeder and Mitchener 1975).

5 Total DDx

Dichlorodiphenyltrichloroethane (DDT) is an anthropogenic organochlorine pesticide. Total DDx refers to the sum of all six DDT isomers that are the result of metabolism or degradation of DDT (i.e., 2, 4′-dichlorodiphenyldichloroethane [DDD], 4,4′-DDD, 2,4′-dichlorodiphenyldichloroethylene [DDE], 4,4′-DDE, 2,4′-DDT, and 4,4′-DDT).

The commercial use of DDT began in 1939; it was primarily applied to agricultural crops, but also used in forests and residential properties. The United States banned the use of DDT in 1972, but it is still used in other parts of the world to control disease-bearing vectors such as mosquitoes (ATSDR 2002b). Prior to 1975, DDT was a widely used pesticide in the United States and primarily entered the environment through its application to agricultural lands. Upon entering the environment, DDT can partition into air, soil/sediment, and water. DDT and its related compounds can be subject to global distillation in air by atmospheric transport from warmer to colder climates. As a result, DDT and its associated derivatives are commonly found in areas far away from the original application. DDT is a hydrophobic compound and will sorb to and remain in surface soils. In aquatic environments, DDT will sorb to particulates and sediments (ATSDR 2002b).

DDT and its related compounds are persistent and bioaccumulative. Its deposition and subsequent association with soil particles can leave a persistent footprint, but it can also be metabolized by microorganisms within the soil. In aquatic systems, DDT is most often associated with suspended particles and sediment, from where it can enter the aquatic food chain and bioaccumulate at higher trophic levels (ATSDR 2002b).

5.1 Fish

Several studies have been conducted to examine the adverse toxicological effects on various fish species (sailfin molly, fathead minnow, goldfish, and several salmonid species) as a result of exposure to DDTs (Allison et al. 1964; Benton et al. 1994; Macek 1968a; Jarvinen et al. 1977; Rhead and Perkins 1984; Buhler et al. 1969). These studies observed adverse effects on reproduction, survival, and growth. Increased mortality as a result of DDT exposure was observed in studies of coho and chinook salmon, goldfish, and fathead minnow (Allison et al. 1964; Allison et al. 1963; Buhler et al. 1969; Jarvinen et al. 1976). Decreased growth was observed in studies of sailfin molly exposed to DDT (Benton et al. 1994). Embryo mortality of yearling brook trout chronically exposed to DDT was observed by Macek (1968b).

5.2 Birds

Historically, the use of DDT resulted in population declines of wild raptors, including bald eagle, peregrine falcon, and osprey, which highlighted the adverse effects that DDT-related compounds have on bird reproduction. Laboratory studies conducted on

barn owl, American kestrel, mallard duck, black duck, quail (Japanese and bobwhite), and ringed turtle doves verified field observations of adverse effects, including decreased eggshell thickness and duckling weight, increased mortality, reduced offspring survival, and reduced fertility and hatchability (Mendenhall et al. 1983; Peakall et al. 1973; Heath et al. 1969; Longcore et al. 1971; Longcore and Samson 1973; Kolaja 1977; Davison and Sell 1974; Shellenberger 1978).

One hypothesized mechanism of action to explain these effects is that a DDT derivative inhibits the prostaglandin synthesis in the shell glad mucosa, reducing the ability of the glad to deposit calcium carbonate onto the developing eggshell; this causes a reduction in eggshell thickness and a decline in reproductive success (ATSDR 2002a). Maternal transfer of DDT to pheasant and ringed dove chicks is also associated with reduced post-hatch survival as a result of direct toxicity (Genelly and Rudd 1956; Haegele and Hudson 1973).

5.3 MAMMALS

Adverse effects from total DDx exposure of mammals in toxicological studies have been observed in mice, rats, and hamsters. Observed adverse effects in rats included reduced litter sizes, offspring weights, survival of young, viable litter size, adult survival, and body weight (Duby et al. 1971; Ottoboni 1972; Fitzhugh 1948; Jonsson et al. 1976; Banerjee et al. 1996). Similarly, studies examining adverse effects on mice from exposure to DDT and related compounds noted reduced litter sizes, adult survival, male growth, lifespan, and survival of young (Cannon and Holcomb 1968; Tomatis et al. 1974; Turusov et al. 1973; Shabad et al. 1973; Ware and Good 1967). In addition, reductions in survival and body weight were observed in hamsters after exposure to DDT, and adverse reproductive effects were observed in dogs after exposure to DDT (Rossi et al. 1983; Ottoboni et al. 1977).

6 Dieldrin

Dieldrin is a white, powdery substance that was applied to agricultural soils and around residential and commercial buildings as an insecticide beginning in the 1950s. Its application to agricultural crops such as corn and cotton was halted in 1970, but the use of dieldrin to kill termites continued from 1972 to 1987 . Dieldrin is no longer manufactured or used as an insecticide in an agricultural or commercial setting (ATSDR 1999a). Aldin (an insecticide similar to dieldrin) generally degrades into dieldrin both in the body and in the environment, and thus dieldrin can also be found in areas where aldrin was used (ATSDR 1999a).

Dieldrin is nonpolar and lipophilic, so upon entering the environment it sorbs to soil particles, where it remains immobile and will not leach into groundwater. In aquatic environments dieldrin sorbs to sediment and soil particulates, from where it can be transported in surface waters. It does not readily degrade in water or soil. Dieldrin can be taken up by plant tissues and is known to bioaccumulate up terrestrial and aquatic food chains, where it is stored in fat tissues (ATSDR 1999a).

6.1 Fish

Adverse effects including decreased growth and survival were reported in toxicological studies that examined exposure to dieldrin for four fish species (blue gill, goldfish, largemouth bass, and rainbow trout). Gakstatter and Weiss (1967) observed that bluegill exposed to dieldrin experienced equilibrium loss and convulsions, and reported that goldfish exposed to dieldrin experienced hyper excitability. Although these effects are not a direct measure of survival, they could impair the organism's ability to avoid predation (Gakstatter and Weiss 1967). Studies examining adverse effects from exposure to dieldrin in largemouth bass and rainbow trout observed reductions in body weight, length, and survival (Muller et al. 2004; Poels et al. 1980).

6.2 Birds

Adverse effects including decreased growth, reproduction, and survival were reported in toxicological studies for six bird species (Japanese and Bobwhite quail, ring-necked pheasant, leghorn chicken, mallard, and robin) exposed to dieldrin. Observed effects include reductions in egg production, hatchability, eggshell thickness, clutch size fertility, body weight, offspring survival, and adult survival (DeWitt 1956).

6.3 Mammals

Studies examining exposure to dieldrin in mammals (mouse and rat) via dietary uptake found adverse effects on reproduction, survival, growth, and behavior. Dietary exposures to dieldrin in these studies ranged from 120 days to 3 generations. Effects reported in these studies included a decrease number of conceptions, litter size, body

weight, pup survival, tendency, and anti-predator response, and an increased onset of nursing (Harr et al. 1970; Treon and Cleveland 1955; Good and Ware 1969; Virgo and Bellward 1977; Bildstein and Forsyth 1979; Fitzhugh et al. 1964).

7 Total PAHs

PAHs are hydrocarbons that have two or more fused benzene rings and occur in the environment as complex mixtures. PAHs are commonly formed as the result of the incomplete combustion of fuels (e.g., oil, coal, and gas) and organic substances (e.g., garbage). In addition, some PAHs are manufactured; these are found in products such as plastics, creosote, and roofing tar (ATSDR 1995).

There are more than 100 individual PAHs, which are generally grouped into two categories: low-molecular-weight PAHs (LPAHs) (compounds composed of fewer than four benzene rings) and high-molecular-weight PAHs (HPAHs) (compounds composed of four or more benzene rings). Total PAHs is the sum of 16 individual PAHs that are commonly present in environmental mixtures and are known or suspected to contribute to toxicity. Total PAHs includes seven LPAHs (acenaphthene, acenaphthylene, anthracene, fluoranthene, fluorene, naphthalene, and phenanthrene) and nine HPAHs (benzo(a)anthracene, benzo(a)pyrene, benzo(b/j)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene, and pyrene). In general, LPAHs have a greater tendency to volatilize and a lesser tendency to bind to organic carbon than do HPAHs, resulting in a lower persistence in the aquatic environment. Correspondingly, HPAHs are more likely to bioaccumulate than LPAHs and are more persistent in the environment. Bioaccumulation by upper-trophic-level organisms, including fish, birds, and mammals, is limited, in part because PAHs are known to be metabolized by fish (Khairy et al. 2014).

The toxicity, carcinogenicity, and mutagenicity of PAHs vary with the molecular weight of the compound, the degree of alkylation, and the mode of accumulation (water, food or sediment) by the organism (Neff 1979; Moore and Ramamoorthy 1984). LPAHs generally have significant acute toxicity, whereas HPAHs do not. However, several HPAHs are known to be carcinogenic and cause chronic toxicity. Thus, effects are highly dependent on the specific PAHs present in the environmental mixture, and also upon the feeding behavior and habitat of a particular species.

7.1 Fish

A wide variety of biological effects have been reported in numerous fish species under laboratory conditions. Exposure to stable, nonpolar organic compounds such as PAHs is known to cause narcosis (a generalized toxic effect), and can be involved in mortality (Schultz 1989). Fish embryos exposed to aqueous PAH mixtures have been shown to exhibit syndromes of cardiac dysfunction, edema, spinal curvature, and reduction in the size of the jaw and other craniofacial structures (Incardona et al. 2004). Exposure to PAHs has also been linked to the development of tumors in fish. Biotransformation by the mixed-function oxidases (MFO) system in the fish liver can result in the formation of carcinogenic and mutagenic intermediates (Eisler 1987b). Fish exposed to PAH-contaminated sediments through direct contact have been shown to exhibit

increased incidence of skin and liver lesions and other deformities (Myers et al. 1994; Pinkney et al. 2000). In addition, reduced lifespan in fish has been linked to cancerous lesions (Johnson et al. 2002; Baumann et al. 1987; Pinkney et al. 2000; Myers et al. 1994).

Observed adverse effects on fish from dietary exposure to PAHs include decreased disease resistance of chinook salmon (Palm et al. 2003); reduced growth of chinook salmon, English sole, rainbow trout, and rockfish (Kim et al. 2008; Rice et al. 2000; Hendricks et al. 1985; Hart and Heddle 1991; Meador et al. 2006); and reduced survival of rainbow trout and grouper (Hendricks et al. 1985; Wu et al. 2003). Recently, behavioral effects have also been observed in fish as a result of exposure to PAHs (and dioxins and PCBs) (Weis et al. 2011).

7.2 BIRDS

The most likely route of exposure to PAHs for birds is through the diet (Malcolm and Shore 2003). Birds tend to metabolize and excrete much of their ingested PAH load (Näf et al. 1992). Metabolism of PAHs also occurs *in ovo* (Näf et al. 1992). Adverse effects of PAHs on birds observed in laboratory studies include reduced survival of bobwhite quail (Brausch et al. 2010), reduced fertility of pigeons (Hough et al. 1993), and reduced growth of chicken (Rigdon and Neal 1963).

7.3 MAMMALS

Various studies have demonstrated the acute toxicity and reproductive toxicity of PAHs to laboratory mammals (WHO 1998), although research on PAH effects on wild mammals is uncommon and is generally associated with oil spills (e.g., Chapter 13 of Douben 2003). One laboratory toxicity study found that the exposure of mice to benzo(a)pyrene resulted in adverse effects on reproduction (decreased pup body weight and decreased adult male testes weights) (MacKenzie and Angevine 1981).

8 Copper

Copper is a naturally occurring and ubiquitous metal found throughout Earth's crust. While low levels of copper are important for good health (copper is an essential element for plants and animals, including humans), high levels of copper can be harmful to health or the environment. Copper is extensively mined in the United States to produce various products, including electrical wires, plumbing components, and alloys used in other products. Additionally, copper compounds are used in agricultural settings (e.g., for treating plant diseases such as mildew), for water treatment, and as a preservative in products such as wood and fabrics (ATSDR 2004).

Copper can enter the environment through human activities, including mining, smelting, and releases of waste water, and through natural sources such as volcanoes or forest fires. Copper found in the environment is usually associated with organic material or other soil/sediment components such as clay or sand. Once released into the environment, copper does not break down, meaning that once it enters the water, it builds up in the sediments of lakes and rivers; it can be found in high concentrations in animal species (ATSDR 2004).

8.1 Fish

Adverse effects, including reduced growth and survival, were reported in toxicological studies of five fish species (Atlantic salmon, channel catfish, rainbow trout, rockfish, and grey mullet) following dietary exposure to copper. A reduction in growth was reported in a study of rockfish and grey mullet, decreased weight was reported in a study of channel catfish fingerlings, and decreased survival was reported in a study of rainbow trout (Berntssen et al. 1999a, b; Baker et al. 1998; Handy 1992, 1993; Kamunde et al. 2001; Kang et al. 2005; Lanno et al. 1985a, b; Lundebye et al. 1999; Miller et al. 1993; Mount et al. 1994; Murai et al. 1981).

8.2 Birds

A review of laboratory studies using birds found that adverse effects on growth and survival were observed as a result of dietary exposure to copper. In studies of young chicks exposed to copper, reduced growth was observed during subchronic exposures (25 days), and reduced growth and survival were observed during chronic exposure (10 weeks) (Mehring et al. 1960; Persia et al. 2004; Dozier et al. 2003; Smith 1969; Balevi and Coskun 2004; Lien et al. 2004; Poupoulis and Jensen 1976).

8.3 Mammals

The exposure of mammals to copper has been reported to adversely affect reproduction, growth, and survival. Effects of exposure to copper include decreased growth for mice, reduced reproduction (reduced kit survival) for mink, and reduced growth for rats

(NTP 1993; Aulerich et al. 1982; Dodds-Smith et al. 1992). Of the three species examined in these studies (mink, rats, and mice), mink were determined to be the species that was most sensitive to copper exposure.

9 Lead

Lead is a naturally occurring metal found in Earth's crust. Lead can be found throughout the environment, largely as a result of anthropogenic activities such as mining, burning of fossil fuels, and various manufacturing processes. Lead is currently mined in the United States for use in products such as pipes,batteries, and ammunition. The use of lead in other products (e.g., caulking materials and pigments for paints and ceramic glazes) has been greatly reduced due to health concerns associated with exposure to lead. Historically, lead has been used in pesticides in fruit orchards (starting in the early 1900s) and as an additive to gasoline (between 1950 and 2000) to increase engine efficiency; both of these uses occurred worldwide (ATSDR 2007).

Once lead enters the environment, its particulates in the air are subject to atmospheric transport and deposition, allowing lead to enter sediment, soil, or surface water. Lead strongly sorbs to soil and sediment and generally will not leach into subsurface soil and groundwater. Lead in surface water exists primarily in an undissolved phase (i.e., as lead carbonate, lead oxide, and lead hydroxide) (ATSDR 2007).

Biomagnification of lead in plants and animals is not expected, but lead uptake in plants and animals can occur as a result of exposure. In aquatic environments benthic organisms and algae have the highest lead concentrations; higher-trophic-level species may experience toxic effects as a result of increased lead concentrations in the diet (ATSDR 2007).

9.1 Fish

Mount et al. (1994) reported adverse effects on survival and growth (body weight and length) in rainbow trout fry exposed to lead via dietary uptake. Sublethal concentrations of lead can accumulate in blood and tissues, and higher-trophic-level organisms may experience adverse effects as a result of consuming prey with accumulated lead concentrations (ATSDR 2007).

9.2 Birds

Adverse effects on birds as a result of dietary exposure to lead have been studied for a variety of bird species, including domesticated birds (chicken and Japanese quail) and non-domesticated birds (American kestrel, mallard, and ringed turtledove) (Kendall and Scanlon 1982; Hoffman et al. 1985; Pattee 1984; Edens et al. 1976). These studies found decreased reproductive success in Japanese quail based on decreases in egg production and hatchability (Morgan et al. 1975; Edens et al. 1976). Numerous laboratory studies found other adverse effects, including damage to the nervous system, muscular paralysis, kidney and liver damage, internal lesions, enlarged gall bladder, anemia, reduced brain weight, and abnormal skeletal development, all of which cause a decrease in survival (Eisler 1988).

9.3 MAMMALS

The exposure of mammals to high concentrations of lead in the diet has been reported to cause anemia, weight loss, muscle atrophy, paralysis, brain damage, mortality, and reproductive effects (Eisler 1988). Toxicity studies on dietary exposure to lead in mammal species (mouse and rat) reported adverse effects on reproduction, growth, and behavior. These effects included decreased offspring survival, decreased litter size, decreased offspring weight, decreased adult body weight, and decreased liver and kidney weight (Odenbro and Kihlstrom 1977; Schroeder and Mitchener 1971; Overmann 1977; Azar et al. 1973; Wise 1981; Iavicoli et al. 2006).

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APPENDIX G. HQ CALCULATIONS

Amphibian/reptile Surface Water HQs

COPEC	Units	EPC	Freshwater (RM 4-17.4)			
			Acute TRV		Chronic TRV	
			TRV	HQ	TRV	HQ
Chromium (dissolved)	µg/l	1.2	2830	0.00042	1940	0.00062
Copper (dissolved)	µg/l	3.1	12	0.26	7.7	0.40
Lead (dissolved)	µg/l	1.8	28	0.064	2.8	0.64
Mercury (dissolved)	ng/l	13	580	0.022	310	0.042
Nickel (dissolved)	µg/l	1.4	240	0.0058	27	0.052
Silver (dissolved	µg/l	0.026	1.5	0.017	0.59	0.044
Zinc (dissolved)	µg/l	8.5	260	0.033	50	0.17

COPEC - chemical of potential ecological concern
EPC - Exposure point concentration
HQ - hazard quotient
TRV - toxicity reference value

Aquatic Plant Surface Sediment HQs

COPEC	Units	EPC		Sediment	HQ	
		Mean	UCL	TRV	Mean	UCL
Antimony	mg/kg	0.98	1.1	5	0.20	0.22
Arsenic	mg/kg	7.6	9.6	18	0.42	0.53
Cadmium	mg/kg	3.7	4.9	32	0.12	0.15
Chromium	mg/kg	120	160	1	**120**	**160**
Cobalt	mg/kg	7.2	7.5	13	0.55	0.58
Copper	mg/kg	140	170	70	**2.0**	**2.4**
Lead	mg/kg	230	270	120	**1.9**	**2.3**
Mercury	ug/kg	2,200	2,900	300	**7.3**	**9.7**
Nickel	mg/kg	28	32	38	0.74	0.84
Selenium	mg/kg	0.95	0.93	0.52	**1.8**	**1.8**
Vanadium	mg/kg	24	27	2	**12**	**14**
Zinc	mg/kg	420	490	160	**2.6**	**3.1**
Acenaphthene	µg/kg	1,000	2,600	25000	0.040	0.10

Aquatic Plant Surface Water HQs

COPEC	Units	Estuarine (RM 0 to RM 13)				Freshwater (RM 4-17.4)			
		EPC		Marine TRV		EPC		FW TRV	
		EPC	type	TRV	HQ	EPC	type	TRV	HQ
Cadmium (dissolved)	µg/l	0.043	UCL	5.2	0.0083	0.035	UCL	1.7	0.021
Chromium (dissolved)	µg/l	0.89	UCL	103	0.0086	1.2	UCL	3.5	0.34
Copper (dissolved)	µg/l	2.61	UCL	4.1	0.64	3.1	UCL	1.7	**1.8**
Lead (dissolved)	µg/l	1.2	UCL	83	0.014	1.8	UCL	251	0.0072
Mercury (dissolved)	ng/l	9	UCL	10700	0.00084	--	--	--	--
Zinc (dissolved)	µg/l	7.5	UCL	0.35	**21**	8.5	UCL	25	0.34
Tributyltin	µg/l	0.026	Max	0.023	**1.1**	0.026	Max	0.00052	**50**
Total PCB Congeners	ng/l	25.5	UCL	100	0.26	--	--	--	--
Cyanide	mg/l	0.01	UCL	0.0049	**2.0**	--	--	--	--

Note 1: "–" indicates no TRV available

Great Blue Heron - Diet Scenario 1

Dietary dose (mg/kg bw/d) = (([Csw*WIR] + [Cprey*FIR] + [Csed*SIR])/BW) *SUF

WIR (L/day)	0.1000
FIR (kg ww/day)	0.40
SIR (kg dw/day)	0.00081
BW (kg)	2.3
SUF	1

Diet	Fractions
0-13 cm fish	1

COPEC	Prey: Fish (≤ 13 cm) $C_{0\text{-}13,\ ww}$	Prey: Fish (≤ 13 cm) Exposure Area	Prey: $C_{prey,ww}$	Prey: $C_{prey,ww}$ (units)	Surface Water: C_{sw}	Surface Water: C_{sw} (units)	Surface Water: Exposure Area	Sediment: $C_{sed,dw}$	Sediment: $C_{sed,dw}$ (units)	Sediment: Exposure Area	Dose: C_{dose} (units)	Dose: C_{dose} (units)	Range of T: TRV-A[a] NOAEL	Range of T: TRV-A[a] LOAEL	Range of T: TRV- NOAEL
Site-wide															
Cadmium	0.039	Site-wide	0.039	mg/kg	0.00017	mg/l	RM ≥ 4	5.2	mg/kg	Site-wide mudflats	0.009	mg/kg bw/day	0.4	4	0.08
Chromium	11	Site-wide	11	mg/kg	0.0048	mg/l	RM ≥ 4	190	mg/kg	Site-wide mudflats	2.0	mg/kg bw/day	10.5	105	-
Copper	3.2	Site-wide	3.2	mg/kg	0.011	mg/l	RM ≥ 4	190	mg/kg	Site-wide mudflats	0.62	mg/kg bw/day	1.9	19	2.3
Lead	2.3	Site-wide	2.3	mg/kg	0.0122	mg/l	RM ≥ 4	320	mg/kg	Site-wide mudflats	0.51	mg/kg bw/day	5.5	28	0.19
Methyl mercury	55	Site-wide	55	µg/kg	0.00044	µg/l	RM ≥ 4	5.3	µg/kg	Site-wide mudflats	9.6	µg/kg bw/day	9.6	96	13
Nickel	7.1	Site-wide	7.1	mg/kg	0.00239	mg/l	RM ≥ 4	34	mg/kg	Site-wide mudflats	1.2	mg/kg bw/day	15	33	1.38
Selenium	0.67	Site-wide	0.67	mg/kg	0.00067	mg/l	RM ≥ 4	1.2	mg/kg	Site-wide mudflats	0.12	mg/kg bw/day	0.42	0.82	0.23
Vanadium	0.72	Site-wide	0.72	mg/kg	0.0033	mg/l	RM ≥ 4	28	mg/kg	Site-wide mudflats	0.14	mg/kg bw/day	1.2	2.3	-
Zinc	42.4	Site-wide	42.4	mg/kg	0.029	mg/l	RM ≥ 4	590	mg/kg	Site-wide mudflats	7.6	mg/kg bw/day	82	124	17.2
Benzo(a)pyrene	32	Site-wide	32	µg/kg	0.0953	µg/l	RM ≥ 4	4000	µg/kg	Site-wide mudflats	7.0	µg/kg bw/day	140	1400	-
Total HPAHs	440	Site-wide	440	µg/kg	0.961	µg/l	RM ≥ 4	35000	µg/kg	Site-wide mudflats	89	µg/kg bw/day	-	-	48
Total LPAHs	110	Site-wide	110	µg/kg	0.178	µg/l	RM ≥ 4	8100	µg/kg	Site-wide mudflats	22	µg/kg bw/day	-	-	670
Total PAHs	470	Site-wide	470	µg/kg	1.1	µg/l	RM ≥ 4	43000	µg/kg	Site-wide mudflats	97	µg/kg bw/day	40000	-	-
Total PCB Congeners	560	Site-wide	560	µg/kg	0.034	µg/l	RM ≥ 4	2900	µg/kg	Site-wide mudflats	98	µg/kg bw/day	140	1400	400
PCB TEQ-Bird	52	Site-wide	52	ng/kg	0.00609	ng/l	RM ≥ 4	770	ng/kg	Site-wide mudflats	9.3	ng/kg bw/day	14	140	2.8
PCDD/PCDF TEQ-Bird	48	Site-wide	48	ng/kg	0.111	ng/l	RM ≥ 4	2900	ng/kg	Site-wide mudflats	9.4	ng/kg bw/day	14	140	2.8
Total TEQ-Bird	96	Site-wide	96	ng/kg	0.116	ng/l	RM ≥ 4	3500	ng/kg	Site-wide mudflats	18	ng/kg bw/day	14	140	2.8
Total DDx	62	Site-wide	62	µg/kg	0.00478	µg/l	RM ≥ 4	230	µg/kg	Site-wide mudflats	11	µg/kg bw/day	25	250	0.9
Reach 1															
Cadmium	0.02	Reach 1	0.02	mg/kg	0.00026	mg/l	Reach 3	2.8	mg/kg	Reach 1	0.0045	mg/kg bw/day	0.4	4	0.08
Chromium	4.9	Reach 1	4.9	mg/kg	0.00732	mg/l	Reach 3	120	mg/kg	Reach 1	0.89	mg/kg bw/day	10.5	105	-
Copper	2.9	Reach 1	2.9	mg/kg	0.0142	mg/l	Reach 3	150	mg/kg	Reach 1	0.56	mg/kg bw/day	1.9	19	2.3
Lead	0.77	Reach 1	0.77	mg/kg	0.0137	mg/l	Reach 3	180	mg/kg	Reach 1	0.20	mg/kg bw/day	5.5	28	0.19
Methyl mercury	69	Reach 1	69	µg/kg	0.0004	µg/l	Reach 3	2.9	µg/kg	Reach 1	12	µg/kg bw/day	9.6	96	13
Nickel	3.1	Reach 1	3.1	mg/kg	0.00272	mg/l	Reach 3	31	mg/kg	Reach 1	0.55	mg/kg bw/day	15	33	1.38
Selenium	0.64	Reach 1	0.64	mg/kg	0.00091	mg/l	Reach 3	1.5	mg/kg	Reach 1	0.11	mg/kg bw/day	0.42	0.82	0.23
Vanadium	0.51	Reach 1	0.51	mg/kg	0.0042	mg/l	Reach 3	30	mg/kg	Reach 1	0.10	mg/kg bw/day	1.2	2.3	-
Zinc	48.2	Reach 1	48.2	mg/kg	0.03	mg/l	Reach 3	420	mg/kg	Reach 1	8.5	mg/kg bw/day	82	124	17.2
Benzo(a)pyrene	7	Reach 1	7	µg/kg	0.182	µg/l	Reach 3	3600	µg/kg	Reach 1	2.5	µg/kg bw/day	140	1400	-
Total HPAHs	68	Reach 1	68	µg/kg	1.23	µg/l	Reach 3	28000	µg/kg	Reach 1	22	µg/kg bw/day	-	-	48
Total LPAHs	35	Reach 1	35	µg/kg	0.21	µg/l	Reach 3	4900	µg/kg	Reach 1	7.8	µg/kg bw/day	-	-	670
Total PAHs	100	Reach 1	100	µg/kg	1.4	µg/l	Reach 3	33000	µg/kg	Reach 1	29	µg/kg bw/day	40000	-	-
Total PCB Congeners	340	Reach 1	340	µg/kg	0.0424	µg/l	Reach 3	1500	µg/kg	Reach 1	60	µg/kg bw/day	140	1400	400
PCB TEQ-Bird	23	Reach 1	23	ng/kg	0.00719	ng/l	Reach 3	440	ng/kg	Reach 1	4.2	ng/kg bw/day	14	140	2.8
PCDD/PCDF TEQ-Bird	17	Reach 1	17	ng/kg	0.291	ng/l	Reach 3	1200	ng/kg	Reach 1	3.4	ng/kg bw/day	14	140	2.8
Total TEQ-Bird	40	Reach 1	40	ng/kg	0.227	ng/l	Reach 3	1100	ng/kg	Reach 1	7.4	ng/kg bw/day	14	140	2.8

Great Blue Heron - Diet Scenario 1

Dietary dose (mg/kg bw/d) = (([Csw*WIR] + [Cprey*FIR] + [Csed*SIR])/BW) *SUF

WIR (L/day)	0.1000
FIR (kg ww/day)	0.40
SIR (kg dw/day)	0.00081
BW (kg)	2.3
SUF	1

Diet	Fractions
0-13 cm fish	1

COPEC	Prey: Fish (≤ 13 cm) $C_{0\text{-}13,\ ww}$	Prey: Fish (≤ 13 cm) Exposure Area	Prey: $C_{prey,ww}$	Prey: $C_{prey,ww}$ (units)	Surface Water: C_{sw}	Surface Water: C_{sw} (units)	Surface Water: Exposure Area	Sediment: $C_{sed,dw}$	Sediment: $C_{sed,dw}$ (units)	Sediment: Exposure Area	Dose: C_{dose} (units)	Dose: C_{dose} (units)	Range of T: TRV-A[a] NOAEL	Range of T: TRV-A[a] LOAEL	Range of T: TRV- NOAEL
Total DDx	32	Reach 1	32	µg/kg	0.00597	µg/l	Reach 3	110	µg/kg	Reach 1	5.6	µg/kg bw/day	25	250	0.9
Reach 2															
Cadmium	0.019	Reach 2	0.019	mg/kg	0.00026	mg/l	Reach 3	3.3	mg/kg	Reach 2	0.0045	mg/kg bw/day	0.4	4	0.08
Chromium	4.6	Reach 2	4.6	mg/kg	0.00732	mg/l	Reach 3	112	mg/kg	Reach 2	0.84	mg/kg bw/day	10.5	105	-
Copper	3.1	Reach 2	3.1	mg/kg	0.0142	mg/l	Reach 3	159	mg/kg	Reach 2	0.60	mg/kg bw/day	1.9	19	2.3
Lead	0.68	Reach 2	0.68	mg/kg	0.0137	mg/l	Reach 3	210	mg/kg	Reach 2	0.19	mg/kg bw/day	5.5	28	0.19
Methyl mercury	65	Reach 2	65	µg/kg	0.0004	µg/l	Reach 3	4.4	µg/kg	Reach 2	11	µg/kg bw/day	9.6	96	13
Nickel	3.4	Reach 2	3.4	mg/kg	0.00272	mg/l	Reach 3	34	mg/kg	Reach 2	0.60	mg/kg bw/day	15	33	1.38
Selenium	0.81	Reach 2	0.81	mg/kg	0.00091	mg/l	Reach 3	1.5	mg/kg	Reach 2	0.14	mg/kg bw/day	0.42	0.82	0.23
Vanadium	0.36	Reach 2	0.36	mg/kg	0.0042	mg/l	Reach 3	31	mg/kg	Reach 2	0.07	mg/kg bw/day	1.2	2.3	-
Zinc	47.7	Reach 2	47.7	mg/kg	0.03	mg/l	Reach 3	469	mg/kg	Reach 2	8.5	mg/kg bw/day	82	124	17.2
Benzo(a)pyrene	7.7	Reach 2	7.7	µg/kg	0.182	µg/l	Reach 3	3700	µg/kg	Reach 2	2.7	µg/kg bw/day	140	1400	-
Total HPAHs	61	Reach 2	61	µg/kg	1.23	µg/l	Reach 3	30000	µg/kg	Reach 2	21	µg/kg bw/day	-	-	48
Total LPAHs	33	Reach 2	33	µg/kg	0.21	µg/l	Reach 3	3800	µg/kg	Reach 2	7.1	µg/kg bw/day	-	-	670
Total PAHs	93	Reach 2	93	µg/kg	1.4	µg/l	Reach 3	34000	µg/kg	Reach 2	28	µg/kg bw/day	40000	-	-
Total PCB Congeners	430	Reach 2	430	µg/kg	0.0424	µg/l	Reach 3	3000	µg/kg	Reach 2	76	µg/kg bw/day	140	1400	400
PCB TEQ-Bird	33	Reach 2	33	ng/kg	0.00719	ng/l	Reach 3	570	ng/kg	Reach 2	5.9	ng/kg bw/day	14	140	2.8
PCDD/PCDF TEQ-Bird	28	Reach 2	28	ng/kg	0.291	ng/l	Reach 3	1300	ng/kg	Reach 2	5.3	ng/kg bw/day	14	140	2.8
Total TEQ-Bird	60	Reach 2	60	ng/kg	0.227	ng/l	Reach 3	1800	ng/kg	Reach 2	11	ng/kg bw/day	14	140	2.8
Total DDx	49	Reach 2	49	µg/kg	0.00597	µg/l	Reach 3	330	µg/kg	Reach 2	8.6	µg/kg bw/day	25	250	0.9
Reach 3															
Cadmium	0.053	Reach 3	0.053	mg/kg	0.00026	mg/l	Reach 3	5.3	mg/kg	Reach 3	0.011	mg/kg bw/day	0.4	4	0.08
Chromium	7.1	Reach 3	7.1	mg/kg	0.00732	mg/l	Reach 3	250	mg/kg	Reach 3	1.3	mg/kg bw/day	10.5	105	-
Copper	3.5	Reach 3	3.5	mg/kg	0.0142	mg/l	Reach 3	220	mg/kg	Reach 3	0.69	mg/kg bw/day	1.9	19	2.3
Lead	1.7	Reach 3	1.7	mg/kg	0.0137	mg/l	Reach 3	309	mg/kg	Reach 3	0.41	mg/kg bw/day	5.5	28	0.19
Methyl mercury	64	Reach 3	64	µg/kg	0.0004	µg/l	Reach 3	6	µg/kg	Reach 3	11	µg/kg bw/day	9.6	96	13
Nickel	4.8	Reach 3	4.8	mg/kg	0.00272	mg/l	Reach 3	52.8	mg/kg	Reach 3	0.85	mg/kg bw/day	15	33	1.38
Selenium	0.89	Reach 3	0.89	mg/kg	0.00091	mg/l	Reach 3	1.6	mg/kg	Reach 3	0.16	mg/kg bw/day	0.42	0.82	0.23
Vanadium	0.79	Reach 3	0.79	mg/kg	0.0042	mg/l	Reach 3	31	mg/kg	Reach 3	0.15	mg/kg bw/day	1.2	2.3	-
Zinc	43.5	Reach 3	43.5	mg/kg	0.03	mg/l	Reach 3	670	mg/kg	Reach 3	7.8	mg/kg bw/day	82	124	17.2
Benzo(a)pyrene	19	Reach 3	19	µg/kg	0.182	µg/l	Reach 3	4000	µg/kg	Reach 3	4.7	µg/kg bw/day	140	1400	-
Total HPAHs	180	Reach 3	180	µg/kg	1.23	µg/l	Reach 3	35000	µg/kg	Reach 3	44	µg/kg bw/day	-	-	48
Total LPAHs	85	Reach 3	85	µg/kg	0.21	µg/l	Reach 3	5100	µg/kg	Reach 3	17	µg/kg bw/day	-	-	670
Total PAHs	260	Reach 3	260	µg/kg	1.4	µg/l	Reach 3	41000	µg/kg	Reach 3	60	µg/kg bw/day	40000	-	-
Total PCB Congeners	860	Reach 3	860	µg/kg	0.0424	µg/l	Reach 3	1600	µg/kg	Reach 3	150	µg/kg bw/day	140	1400	400
PCB TEQ-Bird	58	Reach 3	58	ng/kg	0.00719	ng/l	Reach 3	390	ng/kg	Reach 3	10	ng/kg bw/day	14	140	2.8
PCDD/PCDF TEQ-Bird	58	Reach 3	58	ng/kg	0.291	ng/l	Reach 3	550	ng/kg	Reach 3	10	ng/kg bw/day	14	140	2.8
Total TEQ-Bird	120	Reach 3	120	ng/kg	0.227	ng/l	Reach 3	930	ng/kg	Reach 3	21	ng/kg bw/day	14	140	2.8
Total DDx	100	Reach 3	100	µg/kg	0.00597	µg/l	Reach 3	110	µg/kg	Reach 3	17	µg/kg bw/day	25	250	0.9

Great Blue Heron - Diet Scenario 1

Dietary dose (mg/kg bw/d) = (([Csw*WIR] + [Cprey*FIR] + [Csed*SIR])/BW) *SUF

WIR (L/day)	0.1000
FIR (kg ww/day)	0.40
SIR (kg dw/day)	0.00081
BW (kg)	2.3
SUF	1

Diet	Fractions
0-13 cm fish	1

COPEC	Prey: Fish (≤ 13 cm) $C_{0\text{-}13,\ ww}$	Prey: Fish (≤ 13 cm) Exposure Area	Prey: $C_{prey,ww}$	Prey: $C_{prey,ww}$ (units)	Surface Water: C_{sw}	Surface Water: C_{sw} (units)	Surface Water: Exposure Area	Sediment: $C_{sed,dw}$	Sediment: $C_{sed,dw}$ (units)	Sediment: Exposure Area	Dose: C_{dose} (units)	Dose: C_{dose} (units)	Range of T: TRV-A[a] NOAEL	Range of T: TRV-A[a] LOAEL	Range of T: TRV- NOAEL
Reach 4															
Cadmium	0.099	Reach 4	0.099	mg/kg	0.00027	mg/l	Reach 4	11	mg/kg	Reach 4	0.021	mg/kg bw/day	0.4	4	0.08
Chromium	12.2	Reach 4	12.2	mg/kg	0.00567	mg/l	Reach 4	360	mg/kg	Reach 4	2.2	mg/kg bw/day	10.5	105	-
Copper	5.4	Reach 4	5.4	mg/kg	0.0152	mg/l	Reach 4	300	mg/kg	Reach 4	1.0	mg/kg bw/day	1.9	19	2.3
Lead	4.9	Reach 4	4.9	mg/kg	0.0144	mg/l	Reach 4	407	mg/kg	Reach 4	1.0	mg/kg bw/day	5.5	28	0.19
Methyl mercury	33	Reach 4	33	µg/kg	0.000413	µg/l	Reach 4	7.2	µg/kg	Reach 4	5.7	µg/kg bw/day	9.6	96	13
Nickel	6.6	Reach 4	6.6	mg/kg	0.0026	mg/l	Reach 4	52.2	mg/kg	Reach 4	1.2	mg/kg bw/day	15	33	1.38
Selenium	0.7	Reach 4	0.7	mg/kg	0.00069	mg/l	Reach 4	1.6	mg/kg	Reach 4	0.12	mg/kg bw/day	0.42	0.82	0.23
Vanadium	1.3	Reach 4	1.3	mg/kg	0.0037	mg/l	Reach 4	44	mg/kg	Reach 4	0.24	mg/kg bw/day	1.2	2.3	-
Zinc	44.1	Reach 4	44.1	mg/kg	0.03	mg/l	Reach 4	1100	mg/kg	Reach 4	8.1	mg/kg bw/day	82	124	17.2
Benzo(a)pyrene	98	Reach 4	98	µg/kg	0.153	µg/l	Reach 4	6500	µg/kg	Reach 4	19	µg/kg bw/day	140	1400	-
Total HPAHs	1000	Reach 4	1000	µg/kg	1.17	µg/l	Reach 4	55000	µg/kg	Reach 4	193	µg/kg bw/day	-	-	48
Total LPAHs	190	Reach 4	190	µg/kg	0.195	µg/l	Reach 4	12000	µg/kg	Reach 4	37	µg/kg bw/day	-	-	670
Total PAHs	1200	Reach 4	1200	µg/kg	1.4	µg/l	Reach 4	73000	µg/kg	Reach 4	234	µg/kg bw/day	40000	-	-
Total PCB Congeners	930	Reach 4	930	µg/kg	0.0323	µg/l	Reach 4	7800	µg/kg	Reach 4	164	µg/kg bw/day	140	1400	400
PCB TEQ-Bird	73	Reach 4	73	ng/kg	0.00651	ng/l	Reach 4	1700	ng/kg	Reach 4	13	ng/kg bw/day	14	140	2.8
PCDD/PCDF TEQ-Bird	84	Reach 4	84	ng/kg	0.266	ng/l	Reach 4	16000	ng/kg	Reach 4	20	ng/kg bw/day	14	140	2.8
Total TEQ-Bird	160	Reach 4	160	ng/kg	0.274	ng/l	Reach 4	18000	ng/kg	Reach 4	34	ng/kg bw/day	14	140	2.8
Total DDx	86	Reach 4	86	µg/kg	0.00643	µg/l	Reach 4	570	µg/kg	Reach 4	15	µg/kg bw/day	25	250	0.9
Reach 5															
Cadmium	0.052	Reach 5	0.052	mg/kg	0.000081	mg/l	Reach 5	5.2	mg/kg	Reach 5	0.011	mg/kg bw/day	0.4	4	0.08
Chromium	23.2	Reach 5	23.2	mg/kg	0.00337	mg/l	Reach 5	140	mg/kg	Reach 5	4.1	mg/kg bw/day	10.5	105	-
Copper	3.8	Reach 5	3.8	mg/kg	0.0052	mg/l	Reach 5	178	mg/kg	Reach 5	0.72	mg/kg bw/day	1.9	19	2.3
Lead	3.1	Reach 5	3.1	mg/kg	0.00753	mg/l	Reach 5	366	mg/kg	Reach 5	0.67	mg/kg bw/day	5.5	28	0.19
Methyl mercury	25	Reach 5	25	µg/kg	0.000289	µg/l	Reach 5	23	µg/kg	Reach 5	4.4	µg/kg bw/day	9.6	96	13
Nickel	15.8	Reach 5	15.8	mg/kg	0.00223	mg/l	Reach 5	29	mg/kg	Reach 5	2.8	mg/kg bw/day	15	33	1.38
Selenium	0.81	Reach 5	0.81	mg/kg	0.001	mg/l	Reach 5	0.93	mg/kg	Reach 5	0.14	mg/kg bw/day	0.42	0.82	0.23
Vanadium	1.1	Reach 5	1.1	mg/kg	0.0053	mg/l	Reach 5	30	mg/kg	Reach 5	0.20	mg/kg bw/day	1.2	2.3	-
Zinc	42.3	Reach 5	42.3	mg/kg	0.0111	mg/l	Reach 5	880	mg/kg	Reach 5	7.7	mg/kg bw/day	82	124	17.2
Benzo(a)pyrene	48	Reach 5	48	µg/kg	0.0421	µg/l	Reach 5	3900	µg/kg	Reach 5	10	µg/kg bw/day	140	1400	-
Total HPAHs	480	Reach 5	480	µg/kg	0.484	µg/l	Reach 5	38000	µg/kg	Reach 5	97	µg/kg bw/day	-	-	48
Total LPAHs	120	Reach 5	120	µg/kg	0.0744	µg/l	Reach 5	5600	µg/kg	Reach 5	23	µg/kg bw/day	-	-	670
Total PAHs	600	Reach 5	600	µg/kg	0.558	µg/l	Reach 5	44000	µg/kg	Reach 5	120	µg/kg bw/day	40000	-	-
Total PCB Congeners	710	Reach 5	710	µg/kg	0.0279	µg/l	Reach 5	4000	µg/kg	Reach 5	125	µg/kg bw/day	140	1400	400
PCB TEQ-Bird	72	Reach 5	72	ng/kg	0.00436	ng/l	Reach 5	2300	ng/kg	Reach 5	13	ng/kg bw/day	14	140	2.8
PCDD/PCDF TEQ-Bird	110	Reach 5	110	ng/kg	0.0228	ng/l	Reach 5	1600	ng/kg	Reach 5	20	ng/kg bw/day	14	140	2.8
Total TEQ-Bird	170	Reach 5	170	ng/kg	0.0271	ng/l	Reach 5	2100	ng/kg	Reach 5	30	ng/kg bw/day	14	140	2.8
Total DDx	81	Reach 5	81	µg/kg	0.00377	µg/l	Reach 5	260	µg/kg	Reach 5	14	µg/kg bw/day	25	250	0.9
Reach 6															

Great Blue Heron - Diet Scenario 1

Dietary dose (mg/kg bw/d) = (([Csw*WIR] + [Cprey*FIR] + [Csed*SIR])/BW) *SUF

WIR (L/day)	0.1000
FIR (kg ww/day)	0.40
SIR (kg dw/day)	0.00081
BW (kg)	2.3
SUF	1

Diet	Fractions
0-13 cm fish	1

COPEC	Prey: Fish (≤ 13 cm) $C_{0\text{-}13,\ ww}$	Prey: Fish (≤ 13 cm) Exposure Area	Prey: $C_{prey,ww}$	Prey: $C_{prey,ww}$ (units)	Surface Water: C_{sw}	Surface Water: C_{sw} (units)	Surface Water: Exposure Area	Sediment: $C_{sed,dw}$	Sediment: $C_{sed,dw}$ (units)	Sediment: Exposure Area	Dose: C_{dose} (units)	Dose: C_{dose} (units)	Range of T: TRV-A[a] NOAEL	Range of T: TRV-A[a] LOAEL	Range of T: TRV- NOAEL
Cadmium	0.051	Reach 6	0.051	mg/kg	0.00013	mg/l	Reach 6	5.1	mg/kg	Reach 6	0.011	mg/kg bw/day	0.4	4	0.08
Chromium	16.4	Reach 6	16.4	mg/kg	0.0067	mg/l	Reach 6	260	mg/kg	Reach 6	2.9	mg/kg bw/day	10.5	105	-
Copper	4.1	Reach 6	4.1	mg/kg	0.00793	mg/l	Reach 6	191	mg/kg	Reach 6	0.78	mg/kg bw/day	1.9	19	2.3
Lead	3.2	Reach 6	3.2	mg/kg	0.00835	mg/l	Reach 6	375	mg/kg	Reach 6	0.69	mg/kg bw/day	5.5	28	0.19
Methyl mercury	31	Reach 6	31	µg/kg	0.00036	µg/l	Reach 6	1.3	µg/kg	Reach 6	5.4	µg/kg bw/day	9.6	96	13
Nickel	9.9	Reach 6	9.9	mg/kg	0.00239	mg/l	Reach 6	30	mg/kg	Reach 6	1.7	mg/kg bw/day	15	33	1.38
Selenium	0.69	Reach 6	0.69	mg/kg	0.00063	mg/l	Reach 6	0.89	mg/kg	Reach 6	0.12	mg/kg bw/day	0.42	0.82	0.23
Vanadium	0.9	Reach 6	0.9	mg/kg	0.0032	mg/l	Reach 6	29	mg/kg	Reach 6	0.17	mg/kg bw/day	1.2	2.3	-
Zinc	40.9	Reach 6	40.9	mg/kg	0.031	mg/l	Reach 6	560	mg/kg	Reach 6	7.3	mg/kg bw/day	82	124	17.2
Benzo(a)pyrene	48	Reach 6	48	µg/kg	0.0854	µg/l	Reach 6	3600	µg/kg	Reach 6	10	µg/kg bw/day	140	1400	-
Total HPAHs	620	Reach 6	620	µg/kg	0.871	µg/l	Reach 6	40000	µg/kg	Reach 6	122	µg/kg bw/day	-	-	48
Total LPAHs	160	Reach 6	160	µg/kg	0.173	µg/l	Reach 6	11000	µg/kg	Reach 6	32	µg/kg bw/day	-	-	670
Total PAHs	780	Reach 6	780	µg/kg	1	µg/l	Reach 6	50000	µg/kg	Reach 6	153	µg/kg bw/day	40000	-	-
Total PCB Congeners	450	Reach 6	450	µg/kg	0.0223	µg/l	Reach 6	6800	µg/kg	Reach 6	81	µg/kg bw/day	140	1400	400
PCB TEQ-Bird	43	Reach 6	43	ng/kg	0.00387	ng/l	Reach 6	1700	ng/kg	Reach 6	8.1	ng/kg bw/day	14	140	2.8
PCDD/PCDF TEQ-Bird	41	Reach 6	41	ng/kg	0.0168	ng/l	Reach 6	4900	ng/kg	Reach 6	8.9	ng/kg bw/day	14	140	2.8
Total TEQ-Bird	82	Reach 6	82	ng/kg	0.015	ng/l	Reach 6	6600	ng/kg	Reach 6	17	ng/kg bw/day	14	140	2.8
Total DDx	67	Reach 6	67	µg/kg	0.00397	µg/l	Reach 6	210	µg/kg	Reach 6	12	µg/kg bw/day	25	250	0.9
Reach 7															
Cadmium	0.048	Reach 7	0.048	mg/kg	0.00013	mg/l	Reach 6	2.4	mg/kg	Reach 7	0.0092	mg/kg bw/day	0.4	4	0.08
Chromium	4.3	Reach 7	4.3	mg/kg	0.0067	mg/l	Reach 6	65.1	mg/kg	Reach 7	0.77	mg/kg bw/day	10.5	105	-
Copper	3.6	Reach 7	3.6	mg/kg	0.00793	mg/l	Reach 6	77.6	mg/kg	Reach 7	0.65	mg/kg bw/day	1.9	19	2.3
Lead	2.5	Reach 7	2.5	mg/kg	0.00835	mg/l	Reach 6	211	mg/kg	Reach 7	0.51	mg/kg bw/day	5.5	28	0.19
Methyl mercury	17	Reach 7	17	µg/kg	0.00036	µg/l	Reach 6	1.3	µg/kg	Reach 7	3.0	µg/kg bw/day	9.6	96	13
Nickel	3	Reach 7	3	mg/kg	0.00239	mg/l	Reach 6	19.5	mg/kg	Reach 7	0.53	mg/kg bw/day	15	33	1.38
Selenium	0.3	Reach 7	0.3	mg/kg	0.00063	mg/l	Reach 6	0.4	mg/kg	Reach 7	0.052	mg/kg bw/day	0.42	0.82	0.23
Vanadium	0.68	Reach 7	0.68	mg/kg	0.0032	mg/l	Reach 6	25.6	mg/kg	Reach 7	0.13	mg/kg bw/day	1.2	2.3	-
Zinc	25	Reach 7	25	mg/kg	0.031	mg/l	Reach 6	314	mg/kg	Reach 7	4.5	mg/kg bw/day	82	124	17.2
Benzo(a)pyrene	28	Reach 7	28	µg/kg	0.0854	µg/l	Reach 6	1770	µg/kg	Reach 7	5.5	µg/kg bw/day	140	1400	-
Total HPAHs	340	Reach 7	340	µg/kg	0.871	µg/l	Reach 6	15800	µg/kg	Reach 7	65	µg/kg bw/day	-	-	48
Total LPAHs	85	Reach 7	85	µg/kg	0.173	µg/l	Reach 6	3260	µg/kg	Reach 7	16	µg/kg bw/day	-	-	670
Total PAHs	430	Reach 7	430	µg/kg	1	µg/l	Reach 6	19000	µg/kg	Reach 7	82	µg/kg bw/day	40000	-	-
Total PCB Congeners	250	Reach 7	250	µg/kg	0.0223	µg/l	Reach 6	560	µg/kg	Reach 7	44	µg/kg bw/day	140	1400	400
PCB TEQ-Bird	20	Reach 7	20	ng/kg	0.00387	ng/l	Reach 6	180	ng/kg	Reach 7	3.5	ng/kg bw/day	14	140	2.8
PCDD/PCDF TEQ-Bird	15	Reach 7	15	ng/kg	0.0168	ng/l	Reach 6	370	ng/kg	Reach 7	2.7	ng/kg bw/day	14	140	2.8
Total TEQ-Bird	35	Reach 7	35	ng/kg	0.015	ng/l	Reach 6	540	ng/kg	Reach 7	6.3	ng/kg bw/day	14	140	2.8
Total DDx	29	Reach 7	29	µg/kg	0.00397	µg/l	Reach 6	65	µg/kg	Reach 7	5.1	µg/kg bw/day	25	250	0.9
Reach 8															
Cadmium	0.037	Reach 8	0.037	mg/kg	0.00013	mg/l	Reach 6	1.2	mg/kg	Reach 8	0.0069	mg/kg bw/day	0.4	4	0.08

Great Blue Heron - Diet Scenario 1

Dietary dose (mg/kg bw/d) = (([Csw*WIR] + [Cprey*FIR] + [Csed*SIR])/BW) *SUF

WIR (L/day)	0.1000
FIR (kg ww/day)	0.40
SIR (kg dw/day)	0.00081
BW (kg)	2.3
SUF	1

Diet	Fractions
0-13 cm fish	1

COPEC	Prey: Fish (≤ 13 cm) $C_{0\text{-}13,\ ww}$	Prey: Fish (≤ 13 cm) Exposure Area	Prey: $C_{prey,ww}$	Prey: $C_{prey,ww}$ (units)	Surface Water: C_{sw}	Surface Water: C_{sw} (units)	Surface Water: Exposure Area	Sediment: $C_{sed,dw}$	Sediment: $C_{sed,dw}$ (units)	Sediment: Exposure Area	Dose: C_{dose} (units)	Dose: C_{dose} (units)	Range of T: TRV-A[a] NOAEL	Range of T: TRV-A[a] LOAEL	Range of T: TRV- NOAEL
Chromium	31.7	Reach 8	31.7	mg/kg	0.0067	mg/l	Reach 6	36	mg/kg	Reach 8	5.5	mg/kg bw/day	10.5	105	-
Copper	3.7	Reach 8	3.7	mg/kg	0.00793	mg/l	Reach 6	71	mg/kg	Reach 8	0.67	mg/kg bw/day	1.9	19	2.3
Lead	3.1	Reach 8	3.1	mg/kg	0.00835	mg/l	Reach 6	286	mg/kg	Reach 8	0.6	mg/kg bw/day	5.5	28	0.19
Methyl mercury	29	Reach 8	29	µg/kg	0.00036	µg/l	Reach 6	1.9	µg/kg	Reach 8	5.0	µg/kg bw/day	9.6	96	13
Nickel	22.1	Reach 8	22.1	mg/kg	0.00239	mg/l	Reach 6	13	mg/kg	Reach 8	3.8	mg/kg bw/day	15	33	1.38
Selenium	0.76	Reach 8	0.76	mg/kg	0.00063	mg/l	Reach 6	0.48	mg/kg	Reach 8	0.13	mg/kg bw/day	0.42	0.82	0.23
Vanadium	1.1	Reach 8	1.1	mg/kg	0.0032	mg/l	Reach 6	14	mg/kg	Reach 8	0.20	mg/kg bw/day	1.2	2.3	-
Zinc	48	Reach 8	48	mg/kg	0.031	mg/l	Reach 6	445	mg/kg	Reach 8	8.5	mg/kg bw/day	82	124	17.2
Benzo(a)pyrene	63	Reach 8	63	µg/kg	0.0854	µg/l	Reach 6	4900	µg/kg	Reach 8	13	µg/kg bw/day	140	1400	-
Total HPAHs	860	Reach 8	860	µg/kg	0.871	µg/l	Reach 6	38000	µg/kg	Reach 8	163	µg/kg bw/day	-	-	48
Total LPAHs	370	Reach 8	370	µg/kg	0.173	µg/l	Reach 6	8400	µg/kg	Reach 8	67	µg/kg bw/day	-	-	670
Total PAHs	1100	Reach 8	1100	µg/kg	1	µg/l	Reach 6	45000	µg/kg	Reach 8	207	µg/kg bw/day	40000	-	-
Total PCB Congeners	480	Reach 8	480	µg/kg	0.0223	µg/l	Reach 6	760	µg/kg	Reach 8	84	µg/kg bw/day	140	1400	400
PCB TEQ-Bird	88	Reach 8	88	ng/kg	0.00387	ng/l	Reach 6	86	ng/kg	Reach 8	15	ng/kg bw/day	14	140	2.8
PCDD/PCDF TEQ-Bird	23	Reach 8	23	ng/kg	0.0168	ng/l	Reach 6	15	ng/kg	Reach 8	4.0	ng/kg bw/day	14	140	2.8
Total TEQ-Bird	100	Reach 8	100	ng/kg	0.015	ng/l	Reach 6	95	ng/kg	Reach 8	17	ng/kg bw/day	14	140	2.8
Total DDx	56	Reach 8	56	µg/kg	0.00397	µg/l	Reach 6	25	µg/kg	Reach 8	9.7	µg/kg bw/day	25	250	0.9

Note 1: "–" indicates no TRV available

Note 2: Blue highlighted cells indicate EPC is based on maximium concentration

[a] TRVs derived from the primary literature review based on process identified in Section 8.1.3.1 .

[b] TRVs based on USEPA's LPR restoration project FFS (Louis Berger et al. 2014), USEPA's first draft of the LPR restoration project FFS (Malcolm Pirnie 2007) or USEPA's LPR restoration project PAR (Battelle 2005) .

BW - body weight
COC - chemical of concern
COPEC - chemical of potential ecological concern
FIR - food ingestion rate
LOAEL - Lowest observed adverse effect level
na - not applicable
NFF - non forage fish
NOAEL - No observed adverse effect level
RM - River Mile
SFF - small forage fish
SIR - sediment ingestion rate
SUF - site use factor
UCL HQ = hazard quotient based on the 95th percentile (UCL) concentration
WIR - water ingestion rate

Great Blue Heron - Diet Scenario 1

Dietary dose (mg/kg bw/d) = (([Csw*WIR] + [Cprey*FIR] + [Csed*SIR])/BW) *SUF

WIR (L/day)	0.1000
FIR (kg ww/day)	0.40
SIR (kg dw/day)	0.00081
BW (kg)	2.3
SUF	1

Diet	Fractions
0-13 cm fish	1

COPEC	Prey				Surface Water			Sediment			Dose		Range of T		
	Fish (≤ 13 cm)												TRV-A[a]		TRV-
	$C_{0\text{-}13,\ ww}$	Exposure Area	$C_{prey,ww}$	$C_{prey,ww}$ (units)	C_{sw}	C_{sw} (units)	Exposure Area	$C_{sed,dw}$	$C_{sed,dw}$ (units)	Exposure Area	C_{dose} (units)	C_{dose} (units)	NOAEL	LOAEL	NOAEL

Great Blue Heron - Diet Scenario 1

Dietary dose (mg/kg bw/d) = (([Csw*WIR] + [Cprey*FIR] + [Csed*SIR])/BW) *SUF

WIR (L/day)	0.1000
FIR (kg ww/day)	0.40
SIR (kg dw/day)	0.00081
BW (kg)	2.3
SUF	1

Diet	Fractions
0-13 cm fish	1

COPEC	Prey				Surface Water			Sediment			Dose		Range of T		
	Fish (≤ 13 cm)												TRV-A[a]		TRV-
	$C_{0\text{-}13,\ ww}$	Exposure Area	$C_{prey,ww}$	$C_{prey,ww}$ (units)	C_{sw}	C_{sw} (units)	Exposure Area	$C_{sed,dw}$	$C_{sed,dw}$ (units)	Exposure Area	C_{dose} (units)	C_{dose} (units)	NOAEL	LOAEL	NOAEL

RVs		Range of HQs			
-B[b]		HQ based on TRV-A[a]		HQ based on TRV-B[a]	
LOAEL	TRV units	NOAEL HQ	LOAEL HQ	NOAEL HQ[b]	LOAEL HQ[b]
10.4	mg/kg bw/day	0.022	0.0022	0.11	0.00083
-	mg/kg bw/day	0.19	0.019	-	-
4.7	mg/kg bw/day	0.33	0.033	0.27	0.13
1.9	mg/kg bw/day	0.093	0.018	**2.7**	0.27
26	µg/kg bw/day	**1.0**	0.10	0.74	0.37
56.3	mg/kg bw/day	0.083	0.038	0.90	0.022
0.93	mg/kg bw/day	0.28	0.14	0.51	0.13
-	mg/kg bw/day	0.11	0.059	-	-
172	mg/kg bw/day	0.092	0.061	0.44	0.044
-	µg/kg bw/day	0.050	0.0050	-	-
480	µg/kg bw/day	-	-	**1.9**	0.19
6700	µg/kg bw/day	-	-	0.033	0.0033
-	µg/kg bw/day	0.0024	-	-	-
500	µg/kg bw/day	0.70	0.070	0.25	0.20
28	ng/kg bw/day	0.67	0.067	**3.3**	0.33
28	ng/kg bw/day	0.67	0.067	**3.3**	0.33
28	ng/kg bw/day	**1.3**	0.13	**6.4**	0.64
27	µg/kg bw/day	0.43	0.043	**12**	0.40
10.4	mg/kg bw/day	0.011	0.0011	0.056	0.00043
-	mg/kg bw/day	0.085	0.0085	-	-
4.7	mg/kg bw/day	0.29	0.029	0.24	0.12
1.9	mg/kg bw/day	0.036	0.0071	**1.0**	0.10
26	µg/kg bw/day	**1.3**	0.13	0.92	0.46
56.3	mg/kg bw/day	0.037	0.017	0.40	0.010
0.93	mg/kg bw/day	0.27	0.14	0.49	0.12
-	mg/kg bw/day	0.083	0.043	-	-
172	mg/kg bw/day	0.10	0.069	0.50	0.050
-	µg/kg bw/day	0.018	0.0018	-	-
480	µg/kg bw/day	-	-	0.45	0.045
6700	µg/kg bw/day	-	-	0.012	0.0012
-	µg/kg bw/day	0.00073	-	-	-
500	µg/kg bw/day	0.43	0.043	0.15	0.12
28	ng/kg bw/day	0.30	0.030	**1.5**	0.15
28	ng/kg bw/day	0.24	0.024	**1.2**	0.12
28	ng/kg bw/day	0.53	0.053	**2.6**	0.26

RVs		Range of HQs			
-B[b]		HQ based on TRV-A[a]		HQ based on TRV-B[a]	
LOAEL	TRV units	NOAEL HQ	LOAEL HQ	NOAEL HQ[b]	LOAEL HQ[b]
27	µg/kg bw/day	0.22	0.022	**6.2**	0.21
[redacted]					
10.4	mg/kg bw/day	0.011	0.0011	0.056	0.00043
-	mg/kg bw/day	0.080	0.0080	-	-
4.7	mg/kg bw/day	0.31	0.031	0.26	0.13
1.9	mg/kg bw/day	0.035	0.0069	**1.0**	0.10
26	µg/kg bw/day	**1.2**	0.12	0.87	0.43
56.3	mg/kg bw/day	0.040	0.018	0.44	0.011
0.93	mg/kg bw/day	0.34	0.17	0.61	0.15
-	mg/kg bw/day	0.061	0.032	-	-
172	mg/kg bw/day	0.10	0.068	0.49	0.049
-	µg/kg bw/day	0.019	0.0019	-	-
480	µg/kg bw/day	-	-	0.44	0.044
6700	µg/kg bw/day	-	-	0.011	0.0011
-	µg/kg bw/day	0.00071	-	-	-
500	µg/kg bw/day	0.54	0.054	0.19	0.15
28	ng/kg bw/day	0.42	0.042	**2.1**	0.21
28	ng/kg bw/day	0.38	0.038	**1.9**	0.19
28	ng/kg bw/day	0.79	0.079	**4.0**	0.40
27	µg/kg bw/day	0.35	0.035	**9.6**	0.32
[redacted]					
10.4	mg/kg bw/day	0.028	0.0028	0.14	0.0011
-	mg/kg bw/day	0.13	0.013	-	-
4.7	mg/kg bw/day	0.36	0.036	0.30	0.15
1.9	mg/kg bw/day	0.074	0.014	**2.1**	0.21
26	µg/kg bw/day	**1.2**	0.12	0.86	0.43
56.3	mg/kg bw/day	0.057	0.026	0.62	0.015
0.93	mg/kg bw/day	0.37	0.19	0.68	0.17
-	mg/kg bw/day	0.12	0.065	-	-
172	mg/kg bw/day	0.095	0.063	0.45	0.045
-	µg/kg bw/day	0.034	0.0034	-	-
480	µg/kg bw/day	-	-	0.91	0.091
6700	µg/kg bw/day	-	-	0.025	0.0025
-	µg/kg bw/day	0.0015	-	-	-
500	µg/kg bw/day	**1.1**	0.11	0.38	0.30
28	ng/kg bw/day	0.73	0.073	**3.7**	0.37
28	ng/kg bw/day	0.74	0.074	**3.7**	0.37
28	ng/kg bw/day	**1.5**	0.15	**7.6**	0.76
27	µg/kg bw/day	0.70	0.070	**19**	0.65

RVs		Range of HQs			
-B[b]		HQ based on TRV-A[a]		HQ based on TRV-B[a]	
LOAEL	TRV units	NOAEL HQ	LOAEL HQ	NOAEL HQ[b]	LOAEL HQ[b]
10.4	mg/kg bw/day	0.053	0.0053	0.26	0.0020
-	mg/kg bw/day	0.21	0.021	-	-
4.7	mg/kg bw/day	0.55	0.055	0.45	0.22
1.9	mg/kg bw/day	0.18	0.036	**5.2**	0.52
26	µg/kg bw/day	0.60	0.060	0.44	0.22
56.3	mg/kg bw/day	0.078	0.035	0.85	0.021
0.93	mg/kg bw/day	0.29	0.15	0.53	0.13
-	mg/kg bw/day	0.20	0.11	-	-
172	mg/kg bw/day	0.098	0.065	0.47	0.047
-	µg/kg bw/day	0.14	0.014	-	-
480	µg/kg bw/day	-	-	**4.0**	0.40
6700	µg/kg bw/day	-	-	0.056	0.0056
-	µg/kg bw/day	0.0059	-	-	-
500	µg/kg bw/day	**1.2**	0.12	0.41	0.33
28	ng/kg bw/day	0.95	0.095	**4.7**	0.47
28	ng/kg bw/day	**1.4**	0.14	**7.2**	0.72
28	ng/kg bw/day	**2.4**	0.24	**12**	**1.2**
27	µg/kg bw/day	0.61	0.061	**17**	0.56
10.4	mg/kg bw/day	0.027	0.0027	0.14	0.0010
-	mg/kg bw/day	0.39	0.039	-	-
4.7	mg/kg bw/day	0.38	0.038	0.31	0.15
1.9	mg/kg bw/day	0.12	0.024	**3.5**	0.35
26	µg/kg bw/day	0.45	0.045	0.34	0.17
56.3	mg/kg bw/day	0.18	0.084	**2.0**	0.049
0.93	mg/kg bw/day	0.34	0.17	0.61	0.15
-	mg/kg bw/day	0.17	0.088	-	-
172	mg/kg bw/day	0.093	0.062	0.45	0.045
-	µg/kg bw/day	0.069	0.0069	-	-
480	µg/kg bw/day	-	-	**2.0**	0.20
6700	µg/kg bw/day	-	-	0.034	0.0034
-	µg/kg bw/day	0.0030	-	-	-
500	µg/kg bw/day	0.89	0.089	0.31	0.25
28	ng/kg bw/day	0.95	0.095	**4.8**	0.48
28	ng/kg bw/day	**1.4**	0.14	**7.0**	0.70
28	ng/kg bw/day	**2.2**	0.22	**11**	**1.1**
27	µg/kg bw/day	0.57	0.057	**16**	0.53

RVs		Range of HQs			
-B[b]		HQ based on TRV-A[a]		HQ based on TRV-B[a]	
LOAEL	TRV units	NOAEL HQ	LOAEL HQ	NOAEL HQ[b]	LOAEL HQ[b]
10.4	mg/kg bw/day	0.027	0.0027	0.13	0.0010
-	mg/kg bw/day	0.28	0.028	-	-
4.7	mg/kg bw/day	0.41	0.041	0.34	0.17
1.9	mg/kg bw/day	0.13	0.025	**3.6**	0.36
26	µg/kg bw/day	0.56	0.056	0.41	0.21
56.3	mg/kg bw/day	0.12	0.052	**1.3**	0.031
0.93	mg/kg bw/day	0.29	0.15	0.52	0.13
-	mg/kg bw/day	0.14	0.073	-	-
172	mg/kg bw/day	0.089	0.059	0.43	0.043
-	µg/kg bw/day	0.069	0.0069	-	-
480	µg/kg bw/day	-	-	**2.5**	0.25
6700	µg/kg bw/day	-	-	0.047	0.0047
-	µg/kg bw/day	0.0038	-	-	-
500	µg/kg bw/day	0.58	0.058	0.20	0.16
28	ng/kg bw/day	0.58	0.058	**2.9**	0.29
28	ng/kg bw/day	0.63	0.063	**3.2**	0.32
28	ng/kg bw/day	**1.2**	0.12	**5.9**	0.59
27	µg/kg bw/day	0.47	0.047	**13**	0.43
10.4	mg/kg bw/day	0.023	0.0023	0.11	0.00088
-	mg/kg bw/day	0.073	0.0073	-	-
4.7	mg/kg bw/day	0.34	0.034	0.28	0.14
1.9	mg/kg bw/day	0.093	0.018	**2.7**	0.27
26	µg/kg bw/day	0.31	0.031	0.23	0.11
56.3	mg/kg bw/day	0.035	0.016	0.38	0.0094
0.93	mg/kg bw/day	0.12	0.064	0.23	0.056
-	mg/kg bw/day	0.11	0.055	-	-
172	mg/kg bw/day	0.054	0.036	0.26	0.026
-	µg/kg bw/day	0.039	0.0039	-	-
480	µg/kg bw/day	-	-	**1.3**	0.13
6700	µg/kg bw/day	-	-	0.024	0.0024
-	µg/kg bw/day	0.0020	-	-	-
500	µg/kg bw/day	0.31	0.031	0.11	0.087
28	ng/kg bw/day	0.25	0.025	**1.3**	0.13
28	ng/kg bw/day	0.20	0.020	0.98	0.098
28	ng/kg bw/day	0.45	0.045	**2.2**	0.22
27	µg/kg bw/day	0.20	0.020	**5.6**	0.19
10.4	mg/kg bw/day	0.017	0.0017	0.086	0.00066

RVs		Range of HQs			
-B[b]		HQ based on TRV-A[a]		HQ based on TRV-B[a]	
LOAEL	TRV units	NOAEL HQ	LOAEL HQ	NOAEL HQ[b]	LOAEL HQ[b]
-	mg/kg bw/day	0.53	0.053	-	-
4.7	mg/kg bw/day	0.35	0.035	0.29	0.14
1.9	mg/kg bw/day	0.12	0.023	**3.4**	0.34
26	µg/kg bw/day	0.53	0.053	0.39	0.19
56.3	mg/kg bw/day	0.26	0.12	**2.8**	0.068
0.93	mg/kg bw/day	0.32	0.16	0.58	0.14
-	mg/kg bw/day	0.16	0.085	-	-
172	mg/kg bw/day	0.10	0.069	0.49	0.049
-	µg/kg bw/day	0.091	0.0091	-	-
480	µg/kg bw/day	-	-	**3.4**	0.34
6700	µg/kg bw/day	-	-	0.10	0.010
-	µg/kg bw/day	0.0052	-	-	-
500	µg/kg bw/day	0.60	0.060	0.21	0.17
28	ng/kg bw/day	**1.1**	0.11	**5.5**	0.55
28	ng/kg bw/day	0.29	0.029	**1.4**	0.14
28	ng/kg bw/day	**1.2**	0.12	**6.2**	0.62
27	µg/kg bw/day	0.39	0.039	**11**	0.36

RVs		Range of HQs			
-B[b]		HQ based on TRV-A[a]		HQ based on TRV-B[a]	
LOAEL	TRV units	NOAEL HQ	LOAEL HQ	NOAEL HQ[b]	LOAEL HQ[b]

RVs		Range of HQs			
-B[b]		HQ based on TRV-A[a]		HQ based on TRV-B[a]	
LOAEL	TRV units	NOAEL HQ	LOAEL HQ	NOAEL HQ[b]	LOAEL HQ[b]

Great Blue Heron - Diet Scenario 2

Dietary dose (mg/kg bw/d) = (([Csw*WIR] + [Cprey*FIR] + [Csed*SIR])/BW) *SUF

WIR (L/day)	0.1000
FIR (kg ww/day)	0.40
SIR (kg dw/day)	0.00081
BW (kg)	2.3
SUF	1

Diet	Fractions
0-13 cm fish	0.17
13-18 cm fish	0.29
18-30 cm fish	0.40
>30 cm fish	0.14

	Prey										Surface Water			Sedim	
	Fish (≤ 13)		Fish (>13 and ≤ 18)		Fish (>18 and ≤ 30)		Fish (>30)								
COPEC	$C_{0\text{-}13,\ ww}$	Exposure Area	$C_{13\text{-}18,\ ww}$	Exposure Area	$C_{18\text{-}30,\ ww}$	Exposure Area	$C_{>30,\ ww}$	Exposure Area	$C_{prey,ww}$	$C_{prey,ww}$ (units)	C_{sw}	C_{sw} (units)	Exposure Area	$C_{sed,dw}$	$C_{sed,dw}$ (units)
Site-wide															
Cadmium	0.039	Site-wide	0.023	Site-wide	0.044	Site-wide	0.042	Site-wide	0.03678	mg/kg	0.00017	mg/l	RM ≥ 4	5.2	mg/kg
Chromium	11	Site-wide	48	Site-wide	2	Site-wide	1.3	Site-wide	16.772	mg/kg	0.0048	mg/l	RM ≥ 4	190	mg/kg
Copper	3.2	Site-wide	7.2	Site-wide	17	Site-wide	3.1	Site-wide	9.866	mg/kg	0.011	mg/l	RM ≥ 4	190	mg/kg
Lead	2.3	Site-wide	1	Site-wide	0.66	Site-wide	0.53	Site-wide	1.0192	mg/kg	0.0122	mg/l	RM ≥ 4	320	mg/kg
Methyl mercury	55	Site-wide	120	Site-wide	170	Site-wide	200	Site-wide	140.15	µg/kg	0.00044	µg/l	RM ≥ 4	5.3	µg/kg
Nickel	7.1	Site-wide	34	Site-wide	1.3	Site-wide	0.85	Site-wide	11.706	mg/kg	0.00239	mg/l	RM ≥ 4	34	mg/kg
Selenium	0.67	Site-wide	0.98	Site-wide	1.3	Site-wide	0.57	Site-wide	0.9979	mg/kg	0.00067	mg/l	RM ≥ 4	1.2	mg/kg
Vanadium	0.72	Site-wide	0.58	Site-wide	0.12	Site-wide	0.093	Site-wide	0.35162	mg/kg	0.0033	mg/l	RM ≥ 4	28	mg/kg
Zinc	42.4	Site-wide	27.9	Site-wide	25	Site-wide	39	Site-wide	30.759	mg/kg	0.029	mg/l	RM ≥ 4	590	mg/kg
Benzo(a)pyrene	32	Site-wide	40	Site-wide	6.8	Site-wide	1.9	Site-wide	20.026	µg/kg	0.0953	µg/l	RM ≥ 4	4000	µg/kg
Total HPAHs	440	Site-wide	270	Site-wide	140	Site-wide	53	Site-wide	216.52	µg/kg	0.961	µg/l	RM ≥ 4	35000	µg/kg
Total LPAHs	110	Site-wide	180	Site-wide	190	Site-wide	110	Site-wide	162.3	µg/kg	0.178	µg/l	RM ≥ 4	8100	µg/kg
Total PAHs	470	Site-wide	440	Site-wide	300	Site-wide	160	Site-wide	349.9	µg/kg	1.1	µg/l	RM ≥ 4	43000	µg/kg
Total PCB Congeners	560	Site-wide	2500	Site-wide	1700	Site-wide	2800	Site-wide	1892.2	µg/kg	0.034	µg/l	RM ≥ 4	2900	µg/kg
PCB TEQ-Bird	52	Site-wide	220	Site-wide	140	Site-wide	100	Site-wide	142.64	ng/kg	0.00609	ng/l	RM ≥ 4	770	ng/kg
PCDD/PCDF TEQ-Bird	48	Site-wide	220	Site-wide	120	Site-wide	200	Site-wide	147.96	ng/kg	0.111	ng/l	RM ≥ 4	2900	ng/kg
Total TEQ-Bird	96	Site-wide	390	Site-wide	290	Site-wide	300	Site-wide	287.42	ng/kg	0.116	ng/l	RM ≥ 4	3500	ng/kg
Total DDx	62	Site-wide	200	Site-wide	220	Site-wide	310	Site-wide	199.94	µg/kg	0.00478	µg/l	RM ≥ 4	230	µg/kg
Reach 1															
Cadmium	0.02	Reach 1	0.003	Reach 1; ≥18 a	0.003	Reach 1	0.016	Reach 1	0.00771	mg/kg	0.00026	mg/l	Reach 3	2.8	mg/kg
Chromium	4.9	Reach 1	0.8	Reach 1; ≥18 a	0.8	Reach 1	0.61	Reach 1	1.4704	mg/kg	0.00732	mg/l	Reach 3	120	mg/kg
Copper	2.9	Reach 1	6.1	Reach 1; ≥18 a	6.1	Reach 1	29	Reach 1	8.762	mg/kg	0.0142	mg/l	Reach 3	150	mg/kg
Lead	0.77	Reach 1	0.17	Reach 1; ≥18 a	0.17	Reach 1	0.27	Reach 1	0.286	mg/kg	0.0137	mg/l	Reach 3	180	mg/kg
Methyl mercury	69	Reach 1	160	Reach 1; ≥18 a	160	Reach 1	290	Reach 1	162.73	µg/kg	0.0004	µg/l	Reach 3	2.9	µg/kg
Nickel	3.1	Reach 1	0.71	Reach 1; ≥18 a	0.71	Reach 1	0.62	Reach 1	1.1037	mg/kg	0.00272	mg/l	Reach 3	31	mg/kg
Selenium	0.64	Reach 1	0.52	Reach 1; ≥18 a	0.52	Reach 1	1.4	Reach 1	0.6636	mg/kg	0.00091	mg/l	Reach 3	1.5	mg/kg
Vanadium	0.51	Reach 1	0.15	Reach 1; ≥18 a	0.15	Reach 1	0.089	Reach 1	0.20266	mg/kg	0.0042	mg/l	Reach 3	30	mg/kg
Zinc	48.2	Reach 1	24.8	Reach 1; ≥18 a	24.8	Reach 1	42.2	Reach 1	31.214	mg/kg	0.03	mg/l	Reach 3	420	mg/kg
Benzo(a)pyrene	7	Reach 1	0.58	Reach 1; ≥18 a	0.58	Reach 1	2.6	Reach 1	1.9542	µg/kg	0.182	µg/l	Reach 3	3600	µg/kg
Total HPAHs	68	Reach 1	77	Reach 1; ≥18 a	77	Reach 1	140	Reach 1	84.29	µg/kg	1.23	µg/l	Reach 3	28000	µg/kg
Total LPAHs	35	Reach 1	280	Reach 1; ≥18 a	280	Reach 1	240	Reach 1	232.75	µg/kg	0.21	µg/l	Reach 3	4900	µg/kg
Total PAHs	100	Reach 1	360	Reach 1; ≥18 a	360	Reach 1	370	Reach 1	317.2	µg/kg	1.4	µg/l	Reach 3	33000	µg/kg
Total PCB Congeners	340	Reach 1	1700	Reach 1; ≥18 a	1700	Reach 1	1300	Reach 1	1412.8	µg/kg	0.0424	µg/l	Reach 3	1500	µg/kg
PCB TEQ-Bird	23	Reach 1	150	Reach 1; ≥18 a	150	Reach 1	200	Reach 1	135.41	ng/kg	0.00719	ng/l	Reach 3	440	ng/kg
PCDD/PCDF TEQ-Bird	17	Reach 1	130	Reach 1; ≥18 a	130	Reach 1	120	Reach 1	109.39	ng/kg	0.291	ng/l	Reach 3	1200	ng/kg
Total TEQ-Bird	40	Reach 1	290	Reach 1; ≥18 a	290	Reach 1	320	Reach 1	251.7	ng/kg	0.227	ng/l	Reach 3	1100	ng/kg

Total DDx	32	Reach 1	490	Reach 1; ≥18 a	490	Reach 1	230	Reach 1	375.74	µg/kg	0.00597	µg/l	Reach 3	110	µg/kg
Reach 2															
Cadmium	0.019	Reach 2	0.008	Reach 2;≥18 an	0.008	Reach 2	0.012	Reach 2	0.01043	mg/kg	0.00026	mg/l	Reach 3	3.3	mg/kg
Chromium	4.6	Reach 2	1.1	Reach 2;≥18 an	1.1	Reach 2	1.4	Reach 2	1.737	mg/kg	0.00732	mg/l	Reach 3	112	mg/kg
Copper	3.1	Reach 2	50.9	Reach 2;≥18 an	50.9	Reach 2	0.84	Reach 2	35.7656	mg/kg	0.0142	mg/l	Reach 3	159	mg/kg
Lead	0.68	Reach 2	0.51	Reach 2;≥18 an	0.51	Reach 2	0.43	Reach 2	0.5277	mg/kg	0.0137	mg/l	Reach 3	210	mg/kg
Methyl mercury	65	Reach 2	270	Reach 2;≥18 an	270	Reach 2	260	Reach 2	233.75	µg/kg	0.0004	µg/l	Reach 3	4.4	µg/kg
Nickel	3.4	Reach 2	1	Reach 2;≥18 an	1	Reach 2	0.89	Reach 2	1.3926	mg/kg	0.00272	mg/l	Reach 3	34	mg/kg
Selenium	0.81	Reach 2	1.9	Reach 2;≥18 an	1.9	Reach 2	0.85	Reach 2	1.5677	mg/kg	0.00091	mg/l	Reach 3	1.5	mg/kg
Vanadium	0.36	Reach 2	0.12	Reach 2;≥18 an	0.12	Reach 2	0.15	Reach 2	0.165	mg/kg	0.0042	mg/l	Reach 3	31	mg/kg
Zinc	47.7	Reach 2	30.7	Reach 2;≥18 an	30.7	Reach 2	30.3	Reach 2	33.534	mg/kg	0.03	mg/l	Reach 3	469	mg/kg
Benzo(a)pyrene	7.7	Reach 2	1.1	Reach 2;≥18 an	1.1	Reach 2	1.3	Reach 2	2.25	µg/kg	0.182	µg/l	Reach 3	3700	µg/kg
Total HPAHs	61	Reach 2	63	Reach 2;≥18 an	63	Reach 2	34	Reach 2	58.6	µg/kg	1.23	µg/l	Reach 3	30000	µg/kg
Total LPAHs	33	Reach 2	130	Reach 2;≥18 an	130	Reach 2	180	Reach 2	120.51	µg/kg	0.21	µg/l	Reach 3	3800	µg/kg
Total PAHs	93	Reach 2	190	Reach 2;≥18 an	190	Reach 2	210	Reach 2	176.31	µg/kg	1.4	µg/l	Reach 3	34000	µg/kg
Total PCB Congeners	430	Reach 2	1300	Reach 2;≥18 an	1300	Reach 2	2700	Reach 2	1348.1	µg/kg	0.0424	µg/l	Reach 3	3000	µg/kg
PCB TEQ-Bird	33	Reach 2	99	Reach 2;≥18 an	99	Reach 2	71	Reach 2	83.86	ng/kg	0.00719	ng/l	Reach 3	570	ng/kg
PCDD/PCDF TEQ-Bird	28	Reach 2	83	Reach 2;≥18 an	83	Reach 2	170	Reach 2	85.83	ng/kg	0.291	ng/l	Reach 3	1300	ng/kg
Total TEQ-Bird	60	Reach 2	180	Reach 2;≥18 an	180	Reach 2	250	Reach 2	169.4	ng/kg	0.227	ng/l	Reach 3	1800	ng/kg
Total DDx	49	Reach 2	280	Reach 2;≥18 an	280	Reach 2	280	Reach 2	240.73	µg/kg	0.00597	µg/l	Reach 3	330	µg/kg
Reach 3															
Cadmium	0.053	Reach 3	0.009	Reach 3	0.011	Reach 3	0.027	Reach 3	0.0198	mg/kg	0.00026	mg/l	Reach 3	5.3	mg/kg
Chromium	7.1	Reach 3	5.4	Reach 3	3.4	Reach 3	3	Reach 3	4.553	mg/kg	0.00732	mg/l	Reach 3	250	mg/kg
Copper	3.5	Reach 3	8.5	Reach 3	9.3	Reach 3	0.92	Reach 3	6.9088	mg/kg	0.0142	mg/l	Reach 3	220	mg/kg
Lead	1.7	Reach 3	0.45	Reach 3	0.46	Reach 3	1.4	Reach 3	0.7995	mg/kg	0.0137	mg/l	Reach 3	309	mg/kg
Methyl mercury	64	Reach 3	120	Reach 3	140	Reach 3	350	Reach 3	150.68	µg/kg	0.0004	µg/l	Reach 3	6	µg/kg
Nickel	4.8	Reach 3	3.3	Reach 3	2.1	Reach 3	2.1	Reach 3	2.907	mg/kg	0.00272	mg/l	Reach 3	52.8	mg/kg
Selenium	0.89	Reach 3	1.3	Reach 3	1.6	Reach 3	0.7	Reach 3	1.2663	mg/kg	0.00091	mg/l	Reach 3	1.6	mg/kg
Vanadium	0.79	Reach 3	0.13	Reach 3	0.13	Reach 3	0.12	Reach 3	0.2408	mg/kg	0.0042	mg/l	Reach 3	31	mg/kg
Zinc	43.5	Reach 3	23.4	Reach 3	41.4	Reach 3	50	Reach 3	37.741	mg/kg	0.03	mg/l	Reach 3	670	mg/kg
Benzo(a)pyrene	19	Reach 3	3.2	Reach 3	24	Reach 3	1.3	Reach 3	13.94	µg/kg	0.182	µg/l	Reach 3	4000	µg/kg
Total HPAHs	180	Reach 3	150	Reach 3	340	Reach 3	58	Reach 3	218.22	µg/kg	1.23	µg/l	Reach 3	35000	µg/kg
Total LPAHs	85	Reach 3	300	Reach 3	300	Reach 3	130	Reach 3	239.65	µg/kg	0.21	µg/l	Reach 3	5100	µg/kg
Total PAHs	260	Reach 3	440	Reach 3	570	Reach 3	180	Reach 3	425	µg/kg	1.4	µg/l	Reach 3	41000	µg/kg
Total PCB Congeners	860	Reach 3	2800	Reach 3	2800	Reach 3	4300	Reach 3	2680.2	µg/kg	0.0424	µg/l	Reach 3	1600	µg/kg
PCB TEQ-Bird	58	Reach 3	280	Reach 3	270	Reach 3	110	Reach 3	214.46	ng/kg	0.00719	ng/l	Reach 3	390	ng/kg
PCDD/PCDF TEQ-Bird	58	Reach 3	200	Reach 3	190	Reach 3	280	Reach 3	183.06	ng/kg	0.291	ng/l	Reach 3	550	ng/kg
Total TEQ-Bird	120	Reach 3	490	Reach 3	460	Reach 3	390	Reach 3	401.1	ng/kg	0.227	ng/l	Reach 3	930	ng/kg
Total DDx	100	Reach 3	340	Reach 3	250	Reach 3	400	Reach 3	271.6	µg/kg	0.00597	µg/l	Reach 3	110	µg/kg
Reach 4															
Cadmium	0.099	Reach 4	0.04	Reach 4	0.014	Reach 4	0.035	Reach 4	0.03893	mg/kg	0.00027	mg/l	Reach 4	11	mg/kg
Chromium	12.2	Reach 4	16.8	Reach 4	1.2	Reach 4	0.69	Reach 4	7.5226	mg/kg	0.00567	mg/l	Reach 4	360	mg/kg
Copper	5.4	Reach 4	4	Reach 4	13.5	Reach 4	0.87	Reach 4	7.5998	mg/kg	0.0152	mg/l	Reach 4	300	mg/kg
Lead	4.9	Reach 4	1.8	Reach 4	0.62	Reach 4	0.36	Reach 4	1.6534	mg/kg	0.0144	mg/l	Reach 4	407	mg/kg
Methyl mercury	33	Reach 4	93	Reach 4	150	Reach 4	300	Reach 4	134.58	µg/kg	0.000413	µg/l	Reach 4	7.2	µg/kg
Nickel	6.6	Reach 4	11.6	Reach 4	0.86	Reach 4	0.38	Reach 4	4.8832	mg/kg	0.0026	mg/l	Reach 4	52.2	mg/kg
Selenium	0.7	Reach 4	0.93	Reach 4	0.91	Reach 4	0.52	Reach 4	0.8255	mg/kg	0.00069	mg/l	Reach 4	1.6	mg/kg
Vanadium	1.3	Reach 4	0.68	Reach 4	0.12	Reach 4	0.13	Reach 4	0.4844	mg/kg	0.0037	mg/l	Reach 4	44	mg/kg
Zinc	44.1	Reach 4	30.1	Reach 4	19.9	Reach 4	40	Reach 4	29.786	mg/kg	0.03	mg/l	Reach 4	1100	mg/kg
Benzo(a)pyrene	98	Reach 4	34	Reach 4	2.6	Reach 4	24	Reach 4	30.92	µg/kg	0.153	µg/l	Reach 4	6500	µg/kg
Total HPAHs	1000	Reach 4	350	Reach 4	160	Reach 4	140	Reach 4	355.1	µg/kg	1.17	µg/l	Reach 4	55000	µg/kg
Total LPAHs	190	Reach 4	160	Reach 4	260	Reach 4	150	Reach 4	203.7	µg/kg	0.195	µg/l	Reach 4	12000	µg/kg
Total PAHs	1200	Reach 4	470	Reach 4	420	Reach 4	280	Reach 4	547.5	µg/kg	1.4	µg/l	Reach 4	73000	µg/kg
Total PCB Congeners	930	Reach 4	2000	Reach 4	3700	Reach 4	4700	Reach 4	2876.1	µg/kg	0.0323	µg/l	Reach 4	7800	µg/kg
PCB TEQ-Bird	73	Reach 4	220	Reach 4	400	Reach 4	160	Reach 4	258.61	ng/kg	0.00651	ng/l	Reach 4	1700	ng/kg

PCDD/PCDF TEQ-Bird	84	Reach 4	180	Reach 4	280	Reach 4	630	Reach 4	266.68	ng/kg	0.266	ng/l	Reach 4	16000	ng/kg
Total TEQ-Bird	160	Reach 4	400	Reach 4	690	Reach 4	800	Reach 4	531.2	ng/kg	0.274	ng/l	Reach 4	18000	ng/kg
Total DDx	86	Reach 4	200	Reach 4	380	Reach 4	630	Reach 4	312.82	µg/kg	0.00643	µg/l	Reach 4	570	µg/kg
Reach 5															
Cadmium	0.052	Reach 5	0.01	Reach 5	0.02	Reach 5	0.045	Reach 5	0.02604	mg/kg	0.000081	mg/l	Reach 5	5.2	mg/kg
Chromium	23.2	Reach 5	2	Reach 5	1.2	Reach 5	2.3	Reach 5	5.326	mg/kg	0.00337	mg/l	Reach 5	140	mg/kg
Copper	3.8	Reach 5	14.7	Reach 5	10.8	Reach 5	0.87	Reach 5	9.3508	mg/kg	0.0052	mg/l	Reach 5	178	mg/kg
Lead	3.1	Reach 5	0.28	Reach 5	0.43	Reach 5	0.55	Reach 5	0.8572	mg/kg	0.00753	mg/l	Reach 5	366	mg/kg
Methyl mercury	25	Reach 5	190	Reach 5	180	Reach 5	220	Reach 5	162.15	µg/kg	0.000289	µg/l	Reach 5	23	µg/kg
Nickel	15.8	Reach 5	1.4	Reach 5	0.93	Reach 5	1.1	Reach 5	3.618	mg/kg	0.00223	mg/l	Reach 5	29	mg/kg
Selenium	0.81	Reach 5	1.2	Reach 5	1.4	Reach 5	0.7	Reach 5	1.1437	mg/kg	0.001	mg/l	Reach 5	0.93	mg/kg
Vanadium	1.1	Reach 5	0.08	Reach 5	0.08	Reach 5	0.095	Reach 5	0.2555	mg/kg	0.0053	mg/l	Reach 5	30	mg/kg
Zinc	42.3	Reach 5	24.8	Reach 5	21.9	Reach 5	65	Reach 5	32.243	mg/kg	0.0111	mg/l	Reach 5	880	mg/kg
Benzo(a)pyrene	48	Reach 5	2	Reach 5	1.3	Reach 5	4.9	Reach 5	9.946	µg/kg	0.0421	µg/l	Reach 5	3900	µg/kg
Total HPAHs	480	Reach 5	100	Reach 5	78	Reach 5	64	Reach 5	150.76	µg/kg	0.484	µg/l	Reach 5	38000	µg/kg
Total LPAHs	120	Reach 5	130	Reach 5	130	Reach 5	100	Reach 5	124.1	µg/kg	0.0744	µg/l	Reach 5	5600	µg/kg
Total PAHs	600	Reach 5	230	Reach 5	200	Reach 5	150	Reach 5	269.7	µg/kg	0.558	µg/l	Reach 5	44000	µg/kg
Total PCB Congeners	710	Reach 5	5100	Reach 5	2900	Reach 5	3600	Reach 5	3263.7	µg/kg	0.0279	µg/l	Reach 5	4000	µg/kg
PCB TEQ-Bird	72	Reach 5	310	Reach 5	240	Reach 5	150	Reach 5	219.14	ng/kg	0.00436	ng/l	Reach 5	2300	ng/kg
PCDD/PCDF TEQ-Bird	110	Reach 5	250	Reach 5	180	Reach 5	260	Reach 5	199.6	ng/kg	0.0228	ng/l	Reach 5	1600	ng/kg
Total TEQ-Bird	170	Reach 5	560	Reach 5	420	Reach 5	400	Reach 5	415.3	ng/kg	0.0271	ng/l	Reach 5	2100	ng/kg
Total DDx	81	Reach 5	280	Reach 5	220	Reach 5	560	Reach 5	261.37	µg/kg	0.00377	µg/l	Reach 5	260	µg/kg
Reach 6															
Cadmium	0.051	Reach 6	0.013	Reach 6	0.031	Reach 6	0.022	Reach 6	0.02792	mg/kg	0.00013	mg/l	Reach 6	5.1	mg/kg
Chromium	16.4	Reach 6	9	Reach 6	2.7	Reach 6	0.64	Reach 6	6.5676	mg/kg	0.0067	mg/l	Reach 6	260	mg/kg
Copper	4.1	Reach 6	1.2	Reach 6	8.3	Reach 6	0.77	Reach 6	4.4728	mg/kg	0.00793	mg/l	Reach 6	191	mg/kg
Lead	3.2	Reach 6	0.71	Reach 6	0.83	Reach 6	0.59	Reach 6	1.1645	mg/kg	0.00835	mg/l	Reach 6	375	mg/kg
Methyl mercury	31	Reach 6	50	Reach 6	250	Reach 6	190	Reach 6	146.37	µg/kg	0.00036	µg/l	Reach 6	1.3	µg/kg
Nickel	9.9	Reach 6	6.6	Reach 6	2	Reach 6	0.47	Reach 6	4.4628	mg/kg	0.00239	mg/l	Reach 6	30	mg/kg
Selenium	0.69	Reach 6	0.27	Reach 6	3	Reach 6	0.67	Reach 6	1.4894	mg/kg	0.00063	mg/l	Reach 6	0.89	mg/kg
Vanadium	0.9	Reach 6	0.28	Reach 6	0.2	Reach 6	0.11	Reach 6	0.3296	mg/kg	0.0032	mg/l	Reach 6	29	mg/kg
Zinc	40.9	Reach 6	30.9	Reach 6	26.8	Reach 6	38	Reach 6	31.954	mg/kg	0.031	mg/l	Reach 6	560	mg/kg
Benzo(a)pyrene	48	Reach 6	64	Reach 6	1.1	Reach 6	2.4	Reach 6	27.496	µg/kg	0.0854	µg/l	Reach 6	3600	µg/kg
Total HPAHs	620	Reach 6	750	Reach 6	58	Reach 6	76	Reach 6	356.74	µg/kg	0.871	µg/l	Reach 6	40000	µg/kg
Total LPAHs	160	Reach 6	180	Reach 6	260	Reach 6	180	Reach 6	208.6	µg/kg	0.173	µg/l	Reach 6	11000	µg/kg
Total PAHs	780	Reach 6	930	Reach 6	310	Reach 6	260	Reach 6	562.7	µg/kg	1	µg/l	Reach 6	50000	µg/kg
Total PCB Congeners	450	Reach 6	390	Reach 6	600	Reach 6	3200	Reach 6	877.6	µg/kg	0.0223	µg/l	Reach 6	6800	µg/kg
PCB TEQ-Bird	43	Reach 6	44	Reach 6	36	Reach 6	98	Reach 6	48.19	ng/kg	0.00387	ng/l	Reach 6	1700	ng/kg
PCDD/PCDF TEQ-Bird	41	Reach 6	28	Reach 6	87	Reach 6	250	Reach 6	84.89	ng/kg	0.0168	ng/l	Reach 6	4900	ng/kg
Total TEQ-Bird	82	Reach 6	72	Reach 6	120	Reach 6	340	Reach 6	130.42	ng/kg	0.015	ng/l	Reach 6	6600	ng/kg
Total DDx	67	Reach 6	35	Reach 6	60	Reach 6	420	Reach 6	104.34	µg/kg	0.00397	µg/l	Reach 6	210	µg/kg
Reach 7															
Cadmium	0.048	Reach 7	0.054	Reach 7	0.031	Reach 7	0.27	Reach 7	0.07402	mg/kg	0.00013	mg/l	Reach 6	2.4	mg/kg
Chromium	4.3	Reach 7	125	Reach 7	0.77	Reach 7	0.73	Reach 7	37.3912	mg/kg	0.0067	mg/l	Reach 6	65.1	mg/kg
Copper	3.6	Reach 7	8.7	Reach 7	13.1	Reach 7	6.1	Reach 7	9.229	mg/kg	0.00793	mg/l	Reach 6	77.6	mg/kg
Lead	2.5	Reach 7	1.1	Reach 7	0.81	Reach 7	0.91	Reach 7	1.1954	mg/kg	0.00835	mg/l	Reach 6	211	mg/kg
Methyl mercury	17	Reach 7	150	Reach 7	330	Reach 7	130	Reach 7	196.59	µg/kg	0.00036	µg/l	Reach 6	1.3	µg/kg
Nickel	3	Reach 7	89.1	Reach 7	0.7	Reach 7	0.63	Reach 7	26.7172	mg/kg	0.00239	mg/l	Reach 6	19.5	mg/kg
Selenium	0.3	Reach 7	1.07	Reach 7	2.3	Reach 7	0.69	Reach 7	1.3779	mg/kg	0.00063	mg/l	Reach 6	0.4	mg/kg
Vanadium	0.68	Reach 7	1.2	Reach 7	0.19	Reach 7	0.14	Reach 7	0.5592	mg/kg	0.0032	mg/l	Reach 6	25.6	mg/kg
Zinc	25	Reach 7	32.7	Reach 7	22.5	Reach 7	51	Reach 7	29.873	mg/kg	0.031	mg/l	Reach 6	314	mg/kg
Benzo(a)pyrene	28	Reach 7	27	Reach 7	8.6	Reach 7	2.5	Reach 7	16.38	µg/kg	0.0854	µg/l	Reach 6	1770	µg/kg
Total HPAHs	340	Reach 7	260	Reach 7	110	Reach 7	80	Reach 7	188.4	µg/kg	0.871	µg/l	Reach 6	15800	µg/kg
Total LPAHs	85	Reach 7	220	Reach 7	230	Reach 7	280	Reach 7	209.45	µg/kg	0.173	µg/l	Reach 6	3260	µg/kg
Total PAHs	430	Reach 7	360	Reach 7	330	Reach 7	510	Reach 7	380.9	µg/kg	1	µg/l	Reach 6	19000	µg/kg

Total PCB Congeners	250	Reach 7	2700	Reach 7	410	Reach 7	4200	Reach 7	1577.5	µg/kg	0.0223	µg/l	Reach 6	560	µg/kg
PCB TEQ-Bird	20	Reach 7	250	Reach 7	31	Reach 7	150	Reach 7	109.3	ng/kg	0.00387	ng/l	Reach 6	180	ng/kg
PCDD/PCDF TEQ-Bird	15	Reach 7	180	Reach 7	21	Reach 7	340	Reach 7	110.75	ng/kg	0.0168	ng/l	Reach 6	370	ng/kg
Total TEQ-Bird	35	Reach 7	430	Reach 7	52	Reach 7	480	Reach 7	218.65	ng/kg	0.015	ng/l	Reach 6	540	ng/kg
Total DDx	29	Reach 7	240	Reach 7	38	Reach 7	350	Reach 7	138.73	µg/kg	0.00397	µg/l	Reach 6	65	µg/kg
Reach 8															
Cadmium	0.037	Reach 8	0.018	Reach 8	0.19	Reach 8	0.034	Reach 8	0.09227	mg/kg	0.00013	mg/l	Reach 6	1.2	mg/kg
Chromium	31.7	Reach 8	8.2	Reach 8	4.5	Reach 8	1.9	Reach 8	9.833	mg/kg	0.0067	mg/l	Reach 6	36	mg/kg
Copper	3.7	Reach 8	7.6	Reach 8	1.5	Reach 8	1	Reach 8	3.573	mg/kg	0.00793	mg/l	Reach 6	71	mg/kg
Lead	3.1	Reach 8	0.47	Reach 8	1.3	Reach 8	0.5	Reach 8	1.2533	mg/kg	0.00835	mg/l	Reach 6	286	mg/kg
Methyl mercury	29	Reach 8	120	Reach 8	190	Reach 8	210	Reach 8	145.13	µg/kg	0.00036	µg/l	Reach 6	1.9	µg/kg
Nickel	22.1	Reach 8	4.9	Reach 8	2.8	Reach 8	1.8	Reach 8	6.55	mg/kg	0.00239	mg/l	Reach 6	13	mg/kg
Selenium	0.76	Reach 8	0.83	Reach 8	0.82	Reach 8	0.55	Reach 8	0.7749	mg/kg	0.00063	mg/l	Reach 6	0.48	mg/kg
Vanadium	1.1	Reach 8	0.14	Reach 8	0.12	Reach 8	0.12	Reach 8	0.2924	mg/kg	0.0032	mg/l	Reach 6	14	mg/kg
Zinc	48	Reach 8	28.4	Reach 8	31.3	Reach 8	31	Reach 8	33.256	mg/kg	0.031	mg/l	Reach 6	445	mg/kg
Benzo(a)pyrene	63	Reach 8	4.7	Reach 8	28	Reach 8	2.9	Reach 8	23.679	µg/kg	0.0854	µg/l	Reach 6	4900	µg/kg
Total HPAHs	860	Reach 8	84	Reach 8	390	Reach 8	34	Reach 8	331.32	µg/kg	0.871	µg/l	Reach 6	38000	µg/kg
Total LPAHs	370	Reach 8	91	Reach 8	67	Reach 8	67	Reach 8	125.47	µg/kg	0.173	µg/l	Reach 6	8400	µg/kg
Total PAHs	1100	Reach 8	160	Reach 8	460	Reach 8	99	Reach 8	431.26	µg/kg	1	µg/l	Reach 6	45000	µg/kg
Total PCB Congeners	480	Reach 8	1000	Reach 8	1200	Reach 8	2800	Reach 8	1243.6	µg/kg	0.0223	µg/l	Reach 6	760	µg/kg
PCB TEQ-Bird	88	Reach 8	130	Reach 8	47	Reach 8	130	Reach 8	89.66	ng/kg	0.00387	ng/l	Reach 6	86	ng/kg
PCDD/PCDF TEQ-Bird	23	Reach 8	73	Reach 8	9.8	Reach 8	89	Reach 8	41.46	ng/kg	0.0168	ng/l	Reach 6	15	ng/kg
Total TEQ-Bird	100	Reach 8	200	Reach 8	57	Reach 8	200	Reach 8	125.8	ng/kg	0.015	ng/l	Reach 6	95	ng/kg
Total DDx	56	Reach 8	120	Reach 8	240	Reach 8	260	Reach 8	176.72	µg/kg	0.00397	µg/l	Reach 6	25	µg/kg

Note 1: "–" indicates no TRV available

Note 2: Blue highlighted cells indicate EPC is based on maximium concentration

[a] TRVs derived from the primary literature review based on process identified in Section 8.1.3.1 .

[b] TRVs based on USEPA's LPR restoration project FFS (Louis Berger et al. 2014), USEPA's first draft of the LPR restoration project FFS (Malcolm Pirnie 2007) or USEPA's LPR restoration project PAR (Battelle 2005) .

BW - body weight
COC - chemical of concern
COPEC - chemical of potential ecological concern
FIR - food ingestion rate
LOAEL - Lowest observed adverse effect level
na - not applicable
NFF - non forage fish
NOAEL - No observed adverse effect level
RM - River Mile
SFF - small forage fish
SIR - sediment ingestion rate
SUF - site use factor
UCL HQ = hazard quotient based on the 95th percentile (UCL) concentration
WIR - water ingestion rate

ment	Dose		Range of TRVs					Range of HQs			
			TRV-A[a]		TRV-B[b]			HQ based on TRV-A[a]		HQ based on TRV-B[a]	
Exposure Area	C_{Dose}	C_{dose} (units)	NOAEL	LOAEL	NOAEL	LOAEL	TRV units	NOAEL HQ	LOAEL HQ	NOAEL HQ[b]	LOAEL HQ[b]
Site-wide mudflats	0.0082	mg/kg bw/day	0.4	4	0.08	10.4	mg/kg bw/day	0.021	0.0021	0.10	0.00079
Site-wide mudflats	3.0	mg/kg bw/day	10.5	105	-	-	mg/kg bw/day	0.28	0.028	-	-
Site-wide mudflats	1.8	mg/kg bw/day	1.9	19	2.3	4.7	mg/kg bw/day	0.94	0.094	0.78	0.38
Site-wide mudflats	0.29	mg/kg bw/day	5.5	28	0.19	1.9	mg/kg bw/day	0.053	0.010	**1.5**	0.15
Site-wide mudflats	24	µg/kg bw/day	9.6	96	13	26	µg/kg bw/day	**2.5**	0.25	**1.9**	0.94
Site-wide mudflats	2.0	mg/kg bw/day	15	33	1.38	56.3	mg/kg bw/day	0.14	0.062	**1.5**	0.036
Site-wide mudflats	0.17	mg/kg bw/day	0.42	0.82	0.23	0.93	mg/kg bw/day	0.41	0.21	0.76	0.19
Site-wide mudflats	0.071	mg/kg bw/day	1.2	2.3	-	-	mg/kg bw/day	0.059	0.031	-	-
Site-wide mudflats	5.6	mg/kg bw/day	82	124	17.2	172	mg/kg bw/day	0.068	0.045	0.32	0.032
Site-wide mudflats	4.9	µg/kg bw/day	140	1400	-	-	µg/kg bw/day	0.035	0.0035	-	-
Site-wide mudflats	50	µg/kg bw/day	-	-	48	480	µg/kg bw/day	-	-	**1.0**	0.10
Site-wide mudflats	31	µg/kg bw/day	-	-	670	6700	µg/kg bw/day	-	-	0.046	0.0046
Site-wide mudflats	76	µg/kg bw/day	40000	-	-	-	µg/kg bw/day	0.0019	-	-	-
Site-wide mudflats	330	µg/kg bw/day	140	1400	400	500	µg/kg bw/day	**2.4**	0.24	0.83	0.66
Site-wide mudflats	25	ng/kg bw/day	14	140	2.8	28	ng/kg bw/day	**1.8**	0.18	**9.0**	0.90
Site-wide mudflats	27	ng/kg bw/day	14	140	2.8	28	ng/kg bw/day	**1.9**	0.19	**10**	0.96
Site-wide mudflats	51	ng/kg bw/day	14	140	2.8	28	ng/kg bw/day	**3.7**	0.37	**18**	**1.8**
Site-wide mudflats	35	µg/kg bw/day	25	250	0.9	27	µg/kg bw/day	**1.4**	0.14	**39**	**1.3**
Reach 1	0.0023	mg/kg bw/day	0.4	4	0.08	10.4	mg/kg bw/day	0.0058	0.00058	0.029	0.00022
Reach 1	0.30	mg/kg bw/day	10.5	105	-	-	mg/kg bw/day	0.028	0.0028	-	-
Reach 1	1.6	mg/kg bw/day	1.9	19	2.3	4.7	mg/kg bw/day	0.83	0.083	0.69	0.34
Reach 1	0.11	mg/kg bw/day	5.5	28	0.19	1.9	mg/kg bw/day	0.021	0.0041	0.60	0.060
Reach 1	28	µg/kg bw/day	9.6	96	13	26	µg/kg bw/day	**2.9**	0.29	**2.2**	**1.1**
Reach 1	0.20	mg/kg bw/day	15	33	1.38	56.3	mg/kg bw/day	0.014	0.0062	0.15	0.0036
Reach 1	0.12	mg/kg bw/day	0.42	0.82	0.23	0.93	mg/kg bw/day	0.28	0.14	0.50	0.12
Reach 1	0.046	mg/kg bw/day	1.2	2.3	-	-	mg/kg bw/day	0.038	0.020	-	-
Reach 1	5.6	mg/kg bw/day	82	124	17.2	172	mg/kg bw/day	0.068	0.045	0.32	0.032
Reach 1	1.6	µg/kg bw/day	140	1400	-	-	µg/kg bw/day	0.012	0.0012	-	-
Reach 1	25	µg/kg bw/day	-	-	48	480	µg/kg bw/day	-	-	0.51	0.051
Reach 1	42	µg/kg bw/day	-	-	670	6700	µg/kg bw/day	-	-	0.063	0.0063
Reach 1	67	µg/kg bw/day	40000	-	-	-	µg/kg bw/day	0.0017	-	-	-
Reach 1	246	µg/kg bw/day	140	1400	400	500	µg/kg bw/day	**1.8**	0.18	0.62	0.49
Reach 1	24	ng/kg bw/day	14	140	2.8	28	ng/kg bw/day	**1.7**	0.17	**8.5**	0.85
Reach 1	19	ng/kg bw/day	14	140	2.8	28	ng/kg bw/day	**1.4**	0.14	**6.9**	0.69
Reach 1	44	ng/kg bw/day	14	140	2.8	28	ng/kg bw/day	**3.2**	0.32	**16**	**1.6**

Reach 1	65	µg/kg bw/day	25	250	0.9	27	µg/kg bw/day	**2.6**	0.26	**73**	**2.4**
Reach 2	0.0030	mg/kg bw/day	0.4	4	0.08	10.4	mg/kg bw/day	0.0075	0.00075	0.037	0.00029
Reach 2	0.34	mg/kg bw/day	10.5	105	-	-	mg/kg bw/day	0.033	0.0033	-	-
Reach 2	6.3	mg/kg bw/day	1.9	19	2.3	4.7	mg/kg bw/day	**3.3**	0.33	**2.7**	**1.3**
Reach 2	0.17	mg/kg bw/day	5.5	28	0.19	1.9	mg/kg bw/day	0.030	0.0059	0.88	0.088
Reach 2	41	µg/kg bw/day	9.6	96	13	26	µg/kg bw/day	**4.2**	0.42	**3.1**	**1.6**
Reach 2	0.25	mg/kg bw/day	15	33	1.38	56.3	mg/kg bw/day	0.017	0.0077	0.18	0.0045
Reach 2	0.27	mg/kg bw/day	0.42	0.82	0.23	0.93	mg/kg bw/day	0.65	0.33	**1.2**	0.29
Reach 2	0.040	mg/kg bw/day	1.2	2.3	-	-	mg/kg bw/day	0.033	0.017	-	-
Reach 2	6.0	mg/kg bw/day	82	124	17.2	172	mg/kg bw/day	0.073	0.048	0.35	0.035
Reach 2	1.7	µg/kg bw/day	140	1400	-	-	µg/kg bw/day	0.012	0.0012	-	-
Reach 2	21	µg/kg bw/day	-	-	48	480	µg/kg bw/day	-	-	0.43	0.043
Reach 2	22	µg/kg bw/day	-	-	670	6700	µg/kg bw/day	-	-	0.033	0.0033
Reach 2	43	µg/kg bw/day	40000	-	-	-	µg/kg bw/day	0.0011	-	-	-
Reach 2	236	µg/kg bw/day	140	1400	400	500	µg/kg bw/day	**1.7**	0.17	0.59	0.47
Reach 2	15	ng/kg bw/day	14	140	2.8	28	ng/kg bw/day	**1.1**	0.11	**5.3**	0.53
Reach 2	15	ng/kg bw/day	14	140	2.8	28	ng/kg bw/day	**1.1**	0.11	**5.5**	0.55
Reach 2	30	ng/kg bw/day	14	140	2.8	28	ng/kg bw/day	**2.2**	0.22	**11**	**1.1**
Reach 2	42	µg/kg bw/day	25	250	0.9	27	µg/kg bw/day	**1.7**	0.17	**47**	**1.6**
Reach 3	0.0053	mg/kg bw/day	0.4	4	0.08	10.4	mg/kg bw/day	0.013	0.0013	0.067	0.00051
Reach 3	0.88	mg/kg bw/day	10.5	105	-	-	mg/kg bw/day	0.084	0.0084	-	-
Reach 3	1.3	mg/kg bw/day	1.9	19	2.3	4.7	mg/kg bw/day	0.67	0.067	0.56	0.27
Reach 3	0.25	mg/kg bw/day	5.5	28	0.19	1.9	mg/kg bw/day	0.045	0.0089	**1.3**	0.13
Reach 3	26	µg/kg bw/day	9.6	96	13	26	µg/kg bw/day	**2.7**	0.27	**2.0**	**1.0**
Reach 3	0.52	mg/kg bw/day	15	33	1.38	56.3	mg/kg bw/day	0.035	0.016	0.38	0.0093
Reach 3	0.22	mg/kg bw/day	0.42	0.82	0.23	0.93	mg/kg bw/day	0.53	0.27	0.96	0.24
Reach 3	0.053	mg/kg bw/day	1.2	2.3	-	-	mg/kg bw/day	0.044	0.023	-	-
Reach 3	6.8	mg/kg bw/day	82	124	17.2	172	mg/kg bw/day	0.083	0.055	0.40	0.040
Reach 3	3.8	µg/kg bw/day	140	1400	-	-	µg/kg bw/day	0.027	0.0027	-	-
Reach 3	50	µg/kg bw/day	-	-	48	480	µg/kg bw/day	-	-	**1.0**	0.10
Reach 3	43	µg/kg bw/day	-	-	670	6700	µg/kg bw/day	-	-	0.065	0.0065
Reach 3	88	µg/kg bw/day	40000	-	-	-	µg/kg bw/day	0.0022	-	-	-
Reach 3	467	µg/kg bw/day	140	1400	400	500	µg/kg bw/day	**3.3**	0.33	**1.2**	0.93
Reach 3	37	ng/kg bw/day	14	140	2.8	28	ng/kg bw/day	**2.7**	0.27	**13**	**1.3**
Reach 3	32	ng/kg bw/day	14	140	2.8	28	ng/kg bw/day	**2.3**	0.23	**11**	**1.1**
Reach 3	70	ng/kg bw/day	14	140	2.8	28	ng/kg bw/day	**5.0**	0.50	**25**	**2.5**
Reach 3	47	µg/kg bw/day	25	250	0.9	27	µg/kg bw/day	**1.9**	0.19	**53**	**1.8**
Reach 4	0.011	mg/kg bw/day	0.4	4	0.08	10.4	mg/kg bw/day	0.027	0.0027	0.13	0.0010
Reach 4	1.4	mg/kg bw/day	10.5	105	-	-	mg/kg bw/day	0.14	0.014	-	-
Reach 4	1.4	mg/kg bw/day	1.9	19	2.3	4.7	mg/kg bw/day	0.75	0.075	0.62	0.30
Reach 4	0.43	mg/kg bw/day	5.5	28	0.19	1.9	mg/kg bw/day	0.078	0.015	**2.3**	0.23
Reach 4	23	µg/kg bw/day	9.6	96	13	26	µg/kg bw/day	**2.4**	0.24	**1.8**	0.90
Reach 4	0.87	mg/kg bw/day	15	33	1.38	56.3	mg/kg bw/day	0.06	0.03	0.63	0.015
Reach 4	0.14	mg/kg bw/day	0.42	0.82	0.23	0.93	mg/kg bw/day	0.34	0.18	0.63	0.16
Reach 4	0.10	mg/kg bw/day	1.2	2.3	-	-	mg/kg bw/day	0.083	0.043	-	-
Reach 4	5.6	mg/kg bw/day	82	124	17.2	172	mg/kg bw/day	0.068	0.045	0.32	0.032
Reach 4	7.7	µg/kg bw/day	140	1400	-	-	µg/kg bw/day	0.055	0.0055	-	-
Reach 4	81	µg/kg bw/day	-	-	48	480	µg/kg bw/day	-	-	**1.7**	0.17
Reach 4	40	µg/kg bw/day	-	-	670	6700	µg/kg bw/day	-	-	0.059	0.0059
Reach 4	121	µg/kg bw/day	40000	-	-	-	µg/kg bw/day	0.0030	-	-	-
Reach 4	503	µg/kg bw/day	140	1400	400	500	µg/kg bw/day	**3.6**	0.36	**1.3**	**1.0**
Reach 4	46	ng/kg bw/day	14	140	2.8	28	ng/kg bw/day	**3.3**	0.33	**16**	**1.6**

Reach 4	52	ng/kg bw/day	14	140	2.8	28	ng/kg bw/day	**3.7**	0.37	**19**	**1.9**
Reach 4	99	ng/kg bw/day	14	140	2.8	28	ng/kg bw/day	**7.1**	0.71	**35**	**3.5**
Reach 4	55	µg/kg bw/day	25	250	0.9	27	µg/kg bw/day	**2.2**	0.22	**61**	**2.0**
Reach 5	0.0064	mg/kg bw/day	0.4	4	0.08	10.4	mg/kg bw/day	0.016	0.0016	0.080	0.00061
Reach 5	1.0	mg/kg bw/day	10.5	105	-	-	mg/kg bw/day	0.093	0.0093	-	-
Reach 5	1.7	mg/kg bw/day	1.9	19	2.3	4.7	mg/kg bw/day	0.89	0.089	0.73	0.36
Reach 5	0.28	mg/kg bw/day	5.5	28	0.19	1.9	mg/kg bw/day	0.051	0.010	**1.5**	0.15
Reach 5	28	µg/kg bw/day	9.6	96	13	26	µg/kg bw/day	**2.9**	0.29	**2.2**	**1.1**
Reach 5	0.64	mg/kg bw/day	15	33	1.38	56.3	mg/kg bw/day	0.043	0.019	0.46	0.011
Reach 5	0.20	mg/kg bw/day	0.42	0.82	0.23	0.93	mg/kg bw/day	0.47	0.24	0.87	0.21
Reach 5	0.055	mg/kg bw/day	1.2	2.3	-	-	mg/kg bw/day	0.046	0.024	-	-
Reach 5	5.9	mg/kg bw/day	82	124	17.2	172	mg/kg bw/day	0.072	0.048	0.34	0.034
Reach 5	3.1	µg/kg bw/day	140	1400	-	-	µg/kg bw/day	0.022	0.0022	-	-
Reach 5	40	µg/kg bw/day	-	-	48	480	µg/kg bw/day	-	-	0.83	0.083
Reach 5	24	µg/kg bw/day	-	-	670	6700	µg/kg bw/day	-	-	0.035	0.0035
Reach 5	62	µg/kg bw/day	40000	-	-	-	µg/kg bw/day	0.0016	-	-	-
Reach 5	569	µg/kg bw/day	140	1400	400	500	µg/kg bw/day	**4.1**	0.41	**1.4**	**1.1**
Reach 5	39	ng/kg bw/day	14	140	2.8	28	ng/kg bw/day	**2.8**	0.28	**14**	**1.4**
Reach 5	35	ng/kg bw/day	14	140	2.8	28	ng/kg bw/day	**2.5**	0.25	**13**	**1.3**
Reach 5	73	ng/kg bw/day	14	140	2.8	28	ng/kg bw/day	**5.2**	0.52	**26**	**2.6**
Reach 5	46	µg/kg bw/day	25	250	0.9	27	µg/kg bw/day	**1.8**	0.18	**51**	**1.7**
Reach 6	0.0067	mg/kg bw/day	0.4	4	0.08	10.4	mg/kg bw/day	0.017	0.0017	0.083	0.00064
Reach 6	1.2	mg/kg bw/day	10.5	105	-	-	mg/kg bw/day	0.12	0.012	-	-
Reach 6	0.85	mg/kg bw/day	1.9	19	2.3	4.7	mg/kg bw/day	0.44	0.044	0.37	0.18
Reach 6	0.33	mg/kg bw/day	5.5	28	0.19	1.9	mg/kg bw/day	0.061	0.012	**1.8**	0.18
Reach 6	25	µg/kg bw/day	9.6	96	13	26	µg/kg bw/day	**2.7**	0.27	**2.0**	0.98
Reach 6	0.79	mg/kg bw/day	15	33	1.38	56.3	mg/kg bw/day	0.052	0.024	0.57	0.014
Reach 6	0.26	mg/kg bw/day	0.42	0.82	0.23	0.93	mg/kg bw/day	0.62	0.32	**1.1**	0.28
Reach 6	0.068	mg/kg bw/day	1.2	2.3	-	-	mg/kg bw/day	0.056	0.029	-	-
Reach 6	5.8	mg/kg bw/day	82	124	17.2	172	mg/kg bw/day	0.070	0.046	0.33	0.033
Reach 6	6.1	µg/kg bw/day	140	1400	-	-	µg/kg bw/day	0.043	0.0043	-	-
Reach 6	76	µg/kg bw/day	-	-	48	480	µg/kg bw/day	-	-	**1.6**	0.16
Reach 6	40	µg/kg bw/day	-	-	670	6700	µg/kg bw/day	-	-	0.060	0.0060
Reach 6	116	µg/kg bw/day	40000	-	-	-	µg/kg bw/day	0.0029	-	-	-
Reach 6	155	µg/kg bw/day	140	1400	400	500	µg/kg bw/day	**1.1**	0.11	0.39	0.31
Reach 6	9.0	ng/kg bw/day	14	140	2.8	28	ng/kg bw/day	0.64	0.064	**3.2**	0.32
Reach 6	16	ng/kg bw/day	14	140	2.8	28	ng/kg bw/day	**1.2**	0.12	**5.9**	0.59
Reach 6	25	ng/kg bw/day	14	140	2.8	28	ng/kg bw/day	**1.8**	0.18	**8.9**	0.89
Reach 6	18	µg/kg bw/day	25	250	0.9	27	µg/kg bw/day	0.73	0.073	**20**	0.67
Reach 7	0.014	mg/kg bw/day	0.4	4	0.08	10.4	mg/kg bw/day	0.0343	0.0034	0.17	0.0013
Reach 7	6.5	mg/kg bw/day	10.5	105	-	-	mg/kg bw/day	0.62	0.062	-	-
Reach 7	1.6	mg/kg bw/day	1.9	19	2.3	4.7	mg/kg bw/day	0.86	0.086	0.71	0.35
Reach 7	0.28	mg/kg bw/day	5.5	28	0.19	1.9	mg/kg bw/day	0.051	0.010	**1.5**	0.15
Reach 7	34	µg/kg bw/day	9.6	96	13	26	µg/kg bw/day	**3.6**	0.36	**2.6**	**1.3**
Reach 7	4.7	mg/kg bw/day	15	33	1.38	56.3	mg/kg bw/day	0.31	0.14	**3.4**	0.083
Reach 7	0.24	mg/kg bw/day	0.42	0.82	0.23	0.93	mg/kg bw/day	0.57	0.29	**1.0**	0.26
Reach 7	0.11	mg/kg bw/day	1.2	2.3	-	-	mg/kg bw/day	0.089	0.046	-	-
Reach 7	5.3	mg/kg bw/day	82	124	17.2	172	mg/kg bw/day	0.065	0.043	0.31	0.031
Reach 7	3.5	µg/kg bw/day	140	1400	-	-	µg/kg bw/day	0.025	0.0025	-	-
Reach 7	38	µg/kg bw/day	-	-	48	480	µg/kg bw/day	-	-	0.80	0.080
Reach 7	38	µg/kg bw/day	-	-	670	6700	µg/kg bw/day	-	-	0.056	0.0056
Reach 7	73	µg/kg bw/day	40000	-	-	-	µg/kg bw/day	0.0018	-	-	-

Reach 7	275	µg/kg bw/day	140	1400	400	500	µg/kg bw/day	**2.0**	0.20	0.69	0.55
Reach 7	19	ng/kg bw/day	14	140	2.8	28	ng/kg bw/day	**1.4**	0.14	**6.8**	0.68
Reach 7	19	ng/kg bw/day	14	140	2.8	28	ng/kg bw/day	**1.4**	0.14	**6.9**	0.69
Reach 7	38	ng/kg bw/day	14	140	2.8	28	ng/kg bw/day	**2.7**	0.27	**14**	**1.4**
Reach 7	24	µg/kg bw/day	25	250	0.9	27	µg/kg bw/day	**1.0**	0.10	**27**	0.89
Reach 8	0.016	mg/kg bw/day	0.4	4	0.08	10.4	mg/kg bw/day	0.041	0.0041	0.21	0.0016
Reach 8	1.7	mg/kg bw/day	10.5	105	-	-	mg/kg bw/day	0.16	0.016	-	-
Reach 8	0.65	mg/kg bw/day	1.9	19	2.3	4.7	mg/kg bw/day	0.34	0.034	0.28	0.14
Reach 8	0.32	mg/kg bw/day	5.5	28	0.19	1.9	mg/kg bw/day	0.058	0.011	**1.7**	0.17
Reach 8	25	µg/kg bw/day	9.6	96	13	26	µg/kg bw/day	**2.6**	0.26	**1.9**	0.97
Reach 8	1.1	mg/kg bw/day	15	33	1.38	56.3	mg/kg bw/day	0.076	0.035	0.83	0.020
Reach 8	0.13	mg/kg bw/day	0.42	0.82	0.23	0.93	mg/kg bw/day	0.32	0.16	0.59	0.15
Reach 8	0.056	mg/kg bw/day	1.2	2.3	-	-	mg/kg bw/day	0.047	0.024	-	-
Reach 8	5.9	mg/kg bw/day	82	124	17.2	172	mg/kg bw/day	0.072	0.048	0.35	0.035
Reach 8	5.8	µg/kg bw/day	140	1400	-	-	µg/kg bw/day	0.042	0.0042	-	-
Reach 8	71	µg/kg bw/day	-	-	48	480	µg/kg bw/day	-	-	**1.5**	0.15
Reach 8	25	µg/kg bw/day	-	-	670	6700	µg/kg bw/day	-	-	0.037	0.0037
Reach 8	91	µg/kg bw/day	40000	-	-	-	µg/kg bw/day	0.0023	-	-	-
Reach 8	217	µg/kg bw/day	140	1400	400	500	µg/kg bw/day	**1.5**	0.15	0.54	0.43
Reach 8	16	ng/kg bw/day	14	140	2.8	28	ng/kg bw/day	**1.1**	0.11	**5.6**	0.56
Reach 8	7.2	ng/kg bw/day	14	140	2.8	28	ng/kg bw/day	0.52	0.052	**2.6**	0.26
Reach 8	22	ng/kg bw/day	14	140	2.8	28	ng/kg bw/day	**1.6**	0.16	**7.8**	0.78
Reach 8	31	µg/kg bw/day	25	250	0.9	27	µg/kg bw/day	**1.2**	0.12	**34**	**1.1**

Belted Kingfisher - Diet Scenario 1

Dietary dose (mg/kg bw/d) = (([Csw*WIR] + [Cprey*FIR] + [Csed*SIR])/BW) *SUF

WIR (L/day)	0.016
FIR (kg ww/day)	0.074
SIR (kg dw/day)	0.000074
BW (kg)	0.147
SUF	1

Diet	Fractions
Blue crab	0.15
0-9 cm fish	0.85

	Prey						Surface Water			Sediment			Dose		TR
	Fish (≤ 9)		Blue Crab												
COPEC	$C_{0\text{-}9,\ ww}$	Exposure Area	$C_{crab,\ ww}$	Exposure Area	$C_{prey,ww}$	$C_{prey,ww}$ (units)	C_{sw}	C_{sw} (units)	Exposure Area	$C_{sed,dw}$	$C_{sed,dw}$ (units)	Exposure Area	C_{Dose}	C_{dose} (units)	NOAEL
RM ≥ 6															
Cadmium	0.05	RM ≥ 6	0.11	Site-wide	0.059	mg/kg	0.00016	mg/l	RM ≥ 6	5.5	mg/kg	RM ≥ 6	0.032	mg/kg bw/day	0.4
Chromium	14	RM ≥ 6	1.4	Site-wide	12.11	mg/kg	0.0049	mg/l	RM ≥ 6	180	mg/kg	RM ≥ 6	6.2	mg/kg bw/day	10.5
Copper	3.4	RM ≥ 6	24.6	Site-wide	6.58	mg/kg	0.00895	mg/l	RM ≥ 6	170	mg/kg	RM ≥ 6	3.4	mg/kg bw/day	1.9
Lead	2.8	RM ≥ 6	0.36	Site-wide	2.434	mg/kg	0.00993	mg/l	RM ≥ 6	280	mg/kg	RM ≥ 6	1.4	mg/kg bw/day	5.5
Methyl mercury	28	RM ≥ 6	120	Site-wide	41.8	µg/kg	0.00036	µg/l	RM ≥ 6	4.1	µg/kg	RM ≥ 6	21	µg/kg bw/day	9.6
Nickel	9	RM ≥ 6	1	Site-wide	7.8	mg/kg	0.00237	mg/l	RM ≥ 6	31	mg/kg	RM ≥ 6	3.9	mg/kg bw/day	15
Selenium	0.69	RM ≥ 6	0.79	Site-wide	0.705	mg/kg	0.00063	mg/l	RM ≥ 6	0.78	mg/kg	RM ≥ 6	0.36	mg/kg bw/day	0.42
Vanadium	0.99	RM ≥ 6	0.12	Site-wide	0.8595	mg/kg	0.0035	mg/l	RM ≥ 6	27	mg/kg	RM ≥ 6	0.45	mg/kg bw/day	1.2
Zinc	42.8	RM ≥ 6	36.4	Site-wide	41.84	mg/kg	0.024	mg/l	RM ≥ 6	510	mg/kg	RM ≥ 6	21	mg/kg bw/day	82
Benzo(a)pyrene	38	RM ≥ 6	10	Site-wide	33.8	µg/kg	0.111	µg/l	RM ≥ 6	4600	µg/kg	RM ≥ 6	19	µg/kg bw/day	140
Total HPAHs	380	RM ≥ 6	110	Site-wide	339.5	µg/kg	0.904	µg/l	RM ≥ 6	45000	µg/kg	RM ≥ 6	194	µg/kg bw/day	-
Total LPAHs	89	RM ≥ 6	83	Site-wide	88.1	µg/kg	0.174	µg/l	RM ≥ 6	11000	µg/kg	RM ≥ 6	50	µg/kg bw/day	-
Total PAHs	470	RM ≥ 6	190	Site-wide	428	µg/kg	1.1	µg/l	RM ≥ 6	56000	µg/kg	RM ≥ 6	244	µg/kg bw/day	40000
Total PCB Congeners	770	RM ≥ 6	350	Site-wide	707	µg/kg	0.031	µg/l	RM ≥ 6	2900	µg/kg	RM ≥ 6	357	µg/kg bw/day	140
PCB TEQ-Bird	65	RM ≥ 6	94	Site-wide	69.35	ng/kg	0.00583	ng/l	RM ≥ 6	690	ng/kg	RM ≥ 6	35	ng/kg bw/day	14
PCDD/PCDF TEQ-Bird	78	RM ≥ 6	71	Site-wide	76.95	ng/kg	0.106	ng/l	RM ≥ 6	2900	ng/kg	RM ≥ 6	40	ng/kg bw/day	14
Total TEQ-Bird	140	RM ≥ 6	170	Site-wide	144.5	ng/kg	0.111	ng/l	RM ≥ 6	3500	ng/kg	RM ≥ 6	75	ng/kg bw/day	14
Total DDx	79	RM ≥ 6	68	Site-wide	77.35	µg/kg	0.00463	µg/l	RM ≥ 6	210	µg/kg	RM ≥ 6	39	µg/kg bw/day	25
Site Wide															
Cadmium	0.047	Site-wide	0.11	Site-wide	0.05645	mg/kg	0.00017	mg/l	RM ≥ 4	4.9	mg/kg	Site-wide	0.031	mg/kg bw/day	0.4
Chromium	12	Site-wide	1.4	Site-wide	10.41	mg/kg	0.0048	mg/l	RM ≥ 4	160	mg/kg	Site-wide	5.3	mg/kg bw/day	10.5
Copper	3.4	Site-wide	24.6	Site-wide	6.58	mg/kg	0.011	mg/l	RM ≥ 4	170	mg/kg	Site-wide	3.4	mg/kg bw/day	1.9
Lead	2.5	Site-wide	0.36	Site-wide	2.179	mg/kg	0.0122	mg/l	RM ≥ 4	270	mg/kg	Site-wide	1.2	mg/kg bw/day	5.5
Methyl mercury	35	Site-wide	120	Site-wide	47.75	µg/kg	0.00044	µg/l	RM ≥ 4	3.9	µg/kg	Site-wide	24	µg/kg bw/day	9.6
Nickel	7.8	Site-wide	1	Site-wide	6.78	mg/kg	0.00239	mg/l	RM ≥ 4	32	mg/kg	Site-wide	3.43	mg/kg bw/day	15
Selenium	0.69	Site-wide	0.79	Site-wide	0.705	mg/kg	0.00067	mg/l	RM ≥ 4	0.93	mg/kg	Site-wide	0.36	mg/kg bw/day	0.42
Vanadium	0.91	Site-wide	0.12	Site-wide	0.7915	mg/kg	0.0033	mg/l	RM ≥ 4	27	mg/kg	Site-wide	0.41	mg/kg bw/day	1.2
Zinc	44.6	Site-wide	36.4	Site-wide	43.37	mg/kg	0.029	mg/l	RM ≥ 4	490	mg/kg	Site-wide	22	mg/kg bw/day	82
Benzo(a)pyrene	33	Site-wide	10	Site-wide	29.55	µg/kg	0.0953	µg/l	RM ≥ 4	4700	µg/kg	Site-wide	17	µg/kg bw/day	140
Total HPAHs	330	Site-wide	110	Site-wide	297	µg/kg	0.961	µg/l	RM ≥ 4	46000	µg/kg	Site-wide	173	µg/kg bw/day	-
Total LPAHs	84	Site-wide	83	Site-wide	83.85	µg/kg	0.178	µg/l	RM ≥ 4	18000	µg/kg	Site-wide	51	µg/kg bw/day	-
Total PAHs	410	Site-wide	190	Site-wide	377	µg/kg	1.1	µg/l	RM ≥ 4	62000	µg/kg	Site-wide	221	µg/kg bw/day	40000
Total PCB Congeners	760	Site-wide	350	Site-wide	698.5	µg/kg	0.034	µg/l	RM ≥ 4	2600	µg/kg	Site-wide	353	µg/kg bw/day	140

Belted Kingfisher - Diet Scenario 1

Dietary dose (mg/kg bw/d) = (([Csw*WIR] + [Cprey*FIR] + [Csed*SIR])/BW) *SUF

WIR (L/day)	0.016
FIR (kg ww/day)	0.074
SIR (kg dw/day)	0.000074
BW (kg)	0.147
SUF	1

Diet	Fractions
Blue crab	0.15
0-9 cm fish	0.85

	Prey						Surface Water			Sediment			Dose		TR
	Fish (≤ 9)		Blue Crab												
COPEC	$C_{0\text{-}9,\ ww}$	Exposure Area	$C_{crab,\ ww}$	Exposure Area	$C_{prey,ww}$	$C_{prey,ww}$ (units)	C_{sw}	C_{sw} (units)	Exposure Area	$C_{sed,dw}$	$C_{sed,dw}$ (units)	Exposure Area	C_{Dose}	C_{dose} (units)	NOAEL
PCB TEQ-Bird	63	Site-wide	94	Site-wide	67.65	ng/kg	0.00609	ng/l	RM ≥ 4	630	ng/kg	Site-wide	34	ng/kg bw/day	14
PCDD/PCDF TEQ-Bird	72	Site-wide	71	Site-wide	71.85	ng/kg	0.111	ng/l	RM ≥ 4	2300	ng/kg	Site-wide	37	ng/kg bw/day	14
Total TEQ-Bird	130	Site-wide	170	Site-wide	136	ng/kg	0.116	ng/l	RM ≥ 4	2800	ng/kg	Site-wide	70	ng/kg bw/day	14
Total DDx	81	Site-wide	68	Site-wide	79.05	µg/kg	0.00478	µg/l	RM ≥ 4	190	µg/kg	Site-wide	40	µg/kg bw/day	25
Reach 1															
Cadmium	0.02	Reach 1;≥9 and	0.15	Reach 1	0.0395	mg/kg	0.00026	mg/l	Reach 3	5.9	mg/kg	Reach 1	0.023	mg/kg bw/day	0.4
Chromium	4.9	Reach 1;≥9 and	1.3	Reach 1	4.36	mg/kg	0.00732	mg/l	Reach 3	120	mg/kg	Reach 1	2.3	mg/kg bw/day	10.5
Copper	2.9	Reach 1;≥9 and	20.6	Reach 1	5.555	mg/kg	0.0142	mg/l	Reach 3	150	mg/kg	Reach 1	2.9	mg/kg bw/day	1.9
Lead	0.77	Reach 1;≥9 and	0.44	Reach 1	0.7205	mg/kg	0.0137	mg/l	Reach 3	220	mg/kg	Reach 1	0.47	mg/kg bw/day	5.5
Methyl mercury	69	Reach 1;≥9 and	150	Reach 1	81.15	µg/kg	0.0004	µg/l	Reach 3	3.8	µg/kg	Reach 1	41	µg/kg bw/day	9.6
Nickel	3.1	Reach 1;≥9 and	0.98	Reach 1	2.782	mg/kg	0.00272	mg/l	Reach 3	33	mg/kg	Reach 1	1.4	mg/kg bw/day	15
Selenium	0.64	Reach 1;≥9 and	0.96	Reach 1	0.688	mg/kg	0.00091	mg/l	Reach 3	1.4	mg/kg	Reach 1	0.35	mg/kg bw/day	0.42
Vanadium	0.51	Reach 1;≥9 and	0.13	Reach 1	0.453	mg/kg	0.0042	mg/l	Reach 3	31	mg/kg	Reach 1	0.24	mg/kg bw/day	1.2
Zinc	48.2	Reach 1;≥9 and	36.7	Reach 1	46.475	mg/kg	0.03	mg/l	Reach 3	440	mg/kg	Reach 1	24	mg/kg bw/day	82
Benzo(a)pyrene	7	Reach 1;≥9 and	27	Reach 1	10	µg/kg	0.182	µg/l	Reach 3	4900	µg/kg	Reach 1	7.5	µg/kg bw/day	140
Total HPAHs	68	Reach 1;≥9 and	180	Reach 1	84.8	µg/kg	1.23	µg/l	Reach 3	45000	µg/kg	Reach 1	65	µg/kg bw/day	-
Total LPAHs	35	Reach 1;≥9 and	55	Reach 1	38	µg/kg	0.21	µg/l	Reach 3	18000	µg/kg	Reach 1	28	µg/kg bw/day	-
Total PAHs	100	Reach 1;≥9 and	280	Reach 1	127	µg/kg	1.4	µg/l	Reach 3	89000	µg/kg	Reach 1	109	µg/kg bw/day	40000
Total PCB Congeners	340	Reach 1;≥9 and	270	Reach 1	329.5	µg/kg	0.0424	µg/l	Reach 3	1900	µg/kg	Reach 1	167	µg/kg bw/day	140
PCB TEQ-Bird	23	Reach 1;≥9 and	92	Reach 1	33.35	ng/kg	0.00719	ng/l	Reach 3	430	ng/kg	Reach 1	17	ng/kg bw/day	14
PCDD/PCDF TEQ-Bird	17	Reach 1;≥9 and	66	Reach 1	24.35	ng/kg	0.291	ng/l	Reach 3	710	ng/kg	Reach 1	13	ng/kg bw/day	14
Total TEQ-Bird	40	Reach 1;≥9 and	160	Reach 1	58	ng/kg	0.227	ng/l	Reach 3	1100	ng/kg	Reach 1	30	ng/kg bw/day	14
Total DDx	32	Reach 1;≥9 and	66	Reach 1	37.1	µg/kg	0.00597	µg/l	Reach 3	120	µg/kg	Reach 1	19	µg/kg bw/day	25
Reach 2															
Cadmium	0.01	Reach 2	0.1	Reach 2	0.0235	mg/kg	0.00026	mg/l	Reach 3	3.4	mg/kg	Reach 2	0.014	mg/kg bw/day	0.4
Chromium	0.91	Reach 2	1.2	Reach 2	0.9535	mg/kg	0.00732	mg/l	Reach 3	130	mg/kg	Reach 2	0.55	mg/kg bw/day	10.5
Copper	2.7	Reach 2	24.2	Reach 2	5.925	mg/kg	0.0142	mg/l	Reach 3	240	mg/kg	Reach 2	3.1	mg/kg bw/day	1.9
Lead	0.59	Reach 2	0.46	Reach 2	0.5705	mg/kg	0.0137	mg/l	Reach 3	240	mg/kg	Reach 2	0.41	mg/kg bw/day	5.5
Methyl mercury	58	Reach 2	140	Reach 2	70.3	µg/kg	0.0004	µg/l	Reach 3	4.1	µg/kg	Reach 2	35	µg/kg bw/day	9.6
Nickel	0.88	Reach 2	0.9	Reach 2	0.883	mg/kg	0.00272	mg/l	Reach 3	32	mg/kg	Reach 2	0.46	mg/kg bw/day	15
Selenium	0.7	Reach 2	0.89	Reach 2	0.7285	mg/kg	0.00091	mg/l	Reach 3	1.5	mg/kg	Reach 2	0.37	mg/kg bw/day	0.42
Vanadium	0.2	Reach 2	0.12	Reach 2	0.188	mg/kg	0.0042	mg/l	Reach 3	29	mg/kg	Reach 2	0.11	mg/kg bw/day	1.2
Zinc	51.6	Reach 2	40.3	Reach 2	49.905	mg/kg	0.03	mg/l	Reach 3	480	mg/kg	Reach 2	25	mg/kg bw/day	82
Benzo(a)pyrene	3.3	Reach 2	14	Reach 2	4.905	µg/kg	0.182	µg/l	Reach 3	6100	µg/kg	Reach 2	5.6	µg/kg bw/day	140
Total HPAHs	30	Reach 2	170	Reach 2	51	µg/kg	1.23	µg/l	Reach 3	57000	µg/kg	Reach 2	55	µg/kg bw/day	-
Total LPAHs	18	Reach 2	75	Reach 2	26.55	µg/kg	0.21	µg/l	Reach 3	13000	µg/kg	Reach 2	20	µg/kg bw/day	-
Total PAHs	48	Reach 2	240	Reach 2	76.8	µg/kg	1.4	µg/l	Reach 3	69000	µg/kg	Reach 2	74	µg/kg bw/day	40000

Belted Kingfisher - Diet Scenario 1

Dietary dose (mg/kg bw/d) = (([Csw*WIR] + [Cprey*FIR] + [Csed*SIR])/BW) *SUF

WIR (L/day)	0.016
FIR (kg ww/day)	0.074
SIR (kg dw/day)	0.000074
BW (kg)	0.147
SUF	1

Diet	Fractions
Blue crab	0.15
0-9 cm fish	0.85

	Prey						Surface Water			Sediment			Dose		TR
	Fish (≤ 9)		Blue Crab												
COPEC	$C_{0\text{-}9,\ ww}$	Exposure Area	$C_{crab,\ ww}$	Exposure Area	$C_{prey,ww}$	$C_{prey,ww}$ (units)	C_{sw}	C_{sw} (units)	Exposure Area	$C_{sed,dw}$	$C_{sed,dw}$ (units)	Exposure Area	C_{Dose}	C_{dose} (units)	NOAEL
Total PCB Congeners	420	Reach 2	330	Reach 2	406.5	µg/kg	0.0424	µg/l	Reach 3	3900	µg/kg	Reach 2	207	µg/kg bw/day	140
PCB TEQ-Bird	35	Reach 2	100	Reach 2	44.75	ng/kg	0.00719	ng/l	Reach 3	1400	ng/kg	Reach 2	23	ng/kg bw/day	14
PCDD/PCDF TEQ-Bird	23	Reach 2	75	Reach 2	30.8	ng/kg	0.291	ng/l	Reach 3	2000	ng/kg	Reach 2	17	ng/kg bw/day	14
Total TEQ-Bird	58	Reach 2	180	Reach 2	76.3	ng/kg	0.227	ng/l	Reach 3	3100	ng/kg	Reach 2	40	ng/kg bw/day	14
Total DDx	44	Reach 2	84	Reach 2	50	µg/kg	0.00597	µg/l	Reach 3	380	µg/kg	Reach 2	25	µg/kg bw/day	25
Reach 3															
Cadmium	0.053	Reach 3	0.068	Reach 3	0.05525	mg/kg	0.00026	mg/l	Reach 3	4.9	mg/kg	Reach 3	0.030	mg/kg bw/day	0.4
Chromium	7.1	Reach 3	3.1	Reach 3	6.5	mg/kg	0.00732	mg/l	Reach 3	220	mg/kg	Reach 3	3.4	mg/kg bw/day	10.5
Copper	3.5	Reach 3	30.1	Reach 3	7.49	mg/kg	0.0142	mg/l	Reach 3	200	mg/kg	Reach 3	3.9	mg/kg bw/day	1.9
Lead	1.7	Reach 3	0.36	Reach 3	1.499	mg/kg	0.0137	mg/l	Reach 3	320	mg/kg	Reach 3	0.92	mg/kg bw/day	5.5
Methyl mercury	31	Reach 3	96	Reach 3	40.75	µg/kg	0.0004	µg/l	Reach 3	4.7	µg/kg	Reach 3	21	µg/kg bw/day	9.6
Nickel	4.8	Reach 3	1.9	Reach 3	4.365	mg/kg	0.00272	mg/l	Reach 3	39	mg/kg	Reach 3	2.2	mg/kg bw/day	15
Selenium	0.68	Reach 3	0.75	Reach 3	0.6905	mg/kg	0.00091	mg/l	Reach 3	1.3	mg/kg	Reach 3	0.35	mg/kg bw/day	0.42
Vanadium	0.79	Reach 3	0.13	Reach 3	0.691	mg/kg	0.0042	mg/l	Reach 3	30.6	mg/kg	Reach 3	0.36	mg/kg bw/day	1.2
Zinc	43.5	Reach 3	36.5	Reach 3	42.45	mg/kg	0.03	mg/l	Reach 3	570	mg/kg	Reach 3	22	mg/kg bw/day	82
Benzo(a)pyrene	19	Reach 3	6.8	Reach 3	17.17	µg/kg	0.182	µg/l	Reach 3	9000	µg/kg	Reach 3	13	µg/kg bw/day	140
Total HPAHs	180	Reach 3	110	Reach 3	169.5	µg/kg	1.23	µg/l	Reach 3	92000	µg/kg	Reach 3	132	µg/kg bw/day	-
Total LPAHs	85	Reach 3	270	Reach 3	112.75	µg/kg	0.21	µg/l	Reach 3	110000	µg/kg	Reach 3	112	µg/kg bw/day	-
Total PAHs	260	Reach 3	380	Reach 3	278	µg/kg	1.4	µg/l	Reach 3	200000	µg/kg	Reach 3	241	µg/kg bw/day	40000
Total PCB Congeners	860	Reach 3	450	Reach 3	798.5	µg/kg	0.0424	µg/l	Reach 3	4800	µg/kg	Reach 3	404	µg/kg bw/day	140
PCB TEQ-Bird	58	Reach 3	110	Reach 3	65.8	ng/kg	0.00719	ng/l	Reach 3	1200	ng/kg	Reach 3	34	ng/kg bw/day	14
PCDD/PCDF TEQ-Bird	58	Reach 3	90	Reach 3	62.8	ng/kg	0.291	ng/l	Reach 3	3900	ng/kg	Reach 3	34	ng/kg bw/day	14
Total TEQ-Bird	120	Reach 3	200	Reach 3	132	ng/kg	0.227	ng/l	Reach 3	5100	ng/kg	Reach 3	69	ng/kg bw/day	14
Total DDx	100	Reach 3	79	Reach 3	96.85	µg/kg	0.00597	µg/l	Reach 3	220	µg/kg	Reach 3	49	µg/kg bw/day	25
Reach 4															
Cadmium	0.073	Reach 4	0.097	Reach 4	0.0766	mg/kg	0.00027	mg/l	Reach 4	11	mg/kg	Reach 4	0.0	mg/kg bw/day	0.4
Chromium	12.2	Reach 4	2.3	Reach 4	10.715	mg/kg	0.00567	mg/l	Reach 4	290	mg/kg	Reach 4	5.5	mg/kg bw/day	10.5
Copper	4.3	Reach 4	30.6	Reach 4	8.245	mg/kg	0.0152	mg/l	Reach 4	230	mg/kg	Reach 4	4.3	mg/kg bw/day	1.9
Lead	3.9	Reach 4	0.27	Reach 4	3.3555	mg/kg	0.0144	mg/l	Reach 4	340	mg/kg	Reach 4	1.9	mg/kg bw/day	5.5
Methyl mercury	33	Reach 4	100	Reach 4	43.05	µg/kg	0.000413	µg/l	Reach 4	6.5	µg/kg	Reach 4	21.7	µg/kg bw/day	9.6
Nickel	6.6	Reach 4	1.6	Reach 4	5.85	mg/kg	0.0026	mg/l	Reach 4	39	mg/kg	Reach 4	3.0	mg/kg bw/day	15
Selenium	0.7	Reach 4	0.62	Reach 4	0.688	mg/kg	0.00069	mg/l	Reach 4	1.2	mg/kg	Reach 4	0.3	mg/kg bw/day	0.42
Vanadium	1.3	Reach 4	0.12	Reach 4	1.123	mg/kg	0.0037	mg/l	Reach 4	34	mg/kg	Reach 4	0.6	mg/kg bw/day	1.2
Zinc	44.1	Reach 4	35.2	Reach 4	42.765	mg/kg	0.03	mg/l	Reach 4	660	mg/kg	Reach 4	21.9	mg/kg bw/day	82
Benzo(a)pyrene	56	Reach 4	4	Reach 4	48.2	µg/kg	0.153	µg/l	Reach 4	5600	µg/kg	Reach 4	27.1	µg/kg bw/day	140
Total HPAHs	540	Reach 4	71	Reach 4	469.65	µg/kg	1.17	µg/l	Reach 4	52000	µg/kg	Reach 4	262.7	µg/kg bw/day	-
Total LPAHs	130	Reach 4	230	Reach 4	145	µg/kg	0.195	µg/l	Reach 4	13000	µg/kg	Reach 4	79.6	µg/kg bw/day	-

Belted Kingfisher - Diet Scenario 1

Dietary dose (mg/kg bw/d) = (([Csw*WIR] + [Cprey*FIR] + [Csed*SIR])/BW) *SUF

WIR (L/day)	0.016
FIR (kg ww/day)	0.074
SIR (kg dw/day)	0.000074
BW (kg)	0.147
SUF	1

Diet	Fractions
Blue crab	0.15
0-9 cm fish	0.85

	Prey						Surface Water			Sediment			Dose		TR
	Fish (≤ 9)		Blue Crab												
COPEC	$C_{0\text{-}9,\ ww}$	Exposure Area	$C_{crab,\ ww}$	Exposure Area	$C_{prey,ww}$	$C_{prey,ww}$ (units)	C_{sw}	C_{sw} (units)	Exposure Area	$C_{sed,dw}$	$C_{sed,dw}$ (units)	Exposure Area	C_{Dose}	C_{dose} (units)	NOAEL
Total PAHs	670	Reach 4	300	Reach 4	614.5	µg/kg	1.4	µg/l	Reach 4	65000	µg/kg	Reach 4	342.2	µg/kg bw/day	40000
Total PCB Congeners	930	Reach 4	580	Reach 4	877.5	µg/kg	0.0323	µg/l	Reach 4	6800	µg/kg	Reach 4	445.2	µg/kg bw/day	140
PCB TEQ-Bird	73	Reach 4	110	Reach 4	78.55	ng/kg	0.00651	ng/l	Reach 4	1500	ng/kg	Reach 4	40.3	ng/kg bw/day	14
PCDD/PCDF TEQ-Bird	84	Reach 4	100	Reach 4	86.4	ng/kg	0.266	ng/l	Reach 4	7400	ng/kg	Reach 4	47.2	ng/kg bw/day	14
Total TEQ-Bird	160	Reach 4	200	Reach 4	166	ng/kg	0.274	ng/l	Reach 4	8700	ng/kg	Reach 4	88.0	ng/kg bw/day	14
Total DDx	86	Reach 4	89	Reach 4	86.45	µg/kg	0.00643	µg/l	Reach 4	560	µg/kg	Reach 4	43.8	µg/kg bw/day	25
Reach 5															
Cadmium	0.052	Reach 5	0.12	Reach 5	0.0622	mg/kg	0.000081	mg/l	Reach 5	7.1	mg/kg	Reach 5	0.035	mg/kg bw/day	0.4
Chromium	23.2	Reach 5	1	Reach 5	19.87	mg/kg	0.00337	mg/l	Reach 5	210	mg/kg	Reach 5	10	mg/kg bw/day	10.5
Copper	3.8	Reach 5	29.3	Reach 5	7.625	mg/kg	0.0052	mg/l	Reach 5	170	mg/kg	Reach 5	3.9	mg/kg bw/day	1.9
Lead	3.1	Reach 5	0.33	Reach 5	2.6845	mg/kg	0.00753	mg/l	Reach 5	270	mg/kg	Reach 5	1.5	mg/kg bw/day	5.5
Methyl mercury	25	Reach 5	68	Reach 5	31.45	µg/kg	0.000289	µg/l	Reach 5	7.1	µg/kg	Reach 5	16	µg/kg bw/day	9.6
Nickel	15.8	Reach 5	0.78	Reach 5	13.547	mg/kg	0.00223	mg/l	Reach 5	28	mg/kg	Reach 5	6.8	mg/kg bw/day	15
Selenium	0.81	Reach 5	0.52	Reach 5	0.7665	mg/kg	0.001	mg/l	Reach 5	0.83	mg/kg	Reach 5	0.39	mg/kg bw/day	0.42
Vanadium	1.1	Reach 5	0.11	Reach 5	0.9515	mg/kg	0.0053	mg/l	Reach 5	26	mg/kg	Reach 5	0.49	mg/kg bw/day	1.2
Zinc	42.3	Reach 5	35.5	Reach 5	41.28	mg/kg	0.0111	mg/l	Reach 5	490	mg/kg	Reach 5	21	mg/kg bw/day	82
Benzo(a)pyrene	48	Reach 5	3.6	Reach 5	41.34	µg/kg	0.0421	µg/l	Reach 5	4200	µg/kg	Reach 5	23	µg/kg bw/day	140
Total HPAHs	480	Reach 5	23	Reach 5	411.45	µg/kg	0.484	µg/l	Reach 5	40000	µg/kg	Reach 5	227	µg/kg bw/day	-
Total LPAHs	86	Reach 5	28	Reach 5	77.3	µg/kg	0.0744	µg/l	Reach 5	8800	µg/kg	Reach 5	43	µg/kg bw/day	-
Total PAHs	570	Reach 5	51	Reach 5	492.15	µg/kg	0.558	µg/l	Reach 5	48000	µg/kg	Reach 5	272	µg/kg bw/day	40000
Total PCB Congeners	710	Reach 5	290	Reach 5	647	µg/kg	0.0279	µg/l	Reach 5	4100	µg/kg	Reach 5	328	µg/kg bw/day	140
PCB TEQ-Bird	72	Reach 5	66	Reach 5	71.1	ng/kg	0.00436	ng/l	Reach 5	740	ng/kg	Reach 5	36	ng/kg bw/day	14
PCDD/PCDF TEQ-Bird	110	Reach 5	62	Reach 5	102.8	ng/kg	0.0228	ng/l	Reach 5	3100	ng/kg	Reach 5	53	ng/kg bw/day	14
Total TEQ-Bird	170	Reach 5	130	Reach 5	164	ng/kg	0.0271	ng/l	Reach 5	3700	ng/kg	Reach 5	84	ng/kg bw/day	14
Total DDx	81	Reach 5	54	Reach 5	76.95	µg/kg	0.00377	µg/l	Reach 5	180	µg/kg	Reach 5	39	µg/kg bw/day	25
Reach 6															
Cadmium	0.038	Reach 6	0.12	Reach 5	0.0503	mg/kg	0.00013	mg/l	Reach 6	6.4	mg/kg	Reach 6	0.029	mg/kg bw/day	0.4
Chromium	16.4	Reach 6	1	Reach 5	14.09	mg/kg	0.0067	mg/l	Reach 6	190	mg/kg	Reach 6	7.2	mg/kg bw/day	10.5
Copper	2.9	Reach 6	29.3	Reach 5	6.86	mg/kg	0.00793	mg/l	Reach 6	180	mg/kg	Reach 6	3.5	mg/kg bw/day	1.9
Lead	2.5	Reach 6	0.33	Reach 5	2.1745	mg/kg	0.00835	mg/l	Reach 6	270	mg/kg	Reach 6	1.2	mg/kg bw/day	5.5
Methyl mercury	31	Reach 6	68	Reach 5	36.55	µg/kg	0.00036	µg/l	Reach 6	2.1	µg/kg	Reach 6	18	µg/kg bw/day	9.6
Nickel	9.9	Reach 6	0.78	Reach 5	8.532	mg/kg	0.00239	mg/l	Reach 6	31	mg/kg	Reach 6	4.3	mg/kg bw/day	15
Selenium	0.69	Reach 6	0.52	Reach 5	0.6645	mg/kg	0.00063	mg/l	Reach 6	0.91	mg/kg	Reach 6	0.34	mg/kg bw/day	0.42
Vanadium	0.9	Reach 6	0.11	Reach 5	0.7815	mg/kg	0.0032	mg/l	Reach 6	26	mg/kg	Reach 6	0.41	mg/kg bw/day	1.2
Zinc	40.9	Reach 6	35.5	Reach 5	40.09	mg/kg	0.031	mg/l	Reach 6	500	mg/kg	Reach 6	20	mg/kg bw/day	82
Benzo(a)pyrene	33	Reach 6	3.6	Reach 5	28.59	µg/kg	0.0854	µg/l	Reach 6	6100	µg/kg	Reach 6	17	µg/kg bw/day	140
Total HPAHs	290	Reach 6	23	Reach 5	249.95	µg/kg	0.871	µg/l	Reach 6	68000	µg/kg	Reach 6	160	µg/kg bw/day	-

Belted Kingfisher - Diet Scenario 1

Dietary dose (mg/kg bw/d) = (([Csw*WIR] + [Cprey*FIR] + [Csed*SIR])/BW) *SUF

WIR (L/day)	0.016
FIR (kg ww/day)	0.074
SIR (kg dw/day)	0.000074
BW (kg)	0.147
SUF	1

Diet	Fractions
Blue crab	0.15
0-9 cm fish	0.85

COPEC	Prey: Fish (≤ 9) $C_{0\text{-}9,\ ww}$	Prey: Fish (≤ 9) Exposure Area	Prey: Blue Crab $C_{crab,\ ww}$	Prey: Blue Crab Exposure Area	Prey: $C_{prey,ww}$	Prey: $C_{prey,ww}$ (units)	Surface Water C_{sw}	Surface Water C_{sw} (units)	Surface Water Exposure Area	Sediment $C_{sed,dw}$	Sediment $C_{sed,dw}$ (units)	Sediment Exposure Area	Dose C_{Dose}	Dose C_{dose} (units)	TRV NOAEL
Total LPAHs	74	Reach 6	28	Reach 5	67.1	µg/kg	0.173	µg/l	Reach 6	23000	µg/kg	Reach 6	45	µg/kg bw/day	-
Total PAHs	360	Reach 6	51	Reach 5	313.65	µg/kg	1	µg/l	Reach 6	86000	µg/kg	Reach 6	201	µg/kg bw/day	40000
Total PCB Congeners	430	Reach 6	290	Reach 5	409	µg/kg	0.0223	µg/l	Reach 6	3700	µg/kg	Reach 6	208	µg/kg bw/day	140
PCB TEQ-Bird	43	Reach 6	66	Reach 5	46.45	ng/kg	0.00387	ng/l	Reach 6	990	ng/kg	Reach 6	24	ng/kg bw/day	14
PCDD/PCDF TEQ-Bird	31	Reach 6	62	Reach 5	35.65	ng/kg	0.0168	ng/l	Reach 6	4200	ng/kg	Reach 6	20	ng/kg bw/day	14
Total TEQ-Bird	74	Reach 6	130	Reach 5	82.4	ng/kg	0.015	ng/l	Reach 6	5400	ng/kg	Reach 6	44	ng/kg bw/day	14
Total DDx	67	Reach 6	54	Reach 5	65.05	µg/kg	0.00397	µg/l	Reach 6	210	µg/kg	Reach 6	33	µg/kg bw/day	25
Reach 7															
Cadmium	0.048	Reach 7;≥9 and	0.12	Reach 5	0.0588	mg/kg	0.00013	mg/l	Reach 6	4.3	mg/kg	Reach 7	0.032	mg/kg bw/day	0.4
Chromium	4.3	Reach 7;≥9 and	1	Reach 5	3.805	mg/kg	0.0067	mg/l	Reach 6	82	mg/kg	Reach 7	2.0	mg/kg bw/day	10.5
Copper	3.6	Reach 7;≥9 and	29.3	Reach 5	7.455	mg/kg	0.00793	mg/l	Reach 6	120	mg/kg	Reach 7	3.8	mg/kg bw/day	1.9
Lead	2.5	Reach 7;≥9 and	0.33	Reach 5	2.1745	mg/kg	0.00835	mg/l	Reach 6	224	mg/kg	Reach 7	1.2	mg/kg bw/day	5.5
Methyl mercury	17	Reach 7;≥9 and	68	Reach 5	24.65	µg/kg	0.00036	µg/l	Reach 6	1.9	µg/kg	Reach 7	12	µg/kg bw/day	9.6
Nickel	3	Reach 7;≥9 and	0.78	Reach 5	2.667	mg/kg	0.00239	mg/l	Reach 6	40	mg/kg	Reach 7	1.4	mg/kg bw/day	15
Selenium	0.3	Reach 7;≥9 and	0.52	Reach 5	0.333	mg/kg	0.00063	mg/l	Reach 6	0.63	mg/kg	Reach 7	0.17	mg/kg bw/day	0.42
Vanadium	0.68	Reach 7;≥9 and	0.11	Reach 5	0.5945	mg/kg	0.0032	mg/l	Reach 6	22	mg/kg	Reach 7	0.31	mg/kg bw/day	1.2
Zinc	25	Reach 7;≥9 and	35.5	Reach 5	26.575	mg/kg	0.031	mg/l	Reach 6	390	mg/kg	Reach 7	14	mg/kg bw/day	82
Benzo(a)pyrene	28	Reach 7;≥9 and	3.6	Reach 5	24.34	µg/kg	0.0854	µg/l	Reach 6	8000	µg/kg	Reach 7	16	µg/kg bw/day	140
Total HPAHs	340	Reach 7;≥9 and	23	Reach 5	292.45	µg/kg	0.871	µg/l	Reach 6	68000	µg/kg	Reach 7	182	µg/kg bw/day	-
Total LPAHs	85	Reach 7;≥9 and	28	Reach 5	76.45	µg/kg	0.173	µg/l	Reach 6	17000	µg/kg	Reach 7	47	µg/kg bw/day	-
Total PAHs	430	Reach 7;≥9 and	51	Reach 5	373.15	µg/kg	1	µg/l	Reach 6	84000	µg/kg	Reach 7	230	µg/kg bw/day	40000
Total PCB Congeners	250	Reach 7;≥9 and	290	Reach 5	256	µg/kg	0.0223	µg/l	Reach 6	2300	µg/kg	Reach 7	130	µg/kg bw/day	140
PCB TEQ-Bird	20	Reach 7;≥9 and	66	Reach 5	26.9	ng/kg	0.00387	ng/l	Reach 6	530	ng/kg	Reach 7	14	ng/kg bw/day	14
PCDD/PCDF TEQ-Bird	15	Reach 7;≥9 and	62	Reach 5	22.05	ng/kg	0.0168	ng/l	Reach 6	2400	ng/kg	Reach 7	12	ng/kg bw/day	14
Total TEQ-Bird	35	Reach 7;≥9 and	130	Reach 5	49.25	ng/kg	0.015	ng/l	Reach 6	1300	ng/kg	Reach 7	25	ng/kg bw/day	14
Total DDx	29	Reach 7;≥9 and	54	Reach 5	32.75	µg/kg	0.00397	µg/l	Reach 6	160	µg/kg	Reach 7	17	µg/kg bw/day	25
Reach 8															
Cadmium	0.037	Reach 8;≥9 and	0.12	Reach 5	0.04945	mg/kg	0.00013	mg/l	Reach 6	1.3	mg/kg	Reach 8	0.026	mg/kg bw/day	0.4
Chromium	31.7	Reach 8;≥9 and	1	Reach 5	27.095	mg/kg	0.0067	mg/l	Reach 6	50	mg/kg	Reach 8	14	mg/kg bw/day	10.5
Copper	3.7	Reach 8;≥9 and	29.3	Reach 5	7.54	mg/kg	0.00793	mg/l	Reach 6	58	mg/kg	Reach 8	3.8	mg/kg bw/day	1.9
Lead	3.1	Reach 8;≥9 and	0.33	Reach 5	2.6845	mg/kg	0.00835	mg/l	Reach 6	190	mg/kg	Reach 8	1.4	mg/kg bw/day	5.5
Methyl mercury	29	Reach 8;≥9 and	68	Reach 5	34.85	µg/kg	0.00036	µg/l	Reach 6	1.3	µg/kg	Reach 8	18	µg/kg bw/day	9.6
Nickel	22.1	Reach 8;≥9 and	0.78	Reach 5	18.902	mg/kg	0.00239	mg/l	Reach 6	15	mg/kg	Reach 8	9.5	mg/kg bw/day	15
Selenium	0.76	Reach 8;≥9 and	0.52	Reach 5	0.724	mg/kg	0.00063	mg/l	Reach 6	0.36	mg/kg	Reach 8	0.36	mg/kg bw/day	0.42
Vanadium	1.1	Reach 8;≥9 and	0.11	Reach 5	0.9515	mg/kg	0.0032	mg/l	Reach 6	16	mg/kg	Reach 8	0.49	mg/kg bw/day	1.2
Zinc	48	Reach 8;≥9 and	35.5	Reach 5	46.125	mg/kg	0.031	mg/l	Reach 6	438	mg/kg	Reach 8	23	mg/kg bw/day	82
Benzo(a)pyrene	63	Reach 8;≥9 and	3.6	Reach 5	54.09	µg/kg	0.0854	µg/l	Reach 6	3500	µg/kg	Reach 8	29	µg/kg bw/day	140

Belted Kingfisher - Diet Scenario 1

Dietary dose (mg/kg bw/d) = (([Csw*WIR] + [Cprey*FIR] + [Csed*SIR])/BW) *SUF

WIR (L/day)	0.016
FIR (kg ww/day)	0.074
SIR (kg dw/day)	0.000074
BW (kg)	0.147
SUF	1

Diet	Fractions
Blue crab	0.15
0-9 cm fish	0.85

	Prey						Surface Water			Sediment			Dose		TR
	Fish (≤ 9)		Blue Crab												
COPEC	$C_{0\text{-}9,\ ww}$	Exposure Area	$C_{crab,\ ww}$	Exposure Area	$C_{prey,ww}$	$C_{prey,ww}$ (units)	C_{sw}	C_{sw} (units)	Exposure Area	$C_{sed,dw}$	$C_{sed,dw}$ (units)	Exposure Area	C_{Dose}	C_{dose} (units)	NOAEL
Total HPAHs	860	Reach 8;≥9 and	23	Reach 5	734.45	µg/kg	0.871	µg/l	Reach 6	28000	µg/kg	Reach 8	384	µg/kg bw/day	-
Total LPAHs	370	Reach 8;≥9 and	28	Reach 5	318.7	µg/kg	0.173	µg/l	Reach 6	8900	µg/kg	Reach 8	165	µg/kg bw/day	-
Total PAHs	1100	Reach 8;≥9 and	51	Reach 5	942.65	µg/kg	1	µg/l	Reach 6	38000	µg/kg	Reach 8	494	µg/kg bw/day	40000
Total PCB Congeners	480	Reach 8;≥9 and	290	Reach 5	451.5	µg/kg	0.0223	µg/l	Reach 6	450	µg/kg	Reach 8	228	µg/kg bw/day	140
PCB TEQ-Bird	88	Reach 8;≥9 and	66	Reach 5	84.7	ng/kg	0.00387	ng/l	Reach 6	74	ng/kg	Reach 8	43	ng/kg bw/day	14
PCDD/PCDF TEQ-Bird	23	Reach 8;≥9 and	62	Reach 5	28.85	ng/kg	0.0168	ng/l	Reach 6	160	ng/kg	Reach 8	15	ng/kg bw/day	14
Total TEQ-Bird	100	Reach 8;≥9 and	130	Reach 5	104.5	ng/kg	0.015	ng/l	Reach 6	290	ng/kg	Reach 8	53	ng/kg bw/day	14
Total DDx	56	Reach 8;≥9 and	54	Reach 5	55.7	µg/kg	0.00397	µg/l	Reach 6	53	µg/kg	Reach 8	28	µg/kg bw/day	25

Note 1: "–" indicates no TRV available

Note 2: Blue highlighted cells indicate EPC is based on maximium concentration

[a] TRVs derived from the primary literature review based on process identified in Section 8.1.3.1 .

[b] TRVs based on USEPA's LPR restoration project FFS (Louis Berger et al. 2014), USEPA's first draft of the LPR restoration project FFS (Malcolm Pirnie 2007) or USEPA's LPR restoration project PAR (Battelle 2005) .

BW - body weight
COC - chemical of concern
COPEC - chemical of potential ecological concern
FIR - food ingestion rate
LOAEL - Lowest observed adverse effect level
na - not applicable
NFF - non forage fish
NOAEL - No observed adverse effect level
RM - River Mile
SFF - small forage fish
SIR - sediment ingestion rate
SUF - site use factor
UCL HQ = hazard quotient based on the 95th percentile (UCL) concentration
WIR - water ingestion rate

Range of TRVs				Range of HQs			
V-A[a]	TRV-B[b]			HQ based on TRV-A[a]		HQ based on TRV-B[a]	
LOAEL	NOAEL	LOAEL	TRV units	NOAEL HQ	LOAEL HQ	NOAEL HQ[b]	LOAEL HQ[b]
4	0.08	10.4	mg/kg bw/day	0.081	0.0081	0.41	0.0031
105	-	-	mg/kg bw/day	0.59	0.059	-	-
19	2.3	4.7	mg/kg bw/day	**1.8**	0.18	**1.5**	0.72
28	0.19	1.9	mg/kg bw/day	0.25	0.049	**7.2**	0.72
96	13	26	µg/kg bw/day	**2.2**	0.22	**1.6**	0.81
33	1.38	56.3	mg/kg bw/day	0.26	0.12	**2.9**	0.070
0.82	0.23	0.93	mg/kg bw/day	0.85	0.43	**1.5**	0.38
2.3	-	-	mg/kg bw/day	0.37	0.19	-	-
124	17.2	172	mg/kg bw/day	0.26	0.17	**1.2**	0.12
1400	-	-	µg/kg bw/day	0.14	0.014	-	-
-	48	480	µg/kg bw/day	-	-	**4.0**	0.40
-	670	6700	µg/kg bw/day	-	-	0.074	0.0074
-	-	-	µg/kg bw/day	0.0061	-	-	-
1400	400	500	µg/kg bw/day	**2.6**	0.26	0.89	0.71
140	2.8	28	ng/kg bw/day	**2.5**	0.25	**13**	**1.3**
140	2.8	28	ng/kg bw/day	**2.9**	0.29	**14**	**1.4**
140	2.8	28	ng/kg bw/day	**5.3**	0.53	**27**	**2.7**
250	0.9	27	µg/kg bw/day	**1.6**	0.16	**43**	**1.4**
4	0.08	10.4	mg/kg bw/day	0.077	0.0077	0.39	0.0030
105	-	-	mg/kg bw/day	0.51	0.051	-	-
19	2.3	4.7	mg/kg bw/day	**1.8**	0.18	**1.5**	0.72
28	0.19	1.9	mg/kg bw/day	0.22	0.044	**6.5**	0.65
96	13	26	µg/kg bw/day	**2.5**	0.25	**1.8**	0.92
33	1.38	56.3	mg/kg bw/day	0.23	0.10	**2.5**	0.061
0.82	0.23	0.93	mg/kg bw/day	0.85	0.43	**1.5**	0.38
2.3	-	-	mg/kg bw/day	0.34	0.18	-	-
124	17.2	172	mg/kg bw/day	0.27	0.18	**1.3**	0.13
1400	-	-	µg/kg bw/day	0.12	0.012	-	-
-	48	480	µg/kg bw/day	-	-	**3.6**	0.36
-	670	6700	µg/kg bw/day	-	-	0.077	0.0077
-	-	-	µg/kg bw/day	0.0055	-	-	-
1400	400	500	µg/kg bw/day	**2.5**	0.25	0.88	0.71

Range of TRVs				Range of HQs			
V-A[a]	TRV-B[b]			HQ based on TRV-A[a]		HQ based on TRV-B[a]	
LOAEL	NOAEL	LOAEL	TRV units	NOAEL HQ	LOAEL HQ	NOAEL HQ[b]	LOAEL HQ[b]
140	2.8	28	ng/kg bw/day	**2.5**	0.25	**12**	**1.2**
140	2.8	28	ng/kg bw/day	**2.7**	0.27	**13**	**1.3**
140	2.8	28	ng/kg bw/day	**5.0**	0.50	**25**	**2.5**
250	0.9	27	µg/kg bw/day	**1.6**	0.16	**44**	**1.5**
[redacted]							
4	0.08	10.4	mg/kg bw/day	0.057	0.0057	0.29	0.0022
105	-	-	mg/kg bw/day	0.21	0.021	-	-
19	2.3	4.7	mg/kg bw/day	**1.5**	0.15	**1.2**	0.61
28	0.19	1.9	mg/kg bw/day	0.086	0.017	**2.5**	0.25
96	13	26	µg/kg bw/day	**4.3**	0.43	**3.1**	**1.6**
33	1.38	56.3	mg/kg bw/day	0.094	0.043	**1.0**	0.025
0.82	0.23	0.93	mg/kg bw/day	0.83	0.42	**1.5**	0.37
2.3	-	-	mg/kg bw/day	0.20	0.11	-	-
124	17.2	172	mg/kg bw/day	0.29	0.19	**1.4**	0.14
1400	-	-	µg/kg bw/day	0.054	0.0054	-	-
-	48	480	µg/kg bw/day	-	-	**1.4**	0.14
-	670	6700	µg/kg bw/day	-	-	0.042	0.0042
-	-	-	µg/kg bw/day	0.0027	-	-	-
1400	400	500	µg/kg bw/day	**1.2**	0.12	0.42	0.33
140	2.8	28	ng/kg bw/day	**1.2**	0.12	**6.1**	0.61
140	2.8	28	ng/kg bw/day	0.90	0.090	**4.5**	0.45
140	2.8	28	ng/kg bw/day	**2.1**	0.21	**11**	**1.1**
250	0.9	27	µg/kg bw/day	0.75	0.075	**21**	0.69
[redacted]							
4	0.08	10.4	mg/kg bw/day	0.034	0.0034	0.17	0.0013
105	-	-	mg/kg bw/day	0.052	0.0052	-	-
19	2.3	4.7	mg/kg bw/day	**1.6**	0.16	**1.4**	0.66
28	0.19	1.9	mg/kg bw/day	0.074	0.015	**2.2**	0.22
96	13	26	µg/kg bw/day	**3.7**	0.37	**2.7**	**1.4**
33	1.38	56.3	mg/kg bw/day	0.031	0.014	0.33	0.0082
0.82	0.23	0.93	mg/kg bw/day	0.88	0.45	**1.6**	0.40
2.3	-	-	mg/kg bw/day	0.091	0.048	-	-
124	17.2	172	mg/kg bw/day	0.31	0.20	**1.5**	0.15
1400	-	-	µg/kg bw/day	0.040	0.0040	-	-
-	48	480	µg/kg bw/day	-	-	**1.1**	0.11
-	670	6700	µg/kg bw/day	-	-	0.030	0.0030
-	-	-	µg/kg bw/day	0.0018	-	-	-

Range of TRVs				Range of HQs			
V-A[a]	TRV-B[b]			HQ based on TRV-A[a]		HQ based on TRV-B[a]	
LOAEL	NOAEL	LOAEL	TRV units	NOAEL HQ	LOAEL HQ	NOAEL HQ[b]	LOAEL HQ[b]
1400	400	500	µg/kg bw/day	**1.5**	0.15	0.52	0.41
140	2.8	28	ng/kg bw/day	**1.7**	0.17	**8.3**	0.83
140	2.8	28	ng/kg bw/day	**1.2**	0.12	**5.9**	0.59
140	2.8	28	ng/kg bw/day	**2.9**	0.29	**14**	**1.4**
250	0.9	27	µg/kg bw/day	**1.0**	0.10	**28**	0.94
4	0.08	10.4	mg/kg bw/day	0.076	0.0076	0.38	0.0029
105	-	-	mg/kg bw/day	0.32	0.032	-	-
19	2.3	4.7	mg/kg bw/day	**2.0**	0.20	**1.7**	0.82
28	0.19	1.9	mg/kg bw/day	0.17	0.033	**4.8**	0.48
96	13	26	µg/kg bw/day	**2.1**	0.21	**1.6**	0.79
33	1.38	56.3	mg/kg bw/day	0.15	0.067	**1.6**	0.039
0.82	0.23	0.93	mg/kg bw/day	0.83	0.42	**1.5**	0.37
2.3	-	-	mg/kg bw/day	0.30	0.16	-	-
124	17.2	172	mg/kg bw/day	0.26	0.17	**1.3**	0.13
1400	-	-	µg/kg bw/day	0.094	0.0094	-	-
-	48	480	µg/kg bw/day	-	-	**2.7**	0.27
-	670	6700	µg/kg bw/day	-	-	0.17	0.017
-	-	-	µg/kg bw/day	0.0060	-	-	-
1400	400	500	µg/kg bw/day	**2.9**	0.29	**1.0**	0.81
140	2.8	28	ng/kg bw/day	**2.4**	0.24	**12**	**1.2**
140	2.8	28	ng/kg bw/day	**2.4**	0.24	**12**	**1.2**
140	2.8	28	ng/kg bw/day	**4.9**	0.49	**25**	**2.5**
250	0.9	27	µg/kg bw/day	**2.0**	0.20	**54**	**1.8**
4	0.08	10.4	mg/kg bw/day	0.11	0.011	0.55	0.0042
105	-	-	mg/kg bw/day	0.53	0.053	-	-
19	2.3	4.7	mg/kg bw/day	**2.2**	0.22	**1.9**	0.91
28	0.19	1.9	mg/kg bw/day	0.34	0.066	**9.8**	0.98
96	13	26	µg/kg bw/day	**2.3**	0.23	**1.7**	0.83
33	1.38	56.3	mg/kg bw/day	0.20	0.090	**2.1**	0.05
0.82	0.23	0.93	mg/kg bw/day	0.83	0.42	**1.5**	0.37
2.3	-	-	mg/kg bw/day	0.49	0.25	-	-
124	17.2	172	mg/kg bw/day	0.27	0.18	**1.3**	0.13
1400	-	-	µg/kg bw/day	0.19	0.019	-	-
-	48	480	µg/kg bw/day	-	-	**5.5**	0.55
-	670	6700	µg/kg bw/day	-	-	0.12	0.012

Range of TRVs				Range of HQs			
V-A[a]	TRV-B[b]			HQ based on TRV-A[a]		HQ based on TRV-B[a]	
LOAEL	NOAEL	LOAEL	TRV units	NOAEL HQ	LOAEL HQ	NOAEL HQ[b]	LOAEL HQ[b]
-	-	-	µg/kg bw/day	0.0086	-	-	-
1400	400	500	µg/kg bw/day	**3.2**	0.32	**1.1**	0.89
140	2.8	28	ng/kg bw/day	**2.9**	0.29	**14**	**1.4**
140	2.8	28	ng/kg bw/day	**3.4**	0.34	**17**	**1.7**
140	2.8	28	ng/kg bw/day	**6.3**	0.63	**31**	**3.1**
250	0.9	27	µg/kg bw/day	**1.8**	0.18	**49**	**1.6**
[redacted]							
4	0.08	10.4	mg/kg bw/day	0.087	0.0087	0.44	0.0034
105	-	-	mg/kg bw/day	0.96	0.10	-	-
19	2.3	4.7	mg/kg bw/day	**2.1**	0.21	**1.7**	0.84
28	0.19	1.9	mg/kg bw/day	0.27	0.053	**7.8**	0.78
96	13	26	µg/kg bw/day	**1.6**	0.16	**1.2**	0.61
33	1.38	56.3	mg/kg bw/day	0.46	0.21	**5.0**	0.12
0.82	0.23	0.93	mg/kg bw/day	0.92	0.47	**1.7**	0.42
2.3	-	-	mg/kg bw/day	0.41	0.21	-	-
124	17.2	172	mg/kg bw/day	0.26	0.17	**1.2**	0.12
1400	-	-	µg/kg bw/day	0.16	0.016	-	-
-	48	480	µg/kg bw/day	-	-	**4.7**	0.47
-	670	6700	µg/kg bw/day	-	-	0.065	0.0065
-	-	-	µg/kg bw/day	0.0068	-	-	-
1400	400	500	µg/kg bw/day	**2.3**	0.23	0.82	0.66
140	2.8	28	ng/kg bw/day	**2.6**	0.26	**13**	**1.3**
140	2.8	28	ng/kg bw/day	**3.8**	0.38	**19**	**1.9**
140	2.8	28	ng/kg bw/day	**6.0**	0.60	**30**	**3.0**
250	0.9	27	µg/kg bw/day	**1.6**	0.16	**43**	**1.4**
[redacted]							
4	0.08	10.4	mg/kg bw/day	0.071	0.0071	0.36	0.0027
105	-	-	mg/kg bw/day	0.68	0.068	-	-
19	2.3	4.7	mg/kg bw/day	**1.9**	0.19	**1.5**	0.75
28	0.19	1.9	mg/kg bw/day	0.22	0.044	**6.5**	0.65
96	13	26	µg/kg bw/day	**1.9**	0.19	**1.4**	0.71
33	1.38	56.3	mg/kg bw/day	0.29	0.13	**3.1**	0.077
0.82	0.23	0.93	mg/kg bw/day	0.80	0.41	**1.5**	0.36
2.3	-	-	mg/kg bw/day	0.34	0.18	-	-
124	17.2	172	mg/kg bw/day	0.25	0.16	**1.2**	0.12
1400	-	-	µg/kg bw/day	0.12	0.012	-	-
-	48	480	µg/kg bw/day	-	-	**3.3**	0.33

Range of TRVs				Range of HQs			
V-A[a]	TRV-B[b]			HQ based on TRV-A[a]		HQ based on TRV-B[a]	
LOAEL	NOAEL	LOAEL	TRV units	NOAEL HQ	LOAEL HQ	NOAEL HQ[b]	LOAEL HQ[b]
-	670	6700	µg/kg bw/day	-	-	0.068	0.0068
-	-	-	µg/kg bw/day	0.0050	-	-	-
1400	400	500	µg/kg bw/day	**1.5**	0.15	0.52	0.42
140	2.8	28	ng/kg bw/day	**1.7**	0.17	**8.5**	0.85
140	2.8	28	ng/kg bw/day	**1.4**	0.14	**7.2**	0.72
140	2.8	28	ng/kg bw/day	**3.2**	0.32	**16**	**1.6**
250	0.9	27	µg/kg bw/day	**1.3**	0.13	**37**	**1.2**
4	0.08	10.4	mg/kg bw/day	0.079	0.0079	0.40	0.0031
105	-	-	mg/kg bw/day	0.19	0.019	-	-
19	2.3	4.7	mg/kg bw/day	**2.0**	0.20	**1.7**	0.81
28	0.19	1.9	mg/kg bw/day	0.22	0.043	**6.4**	0.64
96	13	26	µg/kg bw/day	**1.3**	0.13	0.95	0.48
33	1.38	56.3	mg/kg bw/day	0.091	0.041	0.99	0.024
0.82	0.23	0.93	mg/kg bw/day	0.40	0.20	0.73	0.18
2.3	-	-	mg/kg bw/day	0.26	0.14	-	-
124	17.2	172	mg/kg bw/day	0.17	0.11	0.79	0.079
1400	-	-	µg/kg bw/day	0.12	0.012	-	-
-	48	480	µg/kg bw/day	-	-	**3.78**	0.38
-	670	6700	µg/kg bw/day	-	-	0.070	0.0070
-	-	-	µg/kg bw/day	0.0058	-	-	-
1400	400	500	µg/kg bw/day	0.93	0.093	0.33	0.26
140	2.8	28	ng/kg bw/day	0.99	0.10	**4.9**	0.49
140	2.8	28	ng/kg bw/day	0.88	0.088	**4.4**	0.44
140	2.8	28	ng/kg bw/day	**1.8**	0.18	**9.1**	0.91
250	0.9	27	µg/kg bw/day	0.66	0.066	**18**	0.61
4	0.08	10.4	mg/kg bw/day	0.064	0.0064	0.32	0.0025
105	-	-	mg/kg bw/day	**1.3**	0.13	-	-
19	2.3	4.7	mg/kg bw/day	**2.0**	0.20	**1.7**	0.81
28	0.19	1.9	mg/kg bw/day	0.26	0.052	**7.6**	0.76
96	13	26	µg/kg bw/day	**1.8**	0.18	**1.3**	0.67
33	1.38	56.3	mg/kg bw/day	0.63	0.29	**6.9**	0.17
0.82	0.23	0.93	mg/kg bw/day	0.87	0.44	**1.6**	0.39
2.3	-	-	mg/kg bw/day	0.41	0.21	-	-
124	17.2	172	mg/kg bw/day	0.29	0.19	**1.4**	0.14
1400	-	-	µg/kg bw/day	0.21	0.021	-	-

Range of TRVs				Range of HQs			
V-A[a]	TRV-B[b]			HQ based on TRV-A[a]		HQ based on TRV-B[a]	
LOAEL	NOAEL	LOAEL	TRV units	NOAEL HQ	LOAEL HQ	NOAEL HQ[b]	LOAEL HQ[b]
-	48	480	µg/kg bw/day	-	-	**8.0**	0.80
-	670	6700	µg/kg bw/day	-	-	0.25	0.025
-	-	-	µg/kg bw/day	0.012	-	-	-
1400	400	500	µg/kg bw/day	**1.6**	0.16	0.57	0.46
140	2.8	28	ng/kg bw/day	**3.0**	0.30	**15**	**1.5**
140	2.8	28	ng/kg bw/day	**1.0**	0.10	**5.2**	0.52
140	2.8	28	ng/kg bw/day	**3.8**	0.38	**19**	**1.9**
250	0.9	27	µg/kg bw/day	**1.1**	0.11	**31**	**1.0**

Belted Kingfisher - Diet Scenario 2

Dietary dose (mg/kg bw/d) = (([Csw*WIR] + [Cprey*FIR] + [Csed*SIR])/BW) *SUF

WIR (L/day)	0.016
FIR (kg ww/day)	0.074
SIR (kg dw/day)	0.000074
BW (kg)	0.147
SUF	1

Diet	Fractions
Blue crab	0.15
0-9 cm fish	0.315
9-13 cm fish	0.51
13-18 cm fish	0.025

	Prey										Surface Water			Sediment	
	Fish (≤ 9)		Fish (>9 and ≤ 13)		Fish (>13 and ≤ 18)		Blue Crab								
COPEC	$C_{0\text{-}9,\ ww}$	Exposure Area	$C_{9\text{-}13,\ ww}$	Exposure Area	$C_{13\text{-}18,\ ww}$	Exposure Area	$C_{crab,\ ww}$	Exposure Area	$C_{prey,ww}$	$C_{prey,ww}$ (units)	C_{sw}	C_{sw} (units)	Exposure Area	$C_{sed,dw}$	$C_{sed,dw}$ (units)
RM ≥ 6															
Cadmium	0.05	RM ≥ 6	0.067	RM ≥ 6	0.029	RM ≥ 6	0.11	Site-wide	0.067145	mg/kg	0.00016	mg/l	RM ≥ 6	5.5	mg/kg
Chromium	14	RM ≥ 6	20	RM ≥ 6	65	RM ≥ 6	1.4	Site-wide	16.445	mg/kg	0.0049	mg/l	RM ≥ 6	180	mg/kg
Copper	3.4	RM ≥ 6	4.5	RM ≥ 6	8.5	RM ≥ 6	24.6	Site-wide	7.2685	mg/kg	0.00895	mg/l	RM ≥ 6	170	mg/kg
Lead	2.8	RM ≥ 6	3.7	RM ≥ 6	1.2	RM ≥ 6	0.36	Site-wide	2.853	mg/kg	0.00993	mg/l	RM ≥ 6	280	mg/kg
Methyl mercury	28	RM ≥ 6	26	RM ≥ 6	130	RM ≥ 6	120	Site-wide	43.33	µg/kg	0.00036	µg/l	RM ≥ 6	4.1	µg/kg
Nickel	9	RM ≥ 6	14	RM ≥ 6	46	RM ≥ 6	1	Site-wide	11.275	mg/kg	0.00237	mg/l	RM ≥ 6	31	mg/kg
Selenium	0.69	RM ≥ 6	0.63	RM ≥ 6	0.93	RM ≥ 6	0.79	Site-wide	0.6804	mg/kg	0.00063	mg/l	RM ≥ 6	0.78	mg/kg
Vanadium	0.99	RM ≥ 6	1.1	RM ≥ 6	0.58	RM ≥ 6	0.12	Site-wide	0.90535	mg/kg	0.0035	mg/l	RM ≥ 6	27	mg/kg
Zinc	42.8	RM ≥ 6	39	RM ≥ 6	29.4	RM ≥ 6	36.4	Site-wide	39.567	mg/kg	0.024	mg/l	RM ≥ 6	510	mg/kg
Benzo(a)pyrene	38	RM ≥ 6	66	RM ≥ 6	25	RM ≥ 6	10	Site-wide	47.755	µg/kg	0.111	µg/l	RM ≥ 6	4600	µg/kg
Total HPAHs	380	RM ≥ 6	760	RM ≥ 6	360	RM ≥ 6	110	Site-wide	532.8	µg/kg	0.904	µg/l	RM ≥ 6	45000	µg/kg
Total LPAHs	89	RM ≥ 6	240	RM ≥ 6	150	RM ≥ 6	83	Site-wide	166.635	µg/kg	0.174	µg/l	RM ≥ 6	11000	µg/kg
Total PAHs	470	RM ≥ 6	950	RM ≥ 6	440	RM ≥ 6	190	Site-wide	672.05	µg/kg	1.1	µg/l	RM ≥ 6	56000	µg/kg
Total PCB Congeners	770	RM ≥ 6	510	RM ≥ 6	2500	RM ≥ 6	350	Site-wide	617.65	µg/kg	0.031	µg/l	RM ≥ 6	2900	µg/kg
PCB TEQ-Bird	65	RM ≥ 6	72	RM ≥ 6	200	RM ≥ 6	94	Site-wide	76.295	ng/kg	0.00583	ng/l	RM ≥ 6	690	ng/kg
PCDD/PCDF TEQ-Bird	78	RM ≥ 6	47	RM ≥ 6	160	RM ≥ 6	71	Site-wide	63.19	ng/kg	0.106	ng/l	RM ≥ 6	2900	ng/kg
Total TEQ-Bird	140	RM ≥ 6	110	RM ≥ 6	360	RM ≥ 6	170	Site-wide	134.7	ng/kg	0.111	ng/l	RM ≥ 6	3500	ng/kg
Total DDx	79	RM ≥ 6	62	RM ≥ 6	190	RM ≥ 6	68	Site-wide	71.455	µg/kg	0.00463	µg/l	RM ≥ 6	210	µg/kg
Site Wide															
Cadmium	0.047	Site-wide	0.039	Site-wide	0.023	Site-wide	0.11	Site-wide	0.05177	mg/kg	0.00017	mg/l	RM ≥ 4	4.9	mg/kg
Chromium	12	Site-wide	12	Site-wide	48	Site-wide	1.4	Site-wide	11.31	mg/kg	0.0048	mg/l	RM ≥ 4	160	mg/kg
Copper	3.4	Site-wide	3.4	Site-wide	7.2	Site-wide	24.6	Site-wide	6.675	mg/kg	0.011	mg/l	RM ≥ 4	170	mg/kg
Lead	2.5	Site-wide	3	Site-wide	1	Site-wide	0.36	Site-wide	2.3965	mg/kg	0.0122	mg/l	RM ≥ 4	270	mg/kg
Methyl mercury	35	Site-wide	67	Site-wide	120	Site-wide	120	Site-wide	66.195	µg/kg	0.00044	µg/l	RM ≥ 4	3.9	µg/kg
Nickel	7.8	Site-wide	8.2	Site-wide	34	Site-wide	1	Site-wide	7.639	mg/kg	0.00239	mg/l	RM ≥ 4	32	mg/kg
Selenium	0.69	Site-wide	0.69	Site-wide	0.98	Site-wide	0.79	Site-wide	0.71225	mg/kg	0.00067	mg/l	RM ≥ 4	0.93	mg/kg
Vanadium	0.91	Site-wide	0.69	Site-wide	0.58	Site-wide	0.12	Site-wide	0.67105	mg/kg	0.0033	mg/l	RM ≥ 4	27	mg/kg
Zinc	44.6	Site-wide	42.6	Site-wide	27.9	Site-wide	36.4	Site-wide	41.9325	mg/kg	0.029	mg/l	RM ≥ 4	490	mg/kg
Benzo(a)pyrene	33	Site-wide	52	Site-wide	40	Site-wide	10	Site-wide	39.415	µg/kg	0.0953	µg/l	RM ≥ 4	4700	µg/kg
Total HPAHs	330	Site-wide	600	Site-wide	270	Site-wide	110	Site-wide	433.2	µg/kg	0.961	µg/l	RM ≥ 4	46000	µg/kg
Total LPAHs	84	Site-wide	150	Site-wide	180	Site-wide	83	Site-wide	119.91	µg/kg	0.178	µg/l	RM ≥ 4	18000	µg/kg
Total PAHs	410	Site-wide	760	Site-wide	440	Site-wide	190	Site-wide	556.25	µg/kg	1.1	µg/l	RM ≥ 4	62000	µg/kg
Total PCB Congeners	760	Site-wide	440	Site-wide	2500	Site-wide	350	Site-wide	578.8	µg/kg	0.034	µg/l	RM ≥ 4	2600	µg/kg
PCB TEQ-Bird	63	Site-wide	49	Site-wide	220	Site-wide	94	Site-wide	64.435	ng/kg	0.00609	ng/l	RM ≥ 4	630	ng/kg
PCDD/PCDF TEQ-Bird	72	Site-wide	33	Site-wide	220	Site-wide	71	Site-wide	55.66	ng/kg	0.111	ng/l	RM ≥ 4	2300	ng/kg
Total TEQ-Bird	130	Site-wide	77	Site-wide	390	Site-wide	170	Site-wide	115.47	ng/kg	0.116	ng/l	RM ≥ 4	2800	ng/kg

Total DDx	81	Site-wide	52	Site-wide	200	Site-wide	68	Site-wide	67.235	µg/kg	0.00478	µg/l	RM ≥ 4	190 µg/kg
Reach 1														
Cadmium	0.02	Reach 1; ≥9 and	0.02	Reach 1	0.02	Reach 1; ≥9 ar	0.15	Reach 1	0.0395	mg/kg	0.00026	mg/l	Reach 3	5.9 mg/kg
Chromium	4.9	Reach 1; ≥9 and	4.9	Reach 1	4.9	Reach 1; ≥9 an	1.3	Reach 1	4.36	mg/kg	0.00732	mg/l	Reach 3	120 mg/kg
Copper	2.9	Reach 1; ≥9 and	2.9	Reach 1	2.9	Reach 1; ≥9 an	20.6	Reach 1	5.555	mg/kg	0.0142	mg/l	Reach 3	150 mg/kg
Lead	0.77	Reach 1; ≥9 and	0.77	Reach 1	0.77	Reach 1; ≥9 an	0.44	Reach 1	0.7205	mg/kg	0.0137	mg/l	Reach 3	220 mg/kg
Methyl mercury	69	Reach 1; ≥9 and	69	Reach 1	69	Reach 1; ≥9 an	150	Reach 1	81.15	µg/kg	0.0004	µg/l	Reach 3	3.8 µg/kg
Nickel	3.1	Reach 1; ≥9 and	3.1	Reach 1	3.1	Reach 1; ≥9 an	0.98	Reach 1	2.782	mg/kg	0.00272	mg/l	Reach 3	33 mg/kg
Selenium	0.64	Reach 1; ≥9 and	0.64	Reach 1	0.64	Reach 1; ≥9 an	0.96	Reach 1	0.688	mg/kg	0.00091	mg/l	Reach 3	1.4 mg/kg
Vanadium	0.51	Reach 1; ≥9 and	0.51	Reach 1	0.51	Reach 1; ≥9 an	0.13	Reach 1	0.453	mg/kg	0.0042	mg/l	Reach 3	31 mg/kg
Zinc	48.2	Reach 1; ≥9 and	48.2	Reach 1	48.2	Reach 1; ≥9 an	36.7	Reach 1	46.475	mg/kg	0.03	mg/l	Reach 3	440 mg/kg
Benzo(a)pyrene	7	Reach 1; ≥9 and	7	Reach 1	7	Reach 1; ≥9 an	27	Reach 1	10	µg/kg	0.182	µg/l	Reach 3	4900 µg/kg
Total HPAHs	68	Reach 1; ≥9 and	68	Reach 1	68	Reach 1; ≥9 an	180	Reach 1	84.8	µg/kg	1.23	µg/l	Reach 3	45000 µg/kg
Total LPAHs	35	Reach 1; ≥9 and	35	Reach 1	35	Reach 1; ≥9 an	55	Reach 1	38	µg/kg	0.21	µg/l	Reach 3	18000 µg/kg
Total PAHs	100	Reach 1; ≥9 and	100	Reach 1	100	Reach 1; ≥9 an	280	Reach 1	127	µg/kg	1.4	µg/l	Reach 3	89000 µg/kg
Total PCB Congeners	340	Reach 1; ≥9 and	340	Reach 1	340	Reach 1; ≥9 an	270	Reach 1	329.5	µg/kg	0.0424	µg/l	Reach 3	1900 µg/kg
PCB TEQ-Bird	23	Reach 1; ≥9 and	23	Reach 1	23	Reach 1; ≥9 an	92	Reach 1	33.35	ng/kg	0.00719	ng/l	Reach 3	430 ng/kg
PCDD/PCDF TEQ-Bird	17	Reach 1; ≥9 and	17	Reach 1	17	Reach 1; ≥9 an	66	Reach 1	24.35	ng/kg	0.291	ng/l	Reach 3	710 ng/kg
Total TEQ-Bird	40	Reach 1; ≥9 and	40	Reach 1	40	Reach 1; ≥9 an	160	Reach 1	58	ng/kg	0.227	ng/l	Reach 3	1100 ng/kg
Total DDx	32	Reach 1; ≥9 and	32	Reach 1	32	Reach 1; ≥9 an	66	Reach 1	37.1	µg/kg	0.00597	µg/l	Reach 3	120 µg/kg
Reach 2														
Cadmium	0.01	Reach 2	0.025	Reach 2	0.025	Reach 2; ≥9 an	0.1	Reach 2	0.031525	mg/kg	0.00026	mg/l	Reach 3	3.4 mg/kg
Chromium	0.91	Reach 2	6.8	Reach 2	6.8	Reach 2; ≥9 an	1.2	Reach 2	4.10465	mg/kg	0.00732	mg/l	Reach 3	130 mg/kg
Copper	2.7	Reach 2	3.4	Reach 2	3.4	Reach 2; ≥9 an	24.2	Reach 2	6.2995	mg/kg	0.0142	mg/l	Reach 3	240 mg/kg
Lead	0.59	Reach 2	0.86	Reach 2	0.86	Reach 2; ≥9 an	0.46	Reach 2	0.71495	mg/kg	0.0137	mg/l	Reach 3	240 mg/kg
Methyl mercury	58	Reach 2	68	Reach 2	68	Reach 2; ≥9 an	140	Reach 2	75.65	µg/kg	0.0004	µg/l	Reach 3	4.1 µg/kg
Nickel	0.88	Reach 2	4.9	Reach 2	4.9	Reach 2; ≥9 an	0.9	Reach 2	3.0337	mg/kg	0.00272	mg/l	Reach 3	32 mg/kg
Selenium	0.7	Reach 2	0.88	Reach 2	0.88	Reach 2; ≥9 an	0.89	Reach 2	0.8248	mg/kg	0.00091	mg/l	Reach 3	1.5 mg/kg
Vanadium	0.2	Reach 2	0.49	Reach 2	0.49	Reach 2; ≥9 an	0.12	Reach 2	0.34315	mg/kg	0.0042	mg/l	Reach 3	29 mg/kg
Zinc	51.6	Reach 2	45.1	Reach 2	45.1	Reach 2; ≥9 an	40.3	Reach 2	46.4275	mg/kg	0.03	mg/l	Reach 3	480 mg/kg
Benzo(a)pyrene	3.3	Reach 2	10	Reach 2	10	Reach 2; ≥9 an	14	Reach 2	8.4895	µg/kg	0.182	µg/l	Reach 3	6100 µg/kg
Total HPAHs	30	Reach 2	81	Reach 2	81	Reach 2; ≥9 an	170	Reach 2	78.285	µg/kg	1.23	µg/l	Reach 3	57000 µg/kg
Total LPAHs	18	Reach 2	37	Reach 2	37	Reach 2; ≥9 an	75	Reach 2	36.715	µg/kg	0.21	µg/l	Reach 3	13000 µg/kg
Total PAHs	48	Reach 2	120	Reach 2	120	Reach 2; ≥9 an	240	Reach 2	115.32	µg/kg	1.4	µg/l	Reach 3	69000 µg/kg
Total PCB Congeners	420	Reach 2	440	Reach 2	440	Reach 2; ≥9 an	330	Reach 2	417.2	µg/kg	0.0424	µg/l	Reach 3	3900 µg/kg
PCB TEQ-Bird	35	Reach 2	32	Reach 2	32	Reach 2; ≥9 an	100	Reach 2	43.145	ng/kg	0.00719	ng/l	Reach 3	1400 ng/kg
PCDD/PCDF TEQ-Bird	23	Reach 2	29	Reach 2	29	Reach 2; ≥9 an	75	Reach 2	34.01	ng/kg	0.291	ng/l	Reach 3	2000 ng/kg
Total TEQ-Bird	58	Reach 2	60	Reach 2	60	Reach 2; ≥9 an	180	Reach 2	77.37	ng/kg	0.227	ng/l	Reach 3	3100 ng/kg
Total DDx	44	Reach 2	52	Reach 2	52	Reach 2; ≥9 an	84	Reach 2	54.28	µg/kg	0.00597	µg/l	Reach 3	380 µg/kg
Reach 3														
Cadmium	0.053	Reach 3	0.011	Reach 3	0.009	Reach 3	0.068	Reach 3	0.03273	mg/kg	0.00026	mg/l	Reach 3	4.9 mg/kg
Chromium	7.1	Reach 3	2	Reach 3	5.4	Reach 3	3.1	Reach 3	3.8565	mg/kg	0.00732	mg/l	Reach 3	220 mg/kg
Copper	3.5	Reach 3	2.5	Reach 3	8.5	Reach 3	30.1	Reach 3	7.105	mg/kg	0.0142	mg/l	Reach 3	200 mg/kg
Lead	1.7	Reach 3	0.48	Reach 3	0.45	Reach 3	0.36	Reach 3	0.84555	mg/kg	0.0137	mg/l	Reach 3	320 mg/kg
Methyl mercury	31	Reach 3	64	Reach 3	120	Reach 3	96	Reach 3	59.805	µg/kg	0.0004	µg/l	Reach 3	4.7 µg/kg
Nickel	4.8	Reach 3	1.6	Reach 3	3.3	Reach 3	1.9	Reach 3	2.6955	mg/kg	0.00272	mg/l	Reach 3	39 mg/kg
Selenium	0.68	Reach 3	0.89	Reach 3	1.3	Reach 3	0.75	Reach 3	0.8131	mg/kg	0.00091	mg/l	Reach 3	1.3 mg/kg
Vanadium	0.79	Reach 3	0.22	Reach 3	0.13	Reach 3	0.13	Reach 3	0.3838	mg/kg	0.0042	mg/l	Reach 3	30.6 mg/kg
Zinc	43.5	Reach 3	43.1	Reach 3	23.4	Reach 3	36.5	Reach 3	41.7435	mg/kg	0.03	mg/l	Reach 3	570 mg/kg
Benzo(a)pyrene	19	Reach 3	11	Reach 3	3.2	Reach 3	6.8	Reach 3	12.695	µg/kg	0.182	µg/l	Reach 3	9000 µg/kg
Total HPAHs	180	Reach 3	68	Reach 3	150	Reach 3	110	Reach 3	111.63	µg/kg	1.23	µg/l	Reach 3	92000 µg/kg
Total LPAHs	85	Reach 3	63	Reach 3	300	Reach 3	270	Reach 3	106.905	µg/kg	0.21	µg/l	Reach 3	110000 µg/kg
Total PAHs	260	Reach 3	130	Reach 3	440	Reach 3	380	Reach 3	216.2	µg/kg	1.4	µg/l	Reach 3	200000 µg/kg
Total PCB Congeners	860	Reach 3	510	Reach 3	2800	Reach 3	450	Reach 3	668.5	µg/kg	0.0424	µg/l	Reach 3	4800 µg/kg
PCB TEQ-Bird	58	Reach 3	34	Reach 3	280	Reach 3	110	Reach 3	59.11	ng/kg	0.00719	ng/l	Reach 3	1200 ng/kg

PCDD/PCDF TEQ-Bird	58	Reach 3	31	Reach 3	200	Reach 3	90	Reach 3	52.58	ng/kg	0.291	ng/l	Reach 3	3900 ng/kg
Total TEQ-Bird	120	Reach 3	65	Reach 3	490	Reach 3	200	Reach 3	113.2	ng/kg	0.227	ng/l	Reach 3	5100 ng/kg
Total DDx	100	Reach 3	59	Reach 3	340	Reach 3	79	Reach 3	81.94	µg/kg	0.00597	µg/l	Reach 3	220 µg/kg
Reach 4														
Cadmium	0.073	Reach 4	0.099	Reach 4	0.04	Reach 4	0.097	Reach 4	0.089035	mg/kg	0.00027	mg/l	Reach 4	11 mg/kg
Chromium	12.2	Reach 4	7.9	Reach 4	16.8	Reach 4	2.3	Reach 4	8.637	mg/kg	0.00567	mg/l	Reach 4	290 mg/kg
Copper	4.3	Reach 4	5.4	Reach 4	4	Reach 4	30.6	Reach 4	8.7985	mg/kg	0.0152	mg/l	Reach 4	230 mg/kg
Lead	3.9	Reach 4	4.9	Reach 4	1.8	Reach 4	0.27	Reach 4	3.813	mg/kg	0.0144	mg/l	Reach 4	340 mg/kg
Methyl mercury	33	Reach 4	17	Reach 4	93	Reach 4	100	Reach 4	36.39	µg/kg	0.000413	µg/l	Reach 4	6.5 µg/kg
Nickel	6.6	Reach 4	4.5	Reach 4	11.6	Reach 4	1.6	Reach 4	4.904	mg/kg	0.0026	mg/l	Reach 4	39 mg/kg
Selenium	0.7	Reach 4	0.58	Reach 4	0.93	Reach 4	0.62	Reach 4	0.63255	mg/kg	0.00069	mg/l	Reach 4	1.2 mg/kg
Vanadium	1.3	Reach 4	1.3	Reach 4	0.68	Reach 4	0.12	Reach 4	1.1075	mg/kg	0.0037	mg/l	Reach 4	34 mg/kg
Zinc	44.1	Reach 4	30.1	Reach 4	30.1	Reach 4	35.2	Reach 4	35.275	mg/kg	0.03	mg/l	Reach 4	660 mg/kg
Benzo(a)pyrene	56	Reach 4	98	Reach 4	34	Reach 4	4	Reach 4	69.07	µg/kg	0.153	µg/l	Reach 4	5600 µg/kg
Total HPAHs	540	Reach 4	1000	Reach 4	350	Reach 4	71	Reach 4	699.5	µg/kg	1.17	µg/l	Reach 4	52000 µg/kg
Total LPAHs	130	Reach 4	190	Reach 4	160	Reach 4	230	Reach 4	176.35	µg/kg	0.195	µg/l	Reach 4	13000 µg/kg
Total PAHs	670	Reach 4	1200	Reach 4	470	Reach 4	300	Reach 4	879.8	µg/kg	1.4	µg/l	Reach 4	65000 µg/kg
Total PCB Congeners	930	Reach 4	450	Reach 4	2000	Reach 4	580	Reach 4	659.45	µg/kg	0.0323	µg/l	Reach 4	6800 µg/kg
PCB TEQ-Bird	73	Reach 4	45	Reach 4	220	Reach 4	110	Reach 4	67.945	ng/kg	0.00651	ng/l	Reach 4	1500 ng/kg
PCDD/PCDF TEQ-Bird	84	Reach 4	52	Reach 4	180	Reach 4	100	Reach 4	72.48	ng/kg	0.266	ng/l	Reach 4	7400 ng/kg
Total TEQ-Bird	160	Reach 4	97	Reach 4	400	Reach 4	200	Reach 4	139.87	ng/kg	0.274	ng/l	Reach 4	8700 ng/kg
Total DDx	86	Reach 4	61	Reach 4	200	Reach 4	89	Reach 4	76.55	µg/kg	0.00643	µg/l	Reach 4	560 µg/kg
Reach 5														
Cadmium	0.052	Reach 5	0.051	Reach 5	0.01	Reach 5	0.12	Reach 5	0.06064	mg/kg	0.000081	mg/l	Reach 5	7.1 mg/kg
Chromium	23.2	Reach 5	9.4	Reach 5	2	Reach 5	1	Reach 5	12.302	mg/kg	0.00337	mg/l	Reach 5	210 mg/kg
Copper	3.8	Reach 5	3.6	Reach 5	14.7	Reach 5	29.3	Reach 5	7.7955	mg/kg	0.0052	mg/l	Reach 5	170 mg/kg
Lead	3.1	Reach 5	2.4	Reach 5	0.28	Reach 5	0.33	Reach 5	2.257	mg/kg	0.00753	mg/l	Reach 5	270 mg/kg
Methyl mercury	25	Reach 5	25	Reach 5	190	Reach 5	68	Reach 5	35.575	µg/kg	0.000289	µg/l	Reach 5	7.1 µg/kg
Nickel	15.8	Reach 5	5.7	Reach 5	1.4	Reach 5	0.78	Reach 5	8.036	mg/kg	0.00223	mg/l	Reach 5	28 mg/kg
Selenium	0.81	Reach 5	0.62	Reach 5	1.2	Reach 5	0.52	Reach 5	0.67935	mg/kg	0.001	mg/l	Reach 5	0.83 mg/kg
Vanadium	1.1	Reach 5	0.77	Reach 5	0.08	Reach 5	0.11	Reach 5	0.7577	mg/kg	0.0053	mg/l	Reach 5	26 mg/kg
Zinc	42.3	Reach 5	29.8	Reach 5	24.8	Reach 5	35.5	Reach 5	34.4675	mg/kg	0.0111	mg/l	Reach 5	490 mg/kg
Benzo(a)pyrene	48	Reach 5	44	Reach 5	2	Reach 5	3.6	Reach 5	38.15	µg/kg	0.0421	µg/l	Reach 5	4200 µg/kg
Total HPAHs	480	Reach 5	480	Reach 5	100	Reach 5	23	Reach 5	401.95	µg/kg	0.484	µg/l	Reach 5	40000 µg/kg
Total LPAHs	86	Reach 5	120	Reach 5	130	Reach 5	28	Reach 5	95.74	µg/kg	0.0744	µg/l	Reach 5	8800 µg/kg
Total PAHs	570	Reach 5	600	Reach 5	230	Reach 5	51	Reach 5	498.95	µg/kg	0.558	µg/l	Reach 5	48000 µg/kg
Total PCB Congeners	710	Reach 5	610	Reach 5	5100	Reach 5	290	Reach 5	705.75	µg/kg	0.0279	µg/l	Reach 5	4100 µg/kg
PCB TEQ-Bird	72	Reach 5	69	Reach 5	310	Reach 5	66	Reach 5	75.52	ng/kg	0.00436	ng/l	Reach 5	740 ng/kg
PCDD/PCDF TEQ-Bird	110	Reach 5	65	Reach 5	250	Reach 5	62	Reach 5	83.35	ng/kg	0.0228	ng/l	Reach 5	3100 ng/kg
Total TEQ-Bird	170	Reach 5	130	Reach 5	560	Reach 5	130	Reach 5	153.35	ng/kg	0.0271	ng/l	Reach 5	3700 ng/kg
Total DDx	81	Reach 5	71	Reach 5	280	Reach 5	54	Reach 5	76.825	µg/kg	0.00377	µg/l	Reach 5	180 µg/kg
Reach 6														
Cadmium	0.038	Reach 6	0.051	Reach 6	0.013	Reach 6	0.12	Reach 5	0.056305	mg/kg	0.00013	mg/l	Reach 6	6.4 mg/kg
Chromium	16.4	Reach 6	10.2	Reach 6	9	Reach 6	1	Reach 5	10.743	mg/kg	0.0067	mg/l	Reach 6	190 mg/kg
Copper	2.9	Reach 6	4.1	Reach 6	1.2	Reach 6	29.3	Reach 5	7.4295	mg/kg	0.00793	mg/l	Reach 6	180 mg/kg
Lead	2.5	Reach 6	3.2	Reach 6	0.71	Reach 6	0.33	Reach 5	2.48675	mg/kg	0.00835	mg/l	Reach 6	270 mg/kg
Methyl mercury	31	Reach 6	14	Reach 6	50	Reach 6	68	Reach 5	28.355	µg/kg	0.00036	µg/l	Reach 6	2.1 µg/kg
Nickel	9.9	Reach 6	6.9	Reach 6	6.6	Reach 6	0.78	Reach 5	6.9195	mg/kg	0.00239	mg/l	Reach 6	31 mg/kg
Selenium	0.69	Reach 6	0.44	Reach 6	0.27	Reach 6	0.52	Reach 5	0.5265	mg/kg	0.00063	mg/l	Reach 6	0.91 mg/kg
Vanadium	0.9	Reach 6	0.9	Reach 6	0.28	Reach 6	0.11	Reach 5	0.766	mg/kg	0.0032	mg/l	Reach 6	26 mg/kg
Zinc	40.9	Reach 6	26.3	Reach 6	30.9	Reach 6	35.5	Reach 5	32.394	mg/kg	0.031	mg/l	Reach 6	500 mg/kg
Benzo(a)pyrene	33	Reach 6	48	Reach 6	64	Reach 6	3.6	Reach 5	37.015	µg/kg	0.0854	µg/l	Reach 6	6100 µg/kg
Total HPAHs	290	Reach 6	620	Reach 6	750	Reach 6	23	Reach 5	429.75	µg/kg	0.871	µg/l	Reach 6	68000 µg/kg
Total LPAHs	74	Reach 6	160	Reach 6	180	Reach 6	28	Reach 5	113.61	µg/kg	0.173	µg/l	Reach 6	23000 µg/kg
Total PAHs	360	Reach 6	780	Reach 6	930	Reach 6	51	Reach 5	542.1	µg/kg	1	µg/l	Reach 6	86000 µg/kg

Total PCB Congeners	430	Reach 6	450	Reach 6	390	Reach 6	290	Reach 5	418.2	µg/kg	0.0223	µg/l	Reach 6	3700	µg/kg
PCB TEQ-Bird	43	Reach 6	41	Reach 6	44	Reach 6	66	Reach 5	45.455	ng/kg	0.00387	ng/l	Reach 6	990	ng/kg
PCDD/PCDF TEQ-Bird	31	Reach 6	41	Reach 6	28	Reach 6	62	Reach 5	40.675	ng/kg	0.0168	ng/l	Reach 6	4200	ng/kg
Total TEQ-Bird	74	Reach 6	82	Reach 6	72	Reach 6	130	Reach 5	86.43	ng/kg	0.015	ng/l	Reach 6	5400	ng/kg
Total DDx	67	Reach 6	58	Reach 6	35	Reach 6	54	Reach 5	59.66	µg/kg	0.00397	µg/l	Reach 6	210	µg/kg
Reach 7															
Cadmium	0.048	Reach 7; ≥9 and	0.048	Reach 7	0.054	Reach 7	0.12	Reach 5	0.05895	mg/kg	0.00013	mg/l	Reach 6	4.3	mg/kg
Chromium	4.3	Reach 7; ≥9 and	4.3	Reach 7	125	Reach 7	1	Reach 5	6.8225	mg/kg	0.0067	mg/l	Reach 6	82	mg/kg
Copper	3.6	Reach 7; ≥9 and	3.6	Reach 7	8.7	Reach 7	29.3	Reach 5	7.5825	mg/kg	0.00793	mg/l	Reach 6	120	mg/kg
Lead	2.5	Reach 7; ≥9 and	2.5	Reach 7	1.1	Reach 7	0.33	Reach 5	2.1395	mg/kg	0.00835	mg/l	Reach 6	224	mg/kg
Methyl mercury	17	Reach 7; ≥9 and	17	Reach 7	150	Reach 7	68	Reach 5	27.975	µg/kg	0.00036	µg/l	Reach 6	1.9	µg/kg
Nickel	3	Reach 7; ≥9 and	3	Reach 7	89.1	Reach 7	0.78	Reach 5	4.8195	mg/kg	0.00239	mg/l	Reach 6	40	mg/kg
Selenium	0.3	Reach 7; ≥9 and	0.3	Reach 7	1.07	Reach 7	0.52	Reach 5	0.35225	mg/kg	0.00063	mg/l	Reach 6	0.63	mg/kg
Vanadium	0.68	Reach 7; ≥9 and	0.68	Reach 7	1.2	Reach 7	0.11	Reach 5	0.6075	mg/kg	0.0032	mg/l	Reach 6	22	mg/kg
Zinc	25	Reach 7; ≥9 and	25	Reach 7	32.7	Reach 7	35.5	Reach 5	26.7675	mg/kg	0.031	mg/l	Reach 6	390	mg/kg
Benzo(a)pyrene	28	Reach 7; ≥9 and	28	Reach 7	27	Reach 7	3.6	Reach 5	24.315	µg/kg	0.0854	µg/l	Reach 6	8000	µg/kg
Total HPAHs	340	Reach 7; ≥9 and	340	Reach 7	260	Reach 7	23	Reach 5	290.45	µg/kg	0.871	µg/l	Reach 6	68000	µg/kg
Total LPAHs	85	Reach 7; ≥9 and	85	Reach 7	220	Reach 7	28	Reach 5	79.825	µg/kg	0.173	µg/l	Reach 6	17000	µg/kg
Total PAHs	430	Reach 7; ≥9 and	430	Reach 7	360	Reach 7	51	Reach 5	371.4	µg/kg	1	µg/l	Reach 6	84000	µg/kg
Total PCB Congeners	250	Reach 7; ≥9 and	250	Reach 7	2700	Reach 7	290	Reach 5	317.25	µg/kg	0.0223	µg/l	Reach 6	2300	µg/kg
PCB TEQ-Bird	20	Reach 7; ≥9 and	20	Reach 7	250	Reach 7	66	Reach 5	32.65	ng/kg	0.00387	ng/l	Reach 6	530	ng/kg
PCDD/PCDF TEQ-Bird	15	Reach 7; ≥9 and	15	Reach 7	180	Reach 7	62	Reach 5	26.175	ng/kg	0.0168	ng/l	Reach 6	2400	ng/kg
Total TEQ-Bird	35	Reach 7; ≥9 and	35	Reach 7	430	Reach 7	130	Reach 5	59.125	ng/kg	0.015	ng/l	Reach 6	1300	ng/kg
Total DDx	29	Reach 7; ≥9 and	29	Reach 7	240	Reach 7	54	Reach 5	38.025	µg/kg	0.00397	µg/l	Reach 6	160	µg/kg
Reach 8															
Cadmium	0.037	Reach 8; ≥9 and	0.037	Reach 8	0.018	Reach 8	0.12	Reach 5	0.048975	mg/kg	0.00013	mg/l	Reach 6	1.3	mg/kg
Chromium	31.7	Reach 8; ≥9 and	31.7	Reach 8	8.2	Reach 8	1	Reach 5	26.5075	mg/kg	0.0067	mg/l	Reach 6	50	mg/kg
Copper	3.7	Reach 8; ≥9 and	3.7	Reach 8	7.6	Reach 8	29.3	Reach 5	7.6375	mg/kg	0.00793	mg/l	Reach 6	58	mg/kg
Lead	3.1	Reach 8; ≥9 and	3.1	Reach 8	0.47	Reach 8	0.33	Reach 5	2.61875	mg/kg	0.00835	mg/l	Reach 6	190	mg/kg
Methyl mercury	29	Reach 8; ≥9 and	29	Reach 8	120	Reach 8	68	Reach 5	37.125	µg/kg	0.00036	µg/l	Reach 6	1.3	µg/kg
Nickel	22.1	Reach 8; ≥9 and	22.1	Reach 8	4.9	Reach 8	0.78	Reach 5	18.472	mg/kg	0.00239	mg/l	Reach 6	15	mg/kg
Selenium	0.76	Reach 8; ≥9 and	0.76	Reach 8	0.83	Reach 8	0.52	Reach 5	0.72575	mg/kg	0.00063	mg/l	Reach 6	0.36	mg/kg
Vanadium	1.1	Reach 8; ≥9 and	1.1	Reach 8	0.14	Reach 8	0.11	Reach 5	0.9275	mg/kg	0.0032	mg/l	Reach 6	16	mg/kg
Zinc	48	Reach 8; ≥9 and	48	Reach 8	28.4	Reach 8	35.5	Reach 5	45.635	mg/kg	0.031	mg/l	Reach 6	438	mg/kg
Benzo(a)pyrene	63	Reach 8; ≥9 and	63	Reach 8	4.7	Reach 8	3.6	Reach 5	52.6325	µg/kg	0.0854	µg/l	Reach 6	3500	µg/kg
Total HPAHs	860	Reach 8; ≥9 and	860	Reach 8	84	Reach 8	23	Reach 5	715.05	µg/kg	0.871	µg/l	Reach 6	28000	µg/kg
Total LPAHs	370	Reach 8; ≥9 and	370	Reach 8	91	Reach 8	28	Reach 5	311.725	µg/kg	0.173	µg/l	Reach 6	8900	µg/kg
Total PAHs	1100	Reach 8; ≥9 and	1100	Reach 8	160	Reach 8	51	Reach 5	919.15	µg/kg	1	µg/l	Reach 6	38000	µg/kg
Total PCB Congeners	480	Reach 8; ≥9 and	480	Reach 8	1000	Reach 8	290	Reach 5	464.5	µg/kg	0.0223	µg/l	Reach 6	450	µg/kg
PCB TEQ-Bird	88	Reach 8; ≥9 and	88	Reach 8	130	Reach 8	66	Reach 5	85.75	ng/kg	0.00387	ng/l	Reach 6	74	ng/kg
PCDD/PCDF TEQ-Bird	23	Reach 8; ≥9 and	23	Reach 8	73	Reach 8	62	Reach 5	30.1	ng/kg	0.0168	ng/l	Reach 6	160	ng/kg
Total TEQ-Bird	100	Reach 8; ≥9 and	100	Reach 8	200	Reach 8	130	Reach 5	107	ng/kg	0.015	ng/l	Reach 6	290	ng/kg
Total DDx	56	Reach 8; ≥9 and	56	Reach 8	120	Reach 8	54	Reach 5	57.3	µg/kg	0.00397	µg/l	Reach 6	53	µg/kg

Note 1: "–" indicates no TRV available

Note 2: Blue highlighted cells indicate EPC is based on maximium concentration

[a] TRVs derived from the primary literature review based on process identified in Section 8.1.3.1 .

[b] TRVs based on USEPA's LPR restoration project FFS (Louis Berger et al. 2014), USEPA's first draft of the LPR restoration project FFS (Malcolm Pirnie 2007) or USEPA's LPR restoration project PAR (Battelle 2005) .

BW - body weight
COC - chemical of concern
COPEC - chemical of potential ecological concern
FIR - food ingestion rate
LOAEL - Lowest observed adverse effect level

na - not applicable
NFF - non forage fish
NOAEL - No observed adverse effect level
RM - River Mile
SFF - small forage fish
SIR - sediment ingestion rate
SUF - site use factor
UCL HQ = hazard quotient based on the 95th percentile (UCL) concentration
WIR - water ingestion rate

	Dose		Range of TRVs					Range of HQs			
			TRV-A[a]		TRV-B[b]			HQ based on TRV-A[a]		HQ based on TRV-B[a]	
Exposure Area	C_{Dose}	C_{dose} (units)	NOAEL	LOAEL	NOAEL	LOAEL	TRV units	NOAEL HQ	LOAEL HQ	NOAEL HQ[b]	LOAEL HQ[b]
RM ≥ 6	0.037	mg/kg bw/day	0.4	4	0.08	10.4	mg/kg bw/day	0.091	0.0091	0.46	0.0035
RM ≥ 6	8.4	mg/kg bw/day	10.5	105	-	-	mg/kg bw/day	0.80	0.080	-	-
RM ≥ 6	3.7	mg/kg bw/day	1.9	19	2.3	4.7	mg/kg bw/day	**2.0**	0.20	**1.6**	0.80
RM ≥ 6	1.6	mg/kg bw/day	5.5	28	0.19	1.9	mg/kg bw/day	0.29	0.056	**8.3**	0.83
RM ≥ 6	22	µg/kg bw/day	9.6	96	13	26	µg/kg bw/day	**2.3**	0.23	**1.7**	0.84
RM ≥ 6	5.7	mg/kg bw/day	15	33	1.38	56.3	mg/kg bw/day	0.38	0.17	**4.1**	0.10
RM ≥ 6	0.34	mg/kg bw/day	0.42	0.82	0.23	0.93	mg/kg bw/day	0.82	0.42	**1.5**	0.37
RM ≥ 6	0.47	mg/kg bw/day	1.2	2.3	-	-	mg/kg bw/day	0.39	0.20	-	-
RM ≥ 6	20	mg/kg bw/day	82	124	17.2	172	mg/kg bw/day	0.25	0.16	**1.2**	0.12
RM ≥ 6	26	µg/kg bw/day	140	1400	-	-	µg/kg bw/day	0.19	0.019	-	-
RM ≥ 6	291	µg/kg bw/day	-	-	48	480	µg/kg bw/day	-	-	**6.1**	0.61
RM ≥ 6	89	µg/kg bw/day	-	-	670	6700	µg/kg bw/day	-	-	0.13	0.013
RM ≥ 6	367	µg/kg bw/day	40000	-	-	-	µg/kg bw/day	0.0092	-	-	-
RM ≥ 6	312	µg/kg bw/day	140	1400	400	500	µg/kg bw/day	**2.2**	0.22	0.78	0.62
RM ≥ 6	39	ng/kg bw/day	14	140	2.8	28	ng/kg bw/day	**2.8**	0.28	**14**	**1.4**
RM ≥ 6	33	ng/kg bw/day	14	140	2.8	28	ng/kg bw/day	**2.4**	0.24	**12**	**1.2**
RM ≥ 6	70	ng/kg bw/day	14	140	2.8	28	ng/kg bw/day	**5.0**	0.50	**25**	**2.5**
RM ≥ 6	36	µg/kg bw/day	25	250	0.9	27	µg/kg bw/day	**1.4**	0.14	**40**	**1.3**
Site-wide	0.029	mg/kg bw/day	0.4	4	0.08	10.4	mg/kg bw/day	0.071	0.0071	0.36	0.0027
Site-wide	5.8	mg/kg bw/day	10.5	105	-	-	mg/kg bw/day	0.55	0.055	-	-
Site-wide	3.4	mg/kg bw/day	1.9	19	2.3	4.7	mg/kg bw/day	**1.8**	0.18	**1.5**	0.73
Site-wide	1.3	mg/kg bw/day	5.5	28	0.19	1.9	mg/kg bw/day	0.24	0.048	**7.1**	0.71
Site-wide	33	µg/kg bw/day	9.6	96	13	26	µg/kg bw/day	**3.5**	0.35	**2.6**	**1.3**
Site-wide	3.9	mg/kg bw/day	15	33	1.38	56.3	mg/kg bw/day	0.26	0.12	**2.8**	0.069
Site-wide	0.36	mg/kg bw/day	0.42	0.82	0.23	0.93	mg/kg bw/day	0.85	0.44	**1.6**	0.39
Site-wide	0.35	mg/kg bw/day	1.2	2.3	-	-	mg/kg bw/day	0.29	0.15	-	-
Site-wide	21	mg/kg bw/day	82	124	17.2	172	mg/kg bw/day	0.26	0.17	**1.2**	0.12
Site-wide	22	µg/kg bw/day	140	1400	-	-	µg/kg bw/day	0.16	0.016	-	-
Site-wide	241	µg/kg bw/day	-	-	48	480	µg/kg bw/day	-	-	**5.0**	0.50
Site-wide	69	µg/kg bw/day	-	-	670	6700	µg/kg bw/day	-	-	0.10	0.010
Site-wide	311	µg/kg bw/day	40000	-	-	-	µg/kg bw/day	0.0078	-	-	-
Site-wide	293	µg/kg bw/day	140	1400	400	500	µg/kg bw/day	**2.1**	0.21	0.73	0.59
Site-wide	33	ng/kg bw/day	14	140	2.8	28	ng/kg bw/day	**2.3**	0.23	**12**	**1.2**
Site-wide	29	ng/kg bw/day	14	140	2.8	28	ng/kg bw/day	**2.1**	0.21	**10**	**1.0**
Site-wide	60	ng/kg bw/day	14	140	2.8	28	ng/kg bw/day	**4.3**	0.43	**21**	**2.1**

Site-wide	34	µg/kg bw/day	25	250	0.9	27	µg/kg bw/day	**1.4**	0.14	**38**	**1.3**
Reach 1	0.023	mg/kg bw/day	0.4	4	0.08	10.4	mg/kg bw/day	0.057	0.0057	0.29	0.0022
Reach 1	2.3	mg/kg bw/day	10.5	105	-	-	mg/kg bw/day	0.21	0.021	-	-
Reach 1	2.9	mg/kg bw/day	1.9	19	2.3	4.7	mg/kg bw/day	**1.5**	0.15	**1.2**	0.61
Reach 1	0.47	mg/kg bw/day	5.5	28	0.19	1.9	mg/kg bw/day	0.086	0.017	**2.5**	0.25
Reach 1	41	µg/kg bw/day	9.6	96	13	26	µg/kg bw/day	**4.3**	0.43	**3.1**	**1.6**
Reach 1	1.4	mg/kg bw/day	15	33	1.38	56.3	mg/kg bw/day	0.094	0.043	**1.0**	0.025
Reach 1	0.35	mg/kg bw/day	0.42	0.82	0.23	0.93	mg/kg bw/day	0.83	0.42	**1.5**	0.37
Reach 1	0.24	mg/kg bw/day	1.2	2.3	-	-	mg/kg bw/day	0.20	0.11	-	-
Reach 1	24	mg/kg bw/day	82	124	17.2	172	mg/kg bw/day	0.29	0.19	**1.4**	0.14
Reach 1	8	µg/kg bw/day	140	1400	-	-	µg/kg bw/day	0.054	0.0054	-	-
Reach 1	65	µg/kg bw/day	-	-	48	480	µg/kg bw/day	-	-	**1.4**	0.14
Reach 1	28	µg/kg bw/day	-	-	670	6700	µg/kg bw/day	-	-	0.042	0.0042
Reach 1	109	µg/kg bw/day	40000	-	-	-	µg/kg bw/day	0.0027	-	-	-
Reach 1	167	µg/kg bw/day	140	1400	400	500	µg/kg bw/day	**1.2**	0.12	0.42	0.33
Reach 1	17	ng/kg bw/day	14	140	2.8	28	ng/kg bw/day	**1.2**	0.12	**6.1**	0.61
Reach 1	13	ng/kg bw/day	14	140	2.8	28	ng/kg bw/day	0.90	0.090	**4.5**	0.45
Reach 1	30	ng/kg bw/day	14	140	2.8	28	ng/kg bw/day	**2.1**	0.21	**11**	**1.1**
Reach 1	19	µg/kg bw/day	25	250	0.9	27	µg/kg bw/day	0.75	0.075	**21**	0.69
Reach 2	0.018	mg/kg bw/day	0.4	4	0.08	10.4	mg/kg bw/day	0.044	0.0044	0.22	0.0017
Reach 2	2.1	mg/kg bw/day	10.5	105	-	-	mg/kg bw/day	0.20	0.020	-	-
Reach 2	3.3	mg/kg bw/day	1.9	19	2.3	4.7	mg/kg bw/day	**1.7**	0.17	**1.4**	0.70
Reach 2	0.48	mg/kg bw/day	5.5	28	0.19	1.9	mg/kg bw/day	0.088	0.017	**2.5**	0.25
Reach 2	38	µg/kg bw/day	9.6	96	13	26	µg/kg bw/day	**4.0**	0.40	**2.9**	**1.5**
Reach 2	1.5	mg/kg bw/day	15	33	1.38	56.3	mg/kg bw/day	0.10	0.047	**1.1**	0.027
Reach 2	0.42	mg/kg bw/day	0.42	0.82	0.23	0.93	mg/kg bw/day	0.99	0.51	**1.8**	0.45
Reach 2	0.19	mg/kg bw/day	1.2	2.3	-	-	mg/kg bw/day	0.16	0.082	-	-
Reach 2	24	mg/kg bw/day	82	124	17.2	172	mg/kg bw/day	0.29	0.19	**1.4**	0.14
Reach 2	7.4	µg/kg bw/day	140	1400	-	-	µg/kg bw/day	0.053	0.0053	-	-
Reach 2	68	µg/kg bw/day	-	-	48	480	µg/kg bw/day	-	-	**1.4**	0.14
Reach 2	25	µg/kg bw/day	-	-	670	6700	µg/kg bw/day	-	-	0.037	0.0037
Reach 2	93	µg/kg bw/day	40000	-	-	-	µg/kg bw/day	0.0023	-	-	-
Reach 2	212	µg/kg bw/day	140	1400	400	500	µg/kg bw/day	**1.5**	0.15	0.53	0.42
Reach 2	22	ng/kg bw/day	14	140	2.8	28	ng/kg bw/day	**1.6**	0.16	**8.0**	0.80
Reach 2	18	ng/kg bw/day	14	140	2.8	28	ng/kg bw/day	**1.3**	0.13	**6.5**	0.65
Reach 2	41	ng/kg bw/day	14	140	2.8	28	ng/kg bw/day	**2.9**	0.29	**14**	**1.4**
Reach 2	28	µg/kg bw/day	25	250	0.9	27	µg/kg bw/day	**1.1**	0.11	**31**	**1.0**
Reach 3	0.019	mg/kg bw/day	0.4	4	0.08	10.4	mg/kg bw/day	0.047	0.0047	0.24	0.0018
Reach 3	2.1	mg/kg bw/day	10.5	105	-	-	mg/kg bw/day	0.20	0.020	-	-
Reach 3	3.7	mg/kg bw/day	1.9	19	2.3	4.7	mg/kg bw/day	**1.9**	0.19	**1.6**	0.78
Reach 3	0.59	mg/kg bw/day	5.5	28	0.19	1.9	mg/kg bw/day	0.11	0.021	**3.1**	0.31
Reach 3	30	µg/kg bw/day	9.6	96	13	26	µg/kg bw/day	**3.1**	0.31	**2.3**	**1.2**
Reach 3	1.4	mg/kg bw/day	15	33	1.38	56.3	mg/kg bw/day	0.092	0.042	**1.0**	0.024
Reach 3	0.41	mg/kg bw/day	0.42	0.82	0.23	0.93	mg/kg bw/day	0.98	0.50	**1.8**	0.44
Reach 3	0.21	mg/kg bw/day	1.2	2.3	-	-	mg/kg bw/day	0.17	0.091	-	-
Reach 3	21	mg/kg bw/day	82	124	17.2	172	mg/kg bw/day	0.26	0.17	**1.2**	0.12
Reach 3	11	µg/kg bw/day	140	1400	-	-	µg/kg bw/day	0.078	0.0078	-	-
Reach 3	103	µg/kg bw/day	-	-	48	480	µg/kg bw/day	-	-	**2.1**	0.21
Reach 3	109	µg/kg bw/day	-	-	670	6700	µg/kg bw/day	-	-	0.16	0.016
Reach 3	210	µg/kg bw/day	40000	-	-	-	µg/kg bw/day	0.0052	-	-	-
Reach 3	339	µg/kg bw/day	140	1400	400	500	µg/kg bw/day	**2.4**	0.24	0.85	0.68
Reach 3	30	ng/kg bw/day	14	140	2.8	28	ng/kg bw/day	**2.2**	0.22	**11**	**1.1**

Reach 3	28	ng/kg bw/day	14	140	2.8	28	ng/kg bw/day	**2.0**	0.20	**10**	**1.0**
Reach 3	60	ng/kg bw/day	14	140	2.8	28	ng/kg bw/day	**4.3**	0.43	**21**	**2.1**
Reach 3	41	µg/kg bw/day	25	250	0.9	27	µg/kg bw/day	**1.7**	0.17	**46**	**1.5**
Reach 4	0.050	mg/kg bw/day	0.4	4	0.08	10.4	mg/kg bw/day	0.13	0.013	0.63	0.0048
Reach 4	4.5	mg/kg bw/day	10.5	105	-	-	mg/kg bw/day	0.43	0.043	-	-
Reach 4	4.5	mg/kg bw/day	1.9	19	2.3	4.7	mg/kg bw/day	**2.4**	0.24	**2.0**	0.97
Reach 4	2.1	mg/kg bw/day	5.5	28	0.19	1.9	mg/kg bw/day	0.38	0.075	**11**	**1.1**
Reach 4	18	µg/kg bw/day	9.6	96	13	26	µg/kg bw/day	**1.9**	0.19	**1.4**	0.70
Reach 4	2.5	mg/kg bw/day	15	33	1.38	56.3	mg/kg bw/day	0.17	0.075	**1.8**	0.044
Reach 4	0.32	mg/kg bw/day	0.42	0.82	0.23	0.93	mg/kg bw/day	0.76	0.39	**1.4**	0.34
Reach 4	0.58	mg/kg bw/day	1.2	2.3	-	-	mg/kg bw/day	0.48	0.25	-	-
Reach 4	18	mg/kg bw/day	82	124	17.2	172	mg/kg bw/day	0.22	0.15	**1.1**	0.11
Reach 4	38	µg/kg bw/day	140	1400	-	-	µg/kg bw/day	0.27	0.027	-	-
Reach 4	378	µg/kg bw/day	-	-	48	480	µg/kg bw/day	-	-	**7.9**	0.79
Reach 4	95	µg/kg bw/day	-	-	670	6700	µg/kg bw/day	-	-	0.14	0.014
Reach 4	476	µg/kg bw/day	40000	-	-	-	µg/kg bw/day	0.012	-	-	-
Reach 4	335	µg/kg bw/day	140	1400	400	500	µg/kg bw/day	**2.4**	0.24	0.84	0.67
Reach 4	35	ng/kg bw/day	14	140	2.8	28	ng/kg bw/day	**2.5**	0.25	**12**	**1.2**
Reach 4	40	ng/kg bw/day	14	140	2.8	28	ng/kg bw/day	**2.9**	0.29	**14**	**1.4**
Reach 4	75	ng/kg bw/day	14	140	2.8	28	ng/kg bw/day	**5.3**	0.53	**27**	**2.7**
Reach 4	39	µg/kg bw/day	25	250	0.9	27	µg/kg bw/day	**1.6**	0.16	**43**	**1.4**
Reach 5	0.034	mg/kg bw/day	0.4	4	0.08	10.4	mg/kg bw/day	0.085	0.0085	0.43	0.0033
Reach 5	6.3	mg/kg bw/day	10.5	105	-	-	mg/kg bw/day	0.60	0.060	-	-
Reach 5	4.0	mg/kg bw/day	1.9	19	2.3	4.7	mg/kg bw/day	**2.1**	0.21	**1.7**	0.85
Reach 5	1.3	mg/kg bw/day	5.5	28	0.19	1.9	mg/kg bw/day	0.23	0.045	**6.7**	0.67
Reach 5	18	µg/kg bw/day	9.6	96	13	26	µg/kg bw/day	**1.9**	0.19	**1.4**	0.69
Reach 5	4.1	mg/kg bw/day	15	33	1.38	56.3	mg/kg bw/day	0.27	0.12	**2.9**	0.072
Reach 5	0.34	mg/kg bw/day	0.42	0.82	0.23	0.93	mg/kg bw/day	0.82	0.42	**1.5**	0.37
Reach 5	0.40	mg/kg bw/day	1.2	2.3	-	-	mg/kg bw/day	0.33	0.17	-	-
Reach 5	18	mg/kg bw/day	82	124	17.2	172	mg/kg bw/day	0.21	0.14	**1.0**	0.10
Reach 5	21	µg/kg bw/day	140	1400	-	-	µg/kg bw/day	0.15	0.015	-	-
Reach 5	223	µg/kg bw/day	-	-	48	480	µg/kg bw/day	-	-	**4.6**	0.46
Reach 5	53	µg/kg bw/day	-	-	670	6700	µg/kg bw/day	-	-	0.079	0.0079
Reach 5	275	µg/kg bw/day	40000	-	-	-	µg/kg bw/day	0.0069	-	-	-
Reach 5	357	µg/kg bw/day	140	1400	400	500	µg/kg bw/day	**2.6**	0.26	0.89	0.71
Reach 5	38	ng/kg bw/day	14	140	2.8	28	ng/kg bw/day	**2.7**	0.27	**14**	**1.4**
Reach 5	44	ng/kg bw/day	14	140	2.8	28	ng/kg bw/day	**3.1**	0.31	**16**	**1.6**
Reach 5	79	ng/kg bw/day	14	140	2.8	28	ng/kg bw/day	**5.6**	0.56	**28**	**2.8**
Reach 5	39	µg/kg bw/day	25	250	0.9	27	µg/kg bw/day	**1.6**	0.16	**43**	**1.4**
Reach 6	0.032	mg/kg bw/day	0.4	4	0.08	10.4	mg/kg bw/day	0.079	0.0079	0.39	0.0030
Reach 6	5.5	mg/kg bw/day	10.5	105	-	-	mg/kg bw/day	0.52	0.052	-	-
Reach 6	3.8	mg/kg bw/day	1.9	19	2.3	4.7	mg/kg bw/day	**2.0**	0.20	**1.7**	0.82
Reach 6	1.4	mg/kg bw/day	5.5	28	0.19	1.9	mg/kg bw/day	0.25	0.050	**7.3**	0.73
Reach 6	14	µg/kg bw/day	9.6	96	13	26	µg/kg bw/day	**1.5**	0.15	**1.1**	0.55
Reach 6	3.5	mg/kg bw/day	15	33	1.38	56.3	mg/kg bw/day	0.23	0.11	**2.5**	0.062
Reach 6	0.27	mg/kg bw/day	0.42	0.82	0.23	0.93	mg/kg bw/day	0.63	0.32	**1.2**	0.29
Reach 6	0.40	mg/kg bw/day	1.2	2.3	-	-	mg/kg bw/day	0.33	0.17	-	-
Reach 6	17	mg/kg bw/day	82	124	17.2	172	mg/kg bw/day	0.20	0.13	0.96	0.096
Reach 6	22	µg/kg bw/day	140	1400	-	-	µg/kg bw/day	0.16	0.016	-	-
Reach 6	251	µg/kg bw/day	-	-	48	480	µg/kg bw/day	-	-	**5.2**	0.52
Reach 6	69	µg/kg bw/day	-	-	670	6700	µg/kg bw/day	-	-	0.10	0.010
Reach 6	316	µg/kg bw/day	40000	-	-	-	µg/kg bw/day	0.0079	-	-	-

Reach 6	212	µg/kg bw/day	140	1400	400	500	µg/kg bw/day	**1.5**	0.15	0.53	0.42
Reach 6	23	ng/kg bw/day	14	140	2.8	28	ng/kg bw/day	**1.7**	0.17	**8.4**	0.84
Reach 6	23	ng/kg bw/day	14	140	2.8	28	ng/kg bw/day	**1.6**	0.16	**8.1**	0.81
Reach 6	46	ng/kg bw/day	14	140	2.8	28	ng/kg bw/day	**3.3**	0.33	**17**	**1.7**
Reach 6	30	µg/kg bw/day	25	250	0.9	27	µg/kg bw/day	**1.2**	0.12	**33**	**1.1**
Reach 7	0.032	mg/kg bw/day	0.4	4	0.08	10.4	mg/kg bw/day	0.080	0.0080	0.40	0.0031
Reach 7	3.5	mg/kg bw/day	10.5	105	-	-	mg/kg bw/day	0.33	0.033	-	-
Reach 7	3.9	mg/kg bw/day	1.9	19	2.3	4.7	mg/kg bw/day	**2.0**	0.20	**1.7**	0.83
Reach 7	1.2	mg/kg bw/day	5.5	28	0.19	1.9	mg/kg bw/day	0.22	0.043	**6.3**	0.63
Reach 7	14	µg/kg bw/day	9.6	96	13	26	µg/kg bw/day	**1.5**	0.15	**1.1**	0.54
Reach 7	2.4	mg/kg bw/day	15	33	1.38	56.3	mg/kg bw/day	0.16	0.074	**1.8**	0.043
Reach 7	0.18	mg/kg bw/day	0.42	0.82	0.23	0.93	mg/kg bw/day	0.42	0.22	0.77	0.19
Reach 7	0.32	mg/kg bw/day	1.2	2.3	-	-	mg/kg bw/day	0.26	0.14	-	-
Reach 7	14	mg/kg bw/day	82	124	17.2	172	mg/kg bw/day	0.17	0.11	0.80	0.080
Reach 7	16	µg/kg bw/day	140	1400	-	-	µg/kg bw/day	0.12	0.012	-	-
Reach 7	181	µg/kg bw/day	-	-	48	480	µg/kg bw/day	-	-	**3.8**	0.38
Reach 7	49	µg/kg bw/day	-	-	670	6700	µg/kg bw/day	-	-	0.073	0.0073
Reach 7	229	µg/kg bw/day	40000	-	-	-	µg/kg bw/day	0.0057	-	-	-
Reach 7	161	µg/kg bw/day	140	1400	400	500	µg/kg bw/day	**1.1**	0.11	0.40	0.32
Reach 7	17	ng/kg bw/day	14	140	2.8	28	ng/kg bw/day	**1.2**	0.12	**6.0**	0.60
Reach 7	14	ng/kg bw/day	14	140	2.8	28	ng/kg bw/day	**1.0**	0.10	**5.1**	0.51
Reach 7	30	ng/kg bw/day	14	140	2.8	28	ng/kg bw/day	**2.2**	0.22	**11**	**1.1**
Reach 7	19	µg/kg bw/day	25	250	0.9	27	µg/kg bw/day	0.77	0.077	**21**	0.71
Reach 8	0.025	mg/kg bw/day	0.4	4	0.08	10.4	mg/kg bw/day	0.063	0.0063	0.32	0.0024
Reach 8	13	mg/kg bw/day	10.5	105	-	-	mg/kg bw/day	**1.3**	0.13	-	-
Reach 8	3.9	mg/kg bw/day	1.9	19	2.3	4.7	mg/kg bw/day	**2.0**	0.20	**1.7**	0.82
Reach 8	1.4	mg/kg bw/day	5.5	28	0.19	1.9	mg/kg bw/day	0.26	0.051	**7.4**	0.74
Reach 8	19	µg/kg bw/day	9.6	96	13	26	µg/kg bw/day	**1.9**	0.19	**1.4**	0.72
Reach 8	9.3	mg/kg bw/day	15	33	1.38	56.3	mg/kg bw/day	0.62	0.28	**6.7**	0.17
Reach 8	0.37	mg/kg bw/day	0.42	0.82	0.23	0.93	mg/kg bw/day	0.87	0.45	**1.6**	0.39
Reach 8	0.48	mg/kg bw/day	1.2	2.3	-	-	mg/kg bw/day	0.40	0.21	-	-
Reach 8	23	mg/kg bw/day	82	124	17.2	172	mg/kg bw/day	0.28	0.19	**1.3**	0.13
Reach 8	28	µg/kg bw/day	140	1400	-	-	µg/kg bw/day	0.20	0.020	-	-
Reach 8	374	µg/kg bw/day	-	-	48	480	µg/kg bw/day	-	-	**7.8**	0.78
Reach 8	161	µg/kg bw/day	-	-	670	6700	µg/kg bw/day	-	-	0.24	0.024
Reach 8	482	µg/kg bw/day	40000	-	-	-	µg/kg bw/day	0.012	-	-	-
Reach 8	234	µg/kg bw/day	140	1400	400	500	µg/kg bw/day	**1.7**	0.17	0.59	0.47
Reach 8	43	ng/kg bw/day	14	140	2.8	28	ng/kg bw/day	**3.1**	0.31	**15**	**1.5**
Reach 8	15	ng/kg bw/day	14	140	2.8	28	ng/kg bw/day	**1.1**	0.11	**5.4**	0.54
Reach 8	54	ng/kg bw/day	14	140	2.8	28	ng/kg bw/day	**3.9**	0.39	**19**	**1.9**
Reach 8	29	µg/kg bw/day	25	250	0.9	27	µg/kg bw/day	**1.2**	0.12	**32**	**1.1**

Spotted Sandpiper - Diet Scenario 1

Dietary dose (mg/kg bw/d) = (([Csw*WIR] + [Cprey*FIR] + [Csed*SIR])/BW) *SUF

WIR (L/day)	0.0071
FIR (kg ww/day)	0.027
SIR (kg dw/day)	0.0013
BW (kg)	0.0425
SUF	1

	Prey													Range of TRVs		
	Invertebrate (worms)			Surface Water			Sediment			Dose		TRV-A[a]		TRV-
COPEC	$C_{worm, ww}$	$C_{worms,ww}$ (units)	Exposure Area	C_{sw}	C_{sw} (units)	Exposure Area	$C_{sed,dw}$	$C_{sed,dw}$ (units)	Exposure Area	C_{Dose}	C_{dose} (units)	NOAEL	LOAEL	NOAEL
Site-wide														
Cadmium	0.11	mg/kg	Site-wide	0.00017	mg/l	RM ≥ 4	5.2	mg/kg	Site-wide m	0.23	mg/kg bw/day	0.4	4	0.08
Chromium	21	mg/kg	Site-wide	0.0048	mg/l	RM ≥ 4	190	mg/kg	Site-wide m	19	mg/kg bw/day	10.5	105	-
Copper	5.8	mg/kg	Site-wide	0.011	mg/l	RM ≥ 4	190	mg/kg	Site-wide m	9.5	mg/kg bw/day	1.9	19	2.3
Lead	6.4	mg/kg	Site-wide	0.0122	mg/l	RM ≥ 4	320	mg/kg	Site-wide m	14	mg/kg bw/day	5.5	28	0.19
Methyl mercury	2.9	µg/kg	Site-wide	0.00044	µg/l	RM ≥ 4	5.3	µg/kg	Site-wide m	2.0	µg/kg bw/day	9.6	96	13
Nickel	13	mg/kg	Site-wide	0.00239	mg/l	RM ≥ 4	34	mg/kg	Site-wide m	9.3	mg/kg bw/day	15	33	1.38
Selenium	0.54	mg/kg	Site-wide	0.00067	mg/l	RM ≥ 4	1.2	mg/kg	Site-wide m	0.4	mg/kg bw/day	0.42	0.82	0.23
Vanadium	0.59	mg/kg	Site-wide	0.0033	mg/l	RM ≥ 4	28	mg/kg	Site-wide m	1.2	mg/kg bw/day	1.2	2.3	-
Zinc	34	mg/kg	Site-wide	0.029	mg/l	RM ≥ 4	590	mg/kg	Site-wide m	39.7	mg/kg bw/day	82	124	17.2
Benzo(a)pyrene	440	µg/kg	Site-wide	0.0953	µg/l	RM ≥ 4	4000	µg/kg	Site-wide m	402	µg/kg bw/day	140	1400	-
Total HPAHs	2000	µg/kg	Site-wide	0.961	µg/l	RM ≥ 4	35000	µg/kg	Site-wide m	2341	µg/kg bw/day	-	-	48
Total LPAHs	540	µg/kg	Site-wide	0.178	µg/l	RM ≥ 4	8100	µg/kg	Site-wide m	591	µg/kg bw/day	-	-	670
Total PAHs	2400	µg/kg	Site-wide	1.1	µg/l	RM ≥ 4	43000	µg/kg	Site-wide m	2840	µg/kg bw/day	40000	-	-
Total PCB Congeners	240	µg/kg	Site-wide	0.034	µg/l	RM ≥ 4	2900	µg/kg	Site-wide m	241	µg/kg bw/day	140	1400	400
PCB TEQ-Bird	31	ng/kg	Site-wide	0.00609	ng/l	RM ≥ 4	770	ng/kg	Site-wide m	43	ng/kg bw/day	14	140	2.8
PCDD/PCDF TEQ-Bird	60	ng/kg	Site-wide	0.111	ng/l	RM ≥ 4	2900	ng/kg	Site-wide m	127	ng/kg bw/day	14	140	2.8
Total TEQ-Bird	71	ng/kg	Site-wide	0.116	ng/l	RM ≥ 4	3500	ng/kg	Site-wide m	152	ng/kg bw/day	14	140	2.8
Total DDx	16	µg/kg	Site-wide	0.00478	µg/l	RM ≥ 4	230	µg/kg	Site-wide m	17	µg/kg bw/day	25	250	0.9
Reach 1														
Cadmium	0.025	mg/kg	Reach 1	0.00026	mg/l	Reach 3	2.8	mg/kg	Reach 1	0.1	mg/kg bw/day	0.4	4	0.08
Chromium	4.9	mg/kg	Reach 1	0.00732	mg/l	Reach 3	120	mg/kg	Reach 1	6.8	mg/kg bw/day	10.5	105	-
Copper	1.6	mg/kg	Reach 1	0.0142	mg/l	Reach 3	150	mg/kg	Reach 1	5.6	mg/kg bw/day	1.9	19	2.3
Lead	0.22	mg/kg	Reach 1	0.0137	mg/l	Reach 3	180	mg/kg	Reach 1	5.6	mg/kg bw/day	5.5	28	0.19
Methyl mercury	3.4	µg/kg	Reach 1	0.0004	µg/l	Reach 3	2.9	µg/kg	Reach 1	2.2	µg/kg bw/day	9.6	96	13
Nickel	3.4	mg/kg	Reach 1	0.00272	mg/l	Reach 3	31	mg/kg	Reach 1	3.1	mg/kg bw/day	15	33	1.38
Selenium	0.35	mg/kg	Reach 1	0.00091	mg/l	Reach 3	1.5	mg/kg	Reach 1	0.3	mg/kg bw/day	0.42	0.82	0.23
Vanadium	0.08	mg/kg	Reach 1	0.0042	mg/l	Reach 3	30	mg/kg	Reach 1	1.0	mg/kg bw/day	1.2	2.3	-
Zinc	19.1	mg/kg	Reach 1	0.03	mg/l	Reach 3	420	mg/kg	Reach 1	25.0	mg/kg bw/day	82	124	17.2
Benzo(a)pyrene	3.2	µg/kg	Reach 1	0.182	µg/l	Reach 3	3600	µg/kg	Reach 1	112	µg/kg bw/day	140	1400	-
Total HPAHs	95	µg/kg	Reach 1	1.23	µg/l	Reach 3	28000	µg/kg	Reach 1	917	µg/kg bw/day	-	-	48
Total LPAHs	11	µg/kg	Reach 1	0.21	µg/l	Reach 3	4900	µg/kg	Reach 1	157	µg/kg bw/day	-	-	670
Total PAHs	110	µg/kg	Reach 1	1.4	µg/l	Reach 3	33000	µg/kg	Reach 1	1080	µg/kg bw/day	40000	-	-
Total PCB Congeners	35	µg/kg	Reach 1	0.0424	µg/l	Reach 3	1500	µg/kg	Reach 1	68	µg/kg bw/day	140	1400	400
PCB TEQ-Bird	4.8	ng/kg	Reach 1	0.00719	ng/l	Reach 3	440	ng/kg	Reach 1	17	ng/kg bw/day	14	140	2.8
PCDD/PCDF TEQ-Bird	5.2	ng/kg	Reach 1	0.291	ng/l	Reach 3	1200	ng/kg	Reach 1	40	ng/kg bw/day	14	140	2.8
Total TEQ-Bird	10	ng/kg	Reach 1	0.227	ng/l	Reach 3	1100	ng/kg	Reach 1	40	ng/kg bw/day	14	140	2.8
Total DDx	1.8	µg/kg	Reach 1	0.00597	µg/l	Reach 3	110	µg/kg	Reach 1	4.5	µg/kg bw/day	25	250	0.9

Spotted Sandpiper - Diet Scenario 1

Dietary dose (mg/kg bw/d) = (([Csw*WIR] + [Cprey*FIR] + [Csed*SIR])/BW) *SUF

WIR (L/day)	0.0071
FIR (kg ww/day)	0.027
SIR (kg dw/day)	0.0013
BW (kg)	0.0425
SUF	1

COPEC	Prey: Invertebrate (worms) $C_{worm, ww}$	$C_{worms,ww}$ (units)	Exposure Area	Surface Water C_{sw}	C_{sw} (units)	Exposure Area	Sediment $C_{sed,dw}$	$C_{sed,dw}$ (units)	Exposure Area	Dose C_{Dose}	C_{dose} (units)	Range of TRVs: TRV-A[a] NOAEL	TRV-A[a] LOAEL	TRV- NOAEL
Reach 2														
Cadmium	0.024	mg/kg	Reach 2	0.00026	mg/l	Reach 3	3.3	mg/kg	Reach 2	0.12	mg/kg bw/day	0.4	4	0.08
Chromium	3.8	mg/kg	Reach 2	0.00732	mg/l	Reach 3	112	mg/kg	Reach 2	5.8	mg/kg bw/day	10.5	105	-
Copper	1.2	mg/kg	Reach 2	0.0142	mg/l	Reach 3	159	mg/kg	Reach 2	5.6	mg/kg bw/day	1.9	19	2.3
Lead	0.16	mg/kg	Reach 2	0.0137	mg/l	Reach 3	210	mg/kg	Reach 2	6.5	mg/kg bw/day	5.5	28	0.19
Methyl mercury	2.9	µg/kg	Reach 2	0.0004	µg/l	Reach 3	4.4	µg/kg	Reach 2	2.0	µg/kg bw/day	9.6	96	13
Nickel	2.6	mg/kg	Reach 2	0.00272	mg/l	Reach 3	34	mg/kg	Reach 2	2.7	mg/kg bw/day	15	33	1.38
Selenium	0.28	mg/kg	Reach 2	0.00091	mg/l	Reach 3	1.5	mg/kg	Reach 2	0.22	mg/kg bw/day	0.42	0.82	0.23
Vanadium	0.08	mg/kg	Reach 2	0.0042	mg/l	Reach 3	31	mg/kg	Reach 2	1.0	mg/kg bw/day	1.2	2.3	-
Zinc	19.5	mg/kg	Reach 2	0.03	mg/l	Reach 3	469	mg/kg	Reach 2	27	mg/kg bw/day	82	124	17.2
Benzo(a)pyrene	1.9	µg/kg	Reach 2	0.182	µg/l	Reach 3	3700	µg/kg	Reach 2	114	µg/kg bw/day	140	1400	-
Total HPAHs	140	µg/kg	Reach 2	1.23	µg/l	Reach 3	30000	µg/kg	Reach 2	1007	µg/kg bw/day	-	-	48
Total LPAHs	12	µg/kg	Reach 2	0.21	µg/l	Reach 3	3800	µg/kg	Reach 2	124	µg/kg bw/day	-	-	670
Total PAHs	150	µg/kg	Reach 2	1.4	µg/l	Reach 3	34000	µg/kg	Reach 2	1136	µg/kg bw/day	40000	-	-
Total PCB Congeners	130	µg/kg	Reach 2	0.0424	µg/l	Reach 3	3000	µg/kg	Reach 2	174	µg/kg bw/day	140	1400	400
PCB TEQ-Bird	25	ng/kg	Reach 2	0.00719	ng/l	Reach 3	570	ng/kg	Reach 2	33	ng/kg bw/day	14	140	2.8
PCDD/PCDF TEQ-Bird	22	ng/kg	Reach 2	0.291	ng/l	Reach 3	1300	ng/kg	Reach 2	54	ng/kg bw/day	14	140	2.8
Total TEQ-Bird	47	ng/kg	Reach 2	0.227	ng/l	Reach 3	1800	ng/kg	Reach 2	85	ng/kg bw/day	14	140	2.8
Total DDx	3.6	µg/kg	Reach 2	0.00597	µg/l	Reach 3	330	µg/kg	Reach 2	12	µg/kg bw/day	25	250	0.9
Reach 3														
Cadmium	0.026	mg/kg	Reach 3	0.00026	mg/l	Reach 3	5.3	mg/kg	Reach 3	0.2	mg/kg bw/day	0.4	4	0.08
Chromium	7.7	mg/kg	Reach 3	0.00732	mg/l	Reach 3	250	mg/kg	Reach 3	13	mg/kg bw/day	10.5	105	-
Copper	1.5	mg/kg	Reach 3	0.0142	mg/l	Reach 3	220	mg/kg	Reach 3	7.7	mg/kg bw/day	1.9	19	2.3
Lead	0.16	mg/kg	Reach 3	0.0137	mg/l	Reach 3	309	mg/kg	Reach 3	9.6	mg/kg bw/day	5.5	28	0.19
Methyl mercury	3.1	µg/kg	Reach 3	0.0004	µg/l	Reach 3	6	µg/kg	Reach 3	2.2	µg/kg bw/day	9.6	96	13
Nickel	4.9	mg/kg	Reach 3	0.00272	mg/l	Reach 3	52.8	mg/kg	Reach 3	4.7	mg/kg bw/day	15	33	1.38
Selenium	0.28	mg/kg	Reach 3	0.00091	mg/l	Reach 3	1.6	mg/kg	Reach 3	0.2	mg/kg bw/day	0.42	0.82	0.23
Vanadium	0.08	mg/kg	Reach 3	0.0042	mg/l	Reach 3	31	mg/kg	Reach 3	1.0	mg/kg bw/day	1.2	2.3	-
Zinc	18.1	mg/kg	Reach 3	0.03	mg/l	Reach 3	670	mg/kg	Reach 3	32	mg/kg bw/day	82	124	17.2
Benzo(a)pyrene	3	µg/kg	Reach 3	0.182	µg/l	Reach 3	4000	µg/kg	Reach 3	124	µg/kg bw/day	140	1400	-
Total HPAHs	99	µg/kg	Reach 3	1.23	µg/l	Reach 3	35000	µg/kg	Reach 3	1134	µg/kg bw/day	-	-	48
Total LPAHs	8.3	µg/kg	Reach 3	0.21	µg/l	Reach 3	5100	µg/kg	Reach 3	161	µg/kg bw/day	-	-	670
Total PAHs	110	µg/kg	Reach 3	1.4	µg/l	Reach 3	41000	µg/kg	Reach 3	1324	µg/kg bw/day	40000	-	-
Total PCB Congeners	41	µg/kg	Reach 3	0.0424	µg/l	Reach 3	1600	µg/kg	Reach 3	75	µg/kg bw/day	140	1400	400
PCB TEQ-Bird	4.9	ng/kg	Reach 3	0.00719	ng/l	Reach 3	390	ng/kg	Reach 3	15	ng/kg bw/day	14	140	2.8
PCDD/PCDF TEQ-Bird	5.9	ng/kg	Reach 3	0.291	ng/l	Reach 3	550	ng/kg	Reach 3	21	ng/kg bw/day	14	140	2.8
Total TEQ-Bird	11	ng/kg	Reach 3	0.227	ng/l	Reach 3	930	ng/kg	Reach 3	35	ng/kg bw/day	14	140	2.8
Total DDx	4.2	µg/kg	Reach 3	0.00597	µg/l	Reach 3	110	µg/kg	Reach 3	6.0	µg/kg bw/day	25	250	0.9
Reach 4														
Cadmium	0.16	mg/kg	Reach 4	0.00027	mg/l	Reach 4	11	mg/kg	Reach 4	0.44	mg/kg bw/day	0.4	4	0.08

Spotted Sandpiper - Diet Scenario 1

Dietary dose (mg/kg bw/d) = (([Csw*WIR] + [Cprey*FIR] + [Csed*SIR])/BW) *SUF

WIR (L/day)	0.0071
FIR (kg ww/day)	0.027
SIR (kg dw/day)	0.0013
BW (kg)	0.0425
SUF	1

COPEC	Prey: Invertebrate (worms) $C_{worm, ww}$	$C_{worms,ww}$ (units)	Exposure Area	Surface Water C_{sw}	C_{sw} (units)	Exposure Area	Sediment $C_{sed,dw}$	$C_{sed,dw}$ (units)	Exposure Area	Dose C_{Dose}	C_{dose} (units)	Range of TRVs: TRV-A[a] NOAEL	TRV-A[a] LOAEL	TRV- NOAEL
Chromium	24.7	mg/kg	Reach 4	0.00567	mg/l	Reach 4	360	mg/kg	Reach 4	27	mg/kg bw/day	10.5	105	-
Copper	11.9	mg/kg	Reach 4	0.0152	mg/l	Reach 4	300	mg/kg	Reach 4	17	mg/kg bw/day	1.9	19	2.3
Lead	10.2	mg/kg	Reach 4	0.0144	mg/l	Reach 4	407	mg/kg	Reach 4	19	mg/kg bw/day	5.5	28	0.19
Methyl mercury	3.1	µg/kg	Reach 4	0.000413	µg/l	Reach 4	7.2	µg/kg	Reach 4	2.2	µg/kg bw/day	9.6	96	13
Nickel	14.8	mg/kg	Reach 4	0.0026	mg/l	Reach 4	52.2	mg/kg	Reach 4	11	mg/kg bw/day	15	33	1.38
Selenium	0.55	mg/kg	Reach 4	0.00069	mg/l	Reach 4	1.6	mg/kg	Reach 4	0.40	mg/kg bw/day	0.42	0.82	0.23
Vanadium	1.2	mg/kg	Reach 4	0.0037	mg/l	Reach 4	44	mg/kg	Reach 4	2.1	mg/kg bw/day	1.2	2.3	-
Zinc	39.8	mg/kg	Reach 4	0.03	mg/l	Reach 4	1100	mg/kg	Reach 4	59	mg/kg bw/day	82	124	17.2
Benzo(a)pyrene	440	µg/kg	Reach 4	0.153	µg/l	Reach 4	6500	µg/kg	Reach 4	478	µg/kg bw/day	140	1400	-
Total HPAHs	4900	µg/kg	Reach 4	1.17	µg/l	Reach 4	55000	µg/kg	Reach 4	4795	µg/kg bw/day	-	-	48
Total LPAHs	940	µg/kg	Reach 4	0.195	µg/l	Reach 4	12000	µg/kg	Reach 4	964	µg/kg bw/day	-	-	670
Total PAHs	5900	µg/kg	Reach 4	1.4	µg/l	Reach 4	73000	µg/kg	Reach 4	5981	µg/kg bw/day	40000	-	-
Total PCB Congeners	530	µg/kg	Reach 4	0.0323	µg/l	Reach 4	7800	µg/kg	Reach 4	575	µg/kg bw/day	140	1400	400
PCB TEQ-Bird	90	ng/kg	Reach 4	0.00651	ng/l	Reach 4	1700	ng/kg	Reach 4	109	ng/kg bw/day	14	140	2.8
PCDD/PCDF TEQ-Bird	150	ng/kg	Reach 4	0.266	ng/l	Reach 4	16000	ng/kg	Reach 4	585	ng/kg bw/day	14	140	2.8
Total TEQ-Bird	240	ng/kg	Reach 4	0.274	ng/l	Reach 4	18000	ng/kg	Reach 4	703	ng/kg bw/day	14	140	2.8
Total DDx	33	µg/kg	Reach 4	0.00643	µg/l	Reach 4	570	µg/kg	Reach 4	38	µg/kg bw/day	25	250	0.9
Reach 5														
Cadmium	0.15	mg/kg	Reach 5	0.000081	mg/l	Reach 5	5.2	mg/kg	Reach 5	0.25	mg/kg bw/day	0.4	4	0.08
Chromium	7.2	mg/kg	Reach 5	0.00337	mg/l	Reach 5	140	mg/kg	Reach 5	8.9	mg/kg bw/day	10.5	105	-
Copper	6.1	mg/kg	Reach 5	0.0052	mg/l	Reach 5	178	mg/kg	Reach 5	9.3	mg/kg bw/day	1.9	19	2.3
Lead	1.8	mg/kg	Reach 5	0.00753	mg/l	Reach 5	366	mg/kg	Reach 5	12	mg/kg bw/day	5.5	28	0.19
Methyl mercury	2.9	µg/kg	Reach 5	0.000289	µg/l	Reach 5	23	µg/kg	Reach 5	2.5	µg/kg bw/day	9.6	96	13
Nickel	5.1	mg/kg	Reach 5	0.00223	mg/l	Reach 5	29	mg/kg	Reach 5	4.1	mg/kg bw/day	15	33	1.38
Selenium	0.29	mg/kg	Reach 5	0.001	mg/l	Reach 5	0.93	mg/kg	Reach 5	0.21	mg/kg bw/day	0.42	0.82	0.23
Vanadium	0.17	mg/kg	Reach 5	0.0053	mg/l	Reach 5	30	mg/kg	Reach 5	1.0	mg/kg bw/day	1.2	2.3	-
Zinc	33.8	mg/kg	Reach 5	0.0111	mg/l	Reach 5	880	mg/kg	Reach 5	48	mg/kg bw/day	82	124	17.2
Benzo(a)pyrene	440	µg/kg	Reach 4	0.0421	µg/l	Reach 5	3900	µg/kg	Reach 5	399	µg/kg bw/day	140	1400	-
Total HPAHs	4900	µg/kg	Reach 4	0.484	µg/l	Reach 5	38000	µg/kg	Reach 5	4275	µg/kg bw/day	-	-	48
Total LPAHs	940	µg/kg	Reach 4	0.0744	µg/l	Reach 5	5600	µg/kg	Reach 5	768	µg/kg bw/day	-	-	670
Total PAHs	5900	µg/kg	Reach 4	0.558	µg/l	Reach 5	44000	µg/kg	Reach 5	5094	µg/kg bw/day	40000	-	-
Total PCB Congeners	130	µg/kg	Reach 5	0.0279	µg/l	Reach 5	4000	µg/kg	Reach 5	205	µg/kg bw/day	140	1400	400
PCB TEQ-Bird	19	ng/kg	Reach 5	0.00436	ng/l	Reach 5	2300	ng/kg	Reach 5	82	ng/kg bw/day	14	140	2.8
PCDD/PCDF TEQ-Bird	25	ng/kg	Reach 5	0.0228	ng/l	Reach 5	1600	ng/kg	Reach 5	65	ng/kg bw/day	14	140	2.8
Total TEQ-Bird	43	ng/kg	Reach 5	0.0271	ng/l	Reach 5	2100	ng/kg	Reach 5	92	ng/kg bw/day	14	140	2.8
Total DDx	32	µg/kg	Reach 5	0.00377	µg/l	Reach 5	260	µg/kg	Reach 5	28	µg/kg bw/day	25	250	0.9
Reach 6														
Cadmium	0.11	mg/kg	Reach 6	0.00013	mg/l	Reach 6	5.1	mg/kg	Reach 6	0.2	mg/kg bw/day	0.4	4	0.08
Chromium	8.8	mg/kg	Reach 6	0.0067	mg/l	Reach 6	260	mg/kg	Reach 6	14	mg/kg bw/day	10.5	105	-
Copper	5.4	mg/kg	Reach 6	0.00793	mg/l	Reach 6	191	mg/kg	Reach 6	9.3	mg/kg bw/day	1.9	19	2.3

Spotted Sandpiper - Diet Scenario 1

Dietary dose (mg/kg bw/d) = (([Csw*WIR] + [Cprey*FIR] + [Csed*SIR])/BW) *SUF

WIR (L/day)	0.0071
FIR (kg ww/day)	0.027
SIR (kg dw/day)	0.0013
BW (kg)	0.0425
SUF	1

	Prey													
	Invertebrate (worms)			Surface Water			Sediment			Dose		Range of TRVs		
												TRV-A[a]		TRV-
COPEC	$C_{worm, ww}$	$C_{worms,ww}$ (units)	Exposure Area	C_{sw}	C_{sw} (units)	Exposure Area	$C_{sed,dw}$	$C_{sed,dw}$ (units)	Exposure Area	C_{Dose}	C_{dose} (units)	NOAEL	LOAEL	NOAEL
Lead	3	mg/kg	Reach 6	0.00835	mg/l	Reach 6	375	mg/kg	Reach 6	13	mg/kg bw/day	5.5	28	0.19
Methyl mercury	3	µg/kg	Reach 6	0.00036	µg/l	Reach 6	1.3	µg/kg	Reach 6	1.9	µg/kg bw/day	9.6	96	13
Nickel	5.5	mg/kg	Reach 6	0.00239	mg/l	Reach 6	30	mg/kg	Reach 6	4.4	mg/kg bw/day	15	33	1.38
Selenium	0.77	mg/kg	Reach 6	0.00063	mg/l	Reach 6	0.89	mg/kg	Reach 6	0.52	mg/kg bw/day	0.42	0.82	0.23
Vanadium	0.5	mg/kg	Reach 6	0.0032	mg/l	Reach 6	29	mg/kg	Reach 6	1.2	mg/kg bw/day	1.2	2.3	-
Zinc	40	mg/kg	Reach 6	0.031	mg/l	Reach 6	560	mg/kg	Reach 6	43	mg/kg bw/day	82	124	17.2
Benzo(a)pyrene	120	µg/kg	Reach 6	0.0854	µg/l	Reach 6	3600	µg/kg	Reach 6	186	µg/kg bw/day	140	1400	-
Total HPAHs	1800	µg/kg	Reach 6	0.871	µg/l	Reach 6	40000	µg/kg	Reach 6	2367	µg/kg bw/day	-	-	48
Total LPAHs	130	µg/kg	Reach 6	0.173	µg/l	Reach 6	11000	µg/kg	Reach 6	419	µg/kg bw/day	-	-	670
Total PAHs	1900	µg/kg	Reach 6	1	µg/l	Reach 6	50000	µg/kg	Reach 6	2737	µg/kg bw/day	40000	-	-
Total PCB Congeners	370	µg/kg	Reach 6	0.0223	µg/l	Reach 6	6800	µg/kg	Reach 6	443	µg/kg bw/day	140	1400	400
PCB TEQ-Bird	66	ng/kg	Reach 6	0.00387	ng/l	Reach 6	1700	ng/kg	Reach 6	94	ng/kg bw/day	14	140	2.8
PCDD/PCDF TEQ-Bird	83	ng/kg	Reach 6	0.0168	ng/l	Reach 6	4900	ng/kg	Reach 6	203	ng/kg bw/day	14	140	2.8
Total TEQ-Bird	150	ng/kg	Reach 6	0.015	ng/l	Reach 6	6600	ng/kg	Reach 6	297	ng/kg bw/day	14	140	2.8
Total DDx	32	µg/kg	Reach 6	0.00397	µg/l	Reach 6	210	µg/kg	Reach 6	27	µg/kg bw/day	25	250	0.9
Reach 7														
Cadmium	0.2	mg/kg	Reach 7	0.00013	mg/l	Reach 6	2.4	mg/kg	Reach 7	0.20	mg/kg bw/day	0.4	4	0.08
Chromium	61	mg/kg	Reach 7	0.0067	mg/l	Reach 6	65.1	mg/kg	Reach 7	41	mg/kg bw/day	10.5	105	-
Copper	11.4	mg/kg	Reach 7	0.00793	mg/l	Reach 6	77.6	mg/kg	Reach 7	9.6	mg/kg bw/day	1.9	19	2.3
Lead	12.4	mg/kg	Reach 7	0.00835	mg/l	Reach 6	211	mg/kg	Reach 7	14	mg/kg bw/day	5.5	28	0.19
Methyl mercury	1.4	µg/kg	Reach 7	0.00036	µg/l	Reach 6	1.3	µg/kg	Reach 7	0.93	µg/kg bw/day	9.6	96	13
Nickel	36.2	mg/kg	Reach 7	0.00239	mg/l	Reach 6	19.5	mg/kg	Reach 7	24	mg/kg bw/day	15	33	1.38
Selenium	0.54	mg/kg	Reach 7	0.00063	mg/l	Reach 6	0.4	mg/kg	Reach 7	0.36	mg/kg bw/day	0.42	0.82	0.23
Vanadium	1.3	mg/kg	Reach 7	0.0032	mg/l	Reach 6	25.6	mg/kg	Reach 7	1.6	mg/kg bw/day	1.2	2.3	-
Zinc	45.2	mg/kg	Reach 7	0.031	mg/l	Reach 6	314	mg/kg	Reach 7	38	mg/kg bw/day	82	124	17.2
Benzo(a)pyrene	150	µg/kg	Reach 7	0.0854	µg/l	Reach 6	1770	µg/kg	Reach 7	149	µg/kg bw/day	140	1400	-
Total HPAHs	1700	µg/kg	Reach 7	0.871	µg/l	Reach 6	15800	µg/kg	Reach 7	1563	µg/kg bw/day	-	-	48
Total LPAHs	220	µg/kg	Reach 7	0.173	µg/l	Reach 6	3260	µg/kg	Reach 7	240	µg/kg bw/day	-	-	670
Total PAHs	1900	µg/kg	Reach 7	1	µg/l	Reach 6	19000	µg/kg	Reach 7	1788	µg/kg bw/day	40000	-	-
Total PCB Congeners	470	µg/kg	Reach 7	0.0223	µg/l	Reach 6	560	µg/kg	Reach 7	316	µg/kg bw/day	140	1400	400
PCB TEQ-Bird	31	ng/kg	Reach 7	0.00387	ng/l	Reach 6	180	ng/kg	Reach 7	25	ng/kg bw/day	14	140	2.8
PCDD/PCDF TEQ-Bird	28	ng/kg	Reach 7	0.0168	ng/l	Reach 6	370	ng/kg	Reach 7	29	ng/kg bw/day	14	140	2.8
Total TEQ-Bird	59	ng/kg	Reach 7	0.015	ng/l	Reach 6	540	ng/kg	Reach 7	54	ng/kg bw/day	14	140	2.8
Total DDx	8.8	µg/kg	Reach 7	0.00397	µg/l	Reach 6	65	µg/kg	Reach 7	8	µg/kg bw/day	25	250	0.9
Reach 8														
Cadmium	0.2	mg/kg	Reach 7	0.00013	mg/l	Reach 6	1.2	mg/kg	Reach 7	0.16	mg/kg bw/day	0.4	4	0.08
Chromium	61	mg/kg	Reach 7	0.0067	mg/l	Reach 6	36	mg/kg	Reach 7	40	mg/kg bw/day	10.5	105	-
Copper	11.4	mg/kg	Reach 7	0.00793	mg/l	Reach 6	71	mg/kg	Reach 7	9.4	mg/kg bw/day	1.9	19	2.3
Lead	12.4	mg/kg	Reach 7	0.00835	mg/l	Reach 6	286	mg/kg	Reach 7	17	mg/kg bw/day	5.5	28	0.19
Methyl mercury	1	µg/kg	Reach 8	0.00036	µg/l	Reach 6	1.9	µg/kg	Reach 7	0.69	µg/kg bw/day	9.6	96	13

Spotted Sandpiper - Diet Scenario 1

Dietary dose (mg/kg bw/d) = (([Csw*WIR] + [Cprey*FIR] + [Csed*SIR])/BW) *SUF

WIR (L/day)	0.0071
FIR (kg ww/day)	0.027
SIR (kg dw/day)	0.0013
BW (kg)	0.0425
SUF	1

COPEC	Prey: Invertebrate (worms)			Surface Water			Sediment			Dose		Range of TRVs: TRV-A[a]		Range of TRVs: TRV-
	$C_{worm, ww}$	$C_{worms,ww}$ (units)	Exposure Area	C_{sw}	C_{sw} (units)	Exposure Area	$C_{sed,dw}$	$C_{sed,dw}$ (units)	Exposure Area	C_{Dose}	C_{dose} (units)	NOAEL	LOAEL	NOAEL
Nickel	36.2	mg/kg	Reach 7	0.00239	mg/l	Reach 6	13	mg/kg	Reach 7	23	mg/kg bw/day	15	33	1.38
Selenium	0.54	mg/kg	Reach 7	0.00063	mg/l	Reach 6	0.48	mg/kg	Reach 7	0.36	mg/kg bw/day	0.42	0.82	0.23
Vanadium	1.3	mg/kg	Reach 7	0.0032	mg/l	Reach 6	14	mg/kg	Reach 7	1.3	mg/kg bw/day	1.2	2.3	-
Zinc	45.2	mg/kg	Reach 7	0.031	mg/l	Reach 6	445	mg/kg	Reach 7	42	mg/kg bw/day	82	124	17.2
Benzo(a)pyrene	150	µg/kg	Reach 7	0.0854	µg/l	Reach 6	4900	µg/kg	Reach 7	245	µg/kg bw/day	140	1400	-
Total HPAHs	1700	µg/kg	Reach 7	0.871	µg/l	Reach 6	38000	µg/kg	Reach 7	2242	µg/kg bw/day	-	-	48
Total LPAHs	220	µg/kg	Reach 7	0.173	µg/l	Reach 6	8400	µg/kg	Reach 7	397	µg/kg bw/day	-	-	670
Total PAHs	1900	µg/kg	Reach 7	1	µg/l	Reach 6	45000	µg/kg	Reach 7	2584	µg/kg bw/day	40000	-	-
Total PCB Congeners	66	µg/kg	Reach 8	0.0223	µg/l	Reach 6	760	µg/kg	Reach 7	65	µg/kg bw/day	140	1400	400
PCB TEQ-Bird	12	ng/kg	Reach 8	0.00387	ng/l	Reach 6	86	ng/kg	Reach 7	10	ng/kg bw/day	14	140	2.8
PCDD/PCDF TEQ-Bird	2.4	ng/kg	Reach 8	0.0168	ng/l	Reach 6	15	ng/kg	Reach 7	2.0	ng/kg bw/day	14	140	2.8
Total TEQ-Bird	15	ng/kg	Reach 8	0.015	ng/l	Reach 6	95	ng/kg	Reach 7	12	ng/kg bw/day	14	140	2.8
Total DDx	5.5	µg/kg	Reach 8	0.00397	µg/l	Reach 6	25	µg/kg	Reach 7	4	µg/kg bw/day	25	250	0.9

Note 1: "–" indicates no TRV available

Note 2: Blue highlighted cells indicate EPC is based on maximium concentration

[a] TRVs derived from the primary literature review based on process identified in Section 8.1.3.1 .

[b] TRVs based on USEPA's LPR restoration project FFS (Louis Berger et al. 2014), USEPA's first draft of the LPR restoration project FFS (Malcolm Pirnie 2007) or USEPA's LPR restoration project PAR (Battelle 2005) .

BW - body weight
COC - chemical of concern
COPEC - chemical of potential ecological concern
FIR - food ingestion rate
LOAEL - Lowest observed adverse effect level
na - not applicable
NFF - non forage fish
NOAEL - No observed adverse effect level
RM - River Mile
SFF - small forage fish
SIR - sediment ingestion rate
SUF - site use factor
UCL HQ = hazard quotient based on the 95th percentile (UCL) concentration
WIR - water ingestion rate

		Range of HQs			
B[b]		HQ based on TRV-A[a]		HQ based on TRV-B[a]	
LOAEL	TRV units	NOAEL HQ	LOAEL HQ	NOAEL HQ[b]	LOAEL HQ[b]
10.4	mg/kg bw/day	0.57	0.057	**2.9**	0.022
-	mg/kg bw/day	**1.8**	0.18	-	-
4.7	mg/kg bw/day	**5.0**	0.50	**4.1**	**2.0**
1.9	mg/kg bw/day	**2.5**	0.49	**73**	**7.3**
26	µg/kg bw/day	0.21	0.021	0.15	0.077
56.3	mg/kg bw/day	0.62	0.28	**6.7**	0.17
0.93	mg/kg bw/day	0.90	0.46	**1.7**	0.41
-	mg/kg bw/day	**1.0**	0.54	-	-
172	mg/kg bw/day	0.48	0.32	**2.3**	0.23
-	µg/kg bw/day	**2.9**	0.29	-	-
480	µg/kg bw/day	-	-	**49**	**4.9**
6700	µg/kg bw/day	-	-	0.88	0.088
-	µg/kg bw/day	0.071	-	-	-
500	µg/kg bw/day	**1.7**	0.17	0.60	0.48
28	ng/kg bw/day	**3.1**	0.31	**15**	**1.5**
28	ng/kg bw/day	**9.1**	0.91	**45**	**4.5**
28	ng/kg bw/day	**11**	**1.1**	**54**	**5.4**
27	µg/kg bw/day	0.69	0.069	**19**	0.64
10.4	mg/kg bw/day	0.25	0.025	**1.3**	0.010
-	mg/kg bw/day	0.65	0.065	-	-
4.7	mg/kg bw/day	**3.0**	0.30	**2.4**	**1.2**
1.9	mg/kg bw/day	**1.0**	0.20	**30**	**3.0**
26	µg/kg bw/day	0.23	0.023	0.17	0.086
56.3	mg/kg bw/day	0.21	0.094	**2.3**	0.055
0.93	mg/kg bw/day	0.64	0.33	**1.2**	0.29
-	mg/kg bw/day	0.81	0.42	-	-
172	mg/kg bw/day	0.30	0.20	**1.5**	0.15
-	µg/kg bw/day	0.80	0.080	-	-
480	µg/kg bw/day	-	-	**19**	**1.9**
6700	µg/kg bw/day	-	-	0.23	0.023
-	µg/kg bw/day	0.027	-	-	-
500	µg/kg bw/day	0.49	0.049	0.17	0.14
28	ng/kg bw/day	**1.2**	0.12	**5.9**	0.59
28	ng/kg bw/day	**2.9**	0.29	**14**	**1.4**
28	ng/kg bw/day	**2.9**	0.29	**14**	**1.4**
27	µg/kg bw/day	0.18	0.018	**5.0**	0.17

		Range of HQs			
B[b]		HQ based on TRV-A[a]		HQ based on TRV-B[a]	
LOAEL	TRV units	NOAEL HQ	LOAEL HQ	NOAEL HQ[b]	LOAEL HQ[b]
[redacted]					
10.4	mg/kg bw/day	0.29	0.029	**1.5**	0.011
-	mg/kg bw/day	0.56	0.056	-	-
4.7	mg/kg bw/day	**3.0**	0.30	**2.4**	**1.2**
1.9	mg/kg bw/day	**1.2**	0.23	**34**	**3.4**
26	µg/kg bw/day	0.21	0.021	0.15	0.076
56.3	mg/kg bw/day	0.18	0.082	**2.0**	0.048
0.93	mg/kg bw/day	0.53	0.27	0.97	0.24
-	mg/kg bw/day	0.83	0.43	-	-
172	mg/kg bw/day	0.33	0.22	**1.6**	0.16
-	µg/kg bw/day	0.82	0.082	-	-
480	µg/kg bw/day	-	-	**21**	**2.1**
6700	µg/kg bw/day	-	-	0.18	0.018
-	µg/kg bw/day	0.028	-	-	-
500	µg/kg bw/day	**1.2**	0.12	0.44	0.35
28	ng/kg bw/day	**2.4**	0.24	**12**	**1.2**
28	ng/kg bw/day	**3.8**	0.38	**19**	**1.9**
28	ng/kg bw/day	**6.1**	0.61	**30**	**3.0**
27	µg/kg bw/day	0.50	0.050	**14**	0.46
[redacted]					
10.4	mg/kg bw/day	0.45	0.045	**2.2**	0.017
-	mg/kg bw/day	**1.2**	0.12	-	-
4.7	mg/kg bw/day	**4.0**	0.40	**3.3**	**1.6**
1.9	mg/kg bw/day	**1.7**	0.34	**50**	**5.0**
26	µg/kg bw/day	0.22	0.022	0.17	0.083
56.3	mg/kg bw/day	0.32	0.14	**3.4**	0.084
0.93	mg/kg bw/day	0.54	0.28	0.99	0.24
-	mg/kg bw/day	0.83	0.43	-	-
172	mg/kg bw/day	0.39	0.26	**1.9**	0.19
-	µg/kg bw/day	0.89	0.089	-	-
480	µg/kg bw/day	-	-	**24**	**2.4**
6700	µg/kg bw/day	-	-	0.24	0.024
-	µg/kg bw/day	0.033	-	-	-
500	µg/kg bw/day	0.54	0.054	0.19	0.15
28	ng/kg bw/day	**1.1**	0.11	**5.4**	0.54
28	ng/kg bw/day	**1.5**	0.15	**7.4**	0.74
28	ng/kg bw/day	**2.5**	0.25	**13**	**1.3**
27	µg/kg bw/day	0.24	0.024	**6.7**	0.22
[redacted]					
10.4	mg/kg bw/day	**1.1**	0.11	**5.5**	0.042

		Range of HQs			
B[b]		HQ based on TRV-A[a]		HQ based on TRV-B[a]	
LOAEL	TRV units	NOAEL HQ	LOAEL HQ	NOAEL HQ[b]	LOAEL HQ[b]
-	mg/kg bw/day	**2.5**	0.25	-	-
4.7	mg/kg bw/day	**8.8**	0.88	**7.3**	**3.6**
1.9	mg/kg bw/day	**3.4**	0.68	**100**	**10**
26	µg/kg bw/day	0.23	0.023	0.17	0.084
56.3	mg/kg bw/day	0.73	0.33	**8.0**	0.20
0.93	mg/kg bw/day	0.95	0.49	**1.7**	0.43
-	mg/kg bw/day	**1.8**	0.92	-	-
172	mg/kg bw/day	0.72	0.48	**3.4**	0.34
-	µg/kg bw/day	**3.4**	0.34	-	-
480	µg/kg bw/day	-	-	**100**	**10**
6700	µg/kg bw/day	-	-	**1.4**	0.14
-	µg/kg bw/day	0.15	-	-	-
500	µg/kg bw/day	**4.1**	0.41	**1.4**	**1.2**
28	ng/kg bw/day	**7.8**	0.78	**39**	**3.9**
28	ng/kg bw/day	**42**	**4.2**	**210**	**21**
28	ng/kg bw/day	**50**	**5.0**	**250**	**25**
27	µg/kg bw/day	**1.5**	0.15	**43**	**1.4**
[redacted]					
10.4	mg/kg bw/day	0.64	0.064	**3.2**	0.024
-	mg/kg bw/day	0.84	0.084	-	-
4.7	mg/kg bw/day	**4.9**	0.49	**4.1**	**2.0**
1.9	mg/kg bw/day	**2.2**	0.44	**65**	**6.5**
26	µg/kg bw/day	0.27	0.027	0.20	0.098
56.3	mg/kg bw/day	0.28	0.13	**3.0**	0.073
0.93	mg/kg bw/day	0.51	0.26	0.93	0.30
-	mg/kg bw/day	0.86	0.45	-	-
172	mg/kg bw/day	0.59	0.39	**2.8**	0.28
-	µg/kg bw/day	**2.8**	0.28	-	-
480	µg/kg bw/day	-	-	**89**	**8.9**
6700	µg/kg bw/day	-	-	**1.1**	0.11
-	µg/kg bw/day	0.13	-	-	-
500	µg/kg bw/day	**1.5**	0.15	0.51	0.41
28	ng/kg bw/day	**5.9**	0.59	**29**	**2.9**
28	ng/kg bw/day	**4.6**	0.46	**23**	**2.3**
28	ng/kg bw/day	**6.5**	0.65	**33**	**3.3**
27	µg/kg bw/day	**1.1**	0.11	**31**	**1.0**
[redacted]					
10.4	mg/kg bw/day	0.56	0.056	**2.8**	0.022
-	mg/kg bw/day	**1.3**	0.13	-	-
4.7	mg/kg bw/day	**4.9**	0.49	**4.0**	**2.0**

		Range of HQs			
B[b]		HQ based on TRV-A[a]		HQ based on TRV-B[a]	
LOAEL	TRV units	NOAEL HQ	LOAEL HQ	NOAEL HQ[b]	LOAEL HQ[b]
1.9	mg/kg bw/day	**2.4**	0.48	**70**	**7.0**
26	µg/kg bw/day	0.20	0.020	0.15	0.075
56.3	mg/kg bw/day	0.29	0.13	**3.2**	0.078
0.93	mg/kg bw/day	**1.2**	0.63	**2.2**	0.56
-	mg/kg bw/day	**1.0**	0.52	-	-
172	mg/kg bw/day	0.52	0.34	**2.5**	0.25
-	µg/kg bw/day	**1.3**	0.13	-	-
480	µg/kg bw/day	-	-	**49**	**4.9**
6700	µg/kg bw/day	-	-	0.63	0.063
-	µg/kg bw/day	0.068	-	-	-
500	µg/kg bw/day	**3.2**	0.32	**1.1**	0.89
28	ng/kg bw/day	**6.7**	0.67	**34**	**3.4**
28	ng/kg bw/day	**14**	**1.4**	**72**	**7.2**
28	ng/kg bw/day	**21**	**2.1**	**110**	**11**
27	µg/kg bw/day	**1.1**	0.11	**30**	0.99
10.4	mg/kg bw/day	0.50	0.050	**2.5**	0.019
-	mg/kg bw/day	**3.9**	0.39	-	-
4.7	mg/kg bw/day	**5.1**	0.51	**4.2**	**2.0**
1.9	mg/kg bw/day	**2.6**	0.51	**75**	**7.5**
26	µg/kg bw/day	0.097	0.0097	0.071	0.036
56.3	mg/kg bw/day	**1.6**	0.71	**17**	0.42
0.93	mg/kg bw/day	0.85	0.43	**1.5**	0.38
-	mg/kg bw/day	**1.3**	0.70	-	-
172	mg/kg bw/day	0.47	0.31	**2.2**	0.22
-	µg/kg bw/day	**1.1**	0.11	-	-
480	µg/kg bw/day	-	-	**33**	**3.3**
6700	µg/kg bw/day	-	-	0.36	0.036
-	µg/kg bw/day	0.045	-	-	-
500	µg/kg bw/day	**2.3**	0.23	0.79	0.63
28	ng/kg bw/day	**1.8**	0.18	**9.0**	0.90
28	ng/kg bw/day	**2.1**	0.21	**10**	**1.0**
28	ng/kg bw/day	**3.9**	0.39	**19**	**1.9**
27	µg/kg bw/day	0.30	0.030	**8.4**	0.28
10.4	mg/kg bw/day	0.41	0.041	**2.0**	0.016
-	mg/kg bw/day	**3.8**	0.38	-	-
4.7	mg/kg bw/day	**5.0**	0.50	**4.1**	**2.0**
1.9	mg/kg bw/day	**3.0**	0.59	**88**	**8.8**
26	µg/kg bw/day	0.072	0.0072	0.053	0.027

		Range of HQs			
B[b]		HQ based on TRV-A[a]		HQ based on TRV-B[a]	
LOAEL	TRV units	NOAEL HQ	LOAEL HQ	NOAEL HQ[b]	LOAEL HQ[b]
56.3	mg/kg bw/day	**1.6**	0.71	**17**	0.42
0.93	mg/kg bw/day	0.85	0.44	**1.6**	0.39
-	mg/kg bw/day	**1.0**	0.55	-	-
172	mg/kg bw/day	0.52	0.34	**2.5**	0.25
-	µg/kg bw/day	**1.8**	0.18	-	-
480	µg/kg bw/day	-	-	**47**	**4.7**
6700	µg/kg bw/day	-	-	0.59	0.059
-	µg/kg bw/day	0.065	-	-	-
500	µg/kg bw/day	0.47	0.047	0.16	0.13
28	ng/kg bw/day	0.73	0.073	**3.7**	0.37
28	ng/kg bw/day	0.14	0.014	0.71	0.071
28	ng/kg bw/day	0.89	0.089	**4.4**	0.44
27	µg/kg bw/day	0.17	0.017	**4.7**	0.16

Great Blue Heron

Diet	Fractions
0-13 cm fish	1

Chemical	Prey: Fish (≤ 13) $C_{0\text{-}13,\,ww}$	Prey: Fish (≤ 13) Exposure Area	Prey $C_{prey,ww}$	Prey $C_{prey,ww}$ (units)	Range of BMFs[a] BMF	Range of BMFs[a] Min[b]	Range of BMFs[a] Max[b]	Range of BMFs[a] Geo Mean[b]	Range of Egg Conc[a] BMF	Range of Egg Conc[a] BMF Min[b]	Range of Egg Conc[a] BMF Max[b]	Range of Egg Conc[a] BMF Geo Mean[b]	Range of Egg Conc[a] C_{egg}(units)	Range of TRVs: TRV-A[a] NOAEL	Range of TRVs: TRV-A[a] LOAEL	Range of TRVs: TRV NOAEL
Site-Wide																
Mercury	59	Site-wide	59	µg/kg	1.8	1	3	1.8	106	59	177	106	µg/kg	180	1800	-
Methyl mercury	55	Site-wide	55	µg/kg	1.8	1	3	1.8	99	55	165	99	µg/kg	180	1800	-
Total PCB Congeners	560	Site-wide	560	µg/kg	5	5	113	19	2800	2800	63280	10640	µg/kg	1600	16000	700
PCB TEQ-Bird	52	Site-wide	52	ng/kg	7	4.3	21	12	364	224	1092	624	ng/kg	25	250	59
PCDD/PCDF TEQ-Bird	48	Site-wide	48	ng/kg	7	4.3	21	12	336	206	1008	576	ng/kg	25	250	59
Total TEQ-Bird	96	Site-wide	96	ng/kg	7	4.3	21	12	672	413	2016	1152	ng/kg	25	250	59
Dieldrin	11	Site-wide	11	ug/kg	6.9	6.7	7.1	6.9	76	74	78	76	µg/kg	300	3000	200
Total DDx	62	Site-wide	62	µg/kg	20	20	141	46	1240	1240	8742	2852	µg/kg	410	4,100	500
Reach 1																
Mercury	71	Reach 1	71	µg/kg	1.8	1	3	1.8	128	71	213	128	µg/kg	180	1800	-
Methyl mercury	69	Reach 1	69	µg/kg	1.8	1	3	1.8	124	69	207	124	µg/kg	180	1800	-
Total PCB Congeners	340	Reach 1	340	µg/kg	5	5	113	19	1700	1700	38420	6460	µg/kg	1600	16000	700
PCB TEQ-Bird	23	Reach 1	23	ng/kg	7	4.3	21	12	161	99	483	276	ng/kg	25	250	59
PCDD/PCDF TEQ-Bird	17	Reach 1	17	ng/kg	7	4.3	21	12	119	73	357	204	ng/kg	25	250	59
Total TEQ-Bird	40	Reach 1	40	ng/kg	7	4.3	21	12	280	172	840	480	ng/kg	25	250	59
Dieldrin	3.5	Reach 1	3.5	ug/kg	6.9	6.7	7.1	6.9	24	23	25	24	µg/kg	300	3000	200
Total DDx	32	Reach 1	32	µg/kg	20	20	141	46	640	640	4512	1472	µg/kg	410	4,100	500
Reach 2																
Mercury	70	Reach 2	70	µg/kg	1.8	1	3	1.8	126	70	210	126	µg/kg	180	1800	-
Methyl mercury	65	Reach 2	65	µg/kg	1.8	1	3	1.8	117	65	195	117	µg/kg	180	1800	-
Total PCB Congeners	430	Reach 2	430	µg/kg	5	5	113	19	2150	2150	48590	8170	µg/kg	1600	16000	700
PCB TEQ-Bird	33	Reach 2	33	ng/kg	7	4.3	21	12	231	142	693	396	ng/kg	25	250	59
PCDD/PCDF TEQ-Bird	28	Reach 2	28	ng/kg	7	4.3	21	12	196	120	588	336	ng/kg	25	250	59
Total TEQ-Bird	60	Reach 2	60	ng/kg	7	4.3	21	12	420	258	1260	720	ng/kg	25	250	59
Dieldrin	5	Reach 2	5	ug/kg	6.9	6.7	7.1	6.9	35	34	36	35	µg/kg	300	3000	200
Total DDx	49	Reach 2	49	µg/kg	20	20	141	46	980	980	6909	2254	µg/kg	410	4,100	500
Reach 3																
Mercury	68	Reach 3	68	µg/kg	1.8	1	3	1.8	122	68	204	122	µg/kg	180	1800	-
Methyl mercury	64	Reach 3	64	µg/kg	1.8	1	3	1.8	115	64	192	115	µg/kg	180	1800	-
Total PCB Congeners	860	Reach 3	860	µg/kg	5	5	113	19	4300	4300	97180	16340	µg/kg	1600	16000	700
PCB TEQ-Bird	58	Reach 3	58	ng/kg	7	4.3	21	12	406	249	1218	696	ng/kg	25	250	59
PCDD/PCDF TEQ-Bird	58	Reach 3	58	ng/kg	7	4.3	21	12	406	249	1218	696	ng/kg	25	250	59
Total TEQ-Bird	120	Reach 3	120	ng/kg	7	4.3	21	12	840	516	2520	1440	ng/kg	25	250	59
Dieldrin	9.2	Reach 3	9.2	ug/kg	6.9	6.7	7.1	6.9	63	62	65	63	µg/kg	300	3000	200
Total DDx	100	Reach 3	100	µg/kg	20	20	141	46	2000	2000	14100	4600	µg/kg	410	10700	500
Reach 4																
Mercury	83	Reach 4	83	µg/kg	1.8	1	3	1.8	149	83	249	149	µg/kg	180	1800	-
Methyl mercury	33	Reach 4	33	µg/kg	1.8	1	3	1.8	59	33	99	59	µg/kg	180	1800	-

Total PCB Congeners	930	Reach 4	930	µg/kg	5	5	113	19	4650	4650	105090	17670	µg/kg	1600	16000	700
PCB TEQ-Bird	73	Reach 4	73	ng/kg	7	4.3	21	12	511	314	1533	876	ng/kg	25	250	59
PCDD/PCDF TEQ-Bird	84	Reach 4	84	ng/kg	7	4.3	21	12	588	361	1764	1008	ng/kg	25	250	59
Total TEQ-Bird	160	Reach 4	160	ng/kg	7	4.3	21	12	1120	688	3360	1920	ng/kg	25	250	59
Dieldrin	13	Reach 4	13	ug/kg	6.9	6.7	7.1	6.9	90	87	92	90	µg/kg	300	3000	200
Total DDx	86	Reach 4	86	µg/kg	20	20	141	46	1720	1720	12126	3956	µg/kg	410	4,100	500
Reach 5																
Mercury	54	Reach 5	54	µg/kg	1.8	1	3	1.8	97	54	162	97	µg/kg	180	1800	-
Methyl mercury	25	Reach 5	25	µg/kg	1.8	1	3	1.8	45	25	75	45	µg/kg	180	1800	-
Total PCB Congeners	710	Reach 5	710	µg/kg	5	5	113	19	3550	3550	80230	13490	µg/kg	1600	16000	700
PCB TEQ-Bird	72	Reach 5	72	ng/kg	7	4.3	21	12	504	310	1512	864	ng/kg	25	250	59
PCDD/PCDF TEQ-Bird	110	Reach 5	110	ng/kg	7	4.3	21	12	770	473	2310	1320	ng/kg	25	250	59
Total TEQ-Bird	170	Reach 5	170	ng/kg	7	4.3	21	12	1190	731	3570	2040	ng/kg	25	250	59
Dieldrin	14	Reach 5	14	ug/kg	6.9	6.7	7.1	6.9	97	94	99	97	µg/kg	300	3000	200
Total DDx	81	Reach 5	81	µg/kg	20	20	141	46	1620	1620	11421	3726	µg/kg	410	4,100	500
Reach 6																
Mercury	50	Reach 6	50	µg/kg	1.8	1	3	1.8	90	50	150	90	µg/kg	180	1800	-
Methyl mercury	31	Reach 6	31	µg/kg	1.8	1	3	1.8	56	31	93	56	µg/kg	180	1800	-
Total PCB Congeners	450	Reach 6	450	µg/kg	5	5	113	19	2250	2250	50850	8550	µg/kg	1600	16000	700
PCB TEQ-Bird	43	Reach 6	43	ng/kg	7	4.3	21	12	301	185	903	516	ng/kg	25	250	59
PCDD/PCDF TEQ-Bird	41	Reach 6	41	ng/kg	7	4.3	21	12	287	176	861	492	ng/kg	25	250	59
Total TEQ-Bird	82	Reach 6	82	ng/kg	7	4.3	21	12	574	353	1722	984	ng/kg	25	250	59
Dieldrin	28	Reach 6	28	ug/kg	6.9	6.7	7.1	6.9	193	188	199	193	µg/kg	300	3000	200
Total DDx	67	Reach 6	67	µg/kg	20	20	141	46	1340	1340	9447	3082	µg/kg	410	4,100	500
Reach 7																
Mercury	43	Reach 7	43	µg/kg	1.8	1	3	1.8	77	43	129	77	µg/kg	180	1800	-
Methyl mercury	17	Reach 7	17	µg/kg	1.8	1	3	1.8	31	17	51	31	µg/kg	180	1800	-
Total PCB Congeners	250	Reach 7	250	µg/kg	5	5	113	19	1250	1250	28250	4750	µg/kg	1600	16000	700
PCB TEQ-Bird	20	Reach 7	20	ng/kg	7	4.3	21	12	140	86	420	240	ng/kg	25	250	59
PCDD/PCDF TEQ-Bird	15	Reach 7	15	ng/kg	7	4.3	21	12	105	65	315	180	ng/kg	25	250	59
Total TEQ-Bird	35	Reach 7	35	ng/kg	7	4.3	21	12	245	151	735	420	ng/kg	25	250	59
Dieldrin	11	Reach 7	11	ug/kg	6.9	6.7	7.1	6.9	76	74	78	76	µg/kg	300	3000	200
Total DDx	29	Reach 7	29	µg/kg	20	20	141	46	580	580	4089	1334	µg/kg	410	4,100	500
Reach 8																
Mercury	48	Reach 8	48	µg/kg	1.8	1	3	1.8	86	48	144	86	µg/kg	180	1800	-
Methyl mercury	29	Reach 8	29	µg/kg	1.8	1	3	1.8	52	29	87	52	µg/kg	180	1800	-
Total PCB Congeners	480	Reach 8	480	µg/kg	5	5	113	19	2400	2400	54240	9120	µg/kg	1600	16000	700
PCB TEQ-Bird	88	Reach 8	88	ng/kg	7	4.3	21	12	616	378	1848	1056	ng/kg	25	250	59
PCDD/PCDF TEQ-Bird	23	Reach 8	23	ng/kg	7	4.3	21	12	161	99	483	276	ng/kg	25	250	59
Total TEQ-Bird	100	Reach 8	100	ng/kg	7	4.3	21	12	700	430	2100	1200	ng/kg	25	250	59
Dieldrin	17	Reach 8	17	ug/kg	6.9	6.7	7.1	6.9	117	114	121	117	µg/kg	300	3000	200
Total DDx	56	Reach 8	56	µg/kg	20	20	141	46	1120	1120	7896	2576	µg/kg	410	4,100	500

Note 1: "–" indicates no TRV available

Note 2: Blue highlighted cells indicate EPC is based on maximium concentration

[a] TRVs derived from the primary literature based on the process identified in Section 8.2.3.1.

[b] TRVs based on USEPA's LPR restoration project FFS (Louis Berger et al. 2014) or USEPA's first draft of the LPR restoration project FFS (Malcolm Pirnie 2007).

[c] BMFs derived based on process identified in Section 8.2.2.2.

[d] BMFs derived based on process identified by USEPA (2015b), USEPA (2015c), USEPA (2016e), and other communications with USEPA throughout 2015 and 2016

BW - body weight

COC - chemical of concern

COPEC - chemical of potential ecological concern

FIR - food ingestion rate

LOAEL - Lowest observed adverse effect level
na - not applicable
NFF - non forage fish
NOAEL - No observed adverse effect level
RM - River Mile
SFF - small forage fish
SIR - sediment ingestion rate
SUF - site use factor
UCL HQ = hazard quotient based on the 95th percentile (UCL) concentration
WIR - water ingestion rate

		Range of HQs							
		HQ based on TRV-A[a]		HQ based on TRV-B[b]					
-B[b]		Receptor-specific BMF[c]		BMF Min[d]		BMF Max[d]		BMF Geo Mean[d]	
LOAEL	TRV units	NOAEL HQ	LOAEL HQ	NOAEL HQ	LOAEL HQ	NOAEL HQ	LOAEL HQ	NOAEL HQ	LOAEL HQ
[redacted]									
-	µg/kg	0.59	0.059	-	-	-	-	-	-
-	µg/kg	0.55	0.055	-	-	-	-	-	-
1300	µg/kg	**1.8**	0.18	**4.0**	**2.2**	**90**	**49**	**15**	**8.2**
150	ng/kg	**15**	**1.5**	**3.8**	**1.5**	**19**	**7.3**	**11**	**4.2**
150	ng/kg	**13**	**1.3**	**3.5**	**1.4**	**17**	**6.7**	**9.8**	**3.8**
150	ng/kg	**27**	**2.7**	**7.0**	**2.8**	**34**	**13**	**20**	**7.7**
8100	µg/kg	0.25	0.025	0.37	0.0091	0.39	0.010	0.38	0.0094
3000	µg/kg	**3.0**	0.30	**2.5**	0.41	**17**	**2.9**	**5.7**	0.95
[redacted]									
-	µg/kg	0.71	0.071	-	-	-	-	-	-
-	µg/kg	0.69	0.069	-	-	-	-	-	-
1300	µg/kg	**1.1**	0.11	**2.4**	**1.3**	**55**	**30**	**9.2**	**5.0**
150	ng/kg	**6.4**	0.64	**1.7**	0.66	**8.2**	**3.2**	**4.7**	**1.8**
150	ng/kg	**4.8**	0.48	**1.2**	0.49	**6.1**	**2.4**	**3.5**	**1.4**
150	ng/kg	**11**	**1.1**	**2.9**	**1.1**	**14**	**5.6**	**8.1**	**3.2**
8100	µg/kg	0.081	0.0081	0.12	0.0029	0.12	0.0031	0.12	0.0030
3000	µg/kg	**1.6**	0.16	**1.3**	0.21	**9.0**	**1.5**	**2.9**	0.49
[redacted]									
-	µg/kg	0.70	0.070	-	-	-	-	-	-
-	µg/kg	0.65	0.065	-	-	-	-	-	-
1300	µg/kg	**1.3**	0.13	**3.1**	**1.7**	**69**	**37**	**12**	**6.3**
150	ng/kg	**9.2**	0.92	**2.4**	0.95	**12**	**4.6**	**6.7**	**2.6**
150	ng/kg	**7.8**	0.78	**2.0**	0.80	**10**	**3.9**	**5.7**	**2.2**
150	ng/kg	**17**	**1.7**	**4.4**	**1.7**	**21**	**8.4**	**12**	**4.8**
8100	µg/kg	0.12	0.012	0.17	0.0041	0.18	0.0044	0.17	0.0043
3000	µg/kg	**2.4**	0.24	**2.0**	0.33	**14**	**2.3**	**4.5**	0.75
[redacted]									
-	µg/kg	0.68	0.068	-	-	-	-	-	-
-	µg/kg	0.64	0.064	-	-	-	-	-	-
1300	µg/kg	**2.7**	0.27	**6.1**	**3.3**	**139**	**75**	**23**	**13**
150	ng/kg	**16**	**1.6**	**4.2**	**1.7**	**21**	**8.1**	**12**	**4.6**
150	ng/kg	**16**	**1.6**	**4.2**	**1.7**	**21**	**8.1**	**12**	**4.6**
150	ng/kg	**34**	**3.4**	**8.7**	**3.4**	**43**	**17**	**24**	**9.6**
8100	µg/kg	0.21	0.021	0.31	0.0076	0.33	0.0081	0.32	0.0078
3000	µg/kg	**4.9**	0.49	**4.0**	0.67	**28**	**4.7**	**9.2**	**1.5**
[redacted]									
-	µg/kg	0.83	0.083	-	-	-	-	-	-
-	µg/kg	0.33	0.033	-	-	-	-	-	-

1300	µg/kg	**2.9**	0.29	**6.6**	**3.6**	**150**	**81**	**25**	**14**
150	ng/kg	**20**	**2.0**	**5.3**	**2.1**	**26**	**10**	**15**	**5.8**
150	ng/kg	**24**	**2.4**	**6.1**	**2.4**	**30**	**12**	**17**	**6.7**
150	ng/kg	**45**	**4.5**	**12**	**4.6**	**57**	**22**	**33**	**13**
8100	µg/kg	0.30	0.030	0.44	0.011	0.46	0.011	0.45	0.011
3000	µg/kg	**4.2**	0.42	**3.4**	0.57	**24**	**4.0**	**7.9**	**1.3**
-	µg/kg	0.54	0.054	-	-	-	-	-	-
-	µg/kg	0.25	0.025	-	-	-	-	-	-
1300	µg/kg	**2.2**	0.22	**5.1**	**2.7**	**115**	**62**	**19**	**10**
150	ng/kg	**20**	**2.0**	**5.2**	**2.1**	**26**	**10**	**15**	**5.8**
150	ng/kg	**31**	**3.1**	**8.0**	**3.2**	**39**	**15**	**22**	**8.8**
150	ng/kg	**48**	**4.8**	**12**	**4.9**	**61**	**24**	**35**	**14**
8100	µg/kg	0.32	0.032	0.47	0.012	0.50	0.012	0.48	0.012
3000	µg/kg	**4.0**	0.40	**3.2**	0.54	**23**	**3.8**	**7.5**	**1.2**
-	µg/kg	0.50	0.050	-	-	-	-	-	-
-	µg/kg	0.31	0.031	-	-	-	-	-	-
1300	µg/kg	**1.4**	0.14	**3.2**	**1.7**	**73**	**39**	**12**	**6.6**
150	ng/kg	**12**	**1.2**	**3.1**	**1.2**	**15**	**6.0**	**8.7**	**3.4**
150	ng/kg	**11**	**1.1**	**3.0**	**1.2**	**15**	**5.7**	**8.3**	**3.3**
150	ng/kg	**23**	**2.3**	**6.0**	**2.4**	**29**	**11**	**17**	**6.6**
8100	µg/kg	0.64	0.064	0.94	0.023	0.99	0.025	0.97	0.024
3000	µg/kg	**3.3**	0.33	**2.7**	0.45	**19**	**3.1**	**6.2**	**1.0**
-	µg/kg	0.43	0.043	-	-	-	-	-	-
-	µg/kg	0.17	0.017	-	-	-	-	-	-
1300	µg/kg	0.78	0.078	**1.8**	0.96	**40**	**22**	**6.8**	**3.7**
150	ng/kg	**5.6**	0.56	**1.5**	0.57	**7.1**	**2.8**	**4.1**	**1.6**
150	ng/kg	**4.2**	0.42	**1.1**	0.43	**5.3**	**2.1**	**3.1**	**1.2**
150	ng/kg	**9.8**	0.98	**2.6**	**1.0**	**12**	**4.9**	**7.1**	**2.8**
8100	µg/kg	0.25	0.025	0.37	0.0091	0.39	0.010	0.38	0.0094
3000	µg/kg	**1.4**	0.14	**1.2**	0.19	**8.2**	**1.4**	**2.7**	0.44
-	µg/kg	0.48	0.048	-	-	-	-	-	-
-	µg/kg	0.29	0.029	-	-	-	-	-	-
1300	µg/kg	**1.5**	0.15	**3.4**	**1.8**	**77**	**42**	**13**	**7.0**
150	ng/kg	**25**	**2.5**	**6.4**	**2.5**	**31**	**12**	**18**	**7.0**
150	ng/kg	**6.4**	0.64	**1.7**	0.66	**8.2**	**3.2**	**4.7**	**1.8**
150	ng/kg	**28**	**2.8**	**7.3**	**2.9**	**36**	**14**	**20**	**8.0**
8100	µg/kg	0.39	0.039	0.57	0.014	0.60	0.015	0.59	0.014
3000	µg/kg	**2.7**	0.27	**2.2**	0.37	**16**	**2.6**	**5.2**	0.86

Great Blue Heron

Diet	Fractions
0-13 cm fish	0.17
13-18 cm fish	0.29
18-30 cm fish	0.40
>30 cm fish	0.14

Chemical	Prey: Fish (≤ 13) $C_{0\text{-}13,\ ww}$	Exposure Area	Fish (>13 and ≤ 18) $C_{13\text{-}18,\ ww}$	Exposure Area	Fish (>18 and ≤ 30) $C_{18\text{-}30,\ ww}$	Exposure Area	Fish (>30) $C_{>30,\ ww}$	Exposure Area	$C_{prey,ww}$	$C_{prey,ww}$ (units)	Range of BMFs[a] BMF	Min[b]	Max[b]	Geo Mean[b]	Range in Egg Conc[a] BMF	BMF Min	BMF Max	BMF Geo Mean	C_{egg}(units)	TRV NOAEL
Site-Wide																				
Mercury	59	Site-wide	120	Site-wide	180	Site-wide	210	Site-wide	146.23	µg/kg	1.8	1	3	1.8	263	146	439	263	µg/kg	180
Methyl mercury	55	Site-wide	120	Site-wide	170	Site-wide	200	Site-wide	140.15	µg/kg	1.8	1	3	1.8	252	140	420	252	µg/kg	180
Total PCB Congeners	560	Site-wide	2500	Site-wide	1700	Site-wide	2800	Site-wide	1892.2	µg/kg	5	5	113	19	9461	9461	213819	35952	µg/kg	1600
PCB TEQ-Bird	52	Site-wide	220	Site-wide	140	Site-wide	100	Site-wide	142.64	ng/kg	7	4.3	21	12	998	613	2995	1712	ng/kg	25
PCDD/PCDF TEQ-Bird	48	Site-wide	220	Site-wide	120	Site-wide	200	Site-wide	147.96	ng/kg	7	4.3	21	12	1036	636	3107	1776	ng/kg	25
Total TEQ-Bird	96	Site-wide	390	Site-wide	290	Site-wide	300	Site-wide	287.42	ng/kg	7	4.3	21	12	2012	1236	6036	3449	ng/kg	25
Total DDx	62	Site-wide	200	Site-wide	220	Site-wide	310	Site-wide	199.94	µg/kg	20	20	141	46	3999	3999	28192	9197	µg/kg	410
Dieldrin	11	Site-wide	33	Site-wide	38	Site-wide	38	Site-wide	31.96	ug/kg	6.9	6.7	7.1	6.9	221	214	227	221	µg/kg	300
Reach 1																				
Mercury	71	Reach 1	150	Reach 1; ≥18 anc	150	Reach 1	530	Reach 1	189.77	µg/kg	1.8	1	3	1.8	342	190	569	342	µg/kg	180
Methyl mercury	69	Reach 1	160	Reach 1; ≥18 anc	160	Reach 1	290	Reach 1	162.73	µg/kg	1.8	1	3	1.8	293	163	488	293	µg/kg	180
Total PCB Congeners	340	Reach 1	1700	Reach 1; ≥18 anc	1700	Reach 1	1300	Reach 1	1412.8	µg/kg	5	5	113	19	7064	7064	159646	26843	µg/kg	1600
PCB TEQ-Bird	23	Reach 1	150	Reach 1; ≥18 anc	150	Reach 1	200	Reach 1	135.41	ng/kg	7	4.3	21	12	948	582	2844	1625	ng/kg	25
PCDD/PCDF TEQ-Bird	17	Reach 1	130	Reach 1; ≥18 anc	130	Reach 1	120	Reach 1	109.39	ng/kg	7	4.3	21	12	766	470	2297	1313	ng/kg	25
Total TEQ-Bird	40	Reach 1	290	Reach 1; ≥18 anc	290	Reach 1	320	Reach 1	251.7	ng/kg	7	4.3	21	12	1762	1082	5286	3020	ng/kg	25
Total DDx	32	Reach 1	490	Reach 1; ≥18 anc	490	Reach 1	230	Reach 1	375.74	µg/kg	20	20	141	46	7515	7515	52979	17284	µg/kg	410
Dieldrin	3.5	Reach 1	12	Reach 1; ≥18 anc	12	Reach 1	31	Reach 1	13.215	ug/kg	6.9	6.7	7.1	6.9	91	89	94	91	µg/kg	300
Reach 2																				
Mercury	70	Reach 2	270	Reach 2;≥18 and	270	Reach 2	240	Reach 2	231.8	µg/kg	1.8	1	3	1.8	417	232	695	417	µg/kg	180
Methyl mercury	65	Reach 2	270	Reach 2;≥18 and	270	Reach 2	260	Reach 2	233.75	µg/kg	1.8	1	3	1.8	421	234	701	421	µg/kg	180
Total PCB Congeners	430	Reach 2	1300	Reach 2;≥18 and	1300	Reach 2	2700	Reach 2	1348.1	µg/kg	5	5	113	19	6741	6741	152335	25614	µg/kg	1600
PCB TEQ-Bird	33	Reach 2	99	Reach 2;≥18 and	99	Reach 2	71	Reach 2	83.86	ng/kg	7	4.3	21	12	587	361	1761	1006	ng/kg	25
PCDD/PCDF TEQ-Bird	28	Reach 2	83	Reach 2;≥18 and	83	Reach 2	170	Reach 2	85.83	ng/kg	7	4.3	21	12	601	369	1802	1030	ng/kg	25
Total TEQ-Bird	60	Reach 2	180	Reach 2;≥18 and	180	Reach 2	250	Reach 2	169.4	ng/kg	7	4.3	21	12	1186	728	3557	2033	ng/kg	25
Total DDx	49	Reach 2	280	Reach 2;≥18 and	280	Reach 2	280	Reach 2	240.73	µg/kg	20	20	141	46	4815	4815	33943	11074	µg/kg	410
Dieldrin	5	Reach 2	16	Reach 2;≥18 and	16	Reach 2	35	Reach 2	16.79	ug/kg	6.9	6.7	7.1	6.9	116	112	119	116	µg/kg	300
Reach 3																				
Mercury	68	Reach 3	130	Reach 3	170	Reach 3	360	Reach 3	167.66	µg/kg	1.8	1	3	1.8	302	168	503	302	µg/kg	180
Methyl mercury	64	Reach 3	120	Reach 3	140	Reach 3	350	Reach 3	150.68	µg/kg	1.8	1	3	1.8	271	151	452	271	µg/kg	180
Total PCB Congeners	860	Reach 3	2800	Reach 3	2800	Reach 3	4300	Reach 3	2680.2	µg/kg	5	5	113	19	13401	13401	302863	50924	µg/kg	1600
PCB TEQ-Bird	58	Reach 3	280	Reach 3	270	Reach 3	110	Reach 3	214.46	ng/kg	7	4.3	21	12	1501	922	4504	2574	ng/kg	25
PCDD/PCDF TEQ-Bird	58	Reach 3	200	Reach 3	190	Reach 3	280	Reach 3	183.06	ng/kg	7	4.3	21	12	1281	787	3844	2197	ng/kg	25
Total TEQ-Bird	120	Reach 3	490	Reach 3	460	Reach 3	390	Reach 3	401.1	ng/kg	7	4.3	21	12	2808	1725	8423	4813	ng/kg	25
Total DDx	100	Reach 3	340	Reach 3	250	Reach 3	400	Reach 3	271.6	µg/kg	20	20	141	46	5432	5432	38296	12494	µg/kg	410
Dieldrin	9.2	Reach 3	39	Reach 3	34	Reach 3	40	Reach 3	32.074	ug/kg	6.9	6.7	7.1	6.9	221	215	228	221	µg/kg	300

Reach 4																
Mercury	83	Reach 4	110	Reach 4	180	Reach 4	290	Reach 4	158.61 µg/kg	1.8	1	3	1.8	285	159	476	285	µg/kg	180
Methyl mercury	33	Reach 4	93	Reach 4	150	Reach 4	300	Reach 4	134.58 µg/kg	1.8	1	3	1.8	242	135	404	242	µg/kg	180
Total PCB Congeners	930	Reach 4	2000	Reach 4	3700	Reach 4	4700	Reach 4	2876.1 µg/kg	5	5	113	19	14381	14381	324999	54646	µg/kg	1600
PCB TEQ-Bird	73	Reach 4	220	Reach 4	400	Reach 4	160	Reach 4	258.61 ng/kg	7	4.3	21	12	1810	1112	5431	3103	ng/kg	25
PCDD/PCDF TEQ-Bird	84	Reach 4	180	Reach 4	280	Reach 4	630	Reach 4	266.68 ng/kg	7	4.3	21	12	1867	1147	5600	3200	ng/kg	25
Total TEQ-Bird	160	Reach 4	400	Reach 4	690	Reach 4	800	Reach 4	531.2 ng/kg	7	4.3	21	12	3718	2284	11155	6374	ng/kg	25
Total DDx	86	Reach 4	200	Reach 4	380	Reach 4	630	Reach 4	312.82 µg/kg	20	20	141	46	6256	6256	44108	14390	µg/kg	410
Dieldrin	13	Reach 4	44	Reach 4	43	Reach 4	65	Reach 4	41.27 ug/kg	6.9	6.7	7.1	6.9	285	277	293	285	µg/kg	300
Reach 5																			
Mercury	54	Reach 5	180	Reach 5	170	Reach 5	300	Reach 5	171.38 µg/kg	1.8	1	3	1.8	308	171	514	308	µg/kg	180
Methyl mercury	25	Reach 5	190	Reach 5	180	Reach 5	220	Reach 5	162.15 µg/kg	1.8	1	3	1.8	292	162	486	292	µg/kg	180
Total PCB Congeners	710	Reach 5	5100	Reach 5	2900	Reach 5	3600	Reach 5	3263.7 µg/kg	5	5	113	19	16319	16319	368798	62010	µg/kg	1600
PCB TEQ-Bird	72	Reach 5	310	Reach 5	240	Reach 5	150	Reach 5	219.14 ng/kg	7	4.3	21	12	1534	942	4602	2630	ng/kg	25
PCDD/PCDF TEQ-Bird	110	Reach 5	250	Reach 5	180	Reach 5	260	Reach 5	199.6 ng/kg	7	4.3	21	12	1397	858	4192	2395	ng/kg	25
Total TEQ-Bird	170	Reach 5	560	Reach 5	420	Reach 5	400	Reach 5	415.3 ng/kg	7	4.3	21	12	2907	1786	8721	4984	ng/kg	25
Total DDx	81	Reach 5	280	Reach 5	220	Reach 5	560	Reach 5	261.37 µg/kg	20	20	141	46	5227	5227	36853	12023	µg/kg	410
Dieldrin	14	Reach 5	47	Reach 5	39	Reach 5	44	Reach 5	37.77 ug/kg	6.9	6.7	7.1	6.9	261	253	268	261	µg/kg	300
Reach 6																			
Mercury	50	Reach 6	62	Reach 6	220	Reach 6	190	Reach 6	141.08 µg/kg	1.8	1	3	1.8	254	141	423	254	µg/kg	180
Methyl mercury	31	Reach 6	50	Reach 6	250	Reach 6	190	Reach 6	146.37 µg/kg	1.8	1	3	1.8	263	146	439	263	µg/kg	180
Total PCB Congeners	450	Reach 6	390	Reach 6	600	Reach 6	3200	Reach 6	877.6 µg/kg	5	5	113	19	4388	4388	99169	16674	µg/kg	1600
PCB TEQ-Bird	43	Reach 6	44	Reach 6	36	Reach 6	98	Reach 6	48.19 ng/kg	7	4.3	21	12	337	207	1012	578	ng/kg	25
PCDD/PCDF TEQ-Bird	41	Reach 6	28	Reach 6	87	Reach 6	250	Reach 6	84.89 ng/kg	7	4.3	21	12	594	365	1783	1019	ng/kg	25
Total TEQ-Bird	82	Reach 6	72	Reach 6	120	Reach 6	340	Reach 6	130.42 ng/kg	7	4.3	21	12	913	561	2739	1565	ng/kg	25
Total DDx	67	Reach 6	35	Reach 6	60	Reach 6	420	Reach 6	104.34 µg/kg	20	20	141	46	2087	2087	14712	4800	µg/kg	410
Dieldrin	28	Reach 6	13	Reach 6	24	Reach 6	32	Reach 6	22.61 ug/kg	6.9	6.7	7.1	6.9	156	151	161	156	µg/kg	300
Reach 7																			
Mercury	43	Reach 7	150	Reach 7	310	Reach 7	150	Reach 7	195.81 µg/kg	1.8	1	3	1.8	352	196	587	352	µg/kg	180
Methyl mercury	17	Reach 7	150	Reach 7	330	Reach 7	130	Reach 7	196.59 µg/kg	1.8	1	3	1.8	354	197	590	354	µg/kg	180
Total PCB Congeners	250	Reach 7	2700	Reach 7	410	Reach 7	4200	Reach 7	1577.5 µg/kg	5	5	113	19	7888	7888	178258	29973	µg/kg	1600
PCB TEQ-Bird	20	Reach 7	250	Reach 7	31	Reach 7	150	Reach 7	109.3 ng/kg	7	4.3	21	12	765	470	2295	1312	ng/kg	25
PCDD/PCDF TEQ-Bird	15	Reach 7	180	Reach 7	21	Reach 7	340	Reach 7	110.75 ng/kg	7	4.3	21	12	775	476	2326	1329	ng/kg	25
Total TEQ-Bird	35	Reach 7	430	Reach 7	52	Reach 7	480	Reach 7	218.65 ng/kg	7	4.3	21	12	1531	940	4592	2624	ng/kg	25
Total DDx	29	Reach 7	240	Reach 7	38	Reach 7	350	Reach 7	138.73 µg/kg	20	20	141	46	2775	2775	19561	6382	µg/kg	410
Dieldrin	11	Reach 7	40	Reach 7	16	Reach 7	49	Reach 7	26.73 ug/kg	6.9	6.7	7.1	6.9	184	179	190	184	µg/kg	300
Reach 8																			
Mercury	48	Reach 8	110	Reach 8	220	Reach 8	230	Reach 8	160.26 µg/kg	1.8	1	3	1.8	288	160	481	288	µg/kg	180
Methyl mercury	29	Reach 8	120	Reach 8	190	Reach 8	210	Reach 8	145.13 µg/kg	1.8	1	3	1.8	261	145	435	261	µg/kg	180
Total PCB Congeners	480	Reach 8	1000	Reach 8	1200	Reach 8	2800	Reach 8	1243.6 µg/kg	5	5	113	19	6218	6218	140527	23628	µg/kg	1600
PCB TEQ-Bird	88	Reach 8	130	Reach 8	47	Reach 8	130	Reach 8	89.66 ng/kg	7	4.3	21	12	628	386	1883	1076	ng/kg	25
PCDD/PCDF TEQ-Bird	23	Reach 8	73	Reach 8	9.8	Reach 8	89	Reach 8	41.46 ng/kg	7	4.3	21	12	290	178	871	498	ng/kg	25
Total TEQ-Bird	100	Reach 8	200	Reach 8	57	Reach 8	200	Reach 8	125.8 ng/kg	7	4.3	21	12	881	541	2642	1510	ng/kg	25
Total DDx	56	Reach 8	120	Reach 8	240	Reach 8	260	Reach 8	176.72 µg/kg	20	20	141	46	3534	3534	24918	8129	µg/kg	410
Dieldrin	17	Reach 8	25	Reach 8	110	Reach 8	44	Reach 8	60.3 ug/kg	6.9	6.7	7.1	6.9	416	404	428	416	µg/kg	300

Note 1: "–" indicates no TRV available

Note 2: Blue highlighted cells indicate EPC is based on maximium concentration

[a] TRVs derived from the primary literature based on the process identified in Section 8.2.3.1.

[b] TRVs based on USEPA's LPR restoration project FFS (Louis Berger et al. 2014) or USEPA's first draft of the LPR restoration project FFS (Malcolm Pirnie 2007).

[c] BMFs derived based on process identified in Section 8.2.2.2.

[d] BMFs derived based on process identified by USEPA (2015b), USEPA (2015c), USEPA (2016e), and other communications with USEPA throughout 2015 and 2016

BW - body weight

COC - chemical of concern
COPEC - chemical of potential ecological concern
FIR - food ingestion rate
LOAEL - Lowest observed adverse effect level
na - not applicable
NFF - non forage fish
NOAEL - No observed adverse effect level
RM - River Mile
SFF - small forage fish
SIR - sediment ingestion rate
SUF - site use factor
UCL HQ = hazard quotient based on the 95th percentile (UCL) concentration
WIR - water ingestion rate

Range of TRVs				Range of HQs							
				HQ based on TRV-A[a]		HQ based on TRV-B[b]					
/-A[a]	TRV-B[b]			Receptor-specific BMF[c]		BMF Min[d]		BMF Max[d]		BMF Geo Mean[d]	
LOAEL	NOAEL	LOAEL	TRV units	NOAEL HQ	LOAEL HQ	NOAEL HQ	LOAEL HQ	NOAEL HQ	LOAEL HQ	NOAEL HQ	LOAEL HQ
[redacted]											
1800	-	-	µg/kg	1.5	0.15	-	-	-	-	-	-
1800	-	-	µg/kg	1.4	0.14	-	-	-	-	-	-
16000	700	1300	µg/kg	5.9	0.59	14	7.3	310	160	51	28
250	59	150	ng/kg	40	4.0	10	4.1	51	20	29	11
250	59	150	ng/kg	41	4.1	11	4.2	53	21	30	12
250	59	150	ng/kg	80	8.0	21	8.2	100	40	58	23
4,100	500	3000	µg/kg	9.8	0.98	8.0	1.3	56	9.4	18	3.1
3000	200	8100	µg/kg	0.74	0.074	1.1	0.026	1.1	0.028	1.1	0.027
[redacted]											
1800	-	-	µg/kg	1.9	0.19	-	-	-	-	-	-
1800	-	-	µg/kg	1.6	0.16	-	-	-	-	-	-
16000	700	1300	µg/kg	4.4	0.44	10	5.4	230	120	38	21
250	59	150	ng/kg	38	3.8	9.9	3.9	48	19	28	11
250	59	150	ng/kg	31	3.1	8.0	3.1	39	15	22	8.8
250	59	150	ng/kg	70	7.0	18	7.2	90	35	51	20
4,100	500	3000	µg/kg	18	1.8	15	2.5	110	18	35	5.8
3000	200	8100	µg/kg	0.30	0.030	0.44	0.011	0.47	0.012	0.46	0.011
[redacted]											
1800	-	-	µg/kg	2.3	0.23	-	-	-	-	-	-
1800	-	-	µg/kg	2.3	0.23	-	-	-	-	-	-
16000	700	1300	µg/kg	4.2	0.42	9.6	5.2	220	120	37	20
250	59	150	ng/kg	23	2.3	6.1	2.4	30	12	17	6.7
250	59	150	ng/kg	24	2.4	6.3	2.5	31	12	17	6.9
250	59	150	ng/kg	47	4.7	12	4.9	60	24	34	14
4,100	500	3000	µg/kg	12	1.2	10	1.6	68	11	22	3.7
3000	200	8100	µg/kg	0.39	0.039	0.56	0.014	0.60	0.015	0.58	0.014
[redacted]											
1800	-	-	µg/kg	1.7	0.17	-	-	-	-	-	-
1800	-	-	µg/kg	1.5	0.15	-	-	-	-	-	-
16000	700	1300	µg/kg	8.4	0.84	19	10	430	230	73	39
250	59	150	ng/kg	60	6.0	16	6.1	76	30	44	17
250	59	150	ng/kg	51	5.1	13	5.2	65	26	37	15
250	59	150	ng/kg	112	11	29	11	140	56	82	32
4,100	500	3000	µg/kg	13	1.3	11	1.8	77	13	25	4.2
3000	200	8100	µg/kg	0.74	0.074	1.1	0.027	1.1	0.028	1.1	0.027

1800	-	-	µg/kg	**1.6**	0.16	-	-	-	-	-	-
1800	-	-	µg/kg	**1.3**	0.13	-	-	-	-	-	-
16000	700	1300	µg/kg	**9.0**	0.90	**21**	**11**	**460**	**250**	**78**	**42**
250	59	150	ng/kg	**72**	**7.2**	**19**	**7.4**	**92**	**36**	**53**	**21**
250	59	150	ng/kg	**75**	**7.5**	**19**	**7.6**	**95**	**37**	**54**	**21**
250	59	150	ng/kg	**149**	**15**	**39**	**15**	**190**	**74**	**110**	**42**
4,100	500	3000	µg/kg	**15**	**1.5**	**13**	**2.1**	**88**	**15**	**29**	**4.8**
3000	200	8100	µg/kg	0.95	0.095	**1.4**	0.034	**1.5**	0.036	**1.4**	0.035
1800	-	-	µg/kg	**1.7**	0.17	-	-	-	-	-	-
1800	-	-	µg/kg	**1.6**	0.16	-	-	-	-	-	-
16000	700	1300	µg/kg	**10**	**1.0**	**23**	**13**	**530**	**280**	**89**	**48**
250	59	150	ng/kg	**61**	**6.1**	**16**	**6.3**	**78**	**31**	**45**	**18**
250	59	150	ng/kg	**56**	**5.6**	**15**	**5.7**	**71**	**28**	**41**	**16**
250	59	150	ng/kg	**116**	**12**	**30**	**12**	**150**	**58**	**84**	**33**
4,100	500	3000	µg/kg	**13**	**1.3**	**10**	**1.7**	**74**	**12**	**24**	**4.0**
3000	200	8100	µg/kg	0.87	0.087	**1.3**	0.031	**1.3**	0.033	**1.3**	0.032
1800	-	-	µg/kg	**1.4**	0.14	-	-	-	-	-	-
1800	-	-	µg/kg	**1.5**	0.15	-	-	-	-	-	-
16000	700	1300	µg/kg	**2.7**	0.27	**6.3**	**3.4**	**140**	**76**	**24**	**13**
250	59	150	ng/kg	**13**	**1.3**	**3.5**	**1.4**	**17**	**6.7**	**10**	**3.9**
250	59	150	ng/kg	**24**	**2.4**	**6.2**	**2.4**	**30**	**12**	**17**	**6.8**
250	59	150	ng/kg	**37**	**3.7**	**9.5**	**3.7**	**46**	**18**	**27**	**10**
4,100	500	3000	µg/kg	**5.1**	0.51	**4.2**	0.70	**29**	**4.9**	**10**	**1.6**
3000	200	8100	µg/kg	0.52	0.052	0.76	0.019	0.80	0.020	0.78	0.019
1800	-	-	µg/kg	**2.0**	0.20	-	-	-	-	-	-
1800	-	-	µg/kg	**2.0**	0.20	-	-	-	-	-	-
16000	700	1300	µg/kg	**4.9**	0.49	**11**	**6.1**	**250**	**140**	**43**	**23**
250	59	150	ng/kg	**31**	**3.1**	**8.0**	**3.1**	**39**	**15**	**22**	**8.7**
250	59	150	ng/kg	**31**	**3.1**	**8.1**	**3.2**	**39**	**16**	**23**	**8.9**
250	59	150	ng/kg	**61**	**6.1**	**16**	**6.3**	**78**	**31**	**44**	**17**
4,100	500	3000	µg/kg	**6.8**	0.68	**5.5**	0.92	**39**	**6.5**	**13**	**2.1**
3000	200	8100	µg/kg	0.61	0.061	0.90	0.022	0.95	0.023	0.92	0.023
1800	-	-	µg/kg	**1.6**	0.16	-	-	-	-	-	-
1800	-	-	µg/kg	**1.5**	0.15	-	-	-	-	-	-
16000	700	1300	µg/kg	**3.9**	0.39	**8.9**	**4.8**	**200**	**110**	**34**	**18**
250	59	150	ng/kg	**25**	**2.5**	**6.5**	**2.6**	**32**	**13**	**18**	**7.2**
250	59	150	ng/kg	**12**	**1.2**	**3.0**	**1.2**	**15**	**5.8**	**8.4**	**3.3**
250	59	150	ng/kg	**35**	**3.5**	**9.2**	**3.6**	**45**	**18**	**26**	**10**
4,100	500	3000	µg/kg	**8.6**	0.86	**7.1**	**1.2**	**50**	**8.3**	**16**	**2.7**
3000	200	8100	µg/kg	**1.4**	0.14	**2.0**	0.050	**2.1**	0.053	**2.1**	0.051

Belted Kingfisher

Diet	Fractions
Blue crab	0.15
0-9 cm fish	0.85

Chemical	Prey: Fish (≤ 9) $C_{0\text{-}9,\ ww}$	Prey: Fish (≤ 9) Exposure Area	Prey: Blue Crab $C_{crab,\ ww}$	Prey: Blue Crab Exposure Area	Prey $C_{prey,ww}$	Prey $C_{prey,ww}$ (units)	Range of BMFs[a] BMF	Range of BMFs[a] Min[b]	Range of BMFs[a] Max[b]	Range of BMFs[a] Geo Mean[b]	Range in Egg Conc[a] BMF	Range in Egg Conc[a] BMF Min	Range in Egg Conc[a] BMF Max	Range in Egg Conc[a] BMF Geo Mean	Range in Egg Conc[a] C_{egg}(units)	Range of TRVs: TRV-A[a] NOAEL	Range of TRVs: TRV-A[a] LOAEL	Range of TRVs: TRV-B[b] NOAEL	Range of TRVs: TRV-B[b] LOAEL	Range of TRVs: TRV units
RM ≥ 6																				
Mercury	53	RM ≥ 6	140	Site-wide	66.05	µg/kg	1.8	1	3	1.8	119	66	198	119	µg/kg	180	1800	-	-	µg/kg
Methyl mercury	28	RM ≥ 6	120	Site-wide	41.8	µg/kg	1.8	1	3	1.8	75	42	125	75	µg/kg	180	1800	-	-	µg/kg
Total PCB Congeners	770	RM ≥ 6	350	Site-wide	707	µg/kg	14	5	113	19	9898	3535	79891	13433	µg/kg	1600	16000	700	1300	µg/kg
PCB TEQ-Bird	65	RM ≥ 6	94	Site-wide	69.35	ng/kg	4.3	4.3	21	12	298	298	1456	832	ng/kg	25	250	59	150	ng/kg
PCDD/PCDF TEQ-Bird	78	RM ≥ 6	71	Site-wide	76.95	ng/kg	4.3	4.3	21	12	331	331	1616	923	ng/kg	25	250	59	150	ng/kg
Total TEQ-Bird	140	RM ≥ 6	170	Site-wide	144.5	ng/kg	4.3	4.3	21	12	621	621	3035	1734	ng/kg	25	250	59	150	ng/kg
Dieldrin	19	RM ≥ 6	6.8	Site-wide	17.17	ug/kg	6.9	6.7	7.1	6.9	118	115	122	118	µg/kg	300	3000	200	8100	µg/kg
Total DDx	79	RM ≥ 6	68	Site-wide	77.35	µg/kg	46	20	141	46	3558	1547	10906	3558	µg/kg	410	4,100	500	3000	µg/kg
Site-wide																				
Mercury	54	Site-wide	140	Site-wide	66.9	µg/kg	1.8	1	3	1.8	120	67	201	120	µg/kg	180	1800	-	-	µg/kg
Methyl mercury	35	Site-wide	120	Site-wide	47.75	µg/kg	1.8	1	3	1.8	86	48	143	86	µg/kg	180	1800	-	-	µg/kg
Total PCB Congeners	760	Site-wide	350	Site-wide	698.5	µg/kg	14	5	113	19	9779	3493	78931	13272	µg/kg	1600	16000	700	1300	µg/kg
PCB TEQ-Bird	63	Site-wide	94	Site-wide	67.65	ng/kg	4.3	4.3	21	12	291	291	1421	812	ng/kg	25	250	59	150	ng/kg
PCDD/PCDF TEQ-Bird	72	Site-wide	71	Site-wide	71.85	ng/kg	4.3	4.3	21	12	309	309	1509	862	ng/kg	25	250	59	150	ng/kg
Total TEQ-Bird	130	Site-wide	170	Site-wide	136	ng/kg	4.3	4.3	21	12	585	585	2856	1632	ng/kg	25	250	59	150	ng/kg
Dieldrin	16	Site-wide	6.8	Site-wide	14.62	ug/kg	6.9	6.7	7.1	6.9	101	98	104	101	µg/kg	300	3000	200	8100	µg/kg
Total DDx	81	Site-wide	68	Site-wide	79.05	µg/kg	46	20	141	46	3636	1581	11146	3636	µg/kg	410	4,100	500	3000	µg/kg
Reach 1																				
Mercury	71	Reach 1;≥9 a	160	Reach 1	84.35	µg/kg	1.8	1	3	1.8	152	84	253	152	µg/kg	180	1800	-	-	µg/kg
Methyl mercury	69	Reach 1;≥9 a	150	Reach 1	81.15	µg/kg	1.8	1	3	1.8	146	81	243	146	µg/kg	180	1800	-	-	µg/kg
Total PCB Congeners	340	Reach 1;≥9 a	270	Reach 1	329.5	µg/kg	14	5	113	19	4613	1648	37234	6261	µg/kg	1600	16000	700	1300	µg/kg
PCB TEQ-Bird	23	Reach 1;≥9 a	92	Reach 1	33.35	ng/kg	4.3	4.3	21	12	143	143	700	400	ng/kg	25	250	59	150	ng/kg
PCDD/PCDF TEQ-Bird	17	Reach 1;≥9 a	66	Reach 1	24.35	ng/kg	4.3	4.3	21	12	105	105	511	292	ng/kg	25	250	59	150	ng/kg
Total TEQ-Bird	40	Reach 1;≥9 a	160	Reach 1	58	ng/kg	4.3	4.3	21	12	249	249	1218	696	ng/kg	25	250	59	150	ng/kg
Dieldrin	3.5	Reach 1;≥9 a	5.3	Reach 1	3.77	ug/kg	6.9	6.7	7.1	6.9	26	25	27	26	µg/kg	300	3000	200	8100	µg/kg
Total DDx	32	Reach 1;≥9 a	66	Reach 1	37.1	µg/kg	46	20	141	46	1707	742	5231	1707	µg/kg	410	4,100	500	3000	µg/kg
Reach 2																				
Mercury	62	Reach 2	180	Reach 2	79.7	µg/kg	1.8	1	3	1.8	143	80	239	143	µg/kg	180	1800	-	-	µg/kg
Methyl mercury	58	Reach 2	140	Reach 2	70.3	µg/kg	1.8	1	3	1.8	127	70	211	127	µg/kg	180	1800	-	-	µg/kg
Total PCB Congeners	420	Reach 2	330	Reach 2	406.5	µg/kg	14	5	113	19	5691	2033	45935	7724	µg/kg	1600	16000	700	1300	µg/kg
PCB TEQ-Bird	35	Reach 2	100	Reach 2	44.75	ng/kg	4.3	4.3	21	12	192	192	940	537	ng/kg	25	250	59	150	ng/kg
PCDD/PCDF TEQ-Bird	23	Reach 2	75	Reach 2	30.8	ng/kg	4.3	4.3	21	12	132	132	647	370	ng/kg	25	250	59	150	ng/kg
Total TEQ-Bird	58	Reach 2	180	Reach 2	76.3	ng/kg	4.3	4.3	21	12	328	328	1602	916	ng/kg	25	250	59	150	ng/kg

Belted Kingfisher

Diet	Fractions
Blue crab	0.15
0-9 cm fish	0.85

Chemical	Prey: Fish (≤ 9) $C_{0\text{-}9,\ ww}$	Prey: Fish (≤ 9) Exposure Area	Prey: Blue Crab $C_{crab,\ ww}$	Prey: Blue Crab Exposure Area	Prey $C_{prey,ww}$	Prey $C_{prey,ww}$ (units)	Range of BMFs[a] BMF	Range of BMFs[a] Min[b]	Range of BMFs[a] Max[b]	Range of BMFs[a] Geo Mean[b]	Range in Egg Conc[a] BMF	Range in Egg Conc[a] BMF Min	Range in Egg Conc[a] BMF Max	Range in Egg Conc[a] BMF Geo Mean	Range in Egg Conc[a] C_{egg}(units)	Range of TRVs: TRV-A[a] NOAEL	Range of TRVs: TRV-A[a] LOAEL	Range of TRVs: TRV-B[b] NOAEL	Range of TRVs: TRV-B[b] LOAEL	Range of TRVs: TRV units
Dieldrin	4.1	Reach 2	6.5	Reach 2	4.46	ug/kg	6.9	6.7	7.1	6.9	31	30	32	31	µg/kg	300	3000	200	8100	µg/kg
Total DDx	44	Reach 2	84	Reach 2	50	µg/kg	46	20	141	46	2300	1000	7050	2300	µg/kg	410	4,100	500	3000	µg/kg
Reach 3																				
Mercury	47	Reach 3	120	Reach 3	57.95	µg/kg	1.8	1	3	1.8	104	58	174	104	µg/kg	180	1800	-	-	µg/kg
Methyl mercury	31	Reach 3	96	Reach 3	40.75	µg/kg	1.8	1	3	1.8	73	41	122	73	µg/kg	180	1800	-	-	µg/kg
Total PCB Congeners	860	Reach 3	450	Reach 3	798.5	µg/kg	14	5	113	19	11179	3993	90231	15172	µg/kg	1600	16000	700	1300	µg/kg
PCB TEQ-Bird	58	Reach 3	110	Reach 3	65.8	ng/kg	4.3	4.3	21	12	283	283	1382	790	ng/kg	25	250	59	150	ng/kg
PCDD/PCDF TEQ-Bird	58	Reach 3	90	Reach 3	62.8	ng/kg	4.3	4.3	21	12	270	270	1319	754	ng/kg	25	250	59	150	ng/kg
Total TEQ-Bird	120	Reach 3	200	Reach 3	132	ng/kg	4.3	4.3	21	12	568	568	2772	1584	ng/kg	25	250	59	150	ng/kg
Dieldrin	9.2	Reach 3	9.1	Reach 3	9.185	ug/kg	6.9	6.7	7.1	6.9	63	62	65	63	µg/kg	300	3000	200	8100	µg/kg
Total DDx	100	Reach 3	79	Reach 3	96.85	µg/kg	46	20	141	46	4455	1937	13656	4455	µg/kg	410	4,100	500	3000	µg/kg
Reach 4																				
Mercury	65	Reach 4	130	Reach 4	74.75	µg/kg	1.8	1	3	1.8	135	75	224	135	µg/kg	180	1800	-	-	µg/kg
Methyl mercury	33	Reach 4	100	Reach 4	43.05	µg/kg	1.8	1	3	1.8	77	43	129	77	µg/kg	180	1800	-	-	µg/kg
Total PCB Congeners	930	Reach 4	580	Reach 4	877.5	µg/kg	14	5	113	19	12285	4388	99158	16673	µg/kg	1600	16000	700	1300	µg/kg
PCB TEQ-Bird	73	Reach 4	110	Reach 4	78.55	ng/kg	4.3	4.3	21	12	338	338	1650	943	ng/kg	25	250	59	150	ng/kg
PCDD/PCDF TEQ-Bird	84	Reach 4	100	Reach 4	86.4	ng/kg	4.3	4.3	21	12	372	372	1814	1037	ng/kg	25	250	59	150	ng/kg
Total TEQ-Bird	160	Reach 4	200	Reach 4	166	ng/kg	4.3	4.3	21	12	714	714	3486	1992	ng/kg	25	250	59	150	ng/kg
Dieldrin	13	Reach 4	9.1	Reach 4	12.415	ug/kg	6.9	6.7	7.1	6.9	86	83	88	86	µg/kg	300	3000	200	8100	µg/kg
Total DDx	86	Reach 4	89	Reach 4	86.45	µg/kg	46	20	141	46	3977	1729	12189	3977	µg/kg	410	4,100	500	3000	µg/kg
Reach 5																				
Mercury	49	Reach 5	83	Reach 5	54.1	µg/kg	1.8	1	3	1.8	97	54	162	97	µg/kg	180	1800	-	-	µg/kg
Methyl mercury	25	Reach 5	68	Reach 5	31.45	µg/kg	1.8	1	3	1.8	57	31	94	57	µg/kg	180	1800	-	-	µg/kg
Total PCB Congeners	710	Reach 5	290	Reach 5	647	µg/kg	14	5	113	19	9058	3235	73111	12293	µg/kg	1600	16000	700	1300	µg/kg
PCB TEQ-Bird	72	Reach 5	66	Reach 5	71.1	ng/kg	4.3	4.3	21	12	306	306	1493	853	ng/kg	25	250	59	150	ng/kg
PCDD/PCDF TEQ-Bird	110	Reach 5	62	Reach 5	102.8	ng/kg	4.3	4.3	21	12	442	442	2159	1234	ng/kg	25	250	59	150	ng/kg
Total TEQ-Bird	170	Reach 5	130	Reach 5	164	ng/kg	4.3	4.3	21	12	705	705	3444	1968	ng/kg	25	250	59	150	ng/kg
Dieldrin	14	Reach 5	7.4	Reach 5	13.01	ug/kg	6.9	6.7	7.1	6.9	90	87	92	90	µg/kg	300	3000	200	8100	µg/kg
Total DDx	81	Reach 5	54	Reach 5	76.95	µg/kg	46	20	141	46	3540	1539	10850	3540	µg/kg	410	4,100	500	3000	µg/kg
Reach 6																				
Mercury	50	Reach 6	83	Reach 5	54.95	µg/kg	1.8	1	3	1.8	99	55	165	99	µg/kg	180	1800	-	-	µg/kg
Methyl mercury	31	Reach 6	68	Reach 5	36.55	µg/kg	1.8	1	3	1.8	66	37	110	66	µg/kg	180	1800	-	-	µg/kg
Total PCB Congeners	430	Reach 6	290	Reach 5	409	µg/kg	14	5	113	19	5726	2045	46217	7771	µg/kg	1600	16000	700	1300	µg/kg
PCB TEQ-Bird	43	Reach 6	66	Reach 5	46.45	ng/kg	4.3	4.3	21	12	200	200	975	557	ng/kg	25	250	59	150	ng/kg
PCDD/PCDF TEQ-Bird	31	Reach 6	62	Reach 5	35.65	ng/kg	4.3	4.3	21	12	153	153	749	428	ng/kg	25	250	59	150	ng/kg
Total TEQ-Bird	74	Reach 6	130	Reach 5	82.4	ng/kg	4.3	4.3	21	12	354	354	1730	989	ng/kg	25	250	59	150	ng/kg

Belted Kingfisher

Diet	Fractions
Blue crab	0.15
0-9 cm fish	0.85

Chemical	Prey: Fish (≤ 9) $C_{0\text{-}9,\ ww}$	Prey: Fish (≤ 9) Exposure Area	Prey: Blue Crab $C_{crab,\ ww}$	Prey: Blue Crab Exposure Area	$C_{prey,ww}$	$C_{prey,ww}$ (units)	Range of BMFs[a] BMF	Range of BMFs[a] Min[b]	Range of BMFs[a] Max[b]	Range of BMFs[a] Geo Mean[b]	Range in Egg Conc[a] BMF	Range in Egg Conc[a] BMF Min	Range in Egg Conc[a] BMF Max	Range in Egg Conc[a] BMF Geo Mean	C_{egg}(units)	Range of TRVs: TRV-A[a] NOAEL	Range of TRVs: TRV-A[a] LOAEL	Range of TRVs: TRV-B[b] NOAEL	Range of TRVs: TRV-B[b] LOAEL	Range of TRVs: TRV units
Dieldrin	28	Reach 6	7.4	Reach 5	24.91	ug/kg	6.9	6.7	7.1	6.9	172	167	177	172	µg/kg	300	3000	200	8100	µg/kg
Total DDx	67	Reach 6	54	Reach 5	65.05	µg/kg	46	20	141	46	2992	1301	9172	2992	µg/kg	410	4,100	500	3000	µg/kg
Reach 7																				
Mercury	43	Reach 7;≥9 a	83	Reach 5	49	µg/kg	1.8	1	3	1.8	88	49	147	88	µg/kg	180	1800	-	-	µg/kg
Methyl mercury	17	Reach 7;≥9 a	68	Reach 5	24.65	µg/kg	1.8	1	3	1.8	44	25	74	44	µg/kg	180	1800	-	-	µg/kg
Total PCB Congeners	250	Reach 7;≥9 a	290	Reach 5	256	µg/kg	14	5	113	19	3584	1280	28928	4864	µg/kg	1600	16000	700	1300	µg/kg
PCB TEQ-Bird	20	Reach 7;≥9 a	66	Reach 5	26.9	ng/kg	4.3	4.3	21	12	116	116	565	323	ng/kg	25	250	59	150	ng/kg
PCDD/PCDF TEQ-Bird	15	Reach 7;≥9 a	62	Reach 5	22.05	ng/kg	4.3	4.3	21	12	95	95	463	265	ng/kg	25	250	59	150	ng/kg
Total TEQ-Bird	35	Reach 7;≥9 a	130	Reach 5	49.25	ng/kg	4.3	4.3	21	12	212	212	1034	591	ng/kg	25	250	59	150	ng/kg
Dieldrin	11	Reach 7;≥9 a	7.4	Reach 5	10.46	ug/kg	6.9	6.7	7.1	6.9	72	70	74	72	µg/kg	300	3000	200	8100	µg/kg
Total DDx	29	Reach 7;≥9 a	54	Reach 5	32.75	µg/kg	46	20	141	46	1507	655	4618	1507	µg/kg	410	4,100	500	3000	µg/kg
Reach 8																				
Mercury	48	Reach 8;≥9 a	83	Reach 5	53.25	µg/kg	1.8	1	3	1.8	96	53	160	96	µg/kg	180	1800	-	-	µg/kg
Methyl mercury	29	Reach 8;≥9 a	68	Reach 5	34.85	µg/kg	1.8	1	3	1.8	63	35	105	63	µg/kg	180	1800	-	-	µg/kg
Total PCB Congeners	480	Reach 8;≥9 a	290	Reach 5	451.5	µg/kg	14	5	113	19	6321	2258	51020	8579	µg/kg	1600	16000	700	1300	µg/kg
PCB TEQ-Bird	88	Reach 8;≥9 a	66	Reach 5	84.7	ng/kg	4.3	4.3	21	12	364	364	1779	1016	ng/kg	25	250	59	150	ng/kg
PCDD/PCDF TEQ-Bird	23	Reach 8;≥9 a	62	Reach 5	28.85	ng/kg	4.3	4.3	21	12	124	124	606	346	ng/kg	25	250	59	150	ng/kg
Total TEQ-Bird	100	Reach 8;≥9 a	130	Reach 5	104.5	ng/kg	4.3	4.3	21	12	449	449	2195	1254	ng/kg	25	250	59	150	ng/kg
Dieldrin	17	Reach 8;≥9 a	7.4	Reach 5	15.56	ug/kg	6.9	6.7	7.1	6.9	107	104	110	107	µg/kg	300	3000	200	8100	µg/kg
Total DDx	56	Reach 8;≥9 a	54	Reach 5	55.7	µg/kg	46	20	141	46	2562	1114	7854	2562	µg/kg	410	4,100	500	3000	µg/kg

Note 1: "–" indicates no TRV available

Note 2: Blue highlighted cells indicate EPC is based on maximium concentration

[a] TRVs derived from the primary literature based on the process identified in Section 8.2.3.1.

[b] TRVs based on USEPA's LPR restoration project FFS (Louis Berger et al. 2014) or USEPA's first draft of the LPR restoration project FFS (Malcolm Pirnie 2007).

[c] BMFs derived based on process identified in Section 8.2.2.2.

[d] BMFs derived based on process identified by USEPA (2015b), USEPA (2015c), USEPA (2016e), and other communications with USEPA throughout 2015 and 2016

BW - body weight
COC - chemical of concern
COPEC - chemical of potential ecological concern
FIR - food ingestion rate
LOAEL - Lowest observed adverse effect level
na - not applicable
NFF - non forage fish
NOAEL - No observed adverse effect level

Belted Kingfisher

Diet	Fractions
Blue crab	0.15
0-9 cm fish	0.85

Chemical	Prey: Fish (≤ 9) $C_{0\text{-}9,\ ww}$	Prey: Fish (≤ 9) Exposure Area	Prey: Blue Crab $C_{crab,\ ww}$	Prey: Blue Crab Exposure Area	$C_{prey,ww}$	$C_{prey,ww}$ (units)	Range of BMFs[a] BMF	Range of BMFs[a] Min[b]	Range of BMFs[a] Max[b]	Range of BMFs[a] Geo Mean[b]	Range in Egg Conc[a] BMF	Range in Egg Conc[a] BMF Min	Range in Egg Conc[a] BMF Max	Range in Egg Conc[a] BMF Geo Mean	Range in Egg Conc[a] C_{egg}(units)	Range of TRVs: TRV-A[a] NOAEL	Range of TRVs: TRV-A[a] LOAEL	Range of TRVs: TRV-B[b] NOAEL	Range of TRVs: TRV-B[b] LOAEL	Range of TRVs: TRV units

RM - River Mile
SFF - small forage fish
SIR - sediment ingestion rate
SUF - site use factor
UCL HQ = hazard quotient based on the 95th percentile (UCL) concentration
WIR - water ingestion rate

Range of HQs							
HQ based on TRV-A[a]		HQ based on TRV-B[b]					
Receptor-specific BMF[c]		BMF Min[d]		BMF Max[d]		BMF Geo Mean[d]	
NOAEL HQ	LOAEL HQ	NOAEL HQ	LOAEL HQ	NOAEL HQ	LOAEL HQ	NOAEL HQ	LOAEL HQ
[redacted]							
0.66	0.066	-	-	-	-	-	-
0.42	0.042	-	-	-	-	-	-
6.2	0.62	**5.1**	**2.7**	**110**	**61**	**19**	**10**
12	**1.2**	**5.1**	**2.0**	**25**	**9.7**	**14**	**5.5**
13	**1.3**	**5.6**	**2.2**	**27**	**11**	**16**	**6.2**
25	**2.5**	**11**	**4.1**	**51**	**20**	**29**	**12**
0.39	0.039	0.58	0.014	0.61	0.015	0.59	0.015
8.7	0.87	**3.1**	0.52	**22**	**3.6**	**7.1**	**1.2**
[redacted]							
0.67	0.067	-	-	-	-	-	-
0.48	0.048	-	-	-	-	-	-
6.1	0.61	**5.0**	**2.7**	**110**	**61**	**19**	**10**
12	**1.2**	**4.9**	**1.9**	**24**	**9.5**	**14**	**5.4**
12	**1.2**	**5.2**	**2.1**	**26**	**10**	**15**	**5.7**
23	**2.3**	**9.9**	**3.9**	**48**	**19**	**28**	**11**
0.34	0.034	0.49	0.012	0.52	0.013	0.50	0.012
8.9	0.89	**3.2**	0.53	**22**	**3.7**	**7.3**	**1.2**
[redacted]							
0.84	0.084	-	-	-	-	-	-
0.81	0.081	-	-	-	-	-	-
2.9	0.29	**2.4**	**1.3**	**53**	**29**	**8.9**	**4.8**
5.7	0.57	**2.4**	0.96	**12**	**4.7**	**6.8**	**2.7**
4.2	0.42	**1.8**	0.70	**8.7**	**3.4**	**5.0**	**1.9**
10	**1.0**	**4.2**	**1.7**	**21**	**8.1**	**12**	**4.6**
0.087	0.0087	0.13	0.0031	0.13	0.0033	0.13	0.0032
4.2	0.42	**1.5**	0.25	**10**	**1.7**	**3.4**	0.57
[redacted]							
0.80	0.080	-	-	-	-	-	-
0.70	0.070	-	-	-	-	-	-
3.6	0.36	**2.9**	**1.6**	**66**	**35**	**11**	**5.9**
7.7	0.77	**3.3**	**1.3**	**16**	**6.3**	**9.1**	**3.6**
5.3	0.53	**2.2**	0.88	**11**	**4.3**	**6.3**	**2.5**
13	**1.3**	**5.6**	**2.2**	**27**	**11**	**16**	**6.1**

Range of HQs							
HQ based on TRV-A[a]		HQ based on TRV-B[b]					
Receptor-specific BMF[c]		BMF Min[d]		BMF Max[d]		BMF Geo Mean[d]	
NOAEL HQ	LOAEL HQ	NOAEL HQ	LOAEL HQ	NOAEL HQ	LOAEL HQ	NOAEL HQ	LOAEL HQ
0.10	0.010	0.15	0.0037	0.16	0.0039	0.15	0.0038
5.6	0.56	**2.0**	0.33	**14**	**2.4**	**4.6**	0.77
0.58	0.058	-	-	-	-	-	-
0.41	0.041	-	-	-	-	-	-
7.0	0.70	**5.7**	**3.1**	**130**	**69**	**22**	**12**
11	**1.1**	**4.8**	**1.9**	**23**	**9.2**	**13**	**5.3**
11	**1.1**	**4.6**	**1.8**	**22**	**8.8**	**13**	**5.0**
23	**2.3**	**9.6**	**3.8**	**47**	**18**	**27**	**11**
0.21	0.021	0.31	0.0076	0.33	0.0081	0.32	0.0078
11	**1.1**	**3.9**	0.65	**27**	**4.6**	**8.9**	**1.5**
0.75	0.075	-	-	-	-	-	-
0.43	0.043	-	-	-	-	-	-
7.7	0.77	**6.3**	**3.4**	**140**	**76**	**24**	**13**
14	**1.4**	**5.7**	**2.3**	**28**	**11**	**16**	**6.3**
15	**1.5**	**6.3**	**2.5**	**31**	**12**	**18**	**6.9**
29	**2.9**	**12**	**4.8**	**59**	**23**	**34**	**13**
0.29	0.029	0.42	0.010	0.44	0.011	0.43	0.011
9.7	0.97	**3.5**	0.58	**24**	**4.1**	**8.0**	**1.3**
0.54	0.054	-	-	-	-	-	-
0.31	0.031	-	-	-	-	-	-
5.7	0.57	**4.6**	**2.5**	**100**	**56**	**18**	**9.5**
12	**1.2**	**5.2**	**2.0**	**25**	**10**	**14**	**5.7**
18	**1.8**	**7.5**	**2.9**	**37**	**14**	**21**	**8.2**
28	**2.8**	**12**	**4.7**	**58**	**23**	**33**	**13**
0.30	0.030	0.44	0.011	0.46	0.011	0.45	0.011
8.6	0.86	**3.1**	0.51	**22**	**3.6**	**7.1**	**1.2**
0.55	0.055	-	-	-	-	-	-
0.37	0.037	-	-	-	-	-	-
3.6	0.36	**2.9**	**1.6**	**66**	**36**	**11**	**6.0**
8.0	0.80	**3.4**	**1.3**	**17**	**6.5**	**9.4**	**3.7**
6.1	0.61	**2.6**	**1.0**	**13**	**5.0**	**7.3**	**2.9**
14	**1.4**	**6.0**	**2.4**	**29**	**12**	**17**	**6.6**

Range of HQs							
HQ based on TRV-A[a]		HQ based on TRV-B[b]					
Receptor-specific BMF[c]		BMF Min[d]		BMF Max[d]		BMF Geo Mean[d]	
NOAEL HQ	LOAEL HQ	NOAEL HQ	LOAEL HQ	NOAEL HQ	LOAEL HQ	NOAEL HQ	LOAEL HQ
0.57	0.057	0.83	0.021	0.88	0.022	0.86	0.021
7.3	0.73	**2.6**	0.43	**18**	**3.1**	**6.0**	**1.0**
0.49	0.049	-	-	-	-	-	-
0.25	0.025	-	-	-	-	-	-
2.2	0.22	**1.8**	0.98	**41**	**22**	**6.9**	**3.7**
4.6	0.46	**2.0**	0.77	**10**	**3.8**	**5.5**	**2.2**
3.8	0.38	**1.6**	0.63	**7.8**	**3.1**	**4.5**	**1.8**
8.5	0.85	**3.6**	**1.4**	**18**	**6.9**	**10**	**3.9**
0.24	0.024	0.35	0.0087	0.37	0.0092	0.36	0.0089
3.7	0.37	**1.3**	0.22	**9.2**	**1.5**	**3.0**	0.50
0.53	0.053	-	-	-	-	-	-
0.35	0.035	-	-	-	-	-	-
4.0	0.40	**3.2**	**1.7**	**73**	**39**	**12**	**6.6**
15	**1.5**	**6.2**	**2.4**	**30**	**12**	**17**	**6.8**
5.0	0.50	**2.1**	0.83	**10**	**4.0**	**5.9**	**2.3**
18	**1.8**	**7.6**	**3.0**	**37**	**15**	**21**	**8.4**
0.36	0.036	0.52	0.013	0.55	0.014	0.54	0.013
6.2	0.62	**2.2**	0.37	**16**	**2.6**	**5.1**	0.85

Range of HQs							
HQ based on TRV-A[a]		HQ based on TRV-B[b]					
Receptor-specific BMF[c]		BMF Min[d]		BMF Max[d]		BMF Geo Mean[d]	
NOAEL HQ	LOAEL HQ	NOAEL HQ	LOAEL HQ	NOAEL HQ	LOAEL HQ	NOAEL HQ	LOAEL HQ

Belted Kingfisher

Diet	Fractions
Blue crab	0.15
0-9 cm fi	0.315
9-13 cm	0.51
13-18 cn	0.025

Chemical	Prey: Fish (≤ 9) $C_{0\text{-}9,\ ww}$	Fish (≤ 9) Exposure Area	Fish (>9 and ≤ 13) $C_{9\text{-}13,\ ww}$	Fish (>9 and ≤ 13) Exposure Area	Fish (>13 and ≤ 18) $C_{13\text{-}18,\ ww}$	Fish (>13 and ≤ 18) Exposure Area	Blue Crab $C_{crab,\ ww}$	Blue Crab Exposure Area	$C_{prey,ww}$	$C_{prey,ww}$ (units)	Range of BMFs: BMF	Min[a]	Max[a]	Geo Mean[a]	Range in Egg Conc[a]: BMF	BMF Min	BMF Max	BMF Geo Mean	C_{egg}(units)	TRV: NOAEL
RM ≥ 6																				
Mercury	53	RM ≥ 6	62	RM ≥ 6	120	RM ≥ 6	140	Site-wide	72.315	µg/kg	1.8	1	3	1.8	130	72	217	130	µg/kg	180
Methyl mercury	28	RM ≥ 6	26	RM ≥ 6	130	RM ≥ 6	120	Site-wide	43.33	µg/kg	1.8	1	3	1.8	78	43	130	78	µg/kg	180
Total PCB Congeners	770	RM ≥ 6	510	RM ≥ 6	2500	RM ≥ 6	350	Site-wide	617.65	µg/kg	14	5	113	19	8647	3088	69794	11735	µg/kg	1600
PCB TEQ-Bird	65	RM ≥ 6	72	RM ≥ 6	200	RM ≥ 6	94	Site-wide	76.295	ng/kg	4.3	4.3	21	12	328	328	1602	916	ng/kg	25
PCDD/PCDF TEQ-Bird	78	RM ≥ 6	47	RM ≥ 6	160	RM ≥ 6	71	Site-wide	63.19	ng/kg	4.3	4.3	21	12	272	272	1327	758	ng/kg	25
Total TEQ-Bird	140	RM ≥ 6	110	RM ≥ 6	360	RM ≥ 6	170	Site-wide	134.7	ng/kg	4.3	4.3	21	12	579	579	2829	1616	ng/kg	25
Dieldrin	19	RM ≥ 6	15	RM ≥ 6	33	RM ≥ 6	6.8	Site-wide	15.48	ug/kg	6.9	6.7	7.1	6.9	107	104	110	107	µg/kg	300
Total DDx	79	RM ≥ 6	62	RM ≥ 6	190	RM ≥ 6	68	Site-wide	71.455	µg/kg	46	20	141	46	3287	1429	10075	3287	µg/kg	410
Site-wide																				
Mercury	54	Site-wide	65	Site-wide	120	Site-wide	140	Site-wide	74.16	µg/kg	1.8	1	3	1.8	133	74	222	133	µg/kg	180
Methyl mercury	35	Site-wide	67	Site-wide	120	Site-wide	120	Site-wide	66.195	µg/kg	1.8	1	3	1.8	119	66	199	119	µg/kg	180
Total PCB Congeners	760	Site-wide	440	Site-wide	2500	Site-wide	350	Site-wide	578.8	µg/kg	14	5	113	19	8103	2894	65404	10997	µg/kg	1600
PCB TEQ-Bird	63	Site-wide	49	Site-wide	220	Site-wide	94	Site-wide	64.435	ng/kg	4.3	4.3	21	12	277	277	1353	773	ng/kg	25
PCDD/PCDF TEQ-Bird	72	Site-wide	33	Site-wide	220	Site-wide	71	Site-wide	55.66	ng/kg	4.3	4.3	21	12	239	239	1169	668	ng/kg	25
Total TEQ-Bird	130	Site-wide	77	Site-wide	390	Site-wide	170	Site-wide	115.47	ng/kg	4.3	4.3	21	12	497	497	2425	1386	ng/kg	25
Dieldrin	16	Site-wide	10	Site-wide	33	Site-wide	6.8	Site-wide	11.985	ug/kg	6.9	6.7	7.1	6.9	83	80	85	83	µg/kg	300
Total DDx	81	Site-wide	52	Site-wide	200	Site-wide	68	Site-wide	67.235	µg/kg	46	20	141	46	3093	1345	9480	3093	µg/kg	410
Reach 1																				
Mercury	71	Reach 1; ≥9	71	Reach 1	71	Reach 1; ≥9	160	Reach 1	84.35	µg/kg	1.8	1	3	1.8	152	84	253	152	µg/kg	180
Methyl mercury	69	Reach 1; ≥9	69	Reach 1	69	Reach 1; ≥9	150	Reach 1	81.15	µg/kg	1.8	1	3	1.8	146	81	243	146	µg/kg	180
Total PCB Congeners	340	Reach 1; ≥9	340	Reach 1	340	Reach 1; ≥9	270	Reach 1	329.5	µg/kg	14	5	113	19	4613	1648	37234	6261	µg/kg	1600
PCB TEQ-Bird	23	Reach 1; ≥9	23	Reach 1	23	Reach 1; ≥9	92	Reach 1	33.35	ng/kg	4.3	4.3	21	12	143	143	700	400	ng/kg	25
PCDD/PCDF TEQ-Bird	17	Reach 1; ≥9	17	Reach 1	17	Reach 1; ≥9	66	Reach 1	24.35	ng/kg	4.3	4.3	21	12	105	105	511	292	ng/kg	25
Total TEQ-Bird	40	Reach 1; ≥9	40	Reach 1	40	Reach 1; ≥9	160	Reach 1	58	ng/kg	4.3	4.3	21	12	249	249	1218	696	ng/kg	25
Dieldrin	3.5	Reach 1; ≥9	3.5	Reach 1	3.5	Reach 1; ≥9	5.3	Reach 1	3.77	ug/kg	6.9	6.7	7.1	6.9	26	25	27	26	µg/kg	300
Total DDx	32	Reach 1; ≥9	32	Reach 1	32	Reach 1; ≥9	66	Reach 1	37.1	µg/kg	46	20	141	46	1707	742	5231	1707	µg/kg	410
Reach 2																				
Mercury	62	Reach 2	71	Reach 2	71	Reach 2; ≥9	180	Reach 2	84.515	µg/kg	1.8	1	3	1.8	152	85	254	152	µg/kg	180
Methyl mercury	58	Reach 2	68	Reach 2	68	Reach 2; ≥9	140	Reach 2	75.65	µg/kg	1.8	1	3	1.8	136	76	227	136	µg/kg	180
Total PCB Congeners	420	Reach 2	440	Reach 2	440	Reach 2; ≥9	330	Reach 2	417.2	µg/kg	14	5	113	19	5841	2086	47144	7927	µg/kg	1600
PCB TEQ-Bird	35	Reach 2	32	Reach 2	32	Reach 2; ≥9	100	Reach 2	43.145	ng/kg	4.3	4.3	21	12	186	186	906	518	ng/kg	25
PCDD/PCDF TEQ-Bird	23	Reach 2	29	Reach 2	29	Reach 2; ≥9	75	Reach 2	34.01	ng/kg	4.3	4.3	21	12	146	146	714	408	ng/kg	25

Total TEQ-Bird	58	Reach 2	60	Reach 2	60	Reach 2; ≥	180	Reach 2	77.37	ng/kg	4.3	4.3	21	12	333	333	1625	928	ng/kg	25
Dieldrin	4.1	Reach 2	5.4	Reach 2	5.4	Reach 2; ≥	6.5	Reach 2	5.1555	ug/kg	6.9	6.7	7.1	6.9	36	35	37	36	µg/kg	300
Total DDx	44	Reach 2	52	Reach 2	52	Reach 2; ≥	84	Reach 2	54.28	µg/kg	46	20	141	46	2497	1086	7653	2497	µg/kg	410
Reach 3																				
Mercury	47	Reach 3	68	Reach 3	130	Reach 3	120	Reach 3	70.735	µg/kg	1.8	1	3	1.8	127	71	212	127	µg/kg	180
Methyl mercury	31	Reach 3	64	Reach 3	120	Reach 3	96	Reach 3	59.805	µg/kg	1.8	1	3	1.8	108	60	179	108	µg/kg	180
Total PCB Congeners	860	Reach 3	510	Reach 3	2800	Reach 3	450	Reach 3	668.5	µg/kg	14	5	113	19	9359	3343	75541	12702	µg/kg	1600
PCB TEQ-Bird	58	Reach 3	34	Reach 3	280	Reach 3	110	Reach 3	59.11	ng/kg	4.3	4.3	21	12	254	254	1241	709	ng/kg	25
PCDD/PCDF TEQ-Bird	58	Reach 3	31	Reach 3	200	Reach 3	90	Reach 3	52.58	ng/kg	4.3	4.3	21	12	226	226	1104	631	ng/kg	25
Total TEQ-Bird	120	Reach 3	65	Reach 3	490	Reach 3	200	Reach 3	113.2	ng/kg	4.3	4.3	21	12	487	487	2377	1358	ng/kg	25
Dieldrin	9.2	Reach 3	6.8	Reach 3	39	Reach 3	9.1	Reach 3	8.706	ug/kg	6.9	6.7	7.1	6.9	60	58	62	60	µg/kg	300
Total DDx	100	Reach 3	59	Reach 3	340	Reach 3	79	Reach 3	81.94	µg/kg	46	20	141	46	3769	1639	11554	3769	µg/kg	410
Reach 4																				
Mercury	65	Reach 4	83	Reach 4	110	Reach 4	130	Reach 4	85.055	µg/kg	1.8	1	3	1.8	153	85	255	153	µg/kg	180
Methyl mercury	33	Reach 4	17	Reach 4	93	Reach 4	100	Reach 4	36.39	µg/kg	1.8	1	3	1.8	66	36	109	66	µg/kg	180
Total PCB Congeners	930	Reach 4	450	Reach 4	2000	Reach 4	580	Reach 4	659.45	µg/kg	14	5	113	19	9232	3297	74518	12530	µg/kg	1600
PCB TEQ-Bird	73	Reach 4	45	Reach 4	220	Reach 4	110	Reach 4	67.945	ng/kg	4.3	4.3	21	12	292	292	1427	815	ng/kg	25
PCDD/PCDF TEQ-Bird	84	Reach 4	52	Reach 4	180	Reach 4	100	Reach 4	72.48	ng/kg	4.3	4.3	21	12	312	312	1522	870	ng/kg	25
Total TEQ-Bird	160	Reach 4	97	Reach 4	400	Reach 4	200	Reach 4	139.87	ng/kg	4.3	4.3	21	12	601	601	2937	1678	ng/kg	25
Dieldrin	13	Reach 4	9.2	Reach 4	44	Reach 4	9.1	Reach 4	11.252	ug/kg	6.9	6.7	7.1	6.9	78	75	80	78	µg/kg	300
Total DDx	86	Reach 4	61	Reach 4	200	Reach 4	89	Reach 4	76.55	µg/kg	46	20	141	46	3521	1531	10794	3521	µg/kg	410
Reach 5																				
Mercury	49	Reach 5	54	Reach 5	180	Reach 5	83	Reach 5	59.925	µg/kg	1.8	1	3	1.8	108	60	180	108	µg/kg	180
Methyl mercury	25	Reach 5	25	Reach 5	190	Reach 5	68	Reach 5	35.575	µg/kg	1.8	1	3	1.8	64	36	107	64	µg/kg	180
Total PCB Congeners	710	Reach 5	610	Reach 5	5100	Reach 5	290	Reach 5	705.75	µg/kg	14	5	113	19	9881	3529	79750	13409	µg/kg	1600
PCB TEQ-Bird	72	Reach 5	69	Reach 5	310	Reach 5	66	Reach 5	75.52	ng/kg	4.3	4.3	21	12	325	325	1586	906	ng/kg	25
PCDD/PCDF TEQ-Bird	110	Reach 5	65	Reach 5	250	Reach 5	62	Reach 5	83.35	ng/kg	4.3	4.3	21	12	358	358	1750	1000	ng/kg	25
Total TEQ-Bird	170	Reach 5	130	Reach 5	560	Reach 5	130	Reach 5	153.35	ng/kg	4.3	4.3	21	12	659	659	3220	1840	ng/kg	25
Dieldrin	14	Reach 5	8.7	Reach 5	47	Reach 5	7.4	Reach 5	11.132	ug/kg	6.9	6.7	7.1	6.9	77	75	79	77	µg/kg	300
Total DDx	81	Reach 5	71	Reach 5	280	Reach 5	54	Reach 5	76.825	µg/kg	46	20	141	46	3534	1537	10832	3534	µg/kg	410
Reach 6																				
Mercury	50	Reach 6	50	Reach 6	62	Reach 6	83	Reach 5	55.25	µg/kg	1.8	1	3	1.8	99	55	166	99	µg/kg	180
Methyl mercury	31	Reach 6	14	Reach 6	50	Reach 6	68	Reach 5	28.355	µg/kg	1.8	1	3	1.8	51	28	85	51	µg/kg	180
Total PCB Congeners	430	Reach 6	450	Reach 6	390	Reach 6	290	Reach 5	418.2	µg/kg	14	5	113	19	5855	2091	47257	7946	µg/kg	1600
PCB TEQ-Bird	43	Reach 6	41	Reach 6	44	Reach 6	66	Reach 5	45.455	ng/kg	4.3	4.3	21	12	195	195	955	545	ng/kg	25
PCDD/PCDF TEQ-Bird	31	Reach 6	41	Reach 6	28	Reach 6	62	Reach 5	40.675	ng/kg	4.3	4.3	21	12	175	175	854	488	ng/kg	25
Total TEQ-Bird	74	Reach 6	82	Reach 6	72	Reach 6	130	Reach 5	86.43	ng/kg	4.3	4.3	21	12	372	372	1815	1037	ng/kg	25
Dieldrin	28	Reach 6	17	Reach 6	13	Reach 6	7.4	Reach 5	18.925	ug/kg	6.9	6.7	7.1	6.9	131	127	134	131	µg/kg	300
Total DDx	67	Reach 6	58	Reach 6	35	Reach 6	54	Reach 5	59.66	µg/kg	46	20	141	46	2744	1193	8412	2744	µg/kg	410
Reach 7																				
Mercury	43	Reach 7;.>9	43	Reach 7	150	Reach 7	83	Reach 5	51.675	µg/kg	1.8	1	3	1.8	93	52	155	93	µg/kg	180
Methyl mercury	17	Reach 7;.>9	17	Reach 7	150	Reach 7	68	Reach 5	27.975	µg/kg	1.8	1	3	1.8	50	28	84	50	µg/kg	180
Total PCB Congeners	250	Reach 7;.>9	250	Reach 7	2700	Reach 7	290	Reach 5	317.25	µg/kg	14	5	113	19	4442	1586	35849	6028	µg/kg	1600
PCB TEQ-Bird	20	Reach 7;.>9	20	Reach 7	250	Reach 7	66	Reach 5	32.65	ng/kg	4.3	4.3	21	12	140	140	686	392	ng/kg	25
PCDD/PCDF TEQ-Bird	15	Reach 7;.>9	15	Reach 7	180	Reach 7	62	Reach 5	26.175	ng/kg	4.3	4.3	21	12	113	113	550	314	ng/kg	25
Total TEQ-Bird	35	Reach 7;.>9	35	Reach 7	430	Reach 7	130	Reach 5	59.125	ng/kg	4.3	4.3	21	12	254	254	1242	710	ng/kg	25
Dieldrin	11	Reach 7;.>9	11	Reach 7	40	Reach 7	7.4	Reach 5	11.185	ug/kg	6.9	6.7	7.1	6.9	77	75	79	77	µg/kg	300
Total DDx	29	Reach 7;.>9	29	Reach 7	240	Reach 7	54	Reach 5	38.025	µg/kg	46	20	141	46	1749	761	5362	1749	µg/kg	410
Reach 8																				

Mercury	48	Reach 8; >9	48	Reach 8	110	Reach 8	83	Reach 5	54.8	µg/kg	1.8	1	3	1.8	99	55	164	99	µg/kg	180
Methyl mercury	29	Reach 8; >9	29	Reach 8	120	Reach 8	68	Reach 5	37.125	µg/kg	1.8	1	3	1.8	67	37	111	67	µg/kg	180
Total PCB Congeners	480	Reach 8; >9	480	Reach 8	1000	Reach 8	290	Reach 5	464.5	µg/kg	14	5	113	19	6503	2323	52489	8826	µg/kg	1600
PCB TEQ-Bird	88	Reach 8; >9	88	Reach 8	130	Reach 8	66	Reach 5	85.75	ng/kg	4.3	4.3	21	12	369	369	1801	1029	ng/kg	25
PCDD/PCDF TEQ-Bird	23	Reach 8; >9	23	Reach 8	73	Reach 8	62	Reach 5	30.1	ng/kg	4.3	4.3	21	12	129	129	632	361	ng/kg	25
Total TEQ-Bird	100	Reach 8; >9	100	Reach 8	200	Reach 8	130	Reach 5	107	ng/kg	4.3	4.3	21	12	460	460	2247	1284	ng/kg	25
Dieldrin	17	Reach 8; >9	17	Reach 8	25	Reach 8	7.4	Reach 5	15.76	ug/kg	6.9	6.7	7.1	6.9	109	106	112	109	µg/kg	300
Total DDx	56	Reach 8; >9	56	Reach 8	120	Reach 8	54	Reach 5	57.3	µg/kg	46	20	141	46	2636	1146	8079	2636	µg/kg	410

Note 1: "–" indicates no TRV available

Note 2: Blue highlighted cells indicate EPC is based on maximium concentration

[a] TRVs derived from the primary literature based on the process identified in Section 8.2.3.1.

[b] TRVs based on USEPA's LPR restoration project FFS (Louis Berger et al. 2014) or USEPA's first draft of the LPR restoration project FFS (Malcolm Pirnie 2007).

[c] BMFs derived based on process identified in Section 8.2.2.2.

[d] BMFs derived based on process identified by USEPA (2015b), USEPA (2015c), USEPA (2016e), and other communications with USEPA throughout 2015 and 2016

BW - body weight
COC - chemical of concern
COPEC - chemical of potential ecological concern
FIR - food ingestion rate
LOAEL - Lowest observed adverse effect level
na - not applicable
NFF - non forage fish
NOAEL - No observed adverse effect level
RM - River Mile
SFF - small forage fish
SIR - sediment ingestion rate
SUF - site use factor
UCL HQ = hazard quotient based on the 95th percentile (UCL) concentration
WIR - water ingestion rate

Range of TRVs				Range of HQs							
				HQ based on TRV-A[a]		HQ based on TRV-B[b]					
/-A[a]	TRV-B[b]			Receptor-specific BMF[c]		BMF Min[d]		BMF Max[d]		BMF Geo Mean[d]	
LOAEL	NOAEL	LOAEL	TRV units	NOAEL HQ	LOAEL HQ	NOAEL HQ	LOAEL HQ	NOAEL HQ	LOAEL HQ	NOAEL HQ	LOAEL HQ
[redacted]											
1800	-	-	µg/kg	0.72	0.072	-	-	-	-	-	-
1800	-	-	µg/kg	0.43	0.043	-	-	-	-	-	-
16000	700	1300	µg/kg	**5.4**	0.54	**4.4**	**2.4**	**100**	**54**	**17**	**9.0**
250	59	150	ng/kg	**13**	**1.3**	**5.6**	**2.2**	**27**	**11**	**16**	**6.1**
250	59	150	ng/kg	**11**	**1.1**	**4.6**	**1.8**	**22**	**8.8**	**13**	**5.1**
250	59	150	ng/kg	**23**	**2.3**	**9.8**	**3.9**	**48**	**19**	**27**	**11**
3000	200	8100	µg/kg	0.36	0.036	0.52	0.013	0.55	0.014	0.53	0.013
4,100	500	3000	µg/kg	**8.0**	0.80	**2.9**	0.48	**20**	**3.4**	**6.6**	**1.1**
[redacted]											
1800	-	-	µg/kg	0.74	0.074	-	-	-	-	-	-
1800	-	-	µg/kg	0.66	0.066	-	-	-	-	-	-
16000	700	1300	µg/kg	**5.1**	0.51	**4.1**	**2.2**	**93**	**50**	**16**	**8.5**
250	59	150	ng/kg	**11**	**1.1**	**4.7**	**1.8**	**23**	**9.0**	**13**	**5.2**
250	59	150	ng/kg	**9.6**	0.96	**4.1**	**1.6**	**20**	**7.8**	**11**	**4.5**
250	59	150	ng/kg	**20**	**2.0**	**8.4**	**3.3**	**41**	**16**	**23**	**9.2**
3000	200	8100	µg/kg	0.28	0.028	0.40	0.0099	0.43	0.011	0.41	0.010
4,100	500	3000	µg/kg	**7.5**	0.75	**2.7**	0.45	**19**	**3.2**	**6.2**	**1.0**
[redacted]											
1800	-	-	µg/kg	0.84	0.084	-	-	-	-	-	-
1800	-	-	µg/kg	0.81	0.081	-	-	-	-	-	-
16000	700	1300	µg/kg	**2.9**	0.29	**2.4**	**1.3**	**53**	**29**	**8.9**	**4.8**
250	59	150	ng/kg	**5.7**	0.57	**2.4**	0.96	**12**	**4.7**	**6.8**	**2.7**
250	59	150	ng/kg	**4.2**	0.42	**1.8**	0.70	**8.7**	**3.4**	**5.0**	**1.9**
250	59	150	ng/kg	**10**	**1.0**	**4.2**	**1.7**	**21**	**8.1**	**12**	**4.6**
3000	200	8100	µg/kg	0.087	0.0087	0.13	0.0031	0.13	0.0033	0.13	0.0032
4,100	500	3000	µg/kg	**4.2**	0.42	**1.5**	0.25	**10**	**1.7**	**3.4**	0.57
[redacted]											
1800	-	-	µg/kg	0.85	0.085	-	-	-	-	-	-
1800	-	-	µg/kg	0.76	0.076	-	-	-	-	-	-
16000	700	1300	µg/kg	**3.7**	0.37	**3.0**	**1.6**	**67**	**36**	**11**	**6.1**
250	59	150	ng/kg	**7.4**	0.74	**3.1**	**1.2**	**15**	**6.0**	**8.8**	**3.5**
250	59	150	ng/kg	**5.8**	0.58	**2.5**	0.97	**12**	**4.8**	**6.9**	**2.7**

250	59	150	ng/kg	**13**	**1.3**	**5.6**	**2.2**	**28**	**11**	**16**	**6.2**
3000	200	8100	µg/kg	0.12	0.012	0.17	0.0043	0.18	0.0045	0.18	0.0044
4,100	500	3000	µg/kg	**6.1**	0.61	**2.2**	0.36	**15**	**2.6**	**5.0**	0.83
1800	-	-	µg/kg	0.71	0.071	-	-	-	-	-	-
1800	-	-	µg/kg	0.60	0.060	-	-	-	-	-	-
16000	700	1300	µg/kg	**5.8**	0.58	**4.8**	**2.6**	**110**	**58**	**18**	**9.8**
250	59	150	ng/kg	**10**	**1.0**	**4.3**	**1.7**	**21**	**8.3**	**12**	**4.7**
250	59	150	ng/kg	**9.0**	0.90	**3.8**	**1.5**	**19**	**7.4**	**11**	**4.2**
250	59	150	ng/kg	**19**	**1.9**	**8.3**	**3.2**	**40**	**16**	**23**	**9.1**
3000	200	8100	µg/kg	0.20	0.020	0.29	0.0072	0.31	0.0076	0.30	0.0074
4,100	500	3000	µg/kg	**9.2**	0.92	**3.3**	0.55	**23**	**3.9**	**7.5**	**1.3**
1800	-	-	µg/kg	0.85	0.085	-	-	-	-	-	-
1800	-	-	µg/kg	0.36	0.036	-	-	-	-	-	-
16000	700	1300	µg/kg	**5.8**	0.58	**4.7**	**2.5**	**110**	**57**	**18**	**9.6**
250	59	150	ng/kg	**12**	**1.2**	**5.0**	**1.9**	**24**	**9.5**	**14**	**5.4**
250	59	150	ng/kg	**12**	**1.2**	**5.3**	**2.1**	**26**	**10**	**15**	**5.8**
250	59	150	ng/kg	**24**	**2.4**	**10**	**4.0**	**50**	**20**	**28**	**11**
3000	200	8100	µg/kg	0.26	0.026	0.38	0.0093	0.40	0.0099	0.39	0.0096
4,100	500	3000	µg/kg	**8.6**	0.86	**3.1**	0.51	**22**	**3.6**	**7.0**	**1.2**
1800	-	-	µg/kg	0.60	0.060	-	-	-	-	-	-
1800	-	-	µg/kg	0.36	0.036	-	-	-	-	-	-
16000	700	1300	µg/kg	**6.2**	0.62	**5.0**	**2.7**	**110**	**61**	**19**	**10**
250	59	150	ng/kg	**13**	**1.3**	**5.5**	**2.2**	**27**	**11**	**15**	**6.0**
250	59	150	ng/kg	**14**	**1.4**	**6.1**	**2.4**	**30**	**12**	**17**	**6.7**
250	59	150	ng/kg	**26**	**2.6**	**11**	**4.4**	**55**	**21**	**31**	**12**
3000	200	8100	µg/kg	0.26	0.026	0.37	0.0092	0.40	0.0098	0.38	0.0095
4,100	500	3000	µg/kg	**8.6**	0.86	**3.1**	0.51	**22**	**3.6**	**7.1**	**1.2**
1800	-	-	µg/kg	0.55	0.055	-	-	-	-	-	-
1800	-	-	µg/kg	0.28	0.028	-	-	-	-	-	-
16000	700	1300	µg/kg	**3.7**	0.37	**3.0**	**1.6**	**68**	**36**	**11**	**6.1**
250	59	150	ng/kg	**7.8**	0.78	**3.3**	**1.3**	**16**	**6.4**	**9.2**	**3.6**
250	59	150	ng/kg	**7.0**	0.70	**3.0**	**1.2**	**14**	**5.7**	**8.3**	**3.3**
250	59	150	ng/kg	**15**	**1.5**	**6.3**	**2.5**	**31**	**12**	**18**	**6.9**
3000	200	8100	µg/kg	0.44	0.044	0.63	0.016	0.67	0.017	0.65	0.016
4,100	500	3000	µg/kg	**6.7**	0.67	**2.4**	0.40	**17**	**2.8**	**5.5**	0.91
1800	-	-	µg/kg	0.52	0.052	-	-	-	-	-	-
1800	-	-	µg/kg	0.28	0.028	-	-	-	-	-	-
16000	700	1300	µg/kg	**2.8**	0.28	**2.3**	**1.2**	**51**	**28**	**8.6**	**4.6**
250	59	150	ng/kg	**5.6**	0.56	**2.4**	0.94	**12**	**4.6**	**6.6**	**2.6**
250	59	150	ng/kg	**4.5**	0.45	**1.9**	0.75	**9.3**	**3.7**	**5.3**	**2.1**
250	59	150	ng/kg	**10**	**1.0**	**4.3**	**1.7**	**21**	**8.3**	**12**	**4.7**
3000	200	8100	µg/kg	0.26	0.026	0.37	0.0093	0.40	0.0098	0.39	0.0095
4,100	500	3000	µg/kg	**4.3**	0.43	**1.5**	0.25	**11**	**1.8**	**3.5**	0.58

1800	-	-	µg/kg	0.55	0.055	-	-	-	-	-	-
1800	-	-	µg/kg	0.37	0.037	-	-	-	-	-	-
16000	700	1300	µg/kg	**4.1**	0.41	**3.3**	**1.8**	**75**	**40**	**13**	**6.8**
250	59	150	ng/kg	**15**	**1.5**	**6.2**	**2.5**	**31**	**12**	**17**	**6.9**
250	59	150	ng/kg	**5.2**	0.52	**2.2**	0.86	**11**	**4.2**	**6.1**	**2.4**
250	59	150	ng/kg	**18**	**1.8**	**7.8**	**3.1**	**38**	**15**	**22**	**8.6**
3000	200	8100	µg/kg	0.36	0.036	0.53	0.013	0.56	0.014	0.54	0.013
4,100	500	3000	µg/kg	**6.4**	0.64	**2.3**	0.38	**16**	**2.7**	**5.3**	0.88

Fish - Diet

Dietary dose (mg/kg bw/d) = (([Cprey*FIR] + [Csed*SIR])/BW) *SUF

Mummichog			
		Diet	Fraction
FIR (kg ww/da	0.00019	Worms (all)	1.0
SIR (kg dw/day	0.0000037	na	-
BW (kg)	0.0032	na	-
SUF	1	Sediment, mudflats (all)	

White Perch			
		Diet	Fraction
FIR (kg ww/da	0.0041	Worms (all)	0.70
SIR (kg dw/day	0.000041	Blue crab	0.15
BW (kg)	0.057	Fish (≤ 11 cm)	0.15
SUF	1	Sediment, sitewide	

Channel Catfish			
		Diet	Fraction
FIR (kg ww/da	0.036	Worms (freshwater	0.55
SIR (kg dw/day	0.00073	Blue crab	0.05
BW (kg)	0.74	Fish (≤ 13 cm, abo	0.40
SUF	1	Sediment ≥ RM 4	

American eel -		
FIR (kg ww/da	0.0025	
SIR (kg dw/day	0.000025	
BW (kg)	0.032	
SUF	1	

American eel - Large (> 50cm)			
		Diet	Fraction
FIR (kg ww/da	0.024	Worms (all)	0.35
SIR (kg dw/day	0.00024	Blue crab	0.25
BW (kg)	0.45	Fish (≤ 20 cm)	0.40
SUF	1	Sediment, sitewide	

Largemouth bass			
		Diet	Fraction
FIR (kg ww/da	0.0054	Worms (freshv	0.10
SIR (kg dw/day	0.000011	Blue crab	0.10
BW (kg)	0.078	Fish (≤ 13 cm,	0.80
SUF	1	Sediment ≥ RM 4	

Common Carp			
		Diet	Fraction
FIR (kg ww/da	0.11	Worms (freshwater	0.8
SIR (kg dw/day	0.0033	Blue crab	0.17
BW (kg)	2.7	Fish (≤ 11 cm, abo	0.01
SUF	1	Sediment ≥ RM 4	

White		
FIR (kg ww/da	0.039	
SIR (kg dw/day	0.00077	
BW (kg)	0.79	
SUF	1	

White Catfish			
		Diet	Fraction
FIR (kg ww/da	0.037	Worms (all)	0.55
SIR (kg dw/day	0.00074	Blue crab	0.05
BW (kg)	0.75	Fish (≤ 13 cm)	0.40
SUF	1	Sediment ≥ RM 4	

Smallmouth Bass			
		Diet	Fraction
FIR (kg ww/da	0.0089	Worms (freshv	0.1
SIR (kg dw/day	0.000018	Blue crab	0.10
BW (kg)	0.14	Fish (≤ 13 cm,	0.80
SUF	1	Sediment ≥ RM 4	

Northern Pike			
		Diet	Fraction
FIR (kg ww/da	0.11	na	-
SIR (kg dw/day	0.00023	Blue crab	0.1
BW (kg)	2.8	Fish (≤ 20 cm , abc	0.90
SUF	1	Sediment ≥ RM 4	

COPEC	Prey: Prey 1 $C_{prey\ 1,\ ww}$	Prey 1 Exposure Area	Prey 2 $C_{prey\ 2,\ ww}$	Prey 2 Exposure Area	Prey 3 $C_{prey\ 3,\ ww}$	Prey 3 Exposure Area	$C_{prey,ww}$	$C_{prey,ww}$ (units)	Sediment $C_{sed,dw}$	$C_{sed,dw}$ (units)	Sediment Exposure Area	Dose C_{Dose}	C_{dose} (units)	NOAEL
Mummichog														
Cadmium	0.11	sitewide	-	na	-	na	0.11	mg/kg	5.2	mg/kg	sitewide, mudflat	0.013	mg/kg bw/day	0.0010
Chromium	21	sitewide	-	na	-	na	21	mg/kg	190	mg/kg	sitewide, mudflat	1.47	mg/kg bw/day	0.19
Cobalt	0.69	sitewide	-	na	-	na	0.69	mg/kg	7.8	mg/kg	sitewide, mudflat	0.050	mg/kg bw/day	0.14
Copper	5.8	sitewide	-	na	-	na	5.8	mg/kg	190	mg/kg	sitewide, mudflat	0.56	mg/kg bw/day	1.0
Mercury	59	sitewide	-	na	-	na	59	ug/kg	3500	ug/kg	sitewide, mudflat	7.55	ug/kg bw/day	0.56
Methyl mercury	2.9	sitewide	-	na	-	na	2.9	ug/kg	5.3	ug/kg	sitewide, mudflat	0.18	ug/kg bw/day	0.56
Nickel	13	sitewide	-	na	-	na	13	mg/kg	34	mg/kg	sitewide, mudflat	0.81	mg/kg bw/day	0.14
Selenium	0.54	sitewide	-	na	-	na	0.54	mg/kg	1.2	mg/kg	sitewide, mudflat	0.033	mg/kg bw/day	0.011
Vanadium	0.59	sitewide	-	na	-	na	0.59	mg/kg	28	mg/kg	sitewide, mudflat	0.067	mg/kg bw/day	0.019
Zinc	34	sitewide	-	na	-	na	34	mg/kg	590	mg/kg	sitewide, mudflat	2.70	mg/kg bw/day	19
Tributyltin	0.94	sitewide	-	na	-	na	0.94	ug/kg	28	ug/kg	sitewide, mudflat	0.088	ug/kg bw/day	1.2
Benzo(a)pyrene	440	sitewide	-	na	-	na	440	ug/kg	4000	ug/kg	sitewide, mudflat	30.75	ug/kg bw/day	30
Total PAHs	2400	sitewide	-	na	-	na	2400	ug/kg	43000	ug/kg	sitewide, mudflat	192.22	ug/kg bw/day	6200
Total PCB Congeners	240	sitewide	-	na	-	na	240	ug/kg	2900	ug/kg	sitewide, mudflat	17.60	ug/kg bw/day	5
PCB TEQ-Fish	0.2	sitewide	-	na	-	na	0.2	ng/kg	3.7	ng/kg	sitewide, mudflat	0.016	ng/kg bw/day	0.0027
PCDD/PCDF TEQ-Fish	38	sitewide	-	na	-	na	38	ng/kg	2800	ng/kg	sitewide, mudflat	5.49	ng/kg bw/day	0.0027
Total TEQ-Fish	39	sitewide	-	na	-	na	39	ng/kg	2800	ng/kg	sitewide, mudflat	5.55	ng/kg bw/day	0.0027
Total DDx	16	sitewide	-	na	-	na	16	ug/kg	230	ug/kg	sitewide, mudflat	1.22	ug/kg bw/day	14.3
White perch														
Cadmium	0.11	sitewide	0.11	sitewide	0.044	sitewide	0.1001	mg/kg	4.9	mg/kg	sitewide	0.01	mg/kg bw/day	0.0010
Chromium	21	sitewide	1.4	sitewide	9.1	sitewide	16.275	mg/kg	160	mg/kg	sitewide	1.29	mg/kg bw/day	0.19
Cobalt	0.69	sitewide	0.076	sitewide	0.19	sitewide	0.5229	mg/kg	7.5	mg/kg	sitewide	0.04	mg/kg bw/day	0.14
Copper	5.8	sitewide	24.6	sitewide	3.1	sitewide	8.215	mg/kg	170	mg/kg	sitewide	0.71	mg/kg bw/day	1.0
Mercury	59	sitewide	140	sitewide	59	sitewide	71.15	ug/kg	2900	ug/kg	sitewide	7.20	ug/kg bw/day	0.56
Methyl mercury	2.9	sitewide	120	sitewide	58	sitewide	28.73	ug/kg	3.9	ug/kg	sitewide	2.07	ug/kg bw/day	0.56

Nickel	13	sitewide	1	sitewide	6	sitewide	10.15	mg/kg	32	mg/kg	sitewide	0.75	mg/kg bw/day	0.14
Selenium	0.54	sitewide	0.79	sitewide	0.69	sitewide	0.6	mg/kg	0.93	mg/kg	sitewide	0.04	mg/kg bw/day	0.011
Vanadium	0.59	sitewide	0.12	sitewide	0.66	sitewide	0.53	mg/kg	27	mg/kg	sitewide	0.06	mg/kg bw/day	0.019
Zinc	34	sitewide	36.4	sitewide	43.7	sitewide	35.815	mg/kg	490	mg/kg	sitewide	2.93	mg/kg bw/day	19
Tributyltin	0.94	sitewide	2	sitewide	23	sitewide	4.408	ug/kg	25	ug/kg	sitewide	0.34	ug/kg bw/day	1.2
Benzo(a)pyrene	440	sitewide	10	sitewide	27	sitewide	313.55	ug/kg	4700	ug/kg	sitewide	25.93	ug/kg bw/day	30
Total PAHs	2400	sitewide	190	sitewide	410	sitewide	1770	ug/kg	62000	ug/kg	sitewide	171.91	ug/kg bw/day	6200
Total PCB Congeners	240	sitewide	350	sitewide	570	sitewide	306	ug/kg	2600	ug/kg	sitewide	23.88	ug/kg bw/day	5
PCB TEQ-Fish	0.2	sitewide	0.78	sitewide	0.6	sitewide	0.347	ng/kg	3.1	ng/kg	sitewide	0.03	ng/kg bw/day	0.0027
PCDD/PCDF TEQ-Fish	38	sitewide	62	sitewide	46	sitewide	42.8	ng/kg	2200	ng/kg	sitewide	4.66	ng/kg bw/day	0.0027
Total TEQ-Fish	39	sitewide	63	sitewide	46	sitewide	43.65	ng/kg	2200	ng/kg	sitewide	4.72	ng/kg bw/day	0.0027
Total DDx	16	sitewide	68	sitewide	62	sitewide	30.7	ug/kg	190	ug/kg	sitewide	2.34	ug/kg bw/day	14.3
Channel catfish														
Cadmium	0.13	≥ RM 4 to DD	0.11	≥ RM 4 to DD	0.049	≥ RM 4 to DD	0.0966	mg/kg	5.3	mg/kg	≥ RM 4	0.01	mg/kg bw/day	0.0010
Chromium	30	≥ RM 4 to DD	1.4	≥ RM 4 to DD	13	≥ RM 4 to DD	21.77	mg/kg	170	mg/kg	≥ RM 4	1.23	mg/kg bw/day	0.19
Cobalt	0.87	≥ RM 4 to DD	0.076	≥ RM 4 to DD	0.24	≥ RM 4 to DD	0.5783	mg/kg	7.1	mg/kg	≥ RM 4	0.04	mg/kg bw/day	0.14
Copper	7.3	≥ RM 4 to DD	24.6	≥ RM 4 to DD	3.5	≥ RM 4 to DD	6.645	mg/kg	150	mg/kg	≥ RM 4	0.47	mg/kg bw/day	1.0
Mercury	43	≥ RM 4 to DD	140	≥ RM 4 to DD	54	≥ RM 4 to DD	52.25	ug/kg	3000	ug/kg	≥ RM 4	5.50	ug/kg bw/day	0.56
Methyl mercury	3.1	≥ RM 4 to DD	120	≥ RM 4 to DD	32	≥ RM 4 to DD	20.505	ug/kg	4.1	ug/kg	≥ RM 4	1.00	ug/kg bw/day	0.56
Nickel	18	≥ RM 4 to DD	1	≥ RM 4 to DD	9.8	≥ RM 4 to DD	13.87	mg/kg	32	mg/kg	≥ RM 4	0.71	mg/kg bw/day	0.14
Selenium	0.61	≥ RM 4 to DD	0.79	≥ RM 4 to DD	0.67	≥ RM 4 to DD	0.643	mg/kg	0.81	mg/kg	≥ RM 4	0.03	mg/kg bw/day	0.011
Vanadium	0.77	≥ RM 4 to DD	0.12	≥ RM 4 to DD	0.88	≥ RM 4 to DD	0.7815	mg/kg	27	mg/kg	≥ RM 4	0.06	mg/kg bw/day	0.019
Zinc	38.3	≥ RM 4 to DD	36.4	≥ RM 4 to DD	40.5	≥ RM 4 to DD	39.085	mg/kg	510	mg/kg	≥ RM 4	2.40	mg/kg bw/day	19
Tributyltin	1.4	≥ RM 4 to DD	2	≥ RM 4 to DD	3.5	≥ RM 4 to DD	2.27	ug/kg	26	ug/kg	≥ RM 4	0.14	ug/kg bw/day	1.2
Benzo(a)pyrene	440	≥ RM 4 to DD	10	≥ RM 4 to DD	40	≥ RM 4 to DD	258.5	ug/kg	4800	ug/kg	≥ RM 4	17.31	ug/kg bw/day	30
Total PAHs	3700	≥ RM 4 to DD	190	≥ RM 4 to DD	570	≥ RM 4 to DD	2272.5	ug/kg	66000	ug/kg	≥ RM 4	175.66	ug/kg bw/day	6200
Total PCB Congeners	270	≥ RM 4 to DD	350	≥ RM 4 to DD	630	≥ RM 4 to DD	418	ug/kg	2800	ug/kg	≥ RM 4	23.10	ug/kg bw/day	5
PCB TEQ-Fish	0.3	≥ RM 4 to DD	0.78	≥ RM 4 to DD	0.65	≥ RM 4 to DD	0.464	ng/kg	3.4	ng/kg	≥ RM 4	0.03	ng/kg bw/day	0.0027
PCDD/PCDF TEQ-Fish	49	≥ RM 4 to DD	62	≥ RM 4 to DD	52	≥ RM 4 to DD	50.85	ng/kg	2700	ng/kg	≥ RM 4	5.14	ng/kg bw/day	0.0027
Total TEQ-Fish	49	≥ RM 4 to DD	63	≥ RM 4 to DD	52	≥ RM 4 to DD	50.9	ng/kg	2700	ng/kg	≥ RM 4	5.14	ng/kg bw/day	0.0027
Total DDx	19	≥ RM 4 to DD	68	≥ RM 4 to DD	70	≥ RM 4 to DD	41.85	ug/kg	200	ug/kg	≥ RM 4	2.23	ug/kg bw/day	14.3
American eel - Small (<50 cm)														
Cadmium	0.11	sitewide	0.11	sitewide	0.039	sitewide	0.1029	mg/kg	4.9	mg/kg	sitewide	0.01	mg/kg bw/day	0.0010
Chromium	21	sitewide	1.4	sitewide	11	sitewide	18.04	mg/kg	160	mg/kg	sitewide	1.53	mg/kg bw/day	0.19
Cobalt	0.69	sitewide	0.076	sitewide	0.21	sitewide	0.5806	mg/kg	7.5	mg/kg	sitewide	0.05	mg/kg bw/day	0.14
Copper	5.8	sitewide	24.6	sitewide	3.2	sitewide	7.42	mg/kg	170	mg/kg	sitewide	0.71	mg/kg bw/day	1.0
Mercury	59	sitewide	140	sitewide	59	sitewide	67.1	ug/kg	2900	ug/kg	sitewide	7.51	ug/kg bw/day	0.56
Methyl mercury	2.9	sitewide	120	sitewide	55	sitewide	19.82	ug/kg	3.9	ug/kg	sitewide	1.55	ug/kg bw/day	0.56
Nickel	13	sitewide	1	sitewide	7.1	sitewide	11.21	mg/kg	32	mg/kg	sitewide	0.90	mg/kg bw/day	0.14
Selenium	0.54	sitewide	0.79	sitewide	0.67	sitewide	0.578	mg/kg	0.93	mg/kg	sitewide	0.05	mg/kg bw/day	0.011
Vanadium	0.59	sitewide	0.12	sitewide	0.72	sitewide	0.556	mg/kg	27	mg/kg	sitewide	0.06	mg/kg bw/day	0.019
Zinc	34	sitewide	36.4	sitewide	42.4	sitewide	35.08	mg/kg	490	mg/kg	sitewide	3.12	mg/kg bw/day	19
Tributyltin	0.94	sitewide	2	sitewide	20	sitewide	2.952	ug/kg	25	ug/kg	sitewide	0.25	ug/kg bw/day	1.2
Benzo(a)pyrene	440	sitewide	10	sitewide	32	sitewide	356.2	ug/kg	4700	ug/kg	sitewide	31.50	ug/kg bw/day	30
Total PAHs	2400	sitewide	190	sitewide	470	sitewide	1986	ug/kg	62000	ug/kg	sitewide	203.59	ug/kg bw/day	6200
Total PCB Congeners	240	sitewide	350	sitewide	560	sitewide	283	ug/kg	2600	ug/kg	sitewide	24.14	ug/kg bw/day	5
PCB TEQ-Fish	0.2	sitewide	0.78	sitewide	0.59	sitewide	0.297	ng/kg	3.1	ng/kg	sitewide	0.03	ng/kg bw/day	0.0027
PCDD/PCDF TEQ-Fish	38	sitewide	62	sitewide	43	sitewide	40.9	ng/kg	2200	ng/kg	sitewide	4.91	ng/kg bw/day	0.0027
Total TEQ-Fish	39	sitewide	63	sitewide	46	sitewide	42.1	ng/kg	2200	ng/kg	sitewide	5.01	ng/kg bw/day	0.0027
Total DDx	16	sitewide	68	sitewide	62	sitewide	25.8	ug/kg	190	ug/kg	sitewide	2.16	ug/kg bw/day	14.3
American eel - Large (> 50 cm)														
Cadmium	0.11	sitewide	0.11	sitewide	0.039	sitewide	0.0816	mg/kg	4.9	mg/kg	sitewide	0.01	mg/kg bw/day	0.0010
Chromium	21	sitewide	1.4	sitewide	12	sitewide	12.5	mg/kg	160	mg/kg	sitewide	0.75	mg/kg bw/day	0.19
Cobalt	0.69	sitewide	0.076	sitewide	0.19	sitewide	0.3365	mg/kg	7.5	mg/kg	sitewide	0.02	mg/kg bw/day	0.14
Copper	5.8	sitewide	24.6	sitewide	4.8	sitewide	10.1	mg/kg	170	mg/kg	sitewide	0.63	mg/kg bw/day	1.0

Mercury	59	sitewide	140	sitewide	87	sitewide	90.45	ug/kg	2900	ug/kg	sitewide	6.37 ug/kg bw/day 0.56
Methyl mercury	2.9	sitewide	120	sitewide	78	sitewide	62.215	ug/kg	3.9	ug/kg	sitewide	3.32 ug/kg bw/day 0.56
Nickel	13	sitewide	1	sitewide	7.8	sitewide	7.92	mg/kg	32	mg/kg	sitewide	0.44 mg/kg bw/day 0.14
Selenium	0.54	sitewide	0.79	sitewide	0.81	sitewide	0.7105	mg/kg	0.93	mg/kg	sitewide	0.04 mg/kg bw/day 0.011
Vanadium	0.59	sitewide	0.12	sitewide	0.57	sitewide	0.4645	mg/kg	27	mg/kg	sitewide	0.04 mg/kg bw/day 0.019
Zinc	34	sitewide	36.4	sitewide	36.8	sitewide	35.72	mg/kg	490	mg/kg	sitewide	2.17 mg/kg bw/day 19
Tributyltin	0.94	sitewide	2	sitewide	13	sitewide	6.029	ug/kg	25	ug/kg	sitewide	0.33 ug/kg bw/day 1.2
Benzo(a)pyrene	440	sitewide	10	sitewide	32	sitewide	169.3	ug/kg	4700	ug/kg	sitewide	11.54 ug/kg bw/day 30
Total PAHs	2400	sitewide	190	sitewide	420	sitewide	1055.5	ug/kg	62000	ug/kg	sitewide	89.36 ug/kg bw/day 6200
Total PCB Congeners	240	sitewide	350	sitewide	1800	sitewide	891.5	ug/kg	2600	ug/kg	sitewide	48.93 ug/kg bw/day 5
PCB TEQ-Fish	0.2	sitewide	0.78	sitewide	1.5	sitewide	0.865	ng/kg	3.1	ng/kg	sitewide	0.05 ng/kg bw/day 0.0027
PCDD/PCDF TEQ-Fish	38	sitewide	62	sitewide	110	sitewide	72.8	ng/kg	2200	ng/kg	sitewide	5.06 ng/kg bw/day 0.0027
Total TEQ-Fish	39	sitewide	63	sitewide	120	sitewide	77.4	ng/kg	2200	ng/kg	sitewide	5.30 ng/kg bw/day 0.0027
Total DDx	16	sitewide	68	sitewide	130	sitewide	74.6	ug/kg	190	ug/kg	sitewide	4.08 ug/kg bw/day 14.3
Largemouth bass												
Cadmium	0.13	≥ RM 4	0.11	≥ RM 4	0.049	≥ RM 4	0.0632	mg/kg	5.3	mg/kg	≥ RM 4	0.01 mg/kg bw/day 0.0010
Chromium	30	≥ RM 4	1.4	≥ RM 4	13	≥ RM 4	13.54	mg/kg	170	mg/kg	≥ RM 4	0.96 mg/kg bw/day 0.19
Cobalt	0.87	≥ RM 4	0.076	≥ RM 4	0.24	≥ RM 4	0.2866	mg/kg	7.1	mg/kg	≥ RM 4	0.02 mg/kg bw/day 0.14
Copper	7.3	≥ RM 4	24.6	≥ RM 4	3.5	≥ RM 4	5.99	mg/kg	150	mg/kg	≥ RM 4	0.44 mg/kg bw/day 1.0
Mercury	43	≥ RM 4	140	≥ RM 4	54	≥ RM 4	61.5	ug/kg	3000	ug/kg	≥ RM 4	4.68 ug/kg bw/day 0.56
Methyl mercury	3.1	≥ RM 4	120	≥ RM 4	32	≥ RM 4	37.91	ug/kg	4.1	ug/kg	≥ RM 4	2.63 ug/kg bw/day 0.56
Nickel	18	≥ RM 4	1	≥ RM 4	9.8	≥ RM 4	9.74	mg/kg	32	mg/kg	≥ RM 4	0.68 mg/kg bw/day 0.14
Selenium	0.61	≥ RM 4	0.79	≥ RM 4	0.67	≥ RM 4	0.676	mg/kg	0.81	mg/kg	≥ RM 4	0.05 mg/kg bw/day 0.011
Vanadium	0.77	≥ RM 4	0.12	≥ RM 4	0.88	≥ RM 4	0.793	mg/kg	27	mg/kg	≥ RM 4	0.06 mg/kg bw/day 0.019
Zinc	38.3	≥ RM 4	36.4	≥ RM 4	40.5	≥ RM 4	39.87	mg/kg	510	mg/kg	≥ RM 4	2.83 mg/kg bw/day 19
Tributyltin	1.4	≥ RM 4	2	≥ RM 4	3.5	≥ RM 4	3.14	ug/kg	26	ug/kg	≥ RM 4	0.22 ug/kg bw/day 1.2
Benzo(a)pyrene	440	≥ RM 4	10	≥ RM 4	40	≥ RM 4	77	ug/kg	4800	ug/kg	≥ RM 4	6.01 ug/kg bw/day 30
Total PAHs	3700	≥ RM 4	190	≥ RM 4	570	≥ RM 4	845	ug/kg	66000	ug/kg	≥ RM 4	67.81 ug/kg bw/day 6200
Total PCB Congeners	270	≥ RM 4	350	≥ RM 4	630	≥ RM 4	566	ug/kg	2800	ug/kg	≥ RM 4	39.58 ug/kg bw/day 5
PCB TEQ-Fish	0.3	≥ RM 4	0.78	≥ RM 4	0.65	≥ RM 4	0.628	ng/kg	3.4	ng/kg	≥ RM 4	0.04 ng/kg bw/day 0.0027
PCDD/PCDF TEQ-Fish	49	≥ RM 4	62	≥ RM 4	52	≥ RM 4	52.7	ng/kg	2700	ng/kg	≥ RM 4	4.03 ng/kg bw/day 0.0027
Total TEQ-Fish	49	≥ RM 4	63	≥ RM 4	52	≥ RM 4	52.8	ng/kg	2700	ng/kg	≥ RM 4	4.04 ng/kg bw/day 0.0027
Total DDx	19	≥ RM 4	68	≥ RM 4	70	≥ RM 4	64.7	ug/kg	200	ug/kg	≥ RM 4	4.51 ug/kg bw/day 14.3
Common carp												
Cadmium	0.13	≥ RM 4	0.11	≥ RM 4	0.043	≥ RM 4	0.12573	mg/kg	5.3	mg/kg	≥ RM 4	0.012 mg/kg bw/day 0.0010
Chromium	30	≥ RM 4	1.4	≥ RM 4	11	≥ RM 4	24.948	mg/kg	170	mg/kg	≥ RM 4	1.22 mg/kg bw/day 0.19
Cobalt	0.87	≥ RM 4	0.076	≥ RM 4	0.22	≥ RM 4	0.72852	mg/kg	7.1	mg/kg	≥ RM 4	0.04 mg/kg bw/day 0.14
Copper	7.3	≥ RM 4	24.6	≥ RM 4	3.2	≥ RM 4	10.2	mg/kg	150	mg/kg	≥ RM 4	0.60 mg/kg bw/day 1.0
Mercury	43	≥ RM 4	140	≥ RM 4	51	≥ RM 4	59.57	ug/kg	3000	ug/kg	≥ RM 4	6.09 ug/kg bw/day 0.56
Methyl mercury	3.1	≥ RM 4	120	≥ RM 4	33	≥ RM 4	23.272	ug/kg	4.1	ug/kg	≥ RM 4	0.95 ug/kg bw/day 0.56
Nickel	18	≥ RM 4	1	≥ RM 4	7.4	≥ RM 4	15.004	mg/kg	32	mg/kg	≥ RM 4	0.65 mg/kg bw/day 0.14
Selenium	0.61	≥ RM 4	0.79	≥ RM 4	0.7	≥ RM 4	0.6415	mg/kg	0.81	mg/kg	≥ RM 4	0.03 mg/kg bw/day 0.011
Vanadium	0.77	≥ RM 4	0.12	≥ RM 4	0.84	≥ RM 4	0.6602	mg/kg	27	mg/kg	≥ RM 4	0.06 mg/kg bw/day 0.019
Zinc	38.3	≥ RM 4	36.4	≥ RM 4	42.3	≥ RM 4	38.017	mg/kg	510	mg/kg	≥ RM 4	2.17 mg/kg bw/day 19
Tributyltin	1.4	≥ RM 4	2	≥ RM 4	3.8	≥ RM 4	1.526	ug/kg	26	ug/kg	≥ RM 4	0.09 ug/kg bw/day 1.2
Benzo(a)pyrene	440	≥ RM 4	10	≥ RM 4	34	≥ RM 4	362.84	ug/kg	4800	ug/kg	≥ RM 4	20.65 ug/kg bw/day 30
Total PAHs	3700	≥ RM 4	190	≥ RM 4	530	≥ RM 4	3071.6	ug/kg	66000	ug/kg	≥ RM 4	205.81 ug/kg bw/day 6200
Total PCB Congeners	270	≥ RM 4	350	≥ RM 4	660	≥ RM 4	287.5	ug/kg	2800	ug/kg	≥ RM 4	15.14 ug/kg bw/day 5
PCB TEQ-Fish	0.3	≥ RM 4	0.78	≥ RM 4	0.68	≥ RM 4	0.3854	ng/kg	3.4	ng/kg	≥ RM 4	0.02 ng/kg bw/day 0.0027
PCDD/PCDF TEQ-Fish	49	≥ RM 4	62	≥ RM 4	54	≥ RM 4	51.26	ng/kg	2700	ng/kg	≥ RM 4	5.39 ng/kg bw/day 0.0027
Total TEQ-Fish	49	≥ RM 4	63	≥ RM 4	55	≥ RM 4	51.44	ng/kg	2700	ng/kg	≥ RM 4	5.40 ng/kg bw/day 0.0027
Total DDx	19	≥ RM 4	68	≥ RM 4	72	≥ RM 4	27.86	ug/kg	200	ug/kg	≥ RM 4	1.38 ug/kg bw/day 14.3
White Sucker												
Cadmium	0.13	≥ RM 4	0.11	≥ RM 4	-	na	0.128	mg/kg	5.3	mg/kg	≥ RM 4	0.01 mg/kg bw/day 0.0010
Chromium	30	≥ RM 4	1.4	≥ RM 4	-	na	27.14	mg/kg	170	mg/kg	≥ RM 4	1.51 mg/kg bw/day 0.19

Cobalt	0.87 ≥ RM 4	0.076 ≥ RM 4	- na	0.7906 mg/kg	7.1 mg/kg	≥ RM 4	0.05 mg/kg bw/day	0.14
Copper	7.3 ≥ RM 4	24.6 ≥ RM 4	- na	9.03 mg/kg	150 mg/kg	≥ RM 4	0.59 mg/kg bw/day	1.0
Mercury	43 ≥ RM 4	140 ≥ RM 4	- na	52.7 ug/kg	3000 ug/kg	≥ RM 4	5.53 ug/kg bw/day	0.56
Methyl mercury	3.1 ≥ RM 4	120 ≥ RM 4	- na	14.79 ug/kg	4.1 ug/kg	≥ RM 4	0.73 ug/kg bw/day	0.56
Nickel	18 ≥ RM 4	1 ≥ RM 4	- na	16.3 mg/kg	32 mg/kg	≥ RM 4	0.84 mg/kg bw/day	0.14
Selenium	0.61 ≥ RM 4	0.79 ≥ RM 4	- na	0.628 mg/kg	0.81 mg/kg	≥ RM 4	0.03 mg/kg bw/day	0.011
Vanadium	0.77 ≥ RM 4	0.12 ≥ RM 4	- na	0.705 mg/kg	27 mg/kg	≥ RM 4	0.06 mg/kg bw/day	0.019
Zinc	38.3 ≥ RM 4	36.4 ≥ RM 4	- na	38.11 mg/kg	510 mg/kg	≥ RM 4	2.38 mg/kg bw/day	19
Tributyltin	1.4 ≥ RM 4	2 ≥ RM 4	- na	1.46 ug/kg	26 ug/kg	≥ RM 4	0.10 ug/kg bw/day	1.2
Benzo(a)pyrene	440 ≥ RM 4	10 ≥ RM 4	- na	397 ug/kg	4800 ug/kg	≥ RM 4	24.28 ug/kg bw/day	30
Total PAHs	3700 ≥ RM 4	190 ≥ RM 4	- na	3349 ug/kg	66000 ug/kg	≥ RM 4	229.66 ug/kg bw/day	6200
Total PCB Congeners	270 ≥ RM 4	350 ≥ RM 4	- na	278 ug/kg	2800 ug/kg	≥ RM 4	16.45 ug/kg bw/day	5
PCB TEQ-Fish	0.3 ≥ RM 4	0.78 ≥ RM 4	- na	0.348 ng/kg	3.4 ng/kg	≥ RM 4	0.02 ng/kg bw/day	0.0027
PCDD/PCDF TEQ-Fish	49 ≥ RM 4	62 ≥ RM 4	- na	50.3 ng/kg	2700 ng/kg	≥ RM 4	5.11 ng/kg bw/day	0.0027
Total TEQ-Fish	49 ≥ RM 4	63 ≥ RM 4	- na	50.4 ng/kg	2700 ng/kg	≥ RM 4	5.12 ng/kg bw/day	0.0027
Total DDx	19 ≥ RM 4	68 ≥ RM 4	- na	23.9 ug/kg	200 ug/kg	≥ RM 4	1.37 ug/kg bw/day	14.3
White Catfish								
Cadmium	0.11 sitewide	0.11 sitewide	0.039 sitewide	0.0816 mg/kg	4.9 mg/kg	sitewide	0.01 mg/kg bw/day	0.0010
Chromium	21 sitewide	1.4 sitewide	11 sitewide	16.02 mg/kg	160 mg/kg	sitewide	0.95 mg/kg bw/day	0.19
Cobalt	0.69 sitewide	0.076 sitewide	0.21 sitewide	0.4673 mg/kg	7.5 mg/kg	sitewide	0.03 mg/kg bw/day	0.14
Copper	5.8 sitewide	24.6 sitewide	3.2 sitewide	5.7 mg/kg	170 mg/kg	sitewide	0.45 mg/kg bw/day	1.0
Mercury	59 sitewide	140 sitewide	59 sitewide	63.05 ug/kg	2900 ug/kg	sitewide	5.97 ug/kg bw/day	0.56
Methyl mercury	2.9 sitewide	120 sitewide	55 sitewide	29.595 ug/kg	3.9 ug/kg	sitewide	1.46 ug/kg bw/day	0.56
Nickel	13 sitewide	1 sitewide	7.1 sitewide	10.04 mg/kg	32 mg/kg	sitewide	0.53 mg/kg bw/day	0.14
Selenium	0.54 sitewide	0.79 sitewide	0.67 sitewide	0.6045 mg/kg	0.93 mg/kg	sitewide	0.03 mg/kg bw/day	0.011
Vanadium	0.59 sitewide	0.12 sitewide	0.72 sitewide	0.6185 mg/kg	27 mg/kg	sitewide	0.06 mg/kg bw/day	0.019
Zinc	34 sitewide	36.4 sitewide	42.4 sitewide	37.48 mg/kg	490 mg/kg	sitewide	2.33 mg/kg bw/day	19
Tributyltin	0.94 sitewide	2 sitewide	20 sitewide	8.617 ug/kg	25 ug/kg	sitewide	0.45 ug/kg bw/day	1.2
Benzo(a)pyrene	440 sitewide	10 sitewide	32 sitewide	255.3 ug/kg	4700 ug/kg	sitewide	17.23 ug/kg bw/day	30
Total PAHs	2400 sitewide	190 sitewide	470 sitewide	1517.5 ug/kg	62000 ug/kg	sitewide	136.04 ug/kg bw/day	6200
Total PCB Congeners	240 sitewide	350 sitewide	560 sitewide	373.5 ug/kg	2600 ug/kg	sitewide	20.99 ug/kg bw/day	5
PCB TEQ-Fish	0.2 sitewide	0.78 sitewide	0.59 sitewide	0.385 ng/kg	3.1 ng/kg	sitewide	0.02 ng/kg bw/day	0.0027
PCDD/PCDF TEQ-Fish	38 sitewide	62 sitewide	43 sitewide	41.2 ng/kg	2200 ng/kg	sitewide	4.20 ng/kg bw/day	0.0027
Total TEQ-Fish	39 sitewide	63 sitewide	46 sitewide	43 ng/kg	2200 ng/kg	sitewide	4.29 ng/kg bw/day	0.0027
Total DDx	16 sitewide	68 sitewide	62 sitewide	37 ug/kg	190 ug/kg	sitewide	2.01 ug/kg bw/day	14.3
Smallmouth bass								
Cadmium	0.13 ≥ RM 4	0.11 ≥ RM 4	0.049 ≥ RM 4	0.0632 mg/kg	5.3 mg/kg	≥ RM 4	0.00 mg/kg bw/day	0.0010
Chromium	30 ≥ RM 4	1.4 ≥ RM 4	13 ≥ RM 4	13.54 mg/kg	170 mg/kg	≥ RM 4	0.88 mg/kg bw/day	0.19
Cobalt	0.87 ≥ RM 4	0.076 ≥ RM 4	0.24 ≥ RM 4	0.2866 mg/kg	7.1 mg/kg	≥ RM 4	0.02 mg/kg bw/day	0.14
Copper	7.3 ≥ RM 4	24.6 ≥ RM 4	3.5 ≥ RM 4	5.99 mg/kg	150 mg/kg	≥ RM 4	0.40 mg/kg bw/day	1.0
Mercury	43 ≥ RM 4	140 ≥ RM 4	54 ≥ RM 4	61.5 ug/kg	3000 ug/kg	≥ RM 4	4.30 ug/kg bw/day	0.56
Methyl mercury	3.1 ≥ RM 4	120 ≥ RM 4	32 ≥ RM 4	37.91 ug/kg	4.1 ug/kg	≥ RM 4	2.41 ug/kg bw/day	0.56
Nickel	18 ≥ RM 4	1 ≥ RM 4	9.8 ≥ RM 4	9.74 mg/kg	32 mg/kg	≥ RM 4	0.62 mg/kg bw/day	0.14
Selenium	0.61 ≥ RM 4	0.79 ≥ RM 4	0.67 ≥ RM 4	0.676 mg/kg	0.81 mg/kg	≥ RM 4	0.04 mg/kg bw/day	0.011
Vanadium	0.77 ≥ RM 4	0.12 ≥ RM 4	0.88 ≥ RM 4	0.793 mg/kg	27 mg/kg	≥ RM 4	0.05 mg/kg bw/day	0.019
Zinc	38.3 ≥ RM 4	36.4 ≥ RM 4	40.5 ≥ RM 4	39.87 mg/kg	510 mg/kg	≥ RM 4	2.60 mg/kg bw/day	19
Tributyltin	1.4 ≥ RM 4	2 ≥ RM 4	3.5 ≥ RM 4	3.14 ug/kg	26 ug/kg	≥ RM 4	0.20 ug/kg bw/day	1.2
Benzo(a)pyrene	440 ≥ RM 4	10 ≥ RM 4	40 ≥ RM 4	77 ug/kg	4800 ug/kg	≥ RM 4	5.51 ug/kg bw/day	30
Total PAHs	3700 ≥ RM 4	190 ≥ RM 4	570 ≥ RM 4	845 ug/kg	66000 ug/kg	≥ RM 4	62.20 ug/kg bw/day	6200
Total PCB Congeners	270 ≥ RM 4	350 ≥ RM 4	630 ≥ RM 4	566 ug/kg	2800 ug/kg	≥ RM 4	36.34 ug/kg bw/day	5
PCB TEQ-Fish	0.3 ≥ RM 4	0.78 ≥ RM 4	0.65 ≥ RM 4	0.628 ng/kg	3.4 ng/kg	≥ RM 4	0.04 ng/kg bw/day	0.0027
PCDD/PCDF TEQ-Fish	49 ≥ RM 4	62 ≥ RM 4	52 ≥ RM 4	52.7 ng/kg	2700 ng/kg	≥ RM 4	3.70 ng/kg bw/day	0.0027
Total TEQ-Fish	49 ≥ RM 4	63 ≥ RM 4	52 ≥ RM 4	52.8 ng/kg	2700 ng/kg	≥ RM 4	3.70 ng/kg bw/day	0.0027
Total DDx	19 ≥ RM 4	68 ≥ RM 4	70 ≥ RM 4	64.7 ug/kg	200 ug/kg	≥ RM 4	4.14 ug/kg bw/day	14.3
Northern Pike								

Cadmium	0.11 ≥ RM 4	0.044 ≥ RM 4	- na	0.0506 mg/kg	5.3 mg/kg	≥ RM 4	0.00 mg/kg bw/day	0.0010
Chromium	1.4 ≥ RM 4	16 ≥ RM 4	- na	14.54 mg/kg	170 mg/kg	≥ RM 4	0.59 mg/kg bw/day	0.19
Cobalt	0.076 ≥ RM 4	0.22 ≥ RM 4	- na	0.2056 mg/kg	7.1 mg/kg	≥ RM 4	0.01 mg/kg bw/day	0.14
Copper	24.6 ≥ RM 4	5.3 ≥ RM 4	- na	7.23 mg/kg	150 mg/kg	≥ RM 4	0.30 mg/kg bw/day	1.0
Mercury	140 ≥ RM 4	94 ≥ RM 4	- na	98.6 ug/kg	3000 ug/kg	≥ RM 4	4.12 ug/kg bw/day	0.56
Methyl mercury	120 ≥ RM 4	100 ≥ RM 4	- na	102 ug/kg	4.1 ug/kg	≥ RM 4	4.01 ug/kg bw/day	0.56
Nickel	1 ≥ RM 4	10 ≥ RM 4	- na	9.1 mg/kg	32 mg/kg	≥ RM 4	0.36 mg/kg bw/day	0.14
Selenium	0.79 ≥ RM 4	0.84 ≥ RM 4	- na	0.835 mg/kg	0.81 mg/kg	≥ RM 4	0.03 mg/kg bw/day	0.011
Vanadium	0.12 ≥ RM 4	0.79 ≥ RM 4	- na	0.723 mg/kg	27 mg/kg	≥ RM 4	0.03 mg/kg bw/day	0.019
Zinc	36.4 ≥ RM 4	34.2 ≥ RM 4	- na	34.42 mg/kg	510 mg/kg	≥ RM 4	1.39 mg/kg bw/day	19
Tributyltin	2 ≥ RM 4	8.3 ≥ RM 4	- na	7.67 ug/kg	26 ug/kg	≥ RM 4	0.30 ug/kg bw/day	1.2
Benzo(a)pyrene	10 ≥ RM 4	38 ≥ RM 4	- na	35.2 ug/kg	4800 ug/kg	≥ RM 4	1.78 ug/kg bw/day	30
Total PAHs	190 ≥ RM 4	480 ≥ RM 4	- na	451 ug/kg	66000 ug/kg	≥ RM 4	23.14 ug/kg bw/day	6200
Total PCB Congeners	350 ≥ RM 4	1800 ≥ RM 4	- na	1655 ug/kg	2800 ug/kg	≥ RM 4	65.25 ug/kg bw/day	5
PCB TEQ-Fish	0.78 ≥ RM 4	1.5 ≥ RM 4	- na	1.428 ng/kg	3.4 ng/kg	≥ RM 4	0.06 ng/kg bw/day	0.0027
PCDD/PCDF TEQ-Fish	62 ≥ RM 4	140 ≥ RM 4	- na	132.2 ng/kg	2700 ng/kg	≥ RM 4	5.42 ng/kg bw/day	0.0027
Total TEQ-Fish	63 ≥ RM 4	140 ≥ RM 4	- na	132.3 ng/kg	2700 ng/kg	≥ RM 4	5.42 ng/kg bw/day	0.0027
Total DDx	68 ≥ RM 4	150 ≥ RM 4	- na	141.8 ug/kg	200 ug/kg	≥ RM 4	5.59 ug/kg bw/day	14.3

Note 1: "--" indicates no TRV available
BW - body weight
COC - chemical of concern
COPEC - chemical of potential ecological concern
FIR - food ingestion rate
LOAEL - Lowest observed adverse effect level
na - not applicable
NOAEL - No observed adverse effect level
SIR - sediment ingestion rate
SUF - site use factor
HQ = hazard quotient
WIR - water ingestion rate

Small (< 50 cm)	
Diet	**Fraction**
Worms (all)	0.8
Blue crab	0.10
Fish (≤ 13 cm)	0.10
Sediment, sitewide	

Sucker	
Diet	**Fraction**
Worms (freshv	0.90
Blue crab	0.1
na	-
Sediment ≥ RM 4	

TRVs		HQs	
LOAEL	**TRV units**	**NOAEL HQ**	**LOAEL HQ**
[redacted]			
0.010	mg/kg bw/day	**13**	**1.3**
-	mg/kg bw/day	**7.7**	NC
1.4	mg/kg bw/day	0.36	0.036
2.0	mg/kg bw/day	0.56	0.28
5.6	ug/kg bw/day	**13**	**1.3**
5.6	ug/kg bw/day	0.32	0.032
1.4	mg/kg bw/day	**5.8**	0.58
0.11	mg/kg bw/day	**3.0**	0.30
0.19	mg/kg bw/day	**3.5**	0.35
38	mg/kg bw/day	0.14	0.071
12	ug/kg bw/day	0.073	0.0073
40	ug/kg bw/day	**1.0**	0.77
18000	ug/kg bw/day	0.031	0.011
50	ug/kg bw/day	**3.5**	0.35
0.027	ng/kg bw/day	**6.0**	0.60
0.027	ng/kg bw/day	**2000**	**200**
0.027	ng/kg bw/day	**2100**	**210**
143	ug/kg bw/day	0.085	0.0085
[redacted]			
0.01	mg/kg bw/day	**11**	**1.1**
-	mg/kg bw/day	**6.8**	NC
1.4	mg/kg bw/day	0.31	0.031
2	mg/kg bw/day	0.71	0.36
5.6	ug/kg bw/day	**13**	**1.3**
5.6	ug/kg bw/day	**3.7**	0.37

1.4	mg/kg bw/day	**5.4**	0.54
0.11	mg/kg bw/day	**4.0**	0.40
0.19	mg/kg bw/day	**3.0**	0.30
38	mg/kg bw/day	0.15	0.077
12	ug/kg bw/day	0.28	0.028
40	ug/kg bw/day	0.86	0.65
18000	ug/kg bw/day	0.028	0.0096
50	ug/kg bw/day	**4.8**	0.48
0.027	ng/kg bw/day	**10**	**1.0**
0.027	ng/kg bw/day	**1700**	**170**
0.027	ng/kg bw/day	**1700**	**170**
143	ug/kg bw/day	0.16	0.016
0.01	mg/kg bw/day	**9.9**	0.99
-	mg/kg bw/day	**6.5**	NC
1.4	mg/kg bw/day	0.25	0.025
2	mg/kg bw/day	0.47	0.24
5.6	ug/kg bw/day	**9.8**	0.98
5.6	ug/kg bw/day	**1.8**	0.18
1.4	mg/kg bw/day	**5.0**	0.50
0.11	mg/kg bw/day	**2.9**	0.29
0.19	mg/kg bw/day	**3.4**	0.34
38	mg/kg bw/day	0.13	0.063
12	ug/kg bw/day	0.11	0.011
40	ug/kg bw/day	0.58	0.43
18000	ug/kg bw/day	0.028	0.0098
50	ug/kg bw/day	**4.6**	0.46
0.027	ng/kg bw/day	**9.6**	0.96
0.027	ng/kg bw/day	**1900**	**190**
0.027	ng/kg bw/day	**1900**	**190**
143	ug/kg bw/day	0.16	0.016
0.01	mg/kg bw/day	**12**	**1.2**
-	mg/kg bw/day	**8.1**	NC
1.4	mg/kg bw/day	0.37	0.037
2	mg/kg bw/day	0.71	0.36
5.6	ug/kg bw/day	**13**	**1.3**
5.6	ug/kg bw/day	**2.8**	0.28
1.4	mg/kg bw/day	**6.4**	0.64
0.11	mg/kg bw/day	**4.2**	0.42
0.19	mg/kg bw/day	**3.4**	0.34
38	mg/kg bw/day	0.16	0.082
12	ug/kg bw/day	0.21	0.021
40	ug/kg bw/day	**1.1**	0.79
18000	ug/kg bw/day	0.033	0.011
50	ug/kg bw/day	**4.8**	0.48
0.027	ng/kg bw/day	**9.5**	0.95
0.027	ng/kg bw/day	**1800**	**180**
0.027	ng/kg bw/day	**1900**	**190**
143	ug/kg bw/day	0.15	0.015
0.01	mg/kg bw/day	**7.0**	0.70
-	mg/kg bw/day	**4.0**	NC
1.4	mg/kg bw/day	0.16	0.016
2	mg/kg bw/day	0.63	0.31

5.6	ug/kg bw/day	**11**	**1.1**
5.6	ug/kg bw/day	**5.9**	0.59
1.4	mg/kg bw/day	**3.1**	0.31
0.11	mg/kg bw/day	**3.5**	0.35
0.19	mg/kg bw/day	**2.1**	0.21
38	mg/kg bw/day	0.11	0.057
12	ug/kg bw/day	0.28	0.028
40	ug/kg bw/day	0.38	0.29
18000	ug/kg bw/day	0.014	0.0050
50	ug/kg bw/day	**9.8**	0.98
0.027	ng/kg bw/day	**18**	**1.8**
0.027	ng/kg bw/day	**1900**	**190**
0.027	ng/kg bw/day	**2000**	**200**
143	ug/kg bw/day	0.29	0.029
[redacted]			
0.01	mg/kg bw/day	**5.1**	0.51
-	mg/kg bw/day	**5.1**	NC
1.4	mg/kg bw/day	0.15	0.015
2	mg/kg bw/day	0.44	0.22
5.6	ug/kg bw/day	**8.4**	0.84
5.6	ug/kg bw/day	**4.7**	0.47
1.4	mg/kg bw/day	**4.8**	0.48
0.11	mg/kg bw/day	**4.3**	0.43
0.19	mg/kg bw/day	**3.1**	0.31
38	mg/kg bw/day	0.15	0.075
12	ug/kg bw/day	0.18	0.018
40	ug/kg bw/day	0.20	0.15
18000	ug/kg bw/day	0.011	0.0038
50	ug/kg bw/day	**7.9**	0.79
0.027	ng/kg bw/day	**16**	**1.6**
0.027	ng/kg bw/day	**1500**	**150**
0.027	ng/kg bw/day	**1500**	**150**
143	ug/kg bw/day	0.32	0.032
[redacted]			
0.01	mg/kg bw/day	**12**	**1.2**
-	mg/kg bw/day	**6.4**	NC
1.4	mg/kg bw/day	0.27	0.027
2	mg/kg bw/day	0.60	0.30
5.6	ug/kg bw/day	**11**	**1.1**
5.6	ug/kg bw/day	**1.7**	0.17
1.4	mg/kg bw/day	**4.6**	0.46
0.11	mg/kg bw/day	**2.5**	0.25
0.19	mg/kg bw/day	**3.2**	0.32
38	mg/kg bw/day	0.11	0.057
12	ug/kg bw/day	0.078	0.0078
40	ug/kg bw/day	0.69	0.52
18000	ug/kg bw/day	0.033	0.011
50	ug/kg bw/day	**3.0**	0.30
0.027	ng/kg bw/day	**7.4**	0.74
0.027	ng/kg bw/day	**2000**	**200**
0.027	ng/kg bw/day	**2000**	**200**
143	ug/kg bw/day	0.096	0.0096
[redacted]			
0.01	mg/kg bw/day	**11**	**1.1**
-	mg/kg bw/day	**7.9**	NC

1.4	mg/kg bw/day	0.33	0.033
2	mg/kg bw/day	0.59	0.30
5.6	ug/kg bw/day	**9.9**	0.99
5.6	ug/kg bw/day	**1.3**	0.13
1.4	mg/kg bw/day	**6.0**	0.60
0.11	mg/kg bw/day	**2.9**	0.29
0.19	mg/kg bw/day	**3.2**	0.32
38	mg/kg bw/day	0.13	0.063
12	ug/kg bw/day	0.081	0.0081
40	ug/kg bw/day	0.81	0.61
18000	ug/kg bw/day	0.037	0.013
50	ug/kg bw/day	**3.3**	0.33
0.027	ng/kg bw/day	**7.6**	0.76
0.027	ng/kg bw/day	**1900**	**190**
0.027	ng/kg bw/day	**1900**	**190**
143	ug/kg bw/day	0.096	0.0096
0.01	mg/kg bw/day	**8.9**	0.89
-	mg/kg bw/day	**5.0**	NC
1.4	mg/kg bw/day	0.22	0.022
2	mg/kg bw/day	0.45	0.22
5.6	ug/kg bw/day	**11**	**1.1**
5.6	ug/kg bw/day	**2.6**	0.26
1.4	mg/kg bw/day	**3.8**	0.38
0.11	mg/kg bw/day	**2.8**	0.28
0.19	mg/kg bw/day	**3.0**	0.30
38	mg/kg bw/day	0.12	0.061
12	ug/kg bw/day	0.37	0.037
40	ug/kg bw/day	0.57	0.43
18000	ug/kg bw/day	0.022	0.0076
50	ug/kg bw/day	**4.2**	0.42
0.027	ng/kg bw/day	**8.2**	0.82
0.027	ng/kg bw/day	**1600**	**160**
0.027	ng/kg bw/day	**1600**	**160**
143	ug/kg bw/day	0.14	0.014
0.01	mg/kg bw/day	**4.7**	0.47
-	mg/kg bw/day	**4.6**	NC
1.4	mg/kg bw/day	0.14	0.014
2	mg/kg bw/day	0.40	0.20
5.6	ug/kg bw/day	**7.7**	0.77
5.6	ug/kg bw/day	**4.3**	0.43
1.4	mg/kg bw/day	**4.5**	0.45
0.11	mg/kg bw/day	**3.9**	0.39
0.19	mg/kg bw/day	**2.8**	0.28
38	mg/kg bw/day	0.14	0.068
12	ug/kg bw/day	0.17	0.017
40	ug/kg bw/day	0.18	0.14
18000	ug/kg bw/day	0.010	0.0035
50	ug/kg bw/day	**7.3**	0.73
0.027	ng/kg bw/day	**15**	**1.5**
0.027	ng/kg bw/day	**1400**	**140**
0.027	ng/kg bw/day	**1400**	**140**
143	ug/kg bw/day	0.29	0.029

0.01	mg/kg bw/day	**2.4**	0.24
-	mg/kg bw/day	**3.1**	NC
1.4	mg/kg bw/day	0.062	0.0062
2	mg/kg bw/day	0.30	0.15
5.6	ug/kg bw/day	**7.4**	0.74
5.6	ug/kg bw/day	**7.2**	0.72
1.4	mg/kg bw/day	**2.6**	0.26
0.11	mg/kg bw/day	**3.0**	0.30
0.19	mg/kg bw/day	**1.6**	0.16
38	mg/kg bw/day	0.073	0.037
12	ug/kg bw/day	0.25	0.025
40	ug/kg bw/day	0.059	0.044
18000	ug/kg bw/day	0.0037	0.0013
50	ug/kg bw/day	**13**	**1.3**
0.027	ng/kg bw/day	**21**	**2.1**
0.027	ng/kg bw/day	**2000**	**200**
0.027	ng/kg bw/day	**2000**	**200**
143	ug/kg bw/day	0.39	0.039

Fish Egg Tissue

COPEC	TRV[a]			$EPC_{adult, ww}$		$EPC_{adult, lipid}$		CF		Egg lipid fraction (LPRSA	$C_{egg, ww}$		$C_{egg, lipid}$		HQ	
	NOAEL	LOAEL	unit	C_{adult}	unit	C_{adult}	unit	CF	Basis		C_{egg}	unit	C_{egg}	unit	NOAEL	LOAEL
Mummichog																
Use of CFs based on Niimi 1983[c]																
Mercury	6	60	µg/kg ww	63	µg/kg ww	- -		0.101	ww-to-ww	-	6.4	µg/kg ww	- -		**1.1**	0.11
Methyl mercury	6	60	µg/kg ww	53	µg/kg ww	- -		0.101	ww-to-ww	-	5.4	µg/kg ww	- -		0.89	0.089
Total PCB Congeners	25.8	258	µg/kg ww	600	µg/kg ww	28	mg/kg-lipid	0.6213	lipid-to-lipi	0.033	574	µg/kg ww	17	mg/kg-lipid	**22**	**2.2**
Total PCB Congeners (TRV-B)[b]	5.04	50.4	µg/kg ww	600	µg/kg ww	28	mg/kg-lipid	0.6213	lipid-to-lipi	0.033	574	µg/kg ww	17	mg/kg-lipid	**114**	**11**
PCB TEQ-Fish	7.2	86	ng/kg ww	0.62	ng/kg ww	0.00003	mg/kg-lipid	0.6213	lipid-to-lipi	0.033	0.62	ng/kg ww	0.000019	mg/kg-lipid	0.085	0.0072
PCDD/PCDF TEQ-Fish	7.2	86	ng/kg ww	51	ng/kg ww	0.0022	mg/kg-lipid	0.6213	lipid-to-lipi	0.033	45	ng/kg ww	0.0014	mg/kg-lipid	**6.3**	0.52
Total TEQ-Fish	7.2	86	ng/kg ww	51	ng/kg ww	0.0022	mg/kg-lipid	0.6213	lipid-to-lipi	0.033	45	ng/kg ww	0.0014	mg/kg-lipid	**6.3**	0.52
Use of CFs based on Russell et al. 1999[d]																
Mercury	6	60	µg/kg ww	63	µg/kg ww	- -		1	ww-to-ww	-	63	µg/kg ww	- -		**11**	**1.1**
Methyl mercury	6	60	µg/kg ww	53	µg/kg ww	- -		1	ww-to-ww	-	53	µg/kg ww	- -		**8.8**	0.88
Total PCB Congeners	25.8	258	µg/kg ww	600	µg/kg ww	28	mg/kg-lipid	1	lipid-to-lipi	0.033	924	µg/kg ww	28	mg/kg-lipid	**36**	**3.6**
Total PCB Congeners (TRV-B)[b]	5.04	50.4	µg/kg ww	600	µg/kg ww	28	mg/kg-lipid	1	lipid-to-lipi	0.033	924	µg/kg ww	28	mg/kg-lipid	**183**	**18**
PCB TEQ-Fish	7.2	86	ng/kg ww	0.62	ng/kg ww	0.00003	mg/kg-lipid	1	lipid-to-lipi	0.033	1.0	ng/kg ww	0.000030	mg/kg-lipid	0.14	0.012
PCDD/PCDF TEQ-Fish	7.2	86	ng/kg ww	51	ng/kg ww	0.0022	mg/kg-lipid	1	lipid-to-lipi	0.033	73	ng/kg ww	0.0022	mg/kg-lipid	**10**	0.84
Total TEQ-Fish	7.2	86	ng/kg ww	51	ng/kg ww	0.0022	mg/kg-lipid	1	lipid-to-lipi	0.033	73	ng/kg ww	0.0022	mg/kg-lipid	**10**	0.84

[a] TRVs derived from the primary literature based on the process identified in Section 7.4.3.1, except where noted
[b] TRVs based on USEPA's LPR restoration project FFS (Louis Berger et al. 2014) or USEPA's first draft of the LPR restoration project FFS (Malcolm Pirnie 2007), as described in Section 7.4.3.1
[c] Conversion factor used is described in Section 7.4.2 of the LPRSA BERA
[d] Conversion factor used is based on a 1-to-1 ratio described by Russell et al. 1999
CF - concentration factor
COPEC - chemcial of potential ecological concern
HQ - hazard quotient
LOAEL - Lowest observed adverse effect level
NOAEL - No observed adverse effect level
ww - wet weight

Fish - Surface Water

COPEC	Units	Estuarine (RM 0 to RM 13)					Freshwater (RM 4-17.4)				
			Acute TRV		Chronic TRV			Acute TRV		Chronic TRV	
		EPC[a]	TRV[b]	HQ[c]	TRV[b]	HQ[c]	EPC[a]	TRV[b]	HQ[c]	TRV[b]	HQ[c]
Cadmium (dissolved)	µg/l	0.043	33	0.0013	7.9	0.0054	0.004-0.15	1.4-6.5	0.0018-0.063	0.59-2.0	0.0048-0.016
Chromium (dissolved)	µg/l	0.89	1100	0.00081	50	0.018	1.2	16	0.075	11	0.11
Copper (dissolved)	µg/l	1.11–9.26	0.8–11.2	0.14–**2.7**	0.8–11.2	0.14–**2.7**	1.36-9.26	14.3-100	0.023-0.65	8.9-62.1	0.037-**1.0**
Lead (dissolved)	µg/l	1.2	100	0.012	9.7	0.12	0.098–9.97	192–890	< 0.0010–0.034	7.4–42.3	0.0063–0.67
Mercury (dissolved)	ng/l	9	1800	0.0050	940	0.0096	13	1400	0.0093	210	0.062
Selenium (dissolved)	µg/l	0.54	289	0.0019	71	0.0076	0.62	na	na	3.1	0.20
Silver (dissolved)	µg/l	0.017	5.54	0.0031	2	0.0085	0.026	1.8	0.014	0.69	0.038
Zinc (dissolved)	µg/l	7.5	75	0.10	19	0.39	2.1–18.5	195–1,660	0.0024–0.051	44.8–229	0.017–0.24
Tributyltin	µg/l	0.026	0.42	0.062	0.066	0.39	*not a freshwater COPEC*				
Anthracene	ng/l	15	34500	0.00043	13500	0.0011	17.2	260	0.066	100	0.17
Benzo(a)anthracene	ng/l	41.1	480	0.086	190	0.22	56.6	480	0.12	190	0.30
Benzo(a)pyrene	ng/l	65.7	510	0.13	200	0.33	95.3	2030	0.047	799	0.12
Fluoranthene	ng/l	120	3020	0.040	1190	0.10	161	13200	0.012	5200	0.031
Pyrene	ng/l	123	460	0.27	180	0.68	165	2200	0.075	840	0.20
Bis-(2-ethylhexyl)phthalate	µg/l	1.7	500	0.0034	100	0.017	1.8	24.1	0.075	7	0.26
Butylbenzylphthalate	µg/l	0.74	245	0.0030	71	0.010	1.1	107	0.010	31	0.035
Total PCB Congeners	ng/l	25.5	4600	0.0055	160	0.16	34	1200	0.028	270	0.13
PCB TEQ-Fish	ng/l	0.0000335	250	0.00000013	6	0.0000056	0.0000508	4.1	0.000012	0.98	0.000052
2,3,7,8-TCDD	ng/l	0.0541	250	0.00022	6	0.0090	0.108	4.1	0.026	0.98	0.11
PCDD/PCDF TEQ-Fish	ng/l	0.0713	250	0.00029	6	0.012	0.11	4.1	0.027	0.98	0.11
Total TEQ-Fish	ng/l	0.0559	250	0.00022	6	0.0093	0.11	4.1	0.027	0.98	0.11
4,4'-DDE	ng/l	1.2	1250	0.00096	300	0.0040	1.7	2400	0.00071	1400	0.0012
4,4'-DDT	ng/l	0.41	34	0.012	19	0.022	0.66	450	0.0015	250	0.0026
Dieldrin	ng/l	1.1	360	0.0031	84	0.013	*not a freshwater COPEC*				
Hexachlorobenzene	ng/l	0.19	71000	0.0000027	23000	0.0000083	0.2	180000	0.0000011	57000	0.0000035
Total Chlordane	ng/l	3.01	45	0.067	6.4	0.47	4.32	1200	0.0036	170	0.025
Total DDx	ng/l	3.25	34	0.096	19	0.17	4.78	450	0.011	250	0.019
Cyanide	mg/l	0.01	0.0061	**1.6**	0.0019	**5.3**	0.0068	0.0323	0.21	0.0075	0.91

[a] EPCs for metal COPECs with sample-specific BLM-based TRVs are provided as the min-max range of individual sample concentrations.

[b] For BLM applications, freshwater TRV was used to calculate HQ if sample-specific salinity was < 3.5 ppt, and estuarine TRV was used to calculate HQ if sample-specific salinity was ≥ 3.5 ppt. The BLM-basede TRVs are provided as the min-max range of individual sample-specific TRVs, which are provided in Attachment D1 to Appendix D. Note that this range does not necessarily correspond to the range of associated EPCs or HQs.

[c] HQs for metal COPECs with sample-specific BLM-based TRVs are provided as the min-max range of individual sample-specific HQs. Note that this range does not necessarily correspond to the range of associated EPCs or TRVs.

COC - chemical of concern
EPC - exposure point concentration
COPEC - chemical of potential ecological concern
HQ - hazard quotient
TRV - toxicity reference value
nd - not detected

Fish - Tissue

COPEC	Units	EPC	Range of TRVs				Range of HQs and Efs			
			TRV-A[a]		TRV-B[b]		HQ/EF based on TRV-A[a]		HQ/EF based on TRV-B[b]	
			NOAEL	LOAEL	NOAEL	LOAEL	NOAEL HQ/EF	LOAEL HQ/EF	NOAEL HQ/EF	LOAEL HQ/EF
Mummichog										
Arsenic	mg/kg	0.38	1.3	2.5	-	-	0.29	0.15	na	na
Cadmium	mg/kg	0.045	0.016	0.16	-	-	**2.8**	0.28	na	na
Copper	mg/kg	3.1	-	-	0.32	1.5	na	na	**9.7**	**2.1**
Lead	mg/kg	2.4	2.5	4.0	0.4	4	0.96	0.60	**6.0**	0.60
Mercury	ug/kg	63	35	350	52	260	**1.8**	0.18	**1.2**	0.24
Methyl mercury	µg/kg	53	35	350	52	260	**1.5**	0.15	**1.0**	0.20
Selenium	mg/kg	0.72	-	1.6	-	-	na	0.45	na	na
Silver	mg/kg	0.044	0.11	0.24	-	-	0.40	0.18	na	na
Zinc	mg/kg	44.6	287	403	-	-	0.16	0.11	na	na
Total PCB Congeners	µg/kg	600	380	3800	170	530	**1.6**	0.16	**3.5**	**1.1**
PCB TEQ-Fish	ng/kg	0.62	12	120	0.89	1.8	0.052	0.0052	0.7	0.34
PCB TEQ-Fish-Alternate TRV	ng/kg	0.62	2.3	23	-	-	0.27	0.027	na	na
2,3,7,8-TCDD	ng/kg	49	12	120	0.89	1.8	**4.1**	0.41	**55**	**27**
2,3,7,8-TCDD-Alternate TRV	ng/kg	49	2.3	23	-	-	**21**	**2.1**	na	na
PCDD/PCDF TEQ-Fish	ng/kg	51	12	120	0.89	1.8	**4.3**	0.43	**57**	**28**
PCDD/PCDF TEQ-Fish-Alternate TF	ng/kg	51	2.3	23	-	-	**22**	**2.2**	na	na
Total TEQ-Fish	ng/kg	51	12	120	0.89	1.8	**4.3**	0.43	**57**	**28**
Total TEQ-Fish-Alternate TRV	ng/kg	51	2.3	23	-	-	**22**	**2.2**	na	na
Dieldrin	µg/kg	11	120	200	8	40	0.092	0.055	**1.4**	0.28
Endosulfan I	µg/kg	0.8	3.1	31	-	-	0.26	0.026	na	na
Endosulfan II	µg/kg	1.3	3.1	31	-	-	0.42	0.042	na	na
Total DDx	µg/kg	66	52	520	78	390	1.3	0.13	0.85	0.17
Other forage fish										
Arsenic	mg/kg	0.34	1.3	2.5	-	-	0.26	0.14	na	na
Cadmium	mg/kg	0.058	0.016	0.16	-	-	**3.6**	0.36	na	na
Copper	mg/kg	4.1	-	-	0.32	1.5	na	na	**13**	**2.7**
Lead	mg/kg	3	2.5	4.0	0.4	4	**1.2**	0.75	**7.5**	0.75
Mercury	ug/kg	83	35	350.0	52	260	**2.4**	0.24	**1.6**	0.32
Methyl mercury	µg/kg	70	35	350	52	260	**2.0**	0.20	**1.3**	0.27
Selenium	mg/kg	0.7	-	1.6	-	-	na	0.44	na	na
Silver	mg/kg	0.046	0.11	0.24	-	-	0.42	0.19	na	na
Zinc	mg/kg	36.3	287	403	-	-	0.13	0.090	na	na
Total PCB Congeners	µg/kg	550	380	3800	170	530	**1.4**	0.14	**3.2**	**1.0**
PCB TEQ-Fish	ng/kg	0.62	12	120	0.89	1.8	0.052	0.0052	0.70	0.34
PCB TEQ-Fish-Alternate TRV	ng/kg	0.62	2.3	23	-	-	0.27	0.027	na	na
2,3,7,8-TCDD	ng/kg	46	12	120	0.89	1.8	**3.8**	0.38	**52**	**26**
2,3,7,8-TCDD-Alternate TRV	ng/kg	46	2.3	23	-	-	**20**	**2.0**	na	na
PCDD/PCDF TEQ-Fish	ng/kg	49	12	120	0.89	1.8	**4.1**	0.41	**55**	**27**
PCDD/PCDF TEQ-Fish-Alternate TF	ng/kg	49	2.3	23	-	-	**21**	**2.1**	na	na
Total TEQ-Fish	ng/kg	49	12	120	0.89	1.8	**4.1**	0.41	**55**	**27**
Total TEQ-Fish-Alternate TRV	ng/kg	49	2.3	23	-	-	**21**	**2.1**	na	na
Dieldrin	µg/kg	16	120	200	8	40	0.13	0.080	**2.0**	0.40
Endosulfan I	µg/kg	1.5	3.1	31	-	-	0.48	0.048	na	na
Endosulfan II	µg/kg	1.5	3.1	31	-	-	0.48	0.048	na	na
Total DDx	µg/kg	75	52	520	78	390	**1.4**	0.14	0.96	0.19
White perch										

Fish - Tissue

COPEC	Units	EPC	Range of TRVs				Range of HQs and Efs			
			TRV-A[a]		TRV-B[b]		HQ/EF based on TRV-A[a]		HQ/EF based on TRV-B[b]	
			NOAEL	LOAEL	NOAEL	LOAEL	NOAEL HQ/EF	LOAEL HQ/EF	NOAEL HQ/EF	LOAEL HQ/EF
Arsenic	mg/kg	0.22	1.3	2.5	-	-	0.17	0.088	na	na
Cadmium	mg/kg	0.014	0.016	0.16	-	-	0.88	0.088	na	na
Copper	mg/kg	14	-	-	0.32	1.5	na	na	**44**	**9.3**
Lead	mg/kg	0.44	2.5	4.0	0.4	4	0.18	0.11	**1.1**	0.11
Mercury	ug/kg	200	35	350.0	52	260	**5.7**	0.57	**3.8**	0.77
Methyl mercury	µg/kg	170	35	350	52	260	**4.9**	0.49	**3.3**	0.65
Selenium	mg/kg	1.4	-	1.6	-	-	na	0.88	na	na
Silver	mg/kg	0.2	0.11	0.24	-	-	**1.8**	0.83	na	na

Fish - Tissue

COPEC	Units	EPC	Range of TRVs				Range of HQs and Efs			
			TRV-A[a]		TRV-B[b]		HQ/EF based on TRV-A[a]		HQ/EF based on TRV-B[b]	
			NOAEL	LOAEL	NOAEL	LOAEL	NOAEL HQ/EF	LOAEL HQ/EF	NOAEL HQ/EF	LOAEL HQ/EF
Zinc	mg/kg	26	287	403	-	-	0.091	0.065	na	na
Total PCB Congeners	µg/kg	2500	380	3800	170	530	**6.6**	0.66	**15**	**4.7**
PCB TEQ-Fish	ng/kg	2.1	12	120	0.89	1.8	0.18	0.018	**2.4**	**1.2**
PCB TEQ-Fish-Alternate TRV	ng/kg	2.1	2.3	23	-	-	0.91	0.091	na	na
2,3,7,8-TCDD	ng/kg	190	12	120	0.89	1.8	**16**	**1.6**	**210**	**110**
2,3,7,8-TCDD-Alternate TRV	ng/kg	190	2.3	23	-	-	**83**	**8.3**	na	na
PCDD/PCDF TEQ-Fish	ng/kg	200	12	120	0.89	1.8	**17**	**1.7**	**230**	**110**
PCDD/PCDF TEQ-Fish-Alternate TF	ng/kg	200	2.3	23	-	-	**87**	**8.7**	na	na
Total TEQ-Fish	ng/kg	200	12	120	0.89	1.8	**17**	**1.7**	**230**	**110**
Total TEQ-Fish-Alternate TRV	ng/kg	200	2.3	23	-	-	**87**	**8.7**	na	na
Dieldrin	µg/kg	31	120	200	8	40	0.26	0.16	**3.9**	0.78
Endosulfan I	µg/kg	0.22	3.1	31	-	-	0.071	0.0071	na	na
Endosulfan II	µg/kg	3.7	3.1	31	-	-	**1.2**	0.12	na	na
Total DDx	µg/kg	240	52	520	78	390	**4.6**	0.46	**3.1**	0.62
Channel catfish										
Arsenic	mg/kg	0.054	1.3	2.5	-	-	0.042	0.022	na	na
Cadmium	mg/kg	0.014	0.016	0.16	-	-	0.88	0.088	na	na
Copper	mg/kg	1.3	-	-	0.32	1.5	na	na	**4.1**	0.87
Lead	mg/kg	0.3	2.5	4.0	0.4	4	0.12	0.075	0.75	0.075
Mercury	ug/kg	150	35	350.0	52	260	**4.3**	0.43	**2.9**	0.58
Methyl mercury	µg/kg	140	35	350	52	260	**4.0**	0.40	**2.7**	0.54
Selenium	mg/kg	0.31	-	1.6	-	-	na	0.19	na	na
Silver	mg/kg	0.014	0.11	0.24	-	-	0.13	0.058	na	na
Zinc	mg/kg	20	287	403	-	-	0.070	0.050	na	na
Total PCB Congeners	µg/kg	1700	380	3800	170	530	**4.5**	0.45	**10**	**3.2**
PCB TEQ-Fish	ng/kg	1.8	12	120	0.89	1.8	0.15	0.015	**2.0**	**1.0**
PCB TEQ-Fish-Alternate TRV	ng/kg	1.8	2.3	23	-	-	0.78	0.078	na	na
2,3,7,8-TCDD	ng/kg	96	12	120	0.89	1.8	**8.0**	0.80	**110**	**53**
2,3,7,8-TCDD-Alternate TRV	ng/kg	96	2.3	23	-	-	**42**	**4.2**	na	na
PCDD/PCDF TEQ-Fish	ng/kg	100	12	120	0.89	1.8	**8.3**	0.83	**110**	**56**
PCDD/PCDF TEQ-Fish-Alternate TF	ng/kg	100	2.3	23	-	-	**43**	**4.3**	na	na
Total TEQ-Fish	ng/kg	100	12	120	0.89	1.8	**8.3**	0.83	**110**	**56**
Total TEQ-Fish-Alternate TRV	ng/kg	100	2.3	23	-	-	**43**	**4.3**	na	na
Dieldrin	µg/kg	47	120	200	8	40	0.39	0.24	**5.9**	**1.2**
Endosulfan I	µg/kg	2	3.1	31	-	-	0.65	0.065	na	na
Endosulfan II	µg/kg	0.89	3.1	31	-	-	0.29	0.029	na	na
Total DDx	µg/kg	280	52	520	78	390	**5.4**	0.54	**3.6**	0.72
Brown bullhead										
Arsenic	mg/kg	0.13	1.3	2.5	-	-	0.10	0.052	na	na
Cadmium	mg/kg	0.027	0.016	0.16	-	-	**1.7**	0.17	na	na
Copper	mg/kg	0.86	-	-	0.32	1.5	na	na	**2.7**	0.57
Lead	mg/kg	0.8	2.5	4.0	0.4	4	0.32	0.20	**2.0**	0.20
Mercury	ug/kg	110	35	350.0	52	260	**3.1**	0.31	**2.1**	0.42
Methyl mercury	µg/kg	92	35	350	52	260	**2.6**	0.26	**1.8**	0.35
Selenium	mg/kg	0.77	-	1.6	-	-	na	0.48	na	na
Silver	mg/kg	0.008	0.11	0.24	-	-	0.073	0.033	na	na
Zinc	mg/kg	29.5	287	403	-	-	0.10	0.073	na	na
Total PCB Congeners	µg/kg	1400	380	3800	170	530	**3.7**	0.37	**8.2**	**2.6**

Fish - Tissue

COPEC	Units	EPC	Range of TRVs				Range of HQs and Efs			
			TRV-A[a]		TRV-B[b]		HQ/EF based on TRV-A[a]		HQ/EF based on TRV-B[b]	
			NOAEL	LOAEL	NOAEL	LOAEL	NOAEL HQ/EF	LOAEL HQ/EF	NOAEL HQ/EF	LOAEL HQ/EF
PCB TEQ-Fish	ng/kg	1.3	12	120	0.89	1.8	0.11	0.011	**1.5**	0.72
PCB TEQ-Fish-Alternate TRV	ng/kg	1.3	2.3	23	-	-	0.57	0.057	na	na
2,3,7,8-TCDD	ng/kg	150	12	120	0.89	1.8	**13**	**1.3**	**170**	**83**
2,3,7,8-TCDD-Alternate TRV	ng/kg	150	2.3	23	-	-	**65**	**6.5**	na	na
PCDD/PCDF TEQ-Fish	ng/kg	160	12	120	0.89	1.8	**13**	**1.3**	**180**	**89**
PCDD/PCDF TEQ-Fish-Alternate TF	ng/kg	160	2.3	23	-	-	**70**	**7.0**	na	na
Total TEQ-Fish	ng/kg	160	12	120	0.89	1.8	**13**	**1.3**	**180**	**89**
Total TEQ-Fish-Alternate TRV	ng/kg	160	2.3	23	-	-	**70**	**7.0**	na	na
Dieldrin	µg/kg	30	120	200	8	40	0.25	0.15	**3.8**	0.75
Endosulfan I	µg/kg	1.1	3.1	31	-	-	0.35	0.035	na	na
Endosulfan II	µg/kg	1.6	3.1	31	-	-	0.52	0.052	na	na
Total DDx	µg/kg	160	52	520	78	390	**3.1**	0.31	**2.1**	0.41

Fish - Tissue

COPEC	Units	EPC	Range of TRVs				Range of HQs and Efs			
			TRV-A[a]		TRV-B[b]		HQ/EF based on TRV-A[a]		HQ/EF based on TRV-B[b]	
			NOAEL	LOAEL	NOAEL	LOAEL	NOAEL HQ/EF	LOAEL HQ/EF	NOAEL HQ/EF	LOAEL HQ/EF
American eel										
Arsenic	mg/kg	0.28	1.3	2.5	-	-	0.22	0.11	na	na
Cadmium	mg/kg	0.088	0.016	0.16	-	-	**5.5**	0.55	na	na
Copper	mg/kg	2.6	-	-	0.32	1.5	na	na	**8.1**	**1.7**
Lead	mg/kg	0.87	2.5	4.0	0.4	4	0.35	0.22	**2.2**	0.22
Mercury	ug/kg	260	35	350.0	52	260	**7.4**	0.74	**5.0**	**1.0**
Methyl mercury	µg/kg	280	35	350	52	260	**8.0**	0.80	**5.4**	**1.1**
Selenium	mg/kg	0.77	-	1.6	-	-	na	0.48	na	na
Silver	mg/kg	0.025	0.11	0.24	-	-	0.23	0.10	na	na
Zinc	mg/kg	30.9	287	403	-	-	0.11	0.077	na	na
Total PCB Congeners	µg/kg	2000	380	3800	170	530	5.3	0.53	**12**	**3.8**
PCB TEQ-Fish	ng/kg	1.2	12	120	0.89	1.8	0.10	0.010	**1.3**	0.67
PCB TEQ-Fish-Alternate TRV	ng/kg	1.2	2.3	23	-	-	0.52	0.052	na	na
2,3,7,8-TCDD	ng/kg	23	12	120	0.89	1.8	**1.9**	0.19	**26**	**13**
2,3,7,8-TCDD-Alternate TRV	ng/kg	23	2.3	23	-	-	**10**	**1.0**	na	na
PCDD/PCDF TEQ-Fish	ng/kg	24	12	120	0.89	1.8	**2.0**	0.20	**27**	**13**
PCDD/PCDF TEQ-Fish-Alternate TF	ng/kg	24	2.3	23	-	-	**10**	**1.0**	na	na
Total TEQ-Fish	ng/kg	25	12	120	0.89	1.8	**2.1**	0.21	**28**	**14**
Total TEQ-Fish-Alternate TRV	ng/kg	25	2.3	23	-	-	**11**	**1.1**	na	na
Dieldrin	µg/kg	54	120	200	8	40	0.45	0.27	**6.8**	**1.4**
Endosulfan I	µg/kg	0.59	3.1	31	-	-	0.19	0.019	na	na
Endosulfan II	µg/kg	0.56	3.1	31	-	-	0.18	0.018	na	na
Total DDx	µg/kg	260	52	520	78	390	**5.0**	0.50	**3.3**	0.67
Largemouth bass										
Arsenic	mg/kg	0.068	1.3	2.5	-	-	0.052	0.027	na	na
Cadmium	mg/kg	0.037	0.016	0.16	-	-	**2.3**	0.23	na	na
Copper	mg/kg	0.58	-	-	0.32	1.5	na	na	**1.8**	0.39
Lead	mg/kg	0.12	2.5	4.0	0.4	4	0.048	0.030	0.30	0.030
Mercury	ug/kg	680	35	350.0	52	260	**19**	**1.9**	**13**	**2.6**
Methyl mercury	µg/kg	520	35	350	52	260	**15**	**1.5**	**10**	**2.0**
Selenium	mg/kg	0.59	-	1.6	-	-	na	0.37	na	na
Silver	mg/kg	0.0026	0.11	0.24	-	-	0.024	0.011	na	na
Zinc	mg/kg	16	287	403	-	-	0.056	0.040	na	na
Total PCB Congeners	µg/kg	7900	380	3800	170	530	**21**	**2.1**	**46**	**15**
PCB TEQ-Fish	ng/kg	17	12	120	0.89	1.8	**1.4**	0.14	**19**	**9.4**
PCB TEQ-Fish-Alternate TRV	ng/kg	17	2.3	23	-	-	**7.4**	0.74	na	na
2,3,7,8-TCDD	ng/kg	180	12	120	0.89	1.8	**15**	**1.5**	**200**	**100**
2,3,7,8-TCDD-Alternate TRV	ng/kg	180	2.3	23	-	-	**78**	**7.8**	na	na
PCDD/PCDF TEQ-Fish	ng/kg	180	12	120	0.89	1.8	**15**	**1.5**	**200**	**100**
PCDD/PCDF TEQ-Fish-Alternate TF	ng/kg	180	2.3	23	-	-	**78**	**7.8**	na	na
Total TEQ-Fish	ng/kg	180	12	120	0.89	1.8	**15**	**1.5**	**200**	**100**
Total TEQ-Fish-Alternate TRV	ng/kg	180	2.3	23	-	-	**78**	**7.8**	na	na
Dieldrin	µg/kg	40	120	200	8	40	0.33	0.20	**5.0**	**1.0**
Endosulfan I	µg/kg	10	3.1	31	-	-	**3.2**	0.32	na	na
Endosulfan II	µg/kg	3.3	3.1	31	-	-	**1.1**	0.11	na	na
Total DDx	µg/kg	160	52	520	78	390	**3.1**	0.31	**2.1**	0.41
Common carp										

Fish - Tissue

COPEC	Units	EPC	Range of TRVs				Range of HQs and Efs			
			TRV-A[a]		TRV-B[b]		HQ/EF based on TRV-A[a]		HQ/EF based on TRV-B[b]	
			NOAEL	LOAEL	NOAEL	LOAEL	NOAEL HQ/EF	LOAEL HQ/EF	NOAEL HQ/EF	LOAEL HQ/EF
Arsenic	mg/kg	0.15	1.3	2.5	-	-	0.12	0.060	na	na
Cadmium	mg/kg	0.032	0.016	0.16	-	-	**2.0**	0.20	na	na
Copper	mg/kg	1.1	-	-	0.32	1.5	na	na	**3.4**	0.73
Lead	mg/kg	0.79	2.5	4.0	0.4	4	0.32	0.20	**2.0**	0.20
Mercury	ug/kg	80	35	350.0	52	260	**2.3**	0.23	**1.5**	0.31
Methyl mercury	µg/kg	62	35	350	52	260	**1.8**	0.18	**1.2**	0.24
Selenium	mg/kg	0.82	-	1.6	-	-	na	0.51	na	na
Silver	mg/kg	0.015	0.11	0.24	-	-	0.14	0.063	na	na
Zinc	mg/kg	75.2	287	403	-	-	0.26	0.19	na	na
Total PCB Congeners	µg/kg	5200	380	3800	170	530	**14**	**1.4**	**31**	**9.8**
PCB TEQ-Fish	ng/kg	4.4	12	120	0.89	1.8	0.37	0.037	**4.9**	**2.4**
PCB TEQ-Fish-Alternate TRV	ng/kg	4.4	2.3	23	-	-	**1.9**	0.19	na	na
2,3,7,8-TCDD	ng/kg	610	12	120	0.89	1.8	**51**	**5.1**	**700**	**340**
2,3,7,8-TCDD-Alternate TRV	ng/kg	610	2.3	23	-	-	**270**	**27**	na	na
PCDD/PCDF TEQ-Fish	ng/kg	620	12	120	0.89	1.8	**52**	**5.2**	**700**	**340**
PCDD/PCDF TEQ-Fish-Alternate TF	ng/kg	620	2.3	23	-	-	**270**	**27**	na	na
Total TEQ-Fish	ng/kg	620	12	120	0.89	1.8	**52**	**5.2**	**700**	**340**
Total TEQ-Fish-Alternate TRV	ng/kg	620	2.3	23	-	-	**270**	**27**	na	na
Dieldrin	µg/kg	55	120	200	8	40	0.46	0.28	**6.9**	**1.4**
Endosulfan I	µg/kg	4	3.1	31	-	-	**1.3**	0.13	na	na
Endosulfan II	µg/kg	2.7	3.1	31	-	-	0.87	0.087	na	na
Total DDx	µg/kg	650	52	520	78	390	**13**	**1.3**	**8.3**	**1.7**
Northern pike										
Arsenic	mg/kg	0.12	1.3	2.5	-	-	0.092	0.048	na	na
Cadmium	mg/kg	0.0035	0.016	0.16	-	-	0.22	0.022	na	na
Copper	mg/kg	0.57	-	-	0.32	1.5	na	na	**1.8**	0.38
Lead	mg/kg	0.033	2.5	4.0	0.4	4	0.013	0.0083	0.083	0.0083
Mercury	ug/kg	220	35	350.0	52	260	**6.3**	0.63	**4.2**	0.85
Methyl mercury	µg/kg	180	35	350	52	260	**5.1**	0.51	**3.5**	0.69
Selenium	mg/kg	0.55	-	1.6	-	-	na	0.34	na	na
Silver	mg/kg	0.0028	0.11	0.24	-	-	0.025	0.012	na	na
Zinc	mg/kg	34	287	403	-	-	0.12	0.084	na	na
Total PCB Congeners	µg/kg	2000	380	3800	170	530	**5.3**	0.53	**12**	**3.8**
PCB TEQ-Fish	ng/kg	2.3	12	120	0.89	1.8	0.19	0.019	**2.6**	**1.3**
PCB TEQ-Fish-Alternate TRV	ng/kg	2.3	2.3	23	-	-	**1.0**	0.10	na	na
2,3,7,8-TCDD	ng/kg	95	12	120	0.89	1.8	**7.9**	0.79	**110**	**53**
2,3,7,8-TCDD-Alternate TRV	ng/kg	95	2.3	23	-	-	**41**	**4.1**	na	na
PCDD/PCDF TEQ-Fish	ng/kg	100	12	120	0.89	1.8	**8.3**	0.83	**110**	**56**
PCDD/PCDF TEQ-Fish-Alternate TF	ng/kg	100	2.3	23	-	-	**44**	**4.3**	na	na
Total TEQ-Fish	ng/kg	110	12	120	0.89	1.8	**9.2**	0.92	**120**	**61**
Total TEQ-Fish-Alternate TRV	ng/kg	110	2.3	23	-	-	**48**	**4.8**	na	na
Dieldrin	µg/kg	43	120	200	8	40	0.36	0.22	**5.4**	**1.1**
Endosulfan I	µg/kg	2.1	3.1	31	-	-	0.68	0.068	na	na
Endosulfan II	µg/kg	5	3.1	31	-	-	**1.6**	0.16	na	na
Total DDx	µg/kg	280	52	520	78	390	**5.4**	0.54	**3.6**	0.72
Smallmouth bass										
Arsenic	mg/kg	0.25	1.3	2.5	-	-	0.19	0.10	na	na
Cadmium	mg/kg	0.0089	0.016	0.16	-	-	0.56	0.056	na	na

Fish - Tissue

COPEC	Units	EPC	Range of TRVs				Range of HQs and Efs			
			TRV-A[a]		TRV-B[b]		HQ/EF based on TRV-A[a]		HQ/EF based on TRV-B[b]	
			NOAEL	LOAEL	NOAEL	LOAEL	NOAEL HQ/EF	LOAEL HQ/EF	NOAEL HQ/EF	LOAEL HQ/EF
Copper	mg/kg	0.8	-	-	0.32	1.5	na	na	**2.5**	0.53
Lead	mg/kg	0.098	2.5	4.0	0.4	4	0.039	0.025	0.25	0.025
Mercury	ug/kg	300	35	350.0	52	260	**8.6**	0.86	**5.8**	**1.2**
Methyl mercury	µg/kg	220	35	350	52	260	**6.3**	0.63	**4.2**	0.85
Selenium	mg/kg	0.69	-	1.6	-	-	na	0.43	na	na
Silver	mg/kg	0.0028	0.11	0.24	-	-	0.025	0.012	na	na
Zinc	mg/kg	18.4	287	403	-	-	0.064	0.046	na	na
Total PCB Congeners	µg/kg	1400	380	3800	170	530	**3.7**	0.37	**8.2**	**2.6**
PCB TEQ-Fish	ng/kg	1.4	12	120	0.89	1.8	0.12	0.012	**1.6**	0.78
PCB TEQ-Fish-Alternate TRV	ng/kg	1.4	2.3	23	-	-	0.61	0.061	na	na
2,3,7,8-TCDD	ng/kg	76	12	120	0.89	1.8	**6.3**	0.63	**85**	**42**
2,3,7,8-TCDD-Alternate TRV	ng/kg	76	2.3	23	-	-	**33**	**3.3**	na	na
PCDD/PCDF TEQ-Fish	ng/kg	76	12	120	0.89	1.8	**6.3**	0.63	**85**	**42**
PCDD/PCDF TEQ-Fish-Alternate TF	ng/kg	76	2.3	23	-	-	**33**	**3.3**	na	na
Total TEQ-Fish	ng/kg	82	12	120	0.89	1.8	**6.8**	0.68	**92**	**46**
Total TEQ-Fish-Alternate TRV	ng/kg	82	2.3	23	-	-	**36**	**3.6**	na	na
Dieldrin	µg/kg	20	120	200	8	40	0.17	0.10	**2.5**	0.50
Endosulfan I	µg/kg	2.9	3.1	31	-	-	0.94	0.094	na	na
Endosulfan II	µg/kg	2.8	3.1	31	-	-	0.90	0.090	na	na
Total DDx	µg/kg	230	52	520	78	390	**4.4**	0.44	**2.9**	0.59

Fish - Tissue

COPEC	Units	EPC	Range of TRVs				Range of HQs and Efs			
			TRV-A[a]		TRV-B[b]		HQ/EF based on TRV-A[a]		HQ/EF based on TRV-B[b]	
			NOAEL	LOAEL	NOAEL	LOAEL	NOAEL HQ/EF	LOAEL HQ/EF	NOAEL HQ/EF	LOAEL HQ/EF
White catfish										
Arsenic	mg/kg	0.086	1.3	2.5	-	-	0.066	0.034	na	na
Cadmium	mg/kg	0.014	0.016	0.16	-	-	0.88	0.088	na	na
Copper	mg/kg	0.68	-	-	0.32	1.5	na	na	**2.1**	0.45
Lead	mg/kg	0.75	2.5	4.0	0.4	4	0.30	0.19	**1.9**	0.19
Mercury	ug/kg	280	35	350.0	52	260	**8.0**	0.80	**5.4**	**1.1**
Methyl mercury	µg/kg	250	35	350	52	260	**7.1**	0.71	**4.8**	0.96
Selenium	mg/kg	0.38	-	1.6	-	-	na	0.24	na	na
Silver	mg/kg	0.0033	0.11	0.24	-	-	0.030	0.014	na	na
Zinc	mg/kg	17	287	403	-	-	0.059	0.042	na	na
Total PCB Congeners	µg/kg	3400	380	3800	170	530	**8.9**	0.89	**20**	**6.4**
PCB TEQ-Fish	ng/kg	3.5	12	120	0.89	1.8	0.29	0.029	**3.9**	**1.9**
PCB TEQ-Fish-Alternate TRV	ng/kg	3.5	2.3	23	-	-	**1.5**	0.15	na	na
2,3,7,8-TCDD	ng/kg	210	12	120	0.89	1.8	**18**	**1.8**	**240**	**120**
2,3,7,8-TCDD-Alternate TRV	ng/kg	210	2.3	23	-	-	**91**	**9.1**	na	na
PCDD/PCDF TEQ-Fish	ng/kg	220	12	120	0.89	1.8	**18**	**1.8**	**250**	**120**
PCDD/PCDF TEQ-Fish-Alternate TF	ng/kg	220	2.3	23	-	-	**96**	**9.6**	na	na
Total TEQ-Fish	ng/kg	230	12	120	0.89	1.8	**19**	**1.9**	**260**	**130**
Total TEQ-Fish-Alternate TRV	ng/kg	230	2.3	23	-	-	**100**	**10**	na	na
Dieldrin	µg/kg	27	120	200	8	40	0.23	0.14	**3.4**	0.68
Endosulfan I	µg/kg	1.7	3.1	31	-	-	0.55	0.055	na	na
Endosulfan II	µg/kg	2.5	3.1	31	-	-	0.81	0.081	na	na
Total DDx	µg/kg	350	52	520	78	390	**6.7**	0.67	**4.5**	0.90
White sucker										
Arsenic	mg/kg	0.11	1.3	2.5	-	-	0.085	0.044	na	na
Cadmium	mg/kg	0.013	0.016	0.16	-	-	0.81	0.081	na	na
Copper	mg/kg	1.1	-	-	0.32	1.5	na	na	**3.4**	0.73
Lead	mg/kg	0.3	2.5	4.0	0.4	4	0.12	0.075	0.75	0.075
Mercury	ug/kg	140	35	350.0	52	260	**4.0**	0.40	**2.7**	0.54
Methyl mercury	µg/kg	130	35	350	52	260	**3.7**	0.37	**2.5**	0.50
Selenium	mg/kg	0.46	-	1.6	-	-	na	0.29	na	na
Silver	mg/kg	0.005	0.11	0.24	-	-	0.045	0.021	na	na
Zinc	mg/kg	21	287	403	-	-	0.073	0.052	na	na
Total PCB Congeners	µg/kg	2900	380	3800	170	530	**7.6**	0.76	**17**	**5.5**
PCB TEQ-Fish	ng/kg	3.2	12	120	0.89	1.8	0.27	0.027	**3.6**	**1.8**
PCB TEQ-Fish-Alternate TRV	ng/kg	3.2	2.3	23	-	-	**1.4**	0.14	na	na
2,3,7,8-TCDD	ng/kg	130	12	120	0.89	1.8	**11**	**1.1**	**150**	**72**
2,3,7,8-TCDD-Alternate TRV	ng/kg	130	2.3	23	-	-	**57**	**5.7**	na	na
PCDD/PCDF TEQ-Fish	ng/kg	130	12	120	0.89	1.8	**11**	**1.1**	**150**	**72**
PCDD/PCDF TEQ-Fish-Alternate TF	ng/kg	130	2.3	23	-	-	**57**	**5.7**	na	na
Total TEQ-Fish	ng/kg	130	12	120	0.89	1.8	**11**	**1.1**	**150**	**72**
Total TEQ-Fish-Alternate TRV	ng/kg	130	2.3	23	-	-	**57**	**5.7**	na	na
Dieldrin	µg/kg	25	120	200	8	40	0.21	0.13	**3.1**	0.63
Endosulfan I	µg/kg	0.45	3.1	31	-	-	0.15	0.015	na	na
Endosulfan II	µg/kg	1.1	3.1	31	-	-	0.35	0.035	na	na
Total DDx	µg/kg	150	52	520	78	390	**2.9**	0.29	**1.9**	0.38

Note 1: "–" indicates no TRV available

Fish - Tissue

COPEC	Units	EPC	Range of TRVs				Range of HQs and Efs			
			TRV-A[a]		TRV-B[b]		HQ/EF based on TRV-A[a]		HQ/EF based on TRV-B[b]	
			NOAEL	LOAEL	NOAEL	LOAEL	NOAEL HQ/EF	LOAEL HQ/EF	NOAEL HQ/EF	LOAEL HQ/EF

[a] TRVs derived from the primary literature reviewderived based on the process identified in Section 7.1.3.1 .

[b] TRVs based on USEPA's LPR restoration project FFS (Louis Berger et al. 2014) or USEPA's first draft of the LPR restoration project FFS (Malcolm Pirnie 2007).

COPEC - chemical of potential ecological concern
EF - exceedance factor
EPC - Exposure point concentration
LOAEL - Lowest observed adverse effect level
NOAEL - No observed adverse effect level
HQ = hazard quotient
na - not applicable; no TRV

BERA HQ Reference

Worksheet	Category	HQs by receptor
G1	Benthic invertebrates	Invertebrate tissue
G2		Surface water
G3	Fish	Fish tissue
G4		Fish diet
G5		Surface water
G6		Fish egg
G7	Bird	Sandpiper diet - Scenario 1
G8		Heron diet - Scenario 1
G9		Heron diet - Scenario 2
G10		Kingfisher diet - Scenario 1
G11		Kingfisher diet - Scenario 2
G12	Bird egg	Heron egg diet - Scenario 1
G13		Heron egg diet - Scenario 2
G14		Kingfisher egg diet - Scenario 1
G15		Kingfisher egg diet - Scenario 2
G16	Mammal	Otter diet - Scenario 1
G17		Otter diet - Scenario 2
G18		Mink diet - Scenario 1
G19		Mink diet - Scenario 2
G20		Mink diet - Scenario 3
G21		Mink diet - Scenario 4
G22		Mink diet - Scenario 5
G23	Amphibians & Reptiles	Amphibians & reptiles
G24	Aquatic Plants	Aquatic plants

Invertebrate - Near-bottom surface water

COPEC	Units	Estuarine near-bottom (RM 0 to RM 13)					Freshwater near-bottom (RM 4-17.4)				
			Acute TRV		Chronic TRV			Acute TRV		Chronic TRV	
		EPC[a]	TRV[b]	HQ[c]	TRV[b]	HQ[c]	EPC[a]	TRV[b]	HQ[c]	TRV[b]	HQ[c]
Cadmium (dissolved)	µg/l	0.049	33	0.0015	7.9	0.0062	0.01-0.15	1.4-6.5	0.0038-0.063	0.59-2.0	0.012-0.16
Chromium (dissolved)	µg/l	0.92	1100	0.00084	50	0.018	1.2	16	0.075	11	0.11
Copper (dissolved)	µg/l	1.11–9.26	0.98–11.2	0.14–**2.7**	0.98–11.2	0.14–**2.7**	1.36-9.26	14.3-76.1	0.034-0.65	8.9-62.1	0.055-**1.0**
Lead (dissolved)	µg/l	1.4	100	0.014	9.7	0.14	0.098–9.97	196–761	<0.001–0.034	7.5–35	0.012–0.67
Mercury (dissolved)	ng/l	12	1800	0.0067	940	0.013	18	1400	0.013	210	0.086
Selenium (dissolved)	µg/l	0.49	290	0.0017	71	0.0069	0.5	na	na	3.1	0.16
Silver (dissolved)	µg/l	0.019	5.54	0.0034	2	0.0095	0.027	1.8	0.015	0.69	0.039
Zinc (dissolved)	µg/l	7.8	75	0.10	19	0.41	2.1–18.5	210–1,660	0.0047–0.044	52–229	0.022–0.21
Tributyltin	µg/l	0.05 [d]	0.42	0.12	0.066	0.76	*not a freshwater COPEC*				
Anthracene	ng/l	19.5	34500	0.00057	13500	0.0014	20.6	260	0.079	100	0.21
Benzo(a)anthracene	ng/l	55.7	480	0.12	190	0.29	75.4	480	0.16	190	0.40
Benzo(a)pyrene	ng/l	89.6	510	0.18	200	0.45	134	2030	0.066	799	0.17
Fluoranthene	ng/l	143	3020	0.047	1190	0.12	199	13200	0.015	5200	0.038
Pyrene	ng/l	147	460	0.32	180	0.82	199	2200	0.090	840	0.24
Bis-(2-ethylhexyl)phthalate	µg/l	1.7	500	0.0034	100	0.017	1.8	24.1	0.075	7	0.26
Butylbenzylphthalate	µg/l	1.2	245	0.0049	71	0.017	1.9	107	0.018	31	0.061
Total PCB Congeners	ng/l	32.9	4600	0.0072	160	0.21	38.9	1200	0.032	270	0.14
2,3,7,8-TCDD	ng/l	0.0704	250	0.00028	1.65E-02	**4.3**	0.141	4.1	0.034	0.98	0.14
4,4'-DDE	ng/l	1.5	1250	0.0012	300	0.0050	2.9	2400	0.0012	1400	0.0021
4,4'-DDT	ng/l	0.54	34	0.016	19	0.028	0.95	450	0.0021	250	0.0038
Dieldrin	ng/l	1.1	360	0.0031	84	0.013	*not a freshwater COPEC*				
Hexachlorobenzene	ng/l	0.21	71000	3.0E-06	23000	0.0000091	0.23	180000	0.0000013	57000	0.0000040
Total Chlordane	ng/l	3.42	45	0.076	6.4	0.53	5.69	1200	0.0047	170	0.033
Total DDx	ng/l	4.17	34	0.12	19	0.22	6.77	450	0.015	250	0.027
Cyanide	mg/l	0.0078	0.0061	**1.3**	0.0019	**4.1**	0.0075	0.0323	0.23	0.0075	**1.0**

[a] EPCs for metal COPECs with sample-specific BLM-based TRVs are provided as the min-max range of individual sample concentrations.

[b] For BLM applications, freshwater TRV was used to calculate HQ if sample-specific salinity was < 3.5 ppt, and estuarine TRV was used to calculate HQ if sample-specific salinity was ≥ 3.5 ppt. The BLM-based TRVs are provided as the min-max range of individual sample-s
Attachment D1 to Appendix D. Note that this range does not necessarily correspond to the range of associated EPCs or HQs.

[c] HQs for metal COPECs with sample-specific BLM-based TRVs are provided as the min-max range of individual sample-specific HQs. Note that this range does not necessarily correspond to the range of associated EPCs or TRVs.

[d] EPC is equal to the detection limit.

COPEC - chemical of potential ecological concern
EPC - Exposure point concentration
HQ - hazard quotient
na - not applicable (no TRV selected)
TRV - toxicity reference value

specific TRVs, which are provided in

Invertebrate - Tissue

COPEC	Units	EPC	Range of TRVs				Range of HQs and Efs			
			TRV-A[a]		TRV-B[b]		HQ/EF based on TRV-A[a]		HQ/EF based on TRV-B[b]	
			NOAEL	LOAEL	NOAEL	LOAEL	NOAEL HQ/EF	LOAEL HQ/EF	NOAEL HQ/EF	LOAEL HQ/EF
Infaunal invertebrate (worms)										
Arsenic	mg/kg	1.4	0.064	0.64	-	-	**22**	**2.2**	na	na
Cadmium	mg/kg	0.11	0.024	0.24	-	-	**4.6**	0.46	na	na
Chromium	mg/kg	21	1.5	3.5	-	-	**14**	**6.0**	na	na
Cobalt	mg/kg	0.69	1.2	2.6	-	-	0.58	0.27	na	na
Copper	mg/kg	5.8	-	-	5	12	na	na	**1.2**	0.48
Lead	mg/kg	6.4	4.0	40	0.52	2.6	**1.6**	0.16	**12**	**2.5**
Mercury	µg/kg	59	48	95	48	95	**1.2**	0.62	**1.2**	0.62
Methyl mercury	µg/kg	2.9	48	95	48	95	0.060	0.031	0.060	0.031
Nickel	mg/kg	13	0.10	1.1	-	-	**130**	**12**	na	na
Selenium	mg/kg	0.54	0.050	0.51	-	-	**11**	**1.1**	na	na
Silver	mg/kg	0.028	0.49	0.59	-	-	0.057	0.047	na	na
Vanadium	mg/kg	0.59	-	-	-	-	na	na	na	na
Zinc	mg/kg	34	80	-	-	-	0.43	na	na	na
Total HPAHs	µg/kg	2000	8100	22200	66	660	0.25	0.090	**30**	**3.0**
Total LPAHs	µg/kg	540	11000	111000	78	780	0.049	0.0049	**6.9**	0.69
Total PCB Congeners	µg/kg	240	52	520	6.4	17	**4.6**	0.46	**38**	**14**
PCB TEQ-Fish	ng/kg	0.2	300	3000	0.15	1.3	0.00067	0.000067	**1.3**	0.15
2,3,7,8-TCDD	ng/kg	38	300	3000	0.15	1.3	0.13	0.013	**250**	**29**
PCDD/PCDF TEQ-Fish	ng/kg	38	300	3000	0.15	1.3	0.13	0.013	**250**	**29**
Total TEQ-Fish	ng/kg	39	300	3000	0.15	1.3	0.13	0.013	**260**	**30**
Dieldrin	µg/kg	1.6	8.0	80	1.6	8	0.20	0.020	**1.0**	0.20
Heptachlor epoxide	µg/kg	0.36	10	140	-	-	0.036	0.0026	na	na
Total DDx	µg/kg	16	10 (1.0)	110 (11)	60	130	**1.5 (16)**	**0.15 (1.6)**	0.27	0.12
Mussels (all, day 0-normalized)										
Arsenic	mg/kg	0	0.064	0.64	-	-	0	0.0	na	na
Cadmium	mg/kg	0.009	0.024	0.24	-	-	0.38	0.038	na	na
Chromium	mg/kg	13	1.5	3.5	-	-	**8.7**	**3.7**	na	na
Cobalt	mg/kg	0.075	1.2	2.6	-	-	0.063	0.029	na	na
Copper	mg/kg	0.35	-	-	5	12	na	na	0.070	0.029
Lead	mg/kg	0.13	4	40	0.52	2.6	0.033	0.0033	0.25	0.050
Mercury	µg/kg	8	48	95	48	95	0.17	0.084	0.17	0.084
Methyl mercury	µg/kg	3.2	48	95	48	95	0.067	0.034	0.067	0.034
Nickel	mg/kg	6.6	0.1	1.1	-	-	**66**	**6.0**	na	na
Selenium	mg/kg	0.052	0.05	0.51	-	-	**1.0**	0.10	na	na
Silver	mg/kg	0.0014	0.49	0.59	-	-	0.0029	0.0024	na	na
Vanadium	mg/kg	0.087	-	-	-	-	na	na	na	na
Zinc	mg/kg	1.6	8	80	-	-	0.20	0.020	na	na
Total HPAHs	µg/kg	220	8100	22200	66	660	0.027	0.0099	**3.3**	0.33
Total LPAHs	µg/kg	82	11000	111000	78	780	0.0075	0.00074	**1.1**	0.11
Total PCB Congeners	µg/kg	24	52	520	6.4	17	0.46	0.046	**3.8**	**1.41**
PCB TEQ-Fish	ng/kg	0.021	300	3000	0.15	1.3	0.000070	0.000007	0.14	0.016
2,3,7,8-TCDD	ng/kg	2.2	300	3000	0.15	1.3	0.0073	0.00073	**15**	**1.7**
PCDD/PCDF TEQ-Fish	ng/kg	2.3	300	3000	0.15	1.3	0.0077	0.00077	**15**	**1.8**
Total TEQ-Fish	ng/kg	2.3	300	3000	0.15	1.3	0.0077	0.00077	**15**	**1.8**
Dieldrin	µg/kg	2.7	8	80	1.6	8	0.34	0.034	**1.7**	0.34

Invertebrate - Tissue

COPEC	Units	EPC	Range of TRVs				Range of HQs and Efs			
			TRV-A[a]		TRV-B[b]		HQ/EF based on TRV-A[a]		HQ/EF based on TRV-B[b]	
			NOAEL	LOAEL	NOAEL	LOAEL	NOAEL HQ/EF	LOAEL HQ/EF	NOAEL HQ/EF	LOAEL HQ/EF
Heptachlor epoxide	µg/kg	0.96	10	140	-	-	0.096	0.0069	na	na
Total DDx	µg/kg	5.3	10 (1.0)	110 (11)	60	130	**0.48 (5.3)**	0.048 (0.53)	0.088	0.041
Blue crab										
Arsenic	mg/kg	1.4	0.064	0.64	-	-	**22**	**2.2**	na	na
Cadmium	mg/kg	0.11	0.024	0.24	-	-	**4.6**	0.46	na	na
Chromium	mg/kg	1.4	1.5	3.5	-	-	0.93	0.40	na	na
Cobalt	mg/kg	0.076	1.2	2.6	-	-	0.063	0.029	na	na
Copper	mg/kg	24.6	-	-	5	12	na	na	**4.9**	**2.1**
Lead	mg/kg	0.36	4	40	0.52	2.6	0.090	0.0090	0.69	0.14
Mercury	µg/kg	140	48	95	48	95	**2.9**	**1.5**	**2.9**	**1.5**
Methyl mercury	µg/kg	120	48	95	48	95	**2.5**	**1.3**	**2.5**	**1.3**
Mercury - Hepatopancreas	µg/kg	67	100	1000	-	-	0.67	0.067	na	na
Methyl mercury - Hepatopancreas	µg/kg	49	100	1000	-	-	0.49	0.049	na	na
Mercury - Muscle	µg/kg	200	340	-	-	-	0.59	-	na	na
Methyl mercury - Muscle	µg/kg	190	340	-	-	-	0.56	-	na	na
Nickel	mg/kg	1	0.1	1.1	-	-	**10**	0.91	na	na
Selenium	mg/kg	0.79	0.05	0.51	-	-	**16**	**1.5**	na	na
Silver	mg/kg	0.61	0.49	0.59	-	-	**1.2**	**1.0**	na	na
Vanadium	mg/kg	0.12	-	-	-	-	na	na	na	na
Zinc	mg/kg	36.4	5.1	51	-	-	**7.1**	0.71	na	na
Total HPAHs	µg/kg	110	8100	22200	66	660	0.014	0.0050	**1.7**	0.17
Total LPAHs	µg/kg	83	11000	111000	78	780	0.0075	0.00075	**1.1**	0.11
Total PCB Congeners	µg/kg	350	52	520	6.4	17	**6.7**	0.67	**55**	**21**
PCB TEQ-Fish	ng/kg	0.78	300	3000	0.15	1.3	0.0026	0.00026	**5.2**	0.60
2,3,7,8-TCDD	ng/kg	57	300	3000	0.15	1.3	0.19	0.019	**380**	**44**
PCDD/PCDF TEQ-Fish	ng/kg	62	300	3000	0.15	1.3	0.21	0.021	**410**	**48**
Total TEQ-Fish	ng/kg	63	300	3000	0.15	1.3	0.21	0.021	**420**	**48**
Dieldrin	µg/kg	6.8	8	80	1.6	8	0.85	0.085	**4.3**	0.85
Heptachlor epoxide	µg/kg	6.3	10	140	-	-	0.63	0.045	na	na
Total DDx	µg/kg	68	10 (1.0)	110 (11)	60	130	**6.2 (68)**	**0.62 (6.8)**	**1.1**	0.52

Note 1: "–" indicates no TRV available

Note 2: Mussel data exclude Day 0 and field-exposed organisms have been normalized for day 0 concentrations

[a] TRVs derived from the primary literature review based on the process identified in Section 6.3.3.1.

[b] TRVs based on USEPA's LPR restoration project FFS (Louis Berger et al. 2014) or USEPA's first draft of the LPR restoration project FFS (Malcolm Pirnie 2007)

COPEC - chemical of potential ecological concern
EF - exceedance factor
EPC - Exposure point concentration
HQ - hazard quotient
NOAEL - No observed adverse effect level
LOAEL - Lowest observed adverse effect level
na - not applicable; no TRV

Mink - Diet Scenario 1

Dietary dose (mg/kg bw/d) = (([Csw*WIR] + [Cprey*FIR] + [Csed*SIR])/BW) *SUF

WIR (L/day)	0.099
FIR (kg ww/day)	0.14
SIR (kg dw/day)	0.00056
BW (kg)	1
SUF	1

Diet	Fractions
Blue crab	0.165
small fish	0.34

COPEC	Prey: Small Fish (≤ 30 cm) $C_{sm\ fish,\ ww}$	Prey: Small Fish (≤ 30 cm) Exposure Area	Prey: Blue Crab $C_{crab,\ ww}$	Prey: Blue Crab Exposure Area	$C_{prey,ww}$	$C_{prey,ww}$ (units)	Surface Water C_{sw}	Surface Water C_{sw} (units)	Surface Water Exposure Area	Sediment $C_{sed,dw}$	Sediment $C_{sed,dw}$ (units)	Sediment Exposure Area	Dose C_{Dose}	Dose C_{dose} (units)
RM ≥ 10														
Arsenic	0.18	NFF Sitewide, SFF RM ≥ 10	1.4	Site-wide	0.2922	mg/kg	0.0014	mg/l	RM ≥ 10	7.8	mg/kg	RM ≥ 10	0.05	mg/kg bw/day
Cadmium	0.045	NFF Sitewide, SFF RM ≥ 10	0.11	Site-wide	0.03345	mg/kg	0.00013	mg/l	RM ≥ 10	4.9	mg/kg	RM ≥ 10	0.01	mg/kg bw/day
Copper	7.5	NFF Sitewide, SFF RM ≥ 10	24.6	Site-wide	6.609	mg/kg	0.00793	mg/l	RM ≥ 10	140	mg/kg	RM ≥ 10	1.0	mg/kg bw/day
Lead	1.3	NFF Sitewide, SFF RM ≥ 10	0.36	Site-wide	0.5014	mg/kg	0.00835	mg/l	RM ≥ 10	280	mg/kg	RM ≥ 10	0.23	mg/kg bw/day
Mercury	130	NFF Sitewide, SFF RM ≥ 10	140	Site-wide	67.3	µg/kg	0.061	µg/l	RM ≥ 10	2900	µg/kg	RM ≥ 10	11	µg/kg bw/day
Methyl mercury	130	NFF Sitewide, SFF RM ≥ 10	120	Site-wide	64	µg/kg	0.00036	µg/l	RM ≥ 10	1.8	µg/kg	RM ≥ 10	9.0	µg/kg bw/day
Nickel	14	NFF Sitewide, SFF RM ≥ 10	1	Site-wide	4.925	mg/kg	0.00239	mg/l	RM ≥ 10	31	mg/kg	RM ≥ 10	0.71	mg/kg bw/day
Selenium	1	NFF Sitewide, SFF RM ≥ 10	0.79	Site-wide	0.47035	mg/kg	0.00063	mg/l	RM ≥ 10	0.71	mg/kg	RM ≥ 10	0.066	mg/kg bw/day
Vanadium	0.45	NFF Sitewide, SFF RM ≥ 10	0.12	Site-wide	0.1728	mg/kg	0.0032	mg/l	RM ≥ 10	22	mg/kg	RM ≥ 10	0.037	mg/kg bw/day
Zinc	28	NFF Sitewide, SFF RM ≥ 10	36.4	Site-wide	15.526	mg/kg	0.031	mg/l	RM ≥ 10	420	mg/kg	RM ≥ 10	2.4	mg/kg bw/day
Benzo(a)pyrene	21	NFF Sitewide, SFF RM ≥ 10	10	Site-wide	8.79	µg/kg	0.0854	µg/l	RM ≥ 10	5300	µg/kg	RM ≥ 10	4.2	µg/kg bw/day
Total HPAHs	210	NFF Sitewide, SFF RM ≥ 10	110	Site-wide	89.55	µg/kg	0.871	µg/l	RM ≥ 10	54000	µg/kg	RM ≥ 10	43	µg/kg bw/day
Total PAHs	380	NFF Sitewide, SFF RM ≥ 10	190	Site-wide	160.55	µg/kg	1	µg/l	RM ≥ 10	68000	µg/kg	RM ≥ 10	61	µg/kg bw/day
Total PCB Congeners	2100	NFF Sitewide, SFF RM ≥ 10	350	Site-wide	771.75	µg/kg	0.0223	µg/l	RM ≥ 10	2400	µg/kg	RM ≥ 10	109	µg/kg bw/day
PCB TEQ-Mammal	19	NFF Sitewide, SFF RM ≥ 10	8.8	Site-wide	7.912	ng/kg	0.00102	ng/l	RM ≥ 10	27	ng/kg	RM ≥ 10	1.1	ng/kg bw/day
PCDD/PCDF TEQ-Mammal	140	NFF Sitewide, SFF RM ≥ 10	61	Site-wide	57.665	ng/kg	0.0163	ng/l	RM ≥ 10	2200	ng/kg	RM ≥ 10	9.3	ng/kg bw/day
Total TEQ-Mammal	160	NFF Sitewide, SFF RM ≥ 10	70	Site-wide	65.95	ng/kg	0.0169	ng/l	RM ≥ 10	1900	ng/kg	RM ≥ 10	10	ng/kg bw/day
Dieldrin	32	NFF Sitewide, SFF RM ≥ 10	6.8	Site-wide	12.002	µg/kg	0.0016	µg/l	RM ≥ 10	7.5	µg/kg	RM ≥ 10	1.7	µg/kg bw/day
Site-wide														
Arsenic	0.26	Site-wide	1.4	Site-wide	0.3194	mg/kg	0.0013	mg/l	RM ≥ 4	9.6	mg/kg	Site-wide	0.05	mg/kg bw/day
Cadmium	0.033	Site-wide	0.11	Site-wide	0.02937	mg/kg	0.00017	mg/l	RM ≥ 4	4.9	mg/kg	Site-wide	0.01	mg/kg bw/day
Copper	6.1	Site-wide	24.6	Site-wide	6.133	mg/kg	0.011	mg/l	RM ≥ 4	170	mg/kg	Site-wide	0.95	mg/kg bw/day
Lead	1.6	Site-wide	0.36	Site-wide	0.6034	mg/kg	0.0122	mg/l	RM ≥ 4	270	mg/kg	Site-wide	0.24	mg/kg bw/day
Mercury	130	Site-wide	140	Site-wide	67.3	µg/kg	0.12	µg/l	RM ≥ 4	2900	µg/kg	Site-wide	11	µg/kg bw/day
Methyl mercury	110	Site-wide	120	Site-wide	57.2	µg/kg	0.00044	µg/l	RM ≥ 4	3.9	µg/kg	Site-wide	8.0	µg/kg bw/day
Nickel	5.4	Site-wide	1	Site-wide	2.001	mg/kg	0.00239	mg/l	RM ≥ 4	32	mg/kg	Site-wide	0.30	mg/kg bw/day
Selenium	0.9	Site-wide	0.79	Site-wide	0.43635	mg/kg	0.00067	mg/l	RM ≥ 4	0.93	mg/kg	Site-wide	0.062	mg/kg bw/day
Vanadium	0.54	Site-wide	0.12	Site-wide	0.2034	mg/kg	0.0033	mg/l	RM ≥ 4	27	mg/kg	Site-wide	0.044	mg/kg bw/day
Zinc	33	Site-wide	36.4	Site-wide	17.226	mg/kg	0.029	mg/l	RM ≥ 4	490	mg/kg	Site-wide	2.7	mg/kg bw/day
Benzo(a)pyrene	24	Site-wide	10	Site-wide	9.81	µg/kg	0.0953	µg/l	RM ≥ 4	4700	µg/kg	Site-wide	4.0	µg/kg bw/day

Total HPAHs	250	Site-wide	110	Site-wide	103.15	µg/kg	0.961	µg/l	RM ≥ 4	46000	µg/kg	Site-wide	40	µg/kg bw/day
Total PAHs	350	Site-wide	190	Site-wide	150.35	µg/kg	1.1	µg/l	RM ≥ 4	62000	µg/kg	Site-wide	56	µg/kg bw/day
Total PCB Congeners	1700	Site-wide	350	Site-wide	635.75	µg/kg	0.034	µg/l	RM ≥ 4	2600	µg/kg	Site-wide	90	µg/kg bw/day
PCB TEQ-Mammal	18	Site-wide	8.8	Site-wide	7.572	ng/kg	0.000917	ng/l	RM ≥ 4	30	ng/kg	Site-wide	1.1	ng/kg bw/day
PCDD/PCDF TEQ-Mammal	91	Site-wide	61	Site-wide	41.005	ng/kg	0.11	ng/l	RM ≥ 4	2200	ng/kg	Site-wide	7.0	ng/kg bw/day
Total TEQ-Mammal	130	Site-wide	70	Site-wide	55.75	ng/kg	0.11	ng/l	RM ≥ 4	2200	ng/kg	Site-wide	9.0	ng/kg bw/day
Dieldrin	24	Site-wide	6.8	Site-wide	9.282	µg/kg	0.0015	µg/l	RM ≥ 4	8.3	µg/kg	Site-wide	1.3	µg/kg bw/day

Note 1: "–" indicates no TRV available

[a] TRVs derived from the primary literature based on process identified in Section 9.1.3.1

[b] TRVs based on USEPA's LPR restoration project FFS (Louis Berger et al. 2014), USEPA's first draft of the LPR restoration project FFS (Malcolm Pirnie 2007) or USEPA's LPR restoration project PAR (Battelle 2005) .

BW - body weight
COC - chemical of concern
COPEC - chemical of potential ecological concern
FIR - food ingestion rate
LOAEL - Lowest observed adverse effect level
na - not applicable
NFF - non-small forage fish
NOAEL - No observed adverse effect level
RM - River Mile
SFF - small forage fish
SIR - sediment ingestion rate
SUF - site use factor
UCL HQ = hazard quotient based on the 95th percentile (UCL) concentration
WIR - water ingestion rate

Range of TRVs					Range of HQs			
TRV-A[a]		TRV-B[b]			HQ based on TRV-A[a]		HQ based on TRV-B[a]	
NOAEL	LOAEL	NOAEL	LOAEL	TRV units	NOAEL HQ	LOAEL HQ	NOAEL HQ[b]	LOAEL HQ[b]
[redacted]								
2.6	5.4	0.32	4.7	mg/kg bw/day	0.017	0.0084	0.14	0.010
3.5	13	0.06	2.64	mg/kg bw/day	0.0021	0.00057	0.12	0.0028
18	26	3.4	6.8	mg/kg bw/day	0.056	0.039	0.30	0.15
11	90	0.71	7.0	mg/kg bw/day	0.021	0.0025	0.32	0.033
160	250	1.6	27	µg/kg bw/day	0.069	0.044	**6.9**	0.41
160	250	1.6	27	µg/kg bw/day	0.056	0.036	**5.6**	0.33
40	80	0.133	31.6	mg/kg bw/day	0.018	0.009	**5.3**	0.022
0.016	0.16	0.05	1.21	mg/kg bw/day	**4.1**	0.41	**1.3**	0.055
0.27	2.7	-	-	mg/kg bw/day	0.14	0.014	-	-
160	320	9.6	411	mg/kg bw/day	0.015	0.0075	0.25	0.0059
1000	10000	-	-	µg/kg bw/day	0.0042	0.00042	-	-
-	-	620	3100	µg/kg bw/day	-	-	0.069	0.014
-	-	-	-	µg/kg bw/day	-	-	-	-
80	96	69	82	µg/kg bw/day	**1.4**	**1.1**	**1.6**	**1.3**
2.6	8.8	0.08	2.2	ng/kg bw/day	0.43	0.13	**14**	0.51
2.6	8.8	0.08	2.2	ng/kg bw/day	**3.6**	**1.1**	**120**	**4.2**
2.6	8.8	0.08	2.2	ng/kg bw/day	**4.0**	**1.2**	**130**	**4.7**
15	30	15	30	µg/kg bw/day	0.11	0.056	0.11	0.056
[redacted]								
2.6	5.4	0.32	4.7	mg/kg bw/day	0.019	0.0093	0.16	0.011
3.5	13	0.06	2.64	mg/kg bw/day	0.0020	0.00053	0.11	0.0026
18	26	3.4	6.8	mg/kg bw/day	0.053	0.037	0.28	0.14
11	90	0.71	7.0	mg/kg bw/day	0.022	0.0026	0.33	0.034
160	250	1.6	27	µg/kg bw/day	0.069	0.044	**6.9**	0.41
160	250	1.6	27	µg/kg bw/day	0.050	0.032	**5.0**	0.30
40	80	0.133	31.6	mg/kg bw/day	0.0075	0.0037	**2.2**	0.0094
0.016	0.16	0.05	1.21	mg/kg bw/day	**3.9**	0.39	**1.2**	0.051
0.27	2.7	-	-	mg/kg bw/day	0.16	0.016	-	-
160	320	9.6	411	mg/kg bw/day	0.017	0.0084	0.28	0.0065
1000	10000	-	-	µg/kg bw/day	0.0040	0.00040	-	-

-	-	620	3100	µg/kg bw/day	-	-	0.065	0.013
-	-	-	-	µg/kg bw/day	-	-	-	-
80	96	69	82	µg/kg bw/day	**1.1**	0.94	**1.3**	**1.1**
2.6	8.8	0.08	2.2	ng/kg bw/day	0.41	0.12	**13**	0.49
2.6	8.8	0.08	2.2	ng/kg bw/day	**2.7**	0.79	**87**	**3.2**
2.6	8.8	0.08	2.2	ng/kg bw/day	**3.5**	**1.0**	**110**	**4.1**
15	30	15	30	µg/kg bw/day	0.087	0.043	0.087	0.043

Mink - Diet Scenario 2

Dietary dose (mg/kg bw/d) = (([Csw*WIR] + [Cprey*FIR] + [Csed*SIR])/BW) *SUF

WIR (L/day)	0.099
FIR (kg ww/day)	0.14
SIR (kg dw/day)	0.00056
BW (kg)	1
SUF	1

Diet	Fractions
Blue crab	0.165
small fish	0.31
large fish	0.03

	Prey								Surface Water			Sediment		
	Small Fish (≤ 30 cm)		Large Fish (> 30 cm)		Blue Crab									
COPEC	$C_{sm\ fish,\ ww}$	Exposure Area	$C_{lg\ fish,\ ww}$	Exposure Area	$C_{crab,\ ww}$	Exposure Area	$C_{prey,ww}$	$C_{prey,ww}$ (units)	C_{sw}	C_{sw} (units)	Exposure Area	$C_{sed,dw}$	$C_{sed,dw}$ (units)	Exposure Area
RM ≥ 10														
Arsenic	0.18	NFF Sitewide, SFF RM ≥ 10	0.15	Site-wide	1.4	Site-wide	0.2913	mg/kg	0.0014	mg/l	RM ≥ 10	7.8	mg/kg	RM ≥ 10
Cadmium	0.045	NFF Sitewide, SFF RM ≥ 10	0.042	Site-wide	0.11	Site-wide	0.03336	mg/kg	0.00013	mg/l	RM ≥ 10	4.9	mg/kg	RM ≥ 10
Copper	7.5	NFF Sitewide, SFF RM ≥ 10	3.1	Site-wide	24.6	Site-wide	6.477	mg/kg	0.00793	mg/l	RM ≥ 10	140	mg/kg	RM ≥ 10
Lead	1.3	NFF Sitewide, SFF RM ≥ 10	0.53	Site-wide	0.36	Site-wide	0.4783	mg/kg	0.00835	mg/l	RM ≥ 10	280	mg/kg	RM ≥ 10
Mercury	130	NFF Sitewide, SFF RM ≥ 10	210	Site-wide	140	Site-wide	69.7	µg/kg	0.061	µg/l	RM ≥ 10	2900	µg/kg	RM ≥ 10
Methyl mercury	130	NFF Sitewide, SFF RM ≥ 10	200	Site-wide	120	Site-wide	66.1	µg/kg	0.00036	µg/l	RM ≥ 10	1.8	µg/kg	RM ≥ 10
Nickel	14	NFF Sitewide, SFF RM ≥ 10	0.85	Site-wide	1	Site-wide	4.5305	mg/kg	0.00239	mg/l	RM ≥ 10	31	mg/kg	RM ≥ 10
Selenium	1	NFF Sitewide, SFF RM ≥ 10	0.57	Site-wide	0.79	Site-wide	0.45745	mg/kg	0.00063	mg/l	RM ≥ 10	0.71	mg/kg	RM ≥ 10
Vanadium	0.45	NFF Sitewide, SFF RM ≥ 10	0.093	Site-wide	0.12	Site-wide	0.16209	mg/kg	0.0032	mg/l	RM ≥ 10	22	mg/kg	RM ≥ 10
Zinc	28	NFF Sitewide, SFF RM ≥ 10	39	Site-wide	36.4	Site-wide	15.856	mg/kg	0.031	mg/l	RM ≥ 10	420	mg/kg	RM ≥ 10
Benzo(a)pyrene	21	NFF Sitewide, SFF RM ≥ 10	1.9	Site-wide	10	Site-wide	8.217	µg/kg	0.0854	µg/l	RM ≥ 10	5300	µg/kg	RM ≥ 10
Total HPAHs	210	NFF Sitewide, SFF RM ≥ 10	53	Site-wide	110	Site-wide	84.84	µg/kg	0.871	µg/l	RM ≥ 10	54000	µg/kg	RM ≥ 10
Total PAHs	380	NFF Sitewide, SFF RM ≥ 10	160	Site-wide	190	Site-wide	153.95	µg/kg	1	µg/l	RM ≥ 10	68000	µg/kg	RM ≥ 10
Total PCB Congeners	2100	NFF Sitewide, SFF RM ≥ 10	2800	Site-wide	350	Site-wide	792.75	µg/kg	0.0223	µg/l	RM ≥ 10	2400	µg/kg	RM ≥ 10
PCB TEQ-Mammal	19	NFF Sitewide, SFF RM ≥ 10	36	Site-wide	8.8	Site-wide	8.422	ng/kg	0.00102	ng/l	RM ≥ 10	27	ng/kg	RM ≥ 10
PCDD/PCDF TEQ-Mammal	140	NFF Sitewide, SFF RM ≥ 10	190	Site-wide	61	Site-wide	59.165	ng/kg	0.0163	ng/l	RM ≥ 10	2200	ng/kg	RM ≥ 10
Total TEQ-Mammal	160	NFF Sitewide, SFF RM ≥ 10	230	Site-wide	70	Site-wide	68.05	ng/kg	0.0169	ng/l	RM ≥ 10	1900	ng/kg	RM ≥ 10
Dieldrin	32	NFF Sitewide, SFF RM ≥ 10	38	Site-wide	6.8	Site-wide	12.182	µg/kg	0.0016	µg/l	RM ≥ 10	7.5	µg/kg	RM ≥ 10
Site-wide														
Arsenic	0.26	Site-wide	0.15	Site-wide	1.4	Site-wide	0.3161	mg/kg	0.0013	mg/l	RM ≥ 4	9.6	mg/kg	Site-wide
Cadmium	0.033	Site-wide	0.042	Site-wide	0.11	Site-wide	0.02964	mg/kg	0.00017	mg/l	RM ≥ 4	4.9	mg/kg	Site-wide
Copper	6.1	Site-wide	3.1	Site-wide	24.6	Site-wide	6.043	mg/kg	0.011	mg/l	RM ≥ 4	170	mg/kg	Site-wide
Lead	1.6	Site-wide	0.53	Site-wide	0.36	Site-wide	0.5713	mg/kg	0.0122	mg/l	RM ≥ 4	270	mg/kg	Site-wide
Mercury	130	Site-wide	210	Site-wide	140	Site-wide	69.7	µg/kg	0.12	µg/l	RM ≥ 4	2900	µg/kg	Site-wide
Methyl mercury	110	Site-wide	200	Site-wide	120	Site-wide	59.9	µg/kg	0.00044	µg/l	RM ≥ 4	3.9	µg/kg	Site-wide
Nickel	5.4	Site-wide	0.85	Site-wide	1	Site-wide	1.8645	mg/kg	0.00239	mg/l	RM ≥ 4	32	mg/kg	Site-wide
Selenium	0.9	Site-wide	0.57	Site-wide	0.79	Site-wide	0.42645	mg/kg	0.00067	mg/l	RM ≥ 4	0.93	mg/kg	Site-wide
Vanadium	0.54	Site-wide	0.093	Site-wide	0.12	Site-wide	0.18999	mg/kg	0.0033	mg/l	RM ≥ 4	27	mg/kg	Site-wide
Zinc	33	Site-wide	39	Site-wide	36.4	Site-wide	17.406	mg/kg	0.029	mg/l	RM ≥ 4	490	mg/kg	Site-wide
Benzo(a)pyrene	24	Site-wide	1.9	Site-wide	10	Site-wide	9.147	µg/kg	0.0953	µg/l	RM ≥ 4	4700	µg/kg	Site-wide

Total HPAHs	250	Site-wide	53	Site-wide	110	Site-wide	97.24	µg/kg	0.961	µg/l	RM ≥ 4	46000	µg/kg	Site-wide
Total PAHs	350	Site-wide	160	Site-wide	190	Site-wide	144.65	µg/kg	1.1	µg/l	RM ≥ 4	62000	µg/kg	Site-wide
Total PCB Congeners	1700	Site-wide	2800	Site-wide	350	Site-wide	668.75	µg/kg	0.034	µg/l	RM ≥ 4	2600	µg/kg	Site-wide
PCB TEQ-Mammal	18	Site-wide	36	Site-wide	8.8	Site-wide	8.112	ng/kg	0.000917	ng/l	RM ≥ 4	30	ng/kg	Site-wide
PCDD/PCDF TEQ-Mammal	91	Site-wide	190	Site-wide	61	Site-wide	43.975	ng/kg	0.11	ng/l	RM ≥ 4	2200	ng/kg	Site-wide
Total TEQ-Mammal	130	Site-wide	230	Site-wide	70	Site-wide	58.75	ng/kg	0.11	ng/l	RM ≥ 4	2200	ng/kg	Site-wide
Dieldrin	24	Site-wide	38	Site-wide	6.8	Site-wide	9.702	µg/kg	0.0015	µg/l	RM ≥ 4	8.3	µg/kg	Site-wide

Note 1: "–" indicates no TRV available

[a] TRVs derived from the primary literature based on process identified in Section 9.1.3.1

[b] TRVs based on USEPA's LPR restoration project FFS (Louis Berger et al. 2014), USEPA's first draft of the LPR restoration project FFS (Malcolm Pirnie 2007) or USEPA's LPR restoration project PAR (Battelle 2005) .

BW - body weight
COC - chemical of concern
COPEC - chemical of potential ecological concern
FIR - food ingestion rate
LOAEL - Lowest observed adverse effect level
na - not applicable
NFF - non-small forage fish
NOAEL - No observed adverse effect level
RM - River Mile
SFF - small forage fish
SIR - sediment ingestion rate
SUF - site use factor
UCL HQ = hazard quotient based on the 95th percentile (UCL) concentration
WIR - water ingestion rate

Dose		Range of TRVs					Range of HQs			
		TRV-A[a]		TRV-B[b]			HQ based on TRV-A[a]		HQ based on TRV-B[a]	
C_{Dose}	C_{dose} (units)	NOAEL	LOAEL	NOAEL	LOAEL	TRV units	NOAEL HQ	LOAEL HQ	NOAEL HQ[b]	LOAEL HQ[b]
0.045	mg/kg bw/day	2.6	5.4	0.32	4.7	mg/kg bw/day	0.017	0.0084	0.14	0.010
0.0074	mg/kg bw/day	3.5	13	0.06	2.64	mg/kg bw/day	0.0021	0.00057	0.12	0.0028
0.99	mg/kg bw/day	18	26	3.4	6.8	mg/kg bw/day	0.055	0.038	0.29	0.14
0.22	mg/kg bw/day	11	90	0.71	7.0	mg/kg bw/day	0.020	0.0025	0.32	0.032
11.4	µg/kg bw/day	160	250	1.6	27	µg/kg bw/day	0.071	0.046	**7.1**	0.42
9.3	µg/kg bw/day	160	250	1.6	27	µg/kg bw/day	0.058	0.037	**5.8**	0.34
0.65	mg/kg bw/day	40	80	0.133	31.6	mg/kg bw/day	0.016	0.0081	**4.9**	0.021
0.065	mg/kg bw/day	0.016	0.16	0.05	1.21	mg/kg bw/day	**4.0**	0.40	**1.3**	0.053
0.035	mg/kg bw/day	0.27	2.7	-	-	mg/kg bw/day	0.13	0.013	-	-
2.5	mg/kg bw/day	160	320	9.6	411	mg/kg bw/day	0.015	0.0077	0.26	0.0060
4.1	µg/kg bw/day	1000	10000	-	-	µg/kg bw/day	0.0041	0.00041	-	-
42	µg/kg bw/day	-	-	620	3100	µg/kg bw/day	-	-	0.068	0.014
59.732	µg/kg bw/day	-	-	-	-	µg/kg bw/day	-	-	-	-
112	µg/kg bw/day	80	96	69	82	µg/kg bw/day	**1.4**	**1.2**	**1.6**	**1.4**
1.2	ng/kg bw/day	2.6	8.8	0.08	2.2	ng/kg bw/day	0.46	0.14	**15**	0.54
9.5	ng/kg bw/day	2.6	8.8	0.08	2.2	ng/kg bw/day	**3.7**	**1.1**	**120**	**4.3**
11	ng/kg bw/day	2.6	8.8	0.08	2.2	ng/kg bw/day	**4.1**	**1.2**	**130**	**4.8**
1.7	µg/kg bw/day	15	30	15	30	µg/kg bw/day	0.11	0.057	0.11	0.057
0.050	mg/kg bw/day	2.6	5.4	0.32	4.7	mg/kg bw/day	0.019	0.0092	0.16	0.011
0.0069	mg/kg bw/day	3.5	13	0.06	2.64	mg/kg bw/day	0.0020	0.00053	0.12	0.0026
0.94	mg/kg bw/day	18	26	3.4	6.8	mg/kg bw/day	0.052	0.036	0.28	0.14
0.23	mg/kg bw/day	11	90	0.71	7.0	mg/kg bw/day	0.021	0.0026	0.33	0.033
11	µg/kg bw/day	160	250	1.6	27	µg/kg bw/day	0.071	0.046	**7.1**	0.42
8.4	µg/kg bw/day	160	250	1.6	27	µg/kg bw/day	0.052	0.034	**5.2**	0.31
0.28	mg/kg bw/day	40	80	0.133	31.6	mg/kg bw/day	0.0070	0.0035	**2.1**	0.0088
0.060	mg/kg bw/day	0.016	0.16	0.05	1.21	mg/kg bw/day	**3.8**	0.38	**1.2**	0.050
0.042	mg/kg bw/day	0.27	2.7	-	-	mg/kg bw/day	0.16	0.016	-	-
2.7	mg/kg bw/day	160	320	9.6	411	mg/kg bw/day	0.017	0.0085	0.28	0.0066
3.9	µg/kg bw/day	1000	10000	-	-	µg/kg bw/day	0.0039	0.00039	-	-

39	µg/kg bw/day	-	-	620	3100	µg/kg bw/day	-	-	0.064	0.013
55.080	µg/kg bw/day	-	-	-	-	µg/kg bw/day	-	-	-	-
95	µg/kg bw/day	80	96	69	82	µg/kg bw/day	**1.2**	0.99	**1.4**	**1.2**
1.2	ng/kg bw/day	2.6	8.8	0.08	2.2	ng/kg bw/day	0.44	0.13	**14**	0.52
7.4	ng/kg bw/day	2.6	8.8	0.08	2.2	ng/kg bw/day	**2.8**	0.84	**92**	**3.4**
9.5	ng/kg bw/day	2.6	8.8	0.08	2.2	ng/kg bw/day	**3.6**	**1.1**	**120**	**4.3**
1.4	µg/kg bw/day	15	30	15	30	µg/kg bw/day	0.091	0.045	0.091	0.045

Mink - Diet Scenario 3

Dietary dose (mg/kg bw/d) = (([Csw*WIR] + [Cprey*FIR] + [Csed*SIR])/BW) *SUF

WIR (L/day)	0.099
FIR (kg ww/day)	0.14
SIR (kg dw/day)	0.00056
BW (kg)	1
SUF	1

Diet	Fractions
Blue crab	0.165
small fish	0.835

COPEC	Prey: Small Fish (≤ 30 cm) $C_{sm\ fish,\ ww}$	Prey: Small Fish (≤ 30 cm) Exposure Area	Prey: Blue Crab $C_{crab,\ ww}$	Prey: Blue Crab Exposure Area	$C_{prey,ww}$	$C_{prey,ww}$ (units)	Surface Water C_{sw}	Surface Water C_{sw} (units)	Surface Water Exposure Area	Sediment $C_{sed,dw}$	Sediment $C_{sed,dw}$ (units)	Sediment Exposure Area	Dose C_{Dose}	Dose C_{dose} (units)
RM ≥ 10														
Arsenic	0.18	NFF Sitewide, SFF RM ≥ 10	1.4	Site-wide	0.3813	mg/kg	0.0014	mg/l	RM ≥ 10	7.8	mg/kg	RM ≥ 10	0.058	mg/kg bw/day
Cadmium	0.045	NFF Sitewide, SFF RM ≥ 10	0.11	Site-wide	0.055725	mg/kg	0.00013	mg/l	RM ≥ 10	4.9	mg/kg	RM ≥ 10	0.011	mg/kg bw/day
Copper	7.5	NFF Sitewide, SFF RM ≥ 10	24.6	Site-wide	10.3215	mg/kg	0.00793	mg/l	RM ≥ 10	140	mg/kg	RM ≥ 10	1.5	mg/kg bw/day
Lead	1.3	NFF Sitewide, SFF RM ≥ 10	0.36	Site-wide	1.1449	mg/kg	0.00835	mg/l	RM ≥ 10	280	mg/kg	RM ≥ 10	0.32	mg/kg bw/day
Mercury	130	NFF Sitewide, SFF RM ≥ 10	140	Site-wide	131.65	µg/kg	0.061	µg/l	RM ≥ 10	2900	µg/kg	RM ≥ 10	20	µg/kg bw/day
Methyl mercury	130	NFF Sitewide, SFF RM ≥ 10	120	Site-wide	128.35	µg/kg	0.00036	µg/l	RM ≥ 10	1.8	µg/kg	RM ≥ 10	18	µg/kg bw/day
Nickel	14	NFF Sitewide, SFF RM ≥ 10	1	Site-wide	11.855	mg/kg	0.00239	mg/l	RM ≥ 10	31	mg/kg	RM ≥ 10	1.7	mg/kg bw/day
Selenium	1	NFF Sitewide, SFF RM ≥ 10	0.79	Site-wide	0.96535	mg/kg	0.00063	mg/l	RM ≥ 10	0.71	mg/kg	RM ≥ 10	0.14	mg/kg bw/day
Vanadium	0.45	NFF Sitewide, SFF RM ≥ 10	0.12	Site-wide	0.39555	mg/kg	0.0032	mg/l	RM ≥ 10	22	mg/kg	RM ≥ 10	0.068	mg/kg bw/day
Zinc	28	NFF Sitewide, SFF RM ≥ 10	36.4	Site-wide	29.386	mg/kg	0.031	mg/l	RM ≥ 10	420	mg/kg	RM ≥ 10	4.4	mg/kg bw/day
Benzo(a)pyrene	21	NFF Sitewide, SFF RM ≥ 10	10	Site-wide	19.185	µg/kg	0.0854	µg/l	RM ≥ 10	5300	µg/kg	RM ≥ 10	5.7	µg/kg bw/day
Total HPAHs	210	NFF Sitewide, SFF RM ≥ 10	110	Site-wide	193.5	µg/kg	0.871	µg/l	RM ≥ 10	54000	µg/kg	RM ≥ 10	57	µg/kg bw/day
Total PAHs	380	NFF Sitewide, SFF RM ≥ 10	190	Site-wide	348.65	µg/kg	1	µg/l	RM ≥ 10	68000	µg/kg	RM ≥ 10	87	µg/kg bw/day
Total PCB Congeners	2100	NFF Sitewide, SFF RM ≥ 10	350	Site-wide	1811.25	µg/kg	0.0223	µg/l	RM ≥ 10	2400	µg/kg	RM ≥ 10	255	µg/kg bw/day
PCB TEQ-Mammal	19	NFF Sitewide, SFF RM ≥ 10	8.8	Site-wide	17.317	ng/kg	0.00102	ng/l	RM ≥ 10	27	ng/kg	RM ≥ 10	2.4	ng/kg bw/day
PCDD/PCDF TEQ-Mammal	140	NFF Sitewide, SFF RM ≥ 10	61	Site-wide	126.965	ng/kg	0.0163	ng/l	RM ≥ 10	2200	ng/kg	RM ≥ 10	19	ng/kg bw/day
Total TEQ-Mammal	160	NFF Sitewide, SFF RM ≥ 10	70	Site-wide	145.15	ng/kg	0.0169	ng/l	RM ≥ 10	1900	ng/kg	RM ≥ 10	21	ng/kg bw/day
Dieldrin	32	NFF Sitewide, SFF RM ≥ 10	6.8	Site-wide	27.842	µg/kg	0.0016	µg/l	RM ≥ 10	7.5	µg/kg	RM ≥ 10	3.9	µg/kg bw/day
Site-wide														
Arsenic	0.26	Site-wide	1.4	Site-wide	0.4481	mg/kg	0.0013	mg/l	RM ≥ 4	9.6	mg/kg	Site-wide	0.068	mg/kg bw/day
Cadmium	0.033	Site-wide	0.11	Site-wide	0.045705	mg/kg	0.00017	mg/l	RM ≥ 4	4.9	mg/kg	Site-wide	0.0092	mg/kg bw/day
Copper	6.1	Site-wide	24.6	Site-wide	9.1525	mg/kg	0.011	mg/l	RM ≥ 4	170	mg/kg	Site-wide	1.4	mg/kg bw/day
Lead	1.6	Site-wide	0.36	Site-wide	1.3954	mg/kg	0.0122	mg/l	RM ≥ 4	270	mg/kg	Site-wide	0.35	mg/kg bw/day
Mercury	130	Site-wide	140	Site-wide	131.65	µg/kg	0.12	µg/l	RM ≥ 4	2900	µg/kg	Site-wide	20	µg/kg bw/day
Methyl mercury	110	Site-wide	120	Site-wide	111.65	µg/kg	0.00044	µg/l	RM ≥ 4	3.9	µg/kg	Site-wide	16	µg/kg bw/day
Nickel	5.4	Site-wide	1	Site-wide	4.674	mg/kg	0.00239	mg/l	RM ≥ 4	32	mg/kg	Site-wide	0.67	mg/kg bw/day
Selenium	0.9	Site-wide	0.79	Site-wide	0.88185	mg/kg	0.00067	mg/l	RM ≥ 4	0.93	mg/kg	Site-wide	0.12	mg/kg bw/day
Vanadium	0.54	Site-wide	0.12	Site-wide	0.4707	mg/kg	0.0033	mg/l	RM ≥ 4	27	mg/kg	Site-wide	0.081	mg/kg bw/day
Zinc	33	Site-wide	36.4	Site-wide	33.561	mg/kg	0.029	mg/l	RM ≥ 4	490	mg/kg	Site-wide	5.0	mg/kg bw/day
Benzo(a)pyrene	24	Site-wide	10	Site-wide	21.69	µg/kg	0.0953	µg/l	RM ≥ 4	4700	µg/kg	Site-wide	5.7	µg/kg bw/day

Total HPAHs	250	Site-wide	110	Site-wide	226.9	µg/kg	0.961	µg/l	RM ≥ 4	46000	µg/kg	Site-wide	58	µg/kg bw/day
Total PAHs	350	Site-wide	190	Site-wide	323.6	µg/kg	1.1	µg/l	RM ≥ 4	62000	µg/kg	Site-wide	80	µg/kg bw/day
Total PCB Congeners	1700	Site-wide	350	Site-wide	1477.25	µg/kg	0.034	µg/l	RM ≥ 4	2600	µg/kg	Site-wide	208	µg/kg bw/day
PCB TEQ-Mammal	18	Site-wide	8.8	Site-wide	16.482	ng/kg	0.000917	ng/l	RM ≥ 4	30	ng/kg	Site-wide	2.3	ng/kg bw/day
PCDD/PCDF TEQ-Mammal	91	Site-wide	61	Site-wide	86.05	ng/kg	0.11	ng/l	RM ≥ 4	2200	ng/kg	Site-wide	13	ng/kg bw/day
Total TEQ-Mammal	130	Site-wide	70	Site-wide	120.1	ng/kg	0.11	ng/l	RM ≥ 4	2200	ng/kg	Site-wide	18	ng/kg bw/day
Dieldrin	24	Site-wide	6.8	Site-wide	21.162	µg/kg	0.0015	µg/l	RM ≥ 4	8.3	µg/kg	Site-wide	3.0	µg/kg bw/day

Note 1: "–" indicates no TRV available

[a] TRVs derived from the primary literature based on process identified in Section 9.1.3.1

[b] TRVs based on USEPA's LPR restoration project FFS (Louis Berger et al. 2014), USEPA's first draft of the LPR restoration project FFS (Malcolm Pirnie 2007) or USEPA's LPR restoration project PAR (Battelle 2005) .

BW - body weight
COC - chemical of concern
COPEC - chemical of potential ecological concern
FIR - food ingestion rate
LOAEL - Lowest observed adverse effect level
na - not applicable
NFF - non-small forage fish
NOAEL - No observed adverse effect level
RM - River Mile
SFF - small forage fish
SIR - sediment ingestion rate
SUF - site use factor
UCL HQ = hazard quotient based on the 95th percentile (UCL) concentration
WIR - water ingestion rate

Range of TRVs					Range of HQs			
TRV-A[a]		TRV-B[b]			HQ based on TRV-A[a]		HQ based on TRV-B[a]	
NOAEL	LOAEL	NOAEL	LOAEL	TRV units	NOAEL HQ	LOAEL HQ	NOAEL HQ[b]	LOAEL HQ[b]
2.6	5.4	0.32	4.7	mg/kg bw/day	0.022	0.011	0.18	0.012
3.5	13	0.06	2.64	mg/kg bw/day	0.0030	0.00081	0.18	0.0040
18	26	3.4	6.8	mg/kg bw/day	0.085	0.059	0.45	0.22
11	90	0.71	7.0	mg/kg bw/day	0.029	0.0035	0.45	0.045
160	250	1.6	27	µg/kg bw/day	0.13	0.080	**13**	0.74
160	250	1.6	27	µg/kg bw/day	0.11	0.072	**11**	0.67
40	80	0.133	31.6	mg/kg bw/day	0.042	0.021	**13**	0.053
0.016	0.16	0.05	1.21	mg/kg bw/day	**8.5**	0.85	**2.7**	0.11
0.27	2.7	-	-	mg/kg bw/day	0.25	0.025	-	-
160	320	9.6	411	mg/kg bw/day	0.027	0.014	0.45	0.011
1000	10000	-	-	µg/kg bw/day	0.0057	0.00057	-	-
-	-	620	3100	µg/kg bw/day	-	-	0.093	0.019
-	-	-	-	µg/kg bw/day	-	-	-	-
80	96	69	82	µg/kg bw/day	**3.2**	**2.7**	**3.7**	**3.1**
2.6	8.8	0.08	2.2	ng/kg bw/day	0.94	0.28	**30**	**1.1**
2.6	8.8	0.08	2.2	ng/kg bw/day	**7.3**	**2.2**	**240**	**8.6**
2.6	8.8	0.08	2.2	ng/kg bw/day	**8.2**	**2.4**	**270**	**9.7**
15	30	15	30	µg/kg bw/day	0.26	0.13	0.26	0.13
2.6	5.4	0.32	4.7	mg/kg bw/day	0.026	0.013	0.21	0.015
3.5	13	0.06	2.64	mg/kg bw/day	0.0026	0.00070	0.15	0.0035
18	26	3.4	6.8	mg/kg bw/day	0.077	0.053	0.41	0.20
11	90	0.71	7.0	mg/kg bw/day	0.032	0.0039	0.49	0.050
160	250	1.6	27	µg/kg bw/day	0.13	0.080	**13**	0.74
160	250	1.6	27	µg/kg bw/day	0.10	0.063	**9.8**	0.58
40	80	0.133	31.6	mg/kg bw/day	0.017	0.0084	**5.1**	0.021
0.016	0.16	0.05	1.21	mg/kg bw/day	**7.8**	0.78	**2.5**	0.10
0.27	2.7	-	-	mg/kg bw/day	0.30	0.030	-	-
160	320	9.6	411	mg/kg bw/day	0.031	0.016	0.52	0.012
1000	10000	-	-	µg/kg bw/day	0.0057	0.00057	-	-

-	-	620	3100	µg/kg bw/day	-	-	0.093	0.019
-	-	-	-	µg/kg bw/day	-	-	-	-
80	96	69	82	µg/kg bw/day	**2.6**	**2.2**	**3.0**	**2.5**
2.6	8.8	0.08	2.2	ng/kg bw/day	0.89	0.26	**29**	**1.1**
2.6	8.8	0.08	2.2	ng/kg bw/day	**5.1**	**1.5**	**170**	**6.0**
2.6	8.8	0.08	2.2	ng/kg bw/day	**6.9**	**2.1**	**230**	**8.2**
15	30	15	30	µg/kg bw/day	0.20	0.10	0.20	0.10

Mink - Diet Scenario 4

Dietary dose (mg/kg bw/d) = (([Csw*WIR] + [Cprey*FIR] + [Csed*SIR])/BW) *SUF

WIR (L/day)	0.099
FIR (kg ww/day)	0.14
SIR (kg dw/day)	0.00056
BW (kg)	1
SUF	1

Diet	Fractions
Blue crab	0.165
small fish	0.805
large fish	0.03

	Prey								Surface Water			Sediment		
	Small Fish (≤ 30 cm)		Large Fish (> 30 cm)		Blue Crab									
COPEC	$C_{sm\ fish,\ ww}$	Exposure Area	$C_{lg\ fish,\ ww}$	Exposure Area	$C_{crab,\ ww}$	Exposure Area	$C_{prey,ww}$	$C_{prey,ww}$ (units)	C_{sw}	C_{sw} (units)	Exposure Area	$C_{sed,dw}$	$C_{sed,dw}$ (units)	Exposure Area
RM ≥ 10														
Arsenic	0.18	NFF Sitewide, SFF RM ≥ 10	0.15	Site-wide	1.4	Site-wide	0.3804	mg/kg	0.0014	mg/l	RM ≥ 10	7.8	mg/kg	RM ≥ 10
Cadmium	0.045	NFF Sitewide, SFF RM ≥ 10	0.042	Site-wide	0.11	Site-wide	0.055635	mg/kg	0.00013	mg/l	RM ≥ 10	4.9	mg/kg	RM ≥ 10
Copper	7.5	NFF Sitewide, SFF RM ≥ 10	3.1	Site-wide	24.6	Site-wide	10.1895	mg/kg	0.00793	mg/l	RM ≥ 10	140	mg/kg	RM ≥ 10
Lead	1.3	NFF Sitewide, SFF RM ≥ 10	0.53	Site-wide	0.36	Site-wide	1.1218	mg/kg	0.00835	mg/l	RM ≥ 10	280	mg/kg	RM ≥ 10
Mercury	130	NFF Sitewide, SFF RM ≥ 10	210	Site-wide	140	Site-wide	134.05	µg/kg	0.061	µg/l	RM ≥ 10	2900	µg/kg	RM ≥ 10
Methyl mercury	130	NFF Sitewide, SFF RM ≥ 10	200	Site-wide	120	Site-wide	130.45	µg/kg	0.00036	µg/l	RM ≥ 10	1.8	µg/kg	RM ≥ 10
Nickel	14	NFF Sitewide, SFF RM ≥ 10	0.85	Site-wide	1	Site-wide	11.4605	mg/kg	0.00239	mg/l	RM ≥ 10	31	mg/kg	RM ≥ 10
Selenium	1	NFF Sitewide, SFF RM ≥ 10	0.57	Site-wide	0.79	Site-wide	0.95245	mg/kg	0.00063	mg/l	RM ≥ 10	0.71	mg/kg	RM ≥ 10
Vanadium	0.45	NFF Sitewide, SFF RM ≥ 10	0.093	Site-wide	0.12	Site-wide	0.38484	mg/kg	0.0032	mg/l	RM ≥ 10	22	mg/kg	RM ≥ 10
Zinc	28	NFF Sitewide, SFF RM ≥ 10	39	Site-wide	36.4	Site-wide	29.716	mg/kg	0.031	mg/l	RM ≥ 10	420	mg/kg	RM ≥ 10
Benzo(a)pyrene	21	NFF Sitewide, SFF RM ≥ 10	1.9	Site-wide	10	Site-wide	18.612	µg/kg	0.0854	µg/l	RM ≥ 10	5300	µg/kg	RM ≥ 10
Total HPAHs	210	NFF Sitewide, SFF RM ≥ 10	53	Site-wide	110	Site-wide	188.79	µg/kg	0.871	µg/l	RM ≥ 10	54000	µg/kg	RM ≥ 10
Total PAHs	380	NFF Sitewide, SFF RM ≥ 10	160	Site-wide	190	Site-wide	342.05	µg/kg	1	µg/l	RM ≥ 10	68000	µg/kg	RM ≥ 10
Total PCB Congeners	2100	NFF Sitewide, SFF RM ≥ 10	2800	Site-wide	350	Site-wide	1832.25	µg/kg	0.0223	µg/l	RM ≥ 10	2400	µg/kg	RM ≥ 10
PCB TEQ-Mammal	19	NFF Sitewide, SFF RM ≥ 10	36	Site-wide	8.8	Site-wide	17.827	ng/kg	0.00102	ng/l	RM ≥ 10	27	ng/kg	RM ≥ 10
PCDD/PCDF TEQ-Mammal	140	NFF Sitewide, SFF RM ≥ 10	190	Site-wide	61	Site-wide	128.465	ng/kg	0.0163	ng/l	RM ≥ 10	2200	ng/kg	RM ≥ 10
Total TEQ-Mammal	160	NFF Sitewide, SFF RM ≥ 10	230	Site-wide	70	Site-wide	147.25	ng/kg	0.0169	ng/l	RM ≥ 10	1900	ng/kg	RM ≥ 10
Dieldrin	32	NFF Sitewide, SFF RM ≥ 10	38	Site-wide	6.8	Site-wide	28.022	µg/kg	0.0016	µg/l	RM ≥ 10	7.5	µg/kg	RM ≥ 10
Site-wide														
Arsenic	0.26	Site-wide	0.15	Site-wide	1.4	Site-wide	0.4448	mg/kg	0.0013	mg/l	RM ≥ 4	9.6	mg/kg	Site-wide
Cadmium	0.033	Site-wide	0.042	Site-wide	0.11	Site-wide	0.045975	mg/kg	0.00017	mg/l	RM ≥ 4	4.9	mg/kg	Site-wide
Copper	6.1	Site-wide	3.1	Site-wide	24.6	Site-wide	9.0625	mg/kg	0.011	mg/l	RM ≥ 4	170	mg/kg	Site-wide
Lead	1.6	Site-wide	0.53	Site-wide	0.36	Site-wide	1.3633	mg/kg	0.0122	mg/l	RM ≥ 4	270	mg/kg	Site-wide
Mercury	130	Site-wide	210	Site-wide	140	Site-wide	134.05	µg/kg	0.12	µg/l	RM ≥ 4	2900	µg/kg	Site-wide
Methyl mercury	110	Site-wide	200	Site-wide	120	Site-wide	114.35	µg/kg	0.00044	µg/l	RM ≥ 4	3.9	µg/kg	Site-wide
Nickel	5.4	Site-wide	0.85	Site-wide	1	Site-wide	4.5375	mg/kg	0.00239	mg/l	RM ≥ 4	32	mg/kg	Site-wide
Selenium	0.9	Site-wide	0.57	Site-wide	0.79	Site-wide	0.87195	mg/kg	0.00067	mg/l	RM ≥ 4	0.93	mg/kg	Site-wide
Vanadium	0.54	Site-wide	0.093	Site-wide	0.12	Site-wide	0.45729	mg/kg	0.0033	mg/l	RM ≥ 4	27	mg/kg	Site-wide
Zinc	33	Site-wide	39	Site-wide	36.4	Site-wide	33.741	mg/kg	0.029	mg/l	RM ≥ 4	490	mg/kg	Site-wide
Benzo(a)pyrene	24	Site-wide	1.9	Site-wide	10	Site-wide	18.647	µg/kg	0.0953	µg/l	RM ≥ 4	4700	µg/kg	Site-wide

Total HPAHs	250	Site-wide	53	Site-wide	110	Site-wide	220.99	µg/kg	0.961	µg/l	RM ≥ 4	46000	µg/kg	Site-wide
Total PAHs	350	Site-wide	160	Site-wide	190	Site-wide	290.7	µg/kg	1.1	µg/l	RM ≥ 4	62000	µg/kg	Site-wide
Total PCB Congeners	1700	Site-wide	2800	Site-wide	350	Site-wide	1510.25	µg/kg	0.034	µg/l	RM ≥ 4	2600	µg/kg	Site-wide
PCB TEQ-Mammal	18	Site-wide	36	Site-wide	8.8	Site-wide	17.022	ng/kg	0.000917	ng/l	RM ≥ 4	30	ng/kg	Site-wide
PCDD/PCDF TEQ-Mammal	91	Site-wide	190	Site-wide	61	Site-wide	89.02	ng/kg	0.11	ng/l	RM ≥ 4	2200	ng/kg	Site-wide
Total TEQ-Mammal	130	Site-wide	230	Site-wide	70	Site-wide	123.1	ng/kg	0.11	ng/l	RM ≥ 4	2200	ng/kg	Site-wide
Dieldrin	24	Site-wide	38	Site-wide	6.8	Site-wide	18.658	µg/kg	0.0015	µg/l	RM ≥ 4	8.3	µg/kg	Site-wide

Note 1: "–" indicates no TRV available

[a] TRVs derived from the primary literature based on process identified in Section 9.1.3.1

[b] TRVs based on USEPA's LPR restoration project FFS (Louis Berger et al. 2014), USEPA's first draft of the LPR restoration project FFS (Malcolm Pirnie 2007) or USEPA's LPR restoration project PAR (Battelle 2005) .

BW - body weight
COC - chemical of concern
COPEC - chemical of potential ecological concern
FIR - food ingestion rate
LOAEL - Lowest observed adverse effect level
na - not applicable
NFF - non-small forage fish
NOAEL - No observed adverse effect level
RM - River Mile
SFF - small forage fish
SIR - sediment ingestion rate
SUF - site use factor
UCL HQ = hazard quotient based on the 95th percentile (UCL) concentration
WIR - water ingestion rate

Dose		Range of TRVs					Range of HQs			
		TRV-A[a]		TRV-B[b]			HQ based on TRV-A[a]		HQ based on TRV-B[a]	
C_{Dose}	C_{dose} (units)	NOAEL	LOAEL	NOAEL	LOAEL	TRV units	NOAEL HQ	LOAEL HQ	NOAEL HQ[b]	LOAEL HQ[b]
[redacted]										
0.058	mg/kg bw/day	2.6	5.4	0.32	4.7	mg/kg bw/day	0.022	0.011	0.18	0.012
0.011	mg/kg bw/day	3.5	13	0.06	2.64	mg/kg bw/day	0.0030	0.00081	0.18	0.0040
1.5	mg/kg bw/day	18	26	3.4	6.8	mg/kg bw/day	0.084	0.058	0.44	0.22
0.31	mg/kg bw/day	11	90	0.71	7.0	mg/kg bw/day	0.029	0.0035	0.44	0.045
20	µg/kg bw/day	160	250	1.6	27	µg/kg bw/day	0.13	0.082	**13**	0.76
18	µg/kg bw/day	160	250	1.6	27	µg/kg bw/day	0.11	0.073	**11**	0.68
1.6	mg/kg bw/day	40	80	0.133	31.6	mg/kg bw/day	0.041	0.020	**12**	0.051
0.13	mg/kg bw/day	0.016	0.16	0.05	1.21	mg/kg bw/day	**8.4**	0.84	**2.7**	0.11
0.067	mg/kg bw/day	0.27	2.7	-	-	mg/kg bw/day	0.25	0.025	-	-
4.4	mg/kg bw/day	160	320	9.6	411	mg/kg bw/day	0.027	0.014	0.46	0.011
5.6	µg/kg bw/day	1000	10000	-	-	µg/kg bw/day	0.0056	0.00056	-	-
57	µg/kg bw/day	-	-	620	3100	µg/kg bw/day	-	-	0.092	0.018
86	µg/kg bw/day	-	-	-	-	µg/kg bw/day	-	-	-	-
258	µg/kg bw/day	80	96	69	82	µg/kg bw/day	**3.2**	**2.7**	**3.7**	**3.1**
2.5	ng/kg bw/day	2.6	8.8	0.08	2.2	ng/kg bw/day	0.97	0.29	**31**	**1.1**
19	ng/kg bw/day	2.6	8.8	0.08	2.2	ng/kg bw/day	**7.4**	**2.2**	**240**	**8.7**
22	ng/kg bw/day	2.6	8.8	0.08	2.2	ng/kg bw/day	**8.3**	**2.5**	**270**	**9.9**
3.9	µg/kg bw/day	15	30	15	30	µg/kg bw/day	0.26	0.13	0.26	0.13
[redacted]										
0.068	mg/kg bw/day	2.6	5.4	0.32	4.7	mg/kg bw/day	0.026	0.013	0.21	0.014
0.0092	mg/kg bw/day	3.5	13	0.06	2.64	mg/kg bw/day	0.0026	0.00071	0.15	0.0035
1.4	mg/kg bw/day	18	26	3.4	6.8	mg/kg bw/day	0.076	0.053	0.40	0.20
0.34	mg/kg bw/day	11	90	0.71	7.0	mg/kg bw/day	0.031	0.0038	0.48	0.049
20	µg/kg bw/day	160	250	1.6	27	µg/kg bw/day	0.13	0.082	**13**	0.76
16	µg/kg bw/day	160	250	1.6	27	µg/kg bw/day	0.10	0.064	**10**	0.59
0.65	mg/kg bw/day	40	80	0.133	31.6	mg/kg bw/day	0.016	0.0082	**4.9**	0.021
0.12	mg/kg bw/day	0.016	0.16	0.05	1.21	mg/kg bw/day	**7.7**	0.77	**2.5**	0.10
0.079	mg/kg bw/day	0.27	2.7	-	-	mg/kg bw/day	0.29	0.029	-	-
5.0	mg/kg bw/day	160	320	9.6	411	mg/kg bw/day	0.031	0.016	0.52	0.012
5.3	µg/kg bw/day	1000	10000	-	-	µg/kg bw/day	0.0053	0.00053	-	-

57	µg/kg bw/day	-	-	620	3100	µg/kg bw/day	-	-	0.092	0.018
76	µg/kg bw/day	-	-	-	-	µg/kg bw/day	-	-	-	-
213	µg/kg bw/day	80	96	69	82	µg/kg bw/day	**2.7**	**2.2**	**3.1**	**2.6**
2.4	ng/kg bw/day	2.6	8.8	0.08	2.2	ng/kg bw/day	0.92	0.27	**30**	**1.1**
14	ng/kg bw/day	2.6	8.8	0.08	2.2	ng/kg bw/day	**5.3**	**1.6**	**170**	**6.2**
18	ng/kg bw/day	2.6	8.8	0.08	2.2	ng/kg bw/day	**7.1**	**2.1**	**230**	**8.4**
2.6	µg/kg bw/day	15	30	15	30	µg/kg bw/day	0.17	0.087	0.17	0.087

Mink - Diet Scenario 5

Dietary dose (mg/kg bw/d) = (([Csw*WIR] + [Cprey*FIR] + [Csed*SIR])/BW) *SUF

WIR (L/day)	0.099
FIR (kg ww/day)	0.14
SIR (kg dw/day)	0.00056
BW (kg)	1
SUF	1

Diet	Fractions
Blue crab	0.335
small fish	0.635
large fish	0.03

COPEC	Prey: Small Fish (≤ 30 cm)		Prey: Large Fish (> 30 cm)		Prey: Blue Crab		$C_{prey,ww}$	$C_{prey,ww}$ (units)	Surface Water			Sediment		
	$C_{sm\ fish,\ ww}$	Exposure Area	$C_{lg\ fish,\ ww}$	Exposure Area	$C_{crab,\ ww}$	Exposure Area			C_{sw}	C_{sw} (units)	Exposure Area	$C_{sed,dw}$	$C_{sed,dw}$ (units)	Exposure Area
RM ≥ 10														
Arsenic	0.18	NFF Sitewide, SFF RM ≥ 10	0.15	Site-wide	1.4	Site-wide	0.6	mg/kg	0.0014	mg/l	RM ≥ 10	7.8	mg/kg	RM ≥ 10
Cadmium	0.045	NFF Sitewide, SFF RM ≥ 10	0.042	Site-wide	0.11	Site-wide	0.1	mg/kg	0.00013	mg/l	RM ≥ 10	4.9	mg/kg	RM ≥ 10
Copper	7.5	NFF Sitewide, SFF RM ≥ 10	3.1	Site-wide	24.6	Site-wide	13.1	mg/kg	0.00793	mg/l	RM ≥ 10	140	mg/kg	RM ≥ 10
Lead	1.3	NFF Sitewide, SFF RM ≥ 10	0.53	Site-wide	0.36	Site-wide	1.0	mg/kg	0.00835	mg/l	RM ≥ 10	280	mg/kg	RM ≥ 10
Mercury	130	NFF Sitewide, SFF RM ≥ 10	210	Site-wide	140	Site-wide	135.8	µg/kg	0.061	µg/l	RM ≥ 10	2900	µg/kg	RM ≥ 10
Methyl mercury	130	NFF Sitewide, SFF RM ≥ 10	200	Site-wide	120	Site-wide	128.8	µg/kg	0.00036	µg/l	RM ≥ 10	1.8	µg/kg	RM ≥ 10
Nickel	14	NFF Sitewide, SFF RM ≥ 10	0.85	Site-wide	1	Site-wide	9.3	mg/kg	0.00239	mg/l	RM ≥ 10	31	mg/kg	RM ≥ 10
Selenium	1	NFF Sitewide, SFF RM ≥ 10	0.57	Site-wide	0.79	Site-wide	0.9	mg/kg	0.00063	mg/l	RM ≥ 10	0.71	mg/kg	RM ≥ 10
Vanadium	0.45	NFF Sitewide, SFF RM ≥ 10	0.093	Site-wide	0.12	Site-wide	0.3	mg/kg	0.0032	mg/l	RM ≥ 10	22	mg/kg	RM ≥ 10
Zinc	28	NFF Sitewide, SFF RM ≥ 10	39	Site-wide	36.4	Site-wide	31.1	mg/kg	0.031	mg/l	RM ≥ 10	420	mg/kg	RM ≥ 10
Benzo(a)pyrene	21	NFF Sitewide, SFF RM ≥ 10	1.9	Site-wide	10	Site-wide	16.7	µg/kg	0.0854	µg/l	RM ≥ 10	5300	µg/kg	RM ≥ 10
Total HPAHs	210	NFF Sitewide, SFF RM ≥ 10	53	Site-wide	110	Site-wide	171.8	µg/kg	0.871	µg/l	RM ≥ 10	54000	µg/kg	RM ≥ 10
Total PAHs	380	NFF Sitewide, SFF RM ≥ 10	160	Site-wide	190	Site-wide	309.8	µg/kg	1	µg/l	RM ≥ 10	68000	µg/kg	RM ≥ 10
Total PCB Congeners	2100	NFF Sitewide, SFF RM ≥ 10	2800	Site-wide	350	Site-wide	1534.8	µg/kg	0.0223	µg/l	RM ≥ 10	2400	µg/kg	RM ≥ 10
PCB TEQ-Mammal	19	NFF Sitewide, SFF RM ≥ 10	36	Site-wide	8.8	Site-wide	16.1	ng/kg	0.00102	ng/l	RM ≥ 10	27	ng/kg	RM ≥ 10
PCDD/PCDF TEQ-Mammal	140	NFF Sitewide, SFF RM ≥ 10	190	Site-wide	61	Site-wide	115.0	ng/kg	0.0163	ng/l	RM ≥ 10	2200	ng/kg	RM ≥ 10
Total TEQ-Mammal	160	NFF Sitewide, SFF RM ≥ 10	230	Site-wide	70	Site-wide	132.0	ng/kg	0.0169	ng/l	RM ≥ 10	1900	ng/kg	RM ≥ 10
Dieldrin	32	NFF Sitewide, SFF RM ≥ 10	38	Site-wide	6.8	Site-wide	23.7	µg/kg	0.0016	µg/l	RM ≥ 10	7.5	µg/kg	RM ≥ 10
Site-wide														
Arsenic	0.26	Site-wide	0.15	Site-wide	1.4	Site-wide	0.6	mg/kg	0.0013	mg/l	RM ≥ 4	9.6	mg/kg	Site-wide
Cadmium	0.033	Site-wide	0.042	Site-wide	0.11	Site-wide	0.1	mg/kg	0.00017	mg/l	RM ≥ 4	4.9	mg/kg	Site-wide
Copper	6.1	Site-wide	3.1	Site-wide	24.6	Site-wide	12.2	mg/kg	0.011	mg/l	RM ≥ 4	170	mg/kg	Site-wide
Lead	1.6	Site-wide	0.53	Site-wide	0.36	Site-wide	1.2	mg/kg	0.0122	mg/l	RM ≥ 4	270	mg/kg	Site-wide
Mercury	130	Site-wide	210	Site-wide	140	Site-wide	135.8	µg/kg	0.12	µg/l	RM ≥ 4	2900	µg/kg	Site-wide
Methyl mercury	110	Site-wide	200	Site-wide	120	Site-wide	116.1	µg/kg	0.00044	µg/l	RM ≥ 4	3.9	µg/kg	Site-wide
Nickel	5.4	Site-wide	0.85	Site-wide	1	Site-wide	3.8	mg/kg	0.00239	mg/l	RM ≥ 4	32	mg/kg	Site-wide
Selenium	0.9	Site-wide	0.57	Site-wide	0.79	Site-wide	0.9	mg/kg	0.00067	mg/l	RM ≥ 4	0.93	mg/kg	Site-wide
Vanadium	0.54	Site-wide	0.093	Site-wide	0.12	Site-wide	0.4	mg/kg	0.0033	mg/l	RM ≥ 4	27	mg/kg	Site-wide
Zinc	33	Site-wide	39	Site-wide	36.4	Site-wide	34.3	mg/kg	0.029	mg/l	RM ≥ 4	490	mg/kg	Site-wide
Benzo(a)pyrene	24	Site-wide	1.9	Site-wide	10	Site-wide	18.6	µg/kg	0.0953	µg/l	RM ≥ 4	4700	µg/kg	Site-wide

Total HPAHs	250	Site-wide	53	Site-wide	110	Site-wide	197.2	µg/kg	0.961	µg/l	RM ≥ 4	46000	µg/kg	Site-wide
Total PAHs	350	Site-wide	160	Site-wide	190	Site-wide	290.7	µg/kg	1.1	µg/l	RM ≥ 4	62000	µg/kg	Site-wide
Total PCB Congeners	1700	Site-wide	2800	Site-wide	350	Site-wide	1280.8	µg/kg	0.034	µg/l	RM ≥ 4	2600	µg/kg	Site-wide
PCB TEQ-Mammal	18	Site-wide	36	Site-wide	8.8	Site-wide	15.5	ng/kg	0.000917	ng/l	RM ≥ 4	30	ng/kg	Site-wide
PCDD/PCDF TEQ-Mammal	91	Site-wide	190	Site-wide	61	Site-wide	83.9	ng/kg	0.11	ng/l	RM ≥ 4	2200	ng/kg	Site-wide
Total TEQ-Mammal	130	Site-wide	230	Site-wide	70	Site-wide	112.9	ng/kg	0.11	ng/l	RM ≥ 4	2200	ng/kg	Site-wide
Dieldrin	24	Site-wide	38	Site-wide	6.8	Site-wide	18.7	µg/kg	0.0015	µg/l	RM ≥ 4	8.3	µg/kg	Site-wide

Note 1: "–" indicates no TRV available

[a] TRVs derived from the primary literature based on process identified in Section 9.1.3.1

[b] TRVs based on USEPA's LPR restoration project FFS (Louis Berger et al. 2014), USEPA's first draft of the LPR restoration project FFS (Malcolm Pirnie 2007) or USEPA's LPR restoration project PAR (Battelle 2005) .

BW - body weight
COC - chemical of concern
COPEC - chemical of potential ecological concern
FIR - food ingestion rate
LOAEL - Lowest observed adverse effect level
na - not applicable
NFF - non-small forage fish
NOAEL - No observed adverse effect level
RM - River Mile
SFF - small forage fish
SIR - sediment ingestion rate
SUF - site use factor
UCL HQ = hazard quotient based on the 95th percentile (UCL) concentration
WIR - water ingestion rate

Dose		Range of TRVs					Range of HQs			
		TRV-A[a]		TRV-B[b]			HQ based on TRV-A[a]		HQ based on TRV-B[a]	
C_{Dose}	C_{dose} (units)	NOAEL	LOAEL	NOAEL	LOAEL	TRV units	NOAEL HQ	LOAEL HQ	NOAEL HQ[b]	LOAEL HQ[b]
0.087	mg/kg bw/day	2.6	5.4	0.32	4.7	mg/kg bw/day	0.033	0.016	0.27	0.018
0.012	mg/kg bw/day	3.5	13	0.06	2.64	mg/kg bw/day	0.0035	0.00093	0.20	0.0046
1.9	mg/kg bw/day	18	26	3.4	6.8	mg/kg bw/day	0.11	0.074	0.56	0.28
0.29	mg/kg bw/day	11	90	0.71	7.0	mg/kg bw/day	0.027	0.0032	0.41	0.042
21	µg/kg bw/day	160	250	1.6	27	µg/kg bw/day	0.13	0.083	**13**	0.76
18	µg/kg bw/day	160	250	1.6	27	µg/kg bw/day	0.11	0.072	**11**	0.67
1.3	mg/kg bw/day	40	80	0.133	31.6	mg/kg bw/day	0.033	0.016	**10**	0.042
0.13	mg/kg bw/day	0.016	0.16	0.05	1.21	mg/kg bw/day	**8.1**	0.81	**2.6**	0.11
0.059	mg/kg bw/day	0.27	2.7	-	-	mg/kg bw/day	0.22	0.022	-	-
4.6	mg/kg bw/day	160	320	9.6	411	mg/kg bw/day	0.029	0.014	0.48	0.011
5.3	µg/kg bw/day	1000	10000	-	-	µg/kg bw/day	0.0053	0.00053	-	-
54	µg/kg bw/day	-	-	620	3100	µg/kg bw/day	-	-	0.088	0.018
82	µg/kg bw/day	-	-	-	-	µg/kg bw/day	-	-	-	-
216	µg/kg bw/day	80	96	69	82	µg/kg bw/day	**2.7**	**2.3**	**3.1**	**2.6**
2.3	ng/kg bw/day	2.6	8.8	0.08	2.2	ng/kg bw/day	0.87	0.26	**28**	**1.0**
17	ng/kg bw/day	2.6	8.8	0.08	2.2	ng/kg bw/day	**6.7**	**2.0**	**220**	**7.9**
20	ng/kg bw/day	2.6	8.8	0.08	2.2	ng/kg bw/day	**7.5**	**2.2**	**240**	**8.9**
3.3	µg/kg bw/day	15	30	15	30	µg/kg bw/day	0.22	0.11	0.22	0.11
0.095	mg/kg bw/day	2.6	5.4	0.32	4.7	mg/kg bw/day	0.037	0.018	0.30	0.020
0.011	mg/kg bw/day	3.5	13	0.06	2.64	mg/kg bw/day	0.0032	0.00085	0.18	0.0042
1.8	mg/kg bw/day	18	26	3.4	6.8	mg/kg bw/day	0.10	0.069	0.53	0.27
0.31	mg/kg bw/day	11	90	0.71	7.0	mg/kg bw/day	0.029	0.0035	0.44	0.045
21	µg/kg bw/day	160	250	1.6	27	µg/kg bw/day	0.13	0.083	**13**	0.76
16	µg/kg bw/day	160	250	1.6	27	µg/kg bw/day	0.10	0.065	**10**	0.60
0.55	mg/kg bw/day	40	80	0.133	31.6	mg/kg bw/day	0.014	0.0069	**4.1**	0.017
0.12	mg/kg bw/day	0.016	0.16	0.05	1.21	mg/kg bw/day	**7.5**	0.75	**2.4**	0.10
0.07	mg/kg bw/day	0.27	2.7	-	-	mg/kg bw/day	0.26	0.026	-	-
5.1	mg/kg bw/day	160	320	9.6	411	mg/kg bw/day	0.032	0.016	0.53	0.012
5.3	µg/kg bw/day	1000	10000	-	-	µg/kg bw/day	0.0053	0.00053	-	-

53	µg/kg bw/day	-	-	620	3100	µg/kg bw/day	-	-	0.086	0.017
76	µg/kg bw/day	-	-	-	-	µg/kg bw/day	-	-	-	-
181	µg/kg bw/day	80	96	69	82	µg/kg bw/day	**2.3**	**1.9**	**2.6**	**2.2**
2.2	ng/kg bw/day	2.6	8.8	0.08	2.2	ng/kg bw/day	0.84	0.25	**27**	0.99
13	ng/kg bw/day	2.6	8.8	0.08	2.2	ng/kg bw/day	**5.0**	**1.5**	**160**	**5.9**
17	ng/kg bw/day	2.6	8.8	0.08	2.2	ng/kg bw/day	**6.6**	**1.9**	**210**	**7.7**
2.6	µg/kg bw/day	15	30	15	30	µg/kg bw/day	0.17	0.087	0.17	0.087

River Otter - Diet Scenario 1

Dietary dose (mg/kg bw/d) = (([Csw*WIR] + [Cprey*FIR] + [Csed*SIR])/BW) *SUF

WIR (L/day)	0.64
FIR (kg ww/day)	1.3
SIR (kg dw/day)	0.0052
BW (kg)	8
SUF	1

Diet	Fractions
Blue crab	0.15
small fish	0.85

	Prey						Surface Water			Sediment			Dose		TRV
	Small Fish (≤ 30 cm)		Blue Crab												
COPEC	$C_{sm\ fish,\ ww}$	Exposure Area	$C_{crab,\ ww}$	Exposure Area	$C_{prey,ww}$	$C_{prey,ww}$ (units)	C_{sw}	C_{sw} (units)	Exposure Area	$C_{sed,dw}$	$C_{sed,dw}$ (units)	Exposure Area	C_{Dose}	C_{dose} (units)	NOAEL
RM ≥ 10															
Arsenic	0.18	NFF Sitewide, SFF RM ≥ 10	1.4	Site-wide	0.363	mg/kg	0.0014	mg/l	RM ≥ 10	7.8	mg/kg	RM ≥ 10	0.064	mg/kg bw/day	2.6
Cadmium	0.045	NFF Sitewide, SFF RM ≥ 10	0.11	Site-wide	0.05475	mg/kg	0.00013	mg/l	RM ≥ 10	4.9	mg/kg	RM ≥ 10	0.012	mg/kg bw/day	3.5
Copper	7.5	NFF Sitewide, SFF RM ≥ 10	24.6	Site-wide	10.065	mg/kg	0.00793	mg/l	RM ≥ 10	140	mg/kg	RM ≥ 10	1.7	mg/kg bw/day	18
Lead	1.3	NFF Sitewide, SFF RM ≥ 10	0.36	Site-wide	1.159	mg/kg	0.00835	mg/l	RM ≥ 10	280	mg/kg	RM ≥ 10	0.37	mg/kg bw/day	11
Mercury	130	NFF Sitewide, SFF RM ≥ 10	140	Site-wide	131.5	µg/kg	0.061	µg/l	RM ≥ 10	2900	µg/kg	RM ≥ 10	23	µg/kg bw/day	160
Methyl mercury	130	NFF Sitewide, SFF RM ≥ 10	120	Site-wide	128.5	µg/kg	0.00036	µg/l	RM ≥ 10	1.8	µg/kg	RM ≥ 10	21	µg/kg bw/day	160
Nickel	14	NFF Sitewide, SFF RM ≥ 10	1	Site-wide	12.05	mg/kg	0.00239	mg/l	RM ≥ 10	31	mg/kg	RM ≥ 10	2.0	mg/kg bw/day	40
Selenium	1.00	NFF Sitewide, SFF RM ≥ 10	0.79	Site-wide	0.9685	mg/kg	0.00063	mg/l	RM ≥ 10	0.71	mg/kg	RM ≥ 10	0.16	mg/kg bw/day	0.016
Vanadium	0.45	NFF Sitewide, SFF RM ≥ 10	0.12	Site-wide	0.4005	mg/kg	0.0032	mg/l	RM ≥ 10	22	mg/kg	RM ≥ 10	0.080	mg/kg bw/day	0.27
Zinc	28	NFF Sitewide, SFF RM ≥ 10	36.4	Site-wide	29.26	mg/kg	0.031	mg/l	RM ≥ 10	420	mg/kg	RM ≥ 10	5.0	mg/kg bw/day	160
Benzo(a)pyrene	21	NFF Sitewide, SFF RM ≥ 10	10	Site-wide	19.35	µg/kg	0.0854	µg/l	RM ≥ 10	5300	µg/kg	RM ≥ 10	6.6	µg/kg bw/day	1000
Total HPAHs	210	NFF Sitewide, SFF RM ≥ 10	110	Site-wide	195	µg/kg	0.871	µg/l	RM ≥ 10	54000	µg/kg	RM ≥ 10	67	µg/kg bw/day	-
Total PAHs	380	NFF Sitewide, SFF RM ≥ 10	190	Site-wide	351.5	µg/kg	1.00	µg/l	RM ≥ 10	68000	µg/kg	RM ≥ 10	101	µg/kg bw/day	-
Total PCB Congeners	2100	NFF Sitewide, SFF RM ≥ 10	350	Site-wide	1837.5	µg/kg	0.0223	µg/l	RM ≥ 10	2400	µg/kg	RM ≥ 10	300	µg/kg bw/day	80
PCB TEQ-Mammal	19	NFF Sitewide, SFF RM ≥ 10	8.8	Site-wide	17.47	ng/kg	0.00102	ng/l	RM ≥ 10	27	ng/kg	RM ≥ 10	2.9	ng/kg bw/day	2.6
PCDD/PCDF TEQ-Mammal	140	NFF Sitewide, SFF RM ≥ 10	61	Site-wide	128.15	ng/kg	0.0163	ng/l	RM ≥ 10	2200	ng/kg	RM ≥ 10	22	ng/kg bw/day	2.6
Total TEQ-Mammal	160	NFF Sitewide, SFF RM ≥ 10	70	Site-wide	146.5	ng/kg	0.0169	ng/l	RM ≥ 10	1900	ng/kg	RM ≥ 10	25	ng/kg bw/day	2.6
Dieldrin	32	NFF Sitewide, SFF RM ≥ 10	6.8	Site-wide	28.22	µg/kg	0.0016	µg/l	RM ≥ 10	7.5	µg/kg	RM ≥ 10	4.6	µg/kg bw/day	15
Site-wide															
Arsenic	0.26	Site-wide	1.4	Site-wide	0.431	mg/kg	0.0013	mg/l	RM ≥ 4	9.6	mg/kg	Site-wide	0.076	mg/kg bw/day	2.6
Cadmium	0.033	Site-wide	0.11	Site-wide	0.04455	mg/kg	0.00017	mg/l	RM ≥ 4	4.9	mg/kg	Site-wide	0.010	mg/kg bw/day	3.5
Copper	6.1	Site-wide	24.6	Site-wide	8.875	mg/kg	0.011	mg/l	RM ≥ 4	170	mg/kg	Site-wide	1.6	mg/kg bw/day	18
Lead	1.6	Site-wide	0.36	Site-wide	1.414	mg/kg	0.0122	mg/l	RM ≥ 4	270	mg/kg	Site-wide	0.41	mg/kg bw/day	11
Mercury	130	Site-wide	140	Site-wide	131.5	µg/kg	0.12	µg/l	RM ≥ 4	2900	µg/kg	Site-wide	23	µg/kg bw/day	160
Methyl mercury	110	Site-wide	120	Site-wide	111.5	µg/kg	0.00044	µg/l	RM ≥ 4	3.9	µg/kg	Site-wide	18	µg/kg bw/day	160
Nickel	5.4	Site-wide	1	Site-wide	4.74	mg/kg	0.00239	mg/l	RM ≥ 4	32	mg/kg	Site-wide	0.79	mg/kg bw/day	40
Selenium	0.9	Site-wide	0.79	Site-wide	0.8835	mg/kg	0.00067	mg/l	RM ≥ 4	0.93	mg/kg	Site-wide	0.14	mg/kg bw/day	0.016
Vanadium	0.54	Site-wide	0.12	Site-wide	0.477	mg/kg	0.0033	mg/l	RM ≥ 4	27	mg/kg	Site-wide	0.095	mg/kg bw/day	0.27
Zinc	33	Site-wide	36.4	Site-wide	33.51	mg/kg	0.029	mg/l	RM ≥ 4	490	mg/kg	Site-wide	5.8	mg/kg bw/day	160
Benzo(a)pyrene	24	Site-wide	10	Site-wide	21.9	µg/kg	0.095	µg/l	RM ≥ 4	4700	µg/kg	Site-wide	6.6	µg/kg bw/day	1000

Total HPAHs	250	Site-wide	110	Site-wide	229	µg/kg	0.961	µg/l	RM ≥ 4	46000	µg/kg	Site-wide	67	µg/kg bw/day	-
Total PAHs	350	Site-wide	190	Site-wide	326	µg/kg	1.1	µg/l	RM ≥ 4	62000	µg/kg	Site-wide	93	µg/kg bw/day	-
Total PCB Congeners	1700	Site-wide	350	Site-wide	1497.5	µg/kg	0.034	µg/l	RM ≥ 4	2600	µg/kg	Site-wide	245	µg/kg bw/day	80
PCB TEQ-Mammal	18	Site-wide	8.8	Site-wide	16.62	ng/kg	0.000917	ng/l	RM ≥ 4	30	ng/kg	Site-wide	2.7	ng/kg bw/day	2.6
PCDD/PCDF TEQ-Mammal	91	Site-wide	61	Site-wide	86.5	ng/kg	0.11	ng/l	RM ≥ 4	2200	ng/kg	Site-wide	15	ng/kg bw/day	2.6
Total TEQ-Mammal	130	Site-wide	70	Site-wide	121	ng/kg	0.11	ng/l	RM ≥ 4	2200	ng/kg	Site-wide	21	ng/kg bw/day	2.6
Dieldrin	24	Site-wide	6.8	Site-wide	21.42	µg/kg	0.0015	µg/l	RM ≥ 4	8.3	µg/kg	Site-wide	3.5	µg/kg bw/day	15

Note 1: "–" indicates no TRV available

[a] TRVs derived from the primary literature based on process identified in Section 9.1.3.1

[b] TRVs based on USEPA's LPR restoration project FFS (Louis Berger et al. 2014), USEPA's first draft of the LPR restoration project FFS (Malcolm Pirnie 2007) or USEPA's LPR restoration project PAR (Battelle 2005) .

BW - body weight
COC - chemical of concern
COPEC - chemical of potential ecological concern
FIR - food ingestion rate
LOAEL - Lowest observed adverse effect level
na - not applicable
NFF - non-small forage fish
NOAEL - No observed adverse effect level
RM - River Mile
SFF - small forage fish
SIR - sediment ingestion rate
SUF - site use factor
UCL HQ = hazard quotient based on the 95th percentile (UCL) concentration
WIR - water ingestion rate

Range of TRVs				Range of HQs			
/-A[a]	TRV-B[b]			HQ based on TRV-A[a]		HQ based on TRV-B[a]	
LOAEL	NOAEL	LOAEL	TRV units	NOAEL HQ	LOAEL HQ	NOAEL HQ[b]	LOAEL HQ[b]
[redacted]							
5.4	0.32	4.7	mg/kg bw/day	0.025	0.012	0.20	0.014
13	0.06	2.64	mg/kg bw/day	0.0035	0.00093	0.20	0.0046
26	3.4	6.8	mg/kg bw/day	0.10	0.066	0.51	0.25
90	0.71	7.0	mg/kg bw/day	0.034	0.0041	0.52	0.053
250	1.6	27	µg/kg bw/day	0.15	0.093	**15**	0.86
250	1.6	27	µg/kg bw/day	0.13	0.084	**13**	0.77
80	0.133	31.6	mg/kg bw/day	0.049	0.025	**15**	0.063
0.16	0.05	1.21	mg/kg bw/day	**9.9**	0.99	**3.2**	0.13
2.7	-	-	mg/kg bw/day	0.29	0.029	-	-
320	9.6	411	mg/kg bw/day	0.031	0.016	0.52	0.012
10000	-	-	µg/kg bw/day	0.0066	0.00066	-	-
-	620	3100	µg/kg bw/day	-	-	0.11	0.022
-	-	-	µg/kg bw/day	-	-	-	-
96	69	82	µg/kg bw/day	**3.8**	**3.1**	**4.4**	**3.7**
8.8	0.08	2.2	ng/kg bw/day	**1.1**	0.32	**36**	**1.3**
8.8	0.08	2.2	ng/kg bw/day	**8.6**	**2.5**	**280**	**10**
8.8	0.08	2.2	ng/kg bw/day	**9.6**	**2.8**	**310**	**11**
30	15	30	µg/kg bw/day	0.31	0.15	0.31	0.15
[redacted]							
5.4	0.32	4.7	mg/kg bw/day	0.029	0.014	0.24	0.016
13	0.06	2.64	mg/kg bw/day	0.0030	0.00080	0.17	0.0040
26	3.4	6.8	mg/kg bw/day	0.086	0.060	0.46	0.23
90	0.71	7.0	mg/kg bw/day	0.037	0.0045	0.57	0.058
250	1.6	27	µg/kg bw/day	0.15	0.093	**15**	0.86
250	1.6	27	µg/kg bw/day	0.11	0.072	**11**	0.67
80	0.133	31.6	mg/kg bw/day	0.020	0.010	**5.9**	0.025
0.16	0.05	1.21	mg/kg bw/day	**9.0**	0.90	**2.9**	0.12
2.7	-	-	mg/kg bw/day	0.35	0.035	-	-
320	9.6	411	mg/kg bw/day	0.036	0.018	0.60	0.014
10000	-	-	µg/kg bw/day	0.0066	0.00066	-	-

-	620	3100	µg/kg bw/day	-	-	0.11	0.022
-	-	-	µg/kg bw/day	-	-	-	-
96	69	82	µg/kg bw/day	**3.1**	**2.6**	**3.6**	**3.0**
8.8	0.08	2.2	ng/kg bw/day	**1.0**	0.31	**34**	**1.2**
8.8	0.08	2.2	ng/kg bw/day	**6.0**	**1.8**	**190**	**7.0**
8.8	0.08	2.2	ng/kg bw/day	**8.1**	**2.4**	**260**	**9.6**
30	15	30	µg/kg bw/day	0.23	0.12	0.23	0.12

River Otter - Diet Scenario 2

Dietary dose (mg/kg bw/d) = (([Csw*WIR] + [Cprey*FIR] + [Csed*SIR])/BW) *SUF

WIR (L/day)	0.64
FIR (kg ww/day)	1.3
SIR (kg dw/day)	0.0052
BW (kg)	8
SUF	1

Diet	Fractions
Blue crab	0.15
small fish	0.8
large fish	0.05

COPEC	Prey								Surface Water			Sediment		
	Small Fish (≤ 30 cm)		Large Fish (> 30 cm)		Blue Crab									
	$C_{sm\ fish,\ ww}$	Exposure Area	$C_{lg\ fish,\ ww}$	Exposure Area	$C_{crab,\ ww}$	Exposure Area	$C_{prey,ww}$	$C_{prey,ww}$ (units)	C_{sw}	C_{sw} (units)	Exposure Area	$C_{sed,dw}$	$C_{sed,dw}$ (units)	Exposure Area
RM ≥ 10														
Arsenic	0.18	NFF Sitewide, SFF RM ≥ 10	0.15	Site-wide	1.4	Site-wide	0.3615	mg/kg	0.0014	mg/l	RM ≥ 10	7.8	mg/kg	> RM 10
Cadmium	0.045	NFF Sitewide, SFF RM ≥ 10	0.042	Site-wide	0.11	Site-wide	0.0546	mg/kg	0.00013	mg/l	RM ≥ 10	4.9	mg/kg	> RM 10
Copper	7.5	NFF Sitewide, SFF RM ≥ 10	3.1	Site-wide	24.6	Site-wide	9.845	mg/kg	0.00793	mg/l	RM ≥ 10	140	mg/kg	> RM 10
Lead	1.3	NFF Sitewide, SFF RM ≥ 10	0.53	Site-wide	0.36	Site-wide	1.1205	mg/kg	0.00835	mg/l	RM ≥ 10	280	mg/kg	> RM 10
Mercury	130	NFF Sitewide, SFF RM ≥ 10	210	Site-wide	140	Site-wide	135.5	µg/kg	0.061	µg/l	RM ≥ 10	2900	µg/kg	> RM 10
Methyl mercury	130	NFF Sitewide, SFF RM ≥ 10	200	Site-wide	120	Site-wide	132	µg/kg	0.00036	µg/l	RM ≥ 10	1.8	µg/kg	> RM 10
Nickel	14	NFF Sitewide, SFF RM ≥ 10	0.85	Site-wide	1	Site-wide	11.3925	mg/kg	0.00239	mg/l	RM ≥ 10	31	mg/kg	> RM 10
Selenium	1	NFF Sitewide, SFF RM ≥ 10	0.57	Site-wide	0.79	Site-wide	0.947	mg/kg	0.00063	mg/l	RM ≥ 10	0.71	mg/kg	> RM 10
Vanadium	0.45	NFF Sitewide, SFF RM ≥ 10	0.093	Site-wide	0.12	Site-wide	0.38265	mg/kg	0.0032	mg/l	RM ≥ 10	22	mg/kg	> RM 10
Zinc	28	NFF Sitewide, SFF RM ≥ 10	39	Site-wide	36.4	Site-wide	29.81	mg/kg	0.031	mg/l	RM ≥ 10	420	mg/kg	> RM 10
Benzo(a)pyrene	21	NFF Sitewide, SFF RM ≥ 10	1.9	Site-wide	10	Site-wide	18.4	µg/kg	0.085	µg/l	RM ≥ 10	5300	µg/kg	> RM 10
Total HPAHs	210	NFF Sitewide, SFF RM ≥ 10	53	Site-wide	110	Site-wide	187.15	µg/kg	0.871	µg/l	RM ≥ 10	54000	µg/kg	> RM 10
Total PAHs	380	NFF Sitewide, SFF RM ≥ 10	160	Site-wide	190	Site-wide	340.5	µg/kg	1	µg/l	RM ≥ 10	68000	µg/kg	> RM 10
Total PCB Congeners	2100	NFF Sitewide, SFF RM ≥ 10	2800	Site-wide	350	Site-wide	1872.5	µg/kg	0.0223	µg/l	RM ≥ 10	2400	µg/kg	> RM 10
PCB TEQ-Mammal	19	NFF Sitewide, SFF RM ≥ 10	36	Site-wide	8.8	Site-wide	18.32	ng/kg	0.00102	ng/l	RM ≥ 10	27	ng/kg	> RM 10
PCDD/PCDF TEQ-Mammal	140	NFF Sitewide, SFF RM ≥ 10	190	Site-wide	61	Site-wide	130.65	ng/kg	0.0163	ng/l	RM ≥ 10	2200	ng/kg	> RM 10
Total TEQ-Mammal	160	NFF Sitewide, SFF RM ≥ 10	230	Site-wide	70	Site-wide	150	ng/kg	0.0169	ng/l	RM ≥ 10	1900	ng/kg	> RM 10
Dieldrin	32	NFF Sitewide, SFF RM ≥ 10	38	Site-wide	6.8	Site-wide	28.52	µg/kg	0.0016	µg/l	RM ≥ 10	7.5	µg/kg	> RM 10
Site-wide														
Arsenic	0.26	Site-wide	0.15	Site-wide	1.4	Site-wide	0.4255	mg/kg	0.0013	mg/l	RM ≥ 4	9.6	mg/kg	Site-wide
Cadmium	0.033	Site-wide	0.042	Site-wide	0.11	Site-wide	0.045	mg/kg	0.00017	mg/l	RM ≥ 4	4.9	mg/kg	Site-wide
Copper	6.1	Site-wide	3.1	Site-wide	24.6	Site-wide	8.725	mg/kg	0.011	mg/l	RM ≥ 4	170	mg/kg	Site-wide
Lead	1.6	Site-wide	0.53	Site-wide	0.36	Site-wide	1.3605	mg/kg	0.0122	mg/l	RM ≥ 4	270	mg/kg	Site-wide
Mercury	130	Site-wide	210	Site-wide	140	Site-wide	135.5	µg/kg	0.12	µg/l	RM ≥ 4	2900	µg/kg	Site-wide
Methyl mercury	110	Site-wide	200	Site-wide	120	Site-wide	116	µg/kg	0.00044	µg/l	RM ≥ 4	3.9	µg/kg	Site-wide
Nickel	5.4	Site-wide	0.85	Site-wide	1	Site-wide	4.5125	mg/kg	0.00239	mg/l	RM ≥ 4	32	mg/kg	Site-wide
Selenium	0.9	Site-wide	0.57	Site-wide	0.79	Site-wide	0.867	mg/kg	0.00067	mg/l	RM ≥ 4	0.93	mg/kg	Site-wide
Vanadium	0.54	Site-wide	0.093	Site-wide	0.12	Site-wide	0.45465	mg/kg	0.0033	mg/l	RM ≥ 4	27	mg/kg	Site-wide
Zinc	33	Site-wide	39	Site-wide	36.4	Site-wide	33.81	mg/kg	0.029	mg/l	RM ≥ 4	490	mg/kg	Site-wide
Benzo(a)pyrene	24	Site-wide	1.9	Site-wide	10	Site-wide	20.795	µg/kg	0.0953	µg/l	RM ≥ 4	4700	µg/kg	Site-wide

Total HPAHs	250	Site-wide	53	Site-wide	110	Site-wide	219.15	µg/kg	0.961	µg/l	RM ≥ 4	46000	µg/kg	Site-wide
Total PAHs	350	Site-wide	160	Site-wide	190	Site-wide	316.5	µg/kg	1.1	µg/l	RM ≥ 4	62000	µg/kg	Site-wide
Total PCB Congeners	1700	Site-wide	2800	Site-wide	350	Site-wide	1552.5	µg/kg	0.034	µg/l	RM ≥ 4	2600	µg/kg	Site-wide
PCB TEQ-Mammal	18	Site-wide	36	Site-wide	8.8	Site-wide	17.52	ng/kg	0.000917	ng/l	RM ≥ 4	30	ng/kg	Site-wide
PCDD/PCDF TEQ-Mammal	91	Site-wide	190	Site-wide	61	Site-wide	91.45	ng/kg	0.11	ng/l	RM ≥ 4	2200	ng/kg	Site-wide
Total TEQ-Mammal	130	Site-wide	230	Site-wide	70	Site-wide	126	ng/kg	0.11	ng/l	RM ≥ 4	2200	ng/kg	Site-wide
Dieldrin	24	Site-wide	38	Site-wide	6.8	Site-wide	22.12	µg/kg	0.0015	µg/l	RM ≥ 4	8.3	µg/kg	Site-wide

Note 1: "–" indicates no TRV available

[a] TRVs derived from the primary literature based on process identified in Section 9.1.3.1

[b] TRVs based on USEPA's LPR restoration project FFS (Louis Berger et al. 2014), USEPA's first draft of the LPR restoration project FFS (Malcolm Pirnie 2007) or USEPA's LPR restoration project PAR (Battelle 2005) .

BW - body weight
COC - chemical of concern
COPEC - chemical of potential ecological concern
FIR - food ingestion rate
LOAEL - Lowest observed adverse effect level
na - not applicable
NFF - non-small forage fish
NOAEL - No observed adverse effect level
RM - River Mile
SFF - small forage fish
SIR - sediment ingestion rate
SUF - site use factor
UCL HQ = hazard quotient based on the 95th percentile (UCL) concentration
WIR - water ingestion rate

Dose		Range of TRVs					Range of HQs			
		TRV-A[a]		TRV-B[b]			HQ based on TRV-A[a]		HQ based on TRV-B[a]	
C_{Dose}	C_{dose} (units)	NOAEL	LOAEL	NOAEL	LOAEL	TRV units	NOAEL HQ	LOAEL HQ	NOAEL HQ[b]	LOAEL HQ[b]
[redacted]										
0.064	mg/kg bw/day	2.6	5.4	0.32	4.7	mg/kg bw/day	0.025	0.012	0.20	0.014
0.012	mg/kg bw/day	3.5	13	0.06	2.64	mg/kg bw/day	0.0034	0.00093	0.20	0.0046
1.7	mg/kg bw/day	18	26	3.4	6.8	mg/kg bw/day	0.094	0.065	0.50	0.25
0.4	mg/kg bw/day	11	90	0.71	7.0	mg/kg bw/day	0.033	0.0041	0.51	0.052
24	µg/kg bw/day	160	250	1.6	27	µg/kg bw/day	0.15	0.10	**15**	0.89
21	µg/kg bw/day	160	250	1.6	27	µg/kg bw/day	0.13	0.086	**13**	0.79
1.9	mg/kg bw/day	40	80	0.133	31.6	mg/kg bw/day	0.047	0.023	**14**	0.059
0.15	mg/kg bw/day	0.016	0.16	0.05	1.21	mg/kg bw/day	**9.6**	0.96	**3.1**	0.13
0.077	mg/kg bw/day	0.27	2.7	-	-	mg/kg bw/day	0.28	0.028	-	-
5.1	mg/kg bw/day	160	320	9.6	411	mg/kg bw/day	0.032	0.016	0.53	0.012
6.4	µg/kg bw/day	1000	10000	-	-	µg/kg bw/day	0.0064	0.00064	-	-
66	µg/kg bw/day	-	-	620	3100	µg/kg bw/day	-	-	0.11	0.021
100	µg/kg bw/day	-	-	-	-	µg/kg bw/day	-	-	-	-
306	µg/kg bw/day	80	96	69	82	µg/kg bw/day	**3.8**	**3.2**	**4.4**	**3.7**
3.0	ng/kg bw/day	2.6	8.8	0.08	2.2	ng/kg bw/day	**1.2**	0.34	**37**	**1.4**
23	ng/kg bw/day	2.6	8.8	0.08	2.2	ng/kg bw/day	**8.7**	**2.6**	**280**	**10**
26	ng/kg bw/day	2.6	8.8	0.08	2.2	ng/kg bw/day	**9.9**	**2.9**	**320**	**12**
4.6	µg/kg bw/day	15	30	15	30	µg/kg bw/day	0.31	0.15	0.31	0.15
[redacted]										
0.075	mg/kg bw/day	2.6	5.4	0.32	4.7	mg/kg bw/day	0.029	0.014	0.24	0.016
0.011	mg/kg bw/day	3.5	13	0.06	2.64	mg/kg bw/day	0.0030	0.00081	0.18	0.0040
1.5	mg/kg bw/day	18	26	3.4	6.8	mg/kg bw/day	0.085	0.059	0.45	0.22
0.40	mg/kg bw/day	11	90	0.71	7.0	mg/kg bw/day	0.036	0.0044	0.56	0.057
24	µg/kg bw/day	160	250	1.6	27	µg/kg bw/day	0.15	0.096	**15**	0.89
19	µg/kg bw/day	160	250	1.6	27	µg/kg bw/day	0.12	0.075	**12**	0.70
0.75	mg/kg bw/day	40	80	0.133	31.6	mg/kg bw/day	0.019	0.0094	**5.7**	0.024
0.14	mg/kg bw/day	0.016	0.16	0.05	1.21	mg/kg bw/day	**8.8**	0.88	**2.8**	0.12
0.092	mg/kg bw/day	0.27	2.7	-	-	mg/kg bw/day	0.34	0.034	-	-
5.8	mg/kg bw/day	160	320	9.6	411	mg/kg bw/day	0.036	0.018	0.61	0.014
6.4	µg/kg bw/day	1000	10000	-	-	µg/kg bw/day	0.0064	0.00064	-	-

66	µg/kg bw/day	-	-	620	3100	µg/kg bw/day	-	-	0.11	0.021
92	µg/kg bw/day	-	-	-	-	µg/kg bw/day	-	-	-	-
254	µg/kg bw/day	80	96	69	82	µg/kg bw/day	**3.2**	**2.6**	**3.7**	**3.1**
2.9	ng/kg bw/day	2.6	8.8	0.08	2.2	ng/kg bw/day	**1.1**	0.33	**36**	**1.3**
16	ng/kg bw/day	2.6	8.8	0.08	2.2	ng/kg bw/day	**6.3**	**1.9**	**200**	**7.4**
22	ng/kg bw/day	2.6	8.8	0.08	2.2	ng/kg bw/day	**8.4**	**2.5**	**270**	**10**
3.6	µg/kg bw/day	15	30	15	30	µg/kg bw/day	0.24	0.12	0.24	0.12

APPENDIX H. SENSITIVITY ANALYSIS OF RISK ESTIMATES FOR MINK AND RIVER OTTER

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Acronyms

AE	assimilation efficiency
BERA	baseline ecological risk assessment
bw	body weight
COC	chemical of concern
DF	dietary fraction
ERA	ecological risk assessment
FIR	food ingestion rate
FMR	field metabolic rate
GE	gross energy
HQ	hazard quotient
LOAEL	lowest-observed-adverse-effect level
LPRSA	Lower Passaic River Study Area
PCB	polychlorinated biphenyl
PCDD	polychlorinated dibenzo-*p*-dioxin
PCDF	polychlorinated dibenzofuran
RM	river mile
SD	standard deviation
SFF	small forage fish
TEQ	toxic equivalent
TRV	toxicity reference value
UCL	upper confidence limit
USEPA	US Environmental Protection Agency
ww	wet weight

1 Introduction

This appendix presents the sensitivity analysis of the estimates conducted as part of the uncertainty evaluation for mink and river otter potentially inhabiting the Lower Passaic River Study Area (LPRSA). The potential for risk was calculated for total polychlorinated biphenyls (PCBs), polychlorinated dibenzo-*p*-dioxin (PCDD)/polychlorinated dibenzofuran (PCDF) toxic equivalent (TEQ) – mammal, PCB TEQ – mammal, and total TEQ – mammal for both focal species, because the lowest-observed-adverse-effect level (LOAEL) hazard quotients (HQs) for one or both of these species was greater than or equal to the threshold of 1.0 in the baseline ecological risk assessment (BERA). In addition, this sensitivity analysis evaluated a variety of assumptions:

- **Toxicity reference values (TRVs)** – a range of TRVs was used.
- **Exposure area** – both site-wide and at and upstream of river mile (RM) 10 exposure areas were evaluated.
- **Dietary scenarios** – two diet scenarios were evaluated. The first scenario, henceforth referred to as the primary diet scenario, is a diet based on size classes wherein all fish of a given size class were grouped together. The second scenario, henceforth referred to as the abundance-weighted diet scenario, is a diet wherein the fish species with in a given size class are weighted by abundance. Details of these diets are discussed further in Section 2.3.2 of this appendix.

Thus, for each chemical-species combination, a total of eight analyses were conducted to cover the range of variables evaluated. This sensitivity analysis was conducted to better understand the potential range of risk estimates associated with these preliminary chemicals of concern (COCs), and to better understand which parameters have the greatest impact on the mink and river otter HQs.

1.1 Description of Sensitivity Analysis

This sensitivity analysis allowed for the incorporation of variability and uncertainty associated with input parameter values into the resulting risk estimates. Input values in this sensitivity analysis were assigned a distribution when appropriate (based on the available literature and/or site-specific data) to characterize the uncertainty and/or variability associated with the given parameter (USEPA 2001). These two terms (uncertainty and variability) are defined as follows:

- **Uncertainty** – Results from a lack of knowledge regarding what the correct value should be for a given parameter (e.g., the dietary percentages of different fish species consumed by mink or river otter are not well known, and thus are a source of uncertainty)

- **Variability** – Results from the natural spread of values for a given parameter (e.g., concentrations of chemicals in a given fish species are naturally variable)

Thus, the output of this sensitivity analysis is a distribution of risk estimates, rather than a single value.

1.2 OBJECTIVES

There were two key objectives when conducting this sensitivity analysis. The first objective was to further evaluate the HQs calculated for mink and river otter in order to understand whether they might actually be higher or lower than those calculated in Section 9 of the BERA once the uncertainty and/or variability associated with the various input parameters is taken into account. The second objective was to better understand the impact of input parameters on the HQs, and to determine which parameters were key factors in determining the magnitude of the HQs. This allowed for an evaluation of the sensitivity of the HQs to key assumptions such as dietary fractions, food ingestion rate (FIR), and chemical concentrations in prey.

1.3 KEY DIFFERENCES AS COMPARED WITH HQS CALCULATED IN SECTION 9

To better achieve these objectives, the parameters used for this analysis differed from those used to calculate the point estimate HQs presented in Section 9 of the BERA (Table 9-17) in three key ways:

- **Dietary fractions (DFs)** – The diets of river otter and mink (both the components of the diet and the dietary fractions themselves) were adjusted to more accurately reflect the opportunistic feeding habits of these focal species. Diets were assumed to be composed of prey items from five broad categories (i.e., small fish, large fish [consumed as carrion], invertebrates, birds, and mammals [only mink was assumed to consume birds and mammals]), as described in Section 2. For the abundance-weighted diet scenario, subcategories were developed for the two fish categories based on the species observed during the LPRSA community surveys conducted in 2009 and 2010. The available site-specific fish abundance data were used to develop dietary distribution ranges. In addition, fish data based on size classes (wherein all fish of a given size class were grouped together) were also used to develop dietary distribution ranges.
- **Food ingestion rate** – To evaluate the impact of the FIR on risk estimates, this sensitivity analysis was conducted using the exposure model presented by Moore et al. (1999), which is described in Section 2.1. This exposure model allowed the FIR to be calculated (rather than estimated from literature) using the assimilation efficiency (AE) of the various prey items, the gross energy (GE) of the prey items, and the field metabolic rate (FMR) of mink. Distributions were assigned to the AE, GE, and FMR input parameters, and thus, the FIR was represented as a distribution of values in the sensitivity analysis.

- **Prey concentrations** – Rather than using a single value (e.g., an upper confidence limit [UCL]) to represent the prey concentration in each category or subcategory, distributions were developed using the LPRSA data for use in the sensitivity analysis. As a health-protective assumption, the low end of the distributions was truncated at the minimum detected concentration. No truncation occurred at the high end of the distribution to acknowledge the fact that individuals with higher concentrations than those detected in the available samples could be present in the LPRSA.

Details regarding the model used for this analysis and the parameterization of the model are discussed in Section 2.

2 Methods

This section presents details regarding the methods used for this sensitivity analysis. Section 2.1 presents a description of the exposure model used for the sensitivity analysis, Section 2.2 provides details regarding how the analysis was conducted, and Section 2.3 presents the details of the model parameterization.

2.1 Description of Exposure Model

The model used in this analysis was based on a probabilistic exposure analysis for mink and kingfishers developed and applied by Moore et al. (1999), based on equations presented in USEPA's *Wildlife Exposure Factors Handbook* (USEPA 1993). As described by Moore et al. (1999), Equation 1 was used to calculate the dietary dose and HQs for this analysis.

$$IR_{dietary} = MR_{FW} \times \sum_{i-1}^{n} \left(\frac{C_i \times P_i}{AE_i \times GE_i} \right)$$

Equation 1

Where:

$IR_{dietary}$	=	exposure (µg/kg bw/day)
C_i	=	concentration of total PCBs in each prey item (µg/kg ww)
P_i	=	proportion of each prey item in diet (unitless)
AE_i	=	food assimilation efficiency of each prey item (unitless)
I	=	prey item i
N	=	total number of prey items
GE_i	=	gross energy of each prey item (kcal/g)
MR_{FW}	=	metabolic rate of wild female mink (kcal/kg BW/day)
BW	=	body weight (kg)

Moore et al. (1999) applied this model to mink and kingfisher because those species were the receptors of interest in that study in the 1999 study. This model is also applicable to other birds and mammals. This model was used to evaluate the sensitivity of risk estimates for both mink and river otter in the LPRSA. For each of the exposure

parameters in Equation 1, distributions were developed for both mink and river otter to calculate the distribution of dietary doses for each species (Section 2.3). These dietary dose distributions represent a range of values that incorporate the variability and uncertainty associated with each parameter into the risk calculations.

2.2 CONDUCTING THE SENSITIVITY ANALYSIS

The sensitivity analysis for mink and river otter was conducted using a Monte Carlo simulation, which was run using the @RISK software package for Microsoft Excel®. In each iteration of the Monte Carlo simulation, a value from the distribution for each input parameter was selected at random and used to calculate the dietary dose and HQs for each preliminary COC. For the purposes of this assessment, 5,000 model iterations were conducted for each preliminary COC-focal species pair. This number of iterations was selected to ensure that sufficient model runs were conducted to cover the range of possible outcomes.

2.3 MODEL PARAMETERIZATION

For each of the parameters described in Section 2.1 that are used to calculate the dietary dose and HQ, it is necessary to develop site-specific and species-specific values for use in this sensitivity analysis. Section 2.3.1 presents the general exposure parameters, Section 2.3.2 presents the dietary fractions, and Section 2.3.3 presents the exposure concentrations for the various prey items.

Two exposure scenarios were used for mink and river otter: one that assumed them to utilize only the portion of the LPRSA at and upstream of RM 10, and one that assumed them to utilize the entire LPRSA (i.e., site wide).

2.3.1 Parameters used to estimate the consumption rate

The Moore et al. (1999) exposure model used the metabolic rate of the focal species, along with the AE and GE of the prey species, to calculate the dietary dose based on the consumption of prey. The distributions for AE and GE were developed using the distributions from Moore et al. (1999) and USEPA's *Wildlife Exposure Factors Handbook* (1993) (Table 2-1).

Table 2-1. AE and GE distributions for prey species

Parameter	Distribution Type	Distribution Values	Percentiles			Rationale
			10th	50th	90th	
Parameters for small and large fish prey categories						
AE (no unit)	beta general	α1: 65; α2: 8; min: 0; max.: 1	0.84	0.89	0.93	distribution for fish from Moore et al. (1999)
GE (kcal/g)	normal	mean: 1.2; SD: 0.24	0.89	1.2	1.5	based on bony fishes (USEPA 1993; Table 4-1); same distribution used by Moore et al. (1999)
Parameters for invertebrate prey categories						

Parameter	Distribution Type	Distribution Values	Percentiles			Rationale
			10th	50th	90th	
AE (no unit)	beta general	α1: 65; α2: 8; min: 0; max.: 0.96	0.81	0.86	0.90	distribution for invertebrates from Moore et al. (1999)
GE (kcal/g)	normal	mean: 1.0; SD: 0.21	0.73	1.0	1.3	based on crabs (USEPA 1993; Table 4-1)

Note: AE and GE values for birds and small mammals were not needed for this evaluation because the chemical concentrations in these prey species were assumed to be equal to zero.

AE – assimilation efficiency
GE – gross energy
SD – standard deviation
USEPA – US Environmental Protection Agency

The metabolic rate distributions for mink and river otter were derived using a variety of sources. The key lines of evidence (LOEs) used to develop these distributions included the following:

- **Tier 1** – Review of available FMR values in literature
- **Tier 2** – Calculation of the FMR using an allometric equation (Equation 2) developed by Nagy (1987) for non-herbivorous mammals (as cited in USEPA 1993)

$$FMR = 0.6167 \times BW^{0.862} \qquad \textbf{Equation 2}$$

Where:
FMR = field metabolic rate (kcal/day)
BW = body weight

- **Tier 3** – Calculation of the FMR using Equation 3, which links the FIR and the FMR (USEPA 1993; Figures 4-3 and 4-4)

$$FIR = FMR/(GE \times AE) \qquad \textbf{Equation 3}$$

Where:
FIR = food ingestion rate (g ww/kg bw/day)
FMR = field metabolic rate (kcal/day)
GE = gross energy (kcal/g ww)
AE = assimilation efficiency (unitless)

- **Tier 4** – General information regarding the metabolic rates of mink and river otter, which was used to verify the Tier 1 literature values and the Tiers 2 and 3 calculated values. Tier 4 values were not used for developing distributions.

The FMR distributions for mink and river otter and their development are presented in Sections 2.3.1.1 and 2.3.1.2, respectively.

2.3.1.1 Mink metabolic rate

The FMR distribution for mink was developed using information from Tiers 1 through 4, described in Section 2.3.1. These FMR values, which are shown in Table 2-2, ranged from 124 to 258 kcal/kg body weight (bw)/day for mink based on Tiers 1 through 3. As discussed in Table 2-2, the Tier 4 values were not used in the distribution for mink

because the FIR values as a percent of mink body weight are not mink-specific values (i.e., they are based on information for similar aquatic species). A triangular distribution was determined to be the most appropriate distribution type for the mink FMR parameter, because there is limited information regarding this parameter, and because the available information can be used to determine a best estimate and range of values. The range of values for Tiers 1 through 3 (124 to 258 kcal/kg bw/day) was used to determine the minimum and maximum values for the distribution. A best estimate of 140 kcal/kg bw/day was selected from the literature values presented in USEPA's *Wildlife Exposure Factors Handbook* (USEPA 1993). This value was the recommended FMR for mink based on a review of studies (NRC 1982; as cited in USEPA 1993), and is thus considered a more robust estimate of the mink FMR (as compared with the results for a single study).

Table 2-2. Development of FMR distribution for mink

Tier/Method	FMR Value(s) (kcal/kg bw/day)	Notes
Tier 1 – review of FMR values for mink in literature	124 to 258	With the exception of one study that examined sleeping mink (the reported metabolic rate was 76.5 kcal/kg bw/day), the five studies presented in USEPA's *Wildlife Exposure Factors Handbook* (USEPA 1993; page A-270) were determined to be appropriate for this assessment because the values were based on the average daily energy needs for adult mink.
	140	One of the studies (NRC 1982) was noted as being based on a review of studies looking at the recommendations for the maintenance of mature mink in captivity. This study was considered the best overall estimate of the mink FMR presented in USEPA (1993).
Tier 2 – calculation of FMR using equation for non-herbivorous mammals	237	Equation 2 was used, along with a body weight of 1 kg (as presented in Section 9 of the BERA), to calculate an FMR of 237 kcal/day, which is equal to a body weight normalized-FMR of 237 kcal/kg bw/day. This approach was also used to develop the water quality criteria for wildlife as part of the Great Lakes Water Quality Initiative (USEPA 1995).
Tier 3 – calculation of FMR using FIR equation	174	Equation 3 was used along with the FIR from the BERA (converted to the appropriate units using the mink body weight 1 kg), a GE of 1.4 kcal/kg ww, and an AE of 0.86.[a]
Tier 4 – general information regarding mink metabolism	120, 181, 241	Aquatic mammals such as mink are known to consume a high proportion of their body weight each day (SWPE 2013). Using Equation 3, FMR values corresponding to FIRs equal to 10, 15, and 20% of the mink body weight were calculated for comparison with the FMR values for Tiers 1 through 3. These values were similar to the range of values for Tiers 1 through 3, but were not used to develop the distribution because these FIRs are not mink-specific values, but rather are based on information for similar aquatic species.
Selected distribution	140 (124 to 258)	A triangular distribution with a best estimate of 140 kcal/kg bw/day and a range of 124 to 258 kcal/kg bw/day was selected for mink. This distribution results in a 10th percentile value of 139 kcal/kg bw/day, a 50th percentile value of 169 kcal/kg bw/day, and a 90th percentile value of 218 kcal/kg bw/day.

[a] Weighted values for AE and GE were calculated based on an assumed mink diet of 34% fish, 16.5% crab, 13.5% bird, and 36% small mammals. The AE values for the prey items were equal to 1.2 for fish, 1.0 for crab, 1.9 for birds, and 1.7 for mammals (USEPA 1993; Table 4-1). The GE values for the prey items were equal to 0.89 for fish (the 50th percentile of the distribution in Table 2-1), 0.86 for crab (the 50th percentile of the distribution in Table 2-1), and 0.84 for birds and mammals (USEPA 1993; Table 4-1).

AE – assimilation efficiency
BERA – baseline ecological risk assessment
bw – body weight
FIR – food ingestion rate
FMR – field metabolic rate
GE – gross energy
USEPA – US Environmental Protection Agency
ww – wet weight

2.3.1.2 River otter metabolic rate

The FMR distribution for river otter was developed using information from Tiers 2 through 4, described in Section 2.3.1. As shown in Table 2-3, the FMR values for river otter ranged from 118 to 221 kcal/kg bw/day. As for mink, a triangular distribution was determined to be the most appropriate distribution to use for river otter because a limited amount of information was available regarding the FMR for river otter. The available information was used to develop a best estimate and range of values. The range of values for Tiers 2 through 4 (118 to 221 kcal/kg bw/day) was used to determine the minimum and maximum values for the distribution. A best estimate of 178 kcal/kg bw/day, which was equal to the value calculated using the Tier 2 method, was selected because of the options available for river otter, this equation was thought to be the most accurate method for calculating the FMR.

Table 2-3. Development of FMR distribution for river otter

Tier/Method	FMR Value(s) (kcal/kg bw/day)	Notes
Tier 1 – review of FMR values for river otter in literature	none available	No literature FMR values were available for river otter (USEPA 1993).
Tier 2 – calculation of FMR using equation for non-herbivorous mammals	178	Equation 2 was used, along with a body weight of 8 kg (as presented in Section 9 of the BERA), to calculate an FMR of 1,427 kcal/day, which is equal to a body weight-normalized FMR of 178 kcal/kg bw/day. This approach was also used to develop the water quality criteria for wildlife as part of the Great Lakes Water Quality Initiative (USEPA 1995).
Tier 3 – calculation of FMR using FIR equation	118, 168, 221	Equation 3 was used, along with the FIR from the BERA of 1.3 kg ww/day (converted to the appropriate units using the river otter body weight of 8 kg), to calculate the FMR using three GE and AE assumptions: • Calculated using the 10th percentile weighted estimates for GE (0.87 kcal/kg ww) and AE (0.84)[a] • Calculated using the median weighted estimates for GE (1.2 kcal/kg) and AE (0.89)[a] • Calculated using the 90th percentile weighted estimates for GE (1.5 kcal/kg ww) and AE (0.93)[a] All three of these values were considered in the development of the FMR distribution.
Tier 4 – general information regarding mink metabolism	155, 207	River otter are known to have a high metabolic rate because they lose heat quickly while swimming; sources note that aquatic mammals such as river otter have higher metabolic rates than similar land mammals (SWPE 2013). The available information indicates that river otters consume up to 15 or 20% of their body weight each day (SWPE 2013). Using Equation 3, FMR values corresponding to FIRs equal to 15 and 20% of the river otter body weight were calculated using the median estimates for GE and AE.[a]
Selected distribution	178 (118 – 221)	A triangular distribution with a best estimate of 178 kcal/kg bw/day and a range of 118 to 221 kcal/kg bw/day was selected for river otter. This distribution results in a 10th percentile value of 143 kcal/kg bw/day, a 50th percentile value of 174 kcal/kg bw/day, and a 90th percentile value of 200 kcal/kg bw/day.

[a] Weighted values for AE and GE were calculated based on an assumed river otter diet of 85% fish and 15% crab. The AE and GE values for the 10th, 50th, and 90th percentiles were based on the values for fish and crab reported for the distributions in Table 2-1

AE – assimilation efficiency
BERA – baseline ecological risk assessment
bw – body weight
FIR – food ingestion rate
FMR – field metabolic rate
GE – gross energy
ww – wet weight

2.3.2 Dietary fractions

As discussed briefly in Section 1, one of the objectives of these calculations was to evaluate the effect of parameters—such as the different dietary assumptions—on the risk calculations. As was done in Section 9 of the BERA, broad prey categories were used for this evaluation to better capture the feeding habits of the focal species:

- Small fish (< 30 cm in length)
- Large fish (≥ 30 cm in length; assumed to represent carrion consumed opportunistically)
- Invertebrates (including a variety of small and large invertebrates, such as crayfish, crabs, insects, and benthic invertebrates)
- Terrestrial prey (including small birds and small mammals)

In Section 9 of the BERA, five mink diet scenarios and two river otter diet scenarios were evaluated (Table 2-4) to help show the impact of differing dietary assumptions.

Table 2-4. Prey composition used to estimate dietary dose for focal mammal species in the BERA

Focal Species	Percentage of Prey Type in Diet			
		Fish Size Range		
	Blue Crab	0–30 cm	> 30 cm	Terrestrial Prey
Mink				
Scenario 1 – aquatic/terrestrial prey	16.5	34	0	49.5[a]
Scenario 2 – aquatic/terrestrial prey	16.5	31	3[b]	49.5[a]
Scenario 3 – aquatic prey only	16.5	83.5	0	0
Scenario 4 – aquatic prey only	16.5	80.5	3[b]	0
Scenario 5 – aquatic prey only[c]	33.5	63.5	3[b]	0
River Otter				
Scenario 1	15	100	0	0
Scenario 2	15	80	5[b]	0

[a] For the aquatic and terrestrial prey evaluation for mink, the portion of terrestrial prey concentrations of the diet was assumed to be negligible (i.e., COPEC concentration set equal to zero).

[b] In communications between CPG and USEPA (December 22, 2015), USEPA requested that large fish be included in the diet.

[c] In communications between CPG and USEPA (December 22, 2015), USEPA requested that the mink diet include 66.5% fish and 33.5% blue crab.

BERA – baseline ecological risk assessment

COPEC – chemical of potential ecological concern

CPG – Cooperating Parties Group

USEPA – US Environmental Protection Agency

Because this sensitivity evaluation allows for variability in diet compositions to be incorporated into the analysis, it was not necessary to separately evaluate each of the

different diet composition scenarios presented in Table 2-4. Rather, this evaluation considered the impact on the resulting HQ if fish abundance information was considered in the diet. Thus, for this evaluation, two primary diet scenarios were evaluated:

- **Primary diet scenario –** For the primary diet scenario, all fish of a given size class were grouped together to develop the exposure distribution for that size class. This is similar to the method used in the BERA.
- **Abundance-weighted diet scenario –** For the abundance-weighted diet scenario, weighted exposure concentrations were calculated for small fish and large fish based on the available information regarding fish abundance in the LPRSA.

It should be noted that the crab and terrestrial prey portions of the diet were the same for both diet scenarios. More information on the diet fractions for the broad prey categories, the abundance-weighted calculations, and the normalization of dietary fractions is presented in the subsections that follow.

2.3.2.1 Diet fractions for broad dietary categories

Dietary fractions (both best estimates and ranges) for mink and river otter for the broad dietary categories are presented in Table 2-5. Uniform distributions were used for all dietary fractions for both species because limited information was available regarding dietary fractions, and because the diets of these species vary depending on the availability of different prey items. Although a best estimate is presented in Table 2-5, no information is available to determine if this best estimate is more likely than any other value within the specified range. Thus, available literature and best professional judgment were used to develop the bounds of the uniform distributions. These fractions were used for both the primary diet scenario and the abundance-weighted diet scenario.

Table 2-5. Dietary fractions for mink and river otter for broad prey categories

Prey Category	Mink[a]			River Otter[b]		
	Distribution Type	Best Estimate	Range	Distribution Type	Best Estimate	Range
Small fish (< 30 cm)	uniform	31%	8–49%	uniform	80%	60–100%
Large fish (≥ 30 cm)	uniform	3%	1–5%	uniform	5%	1–10%
Invertebrates	uniform	16.5%	0.6–68%	uniform	15%	5–35%
Small birds	uniform	24.75%	0–63%	point estimate	0%	na
Small mammals	uniform	24.75%	1–68%	point estimate	0%	na

[a] For mink, the best estimate percentages are based on the Hudson River ERA (TAMS and Menzie-Cura 2000), in which the mink diet are composed of 34% fish, 16.5% invertebrates, and 49.5% terrestrial species. In addition, the selected best estimates are consistent with a variety of literature studies regarding mink diet (Wise et al. 1981; Ferreras and MacDonald 1999; Hamilton 1940; Korschgen 1958; Salo et al. 2010; Sealander 1943; Burgess 1978; Ward et al. 1986). The percentage of large fish is assumed to represent carrion consumed opportunistically, based on assumptions made by Wise et al. (1981) and typical body lengths of fish consumed by mink (Melquist et al. 1981; Sealander 1943; Wise et al. 1981). Guilday 1949, as cited by Pendleton (1982), provides a frequency of carrion in mink scats of 3%. This has been applied as the dietary percentage, although this value is uncertain. More information regarding the mink diet is presented in Section 9 of the BERA.

[b] For river otter, the best estimate and range of dietary fractions were based on a variety of literature studies (Tumlison et al. 1986; Larsen 1984; Wise et al. 1981; Melquist and Hornocker 1983; Lanszki et al. 2001; Britton et al. 2006; Novais et al. 2010) and on best professional judgment. More information regarding the river otter diet is presented in Section 9 of the BERA.

BERA – baseline ecological risk assessment

ERA – ecological risk assessment

na – not applicable

The exposure concentrations for each of these broad categories were developed as follows:

- **Small and large fish –** For the primary diet scenario, the exposure concentrations for fish were calculated by size class (i.e., for small [≤ 30 cm] and large fish [> 30 cm fish]). In addition, weighted exposure concentrations were calculated separately for small fish and large fish for the abundance-weighted diet scenario, based on the chemical concentrations in each species and the abundance of that species (see Section 2.3.2.2 for details).
- **Invertebrates –** The chemical concentration in invertebrate tissue was represented by whole-body blue crab samples collected from the LPRSA (i.e., blue crab were used as a surrogate for all small and large invertebrates, including epibenthic crayfish and benthic invertebrates such as insects).
- **Small birds and small mammals –** No empirical data were available regarding the chemical concentrations in small birds and mammals that live near the LPRSA. Thus, for small birds and small mammals, the chemical concentration in tissue was assumed to be equal to zero, as was done in Section 9 of the BERA. This approach was based on the approach used for the calculation of risks for mink in the Hudson River ecological risk assessment (ERA) (TAMS and Menzie-Cura 2000).

It should be noted that regardless of the species being consumed, the meal size (i.e., the average amount of food consumed each day by mink or river otter) does not change. The dietary fractions are assumed to be averages that are applicable to the populations of mink and river otter throughout the course of their lifetime.

2.3.2.2 Fish abundance calculations for the abundance-weighted diet scenario

As described in the bullets in Section 2.3.2.1, the exposure concentrations for the small fish and large fish prey categories for the abundance-weighted diet scenario were calculated as weighted averages of the chemical concentrations in the various species and the abundances of the various species. This approach was selected because both mink and river otter are known to consume fish opportunistically, indicating that they would consume fish in amounts relative to prey abundance. Information regarding both of these parameter values was available for the LPRSA, and thus distributions were defined for both of these input types. This section presents the distributions for fish abundance; Section 2.3.3 presents the corresponding exposure concentrations.

The chemical concentrations in small and large fish were calculated using Equation 4.

$$C_{weighted} = (C_{prey1} + DF_{prey1}) + (C_{prey2} + DF_{prey2}) + etc \qquad \textbf{Equation 4}$$

Where:

$C_{weighted}$ = weighted concentration in small or large fish

C_{prey} = chemical concentration in prey tissue

DF_{prey} = proportion of the diet represented by the prey item

Tables 2-6 and 2-7 present the dietary abundance calculations for mink and river otter, respectively. Abundance was calculated using the data from the fish community surveys conducted in 2009 and 2010 (Windward 2010, 2011). Although there are uncertainties with any community studies when a variety of catch methods are used, these studies provide the best available measure of the fish community in the LPRSA. It should be noted that two exposure areas (i.e., site wide and at and upstream of RM 10) were evaluated, as was done in Section 9 of the BERA. In one scenario, the abundance of fish at and upstream of RM 10 was considered, because this area was deemed acceptable mink and river otter habitat. In the other scenario, mink and river otter were assumed to use the entire LPRSA, and thus the site-wide abundance of fish was considered. The best estimate of abundance is the average across the applicable reaches, and the range is equal to the minimum to maximum values for an individual reach.

Table 2-6. Abundance of fish in the RM ≥ 10 exposure area

Category/Species	Abundance by Reach RM ≥ 10			Distribution		
	6	7	8	Distribution Type	Best Estimate	Range
Small Fish (< 30 cm)						
American eel	0%	3%	59%	uniform	21%	0–59%
Bass species[a]	0%	2%	1%	uniform	1%	0–2%
Catfish species[b]	2%	2%	0%	uniform	1%	0–2%
SFF[c]	93%	84%	36%	uniform	71%	36–93%
White perch	5%	9%	3%	uniform	6%	3–9%
Large Fish (≥ 30 cm)						
American eel	7%	3%	16%	uniform	9%	3–16%
Bass species[a]	3%	0%	1%	uniform	1%	0–3%
Carp	66%	89%	42%	uniform	65%	42–89%
Catfish species[b]	21%	8%	35%	uniform	21%	8–35%

Note: See Attachment H1 for details regarding the fish abundance calculations, and Attachment H2 for the data used to determine these percentages.

[a] The bass species category includes smallmouth and largemouth bass.

[b] The catfish species category includes brown bullhead, white catfish, channel catfish, and white sucker. Sucker were included in this group due to their benthic feeding habits, which are similar to those of other catfish.

[c] The SFF category includes a variety of fish less than 20 cm in length (e.g., mummichog, white perch, sunfish, shiners, gizzard shad, killifish, silverside, redfin pickerel, striped mullet, rock and striped bass, and darters).

RM – river mile SFF – small forage fish

Table 2-7. Abundance of fish in the site-wide exposure area

Category/Species	Abundance by Reach								Distribution		
	1	2	3	4	5	6	7	8	Distribution Type	Best Estimate	Range
Small fish (< 30 cm)											
American eel	0%	0%	1%	0%	1%	0%	3%	60%	uniform	8%	0–60%
Bass species[a]	0%	0%	0%	1%	2%	0%	2%	1%	uniform	1%	0–2%
Catfish species[b]	0%	0%	1%	0%	0%	2%	2%	0%	uniform	1%	0–2%
SFF[c]	98%	100%	78%	95%	88%	93%	84%	36%	uniform	83%	36–100%
White perch	2%	0%	21%	4%	9%	5%	9%	3%	uniform	7%	0–21%
Large fish (≥ 30 cm)											
American eel	88%	75%	61%	45%	34%	7%	3%	17%	uniform	41%	3–88%
Bass species[a]	0%	0%	0%	0%	3%	3%	0%	1%	uniform	1%	0–3%
Carp	0%	0%	22%	37%	52%	67%	89%	44%	uniform	39%	0–89%
Catfish species[b]	0%	25%	17%	18%	11%	21%	8%	38%	uniform	17%	0–38%

Note: See Attachment H1 for details regarding the fish abundance calculations, and Attachment H2 for the data used to determine these percentages.

[a] The bass species category includes smallmouth and largemouth bass.

[b] The catfish species category includes brown bullhead, white catfish, channel catfish, and white sucker. Sucker were included in this group due to their benthic feeding habits, which are similar to those of other catfish.

[c] The SFF category includes a variety of fish less than 12 cm in length (e.g., mummichog, white perch, sunfish, shiners, gizzard shad, killifish, silverside, redfin pickerel, striped mullet, rock and striped bass, and darters).

SFF – small forage fish

2.3.2.3 Normalization of dietary fractions

When running the Monte Carlo simulation for mink and river otter, the dietary fractions (both for the broad dietary categories and the fish subgroups [for the abundance-weighted diet scenario]) were allowed to vary independently. To avoid cases wherein the dietary fractions were allowed to add up to less than or more than 100%, the dietary fractions were normalized back to 100%. For example, if the river otter diet selected by the Monte Carlo simulation resulted in a diet of 60% small fish, 1% large fish, and 5% invertebrates (the low end of range for each of the dietary items), the total diet would add up to only 66%. Normalization of the diet to 100% would thus result in a river otter diet of 84.5% small fish, 1.4% large fish, and 14.1% invertebrates. This normalized diet was then checked to ensure that the normalized values were still within the range of values specified for river otter (as in this example). Normalized diets that ended up outside of this range were excluded from the sensitivity analysis.

2.3.3 Prey concentration distributions

This section presents the exposure concentration distributions representing each of the prey categories, for both the primary diet scenario and the abundance-weighted diet scenario. These distributions were developed using the available data from the LPRSA (Table 2-7). The development of the distributions was dependent on the number of samples in the given dataset:

- **Dataset with fewer than six samples** – A uniform distribution was selected to represent the dataset, with the minimum and maximum values in the dataset used as the bounds of the uniform distribution.
- **Dataset with six or more samples –** The dataset was evaluated to determine if it was normal, lognormal, or neither.
  - If the dataset was determined to be normal, @RISK was used to fit a normal distribution to the dataset.
  - If the dataset was determined to be lognormal (but not normal), @RISK was used to fit a lognormal distribution to the dataset.
  - If the dataset was determined to be neither normal nor lognormal, a distribution was developed based on the percentiles of the empirical dataset.

  When a normal or lognormal distribution was selected, the dataset was truncated at the minimum empirical value. As a conservative (i.e., health-protective) assumption, maximum truncation limits were not entered.

In addition to presenting the distributions by chemical for each of the prey categories, Table 2-7 also presents the average, 10th percentile, and 90th percentile of the distributions, and presents summary statistics for the empirical dataset on which the distributions are based.

As discussed further in Section 9.1.2.3 of the BERA, two exposure areas (i.e., at and upstream of RM 10 and site wide) were used for mink and river otter. With the exception of small forage fish (SFF), this difference in exposure areas did not impact the prey concentration distributions, because the prey species were assumed to be mobile (i.e., it was assumed that all fish caught in the LPRSA could move throughout the study area). SFF, however, were assumed to be relatively stationary, so only those fish caught in the applicable reaches were included in the distributions for mink and river otter. Thus, two distributions for SFF and fish ≤ 30 cm (which include SFF) are presented in Table 2-8: a distribution for at and upstream of RM 10 and a site-wide distribution.

Table 2-8. Prey exposure concentration distributions for mink and river otter

Prey Category	Area	Empirical Dataset				Distribution Type	Distribution Equation in @RISK	Distribution Values[a]		
		Count	Mean	Min.	Max.			Average	10th Percentile	90th Percentile
Total PCBs										
Small fish (< 30 cm)										
American eel	site wide	4	703	420	1,200	uniform	=RiskUniform(420,1200)	810	500	1,100
Bass species[b]	site wide	3	903	630	1,100	uniform	=RiskUniform(630,1100)	870	680	1,100
Catfish species[c]	site wide	6	873	260	1,700	normal	=RiskNormal(873.33,614.06, RiskTruncate(260,))	1,100	450	1,700
SFF[d]	RM ≥ 10	8	360	170	480	normal	=RiskNormal(360,107.3, RiskTruncate(170,))	370	240	500
SFF[d]	site wide	28	488	170	930	lognormal	=RiskLognorm(497.92,208.4, RiskTruncate(179.99,), RiskShift(-9.9911))	490	270	760
White perch	site wide	21	2,080	290	5,100	normal	=RiskNormal(2075.7,1192, RiskTruncate(290,))	2,200	890	3,700
All fish ≤ 30 cm	RM ≥ 10	42	1,360	170	5,100	lognormal	=RiskLognorm(1351.2,1898.8, RiskTruncate(59.93,),RiskShift(110.07))	1,500	320	3,100
All fish ≤ 30 cm	site wide	62	1,100	170	5,100	percentiles	percentile-based distribution	1,100	300	2,700
Large fish (> 30 cm)										
American eel	site wide	17	1,730	730	5,700	lognormal	=RiskLognorm(1104.2,1343.5, RiskTruncate(88.82,), RiskShift(641.18))	1,800	860	3,000
Bass species[b]	site wide	3	3,800	1,400	7,900	uniform	=RiskUniform(1400,7900)	4,700	2,100	7,300
Carp	site wide	12	4,140	1,500	7,900	normal	RiskNormal(4141.7,2018.3, RiskTruncate(1500,))	4,500	2,300	6,800
Catfish species[c]	site wide	35	2,080	350	7,300	lognormal	=RiskLognorm(2185.7,1623.1, RiskTruncate(433.38,), RiskShift(-83.383))	2,100	710	4,000
All fish > 30 cm	site wide	69	2,410	350	7,900	lognormal	=RiskLognorm(2347.4,2039.1, RiskTruncate(642.88,),RiskShift(87.116))	2,600	980	4,900
Invertebrates										
Blue crab	site wide	24	315	150	580	normal	=RiskNormal(315,102.02, RiskTruncate(150,))	330	210	450

Prey Category	Area	Empirical Dataset				Distribution Type	Distribution Equation in @RISK	Distribution Values[a]		
		Count	Mean	Min.	Max.			Average	10th Percentile	90th Percentile
Dioxin/Furan TEQ – mammal										
Small fish (≤ 30 cm)										
American eel	site wide	4	1.6	0.81	3.4	uniform	=RiskUniform(0.81,3.4)	2.1	1.1	3.1
Bass species[b]	site wide	3	36	8.6	65	uniform	=RiskUniform(8.6,65)	37	14	59
Catfish species[c]	site wide	6	96	8.5	200	normal	=RiskNormal(96.25,74.714, RiskTruncate(8.5,))	110	36	200
SFF[d]	RM ≥ 10	8	18	3.8	37	normal	=RiskNormal(17.75,11.828, RiskTruncate(3.8,))	20	8.1	34
SFF[d]	site wide	28	36	3.8	100	lognormal	=RiskLognorm(40.483,28.326, RiskTruncate(8.19,), RiskShift(-4.3917))	37	11	70
White perch	site wide	21	132	19	260	percentiles	percentile-based distribution	130	22	190
All fish ≤ 30 cm	RM ≥ 10	42	86	0.81	260	percentiles	percentile-based distribution	86	3.5	190
All fish ≤ 30 cm	site wide	62	72	0.81	260	lognormal	=RiskLognorm(82.117,119.73, RiskTruncate(4.495,),RiskShift(-3.6949))	80	9.1	180
Large fish (> 30 cm)										
American eel	site wide	17	23	1.8	48	normal	=RiskNormal(22.765,13.548, RiskTruncate(1.8,))	25	9.0	41
Bass species[b]	site wide	3	86	2.1	180	uniform	=RiskUniform(2.1,180)	91	20	160
Carp	site wide	12	418	8.2	1,400	normal	=RiskNormal(417.77,379.62, RiskTruncate(8.2,)	520	130	940
Catfish species[c]	site wide	35	129	4.1	420	normal	=RiskNormal(129.403,99.57, RiskTruncate(4.1,)	150	43	260
All fish > 30 cm	site wide	69	151	1.8	1,400	lognormal	=RiskLognorm(174.21,402.41, RiskTruncate(2.7,),RiskShift(-0.9015)	180	12	400
Invertebrates										
Blue crab	site wide	24	56	26	93	normal	=RiskNormal(55.542,16.291, RiskTruncate(26,))	57	37	77

Prey Category	Area	Empirical Dataset				Distribution Type	Distribution Equation in @RISK	Distribution Values[a]		
		Count	Mean	Min.	Max.			Average	10th Percentile	90th Percentile
PCB TEQ – mammal										
Small fish (≤ 30 cm)										
American eel	site wide	4	7.4	4.7	14	uniform	=RiskUniform(4.7,14)	9.4	5.6	13
Bass species[b]	site wide	3	12.5	9.4	15	uniform	=RiskUniform(9.4,15)	12	10	14
Catfish species[c]	site wide	6	12.8	6.1	23	normal	=RiskNormal(12.8167,6.6535, RiskTruncate(6.1,))	15	8.1	22
SFF[d]	RM ≥ 10	8	5.2	2.1	7.2	normal	=RiskNormal(5.2,1.7825, RiskTruncate(2.1,))	5.4	3.2	7.5
SFF[d]	site wide	28	6.7	2.1	12	normal	=RiskNormal(6.6786,2.3768, RiskTruncate(2.1,))	6.8	3.9	9.8
White perch	site wide	21	22.1	2.9	41	normal	=RiskNormal(22.105,10.12, RiskTruncate(2.9,))	23	11	35
All fish ≤ 30 cm	RM ≥ 10	42	15.5	2.1	41	lognormal	=RiskLognorm(16.121,13.951, RiskTruncate(2.301,),RiskShift(-0.20084))	16	4.7	32
All fish ≤ 30 cm	site wide	62	12.8	2.1	41	percentiles	percentile-based distribution	13	4.6	28
Large fish (> 30 cm)										
American eel	site wide	17	9.3	2.8	17	normal	=RiskNormal(9.3,4.1542, RiskTruncate(2.8,))	9.8	5.0	15
Bass species[b]	site wide	3	95.3	19	240	uniform	=RiskUniform(19,240)	130	41	220
Carp	site wide	12	47.1	16	86	normal	=RiskNormal(47.083,21.056, RiskTruncate(16,))	50	26	75
Catfish species[c]	site wide	35	28.6	2.7	95	lognormal	=RiskLognorm(36.522,18.785, RiskTruncate(10.675,), RiskShift(-7.9752))	29	9.9	53
All fish > 30 cm	site wide	69	29.9	2.7	240	lognormal	=RiskLognorm(30.19,30.688, RiskTruncate(3.1,),RiskShift(-0.40481))	30	7.1	62
Invertebrates										
Blue crab	site wide	24	8.0	3.0	12	normal	=RiskNormal(8,2.2866, RiskTruncate(3,))	8.3	5.2	11

Prey Category	Area	Empirical Dataset				Distribution Type	Distribution Equation in @RISK	Distribution Values[a]		
		Count	Mean	Min.	Max.			Average	10th Percentile	90th Percentile
Total TEQ – mammals										
Small fish (≤ 30 cm)										
American eel	site wide	4	9.2	5.5	18	uniform	=RiskUniform(5.5,18)	12	6.8	17
Bass species[b]	site wide	3	49	22	83	uniform	=RiskUniform(22,83)	53	28	77
Catfish species[c]	site wide	6	109	15	220	normal	=RiskNormal(108.667,80.637, RiskTruncate(15,))	130	44	220
SFF[d]	RM ≥ 10	8	23	10	43	normal	=RiskNormal(23,12.387, RiskTruncate(10,))	26	14	40
SFF[d]	site wide	28	43	10	110	lognormal	=RiskLognorm(41.254,32.516, RiskTruncate(7.98,), RiskShift(2.0168))	44	16	82
White perch	site wide	21	153	25	300	percentiles	percentile-based distribution	150	30	220
All fish ≤ 30 cm	RM ≥ 10	42	101	5.5	300	percentiles	percentile-based distribution	100	10	220
All fish ≤ 30 cm	site wide	62	85	5.5	300	percentiles	percentile-based distribution	85	14	200
Large fish (≥ 30 cm)										
American eel	site wide	17	31	7.0	56	normal	=RiskNormal(31.341,16.474, RiskTruncate(7,))	34	15	53
Bass species[b]	site wide	3	185	96	250	uniform	=RiskUniform(96,250)	170	110	230
Carp	site wide	12	467	24	1,500	normal	=RiskNormal(467.42,401.06, RiskTruncate(24,)	570	160	1,000
Catfish species[c]	site wide	35	158	15	510	normal	=RiskNormal(157.71,117.45, RiskTruncate(15,))	180	59	320
All fish > 30 cm	site wide	69	181	7.0	1,500	lognormal	=RiskLognorm(197.22,389.34, RiskTruncate(3.66,),RiskShift(3.3434))	200	22	450
Invertebrates										
Blue crab	site wide	24	63	28	100	normal	=RiskNormal(63.458,17.922, RiskTruncate(28,))	65	43	87

Note: See Attachment H2 for the data used to develop these distributions.

[a] Distribution values are approximate and are rounded to two significant figures.

[b] The bass species category includes smallmouth and largemouth bass.

[c] The catfish species category includes brown bullhead, white catfish, channel catfish, and white sucker. Sucker were included in this group due to their benthic feeding habits, which are similar to those of other catfish.

[d] The SFF category includes a variety of fish less than 12 cm in length (e.g., mummichog, white perch, sunfish, shiners, gizzard shad, killifish, silverside, redfin pickerel, striped mullet, rock and striped bass, and darters).

PCB – polychlorinated biphenyl RM – river mile SFF – small forage fish TEQ – toxic equivalent

3 Results

This section presents the mink and river otter HQs calculated as described in Section 2. The approximate percentage of the population for which the LOAEL HQ is less than the threshold of 1.0 is presented in Table 3-1. HQs for river otter are higher than those for mink, largely because a portion of the mink diet is comprised of birds and mammals. Prey concentrations for birds and mammals are assumed to be equal to zero (see Section 2.3.2), which means that a higher percentage of the population for mink has a LOAEL HQ below the threshold of 1.0. Using a range of TRVs, HQs for PCB TEQ – mammal, both for mink and river otter, were generally < 1 for more than 80% of the populations.

Table 3-1. HQs for mink and river otter based on the sensitivity analysis

	Approximate Percentage of the Population for which the LOAEL HQ is Below the Threshold of 1.0 Using a Range of TRVs[a]							
	Mink				River Otter			
	Primary Diet Scenario		Abundance-Weighted Diet Scenario		Primary Diet Scenario		Abundance-Weighted Diet Scenario	
Chemical	**RM ≥ 10**	**Site-wide**	**RM ≥ 10**	**Site-wide**	**RM ≥ 10**	**Site-wide**	**RM ≥ 10**	**Site-wide**
Total PCBs	74%	79%	93%	92%	24%	34%	22%	16%
PCDF/PCDD TEQ – mammal	70%	77%	88%	88%	42%	47%	61%	53%
PCB TEQ – mammal	100%	100%	100%	100%	98%	100%	100%	100%
Total TEQ – mammal	63%	68%	80%	80%	34%	37%	39%	35%
TRVs[b]								
Total PCBs	67%	72%	86%	84%	17%	24%	10%	6%
PCDF/PCDD TEQ – mammal	8%	7%	4%	4%	3%	1%	0%	0%
PCB TEQ – mammal	91%	94%	98%	99%	52%	62%	84%	81%
Total TEQ – mammal	5%	4%	2%	2%	0%	0%	0%	0%

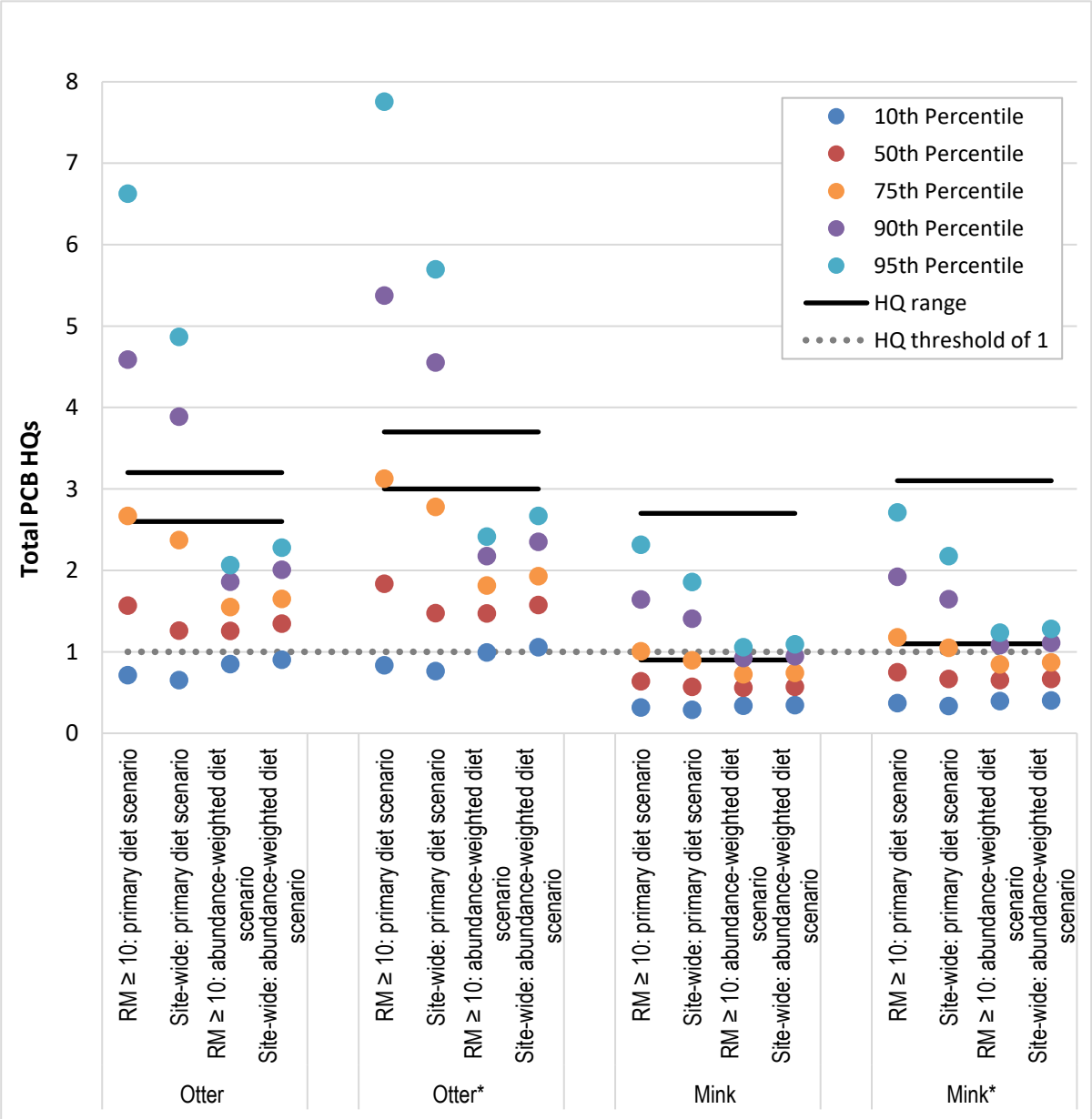
Shaded cells indicate that the HQ is less than 1.0 for 80% or more of the population.

[a] TRVs derived based on process identified in Section 9.1.3.1 of the BERA main text or USEPA (2015a), USEPA (2015b), USEPA (2016), and other communications with USEPA throughout 2015 and 2016.

[b] TRVs derived based on process identified in USEPA (2015a), USEPA (2015b), USEPA (2016), and other communications with USEPA throughout 2015 and 2016.

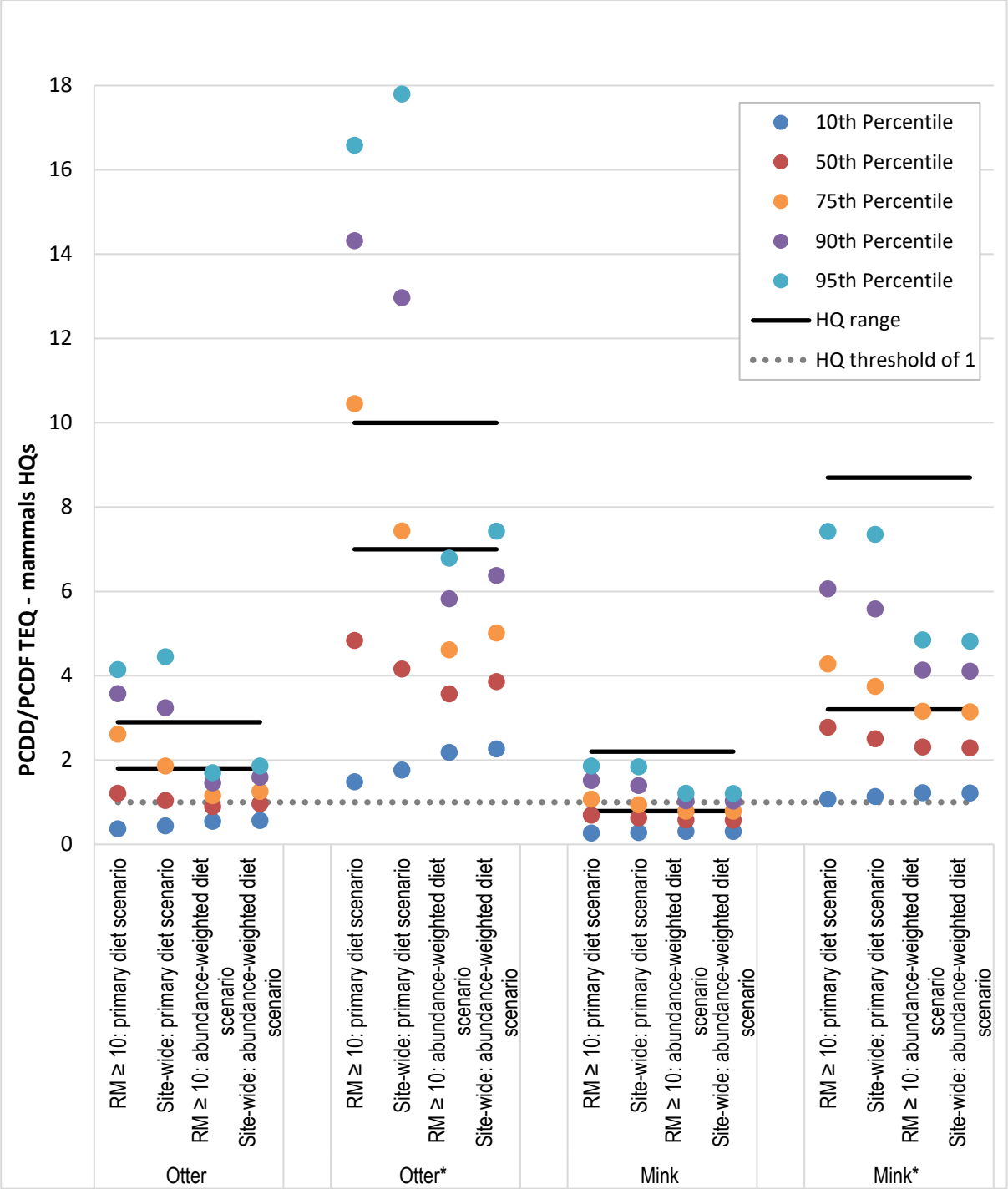
HQ – hazard quotient
LOAEL – lowest-observed-adverse-effect level
PCB – polychlorinated biphenyl
PCDD – polychlorinated dibenzo-*p*-dioxin
PCDF – polychlorinated dibenzofuran
RM – river mile
TEQ – toxic equivalent
TRV – toxicity reference value
USEPA – US Environmental Protection Agency

In addition to the results shown in Table 3-1, the LOAEL HQ results are presented graphically in Figures 3-1 through 3-4. These figures also show the range of point estimate HQs as horizontal black lines as compared with the HQ distribution from the sensitivity analysis. As in Table 3-1, these figures show that the HQs for river otter are higher than those for mink. In addition, these figures show that the deterministically calculated HQs are conservative (i.e., health protective), since they are generally at the upper end of the distributions presented in Figures 3-1 through 3-4.



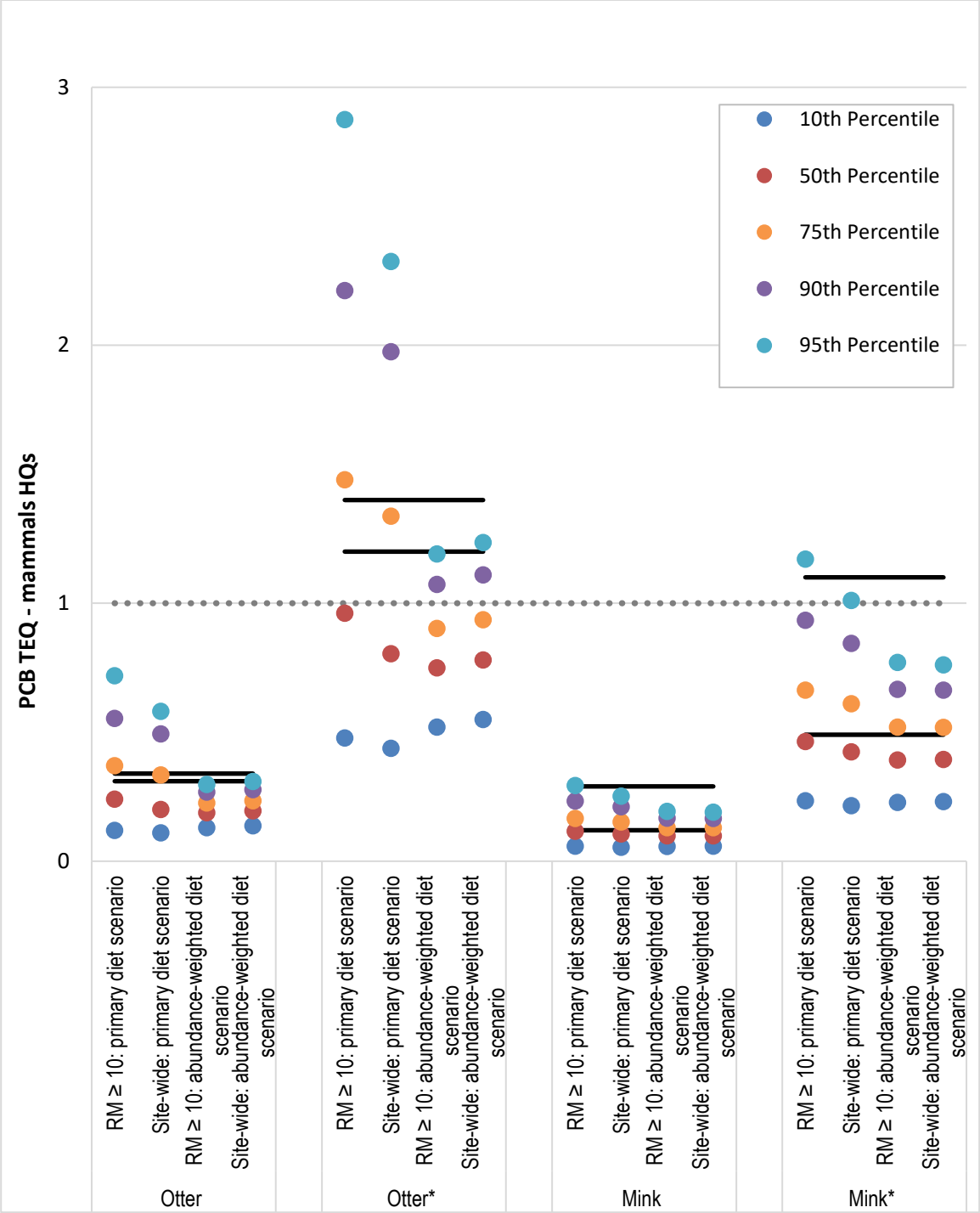
Note: A range of TRVs was used. TRVs derived based on process identified in Section 9.1.3.1 of the BERA main text or USEPA (2015a), USEPA (2015b), USEPA (2016), and other communications with USEPA throughout 2015 and 2016. Receptors with an asterisk identify results from TRVs based on process identified by USEPA (2015a), USEPA (2015b), USEPA (2016), and other communications with USEPA throughout 2015 and 2016.

Figure 3-1. Distribution of LOAEL HQs for total PCBs



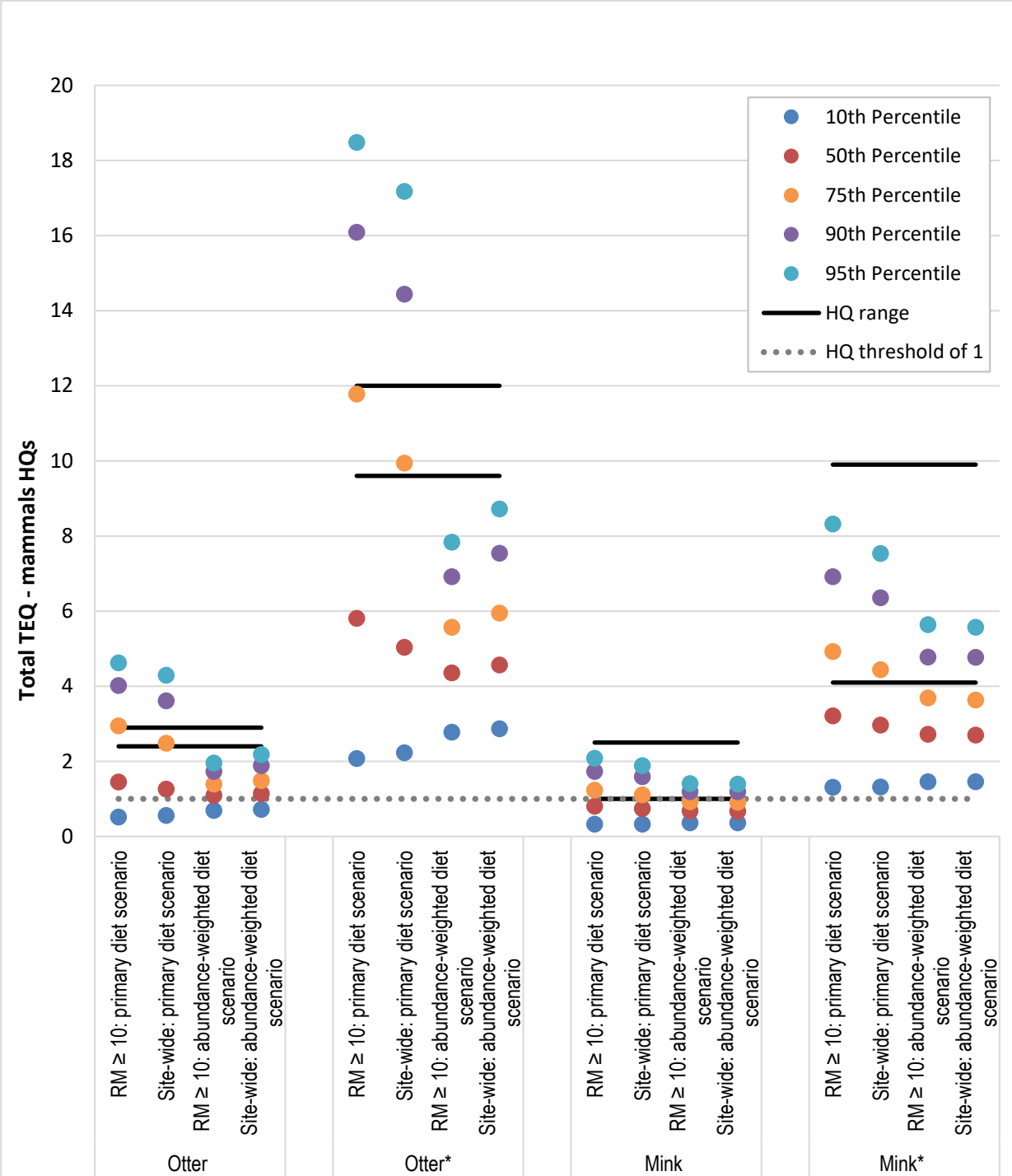
Note: A range of TRVs was used. TRVs derived based on process identified in Section 9.1.3.1 of the BERA main text or USEPA (2015a), USEPA (2015b), USEPA (2016), and other communications with USEPA throughout 2015 and 2016. Receptors with an asterisk identify results from TRVs based on process identified by USEPA (2015a), USEPA (2015b), USEPA (2016), and other communications with USEPA throughout 2015 and 2016.

Figure 3-2. Distribution of LOAEL HQs for PCDD/PCDF TEQ – mammal



Note: A range of TRVs was used. TRVs derived based on process identified in Section 9.1.3.1 of the BERA main text or USEPA (2015a), USEPA (2015b), USEPA (2016), and other communications with USEPA throughout 2015 and 2016. Receptors with an asterisk identify results from TRVs based on process identified by USEPA (2015a), USEPA (2015b), USEPA (2016), and other communications with USEPA throughout 2015 and 2016.

Figure 3-3. Distribution of LOAEL HQs for PCB TEQ – mammal



Note: A range of TRVs was used. TRVs derived based on process identified in Section 9.1.3.1 of the BERA main text or USEPA (2015a), USEPA (2015b), USEPA (2016), and other communications with USEPA throughout 2015 and 2016. Receptors with an asterisk identify results from TRVs based on process identified by USEPA (2015a), USEPA (2015b), USEPA (2016), and other communications with USEPA throughout 2015 and 2016.

Figure 3-4. Distribution of LOAEL HQs for total TEQ – mammal

4 Evaluation of Model Sensitivity to Key Parameters

As part of this sensitivity assessment, an analysis of the sensitivity of the model to the various input parameters was performed to better understand the key parameters that have the largest impact on the HQs. For this analysis, one exposure area (site wide) and one focal species (river otter) were selected for further evaluation. Both dietary scenarios were evaluated, meaning that the sensitivity of HQs to parameters used to calculate both the primary diet scenario and the abundance-weighted diet scenario were considered. When evaluating the results of this exercise, it is important to recognize that there were fewer parameters for the primary diet scenario (n = 13) as compared with the abundance-weighted diet scenario (n = 29).

Table 4-1 presents a summary of this evaluation. Table 4-1 and Figures 4-1 through 4-4 show the top 10 parameters for each preliminary COC-focal species pair (i.e., those parameters that have the greatest impact on the HQ). Parameters for which an increase in the parameter value results in an increase in the HQ (e.g., the FMR) have positive correlation coefficients, while parameters for which an increase in the parameter value results in a decrease in the HQ (e.g., the DF of mammals for mink) have negative correlation coefficients. The following presents a discussion of the key parameters identified in this evaluation.

- **Prey exposure concentrations** – Prey concentration distributions included in Table 4-1 are those for which the concentrations detected in samples from the LPRSA are quite variable (i.e., the difference between the minimum and maximum values detected in samples from the LPRSA is relatively large, and thus the concentration selected from the distribution has a large impact on the HQ). For the primary diet scenario, the exposure concentration for fish < 30 cm has a large impact on the resulting HQs, both because these fish make up the majority of the river otter diet, and because concentrations across the fish included in this category are highly variable. For the abundance-weighted diet scenario, two examples of prey exposure concentrations that have a large impact on the resulting HQ are SFF (important because SFF compose a large percentage of the diet and have a wide range of concentrations) and carp (important because although carp compose only a small percentage of the diet, concentrations of carp are highly variable). The importance of these parameters reflects the natural variability of chemical concentrations in prey tissue. It should also be noted that there is some uncertainty as to whether the selected exposure distributions reflect the true range of concentrations present in the LPRSA.
- **Dietary fractions** – DFs included in Table 4-1 are those with a wide range of values, and/or those for which the associated prey concentrations are much higher or much lower than the average prey concentration. DFs were based on a combination of literature information and (for the abundance-weighted diet

scenario) empirical data for determining fish abundance, and thus these parameters represent both a source of variability (the diets of mink and river otter may vary across different portions of the LPRSA and across seasons) and a source of uncertainty (the literature studies were not site specific and may not accurately represent what mink and river otter would be eating in the LPRSA).

- **Field metabolic rate, gross energy, and absorption efficiency –** These parameters are used to calculate the rate of prey consumption (like the FIR is used to calculate the point estimate HQs), and thus are parameters to which the model can be highly sensitive. This is particularly true for the FMR, which was identified as one of the most important parameters for both diet scenarios across preliminary COCs (i.e., higher FMRs result in higher consumption rates, which in turn result in higher HQs). These parameter values were based on literature information (i.e., no site-specific values were available), and thus there is some uncertainty associated with the values for these parameters. However, efforts were made to reduce this uncertainty by using multiple LOEs to determine the FMR for both mink and river otter.

Table 4-1. Evaluation of key parameters impacting the calculated LOAEL HQs for river otter

Parameter Category	Parameter	Correlation Coefficient[a]			
		Total PCBs	PCDD/PCDF TEQ – Mammal	PCB TEQ – Mammal	Total TEQ – Mammal
Primary diet scenario					
Prey exposure concentrations	C_{prey}: crab	0.05	0.09	0.10	0.10
	C_{prey}: fish < 30 cm	**0.89**	**0.87**	**0.85**	**0.88**
	C_{prey}: fish > 30 cm	0.19	**0.22**	**0.21**	0.20
Dietary fractions	DF: crab	-0.04	0.07	-	0.04
	DF: fish < 30 cm	-	-0.04	-0.03	-
	DF: fish > 30 cm	0.11	0.06	0.08	0.07
Parameters affecting FIR	AE: fish < 30 cm	-0.07	-	-0.07	-0.03
	FMR: otter	0.18	0.16	**0.21**	0.19
	GE: crab	-0.04	-0.07	-0.06	-0.07
	GE: fish < 30 cm	**-0.22**	-0.16	**-0.24**	-0.20
	GE: fish > 30 cm	-0.09	-0.05	-0.07	-0.06
Abundance-weighted diet scenario					
Prey exposure concentrations	C_{prey}: carp > 30 cm	0.15	**0.30**	-	**0.28**
	C_{prey}: crab	-	0.18	**0.21**	0.16
	C_{prey}: eel < 30 cm	0.20	-	**0.21**	-
	C_{prey}: perch < 30 cm	**0.30**	**0.25**	**0.23**	**0.23**
	C_{prey}: SFF	**0.35**	**0.50**	**0.36**	**0.48**
Dietary fractions	DF: carp		0.17	-	0.18
	DF: eel < 30 cm		-0.19	-	-0.17
	DF: fish > 30 cm	**0.22**	**0.22**	0.18	**0.22**
	DF: perch < 30 cm	**0.25**	0.19	0.20	0.20
	DF: SFF	-0.12	-	-	-
Parameters affecting FIR	FMR: otter	**0.40**	**0.28**	**0.44**	**0.33**
	GE: crab	-	-	-0.14	-
	GE: fish < 30 cm	**-0.47**	**-0.24**	**-0.48**	**-0.27**
	GE: fish > 30 cm	-0.13	-	-0.13	-

Bold text indicates parameters with the greatest impact on risk; these are the parameters with correlation coefficients greater than 0.2 or less than -0.2.

[a] For cells that contain a "-", the parameter was not one of the top 10 parameters to which the risk estimates were the most sensitive.

AE – assimilation efficiency
C_{prey} – prey concentration
DF – dietary fraction
FIR – food ingestion rate
FMR – field metabolic rate
GE – gross energy
HQ – hazard quotient
LOAEL – lowest-observed-adverse-effect level
PCB – polychlorinated biphenyl
PCDD – polychlorinated dibenzo-*p*-dioxin
PCDF – polychlorinated dibenzofuran
SFF – small forage fish
TEQ – toxic equivalent

As mentioned, the results shown in Table 4-1 are presented graphically in Figures 4-1 through 4-4 for the primary diet scenario and in Figures 4-5 through 4-8 for the abundance-weighted diet scenario. In these figures, parameters for which an increase in the parameter value results in an increase in the dietary dose (e.g., the FMR) are shown with bars extending to the right of the center line, whereas parameters for which an increase in the parameter value results in a decrease in the dietary dose (e.g., the GE of fish < 30 cm) are shown with bars extending to the left of the center line. Parameters with the correlation coefficients furthest from zero have the largest impact on the resulting HQ.

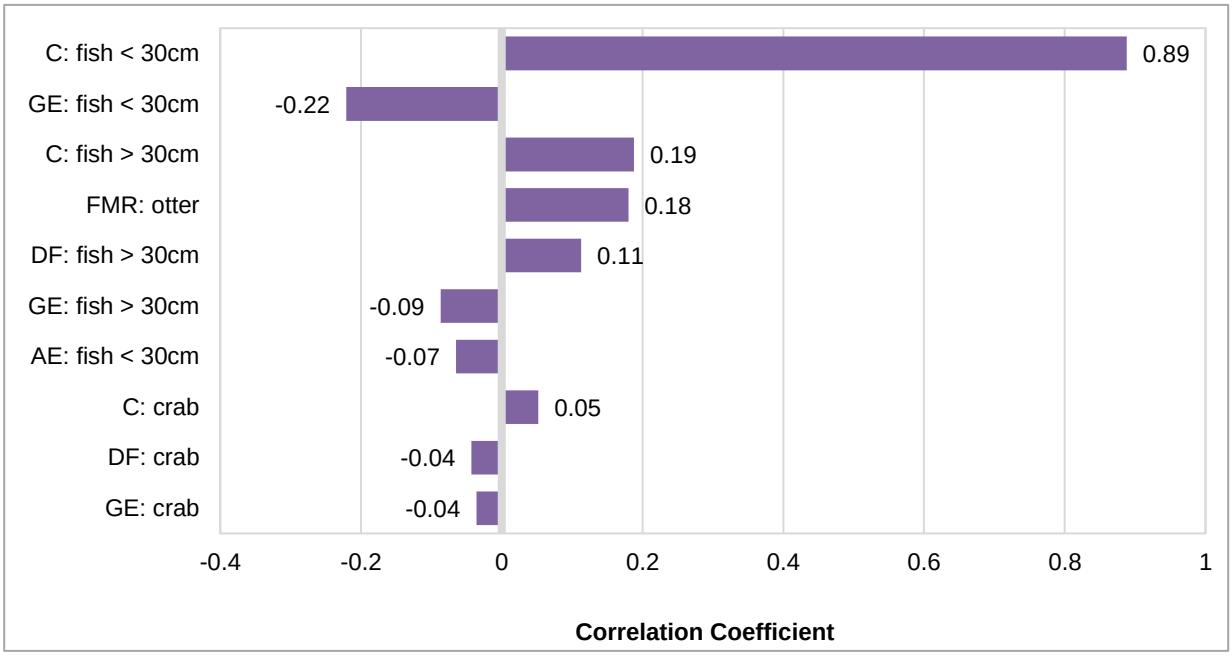


Figure 4-1. Key parameters impacting the HQ for river otter and total PCBs for the primary diet scenario

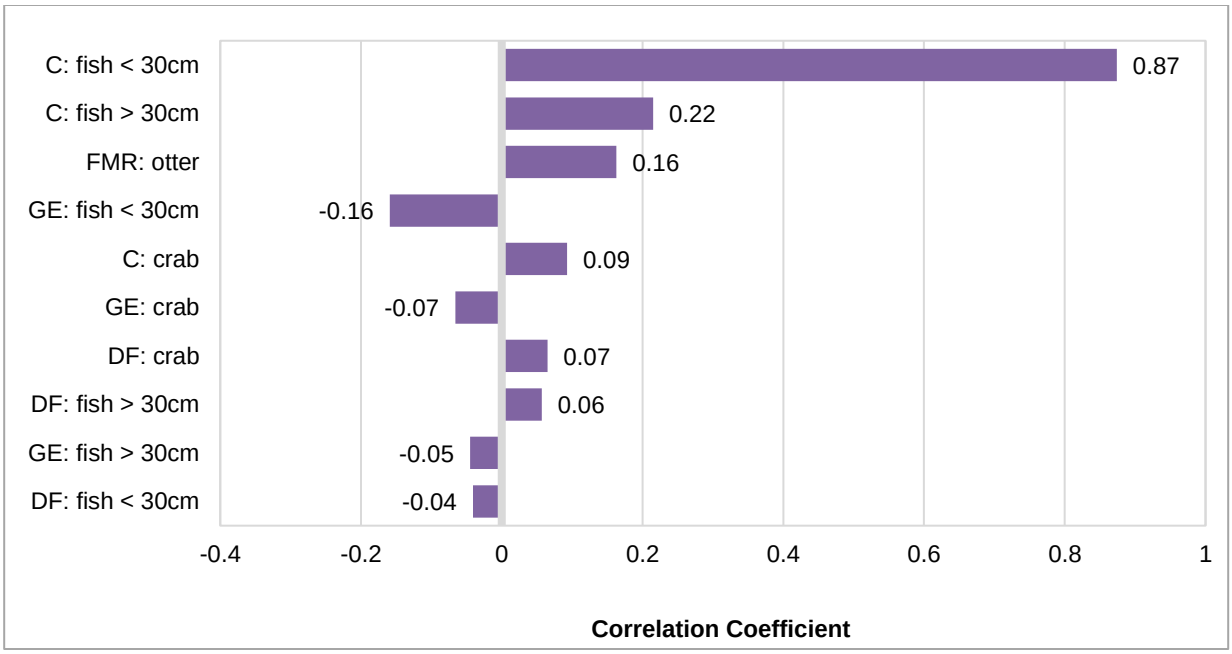


Figure 4-2. Key parameters impacting the HQ for river otter and PCDD/PCDF TEQ – mammal for the primary diet scenario

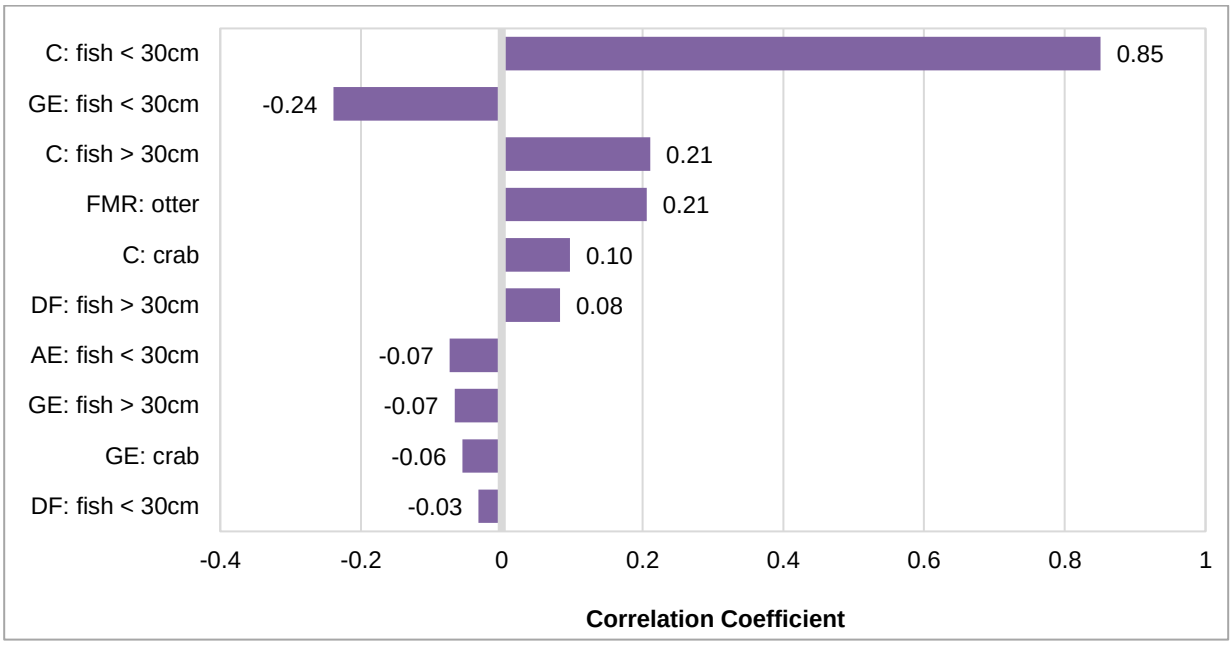


Figure 4-3. Key parameters impacting the HQ for river otter and PCB TEQ – mammal for the primary diet scenario

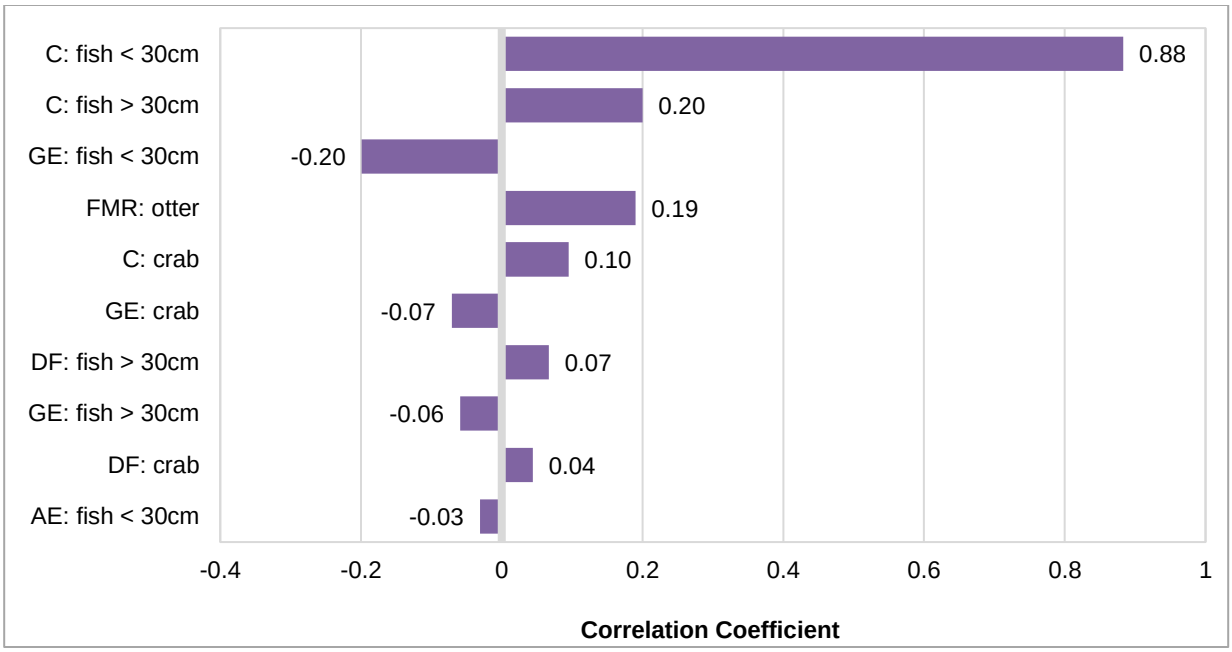


Figure 4-4. Key parameters impacting the HQ for river otter and total TEQ – mammal for the primary diet scenario

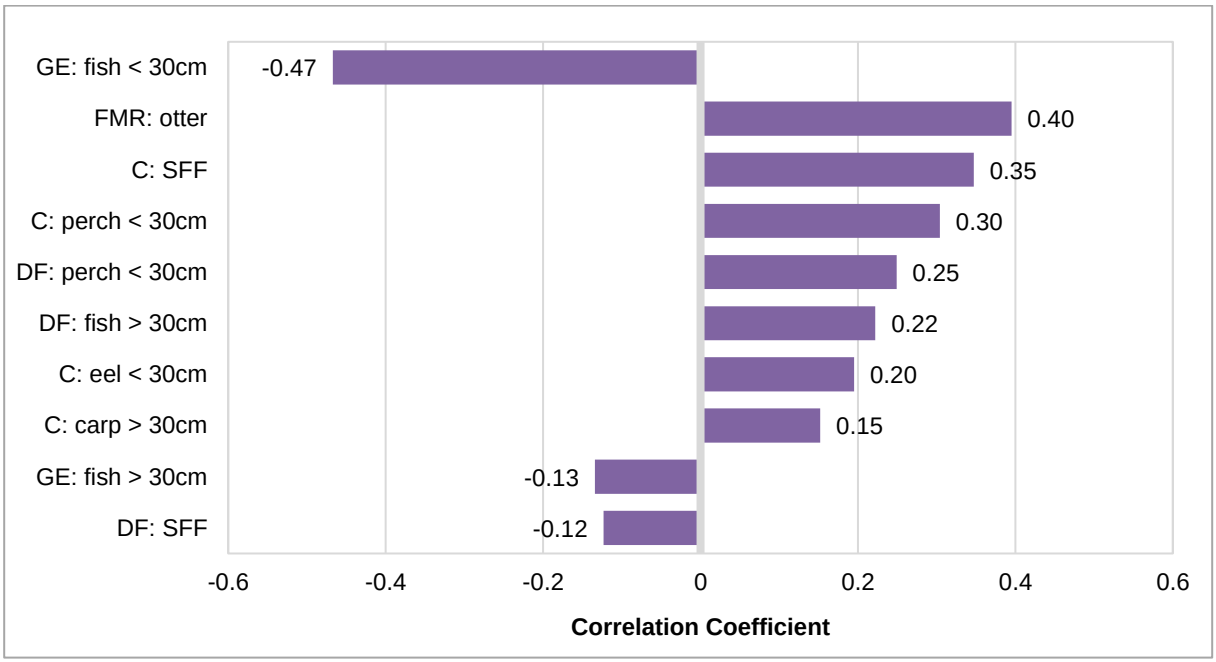


Figure 4-5. Key parameters impacting the HQ for river otter and total PCBs for the abundance-weighted diet scenario

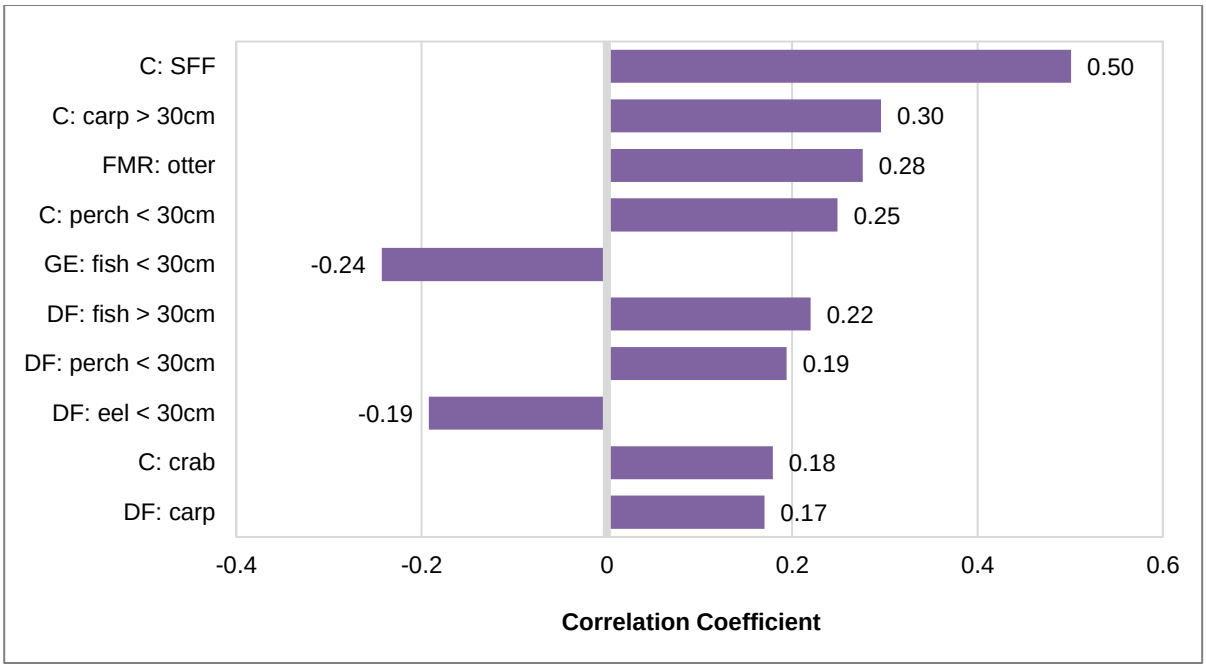


Figure 4-6. Key parameters impacting the HQ for river otter and PCDD/PCDF TEQ – mammal for the abundance-weighted diet scenario

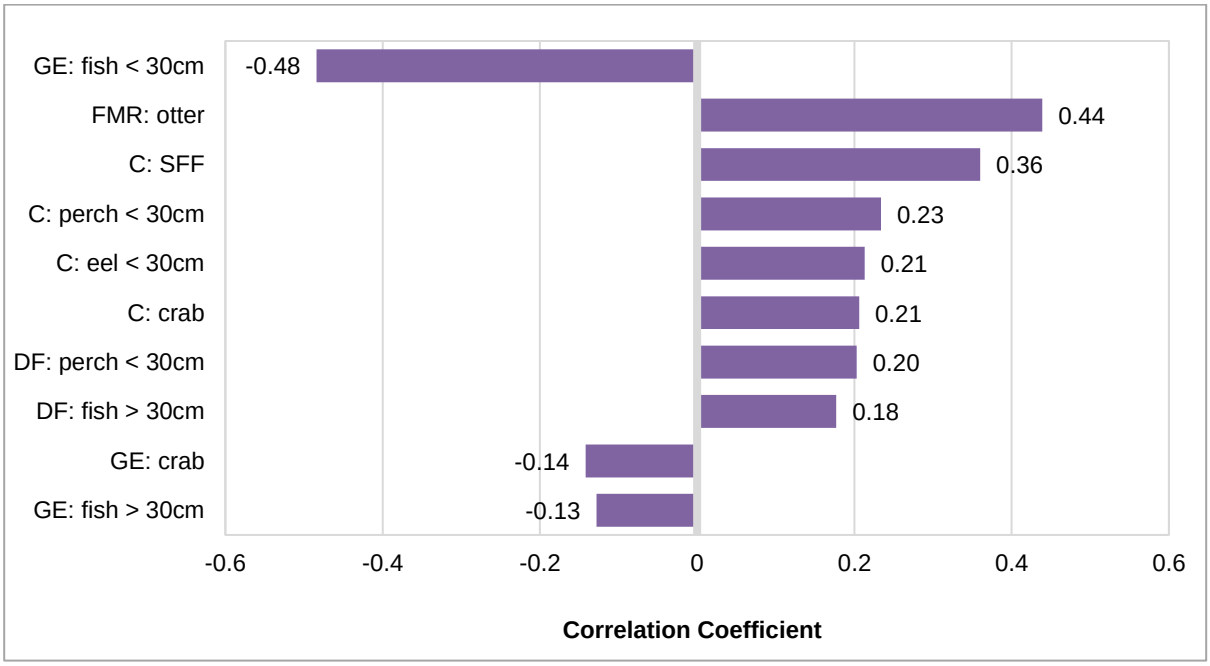


Figure 4-7. Key parameters impacting the HQ for river otter and PCB TEQ – mammal for the abundance-weighted diet scenario

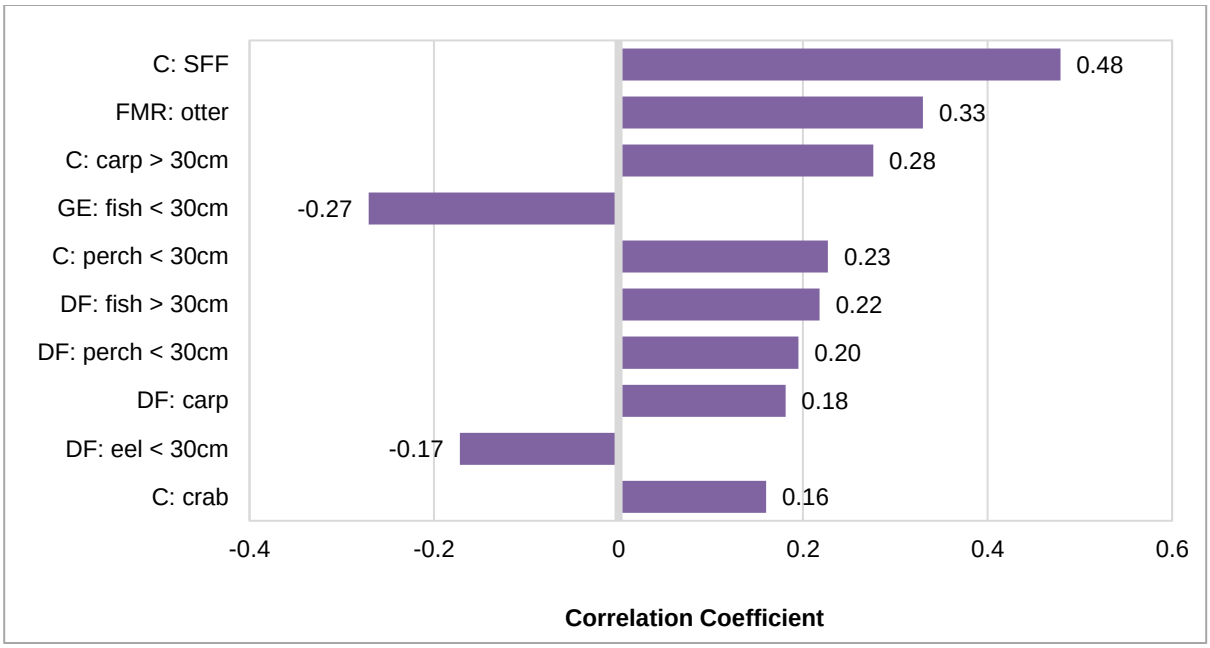


Figure 4-8. Key parameters impacting the HQ for river otter and total TEQ – mammal for the abundance-weighted diet scenario

5 Conclusions and Discussion

The results from this sensitivity analysis indicate that the deterministically calculated HQs are conservative (i.e., health protective), since they generally fall toward the upper ends of the sensitivity-calculated risk distributions, both for the primary diet scenario and the abundance-weighted diet scenario (Figures 3-1 to 3-4). In addition to the use of a different exposure model to calculate risks, the differences in calculated risk estimates are, in part, the result of the inclusion of a variety of health-protective assumptions in this sensitivity analysis. The following are examples of such assumptions:

- **Rate of food consumption –** A wide range of FMR values was used, which resulted in variable FIRs (both higher and lower than those used to calculate HQs in Section 9 of the BERA).
- **Variability –** The natural variability of parameter values was incorporated into the risk estimates (e.g., prey exposure concentrations and DFs).
- **Truncation of prey concentration distributions –** Only the lower ends of the prey exposure concentration distributions were truncated; this was a health-protective assumption to acknowledge that the maximum values in the empirical dataset may not capture the true range of variability the LPRSA.

Despite the use of these conservative assumptions and the differences in the models used to calculate risks, the deterministically calculated HQs in Section 9 of the BERA are generally at the upper ends of the distributions calculated in this sensitivity analysis, indicating that the deterministically calculated HQs are conservative. This is especially true considering that the conservative assumptions used for the sensitivity analysis (such as those listed above) are particularly likely to influence the upper end of the distribution of HQs. Thus, the 90th and 95th percentiles of the HQ distributions likely overestimate risks to mink and river otter, because these percentiles are the result of compounded conservative assumptions. Additionally, the differences between the HQs calculated in Section 9 of the BERA and those calculated in this sensitivity analysis are generally not large enough to affect the overall risk conclusions for mink and river otter (i.e., whether or not the LOAEL HQs for these preliminary COCs are > 1.0). Overall, this sensitivity analysis indicates that the calculated HQs for mink and river otter are conservative estimates of the risk associated with these preliminary COCs.

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Attachment H1. Explanation of Prey Portions Based on LPRSA Fish Abundance

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Acronyms

BERA	baseline ecological risk assessment
CPG	Cooperating Parties Group
LPRSA	Lower Passaic River Study Area
SFF	small forage fish
USEPA	US Environmental Protection Agency

1 Introduction

Information regarding the abundance of various fish species in the Lower Passaic River Study Area (LPRSA) was used to calculate weighted prey concentrations as part of the abundance-weighted diet scenario for the sensitivity analysis conducted for mink and river otter. Both of these species are known to be opportunistic feeders, and thus the abundance of various species is a key factor in determining what species mink and river otter are likely to be consuming. Data from the various field efforts (which are summarized in Section 2) were used to determine the relative abundance of the various fish species.

2 Summary of field efforts

Data regarding the LPRSA fish community was collected during a variety of field sampling efforts conducted in 2009 and 2010. These field events were summarized in two fish community survey data reports:

- The late summer/early fall 2009 fish community survey and tissue collection effort was summarized in the *Fish and Decapod Field Report for the Late Summer/Early Fall 2009 Field Effort* (Windward 2010).
- The 2010 surveys were summarized in the *Fish Community Survey and Tissue Collection Data Report for the Lower Passaic River Study Area 2010 Field Efforts* (Windward 2011). This included the winter 2010 fish community survey, the late spring/early summer 2010 fish community survey and tissue collection effort, and the dedicated 2010 small forage fish tissue collection field effort (including the May 2010 reconnaissance survey and late summer forage fish collection)

It should be noted that only those fish for which length information was available were included in the determination of abundance for the baseline ecological risk assessment (BERA). For example, fish that were partially eaten when collected could not be measured, and thus were excluded from this evaluation.

3 Determination of dietary categories for mink and river otter

Rather than calculating the abundance of fish in the LPRSA on a species-by-species basis, dietary categories were developed that captured the main species present in the LPRSA and those for which chemistry data was available for use in the risk assessment. Dietary categories were developed for fish in the ≤ 30-cm range (i.e., the size that would be targeted by mink and river otter) and for fish in the > 30-cm size range (i.e., larger fish that could be consumed by mink or river otter as carrion) (Table 3-1). In communications between the Cooperating Parties Group (CPG) and the US Environmental Protection Agency (USEPA) (USEPA 2015), USEPA requested that

this larger category (i.e., > 30 cm) also be included as part of mink and otter diet. The larger fish constitute only a small fraction of the mink and river otter diet. Additionally, it should be noted that categories were developed based on the available chemistry data (i.e., categories for which tissue data were not available were not included in the abundance calculations).

Table 3-1. Dietary categories for mink and river otter

Size Range	Category	Species Included
≤ 30 cm in length	eel	American eel
	bass	largemouth and smallmouth bass
	catfish	brown bullhead, channel catfish, white catfish, and white suckers
	SFF	includes a variety of species of small fish (less than 20 cm in length) such as darters, killifish, silversides, mummichog, shiners, and various sunfish species
	perch	white perch
> 30 cm in length	eel	American eel
	bass	largemouth and smallmouth bass
	carp	common carp
	catfish	brown bullhead, channel catfish, white catfish, and white suckers

SFF – small forage fish

4 Abundance calculations

Each of the individual fish collected as part of the fish community surveys were categorized based on the mink and river otter diet. The exception to this was for species for which no chemistry data (or surrogate species) were available: these species were excluded from these calculations. Tables 4-1 and 4-2 present the counts and percent abundance by reach, respectively, for the different prey categories based on the fish community data presented in Attachment H2. Table 4-3 summarizes this information for mink and river otter for use in the BERA based on the exposure area for these receptor species.

Table 4-1. Count of individuals for mink and river otter dietary categories

Species Category	Count of Individuals by Reach								
	1	2	3	4	5	6	7	8	Total
Fish ≤ 30 cm in length									
Eel	1	1	2	3	6	0	3	546	562
Bass	0	0	0	6	11	1	2	13	33
Catfish	0	0	2	2	2	5	2	1	14
SFF	221	863	269	748	530	211	81	329	3,252
Perch	4	2	74	29	51	11	9	28	208
Total	**226**	**866**	**347**	**788**	**600**	**228**	**97**	**917**	**4,069**

Species Category	Count of Individuals by Reach								
	1	2	3	4	5	6	7	8	Total
Fish > 30cm in length[a]									
Eel	7	3	14	17	22	5	2	12	82
Bass	0	0	0	0	2	2	0	1	5
Carp	0	0	5	14	33	45	54	32	183
Catfish	0	1	4	7	7	14	5	27	65
Total	**7**	**4**	**23**	**38**	**64**	**66**	**61**	**72**	**335**

Note: See Attachment H2 (Table H2-1) for fish community data used to develop the counts presented in this table.

[a] Fish greater than 70 cm in length were excluded from the determination of fish abundance because, as described in Section 9.1.2.3 of the BERA, the available literature information suggests that 70 cm is the maximum prey size consumed by mink and river otter.

BERA – baseline ecological risk assessment

Table 4-2. Percent by reach for mink and river otter dietary categories

Species Category	Percent Abundance by Reach							
	1	2	3	4	5	6	7	8
Fish ≤ 30 cm in length								
Eel	0%	0%	1%	0%	1%	0%	3%	60%
Bass	0%	0%	0%	1%	2%	0%	2%	1%
Catfish	0%	0%	1%	0%	0%	2%	2%	0%
SFF	98%	100%	78%	95%	88%	93%	84%	36%
Perch	2%	0%	21%	4%	9%	5%	9%	3%
Fish > 30 cm in length								
Eel	100%	75%	61%	45%	34%	8%	3%	17%
Bass	0%	0%	0%	0%	3%	3%	0%	1%
Carp	0%	0%	22%	37%	52%	68%	89%	44%
Catfish	0%	25%	17%	18%	11%	21%	8%	38%

Table 4-3. Summary of percent abundance by exposure area

Species Category	Site-Wide Exposure Area			RM ≥ 10 Exposure Area		
	Average	Minimum	Maximum	Average	Minimum	Maximum
Fish ≤ 30 cm in length						
Eel	8%	0%	60%	21%	0%	60%
Bass	1%	0%	2%	1%	0%	2%
Catfish	1%	0%	2%	1%	0%	2%
SFF	83%	36%	100%	71%	36%	93%
Perch	7%	0%	21%	6%	3%	9%
Fish > 30 cm in length						
Eel	43%	3%	100%	9%	3%	17%
Bass	1%	0%	3%	2%	0%	3%
Carp	39%	0%	89%	67%	44%	89%
Catfish	17%	0%	38%	22%	8%	38%

5 References

USEPA. 2015. Personal communication (email from S. Vaughn, USEPA, to R. Law, de maximis, submitting USEPA's responses to CPG's September 10 and 15, 2015, responses to USEPA's comments submitted May 1, 2015, on the draft baseline ecological risk assessment for the LPRSA). US Environmental Protection Agency, December 22, 2015.

Windward. 2010. Lower Passaic River Restoration Project. Fish and decapod field report for the late summer/early fall 2009 field effort. Final. Prepared for the Cooperating Parties Group, Newark, NJ. September 14, 2010. Windward Environmental LLC, Seattle, WA.

Windward. 2011. Lower Passaic River Restoration Project. Lower Passaic River Study Area RI/FS. Fish community survey and tissue collection data report for the Lower Passaic River Study Area 2010 field efforts. Final. Prepared for Cooperating Parties Group, Newark, NJ. July 20, 2011. Windward Environmental LLC, Seattle, WA.

Attachment H2. LPRSA Data Used to Support the Mammal Sensitivity Analysis

Table H2-1. Fish community data used to develop abundance fractions

Event	Collection Date	Specimen ID
Late summer/early fall 2009 fish survey and tissue collection	2009-09-01 12:55:00	LPR1G-AR075
Late summer/early fall 2009 fish survey and tissue collection	2009-09-02 15:29:00	LPR1G-AR077
Late summer/early fall 2009 fish survey and tissue collection	2009-09-03 14:08:00	LPR1G-AR080
Late summer/early fall 2009 fish survey and tissue collection	2009-09-05 12:03:00	LPR1G-AR085
Late summer/early fall 2009 fish survey and tissue collection	2009-09-19 10:27:00	LPR1G-AR646
Late summer/early fall 2009 fish survey and tissue collection	2009-09-02 14:59:00	LPR2N-AR078
Late summer/early fall 2009 fish survey and tissue collection	2009-08-11 11:08:00	LPR3L-AR006
Late summer/early fall 2009 fish survey and tissue collection	2009-08-11 11:21:00	LPR3L-AR007
Late summer/early fall 2009 fish survey and tissue collection	2009-08-12 09:00:00	LPR3L-AR010
Late summer/early fall 2009 fish survey and tissue collection	2009-08-11 07:46:00	LPR3P-AR001
Late summer/early fall 2009 fish survey and tissue collection	2009-08-11 08:00:00	LPR3P-AR002
Late summer/early fall 2009 fish survey and tissue collection	2009-08-12 12:28:00	LPR3P-AR014
Late summer/early fall 2009 fish survey and tissue collection	2009-08-11 08:50:00	LPR3Q-AR004
Late summer/early fall 2009 fish survey and tissue collection	2009-08-11 09:13:00	LPR3Q-AR005
Late summer/early fall 2009 fish survey and tissue collection	2009-08-12 11:36:00	LPR3Q-AR012
Late summer/early fall 2009 fish survey and tissue collection	2009-08-18 08:42:00	LPR4F-AR022
Late summer/early fall 2009 fish survey and tissue collection	2009-08-22 07:23:00	LPR4L-AR054
Late summer/early fall 2009 fish survey and tissue collection	2009-08-19 12:21:00	LPR4M-AR035
Late summer/early fall 2009 fish survey and tissue collection	2009-08-20 13:44:00	LPR4M-AR041
Late summer/early fall 2009 fish survey and tissue collection	2009-08-22 07:53:00	LPR4M-AR055
Late summer/early fall 2009 fish survey and tissue collection	2009-08-18 11:28:00	LPR4N-AR024
Late summer/early fall 2009 fish survey and tissue collection	2009-08-19 12:44:00	LPR4N-AR032
Late summer/early fall 2009 fish survey and tissue collection	2009-08-21 14:42:00	LPR4N-AR050
Late summer/early fall 2009 fish survey and tissue collection	2009-08-22 08:17:00	LPR4N-AR060
Late summer/early fall 2009 fish survey and tissue collection	2009-08-18 12:39:00	LPR4Q-AR025
Late summer/early fall 2009 fish survey and tissue collection	2009-08-18 12:30:00	LPR4Q-AR026
Late summer/early fall 2009 fish survey and tissue collection	2009-08-20 14:42:00	LPR4Q-AR043
Late summer/early fall 2009 fish survey and tissue collection	2009-08-20 14:42:00	LPR4Q-AR044
Late summer/early fall 2009 fish survey and tissue collection	2009-08-18 08:15:00	LPR5F-AR021
Late summer/early fall 2009 fish survey and tissue collection	2009-08-19 09:28:00	LPR5F-AR028
Late summer/early fall 2009 fish survey and tissue collection	2009-08-21 12:09:00	LPR5F-AR048
Late summer/early fall 2009 fish survey and tissue collection	2009-08-21 11:56:00	LPR5F-AR049
Late summer/early fall 2009 fish survey and tissue collection	2009-08-19 10:51:00	LPR5H-AR030
Late summer/early fall 2009 fish survey and tissue collection	2009-08-22 09:22:00	LPR5H-AR062
Late summer/early fall 2009 fish survey and tissue collection	2009-08-20 12:30:00	LPR5J-AR039
Late summer/early fall 2009 fish survey and tissue collection	2009-08-20 12:25:00	LPR5J-AR040
Late summer/early fall 2009 fish survey and tissue collection	2009-09-05 15:15:00	LPR5M-AR086
Late summer/early fall 2009 fish survey and tissue collection	2009-08-29 08:27:00	LPR6O-AR073
Late summer/early fall 2009 fish survey and tissue collection	2009-08-25 09:25:00	LPR6P-AR065
Late summer/early fall 2009 fish survey and tissue collection	2009-08-27 11:08:00	LPR7O-AR071
Late summer/early fall 2009 fish survey and tissue collection	2009-09-03 12:37:00	LPR1Q-AR081
Late summer/early fall 2009 fish survey and tissue collection	2009-09-03 12:37:00	LPR1Q-AR082
Late summer/early fall 2009 fish survey and tissue collection	2009-09-03 12:37:00	LPR1Q-AR083
Late summer/early fall 2009 fish survey and tissue collection	2009-09-01 11:02:00	LPR2E-AR076
Late summer/early fall 2009 fish survey and tissue collection	2009-09-04 14:07:00	LPR2F-AR084
Late summer/early fall 2009 fish survey and tissue collection	2009-09-03 12:27:00	LPR2G-AR079
Late summer/early fall 2009 fish survey and tissue collection	2009-08-14 09:43:00	LPR3B-AR019
Late summer/early fall 2009 fish survey and tissue collection	2009-08-14 07:46:00	LPR3F-AR015
Late summer/early fall 2009 fish survey and tissue collection	2009-08-14 07:46:00	LPR3F-AR016
Late summer/early fall 2009 fish survey and tissue collection	2009-08-12 10:30:00	LPR3I-AR011

Late summer/early fall 2009 fish survey and tissue collection	2009-08-11 11:21:00	LPR3L-AR008
Late summer/early fall 2009 fish survey and tissue collection	2009-08-11 11:30:00	LPR3L-AR009
Late summer/early fall 2009 fish survey and tissue collection	2009-08-11 08:00:00	LPR3P-AR003
Late summer/early fall 2009 fish survey and tissue collection	2009-08-12 11:36:00	LPR3Q-AR013
Late summer/early fall 2009 fish survey and tissue collection	2009-08-14 07:47:00	LPR4C-AR018
Late summer/early fall 2009 fish survey and tissue collection	2009-08-18 08:35:00	LPR4D-AR023
Late summer/early fall 2009 fish survey and tissue collection	2009-08-14 07:57:00	LPR4J-AR017
Late summer/early fall 2009 fish survey and tissue collection	2009-08-19 12:31:00	LPR4M-AR033
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Late summer/early fall 2009 fish survey and tissue collection	2009-09-07 14:00:00	LPR8X-AR096

Late summer/early fall 2009 fish survey and tissue collection	2009-09-07 14:00:00	LPR8X-AR097
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Late summer/early fall 2009 fish survey and tissue collection	2009-09-04 11:14:00	LPR1Q-MM038
Late summer/early fall 2009 fish survey and tissue collection	2009-09-04 11:14:00	LPR1Q-MM039
Late summer/early fall 2009 fish survey and tissue collection	2009-09-04 11:14:00	LPR1Q-MM040
Late summer/early fall 2009 fish survey and tissue collection	2009-09-04 11:14:00	LPR1Q-MM041
Late summer/early fall 2009 fish survey and tissue collection	2009-09-04 11:14:00	LPR1Q-MM042
Late summer/early fall 2009 fish survey and tissue collection	2009-09-04 11:14:00	LPR1Q-MM043
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Late summer/early fall 2009 fish survey and tissue collection	2009-09-04 11:14:00	LPR1Q-MM046
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Late summer/early fall 2009 fish survey and tissue collection	2009-09-04 11:14:00	LPR1Q-MM063
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Late summer/early fall 2009 fish survey and tissue collection	2009-09-05 10:48:00	LPR1Q-MM068

Late summer/early fall 2009 fish survey and tissue collection	2009-09-05 11:10:00	LPR2B-MM076
Late summer/early fall 2009 fish survey and tissue collection	2009-09-05 11:10:00	LPR2B-MM077
Late summer/early fall 2009 fish survey and tissue collection	2009-09-05 11:10:00	LPR2B-MM078
Late summer/early fall 2009 fish survey and tissue collection	2009-09-05 11:10:00	LPR2B-MM079
Late summer/early fall 2009 fish survey and tissue collection	2009-09-05 11:10:00	LPR2B-MM080
Late summer/early fall 2009 fish survey and tissue collection	2009-09-05 11:10:00	LPR2B-MM081
Late summer/early fall 2009 fish survey and tissue collection	2009-09-05 11:10:00	LPR2B-MM082
Late summer/early fall 2009 fish survey and tissue collection	2009-09-05 11:10:00	LPR2B-MM083
Late summer/early fall 2009 fish survey and tissue collection	2009-09-05 11:10:00	LPR2B-MM084
Late summer/early fall 2009 fish survey and tissue collection	2009-09-05 11:10:00	LPR2B-MM085
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Late summer/early fall 2009 fish survey and tissue collection	2009-09-05 11:10:00	LPR2B-MM093
Late summer/early fall 2009 fish survey and tissue collection	2009-09-05 11:10:00	LPR2B-MM094
Late summer/early fall 2009 fish survey and tissue collection	2009-09-05 11:10:00	LPR2B-MM095
Late summer/early fall 2009 fish survey and tissue collection	2009-09-05 11:10:00	LPR2B-MM096
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Late summer/early fall 2009 fish survey and tissue collection	2009-09-01 11:51:00	LPR2C-MM002
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Late summer/early fall 2009 fish survey and tissue collection	2009-09-01 14:57:00	LPR2R-MM004
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Late spring/early summer 2010 fish survey and tissue collection	2010-06-28 08:53	LPR2NN-MM115
Late spring/early summer 2010 fish survey and tissue collection	2010-07-13 06:46	LPR2NN-MM129
Late spring/early summer 2010 fish survey and tissue collection	2010-07-13 06:46	LPR2NN-MM130
Late spring/early summer 2010 fish survey and tissue collection	2010-07-09 11:40	LPR2OO-MM119
Late spring/early summer 2010 fish survey and tissue collection	2010-07-09 11:42	LPR2OO-MM120
Late spring/early summer 2010 fish survey and tissue collection	2010-07-13 06:08	LPR2OO-MM125
Late spring/early summer 2010 fish survey and tissue collection	2010-07-13 06:08	LPR2OO-MM126
Late spring/early summer 2010 fish survey and tissue collection	2010-07-13 06:08	LPR2OO-MM127
Late spring/early summer 2010 fish survey and tissue collection	2010-07-13 06:08	LPR2OO-MM128
Late spring/early summer 2010 fish survey and tissue collection	2010-07-01 06:51	LPR2PP-MM116
Late spring/early summer 2010 fish survey and tissue collection	2010-07-09 11:27	LPR2PP-MM118
Late spring/early summer 2010 fish survey and tissue collection	2010-07-14 06:08	LPR2PP-MM132
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Late spring/early summer 2010 fish survey and tissue collection	2010-07-13 05:15	LPR2QQ-MM121
Late spring/early summer 2010 fish survey and tissue collection	2010-07-14 05:18	LPR2RR-MM131
Late spring/early summer 2010 fish survey and tissue collection	2010-07-13 05:25	LPR2SS-MM122

Late spring/early summer 2010 fish survey and tissue collection	2010-07-13 05:25	LPR2SS-MM123
Late spring/early summer 2010 fish survey and tissue collection	2010-07-13 05:22	LPR2SS-MM124
Late spring/early summer 2010 fish survey and tissue collection	2010-06-25 14:40	LPR3II-MM108
Late spring/early summer 2010 fish survey and tissue collection	2010-06-25 14:40	LPR3II-MM109
Late spring/early summer 2010 fish survey and tissue collection	2010-07-06 09:33	LPR3II-MM117
Late summer 2010 small forage fish tissue collection	2010-07-26 14:29	LPR4TT-MM136
Late summer 2010 small forage fish tissue collection	2010-07-26 15:08	LPR4VV-MM133
Late summer 2010 small forage fish tissue collection	2010-07-26 11:13	LPR5SS-MM134
Late summer 2010 small forage fish tissue collection	2010-07-26 11:03	LPR5SS-MM138
Late summer 2010 small forage fish tissue collection	2010-07-26 11:55	LPR5TT-MM135
Late summer 2010 small forage fish tissue collection	2010-07-26 12:13	LPR5TT-MM137
Late summer 2010 small forage fish tissue collection	2010-07-27 11:04	LPR6TT-MM139
Late summer 2010 small forage fish tissue collection	2010-07-27 11:04	LPR6TT-MM140
Late summer 2010 small forage fish tissue collection	2010-07-27 11:04	LPR6TT-MM141
Late summer 2010 small forage fish tissue collection	2010-07-27 11:04	LPR6TT-MM142
Late summer 2010 small forage fish tissue collection	2010-07-27 11:04	LPR6TT-MM143
Late summer 2010 small forage fish tissue collection	2010-07-27 11:04	LPR6TT-MM144
Late summer 2010 small forage fish tissue collection	2010-07-27 11:04	LPR6TT-MM145
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Late summer/early fall 2009 fish survey and tissue collection	2009-09-18 10:10:00	LPR5Q-FD033
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Late summer/early fall 2009 fish survey and tissue collection	2009-09-18 10:10:00	LPR5Q-FD035
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Late summer/early fall 2009 fish survey and tissue collection	2009-09-18 10:10:00	LPR5Q-FD037
Late summer/early fall 2009 fish survey and tissue collection	2009-09-18 10:10:00	LPR5Q-FD038
Late summer/early fall 2009 fish survey and tissue collection	2009-09-18 10:10:00	LPR5Q-FD039
Late summer/early fall 2009 fish survey and tissue collection	2009-09-18 10:10:00	LPR5Q-FD040

Late summer/early fall 2009 fish survey and tissue collection	2009-09-18 11:15:00	LPR5S-FD001
Late summer/early fall 2009 fish survey and tissue collection	2009-09-18 11:15:00	LPR5S-FD002
Late summer/early fall 2009 fish survey and tissue collection	2009-09-18 11:15:00	LPR5S-FD003
Winter 2010 fish survey and tissue collection	2010-01-29 09:47	LPR6AA-FD041
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Late spring/early summer 2010 fish survey and tissue collection	2010-06-25 13:13	LPR1LL-FD048
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Late spring/early summer 2010 fish survey and tissue collection	2010-06-30 06:00	LPR1MM-FD194
Late spring/early summer 2010 fish survey and tissue collection	2010-07-14 04:59	LPR1MM-FD279
Late spring/early summer 2010 fish survey and tissue collection	2010-07-08 11:48	LPR1MM-FD289
Late spring/early summer 2010 fish survey and tissue collection	2010-07-13 05:37	LPR2AC-FD233
Late spring/early summer 2010 fish survey and tissue collection	2010-07-14 05:42	LPR2AC-FD280
Late spring/early summer 2010 fish survey and tissue collection	2010-07-14 05:42	LPR2AC-FD281
Late spring/early summer 2010 fish survey and tissue collection	2010-06-23 13:46	LPR2LL-FD042
Late spring/early summer 2010 fish survey and tissue collection	2010-06-24 12:37	LPR2LL-FD043
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Late spring/early summer 2010 fish survey and tissue collection	2010-06-24 12:49	LPR2MM-FD045
Late spring/early summer 2010 fish survey and tissue collection	2010-06-25 14:47	LPR2MM-FD046
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Late spring/early summer 2010 fish survey and tissue collection	2010-06-25 14:52	LPR2MM-FD122
Late spring/early summer 2010 fish survey and tissue collection	2010-06-25 14:52	LPR2MM-FD123
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Late spring/early summer 2010 fish survey and tissue collection	2010-06-25 14:52	LPR2MM-FD125
Late spring/early summer 2010 fish survey and tissue collection	2010-06-25 14:52	LPR2MM-FD126
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Late spring/early summer 2010 fish survey and tissue collection	2010-06-25 14:52	LPR2MM-FD133
Late spring/early summer 2010 fish survey and tissue collection	2010-06-25 14:52	LPR2MM-FD134
Late spring/early summer 2010 fish survey and tissue collection	2010-06-25 14:52	LPR2MM-FD135
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Late spring/early summer 2010 fish survey and tissue collection	2010-06-25 14:42	LPR2MM-FD155
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Late spring/early summer 2010 fish survey and tissue collection	2010-06-25 15:08	LPR2NN-FD162
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Late spring/early summer 2010 fish survey and tissue collection	2010-06-25 15:08	LPR2NN-FD164
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Late spring/early summer 2010 fish survey and tissue collection	2010-06-25 15:17	LPR2NN-FD167
Late spring/early summer 2010 fish survey and tissue collection	2010-06-25 15:11	LPR2NN-FD168
Late spring/early summer 2010 fish survey and tissue collection	2010-07-13 06:32	LPR2NN-FD241
Late spring/early summer 2010 fish survey and tissue collection	2010-07-13 06:32	LPR2NN-FD242
Late spring/early summer 2010 fish survey and tissue collection	2010-07-13 06:32	LPR2NN-FD243
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Late spring/early summer 2010 fish survey and tissue collection	2010-07-13 06:30	LPR2NN-FD257
Late spring/early summer 2010 fish survey and tissue collection	2010-07-13 06:30	LPR2NN-FD258
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Late spring/early summer 2010 fish survey and tissue collection	2010-07-13 06:34	LPR2NN-FD264
Late spring/early summer 2010 fish survey and tissue collection	2010-07-13 06:34	LPR2NN-FD265
Late spring/early summer 2010 fish survey and tissue collection	2010-07-13 06:34	LPR2NN-FD266
Late spring/early summer 2010 fish survey and tissue collection	2010-07-13 06:34	LPR2NN-FD267
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Late spring/early summer 2010 fish survey and tissue collection	2010-07-13 06:34	LPR2NN-FD270
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Late spring/early summer 2010 fish survey and tissue collection	2010-07-13 06:34	LPR2NN-FD273
Late spring/early summer 2010 fish survey and tissue collection	2010-07-13 06:34	LPR2NN-FD274
Late spring/early summer 2010 fish survey and tissue collection	2010-07-14 06:37	LPR2NN-FD276
Late spring/early summer 2010 fish survey and tissue collection	2010-07-14 06:35	LPR2NN-FD277
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Late spring/early summer 2010 fish survey and tissue collection	2010-06-28 08:21	LPR2OO-FD189
Late spring/early summer 2010 fish survey and tissue collection	2010-07-02 07:36	LPR2OO-FD195
Late spring/early summer 2010 fish survey and tissue collection	2010-07-02 07:33	LPR2OO-FD196
Late spring/early summer 2010 fish survey and tissue collection	2010-07-12 16:16	LPR2OO-FD218

Late spring/early summer 2010 fish survey and tissue collection	2010-07-12 16:16	LPR2OO-FD219
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Late spring/early summer 2010 fish survey and tissue collection	2010-07-12 16:16	LPR2OO-FD221
Late spring/early summer 2010 fish survey and tissue collection	2010-07-12 16:10	LPR2OO-FD222
Late spring/early summer 2010 fish survey and tissue collection	2010-07-12 16:10	LPR2OO-FD223
Late spring/early summer 2010 fish survey and tissue collection	2010-07-12 16:10	LPR2OO-FD224
Late spring/early summer 2010 fish survey and tissue collection	2010-07-13 06:02	LPR2OO-FD237
Late spring/early summer 2010 fish survey and tissue collection	2010-07-13 06:02	LPR2OO-FD238
Late spring/early summer 2010 fish survey and tissue collection	2010-07-13 06:02	LPR2OO-FD239
Late spring/early summer 2010 fish survey and tissue collection	2010-07-14 06:14	LPR2OO-FD287
Late spring/early summer 2010 fish survey and tissue collection	2010-06-25 14:18	LPR2PP-FD061
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Late summer/early fall 2009 fish survey and tissue collection	2009-09-04 09:56:00	LPR1L-CS642
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Late summer/early fall 2009 fish survey and tissue collection	2009-09-01 10:02:00	LPR2I-CS268
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Late summer/early fall 2009 fish survey and tissue collection	2009-09-02 12:26:00	LPR2I-CS381
Late summer/early fall 2009 fish survey and tissue collection	2009-09-02 12:26:00	LPR2I-CS382
Late summer/early fall 2009 fish survey and tissue collection	2009-09-02 12:26:00	LPR2I-CS383
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Late summer/early fall 2009 fish survey and tissue collection	2009-09-05 14:06:00	LPR2I-CS744
Late summer/early fall 2009 fish survey and tissue collection	2009-09-05 14:06:00	LPR2I-CS745
Late summer/early fall 2009 fish survey and tissue collection	2009-09-05 14:06:00	LPR2I-CS746
Late summer/early fall 2009 fish survey and tissue collection	2009-09-05 14:06:00	LPR2I-CS747
Late summer/early fall 2009 fish survey and tissue collection	2009-09-05 14:06:00	LPR2I-CS748
Late summer/early fall 2009 fish survey and tissue collection	2009-09-05 14:06:00	LPR2I-CS749
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Late summer/early fall 2009 fish survey and tissue collection	2009-09-01 11:03:00	LPR2J-CS276
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Late summer/early fall 2009 fish survey and tissue collection	2009-09-01 11:03:00	LPR2J-CS278
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Late summer/early fall 2009 fish survey and tissue collection	2009-09-03 12:35:00	LPR2J-CS539

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Late summer/early fall 2009 fish survey and tissue collection	2009-09-04 12:10:00	LPR2M-CS657

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Late summer/early fall 2009 fish survey and tissue collection	2009-08-13 11:52:00	LPR3O-CS063
Late summer/early fall 2009 fish survey and tissue collection	2009-08-13 11:52:00	LPR3O-CS064
Late summer/early fall 2009 fish survey and tissue collection	2009-08-13 11:52:00	LPR3O-CS065
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Late summer/early fall 2009 fish survey and tissue collection	2009-08-13 11:52:00	LPR3O-CS067

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Late summer/early fall 2009 fish survey and tissue collection	2009-08-13 11:52:00	LPR3O-CS069
Late summer/early fall 2009 fish survey and tissue collection	2009-08-13 11:52:00	LPR3O-CS070
Late summer/early fall 2009 fish survey and tissue collection	2009-08-14 08:44:00	LPR3O-CS081
Late summer/early fall 2009 fish survey and tissue collection	2009-08-14 08:44:00	LPR3O-CS082
Late summer/early fall 2009 fish survey and tissue collection	2009-08-14 08:44:00	LPR3O-CS083
Late summer/early fall 2009 fish survey and tissue collection	2009-08-14 08:44:00	LPR3O-CS084
Late summer/early fall 2009 fish survey and tissue collection	2009-08-14 08:44:00	LPR3O-CS085
Late summer/early fall 2009 fish survey and tissue collection	2009-08-14 08:44:00	LPR3O-CS086
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Late summer/early fall 2009 fish survey and tissue collection	2009-08-15 07:00:00	LPR3O-CS092
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Late summer/early fall 2009 fish survey and tissue collection	2009-08-15 07:40:00	LPR4F-CS108
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Late summer/early fall 2009 fish survey and tissue collection	2009-08-19 10:51:00	LPR4F-CS139
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Late summer/early fall 2009 fish survey and tissue collection	2009-08-14 08:03:00	LPR4G-CS071
Late summer/early fall 2009 fish survey and tissue collection	2009-08-18 10:46:00	LPR4G-CS134
Late summer/early fall 2009 fish survey and tissue collection	2009-08-18 13:55:00	LPR4G-CS137
Late summer/early fall 2009 fish survey and tissue collection	2009-08-18 10:44:00	LPR4G-CS138
Late summer/early fall 2009 fish survey and tissue collection	2009-08-20 13:03:00	LPR4G-CS153
Late summer/early fall 2009 fish survey and tissue collection	2009-08-20 13:06:00	LPR4G-CS154
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Late summer/early fall 2009 fish survey and tissue collection	2009-08-14 08:17:00	LPR4H-CS072
Late summer/early fall 2009 fish survey and tissue collection	2009-08-14 08:22:00	LPR4H-CS074
Late summer/early fall 2009 fish survey and tissue collection	2009-08-18 07:59:00	LPR4H-CS125
Late summer/early fall 2009 fish survey and tissue collection	2009-08-19 12:20:00	LPR4H-CS143
Late summer/early fall 2009 fish survey and tissue collection	2009-08-19 12:17:00	LPR4H-CS150
Late summer/early fall 2009 fish survey and tissue collection	2009-08-19 12:26:00	LPR4H-CS151
Late summer/early fall 2009 fish survey and tissue collection	2009-09-15 08:50:00	LPR4H-CS837

Late summer/early fall 2009 fish survey and tissue collection	2009-09-15 08:55:00	LPR4H-CS838
Late summer/early fall 2009 fish survey and tissue collection	2009-09-16 09:11:00	LPR4H-CS845
Late summer/early fall 2009 fish survey and tissue collection	2009-09-18 09:34:00	LPR4H-CS872
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Late summer/early fall 2009 fish survey and tissue collection	2009-08-18 10:35:00	LPR4L-CS127
Late summer/early fall 2009 fish survey and tissue collection	2009-08-20 13:19:00	LPR4L-CS149
Late summer/early fall 2009 fish survey and tissue collection	2009-08-22 07:23:00	LPR4L-CS162
Late summer/early fall 2009 fish survey and tissue collection	2009-08-22 07:23:00	LPR4L-CS163
Late summer/early fall 2009 fish survey and tissue collection	2009-09-15 09:53:00	LPR4L-CS824
Late summer/early fall 2009 fish survey and tissue collection	2009-09-15 09:53:00	LPR4L-CS825
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Late summer/early fall 2009 fish survey and tissue collection	2009-09-16 10:28:00	LPR4L-CS844
Late summer/early fall 2009 fish survey and tissue collection	2009-08-18 11:41:00	LPR4O-CS128
Late summer/early fall 2009 fish survey and tissue collection	2009-08-18 11:41:00	LPR4O-CS129
Late summer/early fall 2009 fish survey and tissue collection	2009-08-18 11:41:00	LPR4O-CS130
Late summer/early fall 2009 fish survey and tissue collection	2009-08-18 11:41:00	LPR4O-CS131
Late summer/early fall 2009 fish survey and tissue collection	2009-08-19 12:58:00	LPR4O-CS140
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Late summer/early fall 2009 fish survey and tissue collection	2009-09-16 10:08:00	LPR4O-CS842
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Late summer/early fall 2009 fish survey and tissue collection	2009-08-18 12:01:00	LPR4P-CS132
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Late summer/early fall 2009 fish survey and tissue collection	2009-08-19 13:11:00	LPR4P-CS141
Late summer/early fall 2009 fish survey and tissue collection	2009-08-19 13:11:00	LPR4P-CS142
Late summer/early fall 2009 fish survey and tissue collection	2009-09-17 10:25:00	LPR4P-CS858
Late summer/early fall 2009 fish survey and tissue collection	2009-09-17 10:25:00	LPR4P-CS859
Late summer/early fall 2009 fish survey and tissue collection	2009-08-18 07:43:00	LPR5E-CS122
Late summer/early fall 2009 fish survey and tissue collection	2009-08-18 07:43:00	LPR5E-CS123
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Late summer/early fall 2009 fish survey and tissue collection	2009-08-20 11:36:00	LPR5G-CS147
Late summer/early fall 2009 fish survey and tissue collection	2009-09-15 08:34:00	LPR5I-CS822
Late summer/early fall 2009 fish survey and tissue collection	2009-08-20 12:20:00	LPR5J-CS148
Late summer/early fall 2009 fish survey and tissue collection	2009-08-20 16:29:00	LPR5M-CS152
Late summer/early fall 2009 fish survey and tissue collection	2009-08-20 16:33:00	LPR5M-CS157
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Late summer/early fall 2009 fish survey and tissue collection	2009-09-05 15:15:00	LPR5M-CS752
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Late summer/early fall 2009 fish survey and tissue collection	2009-09-19 09:12:00	LPR5M-CS889
Late summer/early fall 2009 fish survey and tissue collection	2009-08-21 13:46:00	LPR5O-CS160
Late summer/early fall 2009 fish survey and tissue collection	2009-08-22 07:17:00	LPR5O-CS164
Late summer/early fall 2009 fish survey and tissue collection	2009-08-22 07:17:00	LPR5O-CS165
Late summer/early fall 2009 fish survey and tissue collection	2009-08-22 07:22:00	LPR5O-CS167
Late summer/early fall 2009 fish survey and tissue collection	2009-09-15 09:46:00	LPR5O-CS827
Late summer/early fall 2009 fish survey and tissue collection	2009-09-15 09:46:00	LPR5O-CS829
Late summer/early fall 2009 fish survey and tissue collection	2009-09-15 09:46:00	LPR5O-CS831
Late summer/early fall 2009 fish survey and tissue collection	2009-09-15 09:49:00	LPR5O-CS832
Late summer/early fall 2009 fish survey and tissue collection	2009-09-15 09:49:00	LPR5O-CS834
Late summer/early fall 2009 fish survey and tissue collection	2009-09-15 09:49:00	LPR5O-CS835

Late summer/early fall 2009 fish survey and tissue collection	2009-09-16 10:00:00	LPR5O-CS846
Late summer/early fall 2009 fish survey and tissue collection	2009-09-16 10:00:00	LPR5O-CS847
Late summer/early fall 2009 fish survey and tissue collection	2009-09-16 10:00:00	LPR5O-CS848
Late summer/early fall 2009 fish survey and tissue collection	2009-09-17 11:13:00	LPR5O-CS862
Late summer/early fall 2009 fish survey and tissue collection	2009-09-17 11:10:00	LPR5O-CS867
Late summer/early fall 2009 fish survey and tissue collection	2009-09-17 11:13:00	LPR5O-CS870
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Late summer/early fall 2009 fish survey and tissue collection	2009-09-19 08:59:00	LPR5O-CS885
Late summer/early fall 2009 fish survey and tissue collection	2009-08-28 07:51:00	LPR7K-CS242
Late summer/early fall 2009 fish survey and tissue collection	2009-09-18 12:06:00	LPR6F-CS876
Late summer/early fall 2009 fish survey and tissue collection	2009-09-12 07:47:00	LPR8H-CS807
Late summer/early fall 2009 fish survey and tissue collection	2009-08-29 11:40:00	LPR7I-CS261
Late summer/early fall 2009 fish survey and tissue collection	2009-08-28 09:05:00	LPR7J-CS236
Late summer/early fall 2009 fish survey and tissue collection	2009-09-15 10:09:00	LPR6G-CS839
Late summer/early fall 2009 fish survey and tissue collection	2009-09-10 10:35:00	LPR8Y-CS800
Late summer/early fall 2009 fish survey and tissue collection	2009-09-08 09:54:00	LPR8K-CS758
Late summer/early fall 2009 fish survey and tissue collection	2009-09-08 12:32:00	LPR8Y-CS761
Late summer/early fall 2009 fish survey and tissue collection	2009-08-26 08:25:00	LPR6K-CS200
Late summer/early fall 2009 fish survey and tissue collection	2009-08-26 11:34:00	LPR7I-CS191
Late summer/early fall 2009 fish survey and tissue collection	2009-09-07 13:50:00	LPR8W-CS754
Late summer/early fall 2009 fish survey and tissue collection	2009-09-18 12:19:00	LPR6G-CS880
Late summer/early fall 2009 fish survey and tissue collection	2009-09-15 10:13:00	LPR6G-CS836
Late summer/early fall 2009 fish survey and tissue collection	2009-08-27 08:55:00	LPR7G-CS217
Late summer/early fall 2009 fish survey and tissue collection	2009-09-16 10:25:00	LPR6H-CS855
Late summer/early fall 2009 fish survey and tissue collection	2009-08-29 11:27:00	LPR7G-CS263
Late summer/early fall 2009 fish survey and tissue collection	2009-09-18 12:10:00	LPR6F-CS879
Late summer/early fall 2009 fish survey and tissue collection	2009-08-26 08:58:00	LPR7H-CS195
Late summer/early fall 2009 fish survey and tissue collection	2009-08-28 07:11:00	LPR6J-CS241
Late summer/early fall 2009 fish survey and tissue collection	2009-08-29 07:32:00	LPR6H-CS246
Late summer/early fall 2009 fish survey and tissue collection	2009-08-29 07:57:00	LPR7K-CS251
Late summer/early fall 2009 fish survey and tissue collection	2009-08-27 08:38:00	LPR7F-CS205
Late summer/early fall 2009 fish survey and tissue collection	2009-08-26 07:12:00	LPR6F-CS196
Late summer/early fall 2009 fish survey and tissue collection	2009-08-25 09:24:00	LPR7F-CS177
Late summer/early fall 2009 fish survey and tissue collection	2009-08-27 07:36:00	LPR6H-CS215
Late summer/early fall 2009 fish survey and tissue collection	2009-08-27 07:00:00	LPR6F-CS207
Late summer/early fall 2009 fish survey and tissue collection	2009-08-28 08:41:00	LPR7I-CS235
Late summer/early fall 2009 fish survey and tissue collection	2009-09-12 10:07:00	LPR8M-CS820
Late summer/early fall 2009 fish survey and tissue collection	2009-09-12 10:50:00	LPR8L-CS821
Late summer/early fall 2009 fish survey and tissue collection	2009-09-08 12:32:00	LPR8Y-CS760
Late summer/early fall 2009 fish survey and tissue collection	2009-08-27 07:13:00	LPR6G-CS206
Late summer/early fall 2009 fish survey and tissue collection	2009-09-16 10:10:00	LPR6F-CS851
Late summer/early fall 2009 fish survey and tissue collection	2009-08-28 07:04:00	LPR6G-CS239
Late summer/early fall 2009 fish survey and tissue collection	2009-08-29 07:04:00	LPR6G-CS252
Late summer/early fall 2009 fish survey and tissue collection	2009-08-29 08:01:00	LPR7H-CS248
Late summer/early fall 2009 fish survey and tissue collection	2009-08-26 07:43:00	LPR6G-CS190
Late summer/early fall 2009 fish survey and tissue collection	2009-09-17 11:38:00	LPR6G-CS863
Late summer/early fall 2009 fish survey and tissue collection	2009-08-28 07:27:00	LPR6H-CS240
Late summer/early fall 2009 fish survey and tissue collection	2009-08-25 09:35:00	LPR7G-CS171
Late summer/early fall 2009 fish survey and tissue collection	2009-09-17 11:36:00	LPR6G-CS864
Late summer/early fall 2009 fish survey and tissue collection	2009-09-09 08:56:00	LPR8K-CS767
Late summer/early fall 2009 fish survey and tissue collection	2009-09-10 11:15:00	LPR8R-CS781
Late summer/early fall 2009 fish survey and tissue collection	2009-08-25 10:42:00	LPR6F-CS182
Late summer/early fall 2009 fish survey and tissue collection	2009-08-27 06:50:00	LPR6F-CS219
Late summer/early fall 2009 fish survey and tissue collection	2009-09-18 12:06:00	LPR6F-CS874
Late summer/early fall 2009 fish survey and tissue collection	2009-08-27 07:17:00	LPR6G-CS208

Late summer/early fall 2009 fish survey and tissue collection	2009-08-29 08:01:00	LPR7H-CS258
Late summer/early fall 2009 fish survey and tissue collection	2009-09-19 12:12:00	LPR6G-CS891
Late summer/early fall 2009 fish survey and tissue collection	2009-09-09 12:20:00	LPR8Y-CS773
Late summer/early fall 2009 fish survey and tissue collection	2009-08-26 10:47:00	LPR7G-CS188
Late summer/early fall 2009 fish survey and tissue collection	2009-09-12 10:02:00	LPR8M-CS819
Late summer/early fall 2009 fish survey and tissue collection	2009-09-12 08:45:00	LPR8R-CS809
Late summer/early fall 2009 fish survey and tissue collection	2009-09-12 09:35:00	LPR8V-CS810
Late summer/early fall 2009 fish survey and tissue collection	2009-08-27 07:17:00	LPR6G-CS218
Late summer/early fall 2009 fish survey and tissue collection	2009-08-29 07:04:00	LPR6G-CS247
Late summer/early fall 2009 fish survey and tissue collection	2009-08-28 08:32:00	LPR7F-CS238
Late summer/early fall 2009 fish survey and tissue collection	2009-08-27 08:05:00	LPR7H-CS209
Late summer/early fall 2009 fish survey and tissue collection	2009-08-29 07:32:00	LPR6H-CS245
Late summer/early fall 2009 fish survey and tissue collection	2009-09-10 13:02:00	LPR8S-CS792
Late summer/early fall 2009 fish survey and tissue collection	2009-09-12 09:35:00	LPR8V-CS811
Late summer/early fall 2009 fish survey and tissue collection	2009-09-19 08:48:00	LPR6F-CS886
Late summer/early fall 2009 fish survey and tissue collection	2009-09-12 08:25:00	LPR8J-CS804
Late summer/early fall 2009 fish survey and tissue collection	2009-09-09 08:49:00	LPR8K-CS764
Late summer/early fall 2009 fish survey and tissue collection	2009-08-25 09:24:00	LPR7F-CS179
Late summer/early fall 2009 fish survey and tissue collection	2009-08-28 08:36:00	LPR7F-CS237
Late summer/early fall 2009 fish survey and tissue collection	2009-08-26 11:14:00	LPR7G-CS192
Late summer/early fall 2009 fish survey and tissue collection	2009-09-15 09:58:00	LPR6F-CS840
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Late summer/early fall 2009 fish survey and tissue collection	2009-09-17 11:27:00	LPR6F-CS865
Late summer/early fall 2009 fish survey and tissue collection	2009-08-25 07:26:00	LPR6G-CS183
Late summer/early fall 2009 fish survey and tissue collection	2009-09-08 08:44:00	LPR8R-CS756
Late summer/early fall 2009 fish survey and tissue collection	2009-09-12 09:35:00	LPR8V-CS812
Late summer/early fall 2009 fish survey and tissue collection	2009-08-29 07:10:00	LPR6N-CS243
Late summer/early fall 2009 fish survey and tissue collection	2009-09-10 11:57:00	LPR8K-CS787
Late summer/early fall 2009 fish survey and tissue collection	2009-08-28 07:59:00	LPR7H-CS234
Late summer/early fall 2009 fish survey and tissue collection	2009-09-12 07:58:00	LPR8U-CS801
Late summer/early fall 2009 fish survey and tissue collection	2009-08-26 07:17:00	LPR6F-CS199
Late summer/early fall 2009 fish survey and tissue collection	2009-08-27 08:55:00	LPR7G-CS227
Late summer/early fall 2009 fish survey and tissue collection	2009-09-12 08:45:00	LPR8R-CS808
Late summer/early fall 2009 fish survey and tissue collection	2009-09-12 09:35:00	LPR8V-CS814
Late summer/early fall 2009 fish survey and tissue collection	2009-08-27 08:46:00	LPR7F-CS214
Late summer/early fall 2009 fish survey and tissue collection	2009-09-16 10:17:00	LPR6G-CS853
Late summer/early fall 2009 fish survey and tissue collection	2009-09-16 10:25:00	LPR6H-CS856
Late summer/early fall 2009 fish survey and tissue collection	2009-08-26 11:11:00	LPR7G-CS193
Late summer/early fall 2009 fish survey and tissue collection	2009-09-09 09:54:00	LPR8J-CS771
Late summer/early fall 2009 fish survey and tissue collection	2009-09-10 13:02:00	LPR8S-CS793
Late summer/early fall 2009 fish survey and tissue collection	2009-09-09 08:56:00	LPR8K-CS769
Late summer/early fall 2009 fish survey and tissue collection	2009-09-12 07:41:00	LPR8K-CS803
Late summer/early fall 2009 fish survey and tissue collection	2009-09-08 12:32:00	LPR8Y-CS759
Late summer/early fall 2009 fish survey and tissue collection	2009-08-25 09:24:00	LPR7F-CS181
Late summer/early fall 2009 fish survey and tissue collection	2009-08-27 08:38:00	LPR7F-CS216
Late summer/early fall 2009 fish survey and tissue collection	2009-08-27 08:08:00	LPR7H-CS222
Late summer/early fall 2009 fish survey and tissue collection	2009-09-08 09:50:00	LPR8K-CS757
Late summer/early fall 2009 fish survey and tissue collection	2009-09-10 10:35:00	LPR8Y-CS799
Late summer/early fall 2009 fish survey and tissue collection	2009-09-18 12:06:00	LPR6F-CS875
Late summer/early fall 2009 fish survey and tissue collection	2009-09-17 11:38:00	LPR6G-CS860
Late summer/early fall 2009 fish survey and tissue collection	2009-08-27 07:06:00	LPR6N-CS202
Late summer/early fall 2009 fish survey and tissue collection	2009-08-25 09:35:00	LPR7G-CS176
Late summer/early fall 2009 fish survey and tissue collection	2009-08-27 09:05:00	LPR7G-CS225
Late summer/early fall 2009 fish survey and tissue collection	2009-08-29 06:45:00	LPR6F-CS254
Late summer/early fall 2009 fish survey and tissue collection	2009-09-16 10:10:00	LPR6F-CS852
Late summer/early fall 2009 fish survey and tissue collection	2009-08-25 09:24:00	LPR7F-CS180

Late summer/early fall 2009 fish survey and tissue collection	2009-08-27 08:38:00	LPR7F-CS210
Late summer/early fall 2009 fish survey and tissue collection	2009-09-10 13:02:00	LPR8S-CS797
Late summer/early fall 2009 fish survey and tissue collection	2009-09-12 09:35:00	LPR8V-CS813
Late summer/early fall 2009 fish survey and tissue collection	2009-09-12 11:16:00	LPR8W-CS815
Late summer/early fall 2009 fish survey and tissue collection	2009-08-26 07:12:00	LPR6F-CS198
Late summer/early fall 2009 fish survey and tissue collection	2009-09-15 10:00:00	LPR6F-CS841
Late summer/early fall 2009 fish survey and tissue collection	2009-08-25 09:39:00	LPR7G-CS173
Late summer/early fall 2009 fish survey and tissue collection	2009-09-10 12:03:00	LPR8K-CS789
Late summer/early fall 2009 fish survey and tissue collection	2009-08-27 07:52:00	LPR6M-CS203
Late summer/early fall 2009 fish survey and tissue collection	2009-08-25 09:35:00	LPR7G-CS175
Late summer/early fall 2009 fish survey and tissue collection	2009-09-09 09:54:00	LPR8J-CS770
Late summer/early fall 2009 fish survey and tissue collection	2009-09-10 13:02:00	LPR8S-CS796
Late summer/early fall 2009 fish survey and tissue collection	2009-09-10 08:38:00	LPR8V-CS774
Late summer/early fall 2009 fish survey and tissue collection	2009-08-27 07:13:00	LPR6G-CS226
Late summer/early fall 2009 fish survey and tissue collection	2009-08-26 08:58:00	LPR7H-CS194
Late summer/early fall 2009 fish survey and tissue collection	2009-09-10 10:23:00	LPR8J-CS776
Late summer/early fall 2009 fish survey and tissue collection	2009-09-16 10:08:00	LPR6F-CS850
Late summer/early fall 2009 fish survey and tissue collection	2009-08-29 07:08:00	LPR6G-CS250
Late summer/early fall 2009 fish survey and tissue collection	2009-09-15 10:00:00	LPR6F-CS828
Late summer/early fall 2009 fish survey and tissue collection	2009-08-26 10:18:00	LPR7L-CS184
Late summer/early fall 2009 fish survey and tissue collection	2009-08-27 09:01:00	LPR7M-CS204
Late summer/early fall 2009 fish survey and tissue collection	2009-09-09 08:47:00	LPR8K-CS766
Late summer/early fall 2009 fish survey and tissue collection	2009-09-10 11:57:00	LPR8K-CS783
Late summer/early fall 2009 fish survey and tissue collection	2009-09-10 11:57:00	LPR8K-CS784
Late summer/early fall 2009 fish survey and tissue collection	2009-09-17 11:27:00	LPR6F-CS866
Late summer/early fall 2009 fish survey and tissue collection	2009-09-15 10:13:00	LPR6G-CS830
Late summer/early fall 2009 fish survey and tissue collection	2009-09-17 11:49:00	LPR6H-CS861
Late summer/early fall 2009 fish survey and tissue collection	2009-08-28 08:32:00	LPR7F-CS230
Late summer/early fall 2009 fish survey and tissue collection	2009-08-26 11:38:00	LPR7F-CS187
Late summer/early fall 2009 fish survey and tissue collection	2009-08-28 08:55:00	LPR7G-CS232
Late summer/early fall 2009 fish survey and tissue collection	2009-09-10 12:03:00	LPR8K-CS788
Late summer/early fall 2009 fish survey and tissue collection	2009-09-10 13:02:00	LPR8S-CS795
Late summer/early fall 2009 fish survey and tissue collection	2009-09-10 13:02:00	LPR8S-CS798
Late summer/early fall 2009 fish survey and tissue collection	2009-09-16 10:22:00	LPR6H-CS854
Late summer/early fall 2009 fish survey and tissue collection	2009-08-29 12:01:00	LPR7O-CS259
Late summer/early fall 2009 fish survey and tissue collection	2009-09-16 10:08:00	LPR6F-CS849
Late summer/early fall 2009 fish survey and tissue collection	2009-08-28 07:04:00	LPR6G-CS228
Late summer/early fall 2009 fish survey and tissue collection	2009-08-27 09:05:00	LPR7G-CS224
Late summer/early fall 2009 fish survey and tissue collection	2009-08-28 08:50:00	LPR7G-CS229
Late summer/early fall 2009 fish survey and tissue collection	2009-09-10 11:15:00	LPR8R-CS780
Late summer/early fall 2009 fish survey and tissue collection	2009-08-27 07:06:00	LPR6N-CS201
Late summer/early fall 2009 fish survey and tissue collection	2009-08-26 11:38:00	LPR7F-CS186
Late summer/early fall 2009 fish survey and tissue collection	2009-08-29 11:28:00	LPR7G-CS264
Late summer/early fall 2009 fish survey and tissue collection	2009-09-09 08:56:00	LPR8K-CS768
Late summer/early fall 2009 fish survey and tissue collection	2009-09-12 07:41:00	LPR8K-CS802
Late summer/early fall 2009 fish survey and tissue collection	2009-09-10 11:15:00	LPR8R-CS782
Late summer/early fall 2009 fish survey and tissue collection	2009-09-12 12:00:00	LPR8S-CS817
Late summer/early fall 2009 fish survey and tissue collection	2009-09-17 11:38:00	LPR6G-CS869
Late summer/early fall 2009 fish survey and tissue collection	2009-08-25 09:24:00	LPR7F-CS178
Late summer/early fall 2009 fish survey and tissue collection	2009-08-27 08:59:00	LPR7G-CS220
Late summer/early fall 2009 fish survey and tissue collection	2009-08-27 07:17:00	LPR6G-CS213
Late summer/early fall 2009 fish survey and tissue collection	2009-08-25 09:42:00	LPR7G-CS169
Late summer/early fall 2009 fish survey and tissue collection	2009-08-26 10:18:00	LPR7L-CS185
Late summer/early fall 2009 fish survey and tissue collection	2009-08-27 08:38:00	LPR7F-CS212
Late summer/early fall 2009 fish survey and tissue collection	2009-09-12 08:22:00	LPR8J-CS805
Late summer/early fall 2009 fish survey and tissue collection	2009-08-29 06:45:00	LPR6F-CS255

Late summer/early fall 2009 fish survey and tissue collection	2009-08-25 10:41:00	LPR7M-CS168
Late summer/early fall 2009 fish survey and tissue collection	2009-09-12 12:00:00	LPR8S-CS816
Late summer/early fall 2009 fish survey and tissue collection	2009-08-29 11:28:00	LPR7G-CS260
Late summer/early fall 2009 fish survey and tissue collection	2009-08-27 08:55:00	LPR7G-CS223
Late summer/early fall 2009 fish survey and tissue collection	2009-09-09 09:15:00	LPR8R-CS762
Late summer/early fall 2009 fish survey and tissue collection	2009-09-10 11:15:00	LPR8R-CS778
Late summer/early fall 2009 fish survey and tissue collection	2009-08-26 07:12:00	LPR6F-CS197
Late summer/early fall 2009 fish survey and tissue collection	2009-08-27 06:50:00	LPR6F-CS221
Late summer/early fall 2009 fish survey and tissue collection	2009-08-29 07:10:00	LPR6N-CS244
Late summer/early fall 2009 fish survey and tissue collection	2009-08-25 09:42:00	LPR7G-CS170
Late summer/early fall 2009 fish survey and tissue collection	2009-08-29 08:01:00	LPR7H-CS256
Late summer/early fall 2009 fish survey and tissue collection	2009-09-17 11:27:00	LPR6F-CS871
Late summer/early fall 2009 fish survey and tissue collection	2009-09-12 10:02:00	LPR8M-CS818
Late summer/early fall 2009 fish survey and tissue collection	2009-09-10 13:02:00	LPR8S-CS794
Late summer/early fall 2009 fish survey and tissue collection	2009-08-29 06:45:00	LPR6F-CS249
Late summer/early fall 2009 fish survey and tissue collection	2009-08-25 09:42:00	LPR7G-CS172
Late summer/early fall 2009 fish survey and tissue collection	2009-09-10 10:30:00	LPR8J-CS777
Late summer/early fall 2009 fish survey and tissue collection	2009-09-09 08:49:00	LPR8K-CS763
Late summer/early fall 2009 fish survey and tissue collection	2009-09-10 13:02:00	LPR8S-CS790
Late summer/early fall 2009 fish survey and tissue collection	2009-09-10 13:02:00	LPR8S-CS791
Late summer/early fall 2009 fish survey and tissue collection	2009-08-29 07:04:00	LPR6G-CS257
Late summer/early fall 2009 fish survey and tissue collection	2009-09-10 11:15:00	LPR8R-CS779
Late summer/early fall 2009 fish survey and tissue collection	2009-08-28 07:01:00	LPR6G-CS233
Late summer/early fall 2009 fish survey and tissue collection	2009-08-29 11:27:00	LPR7G-CS262
Late summer/early fall 2009 fish survey and tissue collection	2009-09-09 08:49:00	LPR8K-CS765
Late summer/early fall 2009 fish survey and tissue collection	2009-09-08 07:48:00	LPR8S-CS755
Late summer/early fall 2009 fish survey and tissue collection	2009-08-25 09:35:00	LPR7G-CS174
Late summer/early fall 2009 fish survey and tissue collection	2009-09-10 10:23:00	LPR8J-CS775
Late summer/early fall 2009 fish survey and tissue collection	2009-08-28 08:50:00	LPR7G-CS231
Late summer/early fall 2009 fish survey and tissue collection	2009-09-10 11:57:00	LPR8K-CS785
Late summer/early fall 2009 fish survey and tissue collection	2009-09-15 10:09:00	LPR6G-CS833
Late summer/early fall 2009 fish survey and tissue collection	2009-09-09 09:54:00	LPR8J-CS772
Late summer/early fall 2009 fish survey and tissue collection	2009-08-29 08:00:00	LPR7H-CS253
Late summer/early fall 2009 fish survey and tissue collection	2009-08-27 06:56:00	LPR6F-CS211
Late summer/early fall 2009 fish survey and tissue collection	2009-09-12 07:38:00	LPR8K-CS806
Late summer/early fall 2009 fish survey and tissue collection	2009-08-26 10:47:00	LPR7G-CS189
Late summer/early fall 2009 fish survey and tissue collection	2009-09-01 12:33:00	LPR1I-PS005
Late summer/early fall 2009 fish survey and tissue collection	2009-09-01 11:32:00	LPR2K-PS001
Late summer/early fall 2009 fish survey and tissue collection	2009-09-01 11:32:00	LPR2K-PS002
Late summer/early fall 2009 fish survey and tissue collection	2009-09-01 11:32:00	LPR2K-PS003
Late summer/early fall 2009 fish survey and tissue collection	2009-09-01 11:32:00	LPR2K-PS004
Late summer/early fall 2009 fish survey and tissue collection	2009-08-25 08:42:00	LPR7H-LM001
Late summer/early fall 2009 fish survey and tissue collection	2009-09-09 07:49:00	LPR8U-LM005
Late summer/early fall 2009 fish survey and tissue collection	2009-09-07 13:15:00	LPR8V-LM002
Late summer/early fall 2009 fish survey and tissue collection	2009-09-08 09:48:00	LPR8W-LM004
Late summer/early fall 2009 fish survey and tissue collection	2009-09-07 14:00:00	LPR8X-LM003
May 2010 small forage fish recon survey	2010-05-28 22:11	LPR8KK-LM006
May 2010 small forage fish recon survey	2010-05-28 22:12	LPR8KK-LM007
May 2010 small forage fish recon survey	2010-05-28 22:17	LPR8KK-LM008
May 2010 small forage fish recon survey	2010-05-28 22:17	LPR8KK-LM009
Late spring/early summer 2010 fish survey and tissue collection	2010-07-13 07:44	LPR6HH-LM021
Late spring/early summer 2010 fish survey and tissue collection	2010-07-14 08:07	LPR6II-LM035
Late spring/early summer 2010 fish survey and tissue collection	2010-07-08 08:20	LPR8SS-LM013
Late spring/early summer 2010 fish survey and tissue collection	2010-07-14 09:05	LPR8SS-LM037
Late spring/early summer 2010 fish survey and tissue collection	2010-07-10 08:29	LPR8TT-LM020
Late spring/early summer 2010 fish survey and tissue collection	2010-07-13 08:26	LPR8TT-LM022

Late spring/early summer 2010 fish survey and tissue collection	2010-07-13 08:26	LPR8TT-LM023
Late spring/early summer 2010 fish survey and tissue collection	2010-07-13 08:28	LPR8TT-LM024
Late spring/early summer 2010 fish survey and tissue collection	2010-07-13 08:28	LPR8TT-LM025
Late spring/early summer 2010 fish survey and tissue collection	2010-07-13 08:28	LPR8TT-LM026
Late spring/early summer 2010 fish survey and tissue collection	2010-07-13 08:28	LPR8TT-LM027
Late spring/early summer 2010 fish survey and tissue collection	2010-07-13 08:28	LPR8TT-LM028
Late spring/early summer 2010 fish survey and tissue collection	2010-07-13 08:28	LPR8TT-LM029
Late spring/early summer 2010 fish survey and tissue collection	2010-07-13 08:30	LPR8TT-LM030
Late spring/early summer 2010 fish survey and tissue collection	2010-07-14 08:56	LPR8TT-LM036
Late spring/early summer 2010 fish survey and tissue collection	2010-07-14 08:57	LPR8TT-LM049
Late spring/early summer 2010 fish survey and tissue collection	2010-07-08 08:44	LPR8UU-LM010
Late spring/early summer 2010 fish survey and tissue collection	2010-07-08 08:44	LPR8UU-LM011
Late spring/early summer 2010 fish survey and tissue collection	2010-07-08 08:44	LPR8UU-LM012
Late spring/early summer 2010 fish survey and tissue collection	2010-07-09 09:00	LPR8UU-LM014
Late spring/early summer 2010 fish survey and tissue collection	2010-07-10 11:10	LPR8VV-LM019
Late spring/early summer 2010 fish survey and tissue collection	2010-07-13 09:25	LPR8VV-LM031
Late spring/early summer 2010 fish survey and tissue collection	2010-07-13 09:27	LPR8VV-LM032
Late spring/early summer 2010 fish survey and tissue collection	2010-07-13 09:27	LPR8VV-LM033
Late spring/early summer 2010 fish survey and tissue collection	2010-07-13 09:27	LPR8VV-LM034
Late spring/early summer 2010 fish survey and tissue collection	2010-07-14 09:55	LPR8VV-LM038
Late spring/early summer 2010 fish survey and tissue collection	2010-07-14 09:55	LPR8VV-LM039
Late spring/early summer 2010 fish survey and tissue collection	2010-07-14 09:55	LPR8VV-LM040
Late spring/early summer 2010 fish survey and tissue collection	2010-07-14 09:55	LPR8VV-LM041
Late spring/early summer 2010 fish survey and tissue collection	2010-07-14 09:55	LPR8VV-LM042
Late spring/early summer 2010 fish survey and tissue collection	2010-07-14 09:53	LPR8VV-LM043
Late spring/early summer 2010 fish survey and tissue collection	2010-07-14 09:53	LPR8VV-LM044
Late spring/early summer 2010 fish survey and tissue collection	2010-07-14 09:53	LPR8VV-LM045
Late spring/early summer 2010 fish survey and tissue collection	2010-07-14 09:53	LPR8VV-LM046
Late spring/early summer 2010 fish survey and tissue collection	2010-07-14 09:51	LPR8VV-LM047
Late spring/early summer 2010 fish survey and tissue collection	2010-07-14 09:51	LPR8VV-LM048
Late spring/early summer 2010 fish survey and tissue collection	2010-07-09 11:51	LPR8YY-LM015
Late spring/early summer 2010 fish survey and tissue collection	2010-07-10 09:32	LPR8YY-LM018
Late spring/early summer 2010 fish survey and tissue collection	2010-07-10 10:31	LPR8ZZ-LM016
Late spring/early summer 2010 fish survey and tissue collection	2010-07-10 10:31	LPR8ZZ-LM017
Late summer 2010 small forage fish tissue collection	2010-07-26 13:05	LPR4RR-LM051
Late summer 2010 small forage fish tissue collection	2010-07-26 13:05	LPR4RR-LM052
Late summer 2010 small forage fish tissue collection	2010-07-26 13:18	LPR4RR-LM055
Late summer 2010 small forage fish tissue collection	2010-07-26 13:26	LPR4RR-LM056
Late summer 2010 small forage fish tissue collection	2010-07-26 11:28	LPR5SS-LM050
Late summer 2010 small forage fish tissue collection	2010-07-26 12:13	LPR5TT-LM053
Late summer 2010 small forage fish tissue collection	2010-07-26 12:13	LPR5TT-LM054
Late summer 2010 small forage fish tissue collection	2010-07-27 11:28	LPR6TT-LM058
Late summer 2010 small forage fish tissue collection	2010-07-27 11:28	LPR6TT-LM059
Late summer 2010 small forage fish tissue collection	2010-07-27 11:19	LPR6TT-LM060
Late summer 2010 small forage fish tissue collection	2010-07-27 11:19	LPR6TT-LM061
Late summer 2010 small forage fish tissue collection	2010-07-27 11:19	LPR6TT-LM062
Late summer 2010 small forage fish tissue collection	2010-07-27 11:19	LPR6TT-LM063
Late summer 2010 small forage fish tissue collection	2010-07-27 11:19	LPR6TT-LM064
Late summer 2010 small forage fish tissue collection	2010-07-27 11:19	LPR6TT-LM065
Late summer 2010 small forage fish tissue collection	2010-07-27 11:19	LPR6TT-LM066
Late summer 2010 small forage fish tissue collection	2010-07-27 10:05	LPR7UU-LM067
Late summer 2010 small forage fish tissue collection	2010-07-27 10:05	LPR7UU-LM068
Late summer 2010 small forage fish tissue collection	2010-07-27 09:56	LPR7UU-LM069
Late summer 2010 small forage fish tissue collection	2010-07-27 09:56	LPR7UU-LM070
Late summer 2010 small forage fish tissue collection	2010-07-27 10:05	LPR7UU-LM071
Late summer 2010 small forage fish tissue collection	2010-07-27 09:56	LPR7UU-LM072

Late summer 2010 small forage fish tissue collection	2010-07-27 10:05	LPR7UU-LM073
Late summer 2010 small forage fish tissue collection	2010-07-27 10:05	LPR7UU-LM074
Late summer 2010 small forage fish tissue collection	2010-07-27 09:56	LPR7UU-LM075
Late summer 2010 small forage fish tissue collection	2010-07-27 10:05	LPR7UU-LM076
Late summer 2010 small forage fish tissue collection	2010-07-27 10:28	LPR7VV-LM057
Late summer/early fall 2009 fish survey and tissue collection	2009-08-12 09:27:00	LPR3F-AN001
Late summer/early fall 2009 fish survey and tissue collection	2009-09-16 10:08:00	LPR4O-AN007
Late summer/early fall 2009 fish survey and tissue collection	2009-08-28 08:05:00	LPR6P-AN004
Late summer/early fall 2009 fish survey and tissue collection	2009-08-29 11:01:00	LPR6P-AN005
Late summer/early fall 2009 fish survey and tissue collection	2009-08-25 08:10:00	LPR6S-AN002
Late summer/early fall 2009 fish survey and tissue collection	2009-08-28 07:24:00	LPR6S-AN003
Late summer/early fall 2009 fish survey and tissue collection	2009-08-29 11:44:00	LPR7P-AN006
Late spring/early summer 2010 fish survey and tissue collection	2010-07-01 08:46	LPR4NN-AN008
Late spring/early summer 2010 fish survey and tissue collection	2010-07-06 08:36	LPR6KK-AN009
Late spring/early summer 2010 fish survey and tissue collection	2010-07-06 08:40	LPR8RR-AN010
Late summer/early fall 2009 fish survey and tissue collection	2009-09-09 09:15:00	LPR8R-IP009
Late spring/early summer 2010 fish survey and tissue collection	2010-07-01 09:51	LPR6OO-IP016
Late summer/early fall 2009 fish survey and tissue collection	2009-08-18 08:15:00	LPR5F-IP001
Late summer/early fall 2009 fish survey and tissue collection	2009-08-18 09:36:00	LPR5O-IP002
Late summer/early fall 2009 fish survey and tissue collection	2009-09-19 08:59:00	LPR5O-IP014
Late summer/early fall 2009 fish survey and tissue collection	2009-08-26 08:29:00	LPR6M-IP004
Late summer/early fall 2009 fish survey and tissue collection	2009-08-25 07:17:00	LPR6Q-IP003
Late summer/early fall 2009 fish survey and tissue collection	2009-08-28 07:24:00	LPR6S-IP007
Late summer/early fall 2009 fish survey and tissue collection	2009-08-26 10:18:00	LPR7L-IP005
Late summer/early fall 2009 fish survey and tissue collection	2009-08-27 09:34:00	LPR7Q-IP006
Late summer/early fall 2009 fish survey and tissue collection	2009-09-09 09:15:00	LPR8R-IP008
Late summer/early fall 2009 fish survey and tissue collection	2009-09-10 13:02:00	LPR8S-IP010
Late summer/early fall 2009 fish survey and tissue collection	2009-09-10 13:02:00	LPR8S-IP011
Late summer/early fall 2009 fish survey and tissue collection	2009-09-10 13:02:00	LPR8S-IP012
Late summer/early fall 2009 fish survey and tissue collection	2009-09-10 13:02:00	LPR8S-IP013
Winter 2010 fish survey and tissue collection	2010-02-24 09:30	LPR6Y-IP015
Late summer/early fall 2009 fish survey and tissue collection	2009-08-15 08:50:00	LPR3M-CC004
Late summer/early fall 2009 fish survey and tissue collection	2009-08-15 08:50:00	LPR3M-CC005
Late summer/early fall 2009 fish survey and tissue collection	2009-08-11 09:25:00	LPR3N-CC001
Late summer/early fall 2009 fish survey and tissue collection	2009-08-11 09:25:00	LPR3N-CC002
Late summer/early fall 2009 fish survey and tissue collection	2009-09-15 09:53:00	LPR4L-CC152
Late summer/early fall 2009 fish survey and tissue collection	2009-09-17 11:05:00	LPR4L-CC156
Late summer/early fall 2009 fish survey and tissue collection	2009-09-17 10:49:00	LPR4O-CC155
Late summer/early fall 2009 fish survey and tissue collection	2009-08-20 14:22:00	LPR4P-CC017
Late summer/early fall 2009 fish survey and tissue collection	2009-09-17 10:25:00	LPR4P-CC154
Late summer/early fall 2009 fish survey and tissue collection	2009-09-18 13:19:00	LPR4R-CC173
Late summer/early fall 2009 fish survey and tissue collection	2009-09-18 13:19:00	LPR4R-CC174
Late summer/early fall 2009 fish survey and tissue collection	2009-09-19 13:59:00	LPR4R-CC187
Late summer/early fall 2009 fish survey and tissue collection	2009-09-18 13:50:00	LPR4S-CC175
Late summer/early fall 2009 fish survey and tissue collection	2009-09-18 13:50:00	LPR4S-CC176
Late summer/early fall 2009 fish survey and tissue collection	2009-09-18 13:50:00	LPR4S-CC177
Late summer/early fall 2009 fish survey and tissue collection	2009-09-19 14:24:00	LPR4S-CC188
Late summer/early fall 2009 fish survey and tissue collection	2009-09-18 14:10:00	LPR4T-CC178
Late summer/early fall 2009 fish survey and tissue collection	2009-09-19 12:10:00	LPR4T-CC186
Late summer/early fall 2009 fish survey and tissue collection	2009-08-18 07:43:00	LPR5E-CC006
Late summer/early fall 2009 fish survey and tissue collection	2009-08-18 07:43:00	LPR5E-CC007
Late summer/early fall 2009 fish survey and tissue collection	2009-08-18 07:43:00	LPR5E-CC008
Late summer/early fall 2009 fish survey and tissue collection	2009-08-19 09:01:00	LPR5E-CC010
Late summer/early fall 2009 fish survey and tissue collection	2009-08-20 10:56:00	LPR5E-CC012
Late summer/early fall 2009 fish survey and tissue collection	2009-08-20 10:56:00	LPR5E-CC013
Late summer/early fall 2009 fish survey and tissue collection	2009-08-20 10:56:00	LPR5E-CC014

Late summer/early fall 2009 fish survey and tissue collection	2009-08-20 10:56:00	LPR5E-CC015
Late summer/early fall 2009 fish survey and tissue collection	2009-08-22 09:03:00	LPR5E-CC018
Late summer/early fall 2009 fish survey and tissue collection	2009-08-19 10:03:00	LPR5G-CC011
Late summer/early fall 2009 fish survey and tissue collection	2009-09-16 09:09:00	LPR5I-CC153
Late summer/early fall 2009 fish survey and tissue collection	2009-09-19 09:35:00	LPR5Q-CC179
Late summer/early fall 2009 fish survey and tissue collection	2009-09-18 10:35:00	LPR5R-CC157
Late summer/early fall 2009 fish survey and tissue collection	2009-09-18 10:35:00	LPR5R-CC158
Late summer/early fall 2009 fish survey and tissue collection	2009-09-18 10:35:00	LPR5R-CC159
Late summer/early fall 2009 fish survey and tissue collection	2009-09-18 10:35:00	LPR5R-CC160
Late summer/early fall 2009 fish survey and tissue collection	2009-09-18 10:35:00	LPR5R-CC161
Late summer/early fall 2009 fish survey and tissue collection	2009-09-18 10:35:00	LPR5R-CC162
Late summer/early fall 2009 fish survey and tissue collection	2009-09-18 10:35:00	LPR5R-CC163
Late summer/early fall 2009 fish survey and tissue collection	2009-09-18 11:15:00	LPR5S-CC165
Late summer/early fall 2009 fish survey and tissue collection	2009-09-18 11:15:00	LPR5S-CC166
Late summer/early fall 2009 fish survey and tissue collection	2009-09-18 11:15:00	LPR5S-CC167
Late summer/early fall 2009 fish survey and tissue collection	2009-09-18 11:15:00	LPR5S-CC168
Late summer/early fall 2009 fish survey and tissue collection	2009-09-18 11:15:00	LPR5S-CC169
Late summer/early fall 2009 fish survey and tissue collection	2009-09-18 11:15:00	LPR5S-CC170
Late summer/early fall 2009 fish survey and tissue collection	2009-09-19 11:00:00	LPR5S-CC180
Late summer/early fall 2009 fish survey and tissue collection	2009-09-19 11:00:00	LPR5S-CC181
Late summer/early fall 2009 fish survey and tissue collection	2009-09-19 11:00:00	LPR5S-CC182
Late summer/early fall 2009 fish survey and tissue collection	2009-09-18 11:57:00	LPR5T-CC172
Late summer/early fall 2009 fish survey and tissue collection	2009-09-19 11:33:00	LPR5T-CC183
Late summer/early fall 2009 fish survey and tissue collection	2009-09-19 11:33:00	LPR5T-CC184
Late summer/early fall 2009 fish survey and tissue collection	2009-09-19 11:33:00	LPR5T-CC185
Late summer/early fall 2009 fish survey and tissue collection	2009-08-25 09:54:00	LPR6L-CC031
Late summer/early fall 2009 fish survey and tissue collection	2009-08-25 09:54:00	LPR6L-CC032
Late summer/early fall 2009 fish survey and tissue collection	2009-08-25 09:54:00	LPR6L-CC033
Late summer/early fall 2009 fish survey and tissue collection	2009-08-26 09:04:00	LPR6L-CC049
Late summer/early fall 2009 fish survey and tissue collection	2009-08-26 09:04:00	LPR6L-CC050
Late summer/early fall 2009 fish survey and tissue collection	2009-08-26 09:04:00	LPR6L-CC051
Late summer/early fall 2009 fish survey and tissue collection	2009-08-26 09:04:00	LPR6L-CC052
Late summer/early fall 2009 fish survey and tissue collection	2009-08-26 09:04:00	LPR6L-CC053
Late summer/early fall 2009 fish survey and tissue collection	2009-08-26 09:04:00	LPR6L-CC054
Late summer/early fall 2009 fish survey and tissue collection	2009-08-27 08:24:00	LPR6L-CC067
Late summer/early fall 2009 fish survey and tissue collection	2009-08-28 08:25:00	LPR6L-CC084
Late summer/early fall 2009 fish survey and tissue collection	2009-08-28 08:25:00	LPR6L-CC085
Late summer/early fall 2009 fish survey and tissue collection	2009-08-28 08:25:00	LPR6L-CC086
Late summer/early fall 2009 fish survey and tissue collection	2009-08-29 08:10:00	LPR6L-CC104
Late summer/early fall 2009 fish survey and tissue collection	2009-08-29 08:10:00	LPR6L-CC105
Late summer/early fall 2009 fish survey and tissue collection	2009-08-29 08:10:00	LPR6L-CC106
Late summer/early fall 2009 fish survey and tissue collection	2009-08-29 08:10:00	LPR6L-CC107
Late summer/early fall 2009 fish survey and tissue collection	2009-08-25 08:43:00	LPR6M-CC027
Late summer/early fall 2009 fish survey and tissue collection	2009-08-25 08:43:00	LPR6M-CC028
Late summer/early fall 2009 fish survey and tissue collection	2009-08-28 07:50:00	LPR6M-CC083
Late summer/early fall 2009 fish survey and tissue collection	2009-08-29 07:48:00	LPR6M-CC100
Late summer/early fall 2009 fish survey and tissue collection	2009-08-29 07:48:00	LPR6M-CC101
Late summer/early fall 2009 fish survey and tissue collection	2009-08-29 07:48:00	LPR6M-CC102
Late summer/early fall 2009 fish survey and tissue collection	2009-08-29 07:48:00	LPR6M-CC103
Late summer/early fall 2009 fish survey and tissue collection	2009-08-25 07:30:00	LPR6N-CC019
Late summer/early fall 2009 fish survey and tissue collection	2009-08-25 07:30:00	LPR6N-CC020
Late summer/early fall 2009 fish survey and tissue collection	2009-08-25 07:30:00	LPR6N-CC021
Late summer/early fall 2009 fish survey and tissue collection	2009-08-25 07:30:00	LPR6N-CC022
Late summer/early fall 2009 fish survey and tissue collection	2009-08-25 07:30:00	LPR6N-CC023
Late summer/early fall 2009 fish survey and tissue collection	2009-08-25 07:30:00	LPR6N-CC024
Late summer/early fall 2009 fish survey and tissue collection	2009-08-25 07:30:00	LPR6N-CC026

Late summer/early fall 2009 fish survey and tissue collection	2009-08-26 07:38:00	LPR6N-CC044
Late summer/early fall 2009 fish survey and tissue collection	2009-08-26 07:38:00	LPR6N-CC045
Late summer/early fall 2009 fish survey and tissue collection	2009-08-26 07:38:00	LPR6N-CC046
Late summer/early fall 2009 fish survey and tissue collection	2009-08-26 07:38:00	LPR6N-CC047
Late summer/early fall 2009 fish survey and tissue collection	2009-08-26 07:38:00	LPR6N-CC048
Late summer/early fall 2009 fish survey and tissue collection	2009-08-27 07:06:00	LPR6N-CC065
Late summer/early fall 2009 fish survey and tissue collection	2009-08-29 07:10:00	LPR6N-CC096
Late summer/early fall 2009 fish survey and tissue collection	2009-08-29 07:10:00	LPR6N-CC097
Late summer/early fall 2009 fish survey and tissue collection	2009-08-29 07:10:00	LPR6N-CC098
Late summer/early fall 2009 fish survey and tissue collection	2009-08-25 11:33:00	LPR7L-CC037
Late summer/early fall 2009 fish survey and tissue collection	2009-08-25 11:33:00	LPR7L-CC039
Late summer/early fall 2009 fish survey and tissue collection	2009-08-25 11:33:00	LPR7L-CC041
Late summer/early fall 2009 fish survey and tissue collection	2009-08-25 11:33:00	LPR7L-CC042
Late summer/early fall 2009 fish survey and tissue collection	2009-08-25 11:33:00	LPR7L-CC043
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Late summer/early fall 2009 fish survey and tissue collection	2009-08-28 09:32:00	LPR7L-CC091
Late summer/early fall 2009 fish survey and tissue collection	2009-08-28 09:32:00	LPR7L-CC092
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Late summer/early fall 2009 fish survey and tissue collection	2009-09-08 08:44:00	LPR8R-CC128

Late summer/early fall 2009 fish survey and tissue collection	2009-09-08 08:44:00	LPR8R-CC129
Late summer/early fall 2009 fish survey and tissue collection	2009-09-08 08:44:00	LPR8R-CC130
Late summer/early fall 2009 fish survey and tissue collection	2009-09-09 09:15:00	LPR8R-CC131
Late summer/early fall 2009 fish survey and tissue collection	2009-09-09 09:15:00	LPR8R-CC132
Late summer/early fall 2009 fish survey and tissue collection	2009-09-12 08:45:00	LPR8R-CC142
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Late summer/early fall 2009 fish survey and tissue collection	2009-09-10 13:02:00	LPR8S-CC136
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Late summer 2010 small forage fish tissue collection	2010-07-28 16:17	LPR5VV-DC155

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Late summer 2010 small forage fish tissue collection	2010-07-27 12:27	LPR5VV-DC143
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Late summer 2010 small forage fish tissue collection	2010-07-27 13:40	LPR7WW-DC078
Late summer 2010 small forage fish tissue collection	2010-07-27 13:40	LPR7WW-DC094
Late spring/early summer 2010 fish survey and tissue collection	2010-07-14 05:47	LPR2SS-DC005
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Late summer 2010 small forage fish tissue collection	2010-07-27 13:40	LPR7WW-DC079
Late summer 2010 small forage fish tissue collection	2010-07-27 13:40	LPR7WW-DC096
Late summer 2010 small forage fish tissue collection	2010-07-28 16:53	LPR5WW-DC157
Late summer 2010 small forage fish tissue collection	2010-07-27 13:40	LPR7WW-DC062
Late summer 2010 small forage fish tissue collection	2010-07-27 13:40	LPR7WW-DC072
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Late summer 2010 small forage fish tissue collection	2010-07-27 13:40	LPR7WW-DC080
Late summer 2010 small forage fish tissue collection	2010-07-27 13:40	LPR7WW-DC084
Late summer 2010 small forage fish tissue collection	2010-07-27 13:40	LPR7WW-DC093
Late summer 2010 small forage fish tissue collection	2010-07-27 13:40	LPR7WW-DC098
Late summer 2010 small forage fish tissue collection	2010-07-27 13:40	LPR7WW-DC114
Late summer 2010 small forage fish tissue collection	2010-07-27 13:40	LPR7WW-DC077
Late spring/early summer 2010 fish survey and tissue collection	2010-07-14 05:47	LPR2SS-DC008
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Late summer 2010 small forage fish tissue collection	2010-07-26 14:29	LPR4TT-DC052
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Late summer 2010 small forage fish tissue collection	2010-07-27 13:40	LPR7WW-DC089
Late summer 2010 small forage fish tissue collection	2010-07-26 14:29	LPR4TT-DC053
Late summer 2010 small forage fish tissue collection	2010-07-27 13:40	LPR7WW-DC117
Late summer 2010 small forage fish tissue collection	2010-07-28 16:29	LPR5VV-DC153
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Late summer 2010 small forage fish tissue collection	2010-07-27 13:40	LPR7WW-DC064
Late summer 2010 small forage fish tissue collection	2010-07-27 13:40	LPR7WW-DC066
Late summer 2010 small forage fish tissue collection	2010-07-27 13:40	LPR7WW-DC085
Late summer 2010 small forage fish tissue collection	2010-07-27 13:40	LPR7WW-DC090
Late summer 2010 small forage fish tissue collection	2010-07-27 13:40	LPR7WW-DC095
Late summer 2010 small forage fish tissue collection	2010-07-27 13:40	LPR7WW-DC104
Late summer 2010 small forage fish tissue collection	2010-07-27 13:40	LPR7WW-DC105
Late summer 2010 small forage fish tissue collection	2010-07-27 13:40	LPR7WW-DC106
Late summer 2010 small forage fish tissue collection	2010-07-28 16:17	LPR5VV-DC156
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Late summer 2010 small forage fish tissue collection	2010-07-27 13:40	LPR7WW-DC071
Late summer 2010 small forage fish tissue collection	2010-07-27 13:40	LPR7WW-DC112
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Late summer 2010 small forage fish tissue collection	2010-07-26 13:26	LPR4RR-DC019
Late summer 2010 small forage fish tissue collection	2010-07-27 12:27	LPR5VV-DC055
Late summer 2010 small forage fish tissue collection	2010-07-27 12:27	LPR5VV-DC144

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Late summer 2010 small forage fish tissue collection	2010-07-27 13:40	LPR7WW-DC088
Late summer 2010 small forage fish tissue collection	2010-07-27 13:40	LPR7WW-DC092
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Late summer 2010 small forage fish tissue collection	2010-07-27 13:40	LPR7WW-DC101
Late summer 2010 small forage fish tissue collection	2010-07-27 13:40	LPR7WW-DC113
Late summer 2010 small forage fish tissue collection	2010-07-27 13:40	LPR7WW-DC081
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Late summer 2010 small forage fish tissue collection	2010-07-27 13:40	LPR7WW-DC110
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Late summer 2010 small forage fish tissue collection	2010-07-27 13:40	LPR7WW-DC069
Late summer 2010 small forage fish tissue collection	2010-07-27 13:40	LPR7WW-DC073
Late summer 2010 small forage fish tissue collection	2010-07-27 13:40	LPR7WW-DC108
Late summer 2010 small forage fish tissue collection	2010-07-26 13:25	LPR4SS-DC032
Late summer 2010 small forage fish tissue collection	2010-07-26 13:25	LPR4SS-DC035
Late summer 2010 small forage fish tissue collection	2010-07-27 11:00	LPR6TT-DC124
Late summer 2010 small forage fish tissue collection	2010-07-27 11:00	LPR6TT-DC133
Late summer 2010 small forage fish tissue collection	2010-07-27 13:40	LPR7WW-DC065
Late summer 2010 small forage fish tissue collection	2010-07-27 13:40	LPR7WW-DC091
Late summer 2010 small forage fish tissue collection	2010-07-27 13:40	LPR7WW-DC097
Late summer 2010 small forage fish tissue collection	2010-07-27 13:40	LPR7WW-DC103
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Late summer 2010 small forage fish tissue collection	2010-07-27 13:40	LPR7WW-DC102
Late summer 2010 small forage fish tissue collection	2010-07-27 12:27	LPR5VV-DC057
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Late summer 2010 small forage fish tissue collection	2010-07-27 13:40	LPR7WW-DC111
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Late summer 2010 small forage fish tissue collection	2010-07-26 13:18	LPR4RR-DC045
Late summer 2010 small forage fish tissue collection	2010-07-27 11:00	LPR6TT-DC123
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Late summer 2010 small forage fish tissue collection	2010-07-27 11:00	LPR6TT-DC127
Late summer 2010 small forage fish tissue collection	2010-07-27 11:00	LPR6TT-DC132
Late summer 2010 small forage fish tissue collection	2010-07-27 11:00	LPR6TT-DC139
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Late summer 2010 small forage fish tissue collection	2010-07-27 11:00	LPR6TT-DC142
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Late summer 2010 small forage fish tissue collection	2010-07-26 14:29	LPR4TT-DC050
Late spring/early summer 2010 fish survey and tissue collection	2010-07-14 05:47	LPR2SS-DC006
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Late summer 2010 small forage fish tissue collection	2010-07-26 14:24	LPR4TT-DC011
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Late summer 2010 small forage fish tissue collection	2010-07-27 11:00	LPR6TT-DC119

Late summer 2010 small forage fish tissue collection	2010-07-27 11:00	LPR6TT-DC121
Late summer 2010 small forage fish tissue collection	2010-07-27 11:00	LPR6TT-DC122
Late summer 2010 small forage fish tissue collection	2010-07-27 11:00	LPR6TT-DC134
Late summer 2010 small forage fish tissue collection	2010-07-27 11:00	LPR6TT-DC137
Late summer 2010 small forage fish tissue collection	2010-07-26 13:26	LPR4RR-DC021
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Late summer 2010 small forage fish tissue collection	2010-07-27 11:00	LPR6TT-DC138
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Late summer 2010 small forage fish tissue collection	2010-07-26 13:25	LPR4SS-DC030
Late summer 2010 small forage fish tissue collection	2010-07-26 14:06	LPR4UU-DC014
Late summer 2010 small forage fish tissue collection	2010-07-26 13:18	LPR4RR-DC041
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Late summer 2010 small forage fish tissue collection	2010-07-26 14:24	LPR4TT-DC010
Late summer 2010 small forage fish tissue collection	2010-07-26 13:25	LPR4SS-DC026
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Late summer 2010 small forage fish tissue collection	2010-07-26 14:06	LPR4UU-DC015
Late summer 2010 small forage fish tissue collection	2010-07-28 12:43	LPR8AB-DC150
Late summer/early fall 2009 fish survey and tissue collection	2009-09-19 10:12:00	LPR5R-DC003
Late summer/early fall 2009 fish survey and tissue collection	2009-09-12 10:57:00	LPR8X-DC002
Late summer/early fall 2009 fish survey and tissue collection	2009-09-19 10:12:00	LPR5R-DC004
Late summer/early fall 2009 fish survey and tissue collection	2009-09-12 10:57:00	LPR8X-DC001
Late summer/early fall 2009 fish survey and tissue collection	2009-09-02 12:33:00	LPR1B-GX002
Late summer/early fall 2009 fish survey and tissue collection	2009-09-01 10:04:00	LPR1O-GX001
Late summer/early fall 2009 fish survey and tissue collection	2009-09-03 11:41:00	LPR1O-GX005
Late summer/early fall 2009 fish survey and tissue collection	2009-09-02 15:11:00	LPR2E-GX004
Late summer/early fall 2009 fish survey and tissue collection	2009-09-02 14:06:00	LPR2O-GX003
Late summer/early fall 2009 fish survey and tissue collection	2009-09-01 13:10:00	LPR1J-TM001
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Late summer 2010 small forage fish tissue collection	2010-07-26 15:08	LPR4VV-TM003
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Late spring/early summer 2010 fish survey and tissue collection	2010-06-28 07:23	LPR1OO-MB002
Late summer 2010 small forage fish tissue collection	2010-07-26 13:26	LPR4RR-MB005
Late summer 2010 small forage fish tissue collection	2010-07-26 12:27	LPR5TT-MB003
Late summer 2010 small forage fish tissue collection	2010-07-26 12:27	LPR5TT-MB004

Late summer 2010 small forage fish tissue collection	2010-07-26 12:13	LPR5TT-MB006
Late summer 2010 small forage fish tissue collection	2010-07-27 12:24	LPR5VV-MB007
Late summer 2010 small forage fish tissue collection	2010-07-28 12:53	LPR8AB-MB008
Late summer 2010 small forage fish tissue collection	2010-07-28 12:53	LPR8AB-MB009
Late summer 2010 small forage fish tissue collection	2010-07-28 12:53	LPR8AB-MB010
Late summer 2010 small forage fish tissue collection	2010-07-28 12:53	LPR8AB-MB011
Late summer 2010 small forage fish tissue collection	2010-07-28 12:53	LPR8AB-MB012
Late summer 2010 small forage fish tissue collection	2010-07-28 12:53	LPR8AB-MB013
Late summer 2010 small forage fish tissue collection	2010-07-28 12:53	LPR8AB-MB014
Late summer 2010 small forage fish tissue collection	2010-07-28 12:53	LPR8AB-MB015
Late summer 2010 small forage fish tissue collection	2010-07-28 12:53	LPR8AB-MB016
Late summer 2010 small forage fish tissue collection	2010-07-28 12:53	LPR8AB-MB017
Late summer 2010 small forage fish tissue collection	2010-07-28 12:53	LPR8AB-MB018
Late summer/early fall 2009 fish survey and tissue collection	2009-09-19 13:59:00	LPR4R-MS017
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Late summer/early fall 2009 fish survey and tissue collection	2009-09-11 11:51:00	LPR8Y-MS006
Late summer 2010 small forage fish tissue collection	2010-07-26 12:27	LPR5TT-MS019
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May 2010 small forage fish recon survey	2010-05-26 10:31	LPR1FF-FH154
May 2010 small forage fish recon survey	2010-05-26 10:35	LPR1FF-FH158
May 2010 small forage fish recon survey	2010-05-25 12:32	LPR2DD-FH057
May 2010 small forage fish recon survey	2010-05-25 12:32	LPR2DD-FH058
May 2010 small forage fish recon survey	2010-05-25 12:32	LPR2DD-FH059
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May 2010 small forage fish recon survey	2010-05-25 12:17	LPR2DD-FH117
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May 2010 small forage fish recon survey	2010-05-25 12:25	LPR2DD-FH131
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May 2010 small forage fish recon survey	2010-05-25 12:25	LPR2DD-FH133
May 2010 small forage fish recon survey	2010-05-25 12:25	LPR2DD-FH134
May 2010 small forage fish recon survey	2010-05-25 12:26	LPR2DD-FH135
May 2010 small forage fish recon survey	2010-05-25 12:26	LPR2DD-FH136
May 2010 small forage fish recon survey	2010-05-25 12:24	LPR2DD-FH137
May 2010 small forage fish recon survey	2010-05-25 12:24	LPR2DD-FH138
May 2010 small forage fish recon survey	2010-05-25 12:21	LPR2DD-FH141
May 2010 small forage fish recon survey	2010-05-25 12:22	LPR2DD-FH142
May 2010 small forage fish recon survey	2010-05-25 12:20	LPR2DD-FH145
May 2010 small forage fish recon survey	2010-05-25 12:31	LPR2DD-FH147
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May 2010 small forage fish recon survey	2010-05-26 09:55	LPR2EE-FH174
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May 2010 small forage fish recon survey	2010-05-26 09:56	LPR2EE-FH182
May 2010 small forage fish recon survey	2010-05-26 09:56	LPR2EE-FH183
May 2010 small forage fish recon survey	2010-05-26 09:56	LPR2EE-FH184

May 2010 small forage fish recon survey	2010-05-26 09:56	LPR2EE-FH185
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May 2010 small forage fish recon survey	2010-05-26 09:54	LPR2EE-FH206
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May 2010 small forage fish recon survey	2010-05-25 12:45	LPR2II-FH123
May 2010 small forage fish recon survey	2010-05-25 12:45	LPR2II-FH124
May 2010 small forage fish recon survey	2010-05-25 12:59	LPR2II-FH140
May 2010 small forage fish recon survey	2010-05-25 12:49	LPR2II-FH146
May 2010 small forage fish recon survey	2010-05-25 12:52	LPR2II-FH149
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May 2010 small forage fish recon survey	2010-05-26 10:06	LPR2II-FH212
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May 2010 small forage fish recon survey	2010-05-25 13:59	LPR3AA-FH129
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May 2010 small forage fish recon survey	2010-05-25 14:01	LPR3AA-FH139
May 2010 small forage fish recon survey	2010-05-26 09:35	LPR3AA-FH155
May 2010 small forage fish recon survey	2010-05-26 09:35	LPR3AA-FH156
May 2010 small forage fish recon survey	2010-05-26 09:33	LPR3AA-FH180
May 2010 small forage fish recon survey	2010-05-25 14:26	LPR4CC-FH093
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Late spring/early summer 2010 fish survey and tissue collection	2010-06-25 09:51	LPR1JJ-FH245
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Late spring/early summer 2010 fish survey and tissue collection	2010-06-26 10:06	LPR1JJ-FH304
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Late spring/early summer 2010 fish survey and tissue collection	2010-06-26 15:05	LPR1JJ-FH384
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Late spring/early summer 2010 fish survey and tissue collection	2010-06-23 13:09	LPR1KK-FH230
Late spring/early summer 2010 fish survey and tissue collection	2010-06-26 15:26	LPR1KK-FH373
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Late summer 2010 small forage fish tissue collection	2010-07-27 11:19	LPR6TT-FH1143
Late summer 2010 small forage fish tissue collection	2010-07-27 11:19	LPR6TT-FH1144
Late summer 2010 small forage fish tissue collection	2010-07-27 11:19	LPR6TT-FH1145
Late summer 2010 small forage fish tissue collection	2010-07-27 11:19	LPR6TT-FH1146
Late summer 2010 small forage fish tissue collection	2010-07-27 11:19	LPR6TT-FH1147
Late summer 2010 small forage fish tissue collection	2010-07-27 11:19	LPR6TT-FH1148
Late summer 2010 small forage fish tissue collection	2010-07-27 11:19	LPR6TT-FH1149
Late summer 2010 small forage fish tissue collection	2010-07-27 11:19	LPR6TT-FH1150
Late summer 2010 small forage fish tissue collection	2010-07-27 11:19	LPR6TT-FH1151

Late summer 2010 small forage fish tissue collection	2010-07-27 11:19	LPR6TT-FH1152
Late summer 2010 small forage fish tissue collection	2010-07-27 11:19	LPR6TT-FH1153
Late summer 2010 small forage fish tissue collection	2010-07-27 11:19	LPR6TT-FH1154
Late summer 2010 small forage fish tissue collection	2010-07-27 11:19	LPR6TT-FH1155
Late summer 2010 small forage fish tissue collection	2010-07-27 11:19	LPR6TT-FH1156
Late summer 2010 small forage fish tissue collection	2010-07-27 11:19	LPR6TT-FH1157
Late summer 2010 small forage fish tissue collection	2010-07-27 11:19	LPR6TT-FH1158
Late summer 2010 small forage fish tissue collection	2010-07-27 11:19	LPR6TT-FH1159
Late summer 2010 small forage fish tissue collection	2010-07-27 11:19	LPR6TT-FH1160
Late summer 2010 small forage fish tissue collection	2010-07-27 11:19	LPR6TT-FH1161
Late summer 2010 small forage fish tissue collection	2010-07-27 11:19	LPR6TT-FH1162
Late summer 2010 small forage fish tissue collection	2010-07-27 11:19	LPR6TT-FH1163
Late summer 2010 small forage fish tissue collection	2010-07-27 11:19	LPR6TT-FH1164
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Late summer 2010 small forage fish tissue collection	2010-07-27 11:19	LPR6TT-FH1166
Late summer 2010 small forage fish tissue collection	2010-07-27 11:19	LPR6TT-FH1167
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Late summer 2010 small forage fish tissue collection	2010-07-27 11:19	LPR6TT-FH1169
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Late summer 2010 small forage fish tissue collection	2010-07-27 11:19	LPR6TT-FH1174
Late summer 2010 small forage fish tissue collection	2010-07-27 11:19	LPR6TT-FH1175
Late summer 2010 small forage fish tissue collection	2010-07-27 11:19	LPR6TT-FH1176
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Late summer 2010 small forage fish tissue collection	2010-07-28 12:45	LPR8AB-FH1190
Late summer 2010 small forage fish tissue collection	2010-07-28 12:45	LPR8AB-FH1191
Late summer 2010 small forage fish tissue collection	2010-07-28 12:34	LPR8AB-FH1192
Late summer 2010 small forage fish tissue collection	2010-07-28 12:34	LPR8AB-FH1194
Late summer/early fall 2009 fish survey and tissue collection	2009-08-25 09:54:00	LPR6L-EL001
Late summer/early fall 2009 fish survey and tissue collection	2009-09-18 10:35:00	LPR5R-EL002
Late summer/early fall 2009 fish survey and tissue collection	2009-09-04 10:08:00	LPR1O-PC001
Late summer/early fall 2009 fish survey and tissue collection	2009-08-28 06:48:00	LPR6I-LG004
Late summer/early fall 2009 fish survey and tissue collection	2009-08-28 07:11:00	LPR6J-LG005
Late summer/early fall 2009 fish survey and tissue collection	2009-08-25 08:43:00	LPR6M-LG001
Late summer/early fall 2009 fish survey and tissue collection	2009-08-27 13:35:00	LPR7U-LG002
Late summer/early fall 2009 fish survey and tissue collection	2009-08-27 13:35:00	LPR7U-LG003
May 2010 small forage fish recon survey	2010-05-28 22:18	LPR8KK-LG006
May 2010 small forage fish recon survey	2010-05-28 22:18	LPR8KK-LG007
May 2010 small forage fish recon survey	2010-05-28 22:19	LPR8KK-LG008
May 2010 small forage fish recon survey	2010-05-28 22:19	LPR8KK-LG009
Late spring/early summer 2010 fish survey and tissue collection	2010-07-01 09:30	LPR7FF-LG010
Late spring/early summer 2010 fish survey and tissue collection	2010-07-02 09:48	LPR7FF-LG012

Late spring/early summer 2010 fish survey and tissue collection	2010-07-09 13:12	LPR8VV-LG011
Late summer 2010 small forage fish tissue collection	2010-07-27 09:30	LPR7TT-LG013
Late summer 2010 small forage fish tissue collection	2010-07-27 09:27	LPR7TT-LG014
Late summer 2010 small forage fish tissue collection	2010-07-28 12:07	LPR7TT-LG015
Late summer/early fall 2009 fish survey and tissue collection	2009-08-26 11:38:00	LPR7F-LA001
Late summer/early fall 2009 fish survey and tissue collection	2009-09-09 07:49:00	LPR8U-LA005
Late summer/early fall 2009 fish survey and tissue collection	2009-09-08 09:48:00	LPR8W-LA002
Late summer/early fall 2009 fish survey and tissue collection	2009-09-08 09:48:00	LPR8W-LA003
Late summer/early fall 2009 fish survey and tissue collection	2009-09-08 12:32:00	LPR8Y-LA004
May 2010 small forage fish recon survey	2010-05-28 23:19	LPR8LL-LA006
May 2010 small forage fish recon survey	2010-05-28 23:19	LPR8LL-LA007
May 2010 small forage fish recon survey	2010-05-28 23:20	LPR8LL-LA008
May 2010 small forage fish recon survey	2010-05-28 23:20	LPR8LL-LA009
May 2010 small forage fish recon survey	2010-05-28 23:21	LPR8LL-LA010
Late spring/early summer 2010 fish survey and tissue collection	2010-07-07 08:15	LPR7LL-LA011
Late spring/early summer 2010 fish survey and tissue collection	2010-07-01 09:36	LPR7GG-EA001
Late summer/early fall 2009 fish survey and tissue collection	2009-09-18 12:24:00	LPR6H-RB009
Late summer/early fall 2009 fish survey and tissue collection	2009-09-11 08:16:00	LPR8L-RB006
Late summer/early fall 2009 fish survey and tissue collection	2009-09-09 12:20:00	LPR8Y-RB001
Late summer/early fall 2009 fish survey and tissue collection	2009-09-10 09:55:00	LPR8Y-RB002
Late summer/early fall 2009 fish survey and tissue collection	2009-09-10 09:55:00	LPR8Y-RB003
Late summer/early fall 2009 fish survey and tissue collection	2009-09-10 09:55:00	LPR8Y-RB004
Late summer/early fall 2009 fish survey and tissue collection	2009-09-10 09:55:00	LPR8Y-RB005
Late summer/early fall 2009 fish survey and tissue collection	2009-09-11 11:51:00	LPR8Y-RB007
Late summer/early fall 2009 fish survey and tissue collection	2009-09-11 11:51:00	LPR8Y-RB008
Late spring/early summer 2010 fish survey and tissue collection	2010-07-14 08:57	LPR8TT-RB010
Late summer/early fall 2009 fish survey and tissue collection	2009-09-09 11:25:00	LPR8Z-CA001
Late summer/early fall 2009 fish survey and tissue collection	2009-09-11 11:03:00	LPR8Z-CA002
Late summer/early fall 2009 fish survey and tissue collection	2009-09-11 11:03:00	LPR8Z-CA003
Late summer/early fall 2009 fish survey and tissue collection	2009-09-04 10:56:00	LPR1Q-BC001
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Late summer 2010 small forage fish tissue collection	2010-07-28 12:49	LPR8AB-NP002
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Late summer 2010 small forage fish tissue collection	2010-07-28 12:49	LPR8AB-NP008
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Late summer 2010 small forage fish tissue collection	2010-07-28 12:49	LPR8AB-NP010
Late summer 2010 small forage fish tissue collection	2010-07-28 12:49	LPR8AB-NP011
Late summer 2010 small forage fish tissue collection	2010-07-28 12:49	LPR8AB-NP012
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Late spring/early summer 2010 fish survey and tissue collection	2010-07-10 09:32	LPR8YY-NH093
Late spring/early summer 2010 fish survey and tissue collection	2010-07-10 09:32	LPR8YY-NH094
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Late spring/early summer 2010 fish survey and tissue collection	2010-07-10 09:32	LPR8YY-NH096
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Late spring/early summer 2010 fish survey and tissue collection	2010-07-10 09:32	LPR8YY-NH098
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Late spring/early summer 2010 fish survey and tissue collection	2010-07-10 09:32	LPR8YY-NH101
Late spring/early summer 2010 fish survey and tissue collection	2010-07-10 09:32	LPR8YY-NH102
Late spring/early summer 2010 fish survey and tissue collection	2010-07-10 09:32	LPR8YY-NH103
Late spring/early summer 2010 fish survey and tissue collection	2010-07-10 09:32	LPR8YY-NH104
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Late spring/early summer 2010 fish survey and tissue collection	2010-07-10 09:32	LPR8YY-NH106
Late spring/early summer 2010 fish survey and tissue collection	2010-07-10 09:32	LPR8YY-NH107
Late spring/early summer 2010 fish survey and tissue collection	2010-07-10 09:32	LPR8YY-NH108

Late spring/early summer 2010 fish survey and tissue collection	2010-07-10 09:32	LPR8YY-NH109
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Late spring/early summer 2010 fish survey and tissue collection	2010-07-10 09:32	LPR8YY-NH111
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Late spring/early summer 2010 fish survey and tissue collection	2010-07-10 09:32	LPR8YY-NH113
Late spring/early summer 2010 fish survey and tissue collection	2010-07-10 09:32	LPR8YY-NH114
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Late spring/early summer 2010 fish survey and tissue collection	2010-07-10 09:32	LPR8YY-NH127
Late spring/early summer 2010 fish survey and tissue collection	2010-07-10 09:32	LPR8YY-NH128
Late spring/early summer 2010 fish survey and tissue collection	2010-07-10 09:32	LPR8YY-NH129
Late spring/early summer 2010 fish survey and tissue collection	2010-07-10 09:32	LPR8YY-NH130
Late spring/early summer 2010 fish survey and tissue collection	2010-07-10 09:32	LPR8YY-NH131
Late spring/early summer 2010 fish survey and tissue collection	2010-07-10 09:32	LPR8YY-NH132
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Late spring/early summer 2010 fish survey and tissue collection	2010-07-10 09:32	LPR8YY-NH136
Late spring/early summer 2010 fish survey and tissue collection	2010-07-10 09:32	LPR8YY-NH137
Late spring/early summer 2010 fish survey and tissue collection	2010-07-10 09:32	LPR8YY-NH138
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Late spring/early summer 2010 fish survey and tissue collection	2010-07-10 09:32	LPR8YY-NH140
Late spring/early summer 2010 fish survey and tissue collection	2010-07-10 09:32	LPR8YY-NH141
Late spring/early summer 2010 fish survey and tissue collection	2010-07-10 09:32	LPR8YY-NH142
Late spring/early summer 2010 fish survey and tissue collection	2010-07-10 09:32	LPR8YY-NH143
Late summer 2010 small forage fish tissue collection	2010-07-26 14:41	LPR4TT-NH144
Late summer 2010 small forage fish tissue collection	2010-07-26 14:41	LPR4TT-NH145
Late summer 2010 small forage fish tissue collection	2010-07-26 14:41	LPR4TT-NH146
Late summer 2010 small forage fish tissue collection	2010-07-26 14:41	LPR4TT-NH147
Late summer 2010 small forage fish tissue collection	2010-07-26 14:41	LPR4TT-NH148
Late summer 2010 small forage fish tissue collection	2010-07-26 14:24	LPR4TT-NH149
Late summer 2010 small forage fish tissue collection	2010-07-26 11:13	LPR5SS-NH154
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Late summer 2010 small forage fish tissue collection	2010-07-26 11:13	LPR5SS-NH157
Late summer 2010 small forage fish tissue collection	2010-07-26 11:13	LPR5SS-NH158
Late summer 2010 small forage fish tissue collection	2010-07-26 11:13	LPR5SS-NH159
Late summer 2010 small forage fish tissue collection	2010-07-26 11:13	LPR5SS-NH160
Late summer 2010 small forage fish tissue collection	2010-07-26 11:13	LPR5SS-NH161
Late summer 2010 small forage fish tissue collection	2010-07-26 11:09	LPR5SS-NH164
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Late summer 2010 small forage fish tissue collection	2010-07-26 12:13	LPR5TT-NH152
Late summer 2010 small forage fish tissue collection	2010-07-26 12:13	LPR5TT-NH153
Late summer 2010 small forage fish tissue collection	2010-07-26 11:55	LPR5TT-NH162
Late summer 2010 small forage fish tissue collection	2010-07-26 11:55	LPR5TT-NH163

Late summer 2010 small forage fish tissue collection	2010-07-27 12:27	LPR5VV-NH167
Late summer 2010 small forage fish tissue collection	2010-07-27 12:24	LPR5VV-NH168
Late summer 2010 small forage fish tissue collection	2010-07-27 12:24	LPR5VV-NH169
Late summer 2010 small forage fish tissue collection	2010-07-27 12:24	LPR5VV-NH170
Late summer 2010 small forage fish tissue collection	2010-07-27 12:24	LPR5VV-NH171
Late summer 2010 small forage fish tissue collection	2010-07-27 12:24	LPR5VV-NH172
Late summer 2010 small forage fish tissue collection	2010-07-28 16:17	LPR5VV-NH173
Late summer 2010 small forage fish tissue collection	2010-07-27 10:36	LPR7UU-NH165
Late summer 2010 small forage fish tissue collection	2010-07-27 10:28	LPR7VV-NH166
Late summer 2010 small forage fish tissue collection	2010-07-27 11:04	LPR6TT-SB022
Late summer 2010 small forage fish tissue collection	2010-07-26 14:29	LPR4TT-SB020
Late summer 2010 small forage fish tissue collection	2010-07-27 11:04	LPR6TT-SB021
Late summer 2010 small forage fish tissue collection	2010-07-28 12:49	LPR8AB-SB026
Late summer 2010 small forage fish tissue collection	2010-07-27 11:04	LPR6TT-SB025
Late summer/early fall 2009 fish survey and tissue collection	2009-09-18 11:57:00	LPR5T-SB014
Late summer 2010 small forage fish tissue collection	2010-07-27 11:04	LPR6TT-SB024
Late summer/early fall 2009 fish survey and tissue collection	2009-09-19 14:24:00	LPR4S-SB017
Late summer 2010 small forage fish tissue collection	2010-07-27 11:04	LPR6TT-SB023
Late summer/early fall 2009 fish survey and tissue collection	2009-09-19 14:24:00	LPR4S-SB018
Late summer 2010 small forage fish tissue collection	2010-07-26 14:24	LPR4TT-SB019
Late summer/early fall 2009 fish survey and tissue collection	2009-09-18 14:10:00	LPR4T-SB015
Late summer/early fall 2009 fish survey and tissue collection	2009-09-12 09:35:00	LPR8V-SB008
Late summer/early fall 2009 fish survey and tissue collection	2009-08-26 07:11:00	LPR6Q-SB004
Late summer/early fall 2009 fish survey and tissue collection	2009-09-12 09:35:00	LPR8V-SB010
Late summer/early fall 2009 fish survey and tissue collection	2009-09-12 09:35:00	LPR8V-SB011
Late summer/early fall 2009 fish survey and tissue collection	2009-08-14 08:44:00	LPR3O-SB003
Late summer/early fall 2009 fish survey and tissue collection	2009-08-13 11:52:00	LPR3O-SB001
Late summer/early fall 2009 fish survey and tissue collection	2009-09-12 09:35:00	LPR8V-SB009
Late summer/early fall 2009 fish survey and tissue collection	2009-08-27 08:41:00	LPR6O-SB005
Late summer/early fall 2009 fish survey and tissue collection	2009-09-12 09:35:00	LPR8V-SB012
Late summer/early fall 2009 fish survey and tissue collection	2009-09-19 10:55:00	LPR1H-SB016
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Late summer/early fall 2009 fish survey and tissue collection	2009-09-12 09:35:00	LPR8V-SB007
Late summer/early fall 2009 fish survey and tissue collection	2009-08-14 08:44:00	LPR3O-SB002
Late summer/early fall 2009 fish survey and tissue collection	2009-09-10 11:15:00	LPR8R-SB006
Late spring/early summer 2010 fish survey and tissue collection	2010-06-24 11:18	LPR1LL-FM001
Late spring/early summer 2010 fish survey and tissue collection	2010-06-24 11:33	LPR1LL-FM002
Late spring/early summer 2010 fish survey and tissue collection	2010-06-25 13:05	LPR1LL-FM003
Late spring/early summer 2010 fish survey and tissue collection	2010-06-25 13:05	LPR1LL-FM004
Late spring/early summer 2010 fish survey and tissue collection	2010-06-25 13:15	LPR1LL-FM005
Late summer 2010 small forage fish tissue collection	2010-07-26 13:18	LPR4RR-FM007
Late summer 2010 small forage fish tissue collection	2010-07-26 14:27	LPR4UU-FM006
Late summer 2010 small forage fish tissue collection	2010-07-26 12:27	LPR5TT-FM008
Late summer 2010 small forage fish tissue collection	2010-07-26 12:27	LPR5TT-FM009
Late summer 2010 small forage fish tissue collection	2010-07-26 12:27	LPR5TT-FM010
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Late summer 2010 small forage fish tissue collection	2010-07-26 12:13	LPR5TT-FM016
Late summer/early fall 2009 fish survey and tissue collection	2009-09-19 09:35:00	LPR5Q-MC001
Late spring/early summer 2010 fish survey and tissue collection	2010-06-24 11:25	LPR1LL-MC002
Late spring/early summer 2010 fish survey and tissue collection	2010-06-24 11:13	LPR1LL-MC003
Late spring/early summer 2010 fish survey and tissue collection	2010-06-24 11:13	LPR1LL-MC004
Late spring/early summer 2010 fish survey and tissue collection	2010-06-24 11:13	LPR1LL-MC005

Late summer 2010 small forage fish tissue collection	2010-07-26 14:04	LPR4TT-MC006
Late summer 2010 small forage fish tissue collection	2010-07-26 14:29	LPR4TT-MC007
Late summer 2010 small forage fish tissue collection	2010-07-27 12:20	LPR5VV-MC008
Late summer 2010 small forage fish tissue collection	2010-07-27 11:04	LPR6TT-MC009
Late summer 2010 small forage fish tissue collection	2010-07-27 11:04	LPR6TT-MC010
Late summer 2010 small forage fish tissue collection	2010-07-27 11:19	LPR6TT-MC011
Late summer 2010 small forage fish tissue collection	2010-07-27 11:19	LPR6TT-MC012
Late summer 2010 small forage fish tissue collection	2010-07-27 11:19	LPR6TT-MC013
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Late summer/early fall 2009 fish survey and tissue collection	2009-09-15 09:35:00	LPR5M-EO016
Late summer/early fall 2009 fish survey and tissue collection	2009-08-25 07:36:00	LPR6C-EO002
Late summer/early fall 2009 fish survey and tissue collection	2009-08-29 06:53:00	LPR6I-EO005
Late summer/early fall 2009 fish survey and tissue collection	2009-08-26 07:49:00	LPR6J-EO003
Late summer/early fall 2009 fish survey and tissue collection	2009-08-26 08:50:00	LPR7K-EO004
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Late summer/early fall 2009 fish survey and tissue collection	2009-09-09 12:20:00	LPR8Y-EO009
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Late summer/early fall 2009 fish survey and tissue collection	2009-09-09 11:25:00	LPR8Z-EO008
Late summer/early fall 2009 fish survey and tissue collection	2009-09-10 08:40:00	LPR8Z-EO010
Late summer/early fall 2009 fish survey and tissue collection	2009-09-11 11:03:00	LPR8Z-EO012
Late summer/early fall 2009 fish survey and tissue collection	2009-09-11 11:03:00	LPR8Z-EO013
Late summer/early fall 2009 fish survey and tissue collection	2009-09-11 11:03:00	LPR8Z-EO014
Winter 2010 fish survey and tissue collection	2010-02-24 09:36	LPR6X-EO017
Late spring/early summer 2010 fish survey and tissue collection	2010-07-07 09:22	LPR6HH-EO022
Late spring/early summer 2010 fish survey and tissue collection	2010-07-07 09:23	LPR6HH-EO023
Late spring/early summer 2010 fish survey and tissue collection	2010-07-07 09:24	LPR6HH-EO024
Late spring/early summer 2010 fish survey and tissue collection	2010-07-10 08:30	LPR6HH-EO032
Late spring/early summer 2010 fish survey and tissue collection	2010-07-06 08:23	LPR6II-EO019
Late spring/early summer 2010 fish survey and tissue collection	2010-07-02 09:12	LPR6LL-EO018
Late spring/early summer 2010 fish survey and tissue collection	2010-07-07 08:53	LPR8NN-EO020
Late spring/early summer 2010 fish survey and tissue collection	2010-07-07 08:53	LPR8NN-EO021
Late spring/early summer 2010 fish survey and tissue collection	2010-07-08 08:20	LPR8SS-EO025
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Late spring/early summer 2010 fish survey and tissue collection	2010-07-09 10:15	LPR8SS-EO044
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Late spring/early summer 2010 fish survey and tissue collection	2010-07-09 11:51	LPR8YY-EO027
Late spring/early summer 2010 fish survey and tissue collection	2010-07-09 11:51	LPR8YY-EO028
Late spring/early summer 2010 fish survey and tissue collection	2010-07-09 11:51	LPR8YY-EO029
Late spring/early summer 2010 fish survey and tissue collection	2010-07-09 11:51	LPR8YY-EO030
Late spring/early summer 2010 fish survey and tissue collection	2010-07-09 11:51	LPR8YY-EO031
Late spring/early summer 2010 fish survey and tissue collection	2010-07-10 09:32	LPR8YY-EO033
Late spring/early summer 2010 fish survey and tissue collection	2010-07-09 11:51	LPR8YY-EO045
Late spring/early summer 2010 fish survey and tissue collection	2010-07-10 10:31	LPR8ZZ-EO034
Late spring/early summer 2010 fish survey and tissue collection	2010-07-10 10:31	LPR8ZZ-EO035
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Late spring/early summer 2010 fish survey and tissue collection	2010-07-10 10:31	LPR8ZZ-EO038
Late spring/early summer 2010 fish survey and tissue collection	2010-07-10 10:31	LPR8ZZ-EO039
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Late spring/early summer 2010 fish survey and tissue collection	2010-07-10 10:31	LPR8ZZ-EO041
Late spring/early summer 2010 fish survey and tissue collection	2010-07-10 10:31	LPR8ZZ-EO042
Late spring/early summer 2010 fish survey and tissue collection	2010-07-10 10:31	LPR8ZZ-EO043
Late summer 2010 small forage fish tissue collection	2010-07-26 13:18	LPR4RR-EO051
Late summer 2010 small forage fish tissue collection	2010-07-26 14:09	LPR4TT-EO047

Late summer 2010 small forage fish tissue collection	2010-07-26 14:34	LPR4TT-EO048
Late summer 2010 small forage fish tissue collection	2010-07-26 14:29	LPR4TT-EO049
Late summer 2010 small forage fish tissue collection	2010-07-26 14:04	LPR4TT-EO050
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Late summer/early fall 2009 fish survey and tissue collection	2009-08-14 07:16:00	LPR3L-AC004
Late summer/early fall 2009 fish survey and tissue collection	2009-08-14 09:04:00	LPR3P-AC005
Late summer/early fall 2009 fish survey and tissue collection	2009-08-13 10:26:00	LPR3Q-AC003
Late summer/early fall 2009 fish survey and tissue collection	2009-08-19 11:42:00	LPR4G-AC007
Late summer/early fall 2009 fish survey and tissue collection	2009-09-17 11:05:00	LPR4L-AC023
Late summer/early fall 2009 fish survey and tissue collection	2009-08-19 10:51:00	LPR5H-AC006
Late summer/early fall 2009 fish survey and tissue collection	2009-09-18 11:15:00	LPR5S-AC024
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Late summer/early fall 2009 fish survey and tissue collection	2009-08-27 07:27:00	LPR6S-AC013
Late summer/early fall 2009 fish survey and tissue collection	2009-08-27 08:26:00	LPR7C-AC015
Late summer/early fall 2009 fish survey and tissue collection	2009-08-29 12:06:00	LPR7N-AC017
Late summer/early fall 2009 fish survey and tissue collection	2009-08-27 09:48:00	LPR7P-AC014
Late summer/early fall 2009 fish survey and tissue collection	2009-09-08 08:04:00	LPR8Q-AC019
Late summer/early fall 2009 fish survey and tissue collection	2009-09-10 13:02:00	LPR8S-AC022
Winter 2010 fish survey and tissue collection	2010-01-29 10:50	LPR4BB-AC025
Winter 2010 fish survey and tissue collection	2010-01-29 10:50	LPR4BB-AC026
Winter 2010 fish survey and tissue collection	2010-02-23 09:33	LPR8CC-AC027
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Late summer/early fall 2009 fish survey and tissue collection	2009-09-01 13:10:00	LPR1J-MA140
Late summer/early fall 2009 fish survey and tissue collection	2009-09-01 13:10:00	LPR1J-MA141
Late summer/early fall 2009 fish survey and tissue collection	2009-09-02 15:46:00	LPR1J-MA145
Late summer/early fall 2009 fish survey and tissue collection	2009-09-03 12:22:00	LPR1P-MA154
Late summer/early fall 2009 fish survey and tissue collection	2009-09-02 13:23:00	LPR1Q-MA147
Late summer/early fall 2009 fish survey and tissue collection	2009-09-02 13:23:00	LPR1Q-MA150
Late summer/early fall 2009 fish survey and tissue collection	2009-09-02 13:20:00	LPR1Q-MA153
Late summer/early fall 2009 fish survey and tissue collection	2009-09-03 12:36:00	LPR1Q-MA155
Late summer/early fall 2009 fish survey and tissue collection	2009-09-05 11:12:00	LPR2B-MA161
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Late summer/early fall 2009 fish survey and tissue collection	2009-09-02 14:18:00	LPR2C-MA151
Late summer/early fall 2009 fish survey and tissue collection	2009-09-05 11:40:00	LPR2C-MA163
Late summer/early fall 2009 fish survey and tissue collection	2009-09-05 11:40:00	LPR2C-MA164
Late summer/early fall 2009 fish survey and tissue collection	2009-09-01 10:58:00	LPR2E-MA142
Late summer/early fall 2009 fish survey and tissue collection	2009-09-04 12:53:00	LPR2E-MA159
Late summer/early fall 2009 fish survey and tissue collection	2009-09-04 11:25:00	LPR2H-MA158
Late summer/early fall 2009 fish survey and tissue collection	2009-09-04 10:22:00	LPR2I-MA157
Late summer/early fall 2009 fish survey and tissue collection	2009-09-01 12:21:00	LPR2O-MA143
Late summer/early fall 2009 fish survey and tissue collection	2009-09-01 12:21:00	LPR2O-MA144
Late summer/early fall 2009 fish survey and tissue collection	2009-09-02 14:09:00	LPR2O-MA146

Late summer/early fall 2009 fish survey and tissue collection	2009-09-02 14:06:00	LPR2O-MA148
Late summer/early fall 2009 fish survey and tissue collection	2009-09-02 14:03:00	LPR2O-MA152
Late summer/early fall 2009 fish survey and tissue collection	2009-09-03 14:44:00	LPR2O-MA156
Late summer/early fall 2009 fish survey and tissue collection	2009-09-04 11:39:00	LPR2O-MA160
Late summer/early fall 2009 fish survey and tissue collection	2009-09-05 11:26:00	LPR2O-MA162
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Late summer/early fall 2009 fish survey and tissue collection	2009-08-12 09:46:00	LPR3G-MA035
Late summer/early fall 2009 fish survey and tissue collection	2009-08-12 09:46:00	LPR3G-MA036
Late summer/early fall 2009 fish survey and tissue collection	2009-08-12 09:44:00	LPR3G-MA038
Late summer/early fall 2009 fish survey and tissue collection	2009-08-13 11:42:00	LPR3H-MA047
Late summer/early fall 2009 fish survey and tissue collection	2009-08-13 11:23:00	LPR3I-MA045
Late summer/early fall 2009 fish survey and tissue collection	2009-08-15 09:04:00	LPR3I-MA108
Late summer/early fall 2009 fish survey and tissue collection	2009-08-15 09:04:00	LPR3I-MA109
Late summer/early fall 2009 fish survey and tissue collection	2009-08-13 10:56:00	LPR3J-MA042
Late summer/early fall 2009 fish survey and tissue collection	2009-08-13 10:56:00	LPR3J-MA043
Late summer/early fall 2009 fish survey and tissue collection	2009-08-13 10:56:00	LPR3J-MA044
Late summer/early fall 2009 fish survey and tissue collection	2009-08-13 10:58:00	LPR3J-MA063
Late summer/early fall 2009 fish survey and tissue collection	2009-08-14 09:00:00	LPR3J-MA089
Late summer/early fall 2009 fish survey and tissue collection	2009-08-12 08:53:00	LPR3K-MA019
Late summer/early fall 2009 fish survey and tissue collection	2009-08-12 08:53:00	LPR3K-MA020
Late summer/early fall 2009 fish survey and tissue collection	2009-08-12 08:51:00	LPR3K-MA021
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Late summer/early fall 2009 fish survey and tissue collection	2009-08-12 08:55:00	LPR3K-MA023
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Late summer/early fall 2009 fish survey and tissue collection	2009-08-13 11:06:00	LPR3K-MA046
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Late summer/early fall 2009 fish survey and tissue collection	2009-08-12 09:24:00	LPR3M-MA029

Late summer/early fall 2009 fish survey and tissue collection	2009-08-12 09:24:00	LPR3M-MA030
Late summer/early fall 2009 fish survey and tissue collection	2009-08-12 09:24:00	LPR3M-MA031
Late summer/early fall 2009 fish survey and tissue collection	2009-08-12 09:24:00	LPR3M-MA032
Late summer/early fall 2009 fish survey and tissue collection	2009-08-12 09:24:00	LPR3M-MA037
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Late summer/early fall 2009 fish survey and tissue collection	2009-08-14 07:46:00	LPR3N-MA092
Late summer/early fall 2009 fish survey and tissue collection	2009-08-14 07:46:00	LPR3N-MA095
Late summer/early fall 2009 fish survey and tissue collection	2009-08-14 07:46:00	LPR3N-MA096
Late summer/early fall 2009 fish survey and tissue collection	2009-08-14 07:46:00	LPR3N-MA097
Late summer/early fall 2009 fish survey and tissue collection	2009-08-14 07:46:00	LPR3N-MA098
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Late summer/early fall 2009 fish survey and tissue collection	2009-08-11 07:21:00	LPR3O-MA005
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Late summer/early fall 2009 fish survey and tissue collection	2009-08-13 11:52:00	LPR3O-MA050
Late summer/early fall 2009 fish survey and tissue collection	2009-08-13 11:52:00	LPR3O-MA051
Late summer/early fall 2009 fish survey and tissue collection	2009-08-13 11:52:00	LPR3O-MA052
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Late summer/early fall 2009 fish survey and tissue collection	2009-08-13 11:52:00	LPR3O-MA057
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Late summer/early fall 2009 fish survey and tissue collection	2009-08-13 11:52:00	LPR3O-MA064
Late summer/early fall 2009 fish survey and tissue collection	2009-08-13 11:52:00	LPR3O-MA065
Late summer/early fall 2009 fish survey and tissue collection	2009-08-13 11:52:00	LPR3O-MA066
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Late summer/early fall 2009 fish survey and tissue collection	2009-08-13 11:52:00	LPR3O-MA068
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Late summer/early fall 2009 fish survey and tissue collection	2009-08-13 11:52:00	LPR3O-MA076
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Late summer/early fall 2009 fish survey and tissue collection	2009-08-13 11:52:00	LPR3O-MA080
Late summer/early fall 2009 fish survey and tissue collection	2009-08-13 11:52:00	LPR3O-MA081
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Late summer/early fall 2009 fish survey and tissue collection	2009-08-14 08:17:00	LPR4H-MA094

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Late summer/early fall 2009 fish survey and tissue collection	2009-08-19 12:35:00	LPR4I-MA116
Late summer/early fall 2009 fish survey and tissue collection	2009-09-18 13:00:00	LPR4L-MA215
Late summer/early fall 2009 fish survey and tissue collection	2009-09-15 09:23:00	LPR4P-MA193
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Late summer/early fall 2009 fish survey and tissue collection	2009-09-18 13:19:00	LPR4R-MA216
Late summer/early fall 2009 fish survey and tissue collection	2009-09-18 13:19:00	LPR4R-MA217
Late summer/early fall 2009 fish survey and tissue collection	2009-09-18 13:19:00	LPR4R-MA218
Late summer/early fall 2009 fish survey and tissue collection	2009-09-18 13:19:00	LPR4R-MA219
Late summer/early fall 2009 fish survey and tissue collection	2009-09-18 13:50:00	LPR4S-MA220
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Late summer/early fall 2009 fish survey and tissue collection	2009-09-18 13:50:00	LPR4S-MA222
Late summer/early fall 2009 fish survey and tissue collection	2009-09-18 13:50:00	LPR4S-MA223
Late summer/early fall 2009 fish survey and tissue collection	2009-09-18 13:50:00	LPR4S-MA224
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Late summer/early fall 2009 fish survey and tissue collection	2009-09-19 14:24:00	LPR4S-MA266
Late summer/early fall 2009 fish survey and tissue collection	2009-09-19 14:24:00	LPR4S-MA267
Late summer/early fall 2009 fish survey and tissue collection	2009-09-18 14:10:00	LPR4T-MA225
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Late summer/early fall 2009 fish survey and tissue collection	2009-09-18 14:10:00	LPR4T-MA232
Late summer/early fall 2009 fish survey and tissue collection	2009-09-18 14:10:00	LPR4T-MA249
Late summer/early fall 2009 fish survey and tissue collection	2009-09-19 12:10:00	LPR4T-MA261
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Late summer/early fall 2009 fish survey and tissue collection	2009-09-19 12:10:00	LPR4T-MA263
Late summer/early fall 2009 fish survey and tissue collection	2009-09-19 12:10:00	LPR4T-MA264
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Late summer/early fall 2009 fish survey and tissue collection	2009-09-17 09:52:00	LPR5I-MA196
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Late summer/early fall 2009 fish survey and tissue collection	2009-08-18 09:30:00	LPR5J-MA112
Late summer/early fall 2009 fish survey and tissue collection	2009-08-18 14:05:00	LPR5K-MA115
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Late summer/early fall 2009 fish survey and tissue collection	2009-09-18 10:35:00	LPR5R-MA206

Late summer/early fall 2009 fish survey and tissue collection	2009-09-18 10:35:00	LPR5R-MA207
Late summer/early fall 2009 fish survey and tissue collection	2009-09-18 10:35:00	LPR5R-MA208
Late summer/early fall 2009 fish survey and tissue collection	2009-09-18 10:35:00	LPR5R-MA209
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Late summer/early fall 2009 fish survey and tissue collection	2009-09-19 10:12:00	LPR5R-MA258
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Late summer/early fall 2009 fish survey and tissue collection	2009-09-18 11:57:00	LPR5T-MA240
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Late summer/early fall 2009 fish survey and tissue collection	2009-09-18 11:57:00	LPR5T-MA244
Late summer/early fall 2009 fish survey and tissue collection	2009-09-18 11:57:00	LPR5T-MA245
Late summer/early fall 2009 fish survey and tissue collection	2009-09-18 11:57:00	LPR5T-MA246
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Late summer/early fall 2009 fish survey and tissue collection	2009-09-18 11:57:00	LPR5T-MA248
Late summer 2010 small forage fish tissue collection	2010-07-27 11:04	LPR6TT-MA636
Late summer 2010 small forage fish tissue collection	2010-07-27 11:00	LPR6TT-MA602
Late summer 2010 small forage fish tissue collection	2010-07-27 11:04	LPR6TT-MA631
Late summer 2010 small forage fish tissue collection	2010-07-27 11:19	LPR6TT-MA621
Late summer 2010 small forage fish tissue collection	2010-07-27 11:04	LPR6TT-MA643
Late summer 2010 small forage fish tissue collection	2010-07-27 11:04	LPR6TT-MA642
Late summer 2010 small forage fish tissue collection	2010-07-27 11:28	LPR6TT-MA646
Late summer 2010 small forage fish tissue collection	2010-07-27 11:19	LPR6TT-MA611
Late summer 2010 small forage fish tissue collection	2010-07-27 11:19	LPR6TT-MA617
Late summer 2010 small forage fish tissue collection	2010-07-27 11:19	LPR6TT-MA623
Late summer 2010 small forage fish tissue collection	2010-07-27 11:19	LPR6TT-MA624
Late summer 2010 small forage fish tissue collection	2010-07-27 11:04	LPR6TT-MA633
Late summer 2010 small forage fish tissue collection	2010-07-27 11:04	LPR6TT-MA638
Late summer 2010 small forage fish tissue collection	2010-07-27 11:04	LPR6TT-MA640
Late summer 2010 small forage fish tissue collection	2010-07-27 11:04	LPR6TT-MA641
Late summer 2010 small forage fish tissue collection	2010-07-27 11:04	LPR6TT-MA639
Late summer 2010 small forage fish tissue collection	2010-07-27 11:28	LPR6TT-MA645
Late summer 2010 small forage fish tissue collection	2010-07-27 11:04	LPR6TT-MA628
Late summer 2010 small forage fish tissue collection	2010-07-27 11:04	LPR6TT-MA637
Late summer 2010 small forage fish tissue collection	2010-07-27 11:00	LPR6TT-MA600
Late summer 2010 small forage fish tissue collection	2010-07-27 11:19	LPR6TT-MA607
Late summer 2010 small forage fish tissue collection	2010-07-27 11:19	LPR6TT-MA609
Late summer 2010 small forage fish tissue collection	2010-07-27 11:19	LPR6TT-MA610
Late summer 2010 small forage fish tissue collection	2010-07-27 11:19	LPR6TT-MA622
Late summer 2010 small forage fish tissue collection	2010-07-27 11:04	LPR6TT-MA627
Late summer 2010 small forage fish tissue collection	2010-07-27 11:04	LPR6TT-MA629

Late summer 2010 small forage fish tissue collection	2010-07-27 11:04	LPR6TT-MA630
Late summer 2010 small forage fish tissue collection	2010-07-27 11:04	LPR6TT-MA634
Late summer 2010 small forage fish tissue collection	2010-07-27 11:00	LPR6TT-MA601
Late summer 2010 small forage fish tissue collection	2010-07-27 11:10	LPR6TT-MA605
Late summer 2010 small forage fish tissue collection	2010-07-27 11:19	LPR6TT-MA606
Late summer 2010 small forage fish tissue collection	2010-07-27 11:19	LPR6TT-MA618
Late summer 2010 small forage fish tissue collection	2010-07-27 11:19	LPR6TT-MA619
Late summer 2010 small forage fish tissue collection	2010-07-27 11:19	LPR6TT-MA625
Late summer 2010 small forage fish tissue collection	2010-07-27 11:04	LPR6TT-MA626
Late summer 2010 small forage fish tissue collection	2010-07-27 11:28	LPR6TT-MA647
Late summer 2010 small forage fish tissue collection	2010-07-27 11:19	LPR6TT-MA608
Late summer 2010 small forage fish tissue collection	2010-07-27 11:04	LPR6TT-MA632
Late summer 2010 small forage fish tissue collection	2010-07-27 11:28	LPR6TT-MA644
Late summer 2010 small forage fish tissue collection	2010-07-27 11:19	LPR6TT-MA620
Late summer 2010 small forage fish tissue collection	2010-07-27 11:19	LPR6TT-MA612
Late summer 2010 small forage fish tissue collection	2010-07-27 11:19	LPR6TT-MA616
Late summer 2010 small forage fish tissue collection	2010-07-27 11:10	LPR6TT-MA603
Late summer 2010 small forage fish tissue collection	2010-07-27 11:19	LPR6TT-MA613
Late summer 2010 small forage fish tissue collection	2010-07-27 11:19	LPR6TT-MA615
Late summer 2010 small forage fish tissue collection	2010-07-27 11:19	LPR6TT-MA614
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Late summer 2010 small forage fish tissue collection	2010-07-27 11:10	LPR6TT-MA604
Winter 2010 fish survey and tissue collection	2010-02-19 10:03	LPR3X-MA270
Late summer 2010 small forage fish tissue collection	2010-07-26 13:18	LPR4RR-MA391
Late summer 2010 small forage fish tissue collection	2010-07-26 13:26	LPR4RR-MA394
Late summer 2010 small forage fish tissue collection	2010-07-26 13:26	LPR4RR-MA395
Late summer 2010 small forage fish tissue collection	2010-07-26 13:26	LPR4RR-MA396
Late summer 2010 small forage fish tissue collection	2010-07-26 13:26	LPR4RR-MA397
Late summer 2010 small forage fish tissue collection	2010-07-26 13:26	LPR4RR-MA398
Late summer 2010 small forage fish tissue collection	2010-07-26 13:26	LPR4RR-MA399
Late summer 2010 small forage fish tissue collection	2010-07-26 13:18	LPR4RR-MA552
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Late summer 2010 small forage fish tissue collection	2010-07-26 13:18	LPR4RR-MA554
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Late summer 2010 small forage fish tissue collection	2010-07-26 14:09	LPR4TT-MA382
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Late summer 2010 small forage fish tissue collection	2010-07-26 14:09	LPR4TT-MA384
Late summer 2010 small forage fish tissue collection	2010-07-26 14:09	LPR4TT-MA385
Late summer 2010 small forage fish tissue collection	2010-07-26 14:09	LPR4TT-MA386
Late summer 2010 small forage fish tissue collection	2010-07-26 14:09	LPR4TT-MA387
Late summer 2010 small forage fish tissue collection	2010-07-26 14:09	LPR4TT-MA388
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Late summer 2010 small forage fish tissue collection	2010-07-26 14:41	LPR4TT-MA435
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Late summer 2010 small forage fish tissue collection	2010-07-26 14:41	LPR4TT-MA437
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Late summer 2010 small forage fish tissue collection	2010-07-26 14:41	LPR4TT-MA439

Late summer 2010 small forage fish tissue collection	2010-07-26 14:41	LPR4TT-MA440
Late summer 2010 small forage fish tissue collection	2010-07-26 14:41	LPR4TT-MA441
Late summer 2010 small forage fish tissue collection	2010-07-26 14:41	LPR4TT-MA442
Late summer 2010 small forage fish tissue collection	2010-07-26 14:41	LPR4TT-MA443
Late summer 2010 small forage fish tissue collection	2010-07-26 14:41	LPR4TT-MA444
Late summer 2010 small forage fish tissue collection	2010-07-26 14:41	LPR4TT-MA445
Late summer 2010 small forage fish tissue collection	2010-07-26 14:41	LPR4TT-MA446
Late summer 2010 small forage fish tissue collection	2010-07-26 14:41	LPR4TT-MA447
Late summer 2010 small forage fish tissue collection	2010-07-26 14:41	LPR4TT-MA448
Late summer 2010 small forage fish tissue collection	2010-07-26 14:41	LPR4TT-MA449
Late summer 2010 small forage fish tissue collection	2010-07-26 14:41	LPR4TT-MA450
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Late summer/early fall 2009 fish survey and tissue collection	2009-09-16 10:22:00	LPR6H-MA194
Late summer/early fall 2009 fish survey and tissue collection	2009-08-28 06:51:00	LPR6I-MA134
Late summer/early fall 2009 fish survey and tissue collection	2009-09-09 07:49:00	LPR8U-MA172
Late summer 2010 small forage fish tissue collection	2010-07-27 10:36	LPR7UU-MA577
Late summer/early fall 2009 fish survey and tissue collection	2009-08-28 08:53:00	LPR7G-MA133
Late summer/early fall 2009 fish survey and tissue collection	2009-09-10 09:30:00	LPR8U-MA170
Late summer/early fall 2009 fish survey and tissue collection	2009-08-27 07:17:00	LPR6G-MA129
Late summer/early fall 2009 fish survey and tissue collection	2009-08-27 14:54:00	LPR6V-MA130
Late summer/early fall 2009 fish survey and tissue collection	2009-09-12 09:35:00	LPR8V-MA190
Late summer/early fall 2009 fish survey and tissue collection	2009-08-28 09:06:00	LPR7Q-MA132
Late summer/early fall 2009 fish survey and tissue collection	2009-08-26 07:11:00	LPR6Q-MA124
Late summer/early fall 2009 fish survey and tissue collection	2009-09-10 09:30:00	LPR8U-MA169
Late summer/early fall 2009 fish survey and tissue collection	2009-08-26 10:37:00	LPR7N-MA126
Late summer/early fall 2009 fish survey and tissue collection	2009-08-29 08:50:00	LPR7J-MA137
Late summer/early fall 2009 fish survey and tissue collection	2009-09-07 13:15:00	LPR8V-MA165
Late summer/early fall 2009 fish survey and tissue collection	2009-09-12 09:35:00	LPR8V-MA174
Late summer/early fall 2009 fish survey and tissue collection	2009-09-12 09:35:00	LPR8V-MA192
Late summer/early fall 2009 fish survey and tissue collection	2009-09-12 09:35:00	LPR8V-MA180
Late summer/early fall 2009 fish survey and tissue collection	2009-09-19 14:37:00	LPR6H-MA268
Late summer/early fall 2009 fish survey and tissue collection	2009-09-12 09:35:00	LPR8V-MA184
Late summer/early fall 2009 fish survey and tissue collection	2009-09-12 09:35:00	LPR8V-MA182
Late summer/early fall 2009 fish survey and tissue collection	2009-08-26 11:26:00	LPR7J-MA127
Late summer/early fall 2009 fish survey and tissue collection	2009-09-12 09:35:00	LPR8V-MA186
Late summer/early fall 2009 fish survey and tissue collection	2009-09-12 09:35:00	LPR8V-MA187
Late summer/early fall 2009 fish survey and tissue collection	2009-09-12 09:35:00	LPR8V-MA188
Late summer/early fall 2009 fish survey and tissue collection	2009-09-12 09:35:00	LPR8V-MA189
Late summer/early fall 2009 fish survey and tissue collection	2009-09-12 09:35:00	LPR8V-MA191
Late summer/early fall 2009 fish survey and tissue collection	2009-09-12 09:35:00	LPR8V-MA175
Late summer/early fall 2009 fish survey and tissue collection	2009-09-12 09:35:00	LPR8V-MA181
Late summer/early fall 2009 fish survey and tissue collection	2009-08-28 07:07:00	LPR6N-MA131
Late summer/early fall 2009 fish survey and tissue collection	2009-09-10 09:30:00	LPR8U-MA171
Late summer/early fall 2009 fish survey and tissue collection	2009-09-12 09:35:00	LPR8V-MA177
Late summer/early fall 2009 fish survey and tissue collection	2009-08-26 08:18:00	LPR6R-MA125
Late summer/early fall 2009 fish survey and tissue collection	2009-09-12 09:35:00	LPR8V-MA178
Late summer/early fall 2009 fish survey and tissue collection	2009-09-07 14:00:00	LPR8X-MA166
Late summer/early fall 2009 fish survey and tissue collection	2009-09-12 09:35:00	LPR8V-MA179
Late summer/early fall 2009 fish survey and tissue collection	2009-09-12 09:35:00	LPR8V-MA176

Late summer/early fall 2009 fish survey and tissue collection	2009-09-12 09:35:00	LPR8V-MA183
Late summer/early fall 2009 fish survey and tissue collection	2009-09-12 09:35:00	LPR8V-MA185
Late summer/early fall 2009 fish survey and tissue collection	2009-09-10 08:38:00	LPR8V-MA167
Late summer/early fall 2009 fish survey and tissue collection	2009-09-10 09:30:00	LPR8U-MA168
Late summer/early fall 2009 fish survey and tissue collection	2009-08-27 06:56:00	LPR6Q-MA128
Late summer/early fall 2009 fish survey and tissue collection	2009-08-25 11:09:00	LPR7Q-MA123
Late summer/early fall 2009 fish survey and tissue collection	2009-08-25 07:30:00	LPR6N-MA120
Late summer/early fall 2009 fish survey and tissue collection	2009-09-10 09:30:00	LPR8U-MA173
Late summer/early fall 2009 fish survey and tissue collection	2009-08-25 08:20:00	LPR6R-MA121
Late summer/early fall 2009 fish survey and tissue collection	2009-08-25 09:54:00	LPR6L-MA122
Late summer/early fall 2009 fish survey and tissue collection	2009-09-18 13:50:00	LPR4S-WS022
Late summer/early fall 2009 fish survey and tissue collection	2009-09-18 14:10:00	LPR4T-WS023
Late summer/early fall 2009 fish survey and tissue collection	2009-09-15 08:34:00	LPR5I-WS019
Late summer/early fall 2009 fish survey and tissue collection	2009-09-18 11:57:00	LPR5T-WS020
Late summer/early fall 2009 fish survey and tissue collection	2009-09-18 11:57:00	LPR5T-WS021
Late summer/early fall 2009 fish survey and tissue collection	2009-09-19 11:33:00	LPR5T-WS024
Late summer/early fall 2009 fish survey and tissue collection	2009-08-29 07:10:00	LPR6N-WS002
Late summer/early fall 2009 fish survey and tissue collection	2009-08-27 12:22:00	LPR7R-WS001
Late summer/early fall 2009 fish survey and tissue collection	2009-09-12 09:35:00	LPR8V-WS006
Late summer/early fall 2009 fish survey and tissue collection	2009-09-12 09:35:00	LPR8V-WS007
Late summer/early fall 2009 fish survey and tissue collection	2009-09-12 09:35:00	LPR8V-WS008
Late summer/early fall 2009 fish survey and tissue collection	2009-09-12 09:35:00	LPR8V-WS009
Late summer/early fall 2009 fish survey and tissue collection	2009-09-07 13:50:00	LPR8W-WS003
Late summer/early fall 2009 fish survey and tissue collection	2009-09-07 13:50:00	LPR8W-WS004
Late summer/early fall 2009 fish survey and tissue collection	2009-09-12 11:16:00	LPR8W-WS013
Late summer/early fall 2009 fish survey and tissue collection	2009-09-12 11:16:00	LPR8W-WS014
Late summer/early fall 2009 fish survey and tissue collection	2009-09-12 11:16:00	LPR8W-WS015
Late summer/early fall 2009 fish survey and tissue collection	2009-09-12 11:16:00	LPR8W-WS016
Late summer/early fall 2009 fish survey and tissue collection	2009-09-12 11:16:00	LPR8W-WS017
Late summer/early fall 2009 fish survey and tissue collection	2009-09-12 11:16:00	LPR8W-WS018
Late summer/early fall 2009 fish survey and tissue collection	2009-09-07 14:00:00	LPR8X-WS005
Late summer/early fall 2009 fish survey and tissue collection	2009-09-12 10:57:00	LPR8X-WS010
Late summer/early fall 2009 fish survey and tissue collection	2009-09-12 10:57:00	LPR8X-WS011
Late summer/early fall 2009 fish survey and tissue collection	2009-09-12 10:57:00	LPR8X-WS012
Late summer/early fall 2009 fish survey and tissue collection	2009-09-04 12:51:00	LPR1J-WF003
Late summer/early fall 2009 fish survey and tissue collection	2009-09-04 09:39:00	LPR1K-WF002
Late summer/early fall 2009 fish survey and tissue collection	2009-09-03 13:13:00	LPR2K-WF001

Trap Attempt ID	Species	Length (cm)	Weight (g)	Gender	Reach	≥ RM 10	Fish Size Category
LPR1G-A1	American eel	55	364	indeterminant	1	no	> 30 cm
LPR1G-A2	American eel	52	312	indeterminant	1	no	> 30 cm
LPR1G-C3	American eel	58	400	indeterminant	1	no	> 30 cm
LPR1G-A5	American eel	57.5	452	indeterminant	1	no	> 30 cm
LPR1G-A10	American eel	52.9	326	indeterminant	1	no	> 30 cm
LPR2N-C2	American eel	50.8	250	indeterminant	2	no	> 30 cm
LPR3L-A1	American eel	52	360	indeterminant	3	no	> 30 cm
LPR3L-B1	American eel	52.5	290	indeterminant	3	no	> 30 cm
LPR3L-C2	American eel	62	490	indeterminant	3	no	> 30 cm
LPR3P-B1	American eel	55.1	375	indeterminant	3	no	> 30 cm
LPR3P-C1	American eel	50	255	indeterminant	3	no	> 30 cm
LPR3P-A2	American eel	75	850	indeterminant	3	no	> 30 cm
LPR3Q-A1	American eel	50	390	indeterminant	3	no	> 30 cm
LPR3Q-C1	American eel	60	438	indeterminant	3	no	> 30 cm
LPR3Q-B2	American eel	63.5	420	indeterminant	3	no	> 30 cm
LPR4F-B3	American eel	66.2	616	indeterminant	4	no	> 30 cm
LPR4L-A5	American eel	56	386	indeterminant	4	no	> 30 cm
LPR4M-B2	American eel	68	656	indeterminant	4	no	> 30 cm
LPR4M-C3	American eel	61	468	indeterminant	4	no	> 30 cm
LPR4M-B5	American eel	57	106	indeterminant	4	no	> 30 cm
LPR4N-C1	American eel	51.1	318	indeterminant	4	no	> 30 cm
LPR4N-A2	American eel	56.1	362	indeterminant	4	no	> 30 cm
LPR4N-A4	American eel	50	250	indeterminant	4	no	> 30 cm
LPR4N-C5	American eel	55	352	indeterminant	4	no	> 30 cm
LPR4Q-C1	American eel	60.3	422	indeterminant	4	no	> 30 cm
LPR4Q-A1	American eel	65	608	indeterminant	4	no	> 30 cm
LPR4Q-A3	American eel	56.1	366	indeterminant	4	no	> 30 cm
LPR4Q-A3	American eel	65.2	666	indeterminant	4	no	> 30 cm
LPR5F-A1	American eel	57.8	518	indeterminant	5	no	> 30 cm
LPR5F-B2	American eel	56.4	380	indeterminant	5	no	> 30 cm
LPR5F-C4	American eel	61.5	542	indeterminant	5	no	> 30 cm
LPR5F-B4	American eel	67.5	638	indeterminant	5	no	> 30 cm
LPR5H-C2	American eel	59.2	524	indeterminant	5	no	> 30 cm
LPR5H-C5	American eel	56	390	indeterminant	5	no	> 30 cm
LPR5J-C3	American eel	55	370	indeterminant	5	no	> 30 cm
LPR5J-A3	American eel	61	506	indeterminant	5	no	> 30 cm
LPR5M-B3	American eel	57	442	indeterminant	5	no	> 30 cm
LPR6O-A5	American eel	74.1	778	indeterminant	6	yes	> 30 cm
LPR6P-A1	American eel	59	580	indeterminant	6	yes	> 30 cm
LPR7O-A3	American eel	62.4	600	indeterminant	7	yes	> 30 cm
LPR1Q-A3	American eel	39.2	64	indeterminant	1	no	> 30 cm
LPR1Q-A3	American eel	28.7	46	indeterminant	1	no	≤ 30 cm
LPR1Q-A3	American eel	34	60	indeterminant	1	no	> 30 cm
LPR2E-C1	American eel	23.7	18	indeterminant	2	no	≤ 30 cm
LPR2F-A4	American eel	40	118	indeterminant	2	no	> 30 cm
LPR2G-A3	American eel	47	232	indeterminant	2	no	> 30 cm
LPR3B-B4	American eel	25	40	indeterminant	3	no	≤ 30 cm
LPR3F-C4	American eel	42.6	128	indeterminant	3	no	> 30 cm
LPR3F-C4	American eel	32	70	indeterminant	3	no	> 30 cm
LPR3I-A2	American eel	21.6	16	indeterminant	3	no	≤ 30 cm

LPR3L-B1	American eel	41.5	152	indeterminant	3	no	> 30 cm
LPR3L-C1	American eel	48	285	indeterminant	3	no	> 30 cm
LPR3P-C1	American eel	40	159	indeterminant	3	no	> 30 cm
LPR3Q-B2	American eel	45	196	indeterminant	3	no	> 30 cm
LPR4C-B1	American eel	33.5	60	indeterminant	4	no	> 30 cm
LPR4D-B3	American eel	20.7	16	indeterminant	4	no	≤ 30 cm
LPR4J-C1	American eel	26.4	46	indeterminant	4	no	≤ 30 cm
LPR4M-C2	American eel	27.3	44	indeterminant	4	no	≤ 30 cm
LPR4M-A3	American eel	48.2	226	indeterminant	4	no	> 30 cm
LPR4M-B5	American eel	48	244	indeterminant	4	no	> 30 cm
LPR4N-A2	American eel	46.3	622	indeterminant	4	no	> 30 cm
LPR5A-A3	American eel	32.5	82	indeterminant	5	no	> 30 cm
LPR5A-B3	American eel	34.5	84	indeterminant	5	no	> 30 cm
LPR5A-B3	American eel	31	58	male	5	no	> 30 cm
LPR5A-A4	American eel	29.9	46	indeterminant	5	no	≤ 30 cm
LPR5A-A4	American eel	31.4	68	indeterminant	5	no	> 30 cm
LPR5A-C5	American eel	30	52	indeterminant	5	no	> 30 cm
LPR5A-A5	American eel	27	42	indeterminant	5	no	≤ 30 cm
LPR5A-A5	American eel	17	16	indeterminant	5	no	≤ 30 cm
LPR5B-C2	American eel	32.2	60	indeterminant	5	no	> 30 cm
LPR5B-C4	American eel	25.5	38	indeterminant	5	no	≤ 30 cm
LPR5F-B1	American eel	49	260	indeterminant	5	no	> 30 cm
LPR5F-C3	American eel	4.3	138	indeterminant	5	no	≤ 30 cm
LPR5H-A2	American eel	47.5	206	indeterminant	5	no	> 30 cm
LPR5H-A3	American eel	46	246	indeterminant	5	no	> 30 cm
LPR5H-B3	American eel	47.3	244	indeterminant	5	no	> 30 cm
LPR5H-B5	American eel	48	254	indeterminant	5	no	> 30 cm
LPR5J-C5	American eel	30	48	indeterminant	5	no	> 30 cm
LPR5J-B5	American eel	36	96	indeterminant	5	no	> 30 cm
LPR5P-B1	American eel	21.8	16	indeterminant	5	no	≤ 30 cm
LPR6B-B1	American eel	31.9	66	indeterminant	6	yes	> 30 cm
LPR6F-A10	American eel	31.9	66	indeterminant	6	yes	> 30 cm
LPR6O-B3	American eel	44.9	214	indeterminant	6	yes	> 30 cm
LPR6R-C5	American eel	48.1	258	indeterminant	6	yes	> 30 cm
LPR7D-B4	American eel	24.5	28	indeterminant	7	yes	≤ 30 cm
LPR7E-A1	American eel	24	28	indeterminant	7	yes	≤ 30 cm
LPR7E-C1	American eel	26.2	34	indeterminant	7	yes	≤ 30 cm
LPR7H-A3	American eel	37.3	126	indeterminant	7	yes	> 30 cm
LPR8D-A4	American eel	29.7	47	indeterminant	8	yes	≤ 30 cm
LPR8D-A4	American eel	26	31	indeterminant	8	yes	≤ 30 cm
LPR8F-A1	American eel	24.3	17.5	indeterminant	8	yes	≤ 30 cm
LPR8U-A3	American eel	18.5	10	indeterminant	8	yes	≤ 30 cm
LPR8U-A3	American eel	26.9	32	indeterminant	8	yes	≤ 30 cm
LPR8U-A3	American eel	31	36	indeterminant	8	yes	> 30 cm
LPR8U-A3	American eel	29	44	indeterminant	8	yes	≤ 30 cm
LPR8U-A3	American eel	26.4	28	indeterminant	8	yes	≤ 30 cm
LPR8U-A3	American eel	25.9	24	indeterminant	8	yes	≤ 30 cm
LPR8U-A3	American eel	25.1	28	indeterminant	8	yes	≤ 30 cm
LPR8U-A3	American eel	22.5	16	indeterminant	8	yes	≤ 30 cm
LPR8U-A3	American eel	28.7	36	indeterminant	8	yes	≤ 30 cm
LPR8U-A3	American eel	22.4	16	indeterminant	8	yes	≤ 30 cm
LPR8U-A3	American eel	17.7	8	indeterminant	8	yes	≤ 30 cm
LPR8U-A3	American eel	17.4	8	indeterminant	8	yes	≤ 30 cm
LPR8U-A3	American eel	16.8	8	indeterminant	8	yes	≤ 30 cm
LPR8U-A4	American eel	19.8	14	indeterminant	8	yes	≤ 30 cm
LPR8U-A4	American eel	23.2	20	indeterminant	8	yes	≤ 30 cm

LPR8U-A5	American eel	20.9	13	indeterminant	8	yes	≤ 30 cm
LPR8V-A2	American eel	24.4	22	indeterminant	8	yes	≤ 30 cm
LPR8V-A2	American eel	27.7	44	indeterminant	8	yes	≤ 30 cm
LPR8V-A3	American eel	26.7	32	indeterminant	8	yes	≤ 30 cm
LPR8V-A3	American eel	32.5	64	indeterminant	8	yes	> 30 cm
LPR8V-A3	American eel	24.9	20	indeterminant	8	yes	≤ 30 cm
LPR8V-A3	American eel	26.8	36	indeterminant	8	yes	≤ 30 cm
LPR8V-A3	American eel	25.8	26	indeterminant	8	yes	≤ 30 cm
LPR8V-A3	American eel	24.1	24	indeterminant	8	yes	≤ 30 cm
LPR8V-A3	American eel	27.3	38	indeterminant	8	yes	≤ 30 cm
LPR8V-A3	American eel	24.7	24	indeterminant	8	yes	≤ 30 cm
LPR8V-A3	American eel	26.7	36	indeterminant	8	yes	≤ 30 cm
LPR8V-A3	American eel	21.3	18	indeterminant	8	yes	≤ 30 cm
LPR8V-A3	American eel	24.7	26	indeterminant	8	yes	≤ 30 cm
LPR8V-A3	American eel	18.5	10	indeterminant	8	yes	≤ 30 cm
LPR8V-A3	American eel	16.2	8	indeterminant	8	yes	≤ 30 cm
LPR8V-A3	American eel	11	4	indeterminant	8	yes	≤ 30 cm
LPR8V-A3	American eel	15.1	8	indeterminant	8	yes	≤ 30 cm
LPR8V-A3	American eel	14.5	4	indeterminant	8	yes	≤ 30 cm
LPR8V-A4	American eel	22.7	28	indeterminant	8	yes	≤ 30 cm
LPR8V-A4	American eel	28.2	44	indeterminant	8	yes	≤ 30 cm
LPR8V-A4	American eel	24.6	25	indeterminant	8	yes	≤ 30 cm
LPR8V-A4	American eel	24.8	26	indeterminant	8	yes	≤ 30 cm
LPR8V-A4	American eel	7.3	0.5	indeterminant	8	yes	≤ 30 cm
LPR8V-A4	American eel	17.8	9	indeterminant	8	yes	≤ 30 cm
LPR8V-A4	American eel	17.4	7	indeterminant	8	yes	≤ 30 cm
LPR8V-A4	American eel	18.6	9	indeterminant	8	yes	≤ 30 cm
LPR8V-A4	American eel	13.5	3	indeterminant	8	yes	≤ 30 cm
LPR8V-A4	American eel	22.2	16	indeterminant	8	yes	≤ 30 cm
LPR8V-A5	American eel	27.8	30	indeterminant	8	yes	≤ 30 cm
LPR8V-A5	American eel	26.5	24	indeterminant	8	yes	≤ 30 cm
LPR8V-A5	American eel	22.4	19	indeterminant	8	yes	≤ 30 cm
LPR8V-A5	American eel	24.1	20	indeterminant	8	yes	≤ 30 cm
LPR8V-A5	American eel	23.9	24	indeterminant	8	yes	≤ 30 cm
LPR8V-A5	American eel	25.2	26	indeterminant	8	yes	≤ 30 cm
LPR8V-A5	American eel	18.7	10	indeterminant	8	yes	≤ 30 cm
LPR8V-A5	American eel	28.2	34	indeterminant	8	yes	≤ 30 cm
LPR8V-A5	American eel	27.8	34	indeterminant	8	yes	≤ 30 cm
LPR8V-A5	American eel	21.3	14	indeterminant	8	yes	≤ 30 cm
LPR8V-A5	American eel	17.4	10	indeterminant	8	yes	≤ 30 cm
LPR8V-A5	American eel	25	21	indeterminant	8	yes	≤ 30 cm
LPR8W-A1	American eel	28.2	40	indeterminant	8	yes	≤ 30 cm
LPR8W-A1	American eel	25.9	26	indeterminant	8	yes	≤ 30 cm
LPR8W-A1	American eel	20.2	12	indeterminant	8	yes	≤ 30 cm
LPR8W-A1	American eel	11.7	2	indeterminant	8	yes	≤ 30 cm
LPR8W-A1	American eel	21.2	16	indeterminant	8	yes	≤ 30 cm
LPR8W-A1	American eel	18.6	9	indeterminant	8	yes	≤ 30 cm
LPR8W-A2	American eel	29.6	46	indeterminant	8	yes	≤ 30 cm
LPR8W-A4	American eel	26.9	36	indeterminant	8	yes	≤ 30 cm
LPR8W-A4	American eel	18.4	6	indeterminant	8	yes	≤ 30 cm
LPR8W-A5	American eel	19.1	9	indeterminant	8	yes	≤ 30 cm
LPR8W-A5	American eel	28.5	38	indeterminant	8	yes	≤ 30 cm
LPR8X-A1	American eel	23.7	20	indeterminant	8	yes	≤ 30 cm
LPR8X-A1	American eel	14.3	8	indeterminant	8	yes	≤ 30 cm
LPR8X-A1	American eel	21.7	20	indeterminant	8	yes	≤ 30 cm
LPR8X-A1	American eel	22.4	18	indeterminant	8	yes	≤ 30 cm

LPR8X-A1	American eel	26.8	40	indeterminant	8	yes	≤ 30 cm
LPR8X-A1	American eel	27.3	34	indeterminant	8	yes	≤ 30 cm
LPR8X-A1	American eel	22.4	20	indeterminant	8	yes	≤ 30 cm
LPR8X-A1	American eel	27.1	30	indeterminant	8	yes	≤ 30 cm
LPR8X-A1	American eel	26.6	32	indeterminant	8	yes	≤ 30 cm
LPR8X-A1	American eel	24.6	18	indeterminant	8	yes	≤ 30 cm
LPR8X-A1	American eel	24.4	26	indeterminant	8	yes	≤ 30 cm
LPR8X-A1	American eel	25.7	32	indeterminant	8	yes	≤ 30 cm
LPR8X-A3	American eel	24.9	24	indeterminant	8	yes	≤ 30 cm
LPR8X-A4	American eel	28.2	44	indeterminant	8	yes	≤ 30 cm
LPR8X-A5	American eel	27.7	34	indeterminant	8	yes	≤ 30 cm
LPR8Y-A1	American eel	30.5	50	indeterminant	8	yes	> 30 cm
LPR8Y-A1	American eel	25.3	27	indeterminant	8	yes	≤ 30 cm
LPR8Y-A1	American eel	27.4	36	indeterminant	8	yes	≤ 30 cm
LPR8Y-A1	American eel	19.9	14	indeterminant	8	yes	≤ 30 cm
LPR8Y-A1	American eel	27.8	42	indeterminant	8	yes	≤ 30 cm
LPR8Y-A1	American eel	27.7	40	indeterminant	8	yes	≤ 30 cm
LPR8Y-A1	American eel	25.7	29	indeterminant	8	yes	≤ 30 cm
LPR8Y-A1	American eel	25.8	36	indeterminant	8	yes	≤ 30 cm
LPR8Y-A1	American eel	25	32.5	indeterminant	8	yes	≤ 30 cm
LPR8Y-A1	American eel	27.4	30	indeterminant	8	yes	≤ 30 cm
LPR8Y-A1	American eel	26.1	33.5	indeterminant	8	yes	≤ 30 cm
LPR8Y-A1	American eel	28.8	46	indeterminant	8	yes	≤ 30 cm
LPR8Y-A1	American eel	18.1	10.5	indeterminant	8	yes	≤ 30 cm
LPR8Y-A1	American eel	25.7	32	indeterminant	8	yes	≤ 30 cm
LPR8Y-A1	American eel	21	11	indeterminant	8	yes	≤ 30 cm
LPR8Y-A1	American eel	11	2	indeterminant	8	yes	≤ 30 cm
LPR8Y-A1	American eel	20	12.5	indeterminant	8	yes	≤ 30 cm
LPR8Y-A1	American eel	18.6	12	indeterminant	8	yes	≤ 30 cm
LPR8Y-A1	American eel	15.7	7	indeterminant	8	yes	≤ 30 cm
LPR8Y-A1	American eel	17.8	9	indeterminant	8	yes	≤ 30 cm
LPR8Y-A1	American eel	13.9	4	indeterminant	8	yes	≤ 30 cm
LPR8Y-A2	American eel	20.4	15	indeterminant	8	yes	≤ 30 cm
LPR8Y-A2	American eel	16.3	6	indeterminant	8	yes	≤ 30 cm
LPR8Y-A2	American eel	12	2	indeterminant	8	yes	≤ 30 cm
LPR8Y-A2	American eel	15	6	indeterminant	8	yes	≤ 30 cm
LPR8Y-A2	American eel	14	4	indeterminant	8	yes	≤ 30 cm
LPR8Y-A2	American eel	16.7	7	indeterminant	8	yes	≤ 30 cm
LPR8Y-A2	American eel	26.1	31	indeterminant	8	yes	≤ 30 cm
LPR8Y-A2	American eel	14.2	5	indeterminant	8	yes	≤ 30 cm
LPR8Y-A2	American eel	13.7	4	indeterminant	8	yes	≤ 30 cm
LPR8Y-A2	American eel	28.4	37	indeterminant	8	yes	≤ 30 cm
LPR8Y-A2	American eel	26.8	32	indeterminant	8	yes	≤ 30 cm
LPR8Y-A2	American eel	28.6	49	indeterminant	8	yes	≤ 30 cm
LPR8Y-A2	American eel	17.3	8	indeterminant	8	yes	≤ 30 cm
LPR8Y-A2	American eel	26.2	29	indeterminant	8	yes	≤ 30 cm
LPR8Y-A2	American eel	21.8	16	indeterminant	8	yes	≤ 30 cm
LPR8Y-A2	American eel	25	25	indeterminant	8	yes	≤ 30 cm
LPR8Y-A2	American eel	26.3	32	indeterminant	8	yes	≤ 30 cm
LPR8Y-A2	American eel	30.8	57	indeterminant	8	yes	> 30 cm
LPR8Y-A2	American eel	19.2	9	indeterminant	8	yes	≤ 30 cm
LPR8Y-A2	American eel	24.9	28	indeterminant	8	yes	≤ 30 cm
LPR8Y-A4	American eel	20.9	16	indeterminant	8	yes	≤ 30 cm
LPR8Y-A4	American eel	21.3	20	indeterminant	8	yes	≤ 30 cm
LPR8Y-A4	American eel	28.2	38	indeterminant	8	yes	≤ 30 cm
LPR8Y-A4	American eel	30.8	56	indeterminant	8	yes	> 30 cm

LPR8Y-A4	American eel	11.7	4	indeterminant	8	yes	≤ 30 cm
LPR8Y-A4	American eel	20.6	16	indeterminant	8	yes	≤ 30 cm
LPR8Y-A4	American eel	24.3	28	indeterminant	8	yes	≤ 30 cm
LPR8Y-A4	American eel	25.4	30	indeterminant	8	yes	≤ 30 cm
LPR8Y-A4	American eel	13.2	4	indeterminant	8	yes	≤ 30 cm
LPR8Y-A4	American eel	14.4	6	indeterminant	8	yes	≤ 30 cm
LPR8Y-A4	American eel	27.5	38	indeterminant	8	yes	≤ 30 cm
LPR8Y-A4	American eel	20.4	16	indeterminant	8	yes	≤ 30 cm
LPR8Y-A4	American eel	25.7	30	indeterminant	8	yes	≤ 30 cm
LPR8Y-A4	American eel	22.1	24	indeterminant	8	yes	≤ 30 cm
LPR8Y-A4	American eel	25.6	28	indeterminant	8	yes	≤ 30 cm
LPR8Y-A4	American eel	23.3	22	indeterminant	8	yes	≤ 30 cm
LPR8Y-A3	American eel	11.8	3	indeterminant	8	yes	≤ 30 cm
LPR8Y-A3	American eel	26.6	40	indeterminant	8	yes	≤ 30 cm
LPR8Y-A3	American eel	25.1	32	indeterminant	8	yes	≤ 30 cm
LPR8Y-A3	American eel	20.1	20	indeterminant	8	yes	≤ 30 cm
LPR8Y-A3	American eel	24.9	28	indeterminant	8	yes	≤ 30 cm
LPR8Y-A3	American eel	22.1	18	indeterminant	8	yes	≤ 30 cm
LPR8Y-A3	American eel	20.4	12	indeterminant	8	yes	≤ 30 cm
LPR8Y-A3	American eel	28.2	46	indeterminant	8	yes	≤ 30 cm
LPR8Y-A3	American eel	31.7	66	indeterminant	8	yes	> 30 cm
LPR8Y-A3	American eel	31.2	54	indeterminant	8	yes	> 30 cm
LPR8Y-A3	American eel	14.2	6	indeterminant	8	yes	≤ 30 cm
LPR8Y-A3	American eel	16.4	7	indeterminant	8	yes	≤ 30 cm
LPR8Y-A3	American eel	14.4	5	indeterminant	8	yes	≤ 30 cm
LPR8Y-A3	American eel	8.8	0.5	indeterminant	8	yes	≤ 30 cm
LPR8Y-A3	American eel	12.2	3	indeterminant	8	yes	≤ 30 cm
LPR8Y-A3	American eel	27.1	44	indeterminant	8	yes	≤ 30 cm
LPR8Y-A3	American eel	17.3	8	indeterminant	8	yes	≤ 30 cm
LPR8Y-A3	American eel	15.2	7	indeterminant	8	yes	≤ 30 cm
LPR8Y-A3	American eel	15.8	6	indeterminant	8	yes	≤ 30 cm
LPR8Y-A3	American eel	16.7	7	indeterminant	8	yes	≤ 30 cm
LPR8Y-A3	American eel	15.9	6	indeterminant	8	yes	≤ 30 cm
LPR8Y-A3	American eel	21.2	20	indeterminant	8	yes	≤ 30 cm
LPR8Y-A3	American eel	24.3	26	indeterminant	8	yes	≤ 30 cm
LPR8Y-A3	American eel	17.2	5	indeterminant	8	yes	≤ 30 cm
LPR8Y-A3	American eel	24.7	28	indeterminant	8	yes	≤ 30 cm
LPR8Y-A3	American eel	19.7	10	indeterminant	8	yes	≤ 30 cm
LPR8Y-A5	American eel	14.5	5	indeterminant	8	yes	≤ 30 cm
LPR8Y-A5	American eel	15.5	6	indeterminant	8	yes	≤ 30 cm
LPR8Y-A5	American eel	28.5	37	indeterminant	8	yes	≤ 30 cm
LPR8Y-A5	American eel	23	20	indeterminant	8	yes	≤ 30 cm
LPR8Y-A5	American eel	18	12	indeterminant	8	yes	≤ 30 cm
LPR8Y-A5	American eel	24	25	indeterminant	8	yes	≤ 30 cm
LPR8Y-A5	American eel	27	36	indeterminant	8	yes	≤ 30 cm
LPR8Y-A5	American eel	11.5	3	indeterminant	8	yes	≤ 30 cm
LPR8Y-A5	American eel	14	4	indeterminant	8	yes	≤ 30 cm
LPR8Z-A1	American eel	23.9	28	indeterminant	8	yes	≤ 30 cm
LPR8Z-A1	American eel	26	32	indeterminant	8	yes	≤ 30 cm
LPR8Z-A1	American eel	28.1	37.5	indeterminant	8	yes	≤ 30 cm
LPR8Z-A1	American eel	23.2	20	indeterminant	8	yes	≤ 30 cm
LPR8Z-A1	American eel	28.4	28.5	indeterminant	8	yes	≤ 30 cm
LPR8Z-A1	American eel	26.5	30	indeterminant	8	yes	≤ 30 cm
LPR8Z-A1	American eel	15.2	6	indeterminant	8	yes	≤ 30 cm
LPR8Z-A1	American eel	26.8	29	indeterminant	8	yes	≤ 30 cm
LPR8Z-A1	American eel	17	8	indeterminant	8	yes	≤ 30 cm

LPR8Z-A1	American eel	21.5	20	indeterminant	8	yes	≤ 30 cm
LPR8Z-A1	American eel	27.8	38.5	indeterminant	8	yes	≤ 30 cm
LPR8Z-A1	American eel	20	12	indeterminant	8	yes	≤ 30 cm
LPR8Z-A1	American eel	25.4	23.5	indeterminant	8	yes	≤ 30 cm
LPR8Z-A1	American eel	24.2	24	indeterminant	8	yes	≤ 30 cm
LPR8Z-A1	American eel	18	8.5	indeterminant	8	yes	≤ 30 cm
LPR8Z-A1	American eel	14.5	4	indeterminant	8	yes	≤ 30 cm
LPR8Z-A1	American eel	18.4	9	indeterminant	8	yes	≤ 30 cm
LPR8Z-A1	American eel	16	6	indeterminant	8	yes	≤ 30 cm
LPR8Z-A1	American eel	18.5	10.5	indeterminant	8	yes	≤ 30 cm
LPR8Z-A1	American eel	21.4	16	indeterminant	8	yes	≤ 30 cm
LPR8Z-A1	American eel	14.7	5	indeterminant	8	yes	≤ 30 cm
LPR8Z-A1	American eel	20.3	15	indeterminant	8	yes	≤ 30 cm
LPR8Z-A1	American eel	19.9	11	indeterminant	8	yes	≤ 30 cm
LPR8Z-A1	American eel	12.1	2.5	indeterminant	8	yes	≤ 30 cm
LPR8Z-A1	American eel	17.9	9	indeterminant	8	yes	≤ 30 cm
LPR8Z-A1	American eel	12.9	4	indeterminant	8	yes	≤ 30 cm
LPR8Z-A1	American eel	13.5	4	indeterminant	8	yes	≤ 30 cm
LPR8Z-A1	American eel	14.2	4	indeterminant	8	yes	≤ 30 cm
LPR8Z-A1	American eel	12.7	3.5	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	26.5	36	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	27.5	35	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	27.8	48	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	23.8	28	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	25	28	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	14.6	8	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	28.9	48	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	26.1	34	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	19.1	16	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	18.7	12	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	22.7	22	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	22.3	20	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	28.1	40	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	27.8	36	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	25	26	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	29.3	46	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	19.4	12	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	22.6	22	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	17.9	12	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	23.6	26	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	21.7	18	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	15.4	8	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	22.2	18	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	18.1	10	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	27.2	32	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	14.1	4	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	13	4	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	13.8	4	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	20.5	12	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	20.6	12	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	17.2	6	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	22.3	20	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	28.2	48	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	26.3	38	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	19.1	14	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	32.7	54	indeterminant	8	yes	> 30 cm

LPR8Z-A2	American eel	22.5	30	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	29.4	48	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	26.5	30	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	24.9	24	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	25.6	24	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	24.1	20	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	18.7	10	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	15.3	6	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	18.4	10	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	15.6	4	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	26.5	32	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	17.8	12	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	17.8	12	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	18.4	12	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	19.3	12	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	15.4	6	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	17.4	6	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	13.7	4	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	13.7	4	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	14.4	4	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	15.1	5	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	14.3	5	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	14.7	6	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	16	6	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	12.5	4	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	14.6	5	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	14	4	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	13.9	5	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	13.5	4	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	11.1	2	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	11.5	3	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	13.3	3	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	13.3	4	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	12.4	3	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	10.5	2	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	10.7	2	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	10.5	2	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	12.3	3	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	15.4	6	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	12.9	4	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	12.6	3	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	10.4	2	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	10.4	2	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	American eel	9.2	1	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	22.6	18	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	25.8	33	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	26.8	31	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	15.3	6	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	18.9	13	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	11.7	3	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	13.6	5	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	24.5	25	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	18	11	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	20.7	15	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	19.6	12	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	16.8	8	indeterminant	8	yes	≤ 30 cm

LPR8Z-A3	American eel	21.5	18	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	15.6	6	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	16.7	7	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	16.7	8	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	26.9	30	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	27.8	33	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	26.7	37	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	14.2	5	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	9.8	1	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	20.8	16	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	22.3	17	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	17.9	10	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	19.1	9	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	20.2	12	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	16.5	8	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	27.8	36	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	24.5	26	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	17.6	9	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	25.5	26	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	29.4	47	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	28.9	53	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	28.1	36	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	20.2	13	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	19.3	14	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	12.7	15	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	24.1	28	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	12.7	4	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	19.5	14	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	21.8	19	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	33	53	indeterminant	8	yes	> 30 cm
LPR8Z-A3	American eel	19.3	14	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	25.6	30	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	22.5	24	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	27.7	38	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	24.5	28	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	13	4	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	22	22	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	26.2	31	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	16.6	7	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	23.4	25	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	27.2	29	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	16.7	8	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	20	11	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	11	2	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	27.3	34	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	19.4	10	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	24.1	23	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	13.3	4	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	18.2	9	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	15	6	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	19.4	14	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	9.6	1	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	11.3	3	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	22.1	18	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	15.2	7	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	13.8	4	indeterminant	8	yes	≤ 30 cm

LPR8Z-A3	American eel	24.5	24	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	12.5	3	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	15.6	7	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	27.4	33	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	13	4	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	22.3	22	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	27	34	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	39.6	160	indeterminant	8	yes	> 30 cm
LPR8Z-A3	American eel	13.4	4	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	24.1	31	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	18.1	11	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	24.4	24	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	23.3	21	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	14.5	6	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	27.3	35	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	24.5	30	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	24.6	25	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	25.8	29	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	25.4	25	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	25.4	28	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	27.6	36	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	27.4	47	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	9.5	2	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	16.7	8	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	25.4	30	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	11	2	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	18.5	12	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	22.7	22	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	20.2	15	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	17.2	10	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	20.2	11	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	23.4	24	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	23.5	28	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	26.1	27	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	12.6	4	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	10	2	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	14.7	6	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	16	9	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	12.9	4	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	14.8	6	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	11.7	3	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	26.4	42	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	15.8	7	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	17	8	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	22.7	22	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	15.4	6	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	34	78	indeterminant	8	yes	> 30 cm
LPR8Z-A3	American eel	24.7	32	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	23.2	29	indeterminant	8	yes	≤ 30 cm
LPR8Z-A4	American eel	28.3	36	indeterminant	8	yes	≤ 30 cm
LPR8Z-A4	American eel	24.7	27	indeterminant	8	yes	≤ 30 cm
LPR8Z-A4	American eel	26.9	34	indeterminant	8	yes	≤ 30 cm
LPR8Z-A4	American eel	27.3	33	indeterminant	8	yes	≤ 30 cm
LPR8Z-A4	American eel	17.8	9	indeterminant	8	yes	≤ 30 cm
LPR8Z-A4	American eel	23.7	20	indeterminant	8	yes	≤ 30 cm
LPR8Z-A4	American eel	15.3	5	indeterminant	8	yes	≤ 30 cm

LPR8Z-A4	American eel	27.9	38	indeterminant	8	yes	≤ 30 cm
LPR8Z-A4	American eel	15.6	5	indeterminant	8	yes	≤ 30 cm
LPR8Z-A4	American eel	16.2	6	indeterminant	8	yes	≤ 30 cm
LPR8Z-A4	American eel	20.6	14	indeterminant	8	yes	≤ 30 cm
LPR8Z-A4	American eel	25.1	35	indeterminant	8	yes	≤ 30 cm
LPR8Z-A4	American eel	12.5	2	indeterminant	8	yes	≤ 30 cm
LPR8Z-A4	American eel	12.2	3	indeterminant	8	yes	≤ 30 cm
LPR8Z-A4	American eel	13.1	4	indeterminant	8	yes	≤ 30 cm
LPR8Z-A4	American eel	17.4	8	indeterminant	8	yes	≤ 30 cm
LPR8Z-A4	American eel	24.5	33	indeterminant	8	yes	≤ 30 cm
LPR8Z-A4	American eel	23.3	23	indeterminant	8	yes	≤ 30 cm
LPR8Z-A4	American eel	22.4	16	indeterminant	8	yes	≤ 30 cm
LPR8Z-A4	American eel	22.4	18	indeterminant	8	yes	≤ 30 cm
LPR8Z-A4	American eel	29.3	44	indeterminant	8	yes	≤ 30 cm
LPR8Z-A4	American eel	21	10	indeterminant	8	yes	≤ 30 cm
LPR8Z-A4	American eel	26.2	36	indeterminant	8	yes	≤ 30 cm
LPR8Z-A4	American eel	16.1	6	indeterminant	8	yes	≤ 30 cm
LPR8Z-A4	American eel	29.1	38	indeterminant	8	yes	≤ 30 cm
LPR8Z-A4	American eel	24.4	23	indeterminant	8	yes	≤ 30 cm
LPR8Z-A4	American eel	18.3	10	indeterminant	8	yes	≤ 30 cm
LPR8Z-A4	American eel	18.2	10	indeterminant	8	yes	≤ 30 cm
LPR8Z-A4	American eel	17.9	7	indeterminant	8	yes	≤ 30 cm
LPR8Z-A4	American eel	21.3	15	indeterminant	8	yes	≤ 30 cm
LPR8Z-A4	American eel	11.1	2	indeterminant	8	yes	≤ 30 cm
LPR8Z-A4	American eel	23.5	24	indeterminant	8	yes	≤ 30 cm
LPR8Z-A4	American eel	23.3	11	indeterminant	8	yes	≤ 30 cm
LPR8Z-A4	American eel	14.6	5	indeterminant	8	yes	≤ 30 cm
LPR8Z-A4	American eel	28.2	31	indeterminant	8	yes	≤ 30 cm
LPR8Z-A4	American eel	15.6	6	indeterminant	8	yes	≤ 30 cm
LPR8Z-A4	American eel	15.1	6	indeterminant	8	yes	≤ 30 cm
LPR8Z-A4	American eel	21.3	14	indeterminant	8	yes	≤ 30 cm
LPR8Z-A4	American eel	24.7	21	indeterminant	8	yes	≤ 30 cm
LPR8Z-A4	American eel	11.7	2	indeterminant	8	yes	≤ 30 cm
LPR8Z-A4	American eel	25.4	28	indeterminant	8	yes	≤ 30 cm
LPR8Z-A4	American eel	14.8	4	indeterminant	8	yes	≤ 30 cm
LPR8Z-A4	American eel	20.8	12	indeterminant	8	yes	≤ 30 cm
LPR8Z-A4	American eel	11.6	2	indeterminant	8	yes	≤ 30 cm
LPR8Z-A4	American eel	12	2	indeterminant	8	yes	≤ 30 cm
LPR8Z-A4	American eel	13.2	3	indeterminant	8	yes	≤ 30 cm
LPR8Z-A4	American eel	17.4	8	indeterminant	8	yes	≤ 30 cm
LPR8Z-A4	American eel	17.1	7	indeterminant	8	yes	≤ 30 cm
LPR8Z-A4	American eel	17.1	6	indeterminant	8	yes	≤ 30 cm
LPR8Z-A4	American eel	17.3	7	indeterminant	8	yes	≤ 30 cm
LPR8Z-A4	American eel	13.8	4	indeterminant	8	yes	≤ 30 cm
LPR8Z-A4	American eel	18.1	10	indeterminant	8	yes	≤ 30 cm
LPR8Z-A4	American eel	27.9	33	indeterminant	8	yes	≤ 30 cm
LPR8Z-A4	American eel	22.3	20	indeterminant	8	yes	≤ 30 cm
LPR8Z-A4	American eel	16.1	7	indeterminant	8	yes	≤ 30 cm
LPR8Z-A4	American eel	11.2	2	indeterminant	8	yes	≤ 30 cm
LPR8Z-A4	American eel	17.1	7	indeterminant	8	yes	≤ 30 cm
LPR8Z-A4	American eel	11.1	2	indeterminant	8	yes	≤ 30 cm
LPR8Z-A4	American eel	11.2	2	indeterminant	8	yes	≤ 30 cm
LPR8Z-A4	American eel	22	19	indeterminant	8	yes	≤ 30 cm
LPR8Z-A4	American eel	12.5	3	indeterminant	8	yes	≤ 30 cm
LPR8Z-A4	American eel	20.4	10	indeterminant	8	yes	≤ 30 cm
LPR8Z-A4	American eel	9.4	1	indeterminant	8	yes	≤ 30 cm

LPR8Z-A4	American eel	10.6	2	indeterminant	8	yes	≤ 30 cm
LPR8Z-A4	American eel	15.3	6	indeterminant	8	yes	≤ 30 cm
LPR8Z-A4	American eel	13.2	4	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	17.5	8	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	25.9	30	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	16.5	9	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	22.5	19	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	12.5	4	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	American eel	24.6	25	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	27.3	36	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	28.1	33	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	32.4	70	indeterminant	8	yes	> 30 cm
LPR8Z-A5	American eel	26.9	32	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	24	26	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	27.8	40	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	26.7	34	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	23.2	22	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	24.4	32	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	27.4	38	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	18.7	10	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	15.6	6	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	13.1	4	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	29.2	44	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	26.3	28	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	22	14	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	26.1	36	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	20.2	14	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	24.9	24	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	26.3	30	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	28.2	36	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	18.8	10	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	25.2	34	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	12.6	3	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	18.1	10	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	20.3	14	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	22.4	14	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	15.4	6	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	20.3	14	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	17.8	10	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	18.2	10	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	16.6	8	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	15.7	6	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	23.3	20	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	19	10	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	21.2	14	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	19.2	10	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	17.7	9	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	21.6	13	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	19.5	13	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	25.5	33	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	20	12	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	19.4	12	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	23	19	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	21	13	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	18.4	12	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	18.8	11	indeterminant	8	yes	≤ 30 cm

LPR8Z-A5	American eel	27.1	36	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	21.5	19	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	18.1	10	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	20	14	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	23	20	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	19.2	12	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	22.4	21	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	15	6	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	22.7	22	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	27.5	39	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	26.5	31	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	26	28	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	12.6	4	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	17.5	9	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	20	13	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	15.5	6	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	18.5	9	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	14.5	5	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	12.5	3	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	12.5	3	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	14.5	5	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	15	5	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	13.1	3	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	13.5	4	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	15.9	6	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	14.6	5	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	13.1	4	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	19	11	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	14	4	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	17	9	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	12.5	3	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	14	4	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	17	8	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	18	9	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	14.5	5	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	American eel	10	2	indeterminant	8	yes	≤ 30 cm
LPR3PP-A2	Atlantic croaker	18.3	84	male	3	no	≤ 30 cm
LPR1J-A1	Atlantic menhaden	32.4	296	indeterminant	1	no	> 30 cm
LPR3O-A1	Atlantic menhaden	31.1	270	female	3	no	> 30 cm
LPR3O-A3	Atlantic menhaden	32	285	male	3	no	> 30 cm
LPR3O-A3	Atlantic menhaden	34	230	male	3	no	> 30 cm
LPR3O-A3	Atlantic menhaden	33	295	female	3	no	> 30 cm
LPR1AA-B5	Atlantic silverside	6.7	1	indeterminant	1	no	≤ 30 cm
LPR1AA-B5	Atlantic silverside	11.7	6	indeterminant	1	no	≤ 30 cm
LPR1AA-A5	Atlantic silverside	6.4	1	indeterminant	1	no	≤ 30 cm
LPR1AA-A5	Atlantic silverside	5.9	1	indeterminant	1	no	≤ 30 cm
LPR1AA-A5	Atlantic silverside	6.6	1	indeterminant	1	no	≤ 30 cm
LPR1AA-A5	Atlantic silverside	6.2	1	indeterminant	1	no	≤ 30 cm
LPR1AA-A5	Atlantic silverside	5.7	0.5	indeterminant	1	no	≤ 30 cm
LPR1AA-B5	Atlantic silverside	5.7	0.5	indeterminant	1	no	≤ 30 cm
LPR1AA-C5	Atlantic silverside	5.8	0.5	indeterminant	1	no	≤ 30 cm
LPR1AA-B5	Atlantic silverside	6.7	0.5	indeterminant	1	no	≤ 30 cm
LPR1AA-A6	Atlantic silverside	6.8	1.5	indeterminant	1	no	≤ 30 cm
LPR1AA-C6	Atlantic silverside	6	1	indeterminant	1	no	≤ 30 cm
LPR1AA-B6	Atlantic silverside	5.6	0.5	indeterminant	1	no	≤ 30 cm
LPR1AA-B6	Atlantic silverside	6.1	1	indeterminant	1	no	≤ 30 cm

LPR1AA-B6	Atlantic silverside	6.5	1	indeterminant	1	no	≤ 30 cm
LPR1BB-A5	Atlantic silverside	8.1	2	indeterminant	1	no	≤ 30 cm
LPR1BB-A6	Atlantic silverside	7.8	2.5	indeterminant	1	no	≤ 30 cm
LPR1BB-A6	Atlantic silverside	6.5	1	indeterminant	1	no	≤ 30 cm
LPR1BB-B6	Atlantic silverside	6.7	1.5	indeterminant	1	no	≤ 30 cm
LPR1BB-B6	Atlantic silverside	7	1	indeterminant	1	no	≤ 30 cm
LPR1D-C1	Atlantic silverside	8.8	3.5	indeterminant	1	no	≤ 30 cm
LPR1D-A4	Atlantic silverside	7.4	2	indeterminant	1	no	≤ 30 cm
LPR1D-A4	Atlantic silverside	6.1	1	indeterminant	1	no	≤ 30 cm
LPR1D-A4	Atlantic silverside	6.2	1	indeterminant	1	no	≤ 30 cm
LPR1D-A4	Atlantic silverside	7.4	2	indeterminant	1	no	≤ 30 cm
LPR1D-A4	Atlantic silverside	8.5	3	indeterminant	1	no	≤ 30 cm
LPR1D-A4	Atlantic silverside	6.8	1	indeterminant	1	no	≤ 30 cm
LPR1D-A4	Atlantic silverside	7.3	2	indeterminant	1	no	≤ 30 cm
LPR1D-A4	Atlantic silverside	8.8	2	indeterminant	1	no	≤ 30 cm
LPR1D-A4	Atlantic silverside	7.3	2	indeterminant	1	no	≤ 30 cm
LPR1D-A4	Atlantic silverside	6.5	1	indeterminant	1	no	≤ 30 cm
LPR1D-A4	Atlantic silverside	6.6	1	indeterminant	1	no	≤ 30 cm
LPR1D-A4	Atlantic silverside	8.2	3	indeterminant	1	no	≤ 30 cm
LPR1Q-A4	Atlantic silverside	8.4	2	indeterminant	1	no	≤ 30 cm
LPR1Q-B4	Atlantic silverside	7.8	2	indeterminant	1	no	≤ 30 cm
LPR1Q-B4	Atlantic silverside	10.6	5	indeterminant	1	no	≤ 30 cm
LPR1Q-B4	Atlantic silverside	8.7	3	indeterminant	1	no	≤ 30 cm
LPR1Q-B4	Atlantic silverside	8.4	3	indeterminant	1	no	≤ 30 cm
LPR1Q-B4	Atlantic silverside	8.3	3	indeterminant	1	no	≤ 30 cm
LPR1Q-B4	Atlantic silverside	8.7	3	indeterminant	1	no	≤ 30 cm
LPR1Q-B4	Atlantic silverside	6.6	1	indeterminant	1	no	≤ 30 cm
LPR1Q-B4	Atlantic silverside	8.4	3	indeterminant	1	no	≤ 30 cm
LPR1Q-B4	Atlantic silverside	8.6	3	indeterminant	1	no	≤ 30 cm
LPR1Q-B4	Atlantic silverside	8.2	3	indeterminant	1	no	≤ 30 cm
LPR1Q-B4	Atlantic silverside	7.7	2	indeterminant	1	no	≤ 30 cm
LPR1Q-B4	Atlantic silverside	7.4	2	indeterminant	1	no	≤ 30 cm
LPR1Q-B4	Atlantic silverside	7.2	2	indeterminant	1	no	≤ 30 cm
LPR1Q-B4	Atlantic silverside	7.6	2	indeterminant	1	no	≤ 30 cm
LPR1Q-B4	Atlantic silverside	7.2	2	indeterminant	1	no	≤ 30 cm
LPR1Q-B4	Atlantic silverside	8.1	2	indeterminant	1	no	≤ 30 cm
LPR1Q-B4	Atlantic silverside	6.9	1	indeterminant	1	no	≤ 30 cm
LPR1Q-B4	Atlantic silverside	6.4	1	indeterminant	1	no	≤ 30 cm
LPR1Q-B4	Atlantic silverside	6.8	1	indeterminant	1	no	≤ 30 cm
LPR1Q-B4	Atlantic silverside	7.5	2	indeterminant	1	no	≤ 30 cm
LPR1Q-B4	Atlantic silverside	6.2	1	indeterminant	1	no	≤ 30 cm
LPR1Q-B4	Atlantic silverside	6.1	1	indeterminant	1	no	≤ 30 cm
LPR1Q-B4	Atlantic silverside	7.7	2	indeterminant	1	no	≤ 30 cm
LPR1Q-B4	Atlantic silverside	5.6	0.5	indeterminant	1	no	≤ 30 cm
LPR1Q-B4	Atlantic silverside	7.4	2	indeterminant	1	no	≤ 30 cm
LPR1Q-B4	Atlantic silverside	8	2	indeterminant	1	no	≤ 30 cm
LPR1Q-B4	Atlantic silverside	7.6	2	indeterminant	1	no	≤ 30 cm
LPR1Q-B4	Atlantic silverside	7.6	2	indeterminant	1	no	≤ 30 cm
LPR1Q-B4	Atlantic silverside	6.7	1	indeterminant	1	no	≤ 30 cm
LPR1Q-B4	Atlantic silverside	7.6	2	indeterminant	1	no	≤ 30 cm
LPR1Q-B4	Atlantic silverside	7	1	indeterminant	1	no	≤ 30 cm
LPR1Q-B4	Atlantic silverside	7	1	indeterminant	1	no	≤ 30 cm
LPR1Q-B4	Atlantic silverside	6.9	1	indeterminant	1	no	≤ 30 cm
LPR1Q-B4	Atlantic silverside	8.2	2	indeterminant	1	no	≤ 30 cm
LPR1Q-B4	Atlantic silverside	7.3	2	indeterminant	1	no	≤ 30 cm
LPR1Q-B5	Atlantic silverside	7.6	2	indeterminant	1	no	≤ 30 cm

LPR2B-B5	Atlantic silverside	9.8	5	indeterminant	2	no	≤ 30 cm
LPR2B-B5	Atlantic silverside	9	4	indeterminant	2	no	≤ 30 cm
LPR2B-B5	Atlantic silverside	8.2	3	indeterminant	2	no	≤ 30 cm
LPR2B-B5	Atlantic silverside	9.3	4	indeterminant	2	no	≤ 30 cm
LPR2B-B5	Atlantic silverside	9.9	4	indeterminant	2	no	≤ 30 cm
LPR2B-B5	Atlantic silverside	7.9	2	indeterminant	2	no	≤ 30 cm
LPR2B-B5	Atlantic silverside	7.9	1	indeterminant	2	no	≤ 30 cm
LPR2B-B5	Atlantic silverside	9.5	4	indeterminant	2	no	≤ 30 cm
LPR2B-B5	Atlantic silverside	6.9	2	indeterminant	2	no	≤ 30 cm
LPR2B-B5	Atlantic silverside	7.2	2	indeterminant	2	no	≤ 30 cm
LPR2B-B5	Atlantic silverside	7.5	1	indeterminant	2	no	≤ 30 cm
LPR2B-B5	Atlantic silverside	7.7	2	indeterminant	2	no	≤ 30 cm
LPR2B-B5	Atlantic silverside	8	2	indeterminant	2	no	≤ 30 cm
LPR2B-B5	Atlantic silverside	7.4	1	indeterminant	2	no	≤ 30 cm
LPR2B-B5	Atlantic silverside	9.4	4	indeterminant	2	no	≤ 30 cm
LPR2B-B5	Atlantic silverside	7.5	2	indeterminant	2	no	≤ 30 cm
LPR2B-B5	Atlantic silverside	8	3	indeterminant	2	no	≤ 30 cm
LPR2B-B5	Atlantic silverside	7	2	indeterminant	2	no	≤ 30 cm
LPR2B-B5	Atlantic silverside	8	2	indeterminant	2	no	≤ 30 cm
LPR2B-B5	Atlantic silverside	7.2	1	indeterminant	2	no	≤ 30 cm
LPR2B-B5	Atlantic silverside	8.5	3	indeterminant	2	no	≤ 30 cm
LPR2B-B5	Atlantic silverside	7.8	2	indeterminant	2	no	≤ 30 cm
LPR2B-B5	Atlantic silverside	7.1	2	indeterminant	2	no	≤ 30 cm
LPR2B-B5	Atlantic silverside	7	2	indeterminant	2	no	≤ 30 cm
LPR2B-B5	Atlantic silverside	9.5	3	indeterminant	2	no	≤ 30 cm
LPR2B-B5	Atlantic silverside	9.6	5	indeterminant	2	no	≤ 30 cm
LPR2B-B5	Atlantic silverside	8	2	indeterminant	2	no	≤ 30 cm
LPR2B-B5	Atlantic silverside	9	4	indeterminant	2	no	≤ 30 cm
LPR2B-B5	Atlantic silverside	8.5	3	indeterminant	2	no	≤ 30 cm
LPR2B-B5	Atlantic silverside	7.6	3	indeterminant	2	no	≤ 30 cm
LPR2B-B5	Atlantic silverside	7.3	1.5	indeterminant	2	no	≤ 30 cm
LPR2B-B5	Atlantic silverside	7.5	2	indeterminant	2	no	≤ 30 cm
LPR2C-A1	Atlantic silverside	9.3	6	indeterminant	2	no	≤ 30 cm
LPR2R-A1	Atlantic silverside	6.5	1.5	indeterminant	2	no	≤ 30 cm
LPR2R-A1	Atlantic silverside	8.7	4	female	2	no	≤ 30 cm
LPR2R-A1	Atlantic silverside	8.7	4	female	2	no	≤ 30 cm
LPR1LL-A26	Atlantic silverside	4.1	0.5	indeterminant	1	no	≤ 30 cm
LPR1LL-A35	Atlantic silverside	2	0.5	indeterminant	1	no	≤ 30 cm
LPR2NN-A24	Atlantic silverside	7.2	3.5	indeterminant	2	no	≤ 30 cm
LPR2NN-A24	Atlantic silverside	6.1	2	indeterminant	2	no	≤ 30 cm
LPR2NN-A35	Atlantic silverside	6.8	1	indeterminant	2	no	≤ 30 cm
LPR2NN-A35	Atlantic silverside	7.5	2	indeterminant	2	no	≤ 30 cm
LPR2OO-A54	Atlantic silverside	4.3	0.5	indeterminant	2	no	≤ 30 cm
LPR2OO-A55	Atlantic silverside	3.3	0.5	indeterminant	2	no	≤ 30 cm
LPR2OO-A65	Atlantic silverside	7.6	2.5	indeterminant	2	no	≤ 30 cm
LPR2OO-A65	Atlantic silverside	7.4	2	indeterminant	2	no	≤ 30 cm
LPR2OO-A65	Atlantic silverside	6.6	1.5	indeterminant	2	no	≤ 30 cm
LPR2OO-A65	Atlantic silverside	7.2	2	indeterminant	2	no	≤ 30 cm
LPR2PP-A31	Atlantic silverside	3.8	0.5	indeterminant	2	no	≤ 30 cm
LPR2PP-A59	Atlantic silverside	3.3	0.5	indeterminant	2	no	≤ 30 cm
LPR2PP-A84	Atlantic silverside	6.7	2	indeterminant	2	no	≤ 30 cm
LPR2QQ-A19	Atlantic silverside	8.3	3	indeterminant	2	no	≤ 30 cm
LPR2QQ-A13	Atlantic silverside	11	8	indeterminant	2	no	≤ 30 cm
LPR2QQ-A35	Atlantic silverside	8	2.5	indeterminant	2	no	≤ 30 cm
LPR2RR-A43	Atlantic silverside	7	2	indeterminant	2	no	≤ 30 cm
LPR2SS-A97	Atlantic silverside	6.3	1.5	indeterminant	2	no	≤ 30 cm

LPR2SS-A97	Atlantic silverside	6.8	2	indeterminant	2	no	≤ 30 cm
LPR2SS-A96	Atlantic silverside	6.6	1.5	indeterminant	2	no	≤ 30 cm
LPR3II-A2	Atlantic silverside	7.5	3	indeterminant	3	no	≤ 30 cm
LPR3II-A2	Atlantic silverside	6.5	2	indeterminant	3	no	≤ 30 cm
LPR3II-A54	Atlantic silverside	7.6	3	indeterminant	3	no	≤ 30 cm
LPR4TT-A6	Atlantic silverside	7.5	2	indeterminant	4	no	≤ 30 cm
LPR4VV-A1	Atlantic silverside	8.4	1.5	indeterminant	4	no	≤ 30 cm
LPR5SS-A5	Atlantic silverside	8.7	2.5	indeterminant	5	no	≤ 30 cm
LPR5SS-A3	Atlantic silverside	7.1	2	indeterminant	5	no	≤ 30 cm
LPR5TT-A1	Atlantic silverside	9	2.5	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	Atlantic silverside	7	2	indeterminant	5	no	≤ 30 cm
LPR6TT-A2	Atlantic silverside	8.5	3.9	indeterminant	6	yes	≤ 30 cm
LPR6TT-A2	Atlantic silverside	7.1	3	indeterminant	6	yes	≤ 30 cm
LPR6TT-A2	Atlantic silverside	7.6	3	indeterminant	6	yes	≤ 30 cm
LPR6TT-A2	Atlantic silverside	7.1	2.9	indeterminant	6	yes	≤ 30 cm
LPR6TT-A2	Atlantic silverside	7.2	3	indeterminant	6	yes	≤ 30 cm
LPR6TT-A2	Atlantic silverside	7.2	2.8	indeterminant	6	yes	≤ 30 cm
LPR6TT-A2	Atlantic silverside	7.5	3.1	indeterminant	6	yes	≤ 30 cm
LPR3O-A3	Atlantic tomcod	12.6	18.5	indeterminant	3	no	≤ 30 cm
LPR5Q-A1	Banded killifish	5.7	1	indeterminant	5	no	≤ 30 cm
LPR5Q-A1	Banded killifish	5.2	1	indeterminant	5	no	≤ 30 cm
LPR5Q-A1	Banded killifish	6	2	indeterminant	5	no	≤ 30 cm
LPR5Q-A1	Banded killifish	5.3	1	indeterminant	5	no	≤ 30 cm
LPR5Q-A1	Banded killifish	4.9	1	indeterminant	5	no	≤ 30 cm
LPR5Q-A1	Banded killifish	5.6	1	indeterminant	5	no	≤ 30 cm
LPR5Q-A1	Banded killifish	8.1	5	indeterminant	5	no	≤ 30 cm
LPR5Q-A1	Banded killifish	4.8	1	indeterminant	5	no	≤ 30 cm
LPR5Q-A1	Banded killifish	4.7	1	indeterminant	5	no	≤ 30 cm
LPR5Q-A1	Banded killifish	4.8	1	indeterminant	5	no	≤ 30 cm
LPR5Q-A1	Banded killifish	4.1	1	indeterminant	5	no	≤ 30 cm
LPR5Q-A1	Banded killifish	5.5	1	indeterminant	5	no	≤ 30 cm
LPR5Q-A1	Banded killifish	4.4	1	indeterminant	5	no	≤ 30 cm
LPR5Q-A1	Banded killifish	5.6	1	indeterminant	5	no	≤ 30 cm
LPR5Q-A1	Banded killifish	6.6	2	indeterminant	5	no	≤ 30 cm
LPR5Q-A1	Banded killifish	6	2	indeterminant	5	no	≤ 30 cm
LPR5Q-A1	Banded killifish	5.9	2	indeterminant	5	no	≤ 30 cm
LPR5Q-A1	Banded killifish	6.1	2	indeterminant	5	no	≤ 30 cm
LPR5Q-A1	Banded killifish	5.6	2	indeterminant	5	no	≤ 30 cm
LPR5Q-A1	Banded killifish	5.9	2	indeterminant	5	no	≤ 30 cm
LPR5Q-A1	Banded killifish	5.7	2	indeterminant	5	no	≤ 30 cm
LPR5Q-A1	Banded killifish	5.5	1	indeterminant	5	no	≤ 30 cm
LPR5Q-A1	Banded killifish	5	1	indeterminant	5	no	≤ 30 cm
LPR5Q-A1	Banded killifish	4.8	1	indeterminant	5	no	≤ 30 cm
LPR5Q-A1	Banded killifish	5.7	2	indeterminant	5	no	≤ 30 cm
LPR5Q-A1	Banded killifish	5.3	1	indeterminant	5	no	≤ 30 cm
LPR5Q-A1	Banded killifish	5.4	1	indeterminant	5	no	≤ 30 cm
LPR5Q-A1	Banded killifish	5.3	1	indeterminant	5	no	≤ 30 cm
LPR5Q-A1	Banded killifish	5.5	1	indeterminant	5	no	≤ 30 cm
LPR5Q-A1	Banded killifish	4.9	1	indeterminant	5	no	≤ 30 cm
LPR5Q-A1	Banded killifish	4.9	1	indeterminant	5	no	≤ 30 cm
LPR5Q-A1	Banded killifish	3.3	1	indeterminant	5	no	≤ 30 cm
LPR5Q-A1	Banded killifish	4.5	1	indeterminant	5	no	≤ 30 cm
LPR5Q-A1	Banded killifish	4.9	1	indeterminant	5	no	≤ 30 cm
LPR5Q-A1	Banded killifish	4.9	1	indeterminant	5	no	≤ 30 cm
LPR5Q-A1	Banded killifish	5.2	1	indeterminant	5	no	≤ 30 cm
LPR5Q-A1	Banded killifish	4.9	1	indeterminant	5	no	≤ 30 cm

LPR5S-A1	Banded killifish	5.4	1	indeterminant	5	no	≤ 30 cm
LPR5S-A1	Banded killifish	4.6	1	indeterminant	5	no	≤ 30 cm
LPR5S-A1	Banded killifish	4.3	1	indeterminant	5	no	≤ 30 cm
LPR6AA-A2	Banded killifish	5.7	1.5	indeterminant	6	yes	≤ 30 cm
LPR1LL-A22	Banded killifish	3.3	0.5	female	1	no	≤ 30 cm
LPR1LL-A22	Banded killifish	3.6	0.5	female	1	no	≤ 30 cm
LPR1LL-A24	Banded killifish	2.9	0.5	female	1	no	≤ 30 cm
LPR1MM-A8	Banded killifish	2.5	0.5	female	1	no	≤ 30 cm
LPR1MM-A26	Banded killifish	2.7	0.5	female	1	no	≤ 30 cm
LPR1MM-A51	Banded killifish	6.1	2.5	female	1	no	≤ 30 cm
LPR1MM-A35	Banded killifish	3.1	0.5	female	1	no	≤ 30 cm
LPR2AC-C3	Banded killifish	5.7	2	female	2	no	≤ 30 cm
LPR2AC-A4	Banded killifish	4.3	0.5	female	2	no	≤ 30 cm
LPR2AC-A4	Banded killifish	5.3	1	female	2	no	≤ 30 cm
LPR2LL-A1	Banded killifish	3.8	0.5	female	2	no	≤ 30 cm
LPR2LL-A3	Banded killifish	4.3	0.75	female	2	no	≤ 30 cm
LPR2MM-A7	Banded killifish	4.3	1	male	2	no	≤ 30 cm
LPR2MM-A7	Banded killifish	3.6	0.5	male	2	no	≤ 30 cm
LPR2MM-A17	Banded killifish	3.9	0.5	female	2	no	≤ 30 cm
LPR2MM-A18	Banded killifish	3.1	0.5	female	2	no	≤ 30 cm
LPR2MM-A18	Banded killifish	2.5	0.5	female	2	no	≤ 30 cm
LPR2MM-A18	Banded killifish	3.5	0.5	female	2	no	≤ 30 cm
LPR2MM-A18	Banded killifish	2.9	0.5	female	2	no	≤ 30 cm
LPR2MM-A18	Banded killifish	3.1	0.5	female	2	no	≤ 30 cm
LPR2MM-A18	Banded killifish	3.4	0.5	female	2	no	≤ 30 cm
LPR2MM-A18	Banded killifish	3.9	0.5	male	2	no	≤ 30 cm
LPR2MM-A18	Banded killifish	2.9	0.5	female	2	no	≤ 30 cm
LPR2MM-A18	Banded killifish	2.9	0.5	female	2	no	≤ 30 cm
LPR2MM-A18	Banded killifish	3.5	0.5	female	2	no	≤ 30 cm
LPR2MM-A18	Banded killifish	3.6	0.5	female	2	no	≤ 30 cm
LPR2MM-A18	Banded killifish	3.1	0.5	female	2	no	≤ 30 cm
LPR2MM-A18	Banded killifish	2.8	0.5	female	2	no	≤ 30 cm
LPR2MM-A18	Banded killifish	2.8	0.5	female	2	no	≤ 30 cm
LPR2MM-A18	Banded killifish	3.2	0.5	female	2	no	≤ 30 cm
LPR2MM-A18	Banded killifish	3.3	0.5	female	2	no	≤ 30 cm
LPR2MM-A18	Banded killifish	2.8	0.5	female	2	no	≤ 30 cm
LPR2MM-A18	Banded killifish	2.9	0.5	female	2	no	≤ 30 cm
LPR2MM-A18	Banded killifish	2.4	0.5	female	2	no	≤ 30 cm
LPR2MM-A18	Banded killifish	2.7	0.5	female	2	no	≤ 30 cm
LPR2MM-A18	Banded killifish	4	0.5	male	2	no	≤ 30 cm
LPR2MM-A18	Banded killifish	2.5	0.5	female	2	no	≤ 30 cm
LPR2MM-A18	Banded killifish	3.1	0.5	female	2	no	≤ 30 cm
LPR2MM-A18	Banded killifish	3.5	0.5	female	2	no	≤ 30 cm
LPR2MM-A18	Banded killifish	3.3	0.5	female	2	no	≤ 30 cm
LPR2MM-A18	Banded killifish	2.5	0.5	female	2	no	≤ 30 cm
LPR2MM-A18	Banded killifish	3.2	0.5	female	2	no	≤ 30 cm
LPR2MM-A18	Banded killifish	2.6	0.5	female	2	no	≤ 30 cm
LPR2MM-A18	Banded killifish	3.7	0.5	male	2	no	≤ 30 cm
LPR2MM-A19	Banded killifish	4.1	0.5	female	2	no	≤ 30 cm
LPR2MM-A19	Banded killifish	3.9	0.5	female	2	no	≤ 30 cm
LPR2MM-A19	Banded killifish	3.7	0.5	female	2	no	≤ 30 cm
LPR2MM-A19	Banded killifish	3.8	0.5	female	2	no	≤ 30 cm
LPR2MM-A19	Banded killifish	2.6	0.5	female	2	no	≤ 30 cm
LPR2MM-A19	Banded killifish	2.8	0.5	female	2	no	≤ 30 cm
LPR2MM-A19	Banded killifish	3.6	0.5	male	2	no	≤ 30 cm
LPR2MM-A19	Banded killifish	4.2	0.5	male	2	no	≤ 30 cm

LPR2MM-A14	Banded killifish	3.8	0.5	female	2	no	≤ 30 cm
LPR2MM-A16	Banded killifish	4.3	0.5	male	2	no	≤ 30 cm
LPR2MM-A24	Banded killifish	4.1	0.5	male	2	no	≤ 30 cm
LPR2MM-A24	Banded killifish	3.5	0.5	female	2	no	≤ 30 cm
LPR2MM-A21	Banded killifish	3.8	0.5	male	2	no	≤ 30 cm
LPR2MM-A29	Banded killifish	2.2	0.5	female	2	no	≤ 30 cm
LPR2MM-A30	Banded killifish	2	0.5	female	2	no	≤ 30 cm
LPR2MM-A33	Banded killifish	4	1	female	2	no	≤ 30 cm
LPR2MM-A33	Banded killifish	4	1	female	2	no	≤ 30 cm
LPR2MM-A33	Banded killifish	4.5	1	male	2	no	≤ 30 cm
LPR2MM-A36	Banded killifish	4.8	1.5	female	2	no	≤ 30 cm
LPR2NN-A3	Banded killifish	1.7	0.5	female	2	no	≤ 30 cm
LPR2NN-A3	Banded killifish	2.6	0.5	female	2	no	≤ 30 cm
LPR2NN-A3	Banded killifish	2.4	0.5	female	2	no	≤ 30 cm
LPR2NN-A3	Banded killifish	2.3	0.5	female	2	no	≤ 30 cm
LPR2NN-A3	Banded killifish	2.4	0.5	female	2	no	≤ 30 cm
LPR2NN-A3	Banded killifish	1.7	0.5	female	2	no	≤ 30 cm
LPR2NN-A3	Banded killifish	3.4	0.5	female	2	no	≤ 30 cm
LPR2NN-A3	Banded killifish	2.4	0.5	female	2	no	≤ 30 cm
LPR2NN-A3	Banded killifish	2.6	0.5	female	2	no	≤ 30 cm
LPR2NN-A3	Banded killifish	3.3	0.5	female	2	no	≤ 30 cm
LPR2NN-A6	Banded killifish	2.1	0.5	female	2	no	≤ 30 cm
LPR2NN-A7	Banded killifish	1.4	0.5	female	2	no	≤ 30 cm
LPR2NN-A4	Banded killifish	1.9	0.5	female	2	no	≤ 30 cm
LPR2NN-A32	Banded killifish	5.3	2	female	2	no	≤ 30 cm
LPR2NN-A32	Banded killifish	4.6	1	female	2	no	≤ 30 cm
LPR2NN-A32	Banded killifish	5.4	2.5	female	2	no	≤ 30 cm
LPR2NN-A32	Banded killifish	5.6	2.5	female	2	no	≤ 30 cm
LPR2NN-A31	Banded killifish	5.5	2	female	2	no	≤ 30 cm
LPR2NN-A31	Banded killifish	4.2	1	male	2	no	≤ 30 cm
LPR2NN-A31	Banded killifish	5.4	2	female	2	no	≤ 30 cm
LPR2NN-A31	Banded killifish	5.2	2	female	2	no	≤ 30 cm
LPR2NN-A31	Banded killifish	6.2	3	female	2	no	≤ 30 cm
LPR2NN-A33	Banded killifish	4.1	0.5	male	2	no	≤ 30 cm
LPR2NN-A33	Banded killifish	3.4	0.5	female	2	no	≤ 30 cm
LPR2NN-A33	Banded killifish	4.9	1.5	female	2	no	≤ 30 cm
LPR2NN-A33	Banded killifish	5.2	2	female	2	no	≤ 30 cm
LPR2NN-A33	Banded killifish	5.6	2	female	2	no	≤ 30 cm
LPR2NN-A33	Banded killifish	3.6	1	female	2	no	≤ 30 cm
LPR2NN-A33	Banded killifish	4.6	1	female	2	no	≤ 30 cm
LPR2NN-A33	Banded killifish	5.4	2	female	2	no	≤ 30 cm
LPR2NN-A33	Banded killifish	5.1	1	female	2	no	≤ 30 cm
LPR2NN-A33	Banded killifish	5.4	1.5	female	2	no	≤ 30 cm
LPR2NN-A33	Banded killifish	3.5	1	female	2	no	≤ 30 cm
LPR2NN-A33	Banded killifish	4.7	1.5	female	2	no	≤ 30 cm
LPR2NN-A33	Banded killifish	5.5	2	female	2	no	≤ 30 cm
LPR2NN-A33	Banded killifish	5.4	1.5	female	2	no	≤ 30 cm
LPR2NN-A37	Banded killifish	3.7	0.5	female	2	no	≤ 30 cm
LPR2NN-A36	Banded killifish	4.2	0.5	female	2	no	≤ 30 cm
LPR2NN-A36	Banded killifish	3.9	0.5	female	2	no	≤ 30 cm
LPR2NN-A15	Banded killifish	3.8	0.5	female	2	no	≤ 30 cm
LPR2OO-A2	Banded killifish	4	0.5	male	2	no	≤ 30 cm
LPR2OO-A17	Banded killifish	2.7	0.5	female	2	no	≤ 30 cm
LPR2OO-A45	Banded killifish	4.3	0.5	male	2	no	≤ 30 cm
LPR2OO-A44	Banded killifish	2.5	0.5	indeterminant	2	no	≤ 30 cm
LPR2OO-A59	Banded killifish	6	2.5	female	2	no	≤ 30 cm

LPR2OO-A59	Banded killifish	5.1	2	female	2	no	≤ 30 cm
LPR2OO-A59	Banded killifish	5	1.5	male	2	no	≤ 30 cm
LPR2OO-A59	Banded killifish	4.1	1	male	2	no	≤ 30 cm
LPR2OO-A57	Banded killifish	5.1	1	male	2	no	≤ 30 cm
LPR2OO-A57	Banded killifish	4.2	1	male	2	no	≤ 30 cm
LPR2OO-A57	Banded killifish	3.5	0.5	male	2	no	≤ 30 cm
LPR2OO-A63	Banded killifish	3.7	0.5	female	2	no	≤ 30 cm
LPR2OO-A63	Banded killifish	5.4	1.5	female	2	no	≤ 30 cm
LPR2OO-A63	Banded killifish	5.4	1.5	female	2	no	≤ 30 cm
LPR2OO-A67	Banded killifish	4.7	1	male	2	no	≤ 30 cm
LPR2PP-A9	Banded killifish	1.5	0.5	female	2	no	≤ 30 cm
LPR2PP-A9	Banded killifish	1.8	0.5	female	2	no	≤ 30 cm
LPR2PP-A9	Banded killifish	2.4	0.5	female	2	no	≤ 30 cm
LPR2PP-A9	Banded killifish	2.6	0.5	female	2	no	≤ 30 cm
LPR2PP-A9	Banded killifish	2	0.5	female	2	no	≤ 30 cm
LPR2PP-A9	Banded killifish	2.1	0.5	female	2	no	≤ 30 cm
LPR2PP-A9	Banded killifish	2.4	0.5	female	2	no	≤ 30 cm
LPR2PP-A9	Banded killifish	3.2	0.5	female	2	no	≤ 30 cm
LPR2PP-A9	Banded killifish	2.5	0.5	female	2	no	≤ 30 cm
LPR2PP-A9	Banded killifish	2.1	0.5	female	2	no	≤ 30 cm
LPR2PP-A9	Banded killifish	1.5	0.5	female	2	no	≤ 30 cm
LPR2PP-A9	Banded killifish	2.3	0.5	female	2	no	≤ 30 cm
LPR2PP-A9	Banded killifish	1.8	0.5	female	2	no	≤ 30 cm
LPR2PP-A9	Banded killifish	1.7	0.5	female	2	no	≤ 30 cm
LPR2PP-A9	Banded killifish	2.2	0.5	female	2	no	≤ 30 cm
LPR2PP-A9	Banded killifish	2.5	0.5	female	2	no	≤ 30 cm
LPR2PP-A9	Banded killifish	2.2	0.5	female	2	no	≤ 30 cm
LPR2PP-A9	Banded killifish	1.8	0.5	female	2	no	≤ 30 cm
LPR2PP-A9	Banded killifish	1.8	0.5	female	2	no	≤ 30 cm
LPR2PP-A9	Banded killifish	2.2	0.5	female	2	no	≤ 30 cm
LPR2PP-A9	Banded killifish	2	0.5	female	2	no	≤ 30 cm
LPR2PP-A9	Banded killifish	1.8	0.5	female	2	no	≤ 30 cm
LPR2PP-A9	Banded killifish	1.8	0.5	female	2	no	≤ 30 cm
LPR2PP-A9	Banded killifish	2.4	0.5	female	2	no	≤ 30 cm
LPR2PP-A3	Banded killifish	3.9	0.5	male	2	no	≤ 30 cm
LPR2PP-A3	Banded killifish	2.9	0.5	female	2	no	≤ 30 cm
LPR2PP-A7	Banded killifish	2	0.5	female	2	no	≤ 30 cm
LPR2PP-A7	Banded killifish	2.7	0.5	female	2	no	≤ 30 cm
LPR2PP-A7	Banded killifish	2.5	0.5	female	2	no	≤ 30 cm
LPR2PP-A7	Banded killifish	2.6	0.5	female	2	no	≤ 30 cm
LPR2PP-A10	Banded killifish	1.6	0.5	female	2	no	≤ 30 cm
LPR2PP-A10	Banded killifish	2.1	0.5	female	2	no	≤ 30 cm
LPR2PP-A10	Banded killifish	2	0.5	female	2	no	≤ 30 cm
LPR2PP-A10	Banded killifish	2.2	0.5	female	2	no	≤ 30 cm
LPR2PP-A10	Banded killifish	2.4	0.5	female	2	no	≤ 30 cm
LPR2PP-A10	Banded killifish	2.1	0.5	female	2	no	≤ 30 cm
LPR2PP-A10	Banded killifish	2.3	0.5	female	2	no	≤ 30 cm
LPR2PP-A10	Banded killifish	2.5	0.5	female	2	no	≤ 30 cm
LPR2PP-A10	Banded killifish	2.2	0.5	female	2	no	≤ 30 cm
LPR2PP-A4	Banded killifish	2.5	0.5	female	2	no	≤ 30 cm
LPR2PP-A4	Banded killifish	2.9	0.5	female	2	no	≤ 30 cm
LPR2PP-A4	Banded killifish	2.3	0.5	female	2	no	≤ 30 cm
LPR2PP-A6	Banded killifish	2.1	0.5	female	2	no	≤ 30 cm
LPR2PP-A6	Banded killifish	2.5	0.5	female	2	no	≤ 30 cm
LPR2PP-A6	Banded killifish	2.4	0.5	female	2	no	≤ 30 cm
LPR2PP-A6	Banded killifish	2.6	0.5	female	2	no	≤ 30 cm

LPR2PP-A6	Banded killifish	3.2	0.5	female	2	no	≤ 30 cm
LPR2PP-A6	Banded killifish	3.1	0.5	female	2	no	≤ 30 cm
LPR2PP-A6	Banded killifish	3.2	0.5	female	2	no	≤ 30 cm
LPR2PP-A6	Banded killifish	2.9	0.5	female	2	no	≤ 30 cm
LPR2PP-A6	Banded killifish	2.4	0.5	female	2	no	≤ 30 cm
LPR2PP-A6	Banded killifish	2.6	0.5	female	2	no	≤ 30 cm
LPR2PP-A6	Banded killifish	2.8	0.5	female	2	no	≤ 30 cm
LPR2PP-A6	Banded killifish	3.8	0.5	female	2	no	≤ 30 cm
LPR2PP-A6	Banded killifish	4.1	0.5	female	2	no	≤ 30 cm
LPR2PP-A6	Banded killifish	4.2	0.5	male	2	no	≤ 30 cm
LPR2PP-A12	Banded killifish	2.2	0.5	female	2	no	≤ 30 cm
LPR2PP-A12	Banded killifish	3	0.5	female	2	no	≤ 30 cm
LPR2PP-A12	Banded killifish	2.2	0.5	female	2	no	≤ 30 cm
LPR2PP-A12	Banded killifish	1.5	0.5	female	2	no	≤ 30 cm
LPR2PP-A55	Banded killifish	4.7	1	female	2	no	≤ 30 cm
LPR2PP-A55	Banded killifish	4.4	1	female	2	no	≤ 30 cm
LPR2PP-A52	Banded killifish	4.1	0.5	male	2	no	≤ 30 cm
LPR2PP-A53	Banded killifish	3.5	0.5	male	2	no	≤ 30 cm
LPR2PP-A53	Banded killifish	2.5	0.5	female	2	no	≤ 30 cm
LPR2PP-A53	Banded killifish	2.4	0.5	female	2	no	≤ 30 cm
LPR2PP-A56	Banded killifish	5	1	female	2	no	≤ 30 cm
LPR2PP-A58	Banded killifish	4.2	1	male	2	no	≤ 30 cm
LPR2PP-A75	Banded killifish	5.3	1.5	female	2	no	≤ 30 cm
LPR2PP-A71	Banded killifish	5.6	1.5	female	2	no	≤ 30 cm
LPR2PP-A71	Banded killifish	3.6	0.5	male	2	no	≤ 30 cm
LPR2PP-A72	Banded killifish	5.4	2	female	2	no	≤ 30 cm
LPR2PP-A78	Banded killifish	4	0.5	female	2	no	≤ 30 cm
LPR2PP-A78	Banded killifish	5	1.5	male	2	no	≤ 30 cm
LPR2PP-A80	Banded killifish	5.2	1.5	female	2	no	≤ 30 cm
LPR2PP-A79	Banded killifish	4.6	1	female	2	no	≤ 30 cm
LPR2PP-A79	Banded killifish	5.3	1.5	female	2	no	≤ 30 cm
LPR2PP-A79	Banded killifish	5.2	1.5	female	2	no	≤ 30 cm
LPR2PP-A79	Banded killifish	5.2	1.5	female	2	no	≤ 30 cm
LPR2PP-A79	Banded killifish	4.9	1.5	female	2	no	≤ 30 cm
LPR2PP-A79	Banded killifish	4.7	1.5	female	2	no	≤ 30 cm
LPR2PP-A79	Banded killifish	5.2	1.5	female	2	no	≤ 30 cm
LPR2PP-A79	Banded killifish	5	1.5	female	2	no	≤ 30 cm
LPR2PP-A79	Banded killifish	5.4	2	female	2	no	≤ 30 cm
LPR2PP-A79	Banded killifish	5	1.5	female	2	no	≤ 30 cm
LPR2PP-A81	Banded killifish	4.8	1	female	2	no	≤ 30 cm
LPR2QQ-A9	Banded killifish	3.1	0.5	female	2	no	≤ 30 cm
LPR2QQ-A9	Banded killifish	3	0.5	female	2	no	≤ 30 cm
LPR2QQ-A9	Banded killifish	3.3	0.5	female	2	no	≤ 30 cm
LPR2QQ-A9	Banded killifish	2.4	0.5	female	2	no	≤ 30 cm
LPR2QQ-A9	Banded killifish	3.5	0.5	female	2	no	≤ 30 cm
LPR2QQ-A23	Banded killifish	2	0.5	female	2	no	≤ 30 cm
LPR2QQ-A28	Banded killifish	4.3	1	male	2	no	≤ 30 cm
LPR2QQ-A26	Banded killifish	4.9	1	male	2	no	≤ 30 cm
LPR2QQ-A26	Banded killifish	5	1	female	2	no	≤ 30 cm
LPR2QQ-A26	Banded killifish	5.1	1.5	male	2	no	≤ 30 cm
LPR2QQ-A27	Banded killifish	4.9	1	male	2	no	≤ 30 cm
LPR2QQ-A31	Banded killifish	5.5	2	female	2	no	≤ 30 cm
LPR2RR-A13	Banded killifish	2.4	0.5	female	2	no	≤ 30 cm
LPR2RR-A13	Banded killifish	2.5	0.5	female	2	no	≤ 30 cm
LPR2RR-A13	Banded killifish	2.5	0.5	female	2	no	≤ 30 cm
LPR2RR-A31	Banded killifish	5.6	2	female	2	no	≤ 30 cm

LPR2RR-A41	Banded killifish	4.7	1	female	2	no	≤ 30 cm
LPR2SS-A33	Banded killifish	3.7	0.5	female	2	no	≤ 30 cm
LPR2SS-A97	Banded killifish	5.9	2.5	female	2	no	≤ 30 cm
LPR2SS-A97	Banded killifish	5.6	2	male	2	no	≤ 30 cm
LPR2SS-A98	Banded killifish	4	0.5	female	2	no	≤ 30 cm
LPR2SS-A98	Banded killifish	3.4	0.5	female	2	no	≤ 30 cm
LPR2SS-A98	Banded killifish	4	0.5	female	2	no	≤ 30 cm
LPR2SS-A98	Banded killifish	4.6	1	female	2	no	≤ 30 cm
LPR2SS-A99	Banded killifish	5.6	2	female	2	no	≤ 30 cm
LPR2SS-A97	Banded killifish	5.2	2	female	2	no	≤ 30 cm
LPR2SS-A105	Banded killifish	4.9	1	female	2	no	≤ 30 cm
LPR2SS-A105	Banded killifish	4.6	1	male	2	no	≤ 30 cm
LPR2SS-A105	Banded killifish	5.4	1.5	female	2	no	≤ 30 cm
LPR3HH-A6	Banded killifish	3	0.5	female	3	no	≤ 30 cm
LPR3HH-A6	Banded killifish	2.7	0.5	female	3	no	≤ 30 cm
LPR3HH-A6	Banded killifish	4.7	1	male	3	no	≤ 30 cm
LPR3HH-A6	Banded killifish	3.6	0.5	female	3	no	≤ 30 cm
LPR3HH-A5	Banded killifish	3.8	0.5	female	3	no	≤ 30 cm
LPR3HH-A5	Banded killifish	3.5	0.5	female	3	no	≤ 30 cm
LPR3HH-A5	Banded killifish	3.6	0.5	male	3	no	≤ 30 cm
LPR3HH-A5	Banded killifish	3.7	0.5	female	3	no	≤ 30 cm
LPR3HH-A5	Banded killifish	3.7	0.5	female	3	no	≤ 30 cm
LPR3HH-A5	Banded killifish	2.8	0.5	female	3	no	≤ 30 cm
LPR3HH-A8	Banded killifish	3.2	0.5	female	3	no	≤ 30 cm
LPR3HH-A8	Banded killifish	3.5	0.5	female	3	no	≤ 30 cm
LPR3HH-A34	Banded killifish	5.1	1.5	female	3	no	≤ 30 cm
LPR3II-A78	Banded killifish	5.2	1.5	male	3	no	≤ 30 cm
LPR3II-A78	Banded killifish	5.2	1.5	female	3	no	≤ 30 cm
LPR4TT-A3	Banded killifish	4.9	0.5	indeterminant	4	no	≤ 30 cm
LPR4TT-A8	Banded killifish	4.2	0.5	male	4	no	≤ 30 cm
LPR4TT-A8	Banded killifish	4.5	1	female	4	no	≤ 30 cm
LPR4TT-A8	Banded killifish	3.4	0.5	female	4	no	≤ 30 cm
LPR4TT-A8	Banded killifish	4.9	1	female	4	no	≤ 30 cm
LPR4TT-A8	Banded killifish	4.5	1	female	4	no	≤ 30 cm
LPR4TT-A1	Banded killifish	4.7	1.5	indeterminant	4	no	≤ 30 cm
LPR4TT-A1	Banded killifish	4	1	indeterminant	4	no	≤ 30 cm
LPR4UU-A6	Banded killifish	5	0.5	indeterminant	4	no	≤ 30 cm
LPR4UU-A6	Banded killifish	4.8	0.5	indeterminant	4	no	≤ 30 cm
LPR4UU-A4	Banded killifish	3.7	0.9	indeterminant	4	no	≤ 30 cm
LPR4UU-A4	Banded killifish	3.7	0.9	indeterminant	4	no	≤ 30 cm
LPR4VV-A3	Banded killifish	3.5	0.2	indeterminant	4	no	≤ 30 cm
LPR4VV-A3	Banded killifish	3.5	0.1	indeterminant	4	no	≤ 30 cm
LPR4VV-A3	Banded killifish	3.5	1	indeterminant	4	no	≤ 30 cm
LPR4VV-A3	Banded killifish	3.5	0.3	indeterminant	4	no	≤ 30 cm
LPR4VV-A3	Banded killifish	5.5	2.5	indeterminant	4	no	≤ 30 cm
LPR4VV-A3	Banded killifish	5.3	2	indeterminant	4	no	≤ 30 cm
LPR4VV-A3	Banded killifish	5.5	2	indeterminant	4	no	≤ 30 cm
LPR4VV-A3	Banded killifish	5.1	2	indeterminant	4	no	≤ 30 cm
LPR4VV-A3	Banded killifish	5.6	3	indeterminant	4	no	≤ 30 cm
LPR4VV-A3	Banded killifish	5.7	2.9	indeterminant	4	no	≤ 30 cm
LPR4VV-A3	Banded killifish	5	1.5	indeterminant	4	no	≤ 30 cm
LPR4VV-A3	Banded killifish	5	1.9	indeterminant	4	no	≤ 30 cm
LPR4VV-A3	Banded killifish	5	1.5	indeterminant	4	no	≤ 30 cm
LPR4VV-A3	Banded killifish	5	1.9	indeterminant	4	no	≤ 30 cm
LPR4VV-A3	Banded killifish	4.8	1.5	indeterminant	4	no	≤ 30 cm
LPR4VV-A3	Banded killifish	4.8	2	indeterminant	4	no	≤ 30 cm

LPR4VV-A3	Banded killifish	4.9	1.9	indeterminant	4	no	≤ 30 cm
LPR4VV-A3	Banded killifish	4.9	1.9	indeterminant	4	no	≤ 30 cm
LPR4VV-A3	Banded killifish	4.3	1.5	indeterminant	4	no	≤ 30 cm
LPR4VV-A3	Banded killifish	4.3	1.5	indeterminant	4	no	≤ 30 cm
LPR4VV-A3	Banded killifish	4.7	1.9	indeterminant	4	no	≤ 30 cm
LPR4VV-A3	Banded killifish	4.7	1.5	indeterminant	4	no	≤ 30 cm
LPR4VV-A3	Banded killifish	4	1.1	indeterminant	4	no	≤ 30 cm
LPR4VV-A3	Banded killifish	4	0.4	indeterminant	4	no	≤ 30 cm
LPR4VV-A3	Banded killifish	4	0.4	indeterminant	4	no	≤ 30 cm
LPR4VV-A3	Banded killifish	4.5	0.5	indeterminant	4	no	≤ 30 cm
LPR4VV-A3	Banded killifish	4	0.7	indeterminant	4	no	≤ 30 cm
LPR5TT-A4	Banded killifish	5.6	0.5	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	Banded killifish	4.4	0.5	indeterminant	5	no	≤ 30 cm
LPR5TT-A5	Banded killifish	4.6	0.5	indeterminant	5	no	≤ 30 cm
LPR5TT-A5	Banded killifish	5.6	0.5	indeterminant	5	no	≤ 30 cm
LPR5TT-A1	Banded killifish	6.6	4	male	5	no	≤ 30 cm
LPR5TT-A1	Banded killifish	5.4	1.5	male	5	no	≤ 30 cm
LPR5TT-A1	Banded killifish	4.3	1	female	5	no	≤ 30 cm
LPR5TT-A1	Banded killifish	4.5	1	female	5	no	≤ 30 cm
LPR5TT-A1	Banded killifish	5.2	2	female	5	no	≤ 30 cm
LPR5TT-A1	Banded killifish	4.2	0.5	female	5	no	≤ 30 cm
LPR5TT-A1	Banded killifish	5.6	2	female	5	no	≤ 30 cm
LPR5TT-A1	Banded killifish	4.7	1	female	5	no	≤ 30 cm
LPR5TT-A1	Banded killifish	4.5	1	female	5	no	≤ 30 cm
LPR5TT-A1	Banded killifish	5.1	1.5	female	5	no	≤ 30 cm
LPR5TT-A1	Banded killifish	5	1	female	5	no	≤ 30 cm
LPR5TT-A1	Banded killifish	5.3	1.5	female	5	no	≤ 30 cm
LPR5TT-A1	Banded killifish	4.5	0.5	female	5	no	≤ 30 cm
LPR5TT-A1	Banded killifish	4.4	1	female	5	no	≤ 30 cm
LPR5TT-A1	Banded killifish	5	1	female	5	no	≤ 30 cm
LPR5TT-A1	Banded killifish	5.1	1.5	female	5	no	≤ 30 cm
LPR5TT-A1	Banded killifish	4.9	1	female	5	no	≤ 30 cm
LPR5TT-A1	Banded killifish	5.5	1	female	5	no	≤ 30 cm
LPR6TT-A2	Banded killifish	5.3	2	indeterminant	6	yes	≤ 30 cm
LPR2NN-A25	Bay anchovy	7	2.5	female	2	no	≤ 30 cm
LPR2QQ-A11	Bay anchovy	8.6	4	male	2	no	≤ 30 cm
LPR2QQ-A11	Bay anchovy	6.8	2	male	2	no	≤ 30 cm
LPR4S-A2	Black crappie	16.1	59	male	4	no	≤ 30 cm
LPR4S-A2	Black crappie	13.4	33	male	4	no	≤ 30 cm
LPR6H-B10	Black crappie	15.2	49	female	6	yes	≤ 30 cm
LPR1H-A1	Blue crab	15	224	male	1	no	na
LPR1I-A1	Blue crab	13.9	118	female	1	no	na
LPR1I-A1	Blue crab	14.8	228	male	1	no	na
LPR1I-A1	Blue crab	13.8	200	male	1	no	na
LPR1I-A1	Blue crab	15.8	220	male	1	no	na
LPR1I-A1	Blue crab	14.4	222	male	1	no	na
LPR1I-A1	Blue crab	15	246	male	1	no	na
LPR1I-A1	Blue crab	14.8	216	male	1	no	na
LPR1I-A1	Blue crab	11.8	106	male	1	no	na
LPR1I-A1	Blue crab	16.4	246	male	1	no	na
LPR1I-A1	Blue crab	13.6	188	male	1	no	na
LPR1I-A1	Blue crab	15.6	212	male	1	no	na
LPR1I-A1	Blue crab	13.1	170	male	1	no	na
LPR1I-A1	Blue crab	13.1	180	male	1	no	na
LPR1I-A1	Blue crab	13.9	196	male	1	no	na
LPR1I-A1	Blue crab	8.9	54	female	1	no	na

LPR1I-A1	Blue crab	10.9	84	female	1	no	na
LPR1I-A1	Blue crab	11.5	118	male	1	no	na
LPR1I-A1	Blue crab	10.9	82	female	1	no	na
LPR1I-A2	Blue crab	15.7	202	male	1	no	na
LPR1I-A2	Blue crab	14.3	186	male	1	no	na
LPR1I-A2	Blue crab	14.1	182	male	1	no	na
LPR1I-A2	Blue crab	14.4	136	female	1	no	na
LPR1I-A2	Blue crab	13.3	218	male	1	no	na
LPR1I-A2	Blue crab	13.8	156	female	1	no	na
LPR1I-A2	Blue crab	15	114	female	1	no	na
LPR1I-A2	Blue crab	9.3	50	female	1	no	na
LPR1I-A2	Blue crab	13.9	156	male	1	no	na
LPR1I-A2	Blue crab	13.4	182	male	1	no	na
LPR1I-A2	Blue crab	13.4	172	male	1	no	na
LPR1I-A2	Blue crab	14.4	154	female	1	no	na
LPR1I-A2	Blue crab	13.2	142	male	1	no	na
LPR1I-A2	Blue crab	11.6	114	male	1	no	na
LPR1I-A2	Blue crab	13.4	112	female	1	no	na
LPR1I-A2	Blue crab	15.3	224	male	1	no	na
LPR1I-A2	Blue crab	16.1	214	male	1	no	na
LPR1I-A2	Blue crab	13.4	164	male	1	no	na
LPR1I-A2	Blue crab	14.8	222	male	1	no	na
LPR1I-A2	Blue crab	15.3	164	male	1	no	na
LPR1I-A3	Blue crab	13.6	176	male	1	no	na
LPR1I-A3	Blue crab	13	182	male	1	no	na
LPR1I-A3	Blue crab	14	140	male	1	no	na
LPR1I-A3	Blue crab	13.5	140	female	1	no	na
LPR1I-A3	Blue crab	14.6	174	male	1	no	na
LPR1I-A3	Blue crab	15.6	268	male	1	no	na
LPR1I-A3	Blue crab	13.1	158	male	1	no	na
LPR1I-A3	Blue crab	12.4	104	female	1	no	na
LPR1I-A4	Blue crab	9	51	female	1	no	na
LPR1I-A4	Blue crab	14.2	196	male	1	no	na
LPR1I-A4	Blue crab	14.9	204	male	1	no	na
LPR1I-A4	Blue crab	15.9	180	female	1	no	na
LPR1I-A5	Blue crab	13.6	174	male	1	no	na
LPR1I-A5	Blue crab	14.1	196	male	1	no	na
LPR1I-A5	Blue crab	11.4	70	female	1	no	na
LPR1I-A5	Blue crab	14	166	male	1	no	na
LPR1I-A5	Blue crab	15.5	190	male	1	no	na
LPR1I-A5	Blue crab	14.1	212	male	1	no	na
LPR1I-A5	Blue crab	15	232	male	1	no	na
LPR1I-A5	Blue crab	17.2	270	male	1	no	na
LPR1I-A5	Blue crab	11.3	80	female	1	no	na
LPR1I-A5	Blue crab	9.2	54	female	1	no	na
LPR1J-A1	Blue crab	14.6	210	male	1	no	na
LPR1J-A1	Blue crab	13.9	198	male	1	no	na
LPR1J-A1	Blue crab	11.6	102	male	1	no	na
LPR1J-A1	Blue crab	13.8	188	male	1	no	na
LPR1J-A1	Blue crab	13.4	154	male	1	no	na
LPR1J-A1	Blue crab	13.5	154	male	1	no	na
LPR1J-A1	Blue crab	15.7	270	male	1	no	na
LPR1J-A1	Blue crab	14.3	206	male	1	no	na
LPR1J-A1	Blue crab	14.7	192	male	1	no	na
LPR1J-A1	Blue crab	17	318	male	1	no	na
LPR1J-A1	Blue crab	16.9	332	male	1	no	na

LPR1J-A1	Blue crab	16	286	male	1	no	na
LPR1J-A1	Blue crab	14.9	234	male	1	no	na
LPR1J-A1	Blue crab	14.2	128	female	1	no	na
LPR1J-A2	Blue crab	12.7	100	female	1	no	na
LPR1J-A2	Blue crab	14.4	224	male	1	no	na
LPR1J-A2	Blue crab	15.6	260	male	1	no	na
LPR1J-A2	Blue crab	16.6	206	male	1	no	na
LPR1J-A2	Blue crab	12.5	160	male	1	no	na
LPR1J-A2	Blue crab	14.8	190	male	1	no	na
LPR1J-A2	Blue crab	14.9	184	male	1	no	na
LPR1J-A2	Blue crab	14.8	214	male	1	no	na
LPR1J-A2	Blue crab	11.2	84	female	1	no	na
LPR1J-A2	Blue crab	13	152	male	1	no	na
LPR1J-A2	Blue crab	14.6	220	male	1	no	na
LPR1J-A2	Blue crab	14.2	202	male	1	no	na
LPR1J-A2	Blue crab	12.7	154	male	1	no	na
LPR1J-A2	Blue crab	10.3	70	female	1	no	na
LPR1J-A2	Blue crab	11.1	79	female	1	no	na
LPR1J-A2	Blue crab	10.6	86	female	1	no	na
LPR1J-A2	Blue crab	14.7	214	male	1	no	na
LPR1J-A2	Blue crab	14.2	190	male	1	no	na
LPR1J-A2	Blue crab	16.1	226	male	1	no	na
LPR1J-A2	Blue crab	9.4	50	male	1	no	na
LPR1J-A2	Blue crab	17.6	312	male	1	no	na
LPR1J-A2	Blue crab	16.4	282	male	1	no	na
LPR1J-A2	Blue crab	13.9	190	male	1	no	na
LPR1J-A2	Blue crab	14.2	178	male	1	no	na
LPR1J-A2	Blue crab	16.1	296	male	1	no	na
LPR1J-A2	Blue crab	15.5	236	male	1	no	na
LPR1J-A2	Blue crab	15.4	248	male	1	no	na
LPR1J-A2	Blue crab	10.7	86	female	1	no	na
LPR1J-A3	Blue crab	13.5	188	male	1	no	na
LPR1J-A3	Blue crab	13.2	168	male	1	no	na
LPR1J-A3	Blue crab	13.5	168	male	1	no	na
LPR1J-A3	Blue crab	12.5	104	male	1	no	na
LPR1J-A3	Blue crab	12.4	112	female	1	no	na
LPR1J-A3	Blue crab	14.6	198	male	1	no	na
LPR1J-A3	Blue crab	13.6	194	male	1	no	na
LPR1J-A3	Blue crab	14.8	104	female	1	no	na
LPR1J-A3	Blue crab	11.2	74	female	1	no	na
LPR1J-A3	Blue crab	15.4	232	male	1	no	na
LPR1J-A3	Blue crab	8.3	16	male	1	no	na
LPR1J-A3	Blue crab	15.1	234	male	1	no	na
LPR1J-A3	Blue crab	14.5	200	male	1	no	na
LPR1J-A3	Blue crab	13.1	166	male	1	no	na
LPR1J-A3	Blue crab	17.4	290	male	1	no	na
LPR1J-A3	Blue crab	11.5	92	female	1	no	na
LPR1J-A3	Blue crab	10.6	70	female	1	no	na
LPR1J-A4	Blue crab	16.3	304	male	1	no	na
LPR1J-A4	Blue crab	17.8	344	male	1	no	na
LPR1J-A4	Blue crab	14.6	242	male	1	no	na
LPR1J-A4	Blue crab	13.7	178	male	1	no	na
LPR1J-A4	Blue crab	16.2	312	male	1	no	na
LPR1J-A4	Blue crab	15.9	140	female	1	no	na
LPR1J-A4	Blue crab	15.1	248	male	1	no	na
LPR1J-A4	Blue crab	13.1	114	female	1	no	na

LPR1J-A4	Blue crab	15.1	228	male	1	no	na
LPR1J-A4	Blue crab	12.7	138	male	1	no	na
LPR1J-A4	Blue crab	13.8	168	male	1	no	na
LPR1J-A4	Blue crab	15.3	242	male	1	no	na
LPR1J-A5	Blue crab	16.5	258	male	1	no	na
LPR1J-A5	Blue crab	14.2	192	male	1	no	na
LPR1J-A5	Blue crab	11.4	102	male	1	no	na
LPR1J-A5	Blue crab	15.7	272	male	1	no	na
LPR1J-A5	Blue crab	15	174	male	1	no	na
LPR1J-A5	Blue crab	15	220	male	1	no	na
LPR1J-A5	Blue crab	16.8	310	male	1	no	na
LPR1J-A5	Blue crab	15.1	218	male	1	no	na
LPR1J-A5	Blue crab	13.8	182	male	1	no	na
LPR1J-A5	Blue crab	11.6	96	male	1	no	na
LPR1J-A5	Blue crab	11.5	98	female	1	no	na
LPR1J-A5	Blue crab	12.7	124	male	1	no	na
LPR1K-A1	Blue crab	13.2	170	male	1	no	na
LPR1K-A1	Blue crab	14.2	186	male	1	no	na
LPR1K-A1	Blue crab	15.2	148	female	1	no	na
LPR1K-A1	Blue crab	13.2	136	male	1	no	na
LPR1K-A1	Blue crab	11.3	88	female	1	no	na
LPR1K-A1	Blue crab	13.1	138	male	1	no	na
LPR1K-A1	Blue crab	11.8	140	male	1	no	na
LPR1K-A1	Blue crab	11.5	114	male	1	no	na
LPR1K-A1	Blue crab	15.7	288	male	1	no	na
LPR1K-A1	Blue crab	14.7	138	female	1	no	na
LPR1K-A1	Blue crab	9.8	58	female	1	no	na
LPR1K-A1	Blue crab	11.5	102	male	1	no	na
LPR1K-A1	Blue crab	11.7	142	male	1	no	na
LPR1K-A1	Blue crab	14.1	106	female	1	no	na
LPR1K-A2	Blue crab	15.4	218	male	1	no	na
LPR1K-A2	Blue crab	12.7	88	female	1	no	na
LPR1K-A2	Blue crab	13.6	178	male	1	no	na
LPR1K-A2	Blue crab	10.7	70	female	1	no	na
LPR1K-A2	Blue crab	15.1	196	male	1	no	na
LPR1K-A2	Blue crab	13.1	164	male	1	no	na
LPR1K-A2	Blue crab	15.5	236	male	1	no	na
LPR1K-A2	Blue crab	15.9	256	male	1	no	na
LPR1K-A2	Blue crab	12.5	96	female	1	no	na
LPR1K-A2	Blue crab	14.8	254	male	1	no	na
LPR1K-A2	Blue crab	14.2	190	male	1	no	na
LPR1K-A2	Blue crab	13.7	190	male	1	no	na
LPR1K-A2	Blue crab	14.6	170	male	1	no	na
LPR1K-A2	Blue crab	11.6	118	male	1	no	na
LPR1K-A2	Blue crab	16.9	280	male	1	no	na
LPR1K-A2	Blue crab	14.9	214	male	1	no	na
LPR1K-A2	Blue crab	13.4	150	male	1	no	na
LPR1K-A2	Blue crab	14.2	178	male	1	no	na
LPR1K-A3	Blue crab	14.7	226	male	1	no	na
LPR1K-A3	Blue crab	14.9	202	male	1	no	na
LPR1K-A3	Blue crab	16	278	male	1	no	na
LPR1K-A3	Blue crab	10.2	68	female	1	no	na
LPR1K-A3	Blue crab	14.5	198	male	1	no	na
LPR1K-A3	Blue crab	15	240	male	1	no	na
LPR1K-A3	Blue crab	15.1	232	male	1	no	na
LPR1K-A3	Blue crab	13.6	124	female	1	no	na

LPR1K-A3	Blue crab	15.6	262	male	1	no	na
LPR1K-A3	Blue crab	15.6	214	male	1	no	na
LPR1K-A3	Blue crab	13.1	150	male	1	no	na
LPR1K-A3	Blue crab	14.3	170	male	1	no	na
LPR1K-A3	Blue crab	15.2	200	male	1	no	na
LPR1K-A3	Blue crab	11	84	female	1	no	na
LPR1K-A3	Blue crab	13.9	192	male	1	no	na
LPR1K-A3	Blue crab	15.8	264	male	1	no	na
LPR1K-A3	Blue crab	16.2	272	male	1	no	na
LPR1K-A3	Blue crab	14.4	168	male	1	no	na
LPR1K-A3	Blue crab	11.2	94	male	1	no	na
LPR1K-A3	Blue crab	15.2	192	male	1	no	na
LPR1K-A3	Blue crab	11.5	110	male	1	no	na
LPR1K-A3	Blue crab	11.9	100	female	1	no	na
LPR1K-A3	Blue crab	13.9	194	male	1	no	na
LPR1K-A3	Blue crab	11.8	128	male	1	no	na
LPR1K-A4	Blue crab	16.5	288	male	1	no	na
LPR1K-A4	Blue crab	11.5	92	female	1	no	na
LPR1K-A4	Blue crab	14.2	210	male	1	no	na
LPR1K-A4	Blue crab	17.2	282	male	1	no	na
LPR1K-A4	Blue crab	13.9	180	male	1	no	na
LPR1K-A4	Blue crab	16.8	264	male	1	no	na
LPR1K-A4	Blue crab	16.3	256	male	1	no	na
LPR1K-A4	Blue crab	13.7	110	female	1	no	na
LPR1K-A4	Blue crab	10.8	74	female	1	no	na
LPR1K-A4	Blue crab	11.9	112	female	1	no	na
LPR1K-A4	Blue crab	17.1	266	male	1	no	na
LPR1K-A4	Blue crab	10.6	104	male	1	no	na
LPR1K-A4	Blue crab	11.8	98	female	1	no	na
LPR1K-A4	Blue crab	13.6	186	male	1	no	na
LPR1K-A4	Blue crab	12.9	114	male	1	no	na
LPR1K-A4	Blue crab	4.7	6	male	1	no	na
LPR1K-A4	Blue crab	16.1	226	male	1	no	na
LPR1K-A4	Blue crab	15.8	256	male	1	no	na
LPR1K-A5	Blue crab	17.4	324	male	1	no	na
LPR1K-A5	Blue crab	12.6	150	male	1	no	na
LPR1K-A5	Blue crab	19.9	344	male	1	no	na
LPR1K-A5	Blue crab	17	350	male	1	no	na
LPR1K-A5	Blue crab	13.3	168	male	1	no	na
LPR1K-A5	Blue crab	16.1	260	male	1	no	na
LPR1K-A5	Blue crab	12.2	86	female	1	no	na
LPR1K-A5	Blue crab	12	106	male	1	no	na
LPR1K-A5	Blue crab	15.9	224	male	1	no	na
LPR1K-A5	Blue crab	11.5	94	male	1	no	na
LPR1K-A5	Blue crab	12.5	130	male	1	no	na
LPR1K-A5	Blue crab	13.5	166	male	1	no	na
LPR1K-A5	Blue crab	14.3	122	female	1	no	na
LPR1K-A5	Blue crab	12.4	128	male	1	no	na
LPR1L-A1	Blue crab	7.1	30	female	1	no	na
LPR1L-B1	Blue crab	9.2	56	male	1	no	na
LPR1L-A2	Blue crab	11.4	116	male	1	no	na
LPR1L-A2	Blue crab	15.3	254	male	1	no	na
LPR1L-B2	Blue crab	15.4	168	female	1	no	na
LPR1L-B2	Blue crab	11.2	100	male	1	no	na
LPR1L-B3	Blue crab	13.7	194	male	1	no	na
LPR1L-A3	Blue crab	16.9	304	male	1	no	na

LPR1L-A3	Blue crab	9.7	60	female	1	no	na
LPR1L-B3	Blue crab	6.6	70	male	1	no	na
LPR1L-A3	Blue crab	15.8	236	male	1	no	na
LPR1L-A3	Blue crab	14.1	192	male	1	no	na
LPR1L-B4	Blue crab	9.9	60	male	1	no	na
LPR1L-A4	Blue crab	8.9	45	female	1	no	na
LPR1L-B4	Blue crab	7.5	15	male	1	no	na
LPR1L-A4	Blue crab	9.1	52	female	1	no	na
LPR1L-B5	Blue crab	8.3	36	female	1	no	na
LPR1L-A5	Blue crab	16	186	male	1	no	na
LPR1L-A5	Blue crab	16	234	male	1	no	na
LPR1L-A5	Blue crab	17	346	male	1	no	na
LPR1L-B5	Blue crab	5.4	14	male	1	no	na
LPR1M-B2	Blue crab	14.8	220	male	1	no	na
LPR1M-B2	Blue crab	11.4	106	male	1	no	na
LPR1M-B2	Blue crab	14.1	168	male	1	no	na
LPR1M-C2	Blue crab	11.5	38	female	1	no	na
LPR1M-C2	Blue crab	14.1	188	male	1	no	na
LPR1M-C2	Blue crab	14.4	124	female	1	no	na
LPR1M-A3	Blue crab	11.3	70	female	1	no	na
LPR1M-B3	Blue crab	11.7	84	male	1	no	na
LPR1M-B3	Blue crab	14.5	168	male	1	no	na
LPR1M-A3	Blue crab	14	106	female	1	no	na
LPR1M-A3	Blue crab	14	184	male	1	no	na
LPR1M-C3	Blue crab	16.9	282	male	1	no	na
LPR1M-A3	Blue crab	15.4	158	female	1	no	na
LPR1M-C3	Blue crab	9.2	58	female	1	no	na
LPR1M-A3	Blue crab	13.5	184	male	1	no	na
LPR1M-B3	Blue crab	8.3	20	male	1	no	na
LPR1M-A4	Blue crab	15.9	272	male	1	no	na
LPR1M-C4	Blue crab	16.3	290	male	1	no	na
LPR1M-A4	Blue crab	9.8	63	female	1	no	na
LPR1M-B4	Blue crab	7.8	34	female	1	no	na
LPR1M-B4	Blue crab	7.2	26	male	1	no	na
LPR1M-C5	Blue crab	13.9	192	male	1	no	na
LPR1M-A5	Blue crab	6.9	24	female	1	no	na
LPR1M-A5	Blue crab	13.9	112	female	1	no	na
LPR1M-C5	Blue crab	8.9	44	female	1	no	na
LPR1M-C5	Blue crab	15.8	246	male	1	no	na
LPR1N-A1	Blue crab	9.3	58	female	1	no	na
LPR1N-A1	Blue crab	14.3	188	male	1	no	na
LPR1N-B1	Blue crab	13.3	180	male	1	no	na
LPR1N-C2	Blue crab	12.9	162	male	1	no	na
LPR1N-C2	Blue crab	11	76	female	1	no	na
LPR1N-A2	Blue crab	15.7	254	male	1	no	na
LPR1N-A2	Blue crab	14.1	170	male	1	no	na
LPR1N-B2	Blue crab	8.2	46	male	1	no	na
LPR1N-B2	Blue crab	11.1	88	male	1	no	na
LPR1N-B3	Blue crab	13.6	150	male	1	no	na
LPR1N-B4	Blue crab	13.9	206	male	1	no	na
LPR1N-B4	Blue crab	8.8	54	male	1	no	na
LPR1N-B4	Blue crab	8.3	46	male	1	no	na
LPR1N-B4	Blue crab	11.3	120	male	1	no	na
LPR1N-B5	Blue crab	15.3	214	male	1	no	na
LPR1O-B4	Blue crab	4.6	8	male	1	no	na
LPR1R-A1	Blue crab	5	12	female	1	no	na

LPR2B-A3	Blue crab	12.6	134	male	2	no	na
LPR2B-A3	Blue crab	17.3	286	male	2	no	na
LPR2I-A1	Blue crab	16	228	male	2	no	na
LPR2I-A1	Blue crab	14.9	200	male	2	no	na
LPR2I-A1	Blue crab	13.7	182	male	2	no	na
LPR2I-A1	Blue crab	13.6	210	male	2	no	na
LPR2I-A1	Blue crab	13.5	188	male	2	no	na
LPR2I-A1	Blue crab	12.2	270	male	2	no	na
LPR2I-A1	Blue crab	13.5	178	male	2	no	na
LPR2I-A1	Blue crab	12.5	106	female	2	no	na
LPR2I-A1	Blue crab	11.8	100	female	2	no	na
LPR2I-A2	Blue crab	11.6	92	female	2	no	na
LPR2I-A2	Blue crab	11.9	130	male	2	no	na
LPR2I-A2	Blue crab	15.9	164	female	2	no	na
LPR2I-A2	Blue crab	13.7	146	male	2	no	na
LPR2I-A3	Blue crab	14.3	208	male	2	no	na
LPR2I-A3	Blue crab	13.5	198	male	2	no	na
LPR2I-A3	Blue crab	13.4	160	male	2	no	na
LPR2I-A4	Blue crab	12.3	148	male	2	no	na
LPR2I-A4	Blue crab	10.4	104	female	2	no	na
LPR2I-A4	Blue crab	13	164	male	2	no	na
LPR2I-A4	Blue crab	15.1	136	female	2	no	na
LPR2I-A5	Blue crab	13.5	182	male	2	no	na
LPR2I-A5	Blue crab	13.7	182	male	2	no	na
LPR2I-A5	Blue crab	13.3	170	male	2	no	na
LPR2I-A5	Blue crab	16.3	134	female	2	no	na
LPR2I-A5	Blue crab	14.3	132	female	2	no	na
LPR2I-A5	Blue crab	14.8	200	male	2	no	na
LPR2I-A5	Blue crab	14.9	182	male	2	no	na
LPR2I-A5	Blue crab	11.1	84	female	2	no	na
LPR2I-A5	Blue crab	13.3	172	male	2	no	na
LPR2J-A1	Blue crab	15	226	male	2	no	na
LPR2J-A1	Blue crab	15.4	194	male	2	no	na
LPR2J-A1	Blue crab	13.7	192	male	2	no	na
LPR2J-A1	Blue crab	10.3	88	male	2	no	na
LPR2J-A1	Blue crab	12.6	136	male	2	no	na
LPR2J-A1	Blue crab	18.7	304	male	2	no	na
LPR2J-A2	Blue crab	14.1	218	male	2	no	na
LPR2J-A2	Blue crab	13.7	176	male	2	no	na
LPR2J-A2	Blue crab	14.5	184	male	2	no	na
LPR2J-A2	Blue crab	14.9	116	female	2	no	na
LPR2J-A2	Blue crab	12.7	124	male	2	no	na
LPR2J-A2	Blue crab	14.3	190	male	2	no	na
LPR2J-A2	Blue crab	10.4	88	male	2	no	na
LPR2J-A3	Blue crab	15.8	152	male	2	no	na
LPR2J-A3	Blue crab	14.4	270	male	2	no	na
LPR2J-A3	Blue crab	14.6	196	male	2	no	na
LPR2J-A3	Blue crab	15.1	224	male	2	no	na
LPR2J-A3	Blue crab	13.3	146	male	2	no	na
LPR2J-A3	Blue crab	12.6	138	male	2	no	na
LPR2J-A3	Blue crab	9.2	54	male	2	no	na
LPR2J-A3	Blue crab	9.9	60	female	2	no	na
LPR2J-A3	Blue crab	10.6	62	female	2	no	na
LPR2J-A3	Blue crab	8.5	34	female	2	no	na
LPR2J-A3	Blue crab	12.4	140	male	2	no	na
LPR2J-A3	Blue crab	14.3	184	male	2	no	na

LPR2J-A3	Blue crab	15.2	132	female	2	no	na
LPR2J-A3	Blue crab	16.2	232	male	2	no	na
LPR2J-A3	Blue crab	11.5	112	male	2	no	na
LPR2J-A4	Blue crab	14.3	194	male	2	no	na
LPR2J-A4	Blue crab	13	140	male	2	no	na
LPR2J-A5	Blue crab	15.1	212	male	2	no	na
LPR2J-A5	Blue crab	12.9	114	male	2	no	na
LPR2J-A5	Blue crab	13.8	184	male	2	no	na
LPR2J-A5	Blue crab	14.7	200	male	2	no	na
LPR2K-A1	Blue crab	14.7	202	male	2	no	na
LPR2K-A1	Blue crab	17.9	348	male	2	no	na
LPR2K-A1	Blue crab	16.4	276	male	2	no	na
LPR2K-A1	Blue crab	10	74	female	2	no	na
LPR2K-A1	Blue crab	14.8	188	male	2	no	na
LPR2K-A1	Blue crab	14.2	200	male	2	no	na
LPR2K-A1	Blue crab	12.4	152	male	2	no	na
LPR2K-A1	Blue crab	14.9	224	male	2	no	na
LPR2K-A1	Blue crab	15.2	244	male	2	no	na
LPR2K-A1	Blue crab	8.5	48	female	2	no	na
LPR2K-A1	Blue crab	10	58	female	2	no	na
LPR2K-A1	Blue crab	15.2	194	male	2	no	na
LPR2K-A1	Blue crab	15.5	208	male	2	no	na
LPR2K-A1	Blue crab	14.8	226	male	2	no	na
LPR2K-A1	Blue crab	12.1	134	male	2	no	na
LPR2K-A1	Blue crab	15.7	256	male	2	no	na
LPR2K-A1	Blue crab	15.6	250	male	2	no	na
LPR2K-A1	Blue crab	12	136	male	2	no	na
LPR2K-A1	Blue crab	12	92	female	2	no	na
LPR2K-A1	Blue crab	14.7	242	male	2	no	na
LPR2K-A1	Blue crab	13.9	224	male	2	no	na
LPR2K-A1	Blue crab	14.7	200	male	2	no	na
LPR2K-A1	Blue crab	12.5	140	male	2	no	na
LPR2K-A1	Blue crab	15.8	290	male	2	no	na
LPR2K-A1	Blue crab	14.8	154	male	2	no	na
LPR2K-A1	Blue crab	14.7	210	male	2	no	na
LPR2K-A1	Blue crab	13.2	168	male	2	no	na
LPR2K-A1	Blue crab	12.3	122	male	2	no	na
LPR2K-A1	Blue crab	15.5	210	male	2	no	na
LPR2K-A1	Blue crab	15.1	278	male	2	no	na
LPR2K-A1	Blue crab	9.8	66	female	2	no	na
LPR2K-A1	Blue crab	15.6	232	male	2	no	na
LPR2K-A2	Blue crab	15.2	154	female	2	no	na
LPR2K-A2	Blue crab	17.7	294	male	2	no	na
LPR2K-A2	Blue crab	14.7	220	male	2	no	na
LPR2K-A2	Blue crab	14.8	212	male	2	no	na
LPR2K-A2	Blue crab	13.3	152	male	2	no	na
LPR2K-A2	Blue crab	14.4	214	male	2	no	na
LPR2K-A2	Blue crab	11.6	86	female	2	no	na
LPR2K-A2	Blue crab	14.3	198	male	2	no	na
LPR2K-A2	Blue crab	13.6	176	male	2	no	na
LPR2K-A2	Blue crab	15.1	254	male	2	no	na
LPR2K-A2	Blue crab	13.5	178	male	2	no	na
LPR2K-A2	Blue crab	14.8	222	male	2	no	na
LPR2K-A2	Blue crab	15.2	266	male	2	no	na
LPR2K-A2	Blue crab	13	152	male	2	no	na
LPR2K-A2	Blue crab	15	200	male	2	no	na

LPR2K-A2	Blue crab	13.9	178	male	2	no	na
LPR2K-A2	Blue crab	11.9	96	female	2	no	na
LPR2K-A3	Blue crab	14.4	190	male	2	no	na
LPR2K-A3	Blue crab	14.2	202	male	2	no	na
LPR2K-A3	Blue crab	15	230	male	2	no	na
LPR2K-A3	Blue crab	15.3	232	male	2	no	na
LPR2K-A3	Blue crab	16.4	252	male	2	no	na
LPR2K-A3	Blue crab	15.3	234	male	2	no	na
LPR2K-A3	Blue crab	13.4	158	male	2	no	na
LPR2K-A3	Blue crab	14.5	172	male	2	no	na
LPR2K-A3	Blue crab	10.9	88	female	2	no	na
LPR2K-A3	Blue crab	14.2	204	male	2	no	na
LPR2K-A4	Blue crab	14.7	172	male	2	no	na
LPR2K-A4	Blue crab	12.9	148	male	2	no	na
LPR2K-A4	Blue crab	16	236	male	2	no	na
LPR2K-A4	Blue crab	14.8	248	male	2	no	na
LPR2K-A4	Blue crab	11.5	112	male	2	no	na
LPR2K-A4	Blue crab	13	132	male	2	no	na
LPR2K-A4	Blue crab	12.3	134	male	2	no	na
LPR2K-A4	Blue crab	12.1	116	male	2	no	na
LPR2K-A4	Blue crab	13.4	174	male	2	no	na
LPR2K-A5	Blue crab	15.4	226	male	2	no	na
LPR2K-A5	Blue crab	9.6	60	female	2	no	na
LPR2K-A5	Blue crab	12.8	132	male	2	no	na
LPR2K-A5	Blue crab	13.6	168	male	2	no	na
LPR2K-A5	Blue crab	13.5	156	male	2	no	na
LPR2K-A5	Blue crab	14.5	224	male	2	no	na
LPR2K-A5	Blue crab	16.2	300	male	2	no	na
LPR2K-A5	Blue crab	10	64	female	2	no	na
LPR2L-A1	Blue crab	13.1	148	male	2	no	na
LPR2L-B1	Blue crab	8.1	42	male	2	no	na
LPR2L-A1	Blue crab	13.5	200	male	2	no	na
LPR2L-A2	Blue crab	10.8	96	male	2	no	na
LPR2L-A2	Blue crab	10.5	74	male	2	no	na
LPR2L-A2	Blue crab	13.2	123	male	2	no	na
LPR2L-C2	Blue crab	14.4	152	male	2	no	na
LPR2L-C2	Blue crab	11.9	104	female	2	no	na
LPR2L-C3	Blue crab	16.3	252	male	2	no	na
LPR2L-C3	Blue crab	8.1	35	female	2	no	na
LPR2L-A4	Blue crab	16	244	male	2	no	na
LPR2L-A5	Blue crab	12.5	138	male	2	no	na
LPR2L-C5	Blue crab	15.1	248	male	2	no	na
LPR2L-C5	Blue crab	11.7	104	female	2	no	na
LPR2M-B1	Blue crab	11.8	110	male	2	no	na
LPR2M-B1	Blue crab	14.9	162	female	2	no	na
LPR2M-C2	Blue crab	8.3	42	male	2	no	na
LPR2M-A2	Blue crab	14	114	female	2	no	na
LPR2M-B2	Blue crab	11.8	116	male	2	no	na
LPR2M-B2	Blue crab	10.8	78	male	2	no	na
LPR2M-B3	Blue crab	12.6	86	female	2	no	na
LPR2M-C3	Blue crab	13.4	158	male	2	no	na
LPR2M-A3	Blue crab	15.4	150	female	2	no	na
LPR2M-B3	Blue crab	13.1	192	male	2	no	na
LPR2M-B3	Blue crab	15.6	158	female	2	no	na
LPR2M-B3	Blue crab	10	32	female	2	no	na
LPR2M-B4	Blue crab	14.2	158	male	2	no	na

LPR2M-C4	Blue crab	13.8	198	male	2	no	na
LPR2M-B4	Blue crab	12.8	212	male	2	no	na
LPR2M-C5	Blue crab	12.4	122	male	2	no	na
LPR2M-C5	Blue crab	10	66	female	2	no	na
LPR2N-C1	Blue crab	9.3	48	female	2	no	na
LPR2N-C1	Blue crab	12.4	132	male	2	no	na
LPR2N-C1	Blue crab	13.6	154	male	2	no	na
LPR2N-A1	Blue crab	12.9	140	male	2	no	na
LPR2N-A1	Blue crab	12.2	122	male	2	no	na
LPR2N-A1	Blue crab	14.7	156	female	2	no	na
LPR2N-C1	Blue crab	14.4	198	male	2	no	na
LPR2N-A1	Blue crab	13.5	160	male	2	no	na
LPR2N-A1	Blue crab	13.8	162	male	2	no	na
LPR2N-B1	Blue crab	13.3	156	male	2	no	na
LPR2N-A1	Blue crab	14.7	196	male	2	no	na
LPR2N-B2	Blue crab	13.8	160	male	2	no	na
LPR2N-C3	Blue crab	14.8	216	male	2	no	na
LPR2N-B3	Blue crab	10	78	male	2	no	na
LPR2N-B4	Blue crab	14.5	198	male	2	no	na
LPR2N-B4	Blue crab	13.7	168	male	2	no	na
LPR2N-B5	Blue crab	11.8	112	male	2	no	na
LPR2N-C5	Blue crab	12.6	130	male	2	no	na
LPR2N-C5	Blue crab	12.7	166	male	2	no	na
LPR2N-C5	Blue crab	11.9	86	female	2	no	na
LPR3F-A1	Blue crab	9.5	48	female	3	no	na
LPR3F-A1	Blue crab	10.9	58	male	3	no	na
LPR3F-B1	Blue crab	9	48	male	3	no	na
LPR3F-A2	Blue crab	12.5	86	female	3	no	na
LPR3F-B3	Blue crab	9.7	48	male	3	no	na
LPR3F-B3	Blue crab	7.1	16	male	3	no	na
LPR3F-B5	Blue crab	10.3	70	male	3	no	na
LPR3F-A5	Blue crab	8	40	male	3	no	na
LPR3G-A2	Blue crab	7.6	30	female	3	no	na
LPR3G-A2	Blue crab	6	12	male	3	no	na
LPR3G-B2	Blue crab	10.5	58	female	3	no	na
LPR3G-C3	Blue crab	11.1	82	male	3	no	na
LPR3G-C4	Blue crab	7	30	male	3	no	na
LPR3G-C5	Blue crab	11.5	104	male	3	no	na
LPR3H-A1	Blue crab	11.7	82	indeterminant	3	no	na
LPR3H-A2	Blue crab	10	60	male	3	no	na
LPR3H-A3	Blue crab	6.2	20	male	3	no	na
LPR3H-A3	Blue crab	12.1	108	male	3	no	na
LPR3H-A3	Blue crab	5.2	10	male	3	no	na
LPR3H-C3	Blue crab	11.4	100	male	3	no	na
LPR3H-B4	Blue crab	13.2	134	male	3	no	na
LPR3H-C5	Blue crab	7.9	34	female	3	no	na
LPR3H-B5	Blue crab	13.2	140	male	3	no	na
LPR3J-C3	Blue crab	4.1	6	male	3	no	na
LPR3M-A1	Blue crab	10.6	78	female	3	no	na
LPR3M-A1	Blue crab	13	110	male	3	no	na
LPR3M-A1	Blue crab	12.8	112	female	3	no	na
LPR3M-A1	Blue crab	10.2	56	female	3	no	na
LPR3M-A1	Blue crab	11.5	80	male	3	no	na
LPR3M-A1	Blue crab	10.6	78	male	3	no	na
LPR3M-A2	Blue crab	10.1	58	male	3	no	na
LPR3M-A2	Blue crab	11.7	80	male	3	no	na

LPR3M-A2	Blue crab	11.6	94	male	3	no	na
LPR3M-A2	Blue crab	13.7	116	male	3	no	na
LPR3M-A2	Blue crab	11.7	84	male	3	no	na
LPR3M-A2	Blue crab	11.3	80	female	3	no	na
LPR3M-A2	Blue crab	11.5	70	female	3	no	na
LPR3M-A2	Blue crab	11.7	72	male	3	no	na
LPR3M-A2	Blue crab	12.1	82	female	3	no	na
LPR3M-A2	Blue crab	11.5	106	male	3	no	na
LPR3M-A2	Blue crab	12.1	96	male	3	no	na
LPR3M-A2	Blue crab	11.6	80	female	3	no	na
LPR3M-A3	Blue crab	10.7	74	male	3	no	na
LPR3M-A3	Blue crab	11.3	86	male	3	no	na
LPR3M-A3	Blue crab	13	92	female	3	no	na
LPR3M-A4	Blue crab	13.3	132	male	3	no	na
LPR3M-A5	Blue crab	11.4	84	male	3	no	na
LPR3M-A5	Blue crab	14.4	148	male	3	no	na
LPR3M-A5	Blue crab	11.9	78	male	3	no	na
LPR3M-A5	Blue crab	11.2	70	female	3	no	na
LPR3N-A1	Blue crab	10.9	62	female	3	no	na
LPR3N-A1	Blue crab	6.4	16	male	3	no	na
LPR3N-A2	Blue crab	12	84	male	3	no	na
LPR3N-A3	Blue crab	11.8	90	male	3	no	na
LPR3N-A3	Blue crab	12	108	male	3	no	na
LPR3N-A3	Blue crab	12.7	112	male	3	no	na
LPR3N-A3	Blue crab	10	58	male	3	no	na
LPR3N-A3	Blue crab	11.9	86	female	3	no	na
LPR3N-A3	Blue crab	12.7	94	male	3	no	na
LPR3N-A3	Blue crab	11	72	male	3	no	na
LPR3N-A3	Blue crab	11.6	98	female	3	no	na
LPR3N-A3	Blue crab	13.5	120	male	3	no	na
LPR3N-A3	Blue crab	7.9	34	male	3	no	na
LPR3N-A4	Blue crab	16.8	216	male	3	no	na
LPR3N-A4	Blue crab	12.5	90	male	3	no	na
LPR3N-A4	Blue crab	11.9	94	female	3	no	na
LPR3N-A4	Blue crab	13.1	156	male	3	no	na
LPR3N-A5	Blue crab	11.5	68	female	3	no	na
LPR3N-A5	Blue crab	12.3	88	female	3	no	na
LPR3N-A5	Blue crab	12.3	110	male	3	no	na
LPR3N-A5	Blue crab	8.5	38	male	3	no	na
LPR3N-A5	Blue crab	13.7	118	male	3	no	na
LPR3O-A1	Blue crab	15.4	222	male	3	no	na
LPR3O-A1	Blue crab	13.6	128	male	3	no	na
LPR3O-A1	Blue crab	15.1	159	male	3	no	na
LPR3O-A2	Blue crab	11.7	98	male	3	no	na
LPR3O-A2	Blue crab	16.1	178	male	3	no	na
LPR3O-A2	Blue crab	11.6	74	female	3	no	na
LPR3O-A2	Blue crab	11.2	64	female	3	no	na
LPR3O-A2	Blue crab	9	54	female	3	no	na
LPR3O-A2	Blue crab	12.2	126	male	3	no	na
LPR3O-A2	Blue crab	14.6	90	male	3	no	na
LPR3O-A3	Blue crab	13.3	112	male	3	no	na
LPR3O-A3	Blue crab	16.8	234	male	3	no	na
LPR3O-A3	Blue crab	9.7	58	female	3	no	na
LPR3O-A3	Blue crab	15.1	132	female	3	no	na
LPR3O-A3	Blue crab	11.2	82	male	3	no	na
LPR3O-A3	Blue crab	16.4	242	male	3	no	na

LPR3O-A3	Blue crab	14.3	152	male	3	no	na
LPR3O-A3	Blue crab	14.1	160	male	3	no	na
LPR3O-A3	Blue crab	12.6	124	male	3	no	na
LPR3O-A4	Blue crab	14	134	male	3	no	na
LPR3O-A4	Blue crab	10.8	90	male	3	no	na
LPR3O-A4	Blue crab	13.2	140	male	3	no	na
LPR3O-A4	Blue crab	14	172	male	3	no	na
LPR3O-A4	Blue crab	14.4	104	female	3	no	na
LPR3O-A4	Blue crab	12.2	90	female	3	no	na
LPR3O-A4	Blue crab	12.6	138	male	3	no	na
LPR3O-A4	Blue crab	13.2	134	male	3	no	na
LPR3O-A5	Blue crab	12.8	134	male	3	no	na
LPR3O-A5	Blue crab	11.4	96	female	3	no	na
LPR3O-A5	Blue crab	14.6	202	male	3	no	na
LPR3O-A5	Blue crab	15.1	214	male	3	no	na
LPR3O-A5	Blue crab	14.6	186	male	3	no	na
LPR3O-A5	Blue crab	16	272	male	3	no	na
LPR3O-A5	Blue crab	14.7	222	male	3	no	na
LPR3O-A5	Blue crab	15.2	226	male	3	no	na
LPR3O-A5	Blue crab	15.7	180	male	3	no	na
LPR3O-A5	Blue crab	11.6	80	female	3	no	na
LPR3O-A5	Blue crab	12.4	96	female	3	no	na
LPR3O-A5	Blue crab	12.7	126	male	3	no	na
LPR3O-A5	Blue crab	12.6	108	female	3	no	na
LPR3O-A5	Blue crab	15.2	12	female	3	no	na
LPR3O-A5	Blue crab	11	74	female	3	no	na
LPR3O-A5	Blue crab	14.7	132	female	3	no	na
LPR3O-A5	Blue crab	12.5	170	male	3	no	na
LPR3O-A5	Blue crab	13.7	150	male	3	no	na
LPR4F-B2	Blue crab	7.6	34	male	4	no	na
LPR4F-C3	Blue crab	10.3	68	female	4	no	na
LPR4F-C3	Blue crab	11.2	86	female	4	no	na
LPR4F-C4	Blue crab	11.7	70	female	4	no	na
LPR4F-B4	Blue crab	8.1	44	male	4	no	na
LPR4F-C5	Blue crab	9.9	72	male	4	no	na
LPR4F-A5	Blue crab	13.8	140	male	4	no	na
LPR4F-C5	Blue crab	7.8	36	male	4	no	na
LPR4G-C1	Blue crab	9.7	64	male	4	no	na
LPR4G-C3	Blue crab	10	58	male	4	no	na
LPR4G-A3	Blue crab	10.6	74	male	4	no	na
LPR4G-B3	Blue crab	7.3	28	male	4	no	na
LPR4G-B5	Blue crab	13	100	male	4	no	na
LPR4G-A5	Blue crab	10.3	72	male	4	no	na
LPR4G-B5	Blue crab	9.5	54	female	4	no	na
LPR4G-A9	Blue crab	11.3	90	male	4	no	na
LPR4G-B7	Blue crab	15.5	206	male	4	no	na
LPR4G-B7	Blue crab	16.6	186	female	4	no	na
LPR4G-B10	Blue crab	14.1	144	male	4	no	na
LPR4G-B10	Blue crab	8.3	41	female	4	no	na
LPR4H-B1	Blue crab	10.8	80	male	4	no	na
LPR4H-C1	Blue crab	12.8	84	female	4	no	na
LPR4H-A3	Blue crab	12	78	female	4	no	na
LPR4H-B4	Blue crab	9	56	male	4	no	na
LPR4H-A4	Blue crab	6.6	26	male	4	no	na
LPR4H-C4	Blue crab	11.1	86	male	4	no	na
LPR4H-A6	Blue crab	10.6	68	male	4	no	na

LPR4H-B6	Blue crab	10.5	76	male	4	no	na
LPR4H-A7	Blue crab	12.9	118	male	4	no	na
LPR4H-A9	Blue crab	14	166	male	4	no	na
LPR4L-A1	Blue crab	11.5	68	male	4	no	na
LPR4L-A1	Blue crab	14.8	116	female	4	no	na
LPR4L-A3	Blue crab	10.4	70	male	4	no	na
LPR4L-A5	Blue crab	13.9	160	male	4	no	na
LPR4L-A5	Blue crab	10.5	84	male	4	no	na
LPR4L-A6	Blue crab	14.6	186	male	4	no	na
LPR4L-A6	Blue crab	13.9	150	male	4	no	na
LPR4L-A6	Blue crab	12.7	138	male	4	no	na
LPR4L-A7	Blue crab	13.6	142	male	4	no	na
LPR4O-A1	Blue crab	9.6	56	male	4	no	na
LPR4O-A1	Blue crab	10.6	84	male	4	no	na
LPR4O-A1	Blue crab	13.6	130	male	4	no	na
LPR4O-A1	Blue crab	11.8	82	female	4	no	na
LPR4O-A2	Blue crab	12.1	94	male	4	no	na
LPR4O-A6	Blue crab	12.5	104	male	4	no	na
LPR4O-A7	Blue crab	12.6	100	male	4	no	na
LPR4O-A7	Blue crab	15.1	128	female	4	no	na
LPR4P-A1	Blue crab	11.5	24	female	4	no	na
LPR4P-A1	Blue crab	13.1	112	male	4	no	na
LPR4P-A2	Blue crab	12.7	110	male	4	no	na
LPR4P-A2	Blue crab	11	68	male	4	no	na
LPR4P-A8	Blue crab	16.8	212	male	4	no	na
LPR4P-A8	Blue crab	12.3	122	male	4	no	na
LPR5E-A1	Blue crab	12	106	male	5	no	na
LPR5E-A1	Blue crab	10.8	74	male	5	no	na
LPR5E-A7	Blue crab	12	86	male	5	no	na
LPR5G-A1	Blue crab	10.4	70	male	5	no	na
LPR5G-A3	Blue crab	10.9	76	male	5	no	na
LPR5G-A3	Blue crab	10.5	66	male	5	no	na
LPR5G-A3	Blue crab	10.3	68	male	5	no	na
LPR5I-A2	Blue crab	14.9	160	male	5	no	na
LPR5J-B3	Blue crab	12.7	96	male	5	no	na
LPR5M-A3	Blue crab	12	94	male	5	no	na
LPR5M-C3	Blue crab	14	70	female	5	no	na
LPR5M-C4	Blue crab	12.5	102	female	5	no	na
LPR5M-C5	Blue crab	12	84	female	5	no	na
LPR5M-B3	Blue crab	12.3	100	male	5	no	na
LPR5M-B6	Blue crab	8.4	34	female	5	no	na
LPR5M-B7	Blue crab	11.2	72	male	5	no	na
LPR5M-B7	Blue crab	11.5	90	male	5	no	na
LPR5M-A10	Blue crab	11.2	67	female	5	no	na
LPR5M-A10	Blue crab	15.1	166	male	5	no	na
LPR5M-B8	Blue crab	13.6	136	male	5	no	na
LPR5O-C4	Blue crab	13.8	130	male	5	no	na
LPR5O-C5	Blue crab	8.7	50	male	5	no	na
LPR5O-C5	Blue crab	8.1	40	male	5	no	na
LPR5O-B5	Blue crab	10.2	64	male	5	no	na
LPR5O-A6	Blue crab	10.5	76	male	5	no	na
LPR5O-A6	Blue crab	13.3	110	male	5	no	na
LPR5O-A6	Blue crab	14.9	186	male	5	no	na
LPR5O-B6	Blue crab	14.2	158	male	5	no	na
LPR5O-B6	Blue crab	11.4	80	male	5	no	na
LPR5O-B6	Blue crab	12.9	120	male	5	no	na

LPR5O-A7	Blue crab	8.5	36	female	5	no	na
LPR5O-A7	Blue crab	11.2	88	male	5	no	na
LPR5O-A7	Blue crab	11.4	88	female	5	no	na
LPR5O-B8	Blue crab	13.6	114	female	5	no	na
LPR5O-A8	Blue crab	14.4	170	male	5	no	na
LPR5O-B8	Blue crab	12.4	110	male	5	no	na
LPR5O-A9	Blue crab	12.5	86	female	5	no	na
LPR5O-A9	Blue crab	14	170	male	5	no	na
LPR5O-B10	Blue crab	11.3	96	male	5	no	na
LPR7K-C4	Blue crab	6.5	26	male	7	yes	na
LPR6F-A9	Blue crab	7.7	36	male	6	yes	na
LPR8H-A4	Blue crab	8.8	37	female	8	yes	na
LPR7I-B5	Blue crab	9.1	48	female	7	yes	na
LPR7J-B4	Blue crab	9.1	48	female	7	yes	na
LPR6G-B6	Blue crab	9.3	52	male	6	yes	na
LPR8Y-A4	Blue crab	9.3	50	male	8	yes	na
LPR8K-C1	Blue crab	9.4	56	male	8	yes	na
LPR8Y-A1	Blue crab	9.4	52	male	8	yes	na
LPR6K-A2	Blue crab	9.5	54	male	6	yes	na
LPR7I-A2	Blue crab	9.5	56	male	7	yes	na
LPR8W-A1	Blue crab	9.6	54	male	8	yes	na
LPR6G-A9	Blue crab	9.7	68	male	6	yes	na
LPR6G-A6	Blue crab	9.8	62	male	6	yes	na
LPR7G-C3	Blue crab	9.8	42	female	7	yes	na
LPR6H-A7	Blue crab	9.9	74	male	6	yes	na
LPR7G-A5	Blue crab	9.9	76	male	7	yes	na
LPR6F-B9	Blue crab	10	58	female	6	yes	na
LPR7H-B2	Blue crab	10	106	male	7	yes	na
LPR6J-C4	Blue crab	10.1	66	male	6	yes	na
LPR6H-B5	Blue crab	10.2	88	male	6	yes	na
LPR7K-A5	Blue crab	10.2	70	male	7	yes	na
LPR7F-A3	Blue crab	10.3	58	male	7	yes	na
LPR6F-A2	Blue crab	10.4	78	male	6	yes	na
LPR7F-C1	Blue crab	10.4	72	male	7	yes	na
LPR6H-A3	Blue crab	10.5	70	male	6	yes	na
LPR6F-C3	Blue crab	10.6	84	female	6	yes	na
LPR7I-A4	Blue crab	10.6	86	male	7	yes	na
LPR8M-B5	Blue crab	10.6	76	male	8	yes	na
LPR8L-A5	Blue crab	10.7	88	male	8	yes	na
LPR8Y-A1	Blue crab	10.7	78	male	8	yes	na
LPR6G-A3	Blue crab	10.8	66	male	6	yes	na
LPR6F-B7	Blue crab	10.9	90	male	6	yes	na
LPR6G-C4	Blue crab	10.9	80	male	6	yes	na
LPR6G-A5	Blue crab	10.9	84	male	6	yes	na
LPR7H-B5	Blue crab	10.9	100	male	7	yes	na
LPR6G-C2	Blue crab	11	84	male	6	yes	na
LPR6G-A8	Blue crab	11	74	male	6	yes	na
LPR6H-A4	Blue crab	11	94	male	6	yes	na
LPR7G-C1	Blue crab	11	84	male	7	yes	na
LPR6G-B8	Blue crab	11.1	94	male	6	yes	na
LPR8K-B2	Blue crab	11.1	88	male	8	yes	na
LPR8R-A3	Blue crab	11.1	82	male	8	yes	na
LPR6F-A1	Blue crab	11.2	94	male	6	yes	na
LPR6F-A3	Blue crab	11.2	96	male	6	yes	na
LPR6F-A9	Blue crab	11.2	74	male	6	yes	na
LPR6G-C3	Blue crab	11.2	106	male	6	yes	na

LPR7H-B5	Blue crab	11.2	80	male	7	yes	na
LPR6G-A10	Blue crab	11.3	85	male	6	yes	na
LPR8Y-A2	Blue crab	11.3	90	male	8	yes	na
LPR7G-C2	Blue crab	11.4	76	female	7	yes	na
LPR8M-A5	Blue crab	11.4	81	male	8	yes	na
LPR8R-A4	Blue crab	11.4	73	male	8	yes	na
LPR8V-A5	Blue crab	11.4	90	male	8	yes	na
LPR6G-C3	Blue crab	11.5	86	male	6	yes	na
LPR6G-A5	Blue crab	11.5	82	female	6	yes	na
LPR7F-A4	Blue crab	11.5	90	male	7	yes	na
LPR7H-B3	Blue crab	11.5	84	male	7	yes	na
LPR6H-B5	Blue crab	11.6	104	male	6	yes	na
LPR8S-A3	Blue crab	11.6	94	male	8	yes	na
LPR8V-A5	Blue crab	11.6	94	male	8	yes	na
LPR6F-A10	Blue crab	11.9	110	male	6	yes	na
LPR8J-A4	Blue crab	11.9	90	male	8	yes	na
LPR8K-A2	Blue crab	11.9	86	male	8	yes	na
LPR7F-C1	Blue crab	12	86	female	7	yes	na
LPR7F-B4	Blue crab	12	96	male	7	yes	na
LPR7G-A2	Blue crab	12	86	female	7	yes	na
LPR6F-A6	Blue crab	12.1	106	male	6	yes	na
LPR8K-B3	Blue crab	12.1	102	male	8	yes	na
LPR6F-A8	Blue crab	12.2	104	male	6	yes	na
LPR6G-C1	Blue crab	12.2	88	female	6	yes	na
LPR8R-A1	Blue crab	12.2	96	male	8	yes	na
LPR8V-A5	Blue crab	12.2	126	male	8	yes	na
LPR6N-A5	Blue crab	12.3	146	male	6	yes	na
LPR8K-B3	Blue crab	12.3	112	male	8	yes	na
LPR7H-B4	Blue crab	12.4	104	male	7	yes	na
LPR8U-A5	Blue crab	12.4	90	male	8	yes	na
LPR6F-B2	Blue crab	12.5	96	male	6	yes	na
LPR7G-C3	Blue crab	12.5	106	male	7	yes	na
LPR8R-A4	Blue crab	12.5	114	male	8	yes	na
LPR8V-A5	Blue crab	12.5	112	male	8	yes	na
LPR7F-C3	Blue crab	12.6	106	male	7	yes	na
LPR6G-A7	Blue crab	12.7	124	male	6	yes	na
LPR6H-A7	Blue crab	12.7	138	male	6	yes	na
LPR7G-B2	Blue crab	12.7	110	male	7	yes	na
LPR8J-B2	Blue crab	12.7	118	male	8	yes	na
LPR8S-A3	Blue crab	12.7	102	male	8	yes	na
LPR8K-B2	Blue crab	12.8	126	male	8	yes	na
LPR8K-B4	Blue crab	12.8	136	male	8	yes	na
LPR8Y-A1	Blue crab	12.8	132	male	8	yes	na
LPR7F-C1	Blue crab	12.9	96	female	7	yes	na
LPR7F-A3	Blue crab	13	128	male	7	yes	na
LPR7H-A3	Blue crab	13	92	male	7	yes	na
LPR8K-B1	Blue crab	13	126	male	8	yes	na
LPR8Y-A4	Blue crab	13	110	male	8	yes	na
LPR6F-A9	Blue crab	13.1	136	male	6	yes	na
LPR6G-A8	Blue crab	13.1	138	male	6	yes	na
LPR6N-A3	Blue crab	13.1	120	male	6	yes	na
LPR7G-C1	Blue crab	13.1	128	male	7	yes	na
LPR7G-A3	Blue crab	13.1	140	male	7	yes	na
LPR6F-A5	Blue crab	13.2	152	male	6	yes	na
LPR6F-B7	Blue crab	13.2	116	male	6	yes	na
LPR7F-C1	Blue crab	13.2	136	male	7	yes	na

LPR7F-A3	Blue crab	13.3	140	male	7	yes	na
LPR8S-A3	Blue crab	13.3	126	male	8	yes	na
LPR8V-A5	Blue crab	13.3	130	male	8	yes	na
LPR8W-A5	Blue crab	13.3	102	male	8	yes	na
LPR6F-A2	Blue crab	13.4	118	male	6	yes	na
LPR6F-B6	Blue crab	13.4	162	male	6	yes	na
LPR7G-B1	Blue crab	13.4	134	male	7	yes	na
LPR8K-A3	Blue crab	13.4	128	male	8	yes	na
LPR6M-A3	Blue crab	13.5	130	male	6	yes	na
LPR7G-C1	Blue crab	13.5	114	male	7	yes	na
LPR8J-B2	Blue crab	13.5	148	male	8	yes	na
LPR8S-A3	Blue crab	13.5	134	male	8	yes	na
LPR8V-A4	Blue crab	13.5	144	male	8	yes	na
LPR6G-A3	Blue crab	13.7	138	male	6	yes	na
LPR7H-B2	Blue crab	13.7	140	male	7	yes	na
LPR8J-C3	Blue crab	13.7	134	male	8	yes	na
LPR6F-A7	Blue crab	13.8	134	male	6	yes	na
LPR6G-C5	Blue crab	13.9	138	male	6	yes	na
LPR6F-B6	Blue crab	14	136	male	6	yes	na
LPR7L-A2	Blue crab	14	118	male	7	yes	na
LPR7M-A3	Blue crab	14	134	male	7	yes	na
LPR8K-C2	Blue crab	14	156	male	8	yes	na
LPR8K-B3	Blue crab	14	148	male	8	yes	na
LPR8K-B3	Blue crab	14	160	male	8	yes	na
LPR6F-A8	Blue crab	14.1	146	male	6	yes	na
LPR6G-A6	Blue crab	14.1	170	male	6	yes	na
LPR6H-B8	Blue crab	14.1	154	male	6	yes	na
LPR7F-A4	Blue crab	14.1	152	male	7	yes	na
LPR7F-C2	Blue crab	14.2	150	male	7	yes	na
LPR7G-A4	Blue crab	14.2	160	male	7	yes	na
LPR8K-C3	Blue crab	14.2	138	male	8	yes	na
LPR8S-A3	Blue crab	14.2	152	male	8	yes	na
LPR8S-A3	Blue crab	14.2	138	male	8	yes	na
LPR6H-B7	Blue crab	14.3	144	male	6	yes	na
LPR7O-C5	Blue crab	14.3	152	male	7	yes	na
LPR6F-A7	Blue crab	14.4	174	male	6	yes	na
LPR6G-C4	Blue crab	14.4	166	male	6	yes	na
LPR7G-A3	Blue crab	14.4	148	male	7	yes	na
LPR7G-C4	Blue crab	14.4	170	male	7	yes	na
LPR8R-A3	Blue crab	14.4	144	male	8	yes	na
LPR6N-A3	Blue crab	14.5	160	male	6	yes	na
LPR7F-C2	Blue crab	14.5	154	male	7	yes	na
LPR7G-C5	Blue crab	14.5	170	male	7	yes	na
LPR8K-B2	Blue crab	14.5	172	male	8	yes	na
LPR8K-B4	Blue crab	14.5	152	male	8	yes	na
LPR8R-A3	Blue crab	14.5	122	male	8	yes	na
LPR8S-A4	Blue crab	14.5	150	male	8	yes	na
LPR6G-A8	Blue crab	14.6	158	male	6	yes	na
LPR7F-C1	Blue crab	14.6	176	male	7	yes	na
LPR7G-B3	Blue crab	14.6	194	male	7	yes	na
LPR6G-C3	Blue crab	14.7	178	male	6	yes	na
LPR7G-A1	Blue crab	14.8	170	male	7	yes	na
LPR7L-A2	Blue crab	14.8	148	male	7	yes	na
LPR7F-A3	Blue crab	14.9	166	male	7	yes	na
LPR8J-B4	Blue crab	14.9	130	male	8	yes	na
LPR6F-A5	Blue crab	15	186	male	6	yes	na

LPR7M-A1	Blue crab	15	152	male	7	yes	na
LPR8S-A4	Blue crab	15	184	male	8	yes	na
LPR7G-C5	Blue crab	15.1	164	male	7	yes	na
LPR7G-C3	Blue crab	15.2	176	male	7	yes	na
LPR8R-A2	Blue crab	15.3	185	male	8	yes	na
LPR8R-A3	Blue crab	15.3	198	male	8	yes	na
LPR6F-A2	Blue crab	15.4	170	male	6	yes	na
LPR6F-A3	Blue crab	15.5	204	male	6	yes	na
LPR6N-A5	Blue crab	15.5	194	male	6	yes	na
LPR7G-A1	Blue crab	15.5	130	male	7	yes	na
LPR7H-B5	Blue crab	15.5	218	male	7	yes	na
LPR6F-A8	Blue crab	15.6	186	male	6	yes	na
LPR8M-A5	Blue crab	15.6	182	male	8	yes	na
LPR8S-A3	Blue crab	15.6	178	male	8	yes	na
LPR6F-A5	Blue crab	15.7	236	male	6	yes	na
LPR7G-A1	Blue crab	15.7	182	male	7	yes	na
LPR8J-B3	Blue crab	15.8	214	male	8	yes	na
LPR8K-A2	Blue crab	15.9	170	male	8	yes	na
LPR8S-A3	Blue crab	15.9	206	male	8	yes	na
LPR8S-A3	Blue crab	15.9	126	male	8	yes	na
LPR6G-A5	Blue crab	16	226	male	6	yes	na
LPR8R-A3	Blue crab	16	192	male	8	yes	na
LPR6G-A4	Blue crab	16.1	182	male	6	yes	na
LPR7G-A5	Blue crab	16.1	194	male	7	yes	na
LPR8K-A2	Blue crab	16.1	202	male	8	yes	na
LPR8S-A1	Blue crab	16.3	166	male	8	yes	na
LPR7G-C1	Blue crab	16.4	234	male	7	yes	na
LPR8J-C3	Blue crab	16.4	180	male	8	yes	na
LPR7G-C4	Blue crab	16.5	244	male	7	yes	na
LPR8K-B3	Blue crab	16.5	204	male	8	yes	na
LPR6G-B6	Blue crab	16.7	226	male	6	yes	na
LPR8J-B2	Blue crab	16.7	222	male	8	yes	na
LPR7H-C5	Blue crab	16.8	234	male	7	yes	na
LPR6F-B3	Blue crab	17	240	male	6	yes	na
LPR8K-C4	Blue crab	17.4	208	male	8	yes	na
LPR7G-C2	Blue crab	17.5	228	male	7	yes	na
LPR1I-A1	Bluefish	34.5	398	male	1	no	> 30 cm
LPR2K-A1	Bluefish	37	486	male	2	no	> 30 cm
LPR2K-A1	Bluefish	33.5	386	male	2	no	> 30 cm
LPR2K-A1	Bluefish	36	420	male	2	no	> 30 cm
LPR2K-A1	Bluefish	34.5	504	male	2	no	> 30 cm
LPR7H-A1	Bluegill	14.8	78	female	7	yes	≤ 30 cm
LPR8U-A3	Bluegill	8.2	9.2	female	8	yes	≤ 30 cm
LPR8V-A1	Bluegill	14	58	female	8	yes	≤ 30 cm
LPR8W-A2	Bluegill	11.6	28	indeterminant	8	yes	≤ 30 cm
LPR8X-A1	Bluegill	10.1	22	female	8	yes	≤ 30 cm
LPR8KK-A1	Bluegill	11.1	29	indeterminant	8	yes	≤ 30 cm
LPR8KK-A1	Bluegill	9.9	17	indeterminant	8	yes	≤ 30 cm
LPR8KK-A1	Bluegill	7.8	7.5	indeterminant	8	yes	≤ 30 cm
LPR8KK-A1	Bluegill	8.1	10	indeterminant	8	yes	≤ 30 cm
LPR6HH-C8	Bluegill	3.1	0.5	indeterminant	6	yes	≤ 30 cm
LPR6II-B9	Bluegill	3.1	0.5	indeterminant	6	yes	≤ 30 cm
LPR8SS-A1	Bluegill	3	0.5	indeterminant	8	yes	≤ 30 cm
LPR8SS-C5	Bluegill	3.2	0.5	indeterminant	8	yes	≤ 30 cm
LPR8TT-C3	Bluegill	3.1	0.5	indeterminant	8	yes	≤ 30 cm
LPR8TT-A4	Bluegill	3.3	0.5	indeterminant	8	yes	≤ 30 cm

LPR8TT-A4	Bluegill	3.3	0.5	indeterminant	8	yes	≤ 30 cm
LPR8TT-B4	Bluegill	3.1	0.5	indeterminant	8	yes	≤ 30 cm
LPR8TT-B4	Bluegill	3.1	0.5	indeterminant	8	yes	≤ 30 cm
LPR8TT-B4	Bluegill	3.3	0.5	indeterminant	8	yes	≤ 30 cm
LPR8TT-B4	Bluegill	3.2	0.5	indeterminant	8	yes	≤ 30 cm
LPR8TT-B4	Bluegill	3.4	0.5	indeterminant	8	yes	≤ 30 cm
LPR8TT-B4	Bluegill	2.9	0.5	indeterminant	8	yes	≤ 30 cm
LPR8TT-C4	Bluegill	3.5	1	indeterminant	8	yes	≤ 30 cm
LPR8TT-B5	Bluegill	3.3	0.5	indeterminant	8	yes	≤ 30 cm
LPR8TT-C5	Bluegill	3	0.5	indeterminant	8	yes	≤ 30 cm
LPR8UU-B1	Bluegill	2.9	0.5	indeterminant	8	yes	≤ 30 cm
LPR8UU-B1	Bluegill	3.2	0.5	indeterminant	8	yes	≤ 30 cm
LPR8UU-B1	Bluegill	3.1	0.5	indeterminant	8	yes	≤ 30 cm
LPR8UU-A2	Bluegill	3.3	1	indeterminant	8	yes	≤ 30 cm
LPR8VV-A3	Bluegill	2.8	0.5	indeterminant	8	yes	≤ 30 cm
LPR8VV-A4	Bluegill	3.4	1	indeterminant	8	yes	≤ 30 cm
LPR8VV-C4	Bluegill	3.2	0.5	indeterminant	8	yes	≤ 30 cm
LPR8VV-C4	Bluegill	3.2	0.5	indeterminant	8	yes	≤ 30 cm
LPR8VV-C4	Bluegill	3.5	0.5	indeterminant	8	yes	≤ 30 cm
LPR8VV-A5	Bluegill	3	0.5	indeterminant	8	yes	≤ 30 cm
LPR8VV-A5	Bluegill	3.7	0.5	indeterminant	8	yes	≤ 30 cm
LPR8VV-A5	Bluegill	3.2	0.5	indeterminant	8	yes	≤ 30 cm
LPR8VV-A5	Bluegill	3.2	0.5	indeterminant	8	yes	≤ 30 cm
LPR8VV-A5	Bluegill	3.3	0.5	indeterminant	8	yes	≤ 30 cm
LPR8VV-B5	Bluegill	3.7	0.5	indeterminant	8	yes	≤ 30 cm
LPR8VV-B5	Bluegill	3.1	0.5	indeterminant	8	yes	≤ 30 cm
LPR8VV-B5	Bluegill	2.7	0.5	indeterminant	8	yes	≤ 30 cm
LPR8VV-B5	Bluegill	3.3	0.5	indeterminant	8	yes	≤ 30 cm
LPR8VV-C5	Bluegill	3.2	0.5	indeterminant	8	yes	≤ 30 cm
LPR8VV-C5	Bluegill	2.9	0.5	indeterminant	8	yes	≤ 30 cm
LPR8YY-A1	Bluegill	3.2	0.5	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Bluegill	3	0.5	indeterminant	8	yes	≤ 30 cm
LPR8ZZ-A2	Bluegill	2.7	0.5	indeterminant	8	yes	≤ 30 cm
LPR8ZZ-A2	Bluegill	3	0.5	indeterminant	8	yes	≤ 30 cm
LPR4RR-A1	Bluegill	5.6	1	indeterminant	4	no	≤ 30 cm
LPR4RR-A1	Bluegill	4.1	0.5	indeterminant	4	no	≤ 30 cm
LPR4RR-A2	Bluegill	5.6	0.5	indeterminant	4	no	≤ 30 cm
LPR4RR-A3	Bluegill	5.4	0.5	indeterminant	4	no	≤ 30 cm
LPR5SS-A7	Bluegill	4.8	0.5	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	Bluegill	6.1	1	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	Bluegill	6.1	1	indeterminant	5	no	≤ 30 cm
LPR6TT-A6	Bluegill	3.3	0.5	indeterminant	6	yes	≤ 30 cm
LPR6TT-A6	Bluegill	4.7	1	indeterminant	6	yes	≤ 30 cm
LPR6TT-A5	Bluegill	5	1.5	indeterminant	6	yes	≤ 30 cm
LPR6TT-A5	Bluegill	4.7	1.5	indeterminant	6	yes	≤ 30 cm
LPR6TT-A5	Bluegill	4.5	0.5	indeterminant	6	yes	≤ 30 cm
LPR6TT-A5	Bluegill	4.6	1	indeterminant	6	yes	≤ 30 cm
LPR6TT-A5	Bluegill	3.5	0.5	indeterminant	6	yes	≤ 30 cm
LPR6TT-A5	Bluegill	4.7	1.5	indeterminant	6	yes	≤ 30 cm
LPR6TT-A5	Bluegill	5	1.5	indeterminant	6	yes	≤ 30 cm
LPR7UU-A5	Bluegill	4.3	1	indeterminant	7	yes	≤ 30 cm
LPR7UU-A5	Bluegill	4.4	1	indeterminant	7	yes	≤ 30 cm
LPR7UU-A2	Bluegill	4.4	1	indeterminant	7	yes	≤ 30 cm
LPR7UU-A2	Bluegill	4.4	1	indeterminant	7	yes	≤ 30 cm
LPR7UU-A5	Bluegill	4.1	0.5	indeterminant	7	yes	≤ 30 cm
LPR7UU-A2	Bluegill	4.4	1	indeterminant	7	yes	≤ 30 cm

LPR7UU-A5	Bluegill	4.4	1	indeterminant	7	yes	≤ 30 cm
LPR7UU-A5	Bluegill	4.2	1	indeterminant	7	yes	≤ 30 cm
LPR7UU-A2	Bluegill	4.6	1.5	indeterminant	7	yes	≤ 30 cm
LPR7UU-A5	Bluegill	4.3	1	indeterminant	7	yes	≤ 30 cm
LPR7VV-A2	Bluegill	4.7	1.5	indeterminant	7	yes	≤ 30 cm
LPR3F-C2	Brown bullhead	28.1	300	indeterminant	3	no	≤ 30 cm
LPR4O-A7	Brown bullhead	29.7	414	indeterminant	4	no	≤ 30 cm
LPR6P-A4	Brown bullhead	28.7	330	indeterminant	6	yes	≤ 30 cm
LPR6P-C5	Brown bullhead	25.9	240	indeterminant	6	yes	≤ 30 cm
LPR6S-C1	Brown bullhead	21	130	indeterminant	6	yes	≤ 30 cm
LPR6S-A4	Brown bullhead	25.1	188	indeterminant	6	yes	≤ 30 cm
LPR7P-B5	Brown bullhead	24.5	200	indeterminant	7	yes	≤ 30 cm
LPR4NN-A1	Brown bullhead	32.8	550	male	4	no	> 30 cm
LPR6KK-A2	Brown bullhead	32	470	male	6	yes	> 30 cm
LPR8RR-A1	Brown bullhead	36	616	female	8	yes	> 30 cm
LPR8R-A2	Channel catfish	51	1490	indeterminant	8	yes	> 30 cm
LPR6OO-A1	Channel catfish	52	1184	female	6	yes	> 30 cm
LPR5F-A1	Channel catfish	43	610	indeterminant	5	no	> 30 cm
LPR5O-B1	Channel catfish	18.3	44	indeterminant	5	no	≤ 30 cm
LPR5O-B10	Channel catfish	18.5	42	indeterminant	5	no	≤ 30 cm
LPR6M-A2	Channel catfish	43.5	708	indeterminant	6	yes	> 30 cm
LPR6Q-B1	Channel catfish	49.3	810	indeterminant	6	yes	> 30 cm
LPR6S-A4	Channel catfish	34	286	indeterminant	6	yes	> 30 cm
LPR7L-A2	Channel catfish	37.1	488	indeterminant	7	yes	> 30 cm
LPR7Q-C3	Channel catfish	45.5	900	indeterminant	7	yes	> 30 cm
LPR8R-A2	Channel catfish	35.2	510	indeterminant	8	yes	> 30 cm
LPR8S-A3	Channel catfish	46	925	indeterminant	8	yes	> 30 cm
LPR8S-A3	Channel catfish	46.6	1015	indeterminant	8	yes	> 30 cm
LPR8S-A3	Channel catfish	40.5	905	indeterminant	8	yes	> 30 cm
LPR8S-A3	Channel catfish	48	975	indeterminant	8	yes	> 30 cm
LPR6Y-A4	Channel catfish	49	995	female	6	yes	> 30 cm
LPR3M-A5	Common carp	63.5	3600	indeterminant	3	no	> 30 cm
LPR3M-A5	Common carp	55	2200	indeterminant	3	no	> 30 cm
LPR3N-A1	Common carp	61	5000	indeterminant	3	no	> 30 cm
LPR3N-A1	Common carp	57.5	2590	indeterminant	3	no	> 30 cm
LPR4L-A6	Common carp	54.6	2600	indeterminant	4	no	> 30 cm
LPR4L-A8	Common carp	60.6	3850	indeterminant	4	no	> 30 cm
LPR4O-A8	Common carp	77.9	7130	indeterminant	4	no	> 30 cm
LPR4P-A3	Common carp	56	2900	indeterminant	4	no	> 30 cm
LPR4P-A8	Common carp	61.1	3950	indeterminant	4	no	> 30 cm
LPR4R-A1	Common carp	52.5	2074	indeterminant	4	no	> 30 cm
LPR4R-A1	Common carp	53.5	2398	indeterminant	4	no	> 30 cm
LPR4R-A2	Common carp	56.7	2632	indeterminant	4	no	> 30 cm
LPR4S-A1	Common carp	60.7	3748	indeterminant	4	no	> 30 cm
LPR4S-A1	Common carp	54	2498	indeterminant	4	no	> 30 cm
LPR4S-A1	Common carp	63	3350	indeterminant	4	no	> 30 cm
LPR4S-A2	Common carp	53.2	2102	indeterminant	4	no	> 30 cm
LPR4T-A1	Common carp	53.4	2182	indeterminant	4	no	> 30 cm
LPR4T-A2	Common carp	57.3	3498	indeterminant	4	no	> 30 cm
LPR5E-A1	Common carp	51.6	2050	indeterminant	5	no	> 30 cm
LPR5E-A1	Common carp	57.4	2550	indeterminant	5	no	> 30 cm
LPR5E-A1	Common carp	59.2	3950	indeterminant	5	no	> 30 cm
LPR5E-A2	Common carp	64.6	2500	indeterminant	5	no	> 30 cm
LPR5E-A3	Common carp	65	4200	indeterminant	5	no	> 30 cm
LPR5E-A3	Common carp	60	3450	indeterminant	5	no	> 30 cm
LPR5E-A3	Common carp	64.5	4550	indeterminant	5	no	> 30 cm

LPR5E-A3	Common carp	56.5	2950	indeterminant	5	no	> 30 cm
LPR5E-A5	Common carp	52	2250	indeterminant	5	no	> 30 cm
LPR5G-A2	Common carp	52.4	2500	indeterminant	5	no	> 30 cm
LPR5I-A3	Common carp	54.2	2100	indeterminant	5	no	> 30 cm
LPR5Q-A2	Common carp	55.6	2708	indeterminant	5	no	> 30 cm
LPR5R-A1	Common carp	54.4	3052	indeterminant	5	no	> 30 cm
LPR5R-A1	Common carp	60.4	3960	indeterminant	5	no	> 30 cm
LPR5R-A1	Common carp	56.4	2700	indeterminant	5	no	> 30 cm
LPR5R-A1	Common carp	60.8	3898	indeterminant	5	no	> 30 cm
LPR5R-A1	Common carp	57.7	3056	indeterminant	5	no	> 30 cm
LPR5R-A1	Common carp	59.6	3296	indeterminant	5	no	> 30 cm
LPR5R-A1	Common carp	56	2878	indeterminant	5	no	> 30 cm
LPR5S-A1	Common carp	61.6	4590	indeterminant	5	no	> 30 cm
LPR5S-A1	Common carp	66.6	5090	indeterminant	5	no	> 30 cm
LPR5S-A1	Common carp	62.7	4065	indeterminant	5	no	> 30 cm
LPR5S-A1	Common carp	63.6	3670	indeterminant	5	no	> 30 cm
LPR5S-A1	Common carp	71.8	6040	indeterminant	5	no	> 30 cm
LPR5S-A1	Common carp	66.6	5555	indeterminant	5	no	> 30 cm
LPR5S-A2	Common carp	53.3	2506	indeterminant	5	no	> 30 cm
LPR5S-A2	Common carp	72.7	6675	indeterminant	5	no	> 30 cm
LPR5S-A2	Common carp	53	2716	indeterminant	5	no	> 30 cm
LPR5T-A1	Common carp	57.7	3358	indeterminant	5	no	> 30 cm
LPR5T-A2	Common carp	60.8	3772	indeterminant	5	no	> 30 cm
LPR5T-A2	Common carp	63.5	5355	indeterminant	5	no	> 30 cm
LPR5T-A2	Common carp	64.5	3684	indeterminant	5	no	> 30 cm
LPR6L-A1	Common carp	50.9	1910	indeterminant	6	yes	> 30 cm
LPR6L-A1	Common carp	62.5	4500	indeterminant	6	yes	> 30 cm
LPR6L-A1	Common carp	53.2	2220	indeterminant	6	yes	> 30 cm
LPR6L-A2	Common carp	53.1	2005	male	6	yes	> 30 cm
LPR6L-A2	Common carp	53	2132	indeterminant	6	yes	> 30 cm
LPR6L-A2	Common carp	57.5	2624	indeterminant	6	yes	> 30 cm
LPR6L-A2	Common carp	50	1652	indeterminant	6	yes	> 30 cm
LPR6L-A2	Common carp	55.5	2096	indeterminant	6	yes	> 30 cm
LPR6L-A2	Common carp	53.5	2242	indeterminant	6	yes	> 30 cm
LPR6L-A3	Common carp	58.2	3526	indeterminant	6	yes	> 30 cm
LPR6L-A4	Common carp	61.5	3494	indeterminant	6	yes	> 30 cm
LPR6L-A4	Common carp	55	2422	indeterminant	6	yes	> 30 cm
LPR6L-A4	Common carp	57	3398	indeterminant	6	yes	> 30 cm
LPR6L-A5	Common carp	70.9	5000	indeterminant	6	yes	> 30 cm
LPR6L-A5	Common carp	60.3	3188	indeterminant	6	yes	> 30 cm
LPR6L-A5	Common carp	53.6	2296	indeterminant	6	yes	> 30 cm
LPR6L-A5	Common carp	55.4	3058	indeterminant	6	yes	> 30 cm
LPR6M-A1	Common carp	57	3000	indeterminant	6	yes	> 30 cm
LPR6M-A1	Common carp	59	3050	indeterminant	6	yes	> 30 cm
LPR6M-A4	Common carp	54	2520	indeterminant	6	yes	> 30 cm
LPR6M-A5	Common carp	54.8	2452	indeterminant	6	yes	> 30 cm
LPR6M-A5	Common carp	52.8	2156	indeterminant	6	yes	> 30 cm
LPR6M-A5	Common carp	55.2	2598	indeterminant	6	yes	> 30 cm
LPR6M-A5	Common carp	53.2	2418	indeterminant	6	yes	> 30 cm
LPR6N-A1	Common carp	54.7	2242	indeterminant	6	yes	> 30 cm
LPR6N-A1	Common carp	53.5	2550	indeterminant	6	yes	> 30 cm
LPR6N-A1	Common carp	57	2963	indeterminant	6	yes	> 30 cm
LPR6N-A1	Common carp	51.9	1930	indeterminant	6	yes	> 30 cm
LPR6N-A1	Common carp	56.5	2448	indeterminant	6	yes	> 30 cm
LPR6N-A1	Common carp	52	2200	indeterminant	6	yes	> 30 cm
LPR6N-A1	Common carp	53	2028	indeterminant	6	yes	> 30 cm

LPR6N-A2	Common carp	59.1	2950	male	6	yes	> 30 cm
LPR6N-A2	Common carp	55.5	2600	indeterminant	6	yes	> 30 cm
LPR6N-A2	Common carp	56.3	2060	indeterminant	6	yes	> 30 cm
LPR6N-A2	Common carp	51.7	2198	indeterminant	6	yes	> 30 cm
LPR6N-A2	Common carp	55	1960	indeterminant	6	yes	> 30 cm
LPR6N-A3	Common carp	55.8	2342	indeterminant	6	yes	> 30 cm
LPR6N-A5	Common carp	50.6	2380	indeterminant	6	yes	> 30 cm
LPR6N-A5	Common carp	52.7	2246	indeterminant	6	yes	> 30 cm
LPR6N-A5	Common carp	52.7	2436	indeterminant	6	yes	> 30 cm
LPR7L-A1	Common carp	53	2032	indeterminant	7	yes	> 30 cm
LPR7L-A1	Common carp	53	2470	indeterminant	7	yes	> 30 cm
LPR7L-A1	Common carp	51	2054	indeterminant	7	yes	> 30 cm
LPR7L-A1	Common carp	61	3100	indeterminant	7	yes	> 30 cm
LPR7L-A1	Common carp	51.5	2048	indeterminant	7	yes	> 30 cm
LPR7L-A2	Common carp	53.9	2200	male	7	yes	> 30 cm
LPR7L-A2	Common carp	52	2044	indeterminant	7	yes	> 30 cm
LPR7L-A2	Common carp	53	2090	indeterminant	7	yes	> 30 cm
LPR7L-A2	Common carp	53.5	2416	indeterminant	7	yes	> 30 cm
LPR7L-A3	Common carp	56.4	2756	indeterminant	7	yes	> 30 cm
LPR7L-A3	Common carp	52.8	2274	indeterminant	7	yes	> 30 cm
LPR7L-A3	Common carp	56.9	2992	indeterminant	7	yes	> 30 cm
LPR7L-A3	Common carp	53.5	2358	indeterminant	7	yes	> 30 cm
LPR7L-A3	Common carp	55.8	2262	indeterminant	7	yes	> 30 cm
LPR7L-A3	Common carp	57.2	2500	indeterminant	7	yes	> 30 cm
LPR7L-A4	Common carp	54.2	2334	indeterminant	7	yes	> 30 cm
LPR7L-A4	Common carp	51.2	2076	indeterminant	7	yes	> 30 cm
LPR7L-A4	Common carp	50.8	2146	indeterminant	7	yes	> 30 cm
LPR7L-A4	Common carp	56.9	3050	indeterminant	7	yes	> 30 cm
LPR7L-A4	Common carp	56.4	2554	indeterminant	7	yes	> 30 cm
LPR7L-A4	Common carp	56.9	3168	indeterminant	7	yes	> 30 cm
LPR7L-A4	Common carp	54.9	2104	indeterminant	7	yes	> 30 cm
LPR7L-A4	Common carp	52.4	2366	indeterminant	7	yes	> 30 cm
LPR7L-A5	Common carp	58.7	2970	indeterminant	7	yes	> 30 cm
LPR7L-A5	Common carp	53.2	2044	indeterminant	7	yes	> 30 cm
LPR7L-A5	Common carp	51.5	1982	indeterminant	7	yes	> 30 cm
LPR7L-A5	Common carp	53.4	2116	indeterminant	7	yes	> 30 cm
LPR7L-A5	Common carp	55.3	2480	indeterminant	7	yes	> 30 cm
LPR7M-A1	Common carp	57.8	2830	indeterminant	7	yes	> 30 cm
LPR7M-A1	Common carp	56.4	2750	indeterminant	7	yes	> 30 cm
LPR7M-A1	Common carp	52	1850	indeterminant	7	yes	> 30 cm
LPR7M-A2	Common carp	56	2234	indeterminant	7	yes	> 30 cm
LPR7M-A2	Common carp	53	2188	indeterminant	7	yes	> 30 cm
LPR7M-A2	Common carp	58	2806	indeterminant	7	yes	> 30 cm
LPR7M-A2	Common carp	55	2208	indeterminant	7	yes	> 30 cm
LPR7M-A2	Common carp	51.5	1888	indeterminant	7	yes	> 30 cm
LPR7M-A3	Common carp	58.3	3162	indeterminant	7	yes	> 30 cm
LPR7M-A3	Common carp	57	3056	indeterminant	7	yes	> 30 cm
LPR7M-A3	Common carp	51.3	2064	indeterminant	7	yes	> 30 cm
LPR7M-A3	Common carp	51.7	1902	indeterminant	7	yes	> 30 cm
LPR7M-A3	Common carp	54.5	2326	indeterminant	7	yes	> 30 cm
LPR7M-A5	Common carp	50.7	2396	indeterminant	7	yes	> 30 cm
LPR7M-A5	Common carp	51.7	2084	indeterminant	7	yes	> 30 cm
LPR7M-A5	Common carp	52.3	2208	indeterminant	7	yes	> 30 cm
LPR8R-A1	Common carp	71.3	4850	female	8	yes	> 30 cm
LPR8R-A1	Common carp	54.5	2603	female	8	yes	> 30 cm
LPR8R-A1	Common carp	58.4	3106	indeterminant	8	yes	> 30 cm

LPR8R-A1	Common carp	51.4	2086	indeterminant	8	yes	> 30 cm
LPR8R-A1	Common carp	59.6	2840	indeterminant	8	yes	> 30 cm
LPR8R-A2	Common carp	65.4	4150	indeterminant	8	yes	> 30 cm
LPR8R-A2	Common carp	56.4	2560	indeterminant	8	yes	> 30 cm
LPR8R-A4	Common carp	55.5	2820	indeterminant	8	yes	> 30 cm
LPR8S-A1	Common carp	60.2	3114	indeterminant	8	yes	> 30 cm
LPR8S-A1	Common carp	51.8	2300	indeterminant	8	yes	> 30 cm
LPR8S-A1	Common carp	54.9	4658	indeterminant	8	yes	> 30 cm
LPR8S-A1	Common carp	59.8	2810	indeterminant	8	yes	> 30 cm
LPR8S-A1	Common carp	59.7	3040	indeterminant	8	yes	> 30 cm
LPR8S-A1	Common carp	55.6	2502	indeterminant	8	yes	> 30 cm
LPR8S-A3	Common carp	55.4	2650	indeterminant	8	yes	> 30 cm
LPR8S-A3	Common carp	60.3	3630	indeterminant	8	yes	> 30 cm
LPR8S-A3	Common carp	56.2	2750	indeterminant	8	yes	> 30 cm
LPR8S-A3	Common carp	50.5	1675	indeterminant	8	yes	> 30 cm
LPR8S-A3	Common carp	52	2200	indeterminant	8	yes	> 30 cm
LPR8S-A4	Common carp	55.3	2260	indeterminant	8	yes	> 30 cm
LPR8S-A4	Common carp	52.5	2366	indeterminant	8	yes	> 30 cm
LPR8S-A4	Common carp	51.6	2260	indeterminant	8	yes	> 30 cm
LPR8U-A5	Common carp	59.8	3140	indeterminant	8	yes	> 30 cm
LPR8U-A5	Common carp	55.5	2768	indeterminant	8	yes	> 30 cm
LPR8U-A5	Common carp	55.3	2358	indeterminant	8	yes	> 30 cm
LPR8V-A5	Common carp	51	1840	indeterminant	8	yes	> 30 cm
LPR8X-A5	Common carp	54.9	2625	indeterminant	8	yes	> 30 cm
LPR8X-A5	Common carp	52.3	2120	indeterminant	8	yes	> 30 cm
LPR8X-A5	Common carp	60.9	2884	indeterminant	8	yes	> 30 cm
LPR8X-A5	Common carp	59.6	3064	indeterminant	8	yes	> 30 cm
LPR3M-A1	Common carp	38.5		indeterminant	3	no	> 30 cm
LPR4P-A1	Common carp	48.5	1900	indeterminant	4	no	> 30 cm
LPR5G-A3	Common carp	47	1400	indeterminant	5	no	> 30 cm
LPR5R-A1	Common carp	45.8	2262	male	5	no	> 30 cm
LPR5T-A1	Common carp	46.4	1276	indeterminant	5	no	> 30 cm
LPR6L-A3	Common carp	49.5	1884	indeterminant	6	yes	> 30 cm
LPR6M-A1	Common carp	48	1950	indeterminant	6	yes	> 30 cm
LPR6M-A1	Common carp	47.5	2050	indeterminant	6	yes	> 30 cm
LPR6N-A1	Common carp	47.5	2134	indeterminant	6	yes	> 30 cm
LPR6N-A3	Common carp	49.4	1732	indeterminant	6	yes	> 30 cm
LPR6N-A5	Common carp	48.6	1806	indeterminant	6	yes	> 30 cm
LPR7L-A1	Common carp	40	1166	indeterminant	7	yes	> 30 cm
LPR7L-A1	Common carp	47.5	1690	indeterminant	7	yes	> 30 cm
LPR7L-A3	Common carp	44.8	1340	indeterminant	7	yes	> 30 cm
LPR7L-A3	Common carp	47.1	1516	indeterminant	7	yes	> 30 cm
LPR7L-A3	Common carp	46.7	1604	indeterminant	7	yes	> 30 cm
LPR7L-A5	Common carp	48.3	2062	indeterminant	7	yes	> 30 cm
LPR7L-A5	Common carp	47.2	1558	indeterminant	7	yes	> 30 cm
LPR7M-A3	Common carp	49.8	1870	indeterminant	7	yes	> 30 cm
LPR7M-A5	Common carp	46.3	2052	indeterminant	7	yes	> 30 cm
LPR7M-A5	Common carp	45.6	1448	indeterminant	7	yes	> 30 cm
LPR8R-A1	Common carp	47.5	1684	indeterminant	8	yes	> 30 cm
LPR8S-A3	Common carp	47.2	1500	indeterminant	8	yes	> 30 cm
LPR8S-A4	Common carp	45.1	1430	indeterminant	8	yes	> 30 cm
LPR8Z-A2	Crayfish (unspecified)	3.3	1	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	Crayfish (unspecified)	2.8	0.3	indeterminant	8	yes	≤ 30 cm
LPR4II-A29	Crevalle jack	5	1.5	indeterminant	4	no	≤ 30 cm
LPR5VV-A8	Gizzard shad	6.1	3.5	indeterminant	5	no	≤ 30 cm
LPR5VV-A7	Gizzard shad	6.1	3	indeterminant	5	no	≤ 30 cm

LPR5VV-A8	Gizzard shad	6.2	2.5	indeterminant	5	no	≤ 30 cm
LPR5VV-A4	Gizzard shad	6.5	2.5	indeterminant	5	no	≤ 30 cm
LPR5VV-A6	Gizzard shad	6.5	3	indeterminant	5	no	≤ 30 cm
LPR7WW-A2	Gizzard shad	6.7	2.5	indeterminant	7	yes	≤ 30 cm
LPR4TT-A4	Gizzard shad	6.7	1	indeterminant	4	no	≤ 30 cm
LPR5VV-A6	Gizzard shad	6.7	2.5	indeterminant	5	no	≤ 30 cm
LPR7WW-A2	Gizzard shad	7	4	indeterminant	7	yes	≤ 30 cm
LPR7WW-A2	Gizzard shad	7	3	indeterminant	7	yes	≤ 30 cm
LPR7WW-A2	Gizzard shad	7	3.5	indeterminant	7	yes	≤ 30 cm
LPR7WW-A2	Gizzard shad	7	3.5	indeterminant	7	yes	≤ 30 cm
LPR2SS-A101	Gizzard shad	7	3	female	2	no	≤ 30 cm
LPR5TT-A4	Gizzard shad	7	3	indeterminant	5	no	≤ 30 cm
LPR7WW-A2	Gizzard shad	7.1	2.5	indeterminant	7	yes	≤ 30 cm
LPR7WW-A2	Gizzard shad	7.2	3.5	indeterminant	7	yes	≤ 30 cm
LPR7WW-A2	Gizzard shad	7.2	3.5	indeterminant	7	yes	≤ 30 cm
LPR2SS-A101	Gizzard shad	7.2	3.5	female	2	no	≤ 30 cm
LPR4TT-A4	Gizzard shad	7.2	2.5	indeterminant	4	no	≤ 30 cm
LPR5VV-A5	Gizzard shad	7.2	4	indeterminant	5	no	≤ 30 cm
LPR7WW-A2	Gizzard shad	7.3	4	indeterminant	7	yes	≤ 30 cm
LPR7WW-A2	Gizzard shad	7.4	4.5	indeterminant	7	yes	≤ 30 cm
LPR7WW-A2	Gizzard shad	7.4	4	indeterminant	7	yes	≤ 30 cm
LPR5WW-A6	Gizzard shad	7.4	3.5	indeterminant	5	no	≤ 30 cm
LPR7WW-A2	Gizzard shad	7.5	4.5	indeterminant	7	yes	≤ 30 cm
LPR7WW-A2	Gizzard shad	7.5	3.5	indeterminant	7	yes	≤ 30 cm
LPR7WW-A2	Gizzard shad	7.5	4	indeterminant	7	yes	≤ 30 cm
LPR7WW-A2	Gizzard shad	7.5	4.5	indeterminant	7	yes	≤ 30 cm
LPR7WW-A2	Gizzard shad	7.5	4.5	indeterminant	7	yes	≤ 30 cm
LPR7WW-A2	Gizzard shad	7.5	4.5	indeterminant	7	yes	≤ 30 cm
LPR7WW-A2	Gizzard shad	7.5	4	indeterminant	7	yes	≤ 30 cm
LPR7WW-A2	Gizzard shad	7.5	4.5	indeterminant	7	yes	≤ 30 cm
LPR7WW-A2	Gizzard shad	7.6	4.5	indeterminant	7	yes	≤ 30 cm
LPR2SS-A101	Gizzard shad	7.6	4	female	2	no	≤ 30 cm
LPR4SS-A4	Gizzard shad	7.6	2.5	indeterminant	4	no	≤ 30 cm
LPR4TT-A6	Gizzard shad	7.6	2.5	indeterminant	4	no	≤ 30 cm
LPR7WW-A2	Gizzard shad	7.7	4	indeterminant	7	yes	≤ 30 cm
LPR7WW-A2	Gizzard shad	7.7	4.5	indeterminant	7	yes	≤ 30 cm
LPR4TT-A6	Gizzard shad	7.7	2	indeterminant	4	no	≤ 30 cm
LPR7WW-A2	Gizzard shad	7.8	4.5	indeterminant	7	yes	≤ 30 cm
LPR5VV-A8	Gizzard shad	7.8	6	indeterminant	5	no	≤ 30 cm
LPR7WW-A2	Gizzard shad	7.9	4.5	indeterminant	7	yes	≤ 30 cm
LPR7WW-A2	Gizzard shad	8	5	indeterminant	7	yes	≤ 30 cm
LPR7WW-A2	Gizzard shad	8	5	indeterminant	7	yes	≤ 30 cm
LPR7WW-A2	Gizzard shad	8	5	indeterminant	7	yes	≤ 30 cm
LPR7WW-A2	Gizzard shad	8	5	indeterminant	7	yes	≤ 30 cm
LPR7WW-A2	Gizzard shad	8	5.5	indeterminant	7	yes	≤ 30 cm
LPR7WW-A2	Gizzard shad	8	5	indeterminant	7	yes	≤ 30 cm
LPR7WW-A2	Gizzard shad	8	5	indeterminant	7	yes	≤ 30 cm
LPR7WW-A2	Gizzard shad	8	4.5	indeterminant	7	yes	≤ 30 cm
LPR5VV-A7	Gizzard shad	8	5	indeterminant	5	no	≤ 30 cm
LPR7WW-A2	Gizzard shad	8.1	5.5	indeterminant	7	yes	≤ 30 cm
LPR7WW-A2	Gizzard shad	8.1	4	indeterminant	7	yes	≤ 30 cm
LPR7WW-A2	Gizzard shad	8.2	5.5	indeterminant	7	yes	≤ 30 cm
LPR4RR-A3	Gizzard shad	8.2	3	indeterminant	4	no	≤ 30 cm
LPR4RR-A3	Gizzard shad	8.2	3	indeterminant	4	no	≤ 30 cm
LPR5VV-A6	Gizzard shad	8.2	5.5	indeterminant	5	no	≤ 30 cm
LPR5VV-A6	Gizzard shad	8.2	5.5	indeterminant	5	no	≤ 30 cm

LPR6TT-A1	Gizzard shad	8.3	6.5	indeterminant	6	yes	≤ 30 cm
LPR7WW-A2	Gizzard shad	8.3	5	indeterminant	7	yes	≤ 30 cm
LPR7WW-A2	Gizzard shad	8.3	6	indeterminant	7	yes	≤ 30 cm
LPR7WW-A2	Gizzard shad	8.3	4.5	indeterminant	7	yes	≤ 30 cm
LPR7WW-A2	Gizzard shad	8.3	5	indeterminant	7	yes	≤ 30 cm
LPR7WW-A2	Gizzard shad	8.3	5.5	indeterminant	7	yes	≤ 30 cm
LPR7WW-A2	Gizzard shad	8.3	4.5	indeterminant	7	yes	≤ 30 cm
LPR7WW-A2	Gizzard shad	8.4	5.5	indeterminant	7	yes	≤ 30 cm
LPR7WW-A2	Gizzard shad	8.4	5.5	indeterminant	7	yes	≤ 30 cm
LPR7WW-A2	Gizzard shad	8.4	6	indeterminant	7	yes	≤ 30 cm
LPR4SS-A4	Gizzard shad	8.4	3.5	indeterminant	4	no	≤ 30 cm
LPR6TT-A5	Gizzard shad	8.5	7	indeterminant	6	yes	≤ 30 cm
LPR7WW-A2	Gizzard shad	8.5	7	indeterminant	7	yes	≤ 30 cm
LPR7WW-A2	Gizzard shad	8.5	6.5	indeterminant	7	yes	≤ 30 cm
LPR7WW-A2	Gizzard shad	8.5	6.5	indeterminant	7	yes	≤ 30 cm
LPR7WW-A2	Gizzard shad	8.5	6.5	indeterminant	7	yes	≤ 30 cm
LPR4SS-A4	Gizzard shad	8.5	4	indeterminant	4	no	≤ 30 cm
LPR4SS-A4	Gizzard shad	8.5	3.5	indeterminant	4	no	≤ 30 cm
LPR6TT-A1	Gizzard shad	8.6	7.5	indeterminant	6	yes	≤ 30 cm
LPR6TT-A1	Gizzard shad	8.6	8.5	indeterminant	6	yes	≤ 30 cm
LPR7WW-A2	Gizzard shad	8.6	6	indeterminant	7	yes	≤ 30 cm
LPR7WW-A2	Gizzard shad	8.6	5.5	indeterminant	7	yes	≤ 30 cm
LPR7WW-A2	Gizzard shad	8.6	7	indeterminant	7	yes	≤ 30 cm
LPR7WW-A2	Gizzard shad	8.6	5	indeterminant	7	yes	≤ 30 cm
LPR4RR-A3	Gizzard shad	8.6	4.5	indeterminant	4	no	≤ 30 cm
LPR5VV-A5	Gizzard shad	8.6	6.5	indeterminant	5	no	≤ 30 cm
LPR6TT-A1	Gizzard shad	8.7	8	indeterminant	6	yes	≤ 30 cm
LPR7WW-A2	Gizzard shad	8.7	6	indeterminant	7	yes	≤ 30 cm
LPR7WW-A2	Gizzard shad	8.7	5.5	indeterminant	7	yes	≤ 30 cm
LPR5VV-A6	Gizzard shad	8.7	6.5	indeterminant	5	no	≤ 30 cm
LPR6TT-A1	Gizzard shad	8.8	8	indeterminant	6	yes	≤ 30 cm
LPR7WW-A2	Gizzard shad	8.8	6	indeterminant	7	yes	≤ 30 cm
LPR6TT-A1	Gizzard shad	8.9	6.5	indeterminant	6	yes	≤ 30 cm
LPR4RR-A2	Gizzard shad	8.9	5	indeterminant	4	no	≤ 30 cm
LPR6TT-A1	Gizzard shad	9	7	indeterminant	6	yes	≤ 30 cm
LPR6TT-A1	Gizzard shad	9	8	indeterminant	6	yes	≤ 30 cm
LPR6TT-A1	Gizzard shad	9	9.5	indeterminant	6	yes	≤ 30 cm
LPR4RR-A1	Gizzard shad	9	4	indeterminant	4	no	≤ 30 cm
LPR4SS-A4	Gizzard shad	9	4.5	indeterminant	4	no	≤ 30 cm
LPR4UU-A2	Gizzard shad	9	5	indeterminant	4	no	≤ 30 cm
LPR6TT-A1	Gizzard shad	9.1	9.5	indeterminant	6	yes	≤ 30 cm
LPR6TT-A1	Gizzard shad	9.1	9	indeterminant	6	yes	≤ 30 cm
LPR6TT-A1	Gizzard shad	9.1	9	indeterminant	6	yes	≤ 30 cm
LPR6TT-A1	Gizzard shad	9.1	9	indeterminant	6	yes	≤ 30 cm
LPR4RR-A2	Gizzard shad	9.1	5.5	indeterminant	4	no	≤ 30 cm
LPR4SS-A4	Gizzard shad	9.1	5.5	indeterminant	4	no	≤ 30 cm
LPR4SS-A4	Gizzard shad	9.1	5.5	indeterminant	4	no	≤ 30 cm
LPR6TT-A5	Gizzard shad	9.2	8	indeterminant	6	yes	≤ 30 cm
LPR6TT-A1	Gizzard shad	9.2	7.5	indeterminant	6	yes	≤ 30 cm
LPR4SS-A4	Gizzard shad	9.2	5	indeterminant	4	no	≤ 30 cm
LPR4TT-A6	Gizzard shad	9.2	5	indeterminant	4	no	≤ 30 cm
LPR2SS-A101	Gizzard shad	9.3	7.5	female	2	no	≤ 30 cm
LPR4RR-A3	Gizzard shad	9.3	5	indeterminant	4	no	≤ 30 cm
LPR4TT-A5	Gizzard shad	9.3	5	indeterminant	4	no	≤ 30 cm
LPR5VV-A8	Gizzard shad	9.4	8	indeterminant	5	no	≤ 30 cm
LPR6TT-A1	Gizzard shad	9.5	8.5	indeterminant	6	yes	≤ 30 cm

LPR6TT-A1	Gizzard shad	9.5	8	indeterminant	6	yes	≤ 30 cm
LPR6TT-A1	Gizzard shad	9.5	10	indeterminant	6	yes	≤ 30 cm
LPR6TT-A1	Gizzard shad	9.5	8	indeterminant	6	yes	≤ 30 cm
LPR6TT-A1	Gizzard shad	9.5	10.5	indeterminant	6	yes	≤ 30 cm
LPR4RR-A3	Gizzard shad	9.5	5	indeterminant	4	no	≤ 30 cm
LPR6TT-A1	Gizzard shad	9.6	8	indeterminant	6	yes	≤ 30 cm
LPR6TT-A1	Gizzard shad	9.6	10	indeterminant	6	yes	≤ 30 cm
LPR6TT-A1	Gizzard shad	9.6	9	indeterminant	6	yes	≤ 30 cm
LPR4RR-A2	Gizzard shad	9.6	5.5	indeterminant	4	no	≤ 30 cm
LPR4RR-A2	Gizzard shad	9.6	5	indeterminant	4	no	≤ 30 cm
LPR4TT-A3	Gizzard shad	9.6	6	indeterminant	4	no	≤ 30 cm
LPR6TT-A1	Gizzard shad	9.7	10	indeterminant	6	yes	≤ 30 cm
LPR7WW-A2	Gizzard shad	9.7	9.5	indeterminant	7	yes	≤ 30 cm
LPR6TT-A5	Gizzard shad	9.8	9	indeterminant	6	yes	≤ 30 cm
LPR6TT-A1	Gizzard shad	9.8	11	indeterminant	6	yes	≤ 30 cm
LPR4SS-A1	Gizzard shad	9.8	7	indeterminant	4	no	≤ 30 cm
LPR6TT-A1	Gizzard shad	9.9	11	indeterminant	6	yes	≤ 30 cm
LPR6TT-A5	Gizzard shad	10	11	indeterminant	6	yes	≤ 30 cm
LPR4RR-A2	Gizzard shad	10	5.5	indeterminant	4	no	≤ 30 cm
LPR4SS-A1	Gizzard shad	10	7	indeterminant	4	no	≤ 30 cm
LPR4SS-A4	Gizzard shad	10	7	indeterminant	4	no	≤ 30 cm
LPR8AB-A2	Gizzard shad	10.1	12	indeterminant	8	yes	≤ 30 cm
LPR4RR-A2	Gizzard shad	10.1	7.5	indeterminant	4	no	≤ 30 cm
LPR4SS-A4	Gizzard shad	10.1	8	indeterminant	4	no	≤ 30 cm
LPR4SS-A4	Gizzard shad	10.1	7.5	indeterminant	4	no	≤ 30 cm
LPR4UU-A2	Gizzard shad	10.1	7	indeterminant	4	no	≤ 30 cm
LPR4RR-A2	Gizzard shad	10.2	7.5	indeterminant	4	no	≤ 30 cm
LPR4TT-A5	Gizzard shad	10.2	7	indeterminant	4	no	≤ 30 cm
LPR4TT-A5	Gizzard shad	10.5	8	indeterminant	4	no	≤ 30 cm
LPR4SS-A4	Gizzard shad	10.6	8	indeterminant	4	no	≤ 30 cm
LPR4TT-A6	Gizzard shad	10.6	8	indeterminant	4	no	≤ 30 cm
LPR5UU-A7	Gizzard shad	10.7	9	indeterminant	5	no	≤ 30 cm
LPR8AB-A4	Gizzard shad	10.9	13.5	indeterminant	8	yes	≤ 30 cm
LPR4RR-A2	Gizzard shad	10.9	9	indeterminant	4	no	≤ 30 cm
LPR8AB-A3	Gizzard shad	11	14	indeterminant	8	yes	≤ 30 cm
LPR4SS-A4	Gizzard shad	11.1	10	indeterminant	4	no	≤ 30 cm
LPR4SS-A4	Gizzard shad	11.1	11.5	indeterminant	4	no	≤ 30 cm
LPR4UU-A2	Gizzard shad	12	11.5	indeterminant	4	no	≤ 30 cm
LPR8AB-A2	Gizzard shad	12.1	26	indeterminant	8	yes	≤ 30 cm
LPR5R-A2	Gizzard shad	16	40	indeterminant	5	no	≤ 30 cm
LPR8X-A5	Gizzard shad	39.4	820	indeterminant	8	yes	> 30 cm
LPR5R-A2	Gizzard shad	44.9	1028	indeterminant	5	no	> 30 cm
LPR8X-A5	Gizzard shad	47.5	1330	indeterminant	8	yes	> 30 cm
LPR1B-A2	Goby (unspecified)	4.5	0.5	indeterminant	1	no	≤ 30 cm
LPR1O-B1	Goby (unspecified)	5.9	2	indeterminant	1	no	≤ 30 cm
LPR1O-B3	Goby (unspecified)	3.7	0.5	indeterminant	1	no	≤ 30 cm
LPR2E-A2	Goby (unspecified)	3.3	0.3	indeterminant	2	no	≤ 30 cm
LPR2O-B2	Goby (unspecified)	3.4	0.3	indeterminant	2	no	≤ 30 cm
LPR1J-A1	Hogchoker	11.4	30	female	1	no	≤ 30 cm
LPR4VV-A1	Hogchoker	8.1	5	indeterminant	4	no	≤ 30 cm
LPR4VV-A1	Hogchoker	9.1	7	indeterminant	4	no	≤ 30 cm
LPR1OO-A2	Inland silverside	4	0.5	indeterminant	1	no	≤ 30 cm
LPR1OO-A8	Inland silverside	8.7	5	female	1	no	≤ 30 cm
LPR4RR-A3	Inland silverside	3.6	0.5	indeterminant	4	no	≤ 30 cm
LPR5TT-A5	Inland silverside	4.7	0.5	indeterminant	5	no	≤ 30 cm
LPR5TT-A5	Inland silverside	4.8	0.5	indeterminant	5	no	≤ 30 cm

LPR5TT-A4	Inland silverside	2.6	0.5	indeterminant	5	no	≤ 30 cm
LPR5VV-A5	Inland silverside	3.9	0.5	indeterminant	5	no	≤ 30 cm
LPR8AB-A5	Inland silverside	2.9	0.5	indeterminant	8	yes	≤ 30 cm
LPR8AB-A5	Inland silverside	3.3	0.5	indeterminant	8	yes	≤ 30 cm
LPR8AB-A5	Inland silverside	2.6	0.5	indeterminant	8	yes	≤ 30 cm
LPR8AB-A5	Inland silverside	3.3	0.5	indeterminant	8	yes	≤ 30 cm
LPR8AB-A5	Inland silverside	2.8	0.5	indeterminant	8	yes	≤ 30 cm
LPR8AB-A5	Inland silverside	3.7	0.5	indeterminant	8	yes	≤ 30 cm
LPR8AB-A5	Inland silverside	3.1	0.5	indeterminant	8	yes	≤ 30 cm
LPR8AB-A5	Inland silverside	3.4	0.5	indeterminant	8	yes	≤ 30 cm
LPR8AB-A5	Inland silverside	2.5	0.5	indeterminant	8	yes	≤ 30 cm
LPR8AB-A5	Inland silverside	2.7	0.5	indeterminant	8	yes	≤ 30 cm
LPR8AB-A5	Inland silverside	4.1	0.5	indeterminant	8	yes	≤ 30 cm
LPR4R-A2	Largemouth bass	10.8	18	indeterminant	4	no	≤ 30 cm
LPR4S-A1	Largemouth bass	11.8	20	indeterminant	4	no	≤ 30 cm
LPR4T-A1	Largemouth bass	12.4	22	indeterminant	4	no	≤ 30 cm
LPR5Q-A1	Largemouth bass	13.3	32	indeterminant	5	no	≤ 30 cm
LPR5Q-A2	Largemouth bass	21.9	172	female	5	no	≤ 30 cm
LPR5Q-A2	Largemouth bass	11.9	21	indeterminant	5	no	≤ 30 cm
LPR5R-A1	Largemouth bass	12	22	indeterminant	5	no	≤ 30 cm
LPR5R-A1	Largemouth bass	30.5	440	indeterminant	5	no	> 30 cm
LPR5R-A1	Largemouth bass	9.8	14	indeterminant	5	no	≤ 30 cm
LPR5R-A2	Largemouth bass	27.9	320	indeterminant	5	no	≤ 30 cm
LPR5R-A2	Largemouth bass	10.7	16	indeterminant	5	no	≤ 30 cm
LPR5S-A2	Largemouth bass	12	21	indeterminant	5	no	≤ 30 cm
LPR8A-C3	Largemouth bass	8	6.5	indeterminant	8	yes	≤ 30 cm
LPR8H-A1	Largemouth bass	8	7	indeterminant	8	yes	≤ 30 cm
LPR8W-A2	Largemouth bass	5.8	2	indeterminant	8	yes	≤ 30 cm
LPR8W-A4	Largemouth bass	5.5	2	indeterminant	8	yes	≤ 30 cm
LPR8X-A2	Largemouth bass	30.7	422	indeterminant	8	yes	> 30 cm
LPR8Y-A5	Largemouth bass	7	4.5	indeterminant	8	yes	≤ 30 cm
LPR5TT-A5	Largemouth bass	6.5	1.5	indeterminant	5	no	≤ 30 cm
LPR1D-A4	Mummichog	6.5	3	male	1	no	≤ 30 cm
LPR1D-A5	Mummichog	5.9	2.5	female	1	no	≤ 30 cm
LPR1D-A5	Mummichog	5.5	2	female	1	no	≤ 30 cm
LPR1D-A5	Mummichog	5.3	2	male	1	no	≤ 30 cm
LPR1D-A5	Mummichog	4.7	0.3	female	1	no	≤ 30 cm
LPR1D-A5	Mummichog	5.3	2	male	1	no	≤ 30 cm
LPR1Q-B4	Mummichog	6.5	3	male	1	no	≤ 30 cm
LPR1Q-B5	Mummichog	6.9	4	female	1	no	≤ 30 cm
LPR1Q-B5	Mummichog	5.9	2.5	female	1	no	≤ 30 cm
LPR1Q-B5	Mummichog	5.8	2	male	1	no	≤ 30 cm
LPR1Q-B5	Mummichog	5.6	2	male	1	no	≤ 30 cm
LPR2B-B3	Mummichog	8.6	8	female	2	no	≤ 30 cm
LPR2B-B3	Mummichog	6.3	2	male	2	no	≤ 30 cm
LPR2B-A5	Mummichog	5.2	1	male	2	no	≤ 30 cm
LPR2B-A5	Mummichog	5.5	2	male	2	no	≤ 30 cm
LPR2B-A5	Mummichog	6.2	3	female	2	no	≤ 30 cm
LPR2B-C5	Mummichog	7.9	7	male	2	no	≤ 30 cm
LPR2B-C5	Mummichog	6.1	2	female	2	no	≤ 30 cm
LPR2B-C5	Mummichog	7.9	5	female	2	no	≤ 30 cm
LPR2B-C5	Mummichog	5.4	1.5	female	2	no	≤ 30 cm
LPR2B-C5	Mummichog	5.6	2	female	2	no	≤ 30 cm
LPR2B-C5	Mummichog	7.8	7	male	2	no	≤ 30 cm
LPR2B-C5	Mummichog	5.5	2	female	2	no	≤ 30 cm
LPR2B-C5	Mummichog	8	6	female	2	no	≤ 30 cm

LPR2B-C5	Mummichog	7.5	6	male	2	no	≤ 30 cm
LPR2B-C5	Mummichog	5.5	2	female	2	no	≤ 30 cm
LPR2B-B4	Mummichog	6.8	3.5	female	2	no	≤ 30 cm
LPR2B-B5	Mummichog	10	15	female	2	no	≤ 30 cm
LPR2B-B5	Mummichog	5.9	2	male	2	no	≤ 30 cm
LPR2B-B5	Mummichog	5.3	1.5	male	2	no	≤ 30 cm
LPR2B-B5	Mummichog	6.9	4	male	2	no	≤ 30 cm
LPR2B-B5	Mummichog	7.6	7	male	2	no	≤ 30 cm
LPR2B-B5	Mummichog	8.7	10	female	2	no	≤ 30 cm
LPR2B-B5	Mummichog	8.5	9	male	2	no	≤ 30 cm
LPR2B-B5	Mummichog	5.8	2	female	2	no	≤ 30 cm
LPR2B-B5	Mummichog	5.4	2	male	2	no	≤ 30 cm
LPR2B-B5	Mummichog	6.4	3	female	2	no	≤ 30 cm
LPR2B-B5	Mummichog	5.7	2	female	2	no	≤ 30 cm
LPR2B-B5	Mummichog	8.1	6	female	2	no	≤ 30 cm
LPR2B-B5	Mummichog	5.9	2.5	male	2	no	≤ 30 cm
LPR2B-B5	Mummichog	5.2	2	male	2	no	≤ 30 cm
LPR2B-B5	Mummichog	6.5	3	female	2	no	≤ 30 cm
LPR2B-B5	Mummichog	6.4	3	male	2	no	≤ 30 cm
LPR2B-B5	Mummichog	6	2.5	male	2	no	≤ 30 cm
LPR2B-B5	Mummichog	9.3	10	male	2	no	≤ 30 cm
LPR2B-B5	Mummichog	6.3	2	female	2	no	≤ 30 cm
LPR2B-B5	Mummichog	5.3	1.5	male	2	no	≤ 30 cm
LPR2B-B5	Mummichog	7.2	3	male	2	no	≤ 30 cm
LPR2B-B5	Mummichog	5.5	2	male	2	no	≤ 30 cm
LPR2B-B5	Mummichog	8.5	7	male	2	no	≤ 30 cm
LPR2B-B5	Mummichog	9.1	8	male	2	no	≤ 30 cm
LPR2B-B5	Mummichog	7.1	5	female	2	no	≤ 30 cm
LPR2B-B5	Mummichog	9	10	male	2	no	≤ 30 cm
LPR2B-B5	Mummichog	8	5	female	2	no	≤ 30 cm
LPR2B-B5	Mummichog	8.2	6	male	2	no	≤ 30 cm
LPR5C-C2	Mummichog	8.6	6	indeterminant	5	no	≤ 30 cm
LPR1FF-C5	Mummichog	9.4	7	female	1	no	≤ 30 cm
LPR1FF-C5	Mummichog	7.3	3.5	female	1	no	≤ 30 cm
LPR1FF-C5	Mummichog	7.7	3.5	female	1	no	≤ 30 cm
LPR1FF-B2	Mummichog	7.5	3	male	1	no	≤ 30 cm
LPR2DD-C14	Mummichog	5.7	4	female	2	no	≤ 30 cm
LPR2DD-C14	Mummichog	6.1	4	male	2	no	≤ 30 cm
LPR2DD-C14	Mummichog	6.5	3	female	2	no	≤ 30 cm
LPR2DD-C12	Mummichog	5.4	2	male	2	no	≤ 30 cm
LPR2DD-C15	Mummichog	5.7	3.5	male	2	no	≤ 30 cm
LPR2DD-C15	Mummichog	5.7	3.5	male	2	no	≤ 30 cm
LPR2DD-B1	Mummichog	10.2	13.5	male	2	no	≤ 30 cm
LPR2DD-B1	Mummichog	8.9	8.5	male	2	no	≤ 30 cm
LPR2DD-B1	Mummichog	6.9	4	male	2	no	≤ 30 cm
LPR2DD-A1	Mummichog	10.5	13.5	female	2	no	≤ 30 cm
LPR2DD-A1	Mummichog	5	1.5	female	2	no	≤ 30 cm
LPR2DD-A1	Mummichog	6.1	3	female	2	no	≤ 30 cm
LPR2DD-A1	Mummichog	5.4	2.5	female	2	no	≤ 30 cm
LPR2DD-A1	Mummichog	7	5	male	2	no	≤ 30 cm
LPR2DD-A1	Mummichog	5.6	3	female	2	no	≤ 30 cm
LPR2DD-A1	Mummichog	5.7	2.5	male	2	no	≤ 30 cm
LPR2DD-A1	Mummichog	5.8	2	male	2	no	≤ 30 cm
LPR2DD-A1	Mummichog	4.8	1.5	male	2	no	≤ 30 cm
LPR2DD-A1	Mummichog	4.9	1.5	male	2	no	≤ 30 cm
LPR2DD-A1	Mummichog	5.3	2	female	2	no	≤ 30 cm

LPR2DD-A1	Mummichog	4.5	1	male	2	no	≤ 30 cm
LPR2DD-C11	Mummichog	6.6	5	female	2	no	≤ 30 cm
LPR2DD-C11	Mummichog	5.5	2	female	2	no	≤ 30 cm
LPR2DD-C11	Mummichog	4.3	1	male	2	no	≤ 30 cm
LPR2DD-C11	Mummichog	4.8	1	male	2	no	≤ 30 cm
LPR2DD-C7	Mummichog	6.9	4.5	male	2	no	≤ 30 cm
LPR2DD-C7	Mummichog	6	4	female	2	no	≤ 30 cm
LPR2DD-C7	Mummichog	6.5	4	male	2	no	≤ 30 cm
LPR2DD-C7	Mummichog	5.8	3	male	2	no	≤ 30 cm
LPR2DD-C8	Mummichog	6.6	4.5	female	2	no	≤ 30 cm
LPR2DD-C8	Mummichog	5.3	2	male	2	no	≤ 30 cm
LPR2DD-C6	Mummichog	5.7	2	male	2	no	≤ 30 cm
LPR2DD-C6	Mummichog	5.7	2.5	male	2	no	≤ 30 cm
LPR2DD-C3	Mummichog	7.5	6	male	2	no	≤ 30 cm
LPR2DD-C4	Mummichog	7.5	5	male	2	no	≤ 30 cm
LPR2DD-C2	Mummichog	6.5	5	female	2	no	≤ 30 cm
LPR2DD-C13	Mummichog	4.7	1	male	2	no	≤ 30 cm
LPR2DD-A2	Mummichog	7.6	3	male	2	no	≤ 30 cm
LPR2DD-C18	Mummichog	7.2	2.5	female	2	no	≤ 30 cm
LPR2DD-C18	Mummichog	8.4	4.5	female	2	no	≤ 30 cm
LPR2EE-B1	Mummichog	8.6	9	female	2	no	≤ 30 cm
LPR2EE-B1	Mummichog	9.5	10	female	2	no	≤ 30 cm
LPR2EE-B1	Mummichog	9.8	10.5	female	2	no	≤ 30 cm
LPR2EE-B1	Mummichog	8	7.5	female	2	no	≤ 30 cm
LPR2EE-B1	Mummichog	9	11	female	2	no	≤ 30 cm
LPR2EE-B1	Mummichog	9	8.5	female	2	no	≤ 30 cm
LPR2EE-B1	Mummichog	9.4	10.5	female	2	no	≤ 30 cm
LPR2EE-B1	Mummichog	9.7	9	female	2	no	≤ 30 cm
LPR2EE-B1	Mummichog	9	10.5	female	2	no	≤ 30 cm
LPR2EE-B1	Mummichog	8.5	7	female	2	no	≤ 30 cm
LPR2EE-B1	Mummichog	9.2	8.5	female	2	no	≤ 30 cm
LPR2EE-B1	Mummichog	8.5	7.5	female	2	no	≤ 30 cm
LPR2EE-B1	Mummichog	8	6	female	2	no	≤ 30 cm
LPR2EE-B1	Mummichog	8.6	9	female	2	no	≤ 30 cm
LPR2EE-B1	Mummichog	8.1	8	female	2	no	≤ 30 cm
LPR2EE-B1	Mummichog	7.9	6	female	2	no	≤ 30 cm
LPR2EE-B1	Mummichog	7.7	6	female	2	no	≤ 30 cm
LPR2EE-B1	Mummichog	7.5	5	female	2	no	≤ 30 cm
LPR2EE-B1	Mummichog	8	4	female	2	no	≤ 30 cm
LPR2EE-B1	Mummichog	8	6	female	2	no	≤ 30 cm
LPR2EE-B1	Mummichog	7.9	5.5	female	2	no	≤ 30 cm
LPR2EE-B1	Mummichog	7.5	5	female	2	no	≤ 30 cm
LPR2EE-B1	Mummichog	7.6	6.5	male	2	no	≤ 30 cm
LPR2EE-B1	Mummichog	6.1	3.5	male	2	no	≤ 30 cm
LPR2EE-C4	Mummichog	8	7	female	2	no	≤ 30 cm
LPR2EE-C4	Mummichog	9.3	12	female	2	no	≤ 30 cm
LPR2EE-C2	Mummichog	9	11.5	female	2	no	≤ 30 cm
LPR2EE-C6	Mummichog	4.9	2	male	2	no	≤ 30 cm
LPR2EE-C1	Mummichog	7.1	4.5	male	2	no	≤ 30 cm
LPR2EE-C14	Mummichog	11	13.5	female	2	no	≤ 30 cm
LPR2EE-C11	Mummichog	11	13	female	2	no	≤ 30 cm
LPR2EE-C11	Mummichog	7.4	2	female	2	no	≤ 30 cm
LPR2EE-C8	Mummichog	8.6	4.5	male	2	no	≤ 30 cm
LPR2EE-C15	Mummichog	8.5	5	female	2	no	≤ 30 cm
LPR2EE-C15	Mummichog	8	3.5	male	2	no	≤ 30 cm
LPR2EE-C15	Mummichog	9.4	5.5	male	2	no	≤ 30 cm

LPR2EE-C15	Mummichog	9	5.5	male	2	no	≤ 30 cm
LPR2EE-C10	Mummichog	9.1	4	male	2	no	≤ 30 cm
LPR2EE-C13	Mummichog	10.7	9	female	2	no	≤ 30 cm
LPR2EE-C13	Mummichog	10.8	11	female	2	no	≤ 30 cm
LPR2EE-C13	Mummichog	10.3	12	female	2	no	≤ 30 cm
LPR2EE-C13	Mummichog	9.5	7.5	female	2	no	≤ 30 cm
LPR2EE-C13	Mummichog	9.6	7.5	female	2	no	≤ 30 cm
LPR2EE-C13	Mummichog	9.2	7	female	2	no	≤ 30 cm
LPR2II-C5	Mummichog	6.8	3.5	female	2	no	≤ 30 cm
LPR2II-C5	Mummichog	6	4	female	2	no	≤ 30 cm
LPR2II-C5	Mummichog	5.5	3.5	female	2	no	≤ 30 cm
LPR2II-C5	Mummichog	6	3	female	2	no	≤ 30 cm
LPR2II-C1	Mummichog	8.7	9.5	male	2	no	≤ 30 cm
LPR2II-C1	Mummichog	6.9	4.5	male	2	no	≤ 30 cm
LPR2II-C10	Mummichog	7	5	male	2	no	≤ 30 cm
LPR2II-C4	Mummichog	6.1	3	female	2	no	≤ 30 cm
LPR2II-C7	Mummichog	7.2	6.5	female	2	no	≤ 30 cm
LPR2II-C9	Mummichog	4.7	1	female	2	no	≤ 30 cm
LPR2II-C6	Mummichog	4.7	2.5	male	2	no	≤ 30 cm
LPR2II-C15	Mummichog	7.7	3	male	2	no	≤ 30 cm
LPR2II-C15	Mummichog	7.4	2.5	female	2	no	≤ 30 cm
LPR2II-C15	Mummichog	6	2	female	2	no	≤ 30 cm
LPR2II-C15	Mummichog	6.3	1.5	female	2	no	≤ 30 cm
LPR2II-C15	Mummichog	5.2	0.5	female	2	no	≤ 30 cm
LPR2II-C15	Mummichog	7.4	3	female	2	no	≤ 30 cm
LPR2II-C15	Mummichog	6.2	1.5	female	2	no	≤ 30 cm
LPR2II-C15	Mummichog	6	1.5	female	2	no	≤ 30 cm
LPR2II-C15	Mummichog	7.4	3	female	2	no	≤ 30 cm
LPR2II-C15	Mummichog	6.5	1.5	female	2	no	≤ 30 cm
LPR2II-C15	Mummichog	6.4	1.5	female	2	no	≤ 30 cm
LPR2II-C15	Mummichog	6.6	1.5	female	2	no	≤ 30 cm
LPR2II-C15	Mummichog	7.5	2	male	2	no	≤ 30 cm
LPR2II-C15	Mummichog	6.4	1.5	female	2	no	≤ 30 cm
LPR2II-C15	Mummichog	6.8	1.5	female	2	no	≤ 30 cm
LPR2II-C17	Mummichog	7.7	2.5	male	2	no	≤ 30 cm
LPR2II-C16	Mummichog	6.9	1.5	male	2	no	≤ 30 cm
LPR2II-C16	Mummichog	7.5	2.5	male	2	no	≤ 30 cm
LPR2II-C16	Mummichog	6	1	male	2	no	≤ 30 cm
LPR2II-C16	Mummichog	6.4	1	male	2	no	≤ 30 cm
LPR2II-C16	Mummichog	6.7	2	female	2	no	≤ 30 cm
LPR2II-C16	Mummichog	7.1	2	female	2	no	≤ 30 cm
LPR2II-C16	Mummichog	7.3	3	female	2	no	≤ 30 cm
LPR2II-C13	Mummichog	8.4	4	male	2	no	≤ 30 cm
LPR2II-C13	Mummichog	7.7	3	female	2	no	≤ 30 cm
LPR2II-C13	Mummichog	6.6	2	male	2	no	≤ 30 cm
LPR2II-C13	Mummichog	7.5	2.5	male	2	no	≤ 30 cm
LPR2II-C13	Mummichog	7	2	male	2	no	≤ 30 cm
LPR2II-C13	Mummichog	7	2	male	2	no	≤ 30 cm
LPR2II-C13	Mummichog	6.5	1.5	male	2	no	≤ 30 cm
LPR2II-C13	Mummichog	7.7	3	male	2	no	≤ 30 cm
LPR2II-C13	Mummichog	8.5	4	male	2	no	≤ 30 cm
LPR2II-C13	Mummichog	6.8	2	male	2	no	≤ 30 cm
LPR2II-C13	Mummichog	6.4	1.5	male	2	no	≤ 30 cm
LPR2II-C13	Mummichog	7.2	2	male	2	no	≤ 30 cm
LPR2II-C14	Mummichog	8.3	4	female	2	no	≤ 30 cm
LPR2II-C14	Mummichog	8	3	male	2	no	≤ 30 cm

LPR2II-C14	Mummichog	6.6	1.5	female	2	no	≤ 30 cm
LPR2II-C14	Mummichog	8	3.5	female	2	no	≤ 30 cm
LPR2II-C14	Mummichog	6.6	1.5	male	2	no	≤ 30 cm
LPR2II-C14	Mummichog	6.7	1.5	female	2	no	≤ 30 cm
LPR2II-C14	Mummichog	6.8	1.5	male	2	no	≤ 30 cm
LPR2II-C14	Mummichog	6.5	1	female	2	no	≤ 30 cm
LPR2II-C14	Mummichog	7.2	2.5	male	2	no	≤ 30 cm
LPR2II-C14	Mummichog	6.6	1.5	female	2	no	≤ 30 cm
LPR2II-C14	Mummichog	7.8	3	male	2	no	≤ 30 cm
LPR2II-C14	Mummichog	6.8	1.5	male	2	no	≤ 30 cm
LPR2II-C14	Mummichog	6.6	1.5	male	2	no	≤ 30 cm
LPR2II-C14	Mummichog	7.7	2.5	male	2	no	≤ 30 cm
LPR3AA-C1	Mummichog	9.9	14	male	3	no	≤ 30 cm
LPR3AA-C1	Mummichog	6.5	3	male	3	no	≤ 30 cm
LPR3AA-C1	Mummichog	7.5	7.5	female	3	no	≤ 30 cm
LPR3AA-C4	Mummichog	7.3	7.5	female	3	no	≤ 30 cm
LPR3AA-C4	Mummichog	7.2	5.5	female	3	no	≤ 30 cm
LPR3AA-C4	Mummichog	7.3	5.5	female	3	no	≤ 30 cm
LPR3AA-C4	Mummichog	6.2	3.5	female	3	no	≤ 30 cm
LPR3AA-C4	Mummichog	6.3	3	female	3	no	≤ 30 cm
LPR3AA-C4	Mummichog	5.1	2.5	female	3	no	≤ 30 cm
LPR3AA-C4	Mummichog	5.4	2	male	3	no	≤ 30 cm
LPR3AA-C4	Mummichog	5.6	2.5	male	3	no	≤ 30 cm
LPR3AA-C4	Mummichog	5	1.5	male	3	no	≤ 30 cm
LPR3AA-C4	Mummichog	4.5	1	male	3	no	≤ 30 cm
LPR3AA-B1	Mummichog	10.7	16	female	3	no	≤ 30 cm
LPR3AA-C3	Mummichog	9.1	10.5	male	3	no	≤ 30 cm
LPR3AA-C3	Mummichog	7.5	6	male	3	no	≤ 30 cm
LPR3AA-C5	Mummichog	7.4	6	male	3	no	≤ 30 cm
LPR3AA-C9	Mummichog	8.3	4.5	female	3	no	≤ 30 cm
LPR3AA-C9	Mummichog	8.3	4	male	3	no	≤ 30 cm
LPR3AA-C7	Mummichog	8.7	7	female	3	no	≤ 30 cm
LPR4CC-C1	Mummichog	7	5	female	4	no	≤ 30 cm
LPR1JJ-C2	Mummichog	7.6	6	female	1	no	≤ 30 cm
LPR1JJ-C3	Mummichog	8	8	female	1	no	≤ 30 cm
LPR1JJ-C3	Mummichog	9.2	11.5	female	1	no	≤ 30 cm
LPR1JJ-C3	Mummichog	8.9	8.5	female	1	no	≤ 30 cm
LPR1JJ-C3	Mummichog	8.7	9.5	male	1	no	≤ 30 cm
LPR1JJ-C4	Mummichog	8.7	8	male	1	no	≤ 30 cm
LPR1JJ-C4	Mummichog	6.8	4	male	1	no	≤ 30 cm
LPR1JJ-C4	Mummichog	7.9	8	female	1	no	≤ 30 cm
LPR1JJ-C4	Mummichog	7.7	6	female	1	no	≤ 30 cm
LPR1JJ-C4	Mummichog	8.7	8	female	1	no	≤ 30 cm
LPR1JJ-C4	Mummichog	8.9	10	female	1	no	≤ 30 cm
LPR1JJ-C4	Mummichog	9.3	12	female	1	no	≤ 30 cm
LPR1JJ-C4	Mummichog	7.6	6	female	1	no	≤ 30 cm
LPR1JJ-C4	Mummichog	9	10	female	1	no	≤ 30 cm
LPR1JJ-C4	Mummichog	7	4	male	1	no	≤ 30 cm
LPR1JJ-C4	Mummichog	6.7	4	female	1	no	≤ 30 cm
LPR1JJ-A4	Mummichog	8	6	female	1	no	≤ 30 cm
LPR1JJ-A4	Mummichog	6.5	4	male	1	no	≤ 30 cm
LPR1JJ-A4	Mummichog	7.2	6	male	1	no	≤ 30 cm
LPR1JJ-A4	Mummichog	8.2	6	female	1	no	≤ 30 cm
LPR1JJ-A4	Mummichog	7.9	8	female	1	no	≤ 30 cm
LPR1JJ-B5	Mummichog	8	4	female	1	no	≤ 30 cm
LPR1JJ-A5	Mummichog	6.5	4	male	1	no	≤ 30 cm

LPR1JJ-A5	Mummichog	6.5	3	male	1	no	≤ 30 cm
LPR1JJ-A5	Mummichog	7.2	4	male	1	no	≤ 30 cm
LPR1JJ-A5	Mummichog	6.5	3	male	1	no	≤ 30 cm
LPR1KK-A1	Mummichog	6.5	3	female	1	no	≤ 30 cm
LPR1KK-A1	Mummichog	8.5	8.5	female	1	no	≤ 30 cm
LPR1KK-B5	Mummichog	9.2	12	female	1	no	≤ 30 cm
LPR1KK-A6	Mummichog	6.1	3	female	1	no	≤ 30 cm
LPR1KK-A6	Mummichog	6.9	4.5	female	1	no	≤ 30 cm
LPR1KK-A6	Mummichog	8.6	8.5	male	1	no	≤ 30 cm
LPR1LL-A2	Mummichog	7.7	6	female	1	no	≤ 30 cm
LPR1LL-A10	Mummichog	5.6	3	male	1	no	≤ 30 cm
LPR1LL-A10	Mummichog	7.2	6	female	1	no	≤ 30 cm
LPR1LL-A10	Mummichog	9.7	10.75	male	1	no	≤ 30 cm
LPR1LL-A8	Mummichog	5.9	3	male	1	no	≤ 30 cm
LPR1LL-A11	Mummichog	6	3	male	1	no	≤ 30 cm
LPR1LL-A11	Mummichog	8.2	8	female	1	no	≤ 30 cm
LPR1LL-A20	Mummichog	6.3	3.5	female	1	no	≤ 30 cm
LPR1LL-A20	Mummichog	7.3	5	male	1	no	≤ 30 cm
LPR1LL-A20	Mummichog	5.7	3	female	1	no	≤ 30 cm
LPR1LL-A20	Mummichog	7.8	7.5	female	1	no	≤ 30 cm
LPR1LL-A20	Mummichog	7.4	5	female	1	no	≤ 30 cm
LPR1LL-A31	Mummichog	6.7	4	male	1	no	≤ 30 cm
LPR1MM-A15	Mummichog	5.4	2	male	1	no	≤ 30 cm
LPR1MM-A11	Mummichog	5.5	2	male	1	no	≤ 30 cm
LPR1MM-A11	Mummichog	5.9	2.5	female	1	no	≤ 30 cm
LPR1MM-A13	Mummichog	5.6	2	male	1	no	≤ 30 cm
LPR1MM-A13	Mummichog	5.2	2	male	1	no	≤ 30 cm
LPR1MM-A13	Mummichog	6.7	4	male	1	no	≤ 30 cm
LPR1MM-A13	Mummichog	6.2	4	male	1	no	≤ 30 cm
LPR1MM-A13	Mummichog	6.7	4	male	1	no	≤ 30 cm
LPR1MM-A13	Mummichog	6	3	male	1	no	≤ 30 cm
LPR1MM-A13	Mummichog	6	3	male	1	no	≤ 30 cm
LPR1MM-A13	Mummichog	6.2	4	male	1	no	≤ 30 cm
LPR1MM-A13	Mummichog	7	4.5	male	1	no	≤ 30 cm
LPR1MM-A13	Mummichog	6.1	3	male	1	no	≤ 30 cm
LPR1MM-A13	Mummichog	6.5	4.5	male	1	no	≤ 30 cm
LPR1MM-A13	Mummichog	7.1	5.5	female	1	no	≤ 30 cm
LPR1MM-A13	Mummichog	6.5	5	female	1	no	≤ 30 cm
LPR1MM-A26	Mummichog	7	4	female	1	no	≤ 30 cm
LPR1MM-A26	Mummichog	5.8	3	male	1	no	≤ 30 cm
LPR1MM-A26	Mummichog	6	3	male	1	no	≤ 30 cm
LPR1MM-A26	Mummichog	5.5	2.5	male	1	no	≤ 30 cm
LPR1MM-A26	Mummichog	6.6	3.5	male	1	no	≤ 30 cm
LPR1MM-A26	Mummichog	6	2.5	female	1	no	≤ 30 cm
LPR1MM-A26	Mummichog	5.3	2	male	1	no	≤ 30 cm
LPR1MM-A26	Mummichog	5.6	3	female	1	no	≤ 30 cm
LPR1MM-A27	Mummichog	6.9	3.5	male	1	no	≤ 30 cm
LPR1MM-A27	Mummichog	9	9	female	1	no	≤ 30 cm
LPR1MM-A27	Mummichog	6.3	4.5	male	1	no	≤ 30 cm
LPR1MM-A28	Mummichog	6.3	4	female	1	no	≤ 30 cm
LPR1MM-A28	Mummichog	5.2	1.5	male	1	no	≤ 30 cm
LPR1MM-A28	Mummichog	6	3	male	1	no	≤ 30 cm
LPR1MM-A28	Mummichog	6.2	3	female	1	no	≤ 30 cm
LPR1MM-A28	Mummichog	6.1	2.5	male	1	no	≤ 30 cm
LPR1MM-A28	Mummichog	6.5	5	male	1	no	≤ 30 cm
LPR1MM-A28	Mummichog	5	1.5	female	1	no	≤ 30 cm

LPR1MM-A28	Mummichog	6.3	3	male	1	no	≤ 30 cm
LPR1MM-A28	Mummichog	5.6	2	male	1	no	≤ 30 cm
LPR1MM-A28	Mummichog	6.2	3	female	1	no	≤ 30 cm
LPR1MM-A28	Mummichog	5.3	1.5	male	1	no	≤ 30 cm
LPR1MM-A28	Mummichog	5	2	male	1	no	≤ 30 cm
LPR1MM-A28	Mummichog	5.7	2.5	male	1	no	≤ 30 cm
LPR1MM-A28	Mummichog	6.5	4	female	1	no	≤ 30 cm
LPR1MM-A28	Mummichog	6.5	3.5	female	1	no	≤ 30 cm
LPR1MM-A31	Mummichog	5.2	2.5	male	1	no	≤ 30 cm
LPR1MM-A39	Mummichog	5.6	2	female	1	no	≤ 30 cm
LPR1MM-A39	Mummichog	6.6	3	female	1	no	≤ 30 cm
LPR1MM-A36	Mummichog	4.6	1.5	male	1	no	≤ 30 cm
LPR1MM-A36	Mummichog	6.1	3	female	1	no	≤ 30 cm
LPR1MM-A38	Mummichog	5.7	2	female	1	no	≤ 30 cm
LPR1MM-A38	Mummichog	7.2	5	male	1	no	≤ 30 cm
LPR1MM-A38	Mummichog	4	1	male	1	no	≤ 30 cm
LPR1MM-A38	Mummichog	5.5	2.5	male	1	no	≤ 30 cm
LPR1MM-A42	Mummichog	7.8	6	female	1	no	≤ 30 cm
LPR1MM-A42	Mummichog	7	5	male	1	no	≤ 30 cm
LPR1MM-A43	Mummichog	6.2	3	female	1	no	≤ 30 cm
LPR1MM-A47	Mummichog	6.9	3.5	male	1	no	≤ 30 cm
LPR1MM-A47	Mummichog	6.6	3.5	male	1	no	≤ 30 cm
LPR1MM-A46	Mummichog	7.6	6	male	1	no	≤ 30 cm
LPR1MM-A46	Mummichog	8.4	8	female	1	no	≤ 30 cm
LPR1MM-A55	Mummichog	6	2.5	female	1	no	≤ 30 cm
LPR1MM-A55	Mummichog	7.6	6	male	1	no	≤ 30 cm
LPR1SS-A2	Mummichog	7.3	6	female	1	no	≤ 30 cm
LPR1SS-A2	Mummichog	7.2	6	female	1	no	≤ 30 cm
LPR2AC-C1	Mummichog	9.1	11	female	2	no	≤ 30 cm
LPR2AC-C1	Mummichog	9	10	male	2	no	≤ 30 cm
LPR2AC-B2	Mummichog	8.3	6	male	2	no	≤ 30 cm
LPR2AC-B2	Mummichog	9	10	female	2	no	≤ 30 cm
LPR2AC-A3	Mummichog	8.5	7.5	female	2	no	≤ 30 cm
LPR2AC-B3	Mummichog	9.9	12.5	female	2	no	≤ 30 cm
LPR2AC-B3	Mummichog	9.5	10	female	2	no	≤ 30 cm
LPR2AC-C3	Mummichog	5	1.5	male	2	no	≤ 30 cm
LPR2JJ-C3	Mummichog	7.3	5.5	female	2	no	≤ 30 cm
LPR2JJ-B4	Mummichog	8.2	8	female	2	no	≤ 30 cm
LPR2JJ-B4	Mummichog	7.5	6	female	2	no	≤ 30 cm
LPR2JJ-B4	Mummichog	6.8	4	female	2	no	≤ 30 cm
LPR2JJ-B4	Mummichog	7.2	6	female	2	no	≤ 30 cm
LPR2JJ-A7	Mummichog	7.4	4.5	male	2	no	≤ 30 cm
LPR2JJ-A7	Mummichog	8.5	9	female	2	no	≤ 30 cm
LPR2JJ-A7	Mummichog	8	5	female	2	no	≤ 30 cm
LPR2JJ-A7	Mummichog	6.9	4	male	2	no	≤ 30 cm
LPR2JJ-A7	Mummichog	7.8	6.5	female	2	no	≤ 30 cm
LPR2JJ-A7	Mummichog	7.5	5	female	2	no	≤ 30 cm
LPR2JJ-B7	Mummichog	7.7	6	male	2	no	≤ 30 cm
LPR2JJ-B7	Mummichog	8.8	10	female	2	no	≤ 30 cm
LPR2KK-A4	Mummichog	7.5	5.5	female	2	no	≤ 30 cm
LPR2KK-A5	Mummichog	6	6	female	2	no	≤ 30 cm
LPR2KK-B5	Mummichog	7.7	6	female	2	no	≤ 30 cm
LPR2KK-C5	Mummichog	8	8	male	2	no	≤ 30 cm
LPR2KK-C5	Mummichog	8.4	8	male	2	no	≤ 30 cm
LPR2KK-C5	Mummichog	6.5	4	male	2	no	≤ 30 cm
LPR2KK-C5	Mummichog	6.3	4	female	2	no	≤ 30 cm

LPR2KK-C5	Mummichog	6.3	4	male	2	no	≤ 30 cm
LPR2KK-C5	Mummichog	5.7	4	female	2	no	≤ 30 cm
LPR2KK-C5	Mummichog	6.7	4	female	2	no	≤ 30 cm
LPR2KK-C6	Mummichog	7	5	female	2	no	≤ 30 cm
LPR2LL-A1	Mummichog	6.7	4.5	female	2	no	≤ 30 cm
LPR2LL-C2	Mummichog	8.5	8.5	male	2	no	≤ 30 cm
LPR2LL-C2	Mummichog	7.6	6	male	2	no	≤ 30 cm
LPR2LL-A5	Mummichog	9	12	female	2	no	≤ 30 cm
LPR2LL-A5	Mummichog	7.8	6	female	2	no	≤ 30 cm
LPR2LL-A5	Mummichog	8.5	8	female	2	no	≤ 30 cm
LPR2LL-C5	Mummichog	9.5	16	female	2	no	≤ 30 cm
LPR2LL-C5	Mummichog	9	10	female	2	no	≤ 30 cm
LPR2LL-C5	Mummichog	8	6	female	2	no	≤ 30 cm
LPR2LL-C5	Mummichog	8	6	male	2	no	≤ 30 cm
LPR2LL-C5	Mummichog	7.9	6	female	2	no	≤ 30 cm
LPR2LL-C5	Mummichog	8.8	10	female	2	no	≤ 30 cm
LPR2LL-C5	Mummichog	9.6	14	female	2	no	≤ 30 cm
LPR2LL-C5	Mummichog	9.2	12	female	2	no	≤ 30 cm
LPR2LL-B5	Mummichog	7.9	6	male	2	no	≤ 30 cm
LPR2LL-C8	Mummichog	8.5	12	female	2	no	≤ 30 cm
LPR2LL-C8	Mummichog	8	7.5	female	2	no	≤ 30 cm
LPR2LL-C8	Mummichog	10	14.5	female	2	no	≤ 30 cm
LPR2LL-C8	Mummichog	9.3	11	female	2	no	≤ 30 cm
LPR2LL-C8	Mummichog	9.1	11	female	2	no	≤ 30 cm
LPR2LL-C8	Mummichog	8.1	8.5	female	2	no	≤ 30 cm
LPR2LL-C8	Mummichog	9.4	14	female	2	no	≤ 30 cm
LPR2LL-C8	Mummichog	9.1	12.5	female	2	no	≤ 30 cm
LPR2MM-A4	Mummichog	8.7	6.5	female	2	no	≤ 30 cm
LPR2MM-A1	Mummichog	8.4	7.5	male	2	no	≤ 30 cm
LPR2MM-A1	Mummichog	8	6.5	female	2	no	≤ 30 cm
LPR2MM-A7	Mummichog	8.2	8	male	2	no	≤ 30 cm
LPR2MM-A7	Mummichog	8.6	9.5	female	2	no	≤ 30 cm
LPR2MM-A11	Mummichog	7.8	7.5	female	2	no	≤ 30 cm
LPR2MM-A16	Mummichog	6.4	3	male	2	no	≤ 30 cm
LPR2MM-A16	Mummichog	6.3	3	male	2	no	≤ 30 cm
LPR2MM-A12	Mummichog	7	7	female	2	no	≤ 30 cm
LPR2MM-A20	Mummichog	7	6	female	2	no	≤ 30 cm
LPR2MM-A20	Mummichog	7.7	6	male	2	no	≤ 30 cm
LPR2MM-A17	Mummichog	7.7	6	male	2	no	≤ 30 cm
LPR2MM-A17	Mummichog	8.8	10.5	male	2	no	≤ 30 cm
LPR2MM-A26	Mummichog	7.2	6	male	2	no	≤ 30 cm
LPR2MM-A33	Mummichog	7	4.5	male	2	no	≤ 30 cm
LPR2MM-A39	Mummichog	5.3	1.5	male	2	no	≤ 30 cm
LPR2MM-A37	Mummichog	5.4	2	male	2	no	≤ 30 cm
LPR2MM-A36	Mummichog	8.2	6.5	male	2	no	≤ 30 cm
LPR2MM-A36	Mummichog	4.8	1	male	2	no	≤ 30 cm
LPR2MM-A36	Mummichog	5.4	1	male	2	no	≤ 30 cm
LPR2MM-A36	Mummichog	5.3	2	male	2	no	≤ 30 cm
LPR2MM-A48	Mummichog	9.5	10.5	female	2	no	≤ 30 cm
LPR2MM-A49	Mummichog	5.3	1.5	male	2	no	≤ 30 cm
LPR2MM-A50	Mummichog	4.6	1	male	2	no	≤ 30 cm
LPR2MM-A50	Mummichog	5.3	1	male	2	no	≤ 30 cm
LPR2NN-A5	Mummichog	8.3	9	female	2	no	≤ 30 cm
LPR2NN-A5	Mummichog	8	7	male	2	no	≤ 30 cm
LPR2NN-A5	Mummichog	7.7	4	male	2	no	≤ 30 cm
LPR2NN-A7	Mummichog	7.5	6	female	2	no	≤ 30 cm

LPR2NN-A7	Mummichog	8.4	7.5	male	2	no	≤ 30 cm
LPR2NN-A15	Mummichog	7.1	6	female	2	no	≤ 30 cm
LPR2NN-A12	Mummichog	7.5	8	male	2	no	≤ 30 cm
LPR2NN-A12	Mummichog	8.3	8	male	2	no	≤ 30 cm
LPR2NN-A12	Mummichog	9	10	female	2	no	≤ 30 cm
LPR2NN-A14	Mummichog	8.3	8	female	2	no	≤ 30 cm
LPR2NN-A14	Mummichog	6.2	4	male	2	no	≤ 30 cm
LPR2NN-A14	Mummichog	7.5	6	male	2	no	≤ 30 cm
LPR2NN-A9	Mummichog	8	8	female	2	no	≤ 30 cm
LPR2NN-A30	Mummichog	6.8	4	female	2	no	≤ 30 cm
LPR2NN-A30	Mummichog	5.2	2	male	2	no	≤ 30 cm
LPR2NN-A30	Mummichog	9.5	10	female	2	no	≤ 30 cm
LPR2NN-A29	Mummichog	5.1	2	male	2	no	≤ 30 cm
LPR2NN-A29	Mummichog	7.3	7	female	2	no	≤ 30 cm
LPR2NN-A29	Mummichog	7.7	5.5	female	2	no	≤ 30 cm
LPR2NN-A26	Mummichog	7.8	6	female	2	no	≤ 30 cm
LPR2NN-A26	Mummichog	5.2	2	male	2	no	≤ 30 cm
LPR2NN-A26	Mummichog	7.8	6	male	2	no	≤ 30 cm
LPR2NN-A26	Mummichog	6.1	3	male	2	no	≤ 30 cm
LPR2NN-A26	Mummichog	4.4	1.5	male	2	no	≤ 30 cm
LPR2NN-A26	Mummichog	5	1.5	male	2	no	≤ 30 cm
LPR2NN-A26	Mummichog	5.9	2.5	male	2	no	≤ 30 cm
LPR2NN-A28	Mummichog	5.3	1.5	female	2	no	≤ 30 cm
LPR2NN-A31	Mummichog	5.1	1.5	male	2	no	≤ 30 cm
LPR2NN-A31	Mummichog	4.9	1.5	male	2	no	≤ 30 cm
LPR2NN-A33	Mummichog	5.3	2	male	2	no	≤ 30 cm
LPR2NN-A33	Mummichog	5.4	2	male	2	no	≤ 30 cm
LPR2NN-A33	Mummichog	5.1	1.5	male	2	no	≤ 30 cm
LPR2NN-A33	Mummichog	5	1.5	male	2	no	≤ 30 cm
LPR2NN-A33	Mummichog	5	1.5	male	2	no	≤ 30 cm
LPR2NN-A33	Mummichog	4.9	1.5	male	2	no	≤ 30 cm
LPR2NN-A33	Mummichog	5	1.5	male	2	no	≤ 30 cm
LPR2NN-A33	Mummichog	5	1.5	male	2	no	≤ 30 cm
LPR2NN-A33	Mummichog	4.2	1	male	2	no	≤ 30 cm
LPR2NN-A33	Mummichog	5	1	male	2	no	≤ 30 cm
LPR2NN-A33	Mummichog	4.5	1	male	2	no	≤ 30 cm
LPR2NN-A33	Mummichog	4.6	1	male	2	no	≤ 30 cm
LPR2NN-A33	Mummichog	5.7	2	male	2	no	≤ 30 cm
LPR2NN-A33	Mummichog	4.1	0.5	male	2	no	≤ 30 cm
LPR2NN-A33	Mummichog	4.1	0.5	male	2	no	≤ 30 cm
LPR2NN-A33	Mummichog	5.4	2	male	2	no	≤ 30 cm
LPR2NN-A33	Mummichog	4.6	1	male	2	no	≤ 30 cm
LPR2NN-A33	Mummichog	4.7	1.5	male	2	no	≤ 30 cm
LPR2NN-A33	Mummichog	5.2	1.5	male	2	no	≤ 30 cm
LPR2NN-A33	Mummichog	5.4	1.5	male	2	no	≤ 30 cm
LPR2NN-A34	Mummichog	7.5	6	female	2	no	≤ 30 cm
LPR2NN-A34	Mummichog	5.1	1.5	male	2	no	≤ 30 cm
LPR2NN-A34	Mummichog	5.4	1.5	male	2	no	≤ 30 cm
LPR2NN-A34	Mummichog	5.3	1.5	male	2	no	≤ 30 cm
LPR2NN-A34	Mummichog	5.3	1.5	male	2	no	≤ 30 cm
LPR2NN-A34	Mummichog	4.9	1.5	male	2	no	≤ 30 cm
LPR2NN-A34	Mummichog	5.2	1.5	male	2	no	≤ 30 cm
LPR2NN-A34	Mummichog	7.1	4.5	male	2	no	≤ 30 cm
LPR2NN-A34	Mummichog	4.9	1.5	male	2	no	≤ 30 cm
LPR2NN-A34	Mummichog	5.1	1.5	male	2	no	≤ 30 cm
LPR2NN-A34	Mummichog	4.7	1.5	male	2	no	≤ 30 cm

LPR2NN-A34	Mummichog	5.4	1.5	male	2	no	≤ 30 cm
LPR2NN-A34	Mummichog	5.8	2	male	2	no	≤ 30 cm
LPR2NN-A35	Mummichog	5.7	2	male	2	no	≤ 30 cm
LPR2NN-A35	Mummichog	8.7	9.5	female	2	no	≤ 30 cm
LPR2NN-A38	Mummichog	5.1	1.5	male	2	no	≤ 30 cm
LPR2NN-A36	Mummichog	5	1	male	2	no	≤ 30 cm
LPR2NN-A36	Mummichog	4.9	1	male	2	no	≤ 30 cm
LPR2NN-A37	Mummichog	5.6	2.5	male	2	no	≤ 30 cm
LPR2OO-A5	Mummichog	7.8	6.5	female	2	no	≤ 30 cm
LPR2OO-A4	Mummichog	8.3	9.5	female	2	no	≤ 30 cm
LPR2OO-A9	Mummichog	7.6	6	male	2	no	≤ 30 cm
LPR2OO-A9	Mummichog	7.1	4	female	2	no	≤ 30 cm
LPR2OO-A13	Mummichog	7.3	6	female	2	no	≤ 30 cm
LPR2OO-A11	Mummichog	7.6	6	male	2	no	≤ 30 cm
LPR2OO-A26	Mummichog	8.9	12.5	male	2	no	≤ 30 cm
LPR2OO-A30	Mummichog	9.5	13	female	2	no	≤ 30 cm
LPR2OO-A29	Mummichog	8.2	7.5	male	2	no	≤ 30 cm
LPR2OO-A32	Mummichog	4.6	2	male	2	no	≤ 30 cm
LPR2OO-A32	Mummichog	7.4	6	female	2	no	≤ 30 cm
LPR2OO-A34	Mummichog	4.3	1.5	male	2	no	≤ 30 cm
LPR2OO-A41	Mummichog	4.1	0.5	female	2	no	≤ 30 cm
LPR2OO-A42	Mummichog	5.3	2	male	2	no	≤ 30 cm
LPR2OO-A37	Mummichog	4.8	2	female	2	no	≤ 30 cm
LPR2OO-A45	Mummichog	7.4	6	female	2	no	≤ 30 cm
LPR2OO-A36	Mummichog	8.2	7	male	2	no	≤ 30 cm
LPR2OO-A36	Mummichog	5.2	1.5	female	2	no	≤ 30 cm
LPR2OO-A44	Mummichog	8	6.5	male	2	no	≤ 30 cm
LPR2OO-A38	Mummichog	9.6	11.5	female	2	no	≤ 30 cm
LPR2OO-A39	Mummichog	8.6	9	female	2	no	≤ 30 cm
LPR2OO-A40	Mummichog	7.2	7	male	2	no	≤ 30 cm
LPR2OO-A40	Mummichog	8	9	female	2	no	≤ 30 cm
LPR2OO-A40	Mummichog	6.2	3.5	male	2	no	≤ 30 cm
LPR2OO-A48	Mummichog	5.2	2	male	2	no	≤ 30 cm
LPR2OO-A48	Mummichog	8.1	7	female	2	no	≤ 30 cm
LPR2OO-A52	Mummichog	4.7	1.5	male	2	no	≤ 30 cm
LPR2OO-A52	Mummichog	3.8	1	male	2	no	≤ 30 cm
LPR2OO-A53	Mummichog	7.9	7	female	2	no	≤ 30 cm
LPR2OO-A31	Mummichog	6.9	4	male	2	no	≤ 30 cm
LPR2OO-A57	Mummichog	5	1.5	male	2	no	≤ 30 cm
LPR2OO-A58	Mummichog	5.4	2	female	2	no	≤ 30 cm
LPR2OO-A59	Mummichog	4.3	1	male	2	no	≤ 30 cm
LPR2OO-A59	Mummichog	5.4	2	male	2	no	≤ 30 cm
LPR2OO-A56	Mummichog	5.4	2	female	2	no	≤ 30 cm
LPR2OO-A56	Mummichog	5.3	2	male	2	no	≤ 30 cm
LPR2OO-A56	Mummichog	4.7	1	male	2	no	≤ 30 cm
LPR2OO-A64	Mummichog	8.9	9	female	2	no	≤ 30 cm
LPR2OO-A64	Mummichog	7.3	4.5	female	2	no	≤ 30 cm
LPR2OO-A64	Mummichog	6.4	4	male	2	no	≤ 30 cm
LPR2OO-A64	Mummichog	4.8	1.5	male	2	no	≤ 30 cm
LPR2OO-A64	Mummichog	4.9	1.5	male	2	no	≤ 30 cm
LPR2OO-A62	Mummichog	4.7	1	male	2	no	≤ 30 cm
LPR2OO-A62	Mummichog	5.3	1.5	male	2	no	≤ 30 cm
LPR2OO-A62	Mummichog	5.1	1.5	male	2	no	≤ 30 cm
LPR2OO-A61	Mummichog	8.4	8	female	2	no	≤ 30 cm
LPR2OO-A61	Mummichog	4.8	1	male	2	no	≤ 30 cm
LPR2OO-A63	Mummichog	7.8	6	female	2	no	≤ 30 cm

LPR2OO-A63	Mummichog	5	1.5	male	2	no	≤ 30 cm
LPR2OO-A63	Mummichog	4.9	1.5	male	2	no	≤ 30 cm
LPR2OO-A63	Mummichog	4.3	1	male	2	no	≤ 30 cm
LPR2OO-A63	Mummichog	4.9	1	male	2	no	≤ 30 cm
LPR2OO-A69	Mummichog	9.7	16	female	2	no	≤ 30 cm
LPR2OO-A69	Mummichog	7.6	5.5	female	2	no	≤ 30 cm
LPR2OO-A68	Mummichog	8.7	9.5	female	2	no	≤ 30 cm
LPR2OO-A68	Mummichog	5.5	2	male	2	no	≤ 30 cm
LPR2OO-A70	Mummichog	5	1.5	male	2	no	≤ 30 cm
LPR2OO-A70	Mummichog	5.1	2	male	2	no	≤ 30 cm
LPR2PP-A6	Mummichog	8.5	8.5	female	2	no	≤ 30 cm
LPR2PP-A6	Mummichog	7	6	female	2	no	≤ 30 cm
LPR2PP-A28	Mummichog	8	7.5	female	2	no	≤ 30 cm
LPR2PP-A29	Mummichog	5	2	male	2	no	≤ 30 cm
LPR2PP-A36	Mummichog	7.2	4	male	2	no	≤ 30 cm
LPR2PP-A39	Mummichog	9.1	8	female	2	no	≤ 30 cm
LPR2PP-A35	Mummichog	8	6	female	2	no	≤ 30 cm
LPR2PP-A35	Mummichog	7.5	4	female	2	no	≤ 30 cm
LPR2PP-A66	Mummichog	9	10	female	2	no	≤ 30 cm
LPR2PP-A66	Mummichog	4	0.5	male	2	no	≤ 30 cm
LPR2PP-A66	Mummichog	6.2	4	male	2	no	≤ 30 cm
LPR2PP-A63	Mummichog	5.1	1.5	male	2	no	≤ 30 cm
LPR2PP-A63	Mummichog	4.8	1.5	male	2	no	≤ 30 cm
LPR2PP-A65	Mummichog	4.3	1	male	2	no	≤ 30 cm
LPR2PP-A65	Mummichog	4.9	1.5	male	2	no	≤ 30 cm
LPR2PP-A49	Mummichog	7.9	6	male	2	no	≤ 30 cm
LPR2PP-A49	Mummichog	7.6	6	male	2	no	≤ 30 cm
LPR2PP-A49	Mummichog	8.2	9.5	female	2	no	≤ 30 cm
LPR2PP-A49	Mummichog	8.5	8	female	2	no	≤ 30 cm
LPR2PP-A49	Mummichog	7.2	6	female	2	no	≤ 30 cm
LPR2PP-A45	Mummichog	5.1	1.5	male	2	no	≤ 30 cm
LPR2PP-A42	Mummichog	8.1	11	female	2	no	≤ 30 cm
LPR2PP-A44	Mummichog	4.5	1.5	male	2	no	≤ 30 cm
LPR2PP-A44	Mummichog	5.2	2	male	2	no	≤ 30 cm
LPR2PP-A44	Mummichog	4.5	1.5	male	2	no	≤ 30 cm
LPR2PP-A47	Mummichog	6.6	5	male	2	no	≤ 30 cm
LPR2PP-A47	Mummichog	7	5.5	female	2	no	≤ 30 cm
LPR2PP-A47	Mummichog	7.7	6.5	male	2	no	≤ 30 cm
LPR2PP-A41	Mummichog	9.1	12.5	female	2	no	≤ 30 cm
LPR2PP-A41	Mummichog	4.6	1.5	female	2	no	≤ 30 cm
LPR2PP-A41	Mummichog	4.5	1.5	male	2	no	≤ 30 cm
LPR2PP-A51	Mummichog	4.5	1	male	2	no	≤ 30 cm
LPR2PP-A60	Mummichog	4.2	2	male	2	no	≤ 30 cm
LPR2PP-A60	Mummichog	4.6	1	male	2	no	≤ 30 cm
LPR2PP-A71	Mummichog	5.1	1.5	male	2	no	≤ 30 cm
LPR2PP-A71	Mummichog	5.2	2	male	2	no	≤ 30 cm
LPR2PP-A71	Mummichog	4.7	1	male	2	no	≤ 30 cm
LPR2PP-A71	Mummichog	4.9	1	male	2	no	≤ 30 cm
LPR2PP-A72	Mummichog	6.9	3.5	male	2	no	≤ 30 cm
LPR2PP-A72	Mummichog	6	2	male	2	no	≤ 30 cm
LPR2PP-A72	Mummichog	5	1.5	male	2	no	≤ 30 cm
LPR2PP-A72	Mummichog	6.1	3	male	2	no	≤ 30 cm
LPR2PP-A72	Mummichog	5.4	1.5	male	2	no	≤ 30 cm
LPR2PP-A72	Mummichog	5.3	2	male	2	no	≤ 30 cm
LPR2PP-A74	Mummichog	5.3	1.5	male	2	no	≤ 30 cm
LPR2PP-A78	Mummichog	8.6	10	female	2	no	≤ 30 cm

LPR2PP-A79	Mummichog	7.2	4	female	2	no	≤ 30 cm
LPR2PP-A79	Mummichog	4.8	2.5	male	2	no	≤ 30 cm
LPR2PP-A79	Mummichog	5.6	2	male	2	no	≤ 30 cm
LPR2PP-A79	Mummichog	4.8	1.5	male	2	no	≤ 30 cm
LPR2PP-A80	Mummichog	5.1	1.5	male	2	no	≤ 30 cm
LPR2PP-A80	Mummichog	9.2	11	female	2	no	≤ 30 cm
LPR2PP-A80	Mummichog	8.1	7	female	2	no	≤ 30 cm
LPR2PP-A85	Mummichog	8.2	8.5	female	2	no	≤ 30 cm
LPR2PP-A85	Mummichog	9.1	10.5	female	2	no	≤ 30 cm
LPR2QQ-A2	Mummichog	7	4	male	2	no	≤ 30 cm
LPR2QQ-A5	Mummichog	6.6	3.5	male	2	no	≤ 30 cm
LPR2QQ-A3	Mummichog	6.8	4.5	female	2	no	≤ 30 cm
LPR2QQ-A4	Mummichog	6.3	3.5	male	2	no	≤ 30 cm
LPR2QQ-A4	Mummichog	7.3	5	male	2	no	≤ 30 cm
LPR2QQ-A8	Mummichog	7.5	6	male	2	no	≤ 30 cm
LPR2QQ-A10	Mummichog	6.5	4	female	2	no	≤ 30 cm
LPR2QQ-A15	Mummichog	7.1	5	female	2	no	≤ 30 cm
LPR2QQ-A15	Mummichog	6.3	4	female	2	no	≤ 30 cm
LPR2QQ-A23	Mummichog	6.1	5	male	2	no	≤ 30 cm
LPR2QQ-A25	Mummichog	7.1	5	male	2	no	≤ 30 cm
LPR2QQ-A24	Mummichog	5.6	3	male	2	no	≤ 30 cm
LPR2QQ-A24	Mummichog	6.7	5	male	2	no	≤ 30 cm
LPR2QQ-A24	Mummichog	7	4	male	2	no	≤ 30 cm
LPR2QQ-A24	Mummichog	6.9	4.5	male	2	no	≤ 30 cm
LPR2QQ-A24	Mummichog	7.3	5	male	2	no	≤ 30 cm
LPR2QQ-A24	Mummichog	7.1	5	female	2	no	≤ 30 cm
LPR2QQ-A24	Mummichog	6.5	3	female	2	no	≤ 30 cm
LPR2QQ-A24	Mummichog	8	8	female	2	no	≤ 30 cm
LPR2QQ-A26	Mummichog	5	2	male	2	no	≤ 30 cm
LPR2QQ-A39	Mummichog	8.3	8	female	2	no	≤ 30 cm
LPR2QQ-A39	Mummichog	8.7	8	female	2	no	≤ 30 cm
LPR2RR-A4	Mummichog	5.5	3	female	2	no	≤ 30 cm
LPR2RR-A4	Mummichog	6	3.5	male	2	no	≤ 30 cm
LPR2RR-A4	Mummichog	6	3	male	2	no	≤ 30 cm
LPR2RR-A3	Mummichog	8.1	8	female	2	no	≤ 30 cm
LPR2RR-A1	Mummichog	6.4	3.5	female	2	no	≤ 30 cm
LPR2RR-A15	Mummichog	7.2	4	male	2	no	≤ 30 cm
LPR2RR-A13	Mummichog	5.2	2	male	2	no	≤ 30 cm
LPR2RR-A13	Mummichog	6	4	male	2	no	≤ 30 cm
LPR2RR-A10	Mummichog	8.1	6	female	2	no	≤ 30 cm
LPR2RR-A10	Mummichog	5.5	2.5	male	2	no	≤ 30 cm
LPR2RR-A10	Mummichog	6.8	8	male	2	no	≤ 30 cm
LPR2RR-A10	Mummichog	6	2.5	male	2	no	≤ 30 cm
LPR2RR-A10	Mummichog	9.7	16	male	2	no	≤ 30 cm
LPR2RR-A10	Mummichog	7	4	male	2	no	≤ 30 cm
LPR2RR-A8	Mummichog	6.1	3.5	male	2	no	≤ 30 cm
LPR2RR-A6	Mummichog	7.2	4	male	2	no	≤ 30 cm
LPR2RR-A6	Mummichog	7.5	6	female	2	no	≤ 30 cm
LPR2RR-A18	Mummichog	8.2	6	female	2	no	≤ 30 cm
LPR2RR-A18	Mummichog	6.3	4	male	2	no	≤ 30 cm
LPR2RR-A17	Mummichog	6.7	4	female	2	no	≤ 30 cm
LPR2RR-A22	Mummichog	7.6	6	female	2	no	≤ 30 cm
LPR2RR-A19	Mummichog	7.4	6	female	2	no	≤ 30 cm
LPR2RR-A16	Mummichog	7.5	6	male	2	no	≤ 30 cm
LPR2RR-A27	Mummichog	7.5	6	female	2	no	≤ 30 cm
LPR2RR-A36	Mummichog	5.9	2	male	2	no	≤ 30 cm

LPR2RR-A43	Mummichog	7.6	6.5	male	2	no	≤ 30 cm
LPR2RR-A42	Mummichog	7.7	5	male	2	no	≤ 30 cm
LPR2SS-A9	Mummichog	8.3	8	male	2	no	≤ 30 cm
LPR2SS-A7	Mummichog	8.2	8	female	2	no	≤ 30 cm
LPR2SS-A6	Mummichog	6	2	male	2	no	≤ 30 cm
LPR2SS-A40	Mummichog	7.2	6	male	2	no	≤ 30 cm
LPR2SS-A39	Mummichog	7.2	5	male	2	no	≤ 30 cm
LPR2SS-A39	Mummichog	4.3	2	male	2	no	≤ 30 cm
LPR2SS-A39	Mummichog	4.9	2	male	2	no	≤ 30 cm
LPR2SS-A33	Mummichog	7.1	4	male	2	no	≤ 30 cm
LPR2SS-A34	Mummichog	4.1	1.5	male	2	no	≤ 30 cm
LPR2SS-A32	Mummichog	5	1.5	male	2	no	≤ 30 cm
LPR2SS-A32	Mummichog	5.7	3	male	2	no	≤ 30 cm
LPR2SS-A50	Mummichog	6.4	3.5	male	2	no	≤ 30 cm
LPR2SS-A55	Mummichog	5.3	1.5	male	2	no	≤ 30 cm
LPR2SS-A52	Mummichog	4.9	1.5	male	2	no	≤ 30 cm
LPR2SS-A52	Mummichog	8.8	8.5	male	2	no	≤ 30 cm
LPR2SS-A45	Mummichog	4.5	1	male	2	no	≤ 30 cm
LPR2SS-A54	Mummichog	7.8	7.5	female	2	no	≤ 30 cm
LPR2SS-A47	Mummichog	7.1	5	male	2	no	≤ 30 cm
LPR2SS-A53	Mummichog	4.8	1.5	male	2	no	≤ 30 cm
LPR2SS-A51	Mummichog	4.7	1	male	2	no	≤ 30 cm
LPR2SS-A51	Mummichog	5.4	2	male	2	no	≤ 30 cm
LPR2SS-A51	Mummichog	5.1	1.5	male	2	no	≤ 30 cm
LPR2SS-A51	Mummichog	5.1	1.5	male	2	no	≤ 30 cm
LPR2SS-A51	Mummichog	6.7	5	male	2	no	≤ 30 cm
LPR2SS-A65	Mummichog	4.7	1.5	male	2	no	≤ 30 cm
LPR2SS-A62	Mummichog	5.2	1.5	male	2	no	≤ 30 cm
LPR2SS-A64	Mummichog	7.3	6	female	2	no	≤ 30 cm
LPR2SS-A57	Mummichog	6.9	5	male	2	no	≤ 30 cm
LPR2SS-A63	Mummichog	8.7	9	female	2	no	≤ 30 cm
LPR2SS-A63	Mummichog	6.8	4	male	2	no	≤ 30 cm
LPR2SS-A75	Mummichog	8.5	10	female	2	no	≤ 30 cm
LPR2SS-A70	Mummichog	7.6	6.5	female	2	no	≤ 30 cm
LPR2SS-A71	Mummichog	4.3	0.5	male	2	no	≤ 30 cm
LPR2SS-A69	Mummichog	7.6	0.5	female	2	no	≤ 30 cm
LPR2SS-A74	Mummichog	5.3	1.5	male	2	no	≤ 30 cm
LPR2SS-A72	Mummichog	8.4	9.5	female	2	no	≤ 30 cm
LPR2SS-A67	Mummichog	6.6	3.5	male	2	no	≤ 30 cm
LPR2SS-A67	Mummichog	6.6	4	male	2	no	≤ 30 cm
LPR2SS-A79	Mummichog	6.7	4	female	2	no	≤ 30 cm
LPR2SS-A80	Mummichog	8.6	7.5	male	2	no	≤ 30 cm
LPR2SS-A76	Mummichog	7.2	4.5	male	2	no	≤ 30 cm
LPR2SS-A98	Mummichog	8.1	7.5	female	2	no	≤ 30 cm
LPR2SS-A97	Mummichog	8.4	9	female	2	no	≤ 30 cm
LPR2SS-A99	Mummichog	5.2	1.5	male	2	no	≤ 30 cm
LPR2SS-A99	Mummichog	8.2	6.5	male	2	no	≤ 30 cm
LPR2SS-A100	Mummichog	7.8	6.5	female	2	no	≤ 30 cm
LPR2SS-A100	Mummichog	4.9	1.5	male	2	no	≤ 30 cm
LPR2SS-A100	Mummichog	5.5	2	male	2	no	≤ 30 cm
LPR2SS-A100	Mummichog	6.6	3.5	male	2	no	≤ 30 cm
LPR2SS-A103	Mummichog	9.3	9.5	female	2	no	≤ 30 cm
LPR2SS-A105	Mummichog	6.7	3.5	male	2	no	≤ 30 cm
LPR2SS-A105	Mummichog	5	1	male	2	no	≤ 30 cm
LPR2SS-A105	Mummichog	4.5	1	male	2	no	≤ 30 cm
LPR2SS-A105	Mummichog	4.4	0.5	male	2	no	≤ 30 cm

LPR2SS-A105	Mummichog	4.6	1	male	2	no	≤ 30 cm
LPR2SS-A105	Mummichog	4.8	1	male	2	no	≤ 30 cm
LPR2SS-A105	Mummichog	4.8	1	male	2	no	≤ 30 cm
LPR2SS-A105	Mummichog	4.9	1	male	2	no	≤ 30 cm
LPR2SS-A105	Mummichog	4.6	1	male	2	no	≤ 30 cm
LPR3CC-A1	Mummichog	8.9	10	female	3	no	≤ 30 cm
LPR3CC-B5	Mummichog	9.4	11.5	female	3	no	≤ 30 cm
LPR3CC-A4	Mummichog	8.7	10.5	female	3	no	≤ 30 cm
LPR3CC-C5	Mummichog	7.8	7	female	3	no	≤ 30 cm
LPR3CC-A6	Mummichog	9.5	14	female	3	no	≤ 30 cm
LPR3CC-A6	Mummichog	7.7	6	female	3	no	≤ 30 cm
LPR3CC-A6	Mummichog	8.2	8	female	3	no	≤ 30 cm
LPR3CC-A6	Mummichog	6.7	4	female	3	no	≤ 30 cm
LPR3CC-A6	Mummichog	7	6	male	3	no	≤ 30 cm
LPR3CC-B6	Mummichog	8.4	8	female	3	no	≤ 30 cm
LPR3CC-B6	Mummichog	8	10	female	3	no	≤ 30 cm
LPR3CC-B6	Mummichog	9.5	12	female	3	no	≤ 30 cm
LPR3CC-C6	Mummichog	6.7	4	female	3	no	≤ 30 cm
LPR3CC-C6	Mummichog	8	8	female	3	no	≤ 30 cm
LPR3CC-A8	Mummichog	8.4	8	female	3	no	≤ 30 cm
LPR3FF-C1	Mummichog	8.4	8	male	3	no	≤ 30 cm
LPR3FF-C1	Mummichog	9.7	16	female	3	no	≤ 30 cm
LPR3FF-C1	Mummichog	9.4	10	female	3	no	≤ 30 cm
LPR3FF-C1	Mummichog	9.8	12	female	3	no	≤ 30 cm
LPR3FF-C1	Mummichog	7.7	6	female	3	no	≤ 30 cm
LPR3FF-C1	Mummichog	7.7	6	female	3	no	≤ 30 cm
LPR3FF-C1	Mummichog	8.8	12	female	3	no	≤ 30 cm
LPR3FF-B2	Mummichog	3.7	0.5	female	3	no	≤ 30 cm
LPR3FF-A2	Mummichog	7.7	6.5	female	3	no	≤ 30 cm
LPR3FF-A2	Mummichog	8.6	10	female	3	no	≤ 30 cm
LPR3FF-C3	Mummichog	7.3	5.5	male	3	no	≤ 30 cm
LPR3FF-C3	Mummichog	8.5	8	female	3	no	≤ 30 cm
LPR3FF-A3	Mummichog	9.4	10.5	male	3	no	≤ 30 cm
LPR3FF-A3	Mummichog	7.1	5	male	3	no	≤ 30 cm
LPR3GG-A1	Mummichog	9.3	10	female	3	no	≤ 30 cm
LPR3HH-A2	Mummichog	7.2	5.5	female	3	no	≤ 30 cm
LPR3HH-A2	Mummichog	9.5	10.5	male	3	no	≤ 30 cm
LPR3HH-A9	Mummichog	8.5	12	female	3	no	≤ 30 cm
LPR3HH-A7	Mummichog	8.2	10	male	3	no	≤ 30 cm
LPR3HH-A13	Mummichog	8.5	8	male	3	no	≤ 30 cm
LPR3HH-A13	Mummichog	7	4	female	3	no	≤ 30 cm
LPR3HH-A29	Mummichog	5.2	2	male	3	no	≤ 30 cm
LPR3HH-A29	Mummichog	8.4	8	male	3	no	≤ 30 cm
LPR3HH-A34	Mummichog	4.2	1	male	3	no	≤ 30 cm
LPR3HH-A34	Mummichog	4.9	2	male	3	no	≤ 30 cm
LPR3HH-A34	Mummichog	4.5	1.5	male	3	no	≤ 30 cm
LPR3HH-A34	Mummichog	4.8	1	male	3	no	≤ 30 cm
LPR3HH-A31	Mummichog	5.1	2	male	3	no	≤ 30 cm
LPR3HH-A35	Mummichog	5.2	2	male	3	no	≤ 30 cm
LPR3HH-A35	Mummichog	4.6	1.5	male	3	no	≤ 30 cm
LPR3HH-A35	Mummichog	4.2	1	male	3	no	≤ 30 cm
LPR3HH-A35	Mummichog	3.9	0.5	male	3	no	≤ 30 cm
LPR3HH-A35	Mummichog	4.4	1	male	3	no	≤ 30 cm
LPR3HH-A35	Mummichog	4.4	1.5	male	3	no	≤ 30 cm
LPR3HH-A35	Mummichog	4.1	0.5	male	3	no	≤ 30 cm
LPR3HH-A35	Mummichog	4.9	1.5	male	3	no	≤ 30 cm

LPR3HH-A35	Mummichog	4.7	1	male	3	no	≤ 30 cm
LPR3HH-A35	Mummichog	4.9	1	male	3	no	≤ 30 cm
LPR3HH-A35	Mummichog	5.3	2	male	3	no	≤ 30 cm
LPR3HH-A35	Mummichog	5.2	2	male	3	no	≤ 30 cm
LPR3HH-A35	Mummichog	4.6	1.5	male	3	no	≤ 30 cm
LPR3HH-A35	Mummichog	5.1	1.5	male	3	no	≤ 30 cm
LPR3HH-A35	Mummichog	4.6	1.5	male	3	no	≤ 30 cm
LPR3HH-A36	Mummichog	4.9	1.5	male	3	no	≤ 30 cm
LPR3HH-A36	Mummichog	5.2	2	male	3	no	≤ 30 cm
LPR3HH-A36	Mummichog	5.2	2	male	3	no	≤ 30 cm
LPR3HH-A36	Mummichog	5.1	1.5	male	3	no	≤ 30 cm
LPR3HH-A36	Mummichog	4.9	1.5	male	3	no	≤ 30 cm
LPR3HH-A37	Mummichog	4.9	1.5	female	3	no	≤ 30 cm
LPR3HH-A37	Mummichog	5.8	2.5	male	3	no	≤ 30 cm
LPR3HH-A37	Mummichog	4.9	1.5	male	3	no	≤ 30 cm
LPR3HH-A37	Mummichog	5.4	2	male	3	no	≤ 30 cm
LPR3HH-A37	Mummichog	5.2	1.5	male	3	no	≤ 30 cm
LPR3HH-A37	Mummichog	5.1	1.5	male	3	no	≤ 30 cm
LPR3HH-A37	Mummichog	5.4	2	male	3	no	≤ 30 cm
LPR3HH-A37	Mummichog	5.3	1.5	male	3	no	≤ 30 cm
LPR3HH-A37	Mummichog	5.4	2	male	3	no	≤ 30 cm
LPR3HH-A37	Mummichog	5.4	2	male	3	no	≤ 30 cm
LPR3HH-A37	Mummichog	5	1.5	male	3	no	≤ 30 cm
LPR3HH-A39	Mummichog	5.4	2	male	3	no	≤ 30 cm
LPR3HH-A39	Mummichog	5.2	1.5	male	3	no	≤ 30 cm
LPR3HH-A38	Mummichog	5	1.5	male	3	no	≤ 30 cm
LPR3HH-A38	Mummichog	4.9	1.5	male	3	no	≤ 30 cm
LPR3HH-A38	Mummichog	4.9	1	male	3	no	≤ 30 cm
LPR3HH-A38	Mummichog	5.2	2	male	3	no	≤ 30 cm
LPR3HH-A38	Mummichog	5.5	2	male	3	no	≤ 30 cm
LPR3HH-A38	Mummichog	4.6	1.5	male	3	no	≤ 30 cm
LPR3HH-A40	Mummichog	4.6	1.5	male	3	no	≤ 30 cm
LPR3HH-A40	Mummichog	5	1.5	male	3	no	≤ 30 cm
LPR3HH-A40	Mummichog	5.9	3.5	male	3	no	≤ 30 cm
LPR3HH-A40	Mummichog	4.9	1.5	male	3	no	≤ 30 cm
LPR3HH-A40	Mummichog	4.7	1.5	male	3	no	≤ 30 cm
LPR3HH-A46	Mummichog	5.1	1.5	male	3	no	≤ 30 cm
LPR3HH-A46	Mummichog	4.9	1.5	male	3	no	≤ 30 cm
LPR3HH-A46	Mummichog	5.7	2	male	3	no	≤ 30 cm
LPR3HH-A46	Mummichog	3.2	0.5	male	3	no	≤ 30 cm
LPR3HH-A46	Mummichog	5.2	1.5	male	3	no	≤ 30 cm
LPR3HH-A46	Mummichog	4.1	0.5	male	3	no	≤ 30 cm
LPR3HH-A46	Mummichog	5.5	1.5	male	3	no	≤ 30 cm
LPR3HH-A46	Mummichog	4.2	0.5	male	3	no	≤ 30 cm
LPR3HH-A46	Mummichog	5.1	1	male	3	no	≤ 30 cm
LPR3HH-A46	Mummichog	5.3	2	male	3	no	≤ 30 cm
LPR3HH-A49	Mummichog	5.1	1.5	male	3	no	≤ 30 cm
LPR3HH-A47	Mummichog	4.1	0.5	male	3	no	≤ 30 cm
LPR3HH-A47	Mummichog	5.2	1.5	female	3	no	≤ 30 cm
LPR3HH-A47	Mummichog	5.1	1.5	male	3	no	≤ 30 cm
LPR3HH-A47	Mummichog	4.9	1	male	3	no	≤ 30 cm
LPR3HH-A47	Mummichog	5.1	1	male	3	no	≤ 30 cm
LPR3HH-A50	Mummichog	5	1	male	3	no	≤ 30 cm
LPR3HH-A50	Mummichog	4.6	1.5	male	3	no	≤ 30 cm
LPR3HH-A48	Mummichog	5.9	2.5	male	3	no	≤ 30 cm
LPR3HH-A48	Mummichog	5.4	2	male	3	no	≤ 30 cm

LPR3HH-A48	Mummichog	4.9	1	male	3	no	≤ 30 cm
LPR3HH-A48	Mummichog	5	1	male	3	no	≤ 30 cm
LPR3HH-A48	Mummichog	5.4	1.5	male	3	no	≤ 30 cm
LPR3HH-A48	Mummichog	5.4	1.5	male	3	no	≤ 30 cm
LPR3II-A9	Mummichog	8.1	8	female	3	no	≤ 30 cm
LPR3II-A24	Mummichog	4.3	2	male	3	no	≤ 30 cm
LPR3II-A45	Mummichog	4.7	1.5	male	3	no	≤ 30 cm
LPR3II-A45	Mummichog	4.5	1.5	female	3	no	≤ 30 cm
LPR3II-A66	Mummichog	5.1	1.5	male	3	no	≤ 30 cm
LPR3II-A78	Mummichog	8	7	male	3	no	≤ 30 cm
LPR3II-A86	Mummichog	5	1.5	female	3	no	≤ 30 cm
LPR3II-A86	Mummichog	5.2	1.5	female	3	no	≤ 30 cm
LPR3II-A87	Mummichog	6.1	3	female	3	no	≤ 30 cm
LPR3II-A88	Mummichog	7.2	5	female	3	no	≤ 30 cm
LPR3II-A88	Mummichog	6.1	3	female	3	no	≤ 30 cm
LPR3II-A89	Mummichog	5.1	1.5	male	3	no	≤ 30 cm
LPR3II-A89	Mummichog	4.9	1	female	3	no	≤ 30 cm
LPR3II-A90	Mummichog	4	1	female	3	no	≤ 30 cm
LPR3II-A90	Mummichog	4.6	1.5	female	3	no	≤ 30 cm
LPR3II-A93	Mummichog	4.7	1.5	male	3	no	≤ 30 cm
LPR3II-A93	Mummichog	4.8	1	female	3	no	≤ 30 cm
LPR3II-A96	Mummichog	5.4	2	male	3	no	≤ 30 cm
LPR3II-A96	Mummichog	5.1	1.5	male	3	no	≤ 30 cm
LPR3II-A96	Mummichog	3	0.5	female	3	no	≤ 30 cm
LPR3II-A96	Mummichog	6	2.5	female	3	no	≤ 30 cm
LPR3II-A96	Mummichog	3.5	0.5	female	3	no	≤ 30 cm
LPR3II-A96	Mummichog	5.1	1.5	female	3	no	≤ 30 cm
LPR3II-A96	Mummichog	4.2	1	female	3	no	≤ 30 cm
LPR3II-A96	Mummichog	4.3	1	female	3	no	≤ 30 cm
LPR3II-A97	Mummichog	6	0.5	male	3	no	≤ 30 cm
LPR3II-A97	Mummichog	5	1.5	male	3	no	≤ 30 cm
LPR3II-A97	Mummichog	5.2	2	male	3	no	≤ 30 cm
LPR3II-A97	Mummichog	5.6	3	male	3	no	≤ 30 cm
LPR3II-A97	Mummichog	6	2.5	male	3	no	≤ 30 cm
LPR3II-A97	Mummichog	5.7	3	male	3	no	≤ 30 cm
LPR3II-A97	Mummichog	5.4	2	female	3	no	≤ 30 cm
LPR3II-A97	Mummichog	5.2	2	female	3	no	≤ 30 cm
LPR3II-A97	Mummichog	5.1	2	female	3	no	≤ 30 cm
LPR3II-A97	Mummichog	4.9	1.5	female	3	no	≤ 30 cm
LPR3II-A97	Mummichog	4.5	1	female	3	no	≤ 30 cm
LPR3II-A97	Mummichog	4.5	1	female	3	no	≤ 30 cm
LPR3II-A97	Mummichog	4.1	1	female	3	no	≤ 30 cm
LPR3II-A97	Mummichog	4.1	0.5	female	3	no	≤ 30 cm
LPR3II-A97	Mummichog	4.1	0.5	female	3	no	≤ 30 cm
LPR3II-A98	Mummichog	6	3	female	3	no	≤ 30 cm
LPR3II-A100	Mummichog	4.5	1.5	female	3	no	≤ 30 cm
LPR3II-A100	Mummichog	4.1	1	female	3	no	≤ 30 cm
LPR3RR-A1	Mummichog	5.6	3	male	3	no	≤ 30 cm
LPR3RR-A1	Mummichog	8.1	9.5	male	3	no	≤ 30 cm
LPR3RR-A1	Mummichog	5	2	male	3	no	≤ 30 cm
LPR3RR-A1	Mummichog	5.1	1.5	male	3	no	≤ 30 cm
LPR3RR-A1	Mummichog	5.7	2	male	3	no	≤ 30 cm
LPR3RR-A1	Mummichog	4.5	1.5	male	3	no	≤ 30 cm
LPR3RR-A1	Mummichog	6.2	3	male	3	no	≤ 30 cm
LPR3RR-A1	Mummichog	5.1	1.5	male	3	no	≤ 30 cm
LPR3RR-A1	Mummichog	4.2	1	male	3	no	≤ 30 cm

LPR3RR-A1	Mummichog	4.3	1	male	3	no	≤ 30 cm
LPR3RR-A1	Mummichog	5	1.5	male	3	no	≤ 30 cm
LPR3RR-A1	Mummichog	5.8	3	male	3	no	≤ 30 cm
LPR3RR-A1	Mummichog	4.1	1	male	3	no	≤ 30 cm
LPR3RR-A1	Mummichog	5.9	3	male	3	no	≤ 30 cm
LPR3RR-A1	Mummichog	5.2	2.5	male	3	no	≤ 30 cm
LPR3RR-A1	Mummichog	6	3	male	3	no	≤ 30 cm
LPR3RR-A1	Mummichog	6.1	3	male	3	no	≤ 30 cm
LPR3RR-A1	Mummichog	8.2	8	female	3	no	≤ 30 cm
LPR3RR-A1	Mummichog	4.2	1	female	3	no	≤ 30 cm
LPR3RR-A1	Mummichog	5.5	2	female	3	no	≤ 30 cm
LPR3RR-A1	Mummichog	4.1	1	female	3	no	≤ 30 cm
LPR3RR-A1	Mummichog	4.5	1	female	3	no	≤ 30 cm
LPR3RR-A1	Mummichog	3.4	0.5	female	3	no	≤ 30 cm
LPR3RR-A1	Mummichog	4	1	female	3	no	≤ 30 cm
LPR3RR-A1	Mummichog	4.1	1	female	3	no	≤ 30 cm
LPR3RR-A1	Mummichog	6	3.5	female	3	no	≤ 30 cm
LPR3RR-A1	Mummichog	6.3	4	female	3	no	≤ 30 cm
LPR3RR-A1	Mummichog	5.5	3	female	3	no	≤ 30 cm
LPR3RR-A1	Mummichog	5.5	2.5	female	3	no	≤ 30 cm
LPR3RR-A1	Mummichog	5.5	2.5	female	3	no	≤ 30 cm
LPR3RR-A1	Mummichog	5.2	2	female	3	no	≤ 30 cm
LPR3RR-A1	Mummichog	5.7	3	female	3	no	≤ 30 cm
LPR3RR-A1	Mummichog	5.1	2	female	3	no	≤ 30 cm
LPR3RR-A1	Mummichog	4.5	1	female	3	no	≤ 30 cm
LPR3RR-A1	Mummichog	4.1	1	female	3	no	≤ 30 cm
LPR3RR-A1	Mummichog	4.5	1	female	3	no	≤ 30 cm
LPR3RR-A1	Mummichog	4.2	1	female	3	no	≤ 30 cm
LPR3RR-A1	Mummichog	5.2	2	female	3	no	≤ 30 cm
LPR3RR-A1	Mummichog	4.9	1.5	female	3	no	≤ 30 cm
LPR3RR-A1	Mummichog	4	1	female	3	no	≤ 30 cm
LPR3RR-A1	Mummichog	5	2	female	3	no	≤ 30 cm
LPR3RR-A1	Mummichog	3.8	1	female	3	no	≤ 30 cm
LPR3RR-A1	Mummichog	4.5	1.5	female	3	no	≤ 30 cm
LPR3RR-A1	Mummichog	4.5	1	female	3	no	≤ 30 cm
LPR4RR-A3	Mummichog	6.2	3.5	male	4	no	≤ 30 cm
LPR4RR-A3	Mummichog	5.9	3	male	4	no	≤ 30 cm
LPR4RR-A3	Mummichog	6	3	male	4	no	≤ 30 cm
LPR4RR-A3	Mummichog	6.2	3.5	male	4	no	≤ 30 cm
LPR4RR-A3	Mummichog	4.6	1.5	male	4	no	≤ 30 cm
LPR4RR-A3	Mummichog	4.6	1.5	male	4	no	≤ 30 cm
LPR4RR-A3	Mummichog	6.3	3	male	4	no	≤ 30 cm
LPR4RR-A3	Mummichog	5	2	male	4	no	≤ 30 cm
LPR4RR-A3	Mummichog	4.5	1	male	4	no	≤ 30 cm
LPR4RR-A3	Mummichog	3.6	0.5	male	4	no	≤ 30 cm
LPR4RR-A3	Mummichog	5.5	2.5	male	4	no	≤ 30 cm
LPR4RR-A3	Mummichog	4.5	1.5	male	4	no	≤ 30 cm
LPR4RR-A3	Mummichog	4.7	1.5	male	4	no	≤ 30 cm
LPR4RR-A3	Mummichog	6	3.5	male	4	no	≤ 30 cm
LPR4RR-A3	Mummichog	5.8	2.5	male	4	no	≤ 30 cm
LPR4RR-A3	Mummichog	4.8	1.5	male	4	no	≤ 30 cm
LPR4RR-A3	Mummichog	5	1.5	male	4	no	≤ 30 cm
LPR4RR-A3	Mummichog	6	3.5	male	4	no	≤ 30 cm
LPR4RR-A3	Mummichog	6.2	4	male	4	no	≤ 30 cm
LPR4RR-A3	Mummichog	4.4	1	male	4	no	≤ 30 cm
LPR4RR-A3	Mummichog	5.5	3	male	4	no	≤ 30 cm

LPR4RR-A3	Mummichog	6.5	5	female	4	no	≤ 30 cm
LPR4RR-A3	Mummichog	5	1.5	female	4	no	≤ 30 cm
LPR4RR-A3	Mummichog	5	1.5	female	4	no	≤ 30 cm
LPR4RR-A3	Mummichog	5.3	3	female	4	no	≤ 30 cm
LPR4RR-A3	Mummichog	6	4	female	4	no	≤ 30 cm
LPR4RR-A3	Mummichog	6.5	4.5	female	4	no	≤ 30 cm
LPR4RR-A3	Mummichog	6.1	3.5	female	4	no	≤ 30 cm
LPR4RR-A3	Mummichog	6.2	3.5	female	4	no	≤ 30 cm
LPR4RR-A3	Mummichog	6.3	3.5	female	4	no	≤ 30 cm
LPR4RR-A3	Mummichog	6.2	3.5	female	4	no	≤ 30 cm
LPR4RR-A3	Mummichog	6.1	5	female	4	no	≤ 30 cm
LPR4RR-A3	Mummichog	6.2	4	female	4	no	≤ 30 cm
LPR4RR-A3	Mummichog	4.7	1.5	female	4	no	≤ 30 cm
LPR4RR-A3	Mummichog	4.5	1.5	female	4	no	≤ 30 cm
LPR4RR-A3	Mummichog	5.1	2.5	female	4	no	≤ 30 cm
LPR4RR-A3	Mummichog	5.6	2.5	female	4	no	≤ 30 cm
LPR4RR-A3	Mummichog	5.2	2	female	4	no	≤ 30 cm
LPR4RR-A3	Mummichog	3.4	0.5	female	4	no	≤ 30 cm
LPR4RR-A2	Mummichog	6.1	4.5	female	4	no	≤ 30 cm
LPR4RR-A2	Mummichog	6	4	female	4	no	≤ 30 cm
LPR4RR-A2	Mummichog	6.6	5	male	4	no	≤ 30 cm
LPR4RR-A2	Mummichog	5.1	3.5	male	4	no	≤ 30 cm
LPR4RR-A2	Mummichog	4.3	1.5	male	4	no	≤ 30 cm
LPR4RR-A2	Mummichog	5.5	3	female	4	no	≤ 30 cm
LPR4RR-A2	Mummichog	4.8	1.5	female	4	no	≤ 30 cm
LPR4RR-A2	Mummichog	5.5	2	female	4	no	≤ 30 cm
LPR4RR-A2	Mummichog	5.9	3.5	female	4	no	≤ 30 cm
LPR4RR-A2	Mummichog	5	1.5	female	4	no	≤ 30 cm
LPR4RR-A2	Mummichog	4.9	2	female	4	no	≤ 30 cm
LPR4RR-A2	Mummichog	5.9	3	male	4	no	≤ 30 cm
LPR4RR-A2	Mummichog	5.5	2.5	female	4	no	≤ 30 cm
LPR4RR-A2	Mummichog	4.4	1	male	4	no	≤ 30 cm
LPR4RR-A2	Mummichog	4.5	1.5	male	4	no	≤ 30 cm
LPR4RR-A2	Mummichog	5.5	2.5	male	4	no	≤ 30 cm
LPR4RR-A2	Mummichog	5.4	2	male	4	no	≤ 30 cm
LPR4RR-A2	Mummichog	4.4	1	male	4	no	≤ 30 cm
LPR4RR-A2	Mummichog	5	3.5	female	4	no	≤ 30 cm
LPR4RR-A2	Mummichog	4.7	1.5	male	4	no	≤ 30 cm
LPR4RR-A2	Mummichog	4.8	1.5	male	4	no	≤ 30 cm
LPR4RR-A2	Mummichog	4.7	1.5	male	4	no	≤ 30 cm
LPR4RR-A2	Mummichog	5.6	3	female	4	no	≤ 30 cm
LPR4RR-A2	Mummichog	3.8	1.5	male	4	no	≤ 30 cm
LPR4RR-A2	Mummichog	4.5	1	female	4	no	≤ 30 cm
LPR4RR-A2	Mummichog	4.1	0.5	female	4	no	≤ 30 cm
LPR4RR-A2	Mummichog	4.6	1.5	female	4	no	≤ 30 cm
LPR4RR-A2	Mummichog	3.5	0.5	female	4	no	≤ 30 cm
LPR4RR-A2	Mummichog	3.4	0.5	female	4	no	≤ 30 cm
LPR4RR-A2	Mummichog	4.1	1	female	4	no	≤ 30 cm
LPR4RR-A1	Mummichog	5.1	1.5	male	4	no	≤ 30 cm
LPR4RR-A1	Mummichog	6	3.5	male	4	no	≤ 30 cm
LPR4RR-A1	Mummichog	4.9	1.5	male	4	no	≤ 30 cm
LPR4RR-A1	Mummichog	3.4	0.5	male	4	no	≤ 30 cm
LPR4RR-A1	Mummichog	4.9	1.5	male	4	no	≤ 30 cm
LPR4RR-A1	Mummichog	5	1.5	male	4	no	≤ 30 cm
LPR4RR-A1	Mummichog	4.7	1	male	4	no	≤ 30 cm
LPR4RR-A1	Mummichog	5.6	3	male	4	no	≤ 30 cm

LPR4RR-A1	Mummichog	5.1	2	male	4	no	≤ 30 cm
LPR4RR-A1	Mummichog	6	3.5	male	4	no	≤ 30 cm
LPR4RR-A1	Mummichog	4.9	1.5	male	4	no	≤ 30 cm
LPR4RR-A1	Mummichog	5	2	male	4	no	≤ 30 cm
LPR4RR-A1	Mummichog	5.1	1.5	male	4	no	≤ 30 cm
LPR4RR-A1	Mummichog	4	1	female	4	no	≤ 30 cm
LPR4RR-A1	Mummichog	4.6	1	female	4	no	≤ 30 cm
LPR4RR-A1	Mummichog	6.3	5	female	4	no	≤ 30 cm
LPR4RR-A1	Mummichog	4.8	1.5	female	4	no	≤ 30 cm
LPR4RR-A1	Mummichog	6.4	4	female	4	no	≤ 30 cm
LPR4RR-A1	Mummichog	5.2	2	female	4	no	≤ 30 cm
LPR4RR-A1	Mummichog	6.1	4	female	4	no	≤ 30 cm
LPR4RR-A1	Mummichog	4.4	1	female	4	no	≤ 30 cm
LPR4RR-A1	Mummichog	4.9	1.5	female	4	no	≤ 30 cm
LPR4RR-A1	Mummichog	5.2	2	female	4	no	≤ 30 cm
LPR4RR-A1	Mummichog	5.5	2.5	female	4	no	≤ 30 cm
LPR4RR-A1	Mummichog	5.9	2.5	female	4	no	≤ 30 cm
LPR4RR-A1	Mummichog	5	2	female	4	no	≤ 30 cm
LPR4RR-A1	Mummichog	4.9	1.5	female	4	no	≤ 30 cm
LPR4RR-A1	Mummichog	4.5	1.5	female	4	no	≤ 30 cm
LPR4RR-A1	Mummichog	5.5	2	female	4	no	≤ 30 cm
LPR4RR-A1	Mummichog	4.9	1.5	female	4	no	≤ 30 cm
LPR4RR-A1	Mummichog	4.5	1.5	female	4	no	≤ 30 cm
LPR4RR-A1	Mummichog	3.4	0.5	female	4	no	≤ 30 cm
LPR4RR-A1	Mummichog	4.9	1.5	female	4	no	≤ 30 cm
LPR4RR-A1	Mummichog	4.5	1	female	4	no	≤ 30 cm
LPR4RR-A1	Mummichog	4.7	2	female	4	no	≤ 30 cm
LPR4RR-A1	Mummichog	5.2	2.5	female	4	no	≤ 30 cm
LPR4RR-A1	Mummichog	5.1	2.5	female	4	no	≤ 30 cm
LPR4RR-A1	Mummichog	5.1	2	female	4	no	≤ 30 cm
LPR4SS-A5	Mummichog	4.5	1.5	male	4	no	≤ 30 cm
LPR4SS-A5	Mummichog	4.3	1	male	4	no	≤ 30 cm
LPR4SS-A5	Mummichog	4.9	1.5	male	4	no	≤ 30 cm
LPR4SS-A5	Mummichog	4.7	1	male	4	no	≤ 30 cm
LPR4SS-A5	Mummichog	5.5	2.5	male	4	no	≤ 30 cm
LPR4SS-A5	Mummichog	4.5	1	male	4	no	≤ 30 cm
LPR4SS-A5	Mummichog	4.6	1.5	male	4	no	≤ 30 cm
LPR4SS-A5	Mummichog	5.1	2	male	4	no	≤ 30 cm
LPR4SS-A5	Mummichog	5	1.5	male	4	no	≤ 30 cm
LPR4SS-A5	Mummichog	4.7	1.5	male	4	no	≤ 30 cm
LPR4SS-A5	Mummichog	4.4	1	male	4	no	≤ 30 cm
LPR4SS-A5	Mummichog	4.5	1.5	male	4	no	≤ 30 cm
LPR4SS-A5	Mummichog	5.2	2	male	4	no	≤ 30 cm
LPR4SS-A5	Mummichog	5.4	2.5	male	4	no	≤ 30 cm
LPR4SS-A5	Mummichog	6	3.5	female	4	no	≤ 30 cm
LPR4SS-A5	Mummichog	5.1	2	female	4	no	≤ 30 cm
LPR4SS-A5	Mummichog	5.1	1.5	female	4	no	≤ 30 cm
LPR4SS-A5	Mummichog	5.5	2.5	female	4	no	≤ 30 cm
LPR4SS-A5	Mummichog	5	1.5	female	4	no	≤ 30 cm
LPR4SS-A5	Mummichog	4.5	1	female	4	no	≤ 30 cm
LPR4SS-A5	Mummichog	4.6	1.5	female	4	no	≤ 30 cm
LPR4SS-A5	Mummichog	4.7	1.5	female	4	no	≤ 30 cm
LPR4SS-A5	Mummichog	5	1.5	female	4	no	≤ 30 cm
LPR4TT-A8	Mummichog	4.2	1	male	4	no	≤ 30 cm
LPR4TT-A8	Mummichog	4.9	2	female	4	no	≤ 30 cm
LPR4TT-A6	Mummichog	4.7	1.5	male	4	no	≤ 30 cm

LPR4TT-A6	Mummichog	4.2	1	male	4	no	≤ 30 cm
LPR4TT-A6	Mummichog	4.2	1	male	4	no	≤ 30 cm
LPR4TT-A6	Mummichog	4.1	1	male	4	no	≤ 30 cm
LPR4TT-A6	Mummichog	3.6	0.5	female	4	no	≤ 30 cm
LPR4TT-A6	Mummichog	4.1	1	female	4	no	≤ 30 cm
LPR4TT-A4	Mummichog	4.7	1.5	male	4	no	≤ 30 cm
LPR4TT-A4	Mummichog	5.1	2	male	4	no	≤ 30 cm
LPR4TT-A4	Mummichog	5	1.5	male	4	no	≤ 30 cm
LPR4TT-A4	Mummichog	4.2	1	male	4	no	≤ 30 cm
LPR4TT-A4	Mummichog	4.4	1	male	4	no	≤ 30 cm
LPR4TT-A4	Mummichog	4.6	1	male	4	no	≤ 30 cm
LPR4TT-A4	Mummichog	4.1	1	female	4	no	≤ 30 cm
LPR4TT-A1	Mummichog	5.5	2	male	4	no	≤ 30 cm
LPR4TT-A1	Mummichog	5	1	male	4	no	≤ 30 cm
LPR4TT-A2	Mummichog	3.1	0.5	male	4	no	≤ 30 cm
LPR4TT-A2	Mummichog	4.2	0.5	male	4	no	≤ 30 cm
LPR4TT-A2	Mummichog	4.2	0.5	male	4	no	≤ 30 cm
LPR4TT-A2	Mummichog	4	0.5	male	4	no	≤ 30 cm
LPR4TT-A2	Mummichog	3.5	0.5	male	4	no	≤ 30 cm
LPR4TT-A2	Mummichog	4.3	0.5	male	4	no	≤ 30 cm
LPR4TT-A2	Mummichog	3.9	0.5	male	4	no	≤ 30 cm
LPR4TT-A2	Mummichog	4.2	0.5	female	4	no	≤ 30 cm
LPR4TT-A3	Mummichog	4.5	0.5	male	4	no	≤ 30 cm
LPR4TT-A5	Mummichog	4.5	0.5	male	4	no	≤ 30 cm
LPR4TT-A7	Mummichog	5.1	1.5	male	4	no	≤ 30 cm
LPR4TT-A7	Mummichog	5	1.5	male	4	no	≤ 30 cm
LPR4TT-A7	Mummichog	5.5	2	female	4	no	≤ 30 cm
LPR4TT-A7	Mummichog	4.5	1	female	4	no	≤ 30 cm
LPR4UU-A4	Mummichog	4.6	1	male	4	no	≤ 30 cm
LPR4UU-A4	Mummichog	5.9	3	male	4	no	≤ 30 cm
LPR4UU-A4	Mummichog	4.1	1	male	4	no	≤ 30 cm
LPR4UU-A4	Mummichog	4.2	1	male	4	no	≤ 30 cm
LPR4UU-A4	Mummichog	4.1	1	female	4	no	≤ 30 cm
LPR4UU-A4	Mummichog	4.5	1.5	female	4	no	≤ 30 cm
LPR4UU-A3	Mummichog	5.9	4	female	4	no	≤ 30 cm
LPR4UU-A3	Mummichog	5.9	2.5	female	4	no	≤ 30 cm
LPR4UU-A6	Mummichog	5.2	2	female	4	no	≤ 30 cm
LPR4UU-A6	Mummichog	5	1.5	female	4	no	≤ 30 cm
LPR4UU-A7	Mummichog	3.5	0.5	male	4	no	≤ 30 cm
LPR4UU-A7	Mummichog	3.9	0.5	male	4	no	≤ 30 cm
LPR4UU-A7	Mummichog	3.6	0.5	male	4	no	≤ 30 cm
LPR4UU-A7	Mummichog	5	2	male	4	no	≤ 30 cm
LPR4UU-A7	Mummichog	3.1	0.5	female	4	no	≤ 30 cm
LPR4UU-A7	Mummichog	3.2	0.5	female	4	no	≤ 30 cm
LPR4UU-A7	Mummichog	3.4	0.5	female	4	no	≤ 30 cm
LPR4UU-A7	Mummichog	3.6	0.5	female	4	no	≤ 30 cm
LPR4UU-A7	Mummichog	4.1	0.5	female	4	no	≤ 30 cm
LPR4UU-A7	Mummichog	4.6	1	female	4	no	≤ 30 cm
LPR4UU-A7	Mummichog	4.8	1	female	4	no	≤ 30 cm
LPR4UU-A7	Mummichog	5.1	2	female	4	no	≤ 30 cm
LPR4VV-A3	Mummichog	3.2	0.5	male	4	no	≤ 30 cm
LPR4VV-A3	Mummichog	4.4	1	male	4	no	≤ 30 cm
LPR4VV-A3	Mummichog	5.5	2.5	male	4	no	≤ 30 cm
LPR4VV-A3	Mummichog	5.6	2	male	4	no	≤ 30 cm
LPR4VV-A3	Mummichog	4.3	0.5	male	4	no	≤ 30 cm
LPR4VV-A3	Mummichog	4.5	1	male	4	no	≤ 30 cm

LPR4VV-A3	Mummichog	4.1	1	male	4	no	≤ 30 cm
LPR4VV-A3	Mummichog	4.4	1	male	4	no	≤ 30 cm
LPR4VV-A3	Mummichog	5.1	2	male	4	no	≤ 30 cm
LPR4VV-A3	Mummichog	5.1	2	male	4	no	≤ 30 cm
LPR4VV-A3	Mummichog	5.1	0.5	male	4	no	≤ 30 cm
LPR4VV-A3	Mummichog	6	3	female	4	no	≤ 30 cm
LPR4VV-A3	Mummichog	4.6	1.5	female	4	no	≤ 30 cm
LPR4VV-A3	Mummichog	5	2	female	4	no	≤ 30 cm
LPR4VV-A3	Mummichog	6.1	4	female	4	no	≤ 30 cm
LPR4VV-A3	Mummichog	6.2	4	female	4	no	≤ 30 cm
LPR4VV-A3	Mummichog	5.4	2	female	4	no	≤ 30 cm
LPR4VV-A3	Mummichog	5.2	1.5	female	4	no	≤ 30 cm
LPR4VV-A3	Mummichog	5.8	3	female	4	no	≤ 30 cm
LPR4VV-A3	Mummichog	6.3	4	female	4	no	≤ 30 cm
LPR4VV-A3	Mummichog	5.3	2	female	4	no	≤ 30 cm
LPR4VV-A8	Mummichog	5.5	3	male	4	no	≤ 30 cm
LPR4VV-A2	Mummichog	5.6	2.5	male	4	no	≤ 30 cm
LPR4VV-A2	Mummichog	4.5	1	male	4	no	≤ 30 cm
LPR4VV-A2	Mummichog	9	9	female	4	no	≤ 30 cm
LPR4VV-A2	Mummichog	3.7	0.5	female	4	no	≤ 30 cm
LPR4VV-A2	Mummichog	3.9	0.5	female	4	no	≤ 30 cm
LPR4VV-A2	Mummichog	4.9	1.5	female	4	no	≤ 30 cm
LPR4VV-A2	Mummichog	5	2	female	4	no	≤ 30 cm
LPR4VV-A2	Mummichog	3.9	0.5	female	4	no	≤ 30 cm
LPR4VV-A2	Mummichog	4.2	1	female	4	no	≤ 30 cm
LPR4VV-A1	Mummichog	5.5	2.5	female	4	no	≤ 30 cm
LPR4VV-A4	Mummichog	4	0.5	female	4	no	≤ 30 cm
LPR4VV-A4	Mummichog	5.1	1.5	female	4	no	≤ 30 cm
LPR4VV-A4	Mummichog	5.6	2.5	female	4	no	≤ 30 cm
LPR4VV-A4	Mummichog	5.4	2	female	4	no	≤ 30 cm
LPR4VV-A4	Mummichog	6	3.5	female	4	no	≤ 30 cm
LPR4VV-A4	Mummichog	4.5	1.5	male	4	no	≤ 30 cm
LPR4VV-A4	Mummichog	5.4	2	male	4	no	≤ 30 cm
LPR4VV-A4	Mummichog	4	0.5	male	4	no	≤ 30 cm
LPR4VV-A4	Mummichog	5	2	male	4	no	≤ 30 cm
LPR4WW-A11	Mummichog	4.3	1	male	4	no	≤ 30 cm
LPR4WW-A11	Mummichog	5.2	2	male	4	no	≤ 30 cm
LPR4WW-A11	Mummichog	6.1	1.5	female	4	no	≤ 30 cm
LPR4WW-A11	Mummichog	5.5	2	female	4	no	≤ 30 cm
LPR4WW-A11	Mummichog	5.6	2.5	female	4	no	≤ 30 cm
LPR4WW-A11	Mummichog	4.5	1	female	4	no	≤ 30 cm
LPR4WW-A11	Mummichog	5	1.5	female	4	no	≤ 30 cm
LPR4WW-A11	Mummichog	4.5	1	female	4	no	≤ 30 cm
LPR4WW-A12	Mummichog	4.7	1	male	4	no	≤ 30 cm
LPR4WW-A12	Mummichog	3.2	0.5	female	4	no	≤ 30 cm
LPR4WW-A12	Mummichog	5	1	female	4	no	≤ 30 cm
LPR4WW-A12	Mummichog	4.8	1	female	4	no	≤ 30 cm
LPR4WW-A12	Mummichog	4.7	1	female	4	no	≤ 30 cm
LPR4XX-A1	Mummichog	6.2	3.5	male	4	no	≤ 30 cm
LPR4XX-A1	Mummichog	4.5	1.5	male	4	no	≤ 30 cm
LPR4XX-A1	Mummichog	5.4	2	male	4	no	≤ 30 cm
LPR4XX-A1	Mummichog	4.8	1	male	4	no	≤ 30 cm
LPR4XX-A1	Mummichog	4.4	1	male	4	no	≤ 30 cm
LPR4XX-A1	Mummichog	4.9	2	male	4	no	≤ 30 cm
LPR4XX-A1	Mummichog	5	2.5	male	4	no	≤ 30 cm
LPR4XX-A1	Mummichog	4.9	1	male	4	no	≤ 30 cm

LPR4XX-A1	Mummichog	4.2	1	male	4	no	≤ 30 cm
LPR4XX-A1	Mummichog	5.7	4	male	4	no	≤ 30 cm
LPR4XX-A1	Mummichog	5.2	2.5	male	4	no	≤ 30 cm
LPR4XX-A1	Mummichog	3.8	0.5	male	4	no	≤ 30 cm
LPR4XX-A1	Mummichog	5	2	male	4	no	≤ 30 cm
LPR4XX-A1	Mummichog	4.3	1	male	4	no	≤ 30 cm
LPR4XX-A1	Mummichog	4.6	1.5	male	4	no	≤ 30 cm
LPR4XX-A1	Mummichog	4.7	1.5	male	4	no	≤ 30 cm
LPR4XX-A1	Mummichog	4.8	2	male	4	no	≤ 30 cm
LPR4XX-A1	Mummichog	4.3	1	male	4	no	≤ 30 cm
LPR4XX-A1	Mummichog	4.8	1.5	male	4	no	≤ 30 cm
LPR4XX-A1	Mummichog	4.5	1	male	4	no	≤ 30 cm
LPR4XX-A1	Mummichog	4.6	0.5	female	4	no	≤ 30 cm
LPR4XX-A1	Mummichog	3.8	0.5	female	4	no	≤ 30 cm
LPR4XX-A1	Mummichog	5	1.5	male	4	no	≤ 30 cm
LPR4XX-A1	Mummichog	4	1	female	4	no	≤ 30 cm
LPR4XX-A1	Mummichog	5.1	1.5	female	4	no	≤ 30 cm
LPR4XX-A1	Mummichog	5.3	2.5	female	4	no	≤ 30 cm
LPR4XX-A1	Mummichog	4.4	1	female	4	no	≤ 30 cm
LPR4XX-A1	Mummichog	6.1	4	female	4	no	≤ 30 cm
LPR4XX-A1	Mummichog	5	1.5	female	4	no	≤ 30 cm
LPR4XX-A1	Mummichog	6.2	2.5	female	4	no	≤ 30 cm
LPR4XX-A1	Mummichog	5.7	2.5	female	4	no	≤ 30 cm
LPR4XX-A1	Mummichog	4.9	1.5	female	4	no	≤ 30 cm
LPR4XX-A1	Mummichog	6	3.5	female	4	no	≤ 30 cm
LPR4XX-A1	Mummichog	5.2	2	female	4	no	≤ 30 cm
LPR4XX-A1	Mummichog	4.6	1	female	4	no	≤ 30 cm
LPR4XX-A1	Mummichog	4.2	0.5	female	4	no	≤ 30 cm
LPR4XX-A1	Mummichog	4.6	1	female	4	no	≤ 30 cm
LPR4XX-A1	Mummichog	6	2.5	female	4	no	≤ 30 cm
LPR4XX-A1	Mummichog	6.6	4.5	female	4	no	≤ 30 cm
LPR4XX-A1	Mummichog	5.6	2.5	female	4	no	≤ 30 cm
LPR4XX-A1	Mummichog	4.5	1	female	4	no	≤ 30 cm
LPR4XX-A1	Mummichog	6	2.5	female	4	no	≤ 30 cm
LPR4XX-A1	Mummichog	4.2	1	female	4	no	≤ 30 cm
LPR4XX-A1	Mummichog	4.2	1	female	4	no	≤ 30 cm
LPR4XX-A1	Mummichog	4.4	1	female	4	no	≤ 30 cm
LPR4XX-A1	Mummichog	5	2	female	4	no	≤ 30 cm
LPR4XX-A1	Mummichog	4	0.5	female	4	no	≤ 30 cm
LPR4XX-A1	Mummichog	4.6	1.5	female	4	no	≤ 30 cm
LPR4XX-A1	Mummichog	5.2	2.5	female	4	no	≤ 30 cm
LPR4XX-A1	Mummichog	4.7	1	female	4	no	≤ 30 cm
LPR4XX-A1	Mummichog	4.6	1	female	4	no	≤ 30 cm
LPR4XX-A1	Mummichog	5.5	1.5	female	4	no	≤ 30 cm
LPR4XX-A1	Mummichog	5.1	1	female	4	no	≤ 30 cm
LPR4XX-A1	Mummichog	4.3	1	male	4	no	≤ 30 cm
LPR4XX-A1	Mummichog	4.5	1	male	4	no	≤ 30 cm
LPR4XX-A1	Mummichog	4.2	0.5	male	4	no	≤ 30 cm
LPR4XX-A1	Mummichog	4.6	1.5	male	4	no	≤ 30 cm
LPR4XX-A1	Mummichog	4.4	1	male	4	no	≤ 30 cm
LPR4XX-A1	Mummichog	4.6	1.5	male	4	no	≤ 30 cm
LPR4XX-A1	Mummichog	4.1	1	male	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.7	2.8	male	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.1	1.5	male	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.8	3	male	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	6.8	4.5	male	4	no	≤ 30 cm

LPR4YY-A2	Mummichog	6.3	3.8	male	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	6.7	4.2	male	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	6.3	3.9	male	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.5	3	male	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.7	2.7	male	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.3	2.1	male	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	4.9	2	male	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.4	2.7	male	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	6.1	3.1	male	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.9	3	male	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.5	3	male	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.6	2.9	male	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	4.7	1.9	male	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.3	2	male	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.3	2.1	male	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5	2	male	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.5	2.5	male	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	4.6	1.5	male	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	4.3	1.5	male	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.8	3	male	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.3	2.1	male	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.5	2.8	male	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.2	2.8	male	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.1	2	male	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.1	1.8	male	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.7	3	male	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	4.8	1.8	male	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.7	3	male	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.5	3	male	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.8	3	male	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	4.5	1.1	male	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	3.9	1	male	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.3	2.5	male	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.6	2.9	male	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.6	2.5	male	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	6.1	3.1	male	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	6.3	3.9	male	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.6	2.5	male	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.6	3	male	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.2	2.9	male	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	6.5	5	male	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.5	2.5	male	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	4.9	1.9	male	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	4.9	1.9	male	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5	2	male	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.8	3	male	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5	1.9	male	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	4.8	1.9	male	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.4	2.1	male	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.5	2.9	male	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.1	1.9	male	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.2	2.1	male	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5	1.8	male	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	6.3	3.5	male	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.5	2.9	male	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	6.4	4.5	male	4	no	≤ 30 cm

LPR4YY-A2	Mummichog	5.8	2.9	male	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.7	3	male	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	3.7	1.2	male	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	6.6	4.8	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.3	2.1	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	6	3.8	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.6	3	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.6	2.9	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	6	3.5	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.6	2.9	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.6	3	female	4	no	≤ 30 cm
LPR4YY-A1	Mummichog	7	5	male	4	no	≤ 30 cm
LPR4YY-A1	Mummichog	6	3	male	4	no	≤ 30 cm
LPR4YY-A1	Mummichog	6.1	2.5	male	4	no	≤ 30 cm
LPR4YY-A1	Mummichog	5.6	2	male	4	no	≤ 30 cm
LPR4YY-A1	Mummichog	6.5	4	male	4	no	≤ 30 cm
LPR4YY-A1	Mummichog	6.5	3.5	male	4	no	≤ 30 cm
LPR4YY-A1	Mummichog	5.4	2	male	4	no	≤ 30 cm
LPR4YY-A1	Mummichog	6.1	3	male	4	no	≤ 30 cm
LPR4YY-A1	Mummichog	5.8	3	male	4	no	≤ 30 cm
LPR4YY-A1	Mummichog	5.9	3	male	4	no	≤ 30 cm
LPR4YY-A1	Mummichog	5.5	2.5	male	4	no	≤ 30 cm
LPR4YY-A1	Mummichog	5.6	2.5	male	4	no	≤ 30 cm
LPR4YY-A1	Mummichog	5.2	2	male	4	no	≤ 30 cm
LPR4YY-A1	Mummichog	6.5	4	male	4	no	≤ 30 cm
LPR4YY-A1	Mummichog	7.9	9	male	4	no	≤ 30 cm
LPR4YY-A1	Mummichog	4.8	2	female	4	no	≤ 30 cm
LPR4YY-A1	Mummichog	6.1	4.5	female	4	no	≤ 30 cm
LPR4YY-A1	Mummichog	6.4	5	female	4	no	≤ 30 cm
LPR4YY-A1	Mummichog	5.7	5	female	4	no	≤ 30 cm
LPR4YY-A1	Mummichog	6.2	4	female	4	no	≤ 30 cm
LPR4YY-A1	Mummichog	5.2	2	female	4	no	≤ 30 cm
LPR4YY-A1	Mummichog	6.2	5.5	female	4	no	≤ 30 cm
LPR4YY-A1	Mummichog	5.2	2.5	female	4	no	≤ 30 cm
LPR4YY-A1	Mummichog	6.9	5	female	4	no	≤ 30 cm
LPR4YY-A1	Mummichog	6.7	5	female	4	no	≤ 30 cm
LPR4YY-A1	Mummichog	5.5	3.5	female	4	no	≤ 30 cm
LPR4YY-A1	Mummichog	6.2	3.5	female	4	no	≤ 30 cm
LPR4YY-A1	Mummichog	4.5	1.5	female	4	no	≤ 30 cm
LPR4YY-A1	Mummichog	4.9	1.5	female	4	no	≤ 30 cm
LPR4YY-A1	Mummichog	4.6	1	female	4	no	≤ 30 cm
LPR4YY-A1	Mummichog	5.2	2	female	4	no	≤ 30 cm
LPR4YY-A1	Mummichog	5.7	3	female	4	no	≤ 30 cm
LPR4YY-A1	Mummichog	5.3	2.5	female	4	no	≤ 30 cm
LPR4YY-A1	Mummichog	4.7	2	female	4	no	≤ 30 cm
LPR4YY-A1	Mummichog	5.2	1.5	female	4	no	≤ 30 cm
LPR4YY-A1	Mummichog	6	4.5	female	4	no	≤ 30 cm
LPR4YY-A1	Mummichog	5.4	2.5	female	4	no	≤ 30 cm
LPR4YY-A1	Mummichog	5.8	3	female	4	no	≤ 30 cm
LPR4YY-A1	Mummichog	5	1.5	female	4	no	≤ 30 cm
LPR4YY-A1	Mummichog	4.9	1.5	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.7	2.5	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5	2	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.7	3.9	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.6	3.8	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	6.2	3.5	female	4	no	≤ 30 cm

LPR4YY-A2	Mummichog	6.4	4	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.7	2.5	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	6.5	4	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	6.4	3.5	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	7.3	6.1	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.6	2.5	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.8	3	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	6.5	4.5	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	4.7	1.8	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.8	3	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.9	3	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.2	2.1	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.9	3.5	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.5	2.1	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.3	2.1	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.8	2.9	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	6.2	3.5	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.8	3	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	6.4	4	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	6.7	4.1	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.2	2	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.2	2.2	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.2	2	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	6.4	3.5	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.9	2.9	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	6.5	3.1	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.7	3	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5	1.9	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	6.4	3.8	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.6	2.5	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	6.1	3.1	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.5	2.1	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	6.3	4	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.2	1.9	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.2	2	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.4	2	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.4	2	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.3	1.9	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.4	2.5	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	4.5	1.1	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	6.4	3.9	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.4	2.1	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	4.8	1.8	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5	1.9	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	4.3	1.5	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.6	2.1	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	6.4	4.1	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.7	3.1	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	7	4	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5	2	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5	1.9	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.2	2	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.3	1.9	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	6.2	3	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	6.7	3.9	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	6	3	female	4	no	≤ 30 cm

LPR4YY-A2	Mummichog	6	3.5	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	6.1	3.1	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.5	3	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.3	2.1	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	6	2.9	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	4.8	1.5	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	6.1	2.5	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	4.6	1.5	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	4.8	1.5	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.6	2.9	female	4	no	≤ 30 cm
LPR4YY-A2	Mummichog	5.3	2.5	female	4	no	≤ 30 cm
LPR5SS-A2	Mummichog	5.7	2.5	female	5	no	≤ 30 cm
LPR5SS-A2	Mummichog	4.2	1	male	5	no	≤ 30 cm
LPR5SS-A2	Mummichog	4.9	1	male	5	no	≤ 30 cm
LPR5SS-A6	Mummichog	4.8	1.5	female	5	no	≤ 30 cm
LPR5SS-A7	Mummichog	4.6	1	male	5	no	≤ 30 cm
LPR5TT-A1	Mummichog	5.2	2	female	5	no	≤ 30 cm
LPR5TT-A4	Mummichog	4.7	1.5	male	5	no	≤ 30 cm
LPR5TT-A4	Mummichog	4.5	1	male	5	no	≤ 30 cm
LPR5TT-A4	Mummichog	4.7	1.5	male	5	no	≤ 30 cm
LPR5TT-A4	Mummichog	8.4	8	female	5	no	≤ 30 cm
LPR5TT-A6	Mummichog	5.5	2	female	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	6	3	male	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	6	3	female	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	6	2.9	male	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	6.7	4.5	male	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	5.2	2.1	female	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	5.5	2.1	male	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	5.3	2	male	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	6.1	3.1	male	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	5.3	2.1	female	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	6.2	3.1	female	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	6.1	3.5	male	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	6.1	3.5	female	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	5.8	3	male	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	6.3	3.9	female	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	6.2	3.5	female	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	5.5	2.8	female	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	5.7	3	male	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	6	3	female	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	5.3	2	female	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	5.7	2.9	male	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	5.5	2.9	male	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	5.5	2.8	male	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	5.5	2.2	female	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	5.8	2.9	female	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	5.9	2.1	male	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	5.7	2.5	male	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	5.2	2	female	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	5.5	2.1	female	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	4.7	1.8	male	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	5.2	1.9	female	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	5.2	1.5	female	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	5.4	2	female	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	4.7	1.5	female	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	5.7	2.5	male	5	no	≤ 30 cm

LPR5TT-A10	Mummichog	4.2	1	female	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	5.7	2.1	female	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	6	2.9	female	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	5.3	1.5	female	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	5.2	2	female	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	5.1	1.9	female	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	4.9	1.8	female	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	5.4	2	female	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	4.3	1	female	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	5.1	1.5	female	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	4.7	1.5	female	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	4.8	1.5	female	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	4.8	1.9	female	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	4.9	1.5	female	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	4.7	1.1	female	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	4.6	1	female	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	3.8	1	female	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	5.5	2.1	female	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	5.3	1.5	female	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	6	2.9	female	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	4.2	1	female	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	4.7	1	female	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	4.5	1	female	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	5.6	2.9	female	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	3.6	1.5	female	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	5	1.5	female	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	4.8	1.9	female	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	4.5	1.5	female	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	4.9	1.9	male	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	5.3	2	male	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	4.5	6.5	male	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	5.4	2.1	male	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	5	1.9	male	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	4.7	1.5	male	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	5.6	2.9	male	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	5	1.8	male	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	5	1.5	male	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	4.5	1	male	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	4.8	1.8	male	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	4.6	1.5	male	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	5	1.9	male	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	5	2.1	male	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	5	2	male	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	5	1.9	male	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	5.1	2	male	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	5	2.1	male	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	5.2	2	male	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	5.3	2.1	male	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	5.5	2.9	male	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	5.7	2.5	male	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	5.7	3	male	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	5.7	2.5	male	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	5.7	2.5	male	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	4.8	1.5	male	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	4.7	1.5	male	5	no	≤ 30 cm
LPR5TT-A10	Mummichog	4.7	1	male	5	no	≤ 30 cm

LPR5TT-A5	Mummichog	3.1	0.5	female	5	no	≤ 30 cm
LPR5TT-A5	Mummichog	4.6	1	male	5	no	≤ 30 cm
LPR5TT-A5	Mummichog	4.2	1	male	5	no	≤ 30 cm
LPR5TT-A5	Mummichog	4.4	1	male	5	no	≤ 30 cm
LPR5TT-A5	Mummichog	3.1	0.5	male	5	no	≤ 30 cm
LPR5TT-A5	Mummichog	4.4	1	female	5	no	≤ 30 cm
LPR5TT-A5	Mummichog	5.1	2	female	5	no	≤ 30 cm
LPR5TT-A5	Mummichog	4.6	1	male	5	no	≤ 30 cm
LPR5TT-A5	Mummichog	4.5	0.5	female	5	no	≤ 30 cm
LPR5TT-A5	Mummichog	4.9	1	female	5	no	≤ 30 cm
LPR5TT-A5	Mummichog	5	1.5	female	5	no	≤ 30 cm
LPR5TT-A5	Mummichog	4.6	1	male	5	no	≤ 30 cm
LPR5TT-A5	Mummichog	4.7	1	male	5	no	≤ 30 cm
LPR5TT-A5	Mummichog	4	0.5	female	5	no	≤ 30 cm
LPR5TT-A4	Mummichog	5.2	2	male	5	no	≤ 30 cm
LPR5TT-A4	Mummichog	4.6	1	male	5	no	≤ 30 cm
LPR5TT-A4	Mummichog	4.8	1.5	male	5	no	≤ 30 cm
LPR5TT-A4	Mummichog	4.3	1	male	5	no	≤ 30 cm
LPR5TT-A4	Mummichog	4.4	1	male	5	no	≤ 30 cm
LPR5TT-A4	Mummichog	4.7	1	male	5	no	≤ 30 cm
LPR5TT-A4	Mummichog	5.6	2.5	female	5	no	≤ 30 cm
LPR5TT-A4	Mummichog	4.8	1.5	male	5	no	≤ 30 cm
LPR5TT-A4	Mummichog	5.2	1.5	male	5	no	≤ 30 cm
LPR5TT-A4	Mummichog	4.7	1	female	5	no	≤ 30 cm
LPR5TT-A4	Mummichog	4.8	1.5	female	5	no	≤ 30 cm
LPR5TT-A4	Mummichog	5.8	3	female	5	no	≤ 30 cm
LPR5TT-A4	Mummichog	5.9	3	female	5	no	≤ 30 cm
LPR5TT-A4	Mummichog	5.1	2	female	5	no	≤ 30 cm
LPR5TT-A4	Mummichog	2.9	0.5	female	5	no	≤ 30 cm
LPR5TT-A4	Mummichog	3.4	0.5	female	5	no	≤ 30 cm
LPR5TT-A4	Mummichog	4.9	1	female	5	no	≤ 30 cm
LPR5TT-A4	Mummichog	4.9	1	female	5	no	≤ 30 cm
LPR5TT-A4	Mummichog	3.9	0.5	female	5	no	≤ 30 cm
LPR5VV-A6	Mummichog	6.1	2.5	male	5	no	≤ 30 cm
LPR5VV-A6	Mummichog	4.4	0.6	female	5	no	≤ 30 cm
LPR5VV-A6	Mummichog	5	0.6	female	5	no	≤ 30 cm
LPR5VV-A6	Mummichog	4.7	1.9	male	5	no	≤ 30 cm
LPR5VV-A6	Mummichog	5.8	2.8	female	5	no	≤ 30 cm
LPR5VV-A6	Mummichog	5.5	2.8	male	5	no	≤ 30 cm
LPR5VV-A6	Mummichog	5.4	2.1	female	5	no	≤ 30 cm
LPR5VV-A6	Mummichog	4.9	1.9	female	5	no	≤ 30 cm
LPR5VV-A6	Mummichog	4.7	1.5	male	5	no	≤ 30 cm
LPR5VV-A6	Mummichog	4.7	0.6	male	5	no	≤ 30 cm
LPR5VV-A6	Mummichog	5.7	2.5	male	5	no	≤ 30 cm
LPR5VV-A5	Mummichog	5.5	2.1	male	5	no	≤ 30 cm
LPR5VV-A5	Mummichog	4.9	1.5	male	5	no	≤ 30 cm
LPR5VV-A7	Mummichog	5	2	female	5	no	≤ 30 cm
LPR5VV-A7	Mummichog	3.2	0.5	female	5	no	≤ 30 cm
LPR5VV-A7	Mummichog	4.3	1.1	male	5	no	≤ 30 cm
LPR5VV-A7	Mummichog	5.4	2	female	5	no	≤ 30 cm
LPR5VV-A7	Mummichog	5.5	2.1	female	5	no	≤ 30 cm
LPR5VV-A7	Mummichog	5.5	2.1	male	5	no	≤ 30 cm
LPR5VV-A7	Mummichog	4.5	1.5	female	5	no	≤ 30 cm
LPR5VV-A7	Mummichog	4.8	2	female	5	no	≤ 30 cm
LPR5VV-A7	Mummichog	4.8	1.5	female	5	no	≤ 30 cm
LPR5VV-A7	Mummichog	4.8	1.9	male	5	no	≤ 30 cm

LPR5VV-A7	Mummichog	4.8	1.8	male	5	no	≤ 30 cm
LPR5VV-A7	Mummichog	4.7	1.8	male	5	no	≤ 30 cm
LPR5VV-A7	Mummichog	4.7	1.9	female	5	no	≤ 30 cm
LPR5VV-A7	Mummichog	4.7	1.8	female	5	no	≤ 30 cm
LPR5VV-A7	Mummichog	4.7	1.9	female	5	no	≤ 30 cm
LPR5VV-A7	Mummichog	5.8	2.5	female	5	no	≤ 30 cm
LPR5VV-A7	Mummichog	6.1	3	female	5	no	≤ 30 cm
LPR5VV-A7	Mummichog	6.2	3.5	female	5	no	≤ 30 cm
LPR5VV-A8	Mummichog	6	3.1	female	5	no	≤ 30 cm
LPR5VV-A8	Mummichog	5.6	3	female	5	no	≤ 30 cm
LPR5VV-A8	Mummichog	5.9	3.1	male	5	no	≤ 30 cm
LPR5VV-A8	Mummichog	5.7	3	male	5	no	≤ 30 cm
LPR5VV-A8	Mummichog	5.7	2.9	male	5	no	≤ 30 cm
LPR5VV-A8	Mummichog	5.1	2	male	5	no	≤ 30 cm
LPR5VV-A8	Mummichog	5	2	female	5	no	≤ 30 cm
LPR5VV-A8	Mummichog	5.1	2	male	5	no	≤ 30 cm
LPR5VV-A8	Mummichog	5.5	2.1	female	5	no	≤ 30 cm
LPR5VV-A8	Mummichog	5.3	2	female	5	no	≤ 30 cm
LPR5VV-A8	Mummichog	5	2	female	5	no	≤ 30 cm
LPR5VV-A8	Mummichog	4.8	2	male	5	no	≤ 30 cm
LPR5VV-A8	Mummichog	4.9	2	male	5	no	≤ 30 cm
LPR5VV-A8	Mummichog	5	2	female	5	no	≤ 30 cm
LPR5VV-A8	Mummichog	5.2	2.5	female	5	no	≤ 30 cm
LPR5VV-A8	Mummichog	4.7	1.5	male	5	no	≤ 30 cm
LPR5VV-A8	Mummichog	4.5	1.2	female	5	no	≤ 30 cm
LPR5WW-A12	Mummichog	4.6	1.5	male	5	no	≤ 30 cm
LPR5WW-A12	Mummichog	4.7	1.5	male	5	no	≤ 30 cm
LPR5WW-A12	Mummichog	4.8	1	male	5	no	≤ 30 cm
LPR5WW-A12	Mummichog	5	1.5	male	5	no	≤ 30 cm
LPR5WW-A12	Mummichog	4.5	1	male	5	no	≤ 30 cm
LPR5WW-A12	Mummichog	5.1	1.5	male	5	no	≤ 30 cm
LPR5WW-A12	Mummichog	4.9	1	male	5	no	≤ 30 cm
LPR5WW-A12	Mummichog	5.5	1.5	female	5	no	≤ 30 cm
LPR5WW-A12	Mummichog	6.2	3	female	5	no	≤ 30 cm
LPR5WW-A11	Mummichog	5	1.5	male	5	no	≤ 30 cm
LPR5WW-A11	Mummichog	4.9	1.5	male	5	no	≤ 30 cm
LPR5WW-A11	Mummichog	6	2	male	5	no	≤ 30 cm
LPR5WW-A11	Mummichog	5	1.5	male	5	no	≤ 30 cm
LPR5WW-A11	Mummichog	4.6	1	female	5	no	≤ 30 cm
LPR5WW-A11	Mummichog	5.6	2.5	female	5	no	≤ 30 cm
LPR5WW-A11	Mummichog	6.3	3.5	female	5	no	≤ 30 cm
LPR5WW-A11	Mummichog	7.1	5	female	5	no	≤ 30 cm
LPR5WW-A10	Mummichog	4.6	1.5	female	5	no	≤ 30 cm
LPR5WW-A10	Mummichog	4.9	1.5	female	5	no	≤ 30 cm
LPR5WW-A10	Mummichog	4.7	1	female	5	no	≤ 30 cm
LPR5WW-A10	Mummichog	3.3	0.5	female	5	no	≤ 30 cm
LPR5WW-A10	Mummichog	4.4	1	male	5	no	≤ 30 cm
LPR5WW-A10	Mummichog	4.8	1.5	male	5	no	≤ 30 cm
LPR5WW-A13	Mummichog	5.5	2.5	male	5	no	≤ 30 cm
LPR5WW-A13	Mummichog	5.2	2	male	5	no	≤ 30 cm
LPR5WW-A13	Mummichog	5.9	3.5	male	5	no	≤ 30 cm
LPR5WW-A13	Mummichog	4.6	1	male	5	no	≤ 30 cm
LPR5WW-A13	Mummichog	5.1	1	male	5	no	≤ 30 cm
LPR5WW-A13	Mummichog	5.3	2	female	5	no	≤ 30 cm
LPR5WW-A13	Mummichog	4.4	1	female	5	no	≤ 30 cm
LPR5WW-A13	Mummichog	4.6	1	female	5	no	≤ 30 cm

LPR5WW-A13	Mummichog	5.5	2	female	5	no	≤ 30 cm
LPR5WW-A13	Mummichog	4.5	1.5	female	5	no	≤ 30 cm
LPR5WW-A7	Mummichog	5	1.5	female	5	no	≤ 30 cm
LPR5WW-A9	Mummichog	5.1	3	female	5	no	≤ 30 cm
LPR5WW-A4	Mummichog	4.3	1	female	5	no	≤ 30 cm
LPR6TT-A6	Mummichog	5	2	female	6	yes	≤ 30 cm
LPR6TT-A6	Mummichog	6.5	4.5	female	6	yes	≤ 30 cm
LPR6TT-A6	Mummichog	5.3	2	female	6	yes	≤ 30 cm
LPR6TT-A6	Mummichog	4.6	1.9	female	6	yes	≤ 30 cm
LPR6TT-A6	Mummichog	4.8	1.9	female	6	yes	≤ 30 cm
LPR6TT-A6	Mummichog	5.6	2.5	male	6	yes	≤ 30 cm
LPR6TT-A6	Mummichog	5.1	2.1	female	6	yes	≤ 30 cm
LPR6TT-A6	Mummichog	5	2	female	6	yes	≤ 30 cm
LPR6TT-A6	Mummichog	5	2	female	6	yes	≤ 30 cm
LPR6TT-A6	Mummichog	4.9	1.9	female	6	yes	≤ 30 cm
LPR6TT-A6	Mummichog	5.1	2.1	female	6	yes	≤ 30 cm
LPR6TT-A6	Mummichog	5	1.9	female	6	yes	≤ 30 cm
LPR6TT-A6	Mummichog	4.7	1.9	female	6	yes	≤ 30 cm
LPR6TT-A6	Mummichog	5.4	2.5	female	6	yes	≤ 30 cm
LPR6TT-A6	Mummichog	4.5	1.6	female	6	yes	≤ 30 cm
LPR6TT-A6	Mummichog	4.8	1.9	female	6	yes	≤ 30 cm
LPR6TT-A6	Mummichog	4.6	1.5	female	6	yes	≤ 30 cm
LPR6TT-A6	Mummichog	5.1	2	female	6	yes	≤ 30 cm
LPR6TT-A6	Mummichog	4.7	1.6	female	6	yes	≤ 30 cm
LPR6TT-A6	Mummichog	4.7	1.9	female	6	yes	≤ 30 cm
LPR6TT-A6	Mummichog	4.5	1.6	female	6	yes	≤ 30 cm
LPR6TT-A6	Mummichog	5.7	2	female	6	yes	≤ 30 cm
LPR6TT-A6	Mummichog	4.8	1.9	male	6	yes	≤ 30 cm
LPR6TT-A6	Mummichog	4.6	1.6	female	6	yes	≤ 30 cm
LPR6TT-A6	Mummichog	4.5	1.5	male	6	yes	≤ 30 cm
LPR6TT-A6	Mummichog	5	1.9	female	6	yes	≤ 30 cm
LPR6TT-A6	Mummichog	5	1.5	female	6	yes	≤ 30 cm
LPR6TT-A6	Mummichog	3.6	0.6	female	6	yes	≤ 30 cm
LPR6TT-A5	Mummichog	5.1	2.1	male	6	yes	≤ 30 cm
LPR6TT-A5	Mummichog	4.8	2	male	6	yes	≤ 30 cm
LPR6TT-A5	Mummichog	4.9	2	male	6	yes	≤ 30 cm
LPR6TT-A5	Mummichog	4.7	1.9	male	6	yes	≤ 30 cm
LPR6TT-A5	Mummichog	5.2	2.1	female	6	yes	≤ 30 cm
LPR6TT-A5	Mummichog	6.1	3.5	female	6	yes	≤ 30 cm
LPR6TT-A5	Mummichog	5.5	3	female	6	yes	≤ 30 cm
LPR6TT-A5	Mummichog	4.8	2	female	6	yes	≤ 30 cm
LPR6TT-A5	Mummichog	4.8	2	male	6	yes	≤ 30 cm
LPR6TT-A5	Mummichog	4.9	2	female	6	yes	≤ 30 cm
LPR6TT-A5	Mummichog	5.2	2.1	female	6	yes	≤ 30 cm
LPR6TT-A5	Mummichog	5.3	2.8	female	6	yes	≤ 30 cm
LPR6TT-A5	Mummichog	5.2	2.1	female	6	yes	≤ 30 cm
LPR6TT-A5	Mummichog	4.6	1.9	female	6	yes	≤ 30 cm
LPR6TT-A5	Mummichog	5.1	2.1	female	6	yes	≤ 30 cm
LPR6TT-A5	Mummichog	6	3.5	female	6	yes	≤ 30 cm
LPR6TT-A5	Mummichog	5.1	2.5	female	6	yes	≤ 30 cm
LPR6TT-A5	Mummichog	6.5	4.5	female	6	yes	≤ 30 cm
LPR6TT-A5	Mummichog	5.9	3.5	female	6	yes	≤ 30 cm
LPR6TT-A5	Mummichog	5.1	2	female	6	yes	≤ 30 cm
LPR6TT-A5	Mummichog	4.5	1.8	female	6	yes	≤ 30 cm
LPR6TT-A5	Mummichog	4.9	2	female	6	yes	≤ 30 cm
LPR6TT-A5	Mummichog	5.1	1.9	female	6	yes	≤ 30 cm

LPR6TT-A5	Mummichog	4.9	1.9	male	6	yes	≤ 30 cm
LPR6TT-A5	Mummichog	5.2	2.1	female	6	yes	≤ 30 cm
LPR6TT-A5	Mummichog	5.1	2.1	female	6	yes	≤ 30 cm
LPR6TT-A5	Mummichog	4.6	1.9	male	6	yes	≤ 30 cm
LPR6TT-A5	Mummichog	4.8	1.9	male	6	yes	≤ 30 cm
LPR6TT-A5	Mummichog	5	2	male	6	yes	≤ 30 cm
LPR6TT-A5	Mummichog	4.9	2	male	6	yes	≤ 30 cm
LPR6TT-A5	Mummichog	5.8	3.5	female	6	yes	≤ 30 cm
LPR6TT-A5	Mummichog	4.8	2	female	6	yes	≤ 30 cm
LPR6TT-A5	Mummichog	4.8	1.9	female	6	yes	≤ 30 cm
LPR6TT-A5	Mummichog	4.5	1.5	female	6	yes	≤ 30 cm
LPR6TT-A5	Mummichog	4.5	1.5	male	6	yes	≤ 30 cm
LPR6TT-A5	Mummichog	4.5	1.5	female	6	yes	≤ 30 cm
LPR6TT-A5	Mummichog	5.4	2.5	female	6	yes	≤ 30 cm
LPR6TT-A5	Mummichog	4.9	2	female	6	yes	≤ 30 cm
LPR6TT-A5	Mummichog	5.8	3	female	6	yes	≤ 30 cm
LPR6TT-A5	Mummichog	4.7	1.9	male	6	yes	≤ 30 cm
LPR6TT-A5	Mummichog	4.7	2	female	6	yes	≤ 30 cm
LPR6TT-A5	Mummichog	5.6	2.1	female	6	yes	≤ 30 cm
LPR6TT-A5	Mummichog	5.4	2.5	female	6	yes	≤ 30 cm
LPR6TT-A5	Mummichog	4.6	1.9	female	6	yes	≤ 30 cm
LPR6TT-A5	Mummichog	2.8	0.5	female	6	yes	≤ 30 cm
LPR6TT-A5	Mummichog	4.7	1.9	female	6	yes	≤ 30 cm
LPR6TT-A5	Mummichog	4.1	1.1	male	6	yes	≤ 30 cm
LPR6TT-A5	Mummichog	7.7	5.9	female	6	yes	≤ 30 cm
LPR6TT-A5	Mummichog	8.7	8	female	6	yes	≤ 30 cm
LPR6TT-A5	Mummichog	5.8	3.1	male	6	yes	≤ 30 cm
LPR6TT-A5	Mummichog	5.2	2.8	female	6	yes	≤ 30 cm
LPR6TT-A5	Mummichog	5	2	female	6	yes	≤ 30 cm
LPR6TT-A5	Mummichog	5.4	2.5	male	6	yes	≤ 30 cm
LPR6TT-A5	Mummichog	4.5	1.5	female	6	yes	≤ 30 cm
LPR6TT-A5	Mummichog	4.8	2.1	female	6	yes	≤ 30 cm
LPR6TT-A5	Mummichog	4.8	1.9	male	6	yes	≤ 30 cm
LPR6TT-A5	Mummichog	4.5	1.5	female	6	yes	≤ 30 cm
LPR6TT-A5	Mummichog	4.8	1.5	male	6	yes	≤ 30 cm
LPR6TT-A5	Mummichog	5.2	1.9	female	6	yes	≤ 30 cm
LPR8AB-A4	Mummichog	6.1	2	female	8	yes	≤ 30 cm
LPR8AB-A5	Mummichog	5.8	2	male	8	yes	≤ 30 cm
LPR8AB-A3	Mummichog	5.2	1	female	8	yes	≤ 30 cm
LPR8AB-A3	Mummichog	5.8	2	female	8	yes	≤ 30 cm
LPR8AB-A1	Mummichog	7.6	4.5	male	8	yes	≤ 30 cm
LPR8AB-A1	Mummichog	5.9	1.5	female	8	yes	≤ 30 cm
LPR6L-A1	Northern pike	74	2800	indeterminant	6	yes	> 30 cm
LPR5R-A1	Northern pike	33	160	indeterminant	5	no	> 30 cm
LPR1O-B4	Northern searobin	3.8	0.5	indeterminant	1	no	≤ 30 cm
LPR6I-A4	Pumpkinseed	12.9	48	female	6	yes	≤ 30 cm
LPR6J-C4	Pumpkinseed	10.7	24	female	6	yes	≤ 30 cm
LPR6M-A1	Pumpkinseed	12	34	female	6	yes	≤ 30 cm
LPR7U-A1	Pumpkinseed	11.6	40	female	7	yes	≤ 30 cm
LPR7U-A1	Pumpkinseed	13.6	50	female	7	yes	≤ 30 cm
LPR8KK-A1	Pumpkinseed	7.6	9	indeterminant	8	yes	≤ 30 cm
LPR8KK-A1	Pumpkinseed	7.5	8.5	indeterminant	8	yes	≤ 30 cm
LPR8KK-A1	Pumpkinseed	8.1	7.5	indeterminant	8	yes	≤ 30 cm
LPR8KK-A1	Pumpkinseed	8	10.5	indeterminant	8	yes	≤ 30 cm
LPR7FF-C2	Pumpkinseed	7.3	8	indeterminant	7	yes	≤ 30 cm
LPR7FF-C3	Pumpkinseed	7.8	9	indeterminant	7	yes	≤ 30 cm

LPR8VV-C2	Pumpkinseed	7	6	indeterminant	8	yes	≤ 30 cm
LPR7TT-A2	Pumpkinseed	14.9	80	indeterminant	7	yes	≤ 30 cm
LPR7TT-A1	Pumpkinseed	15	85	indeterminant	7	yes	≤ 30 cm
LPR7TT-A8	Pumpkinseed	14.1	60	indeterminant	7	yes	≤ 30 cm
LPR7F-C2	Redbreast sunfish	15.8	74	indeterminant	7	yes	≤ 30 cm
LPR8U-A3	Redbreast sunfish	14.6	53	female	8	yes	≤ 30 cm
LPR8W-A2	Redbreast sunfish	14.7	54	indeterminant	8	yes	≤ 30 cm
LPR8W-A2	Redbreast sunfish	14.3	50	female	8	yes	≤ 30 cm
LPR8Y-A1	Redbreast sunfish	10.1	18	indeterminant	8	yes	≤ 30 cm
LPR8LL-A1	Redbreast sunfish	7.7	9.5	indeterminant	8	yes	≤ 30 cm
LPR8LL-A1	Redbreast sunfish	5.3	2	indeterminant	8	yes	≤ 30 cm
LPR8LL-A1	Redbreast sunfish	5.2	2	indeterminant	8	yes	≤ 30 cm
LPR8LL-A1	Redbreast sunfish	4.7	1.5	indeterminant	8	yes	≤ 30 cm
LPR8LL-A1	Redbreast sunfish	3.9	0.5	indeterminant	8	yes	≤ 30 cm
LPR7LL-A2	Redbreast sunfish	8.2	11	indeterminant	7	yes	≤ 30 cm
LPR7GG-A2	Redfin pickerel	11.2	10	male	7	yes	≤ 30 cm
LPR6H-B9	Rock bass	16.1	88	indeterminant	6	yes	≤ 30 cm
LPR8L-A4	Rock bass	9.9	16	indeterminant	8	yes	≤ 30 cm
LPR8Y-A2	Rock bass	15.5	68	indeterminant	8	yes	≤ 30 cm
LPR8Y-A3	Rock bass	19.3	142	indeterminant	8	yes	≤ 30 cm
LPR8Y-A3	Rock bass	13.4	54	indeterminant	8	yes	≤ 30 cm
LPR8Y-A3	Rock bass	10.2	19	indeterminant	8	yes	≤ 30 cm
LPR8Y-A3	Rock bass	10.4	23	indeterminant	8	yes	≤ 30 cm
LPR8Y-A5	Rock bass	13.6	48	indeterminant	8	yes	≤ 30 cm
LPR8Y-A5	Rock bass	15.1	62	indeterminant	8	yes	≤ 30 cm
LPR8TT-C5	Rock bass	3.9	1	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	Satinfin shiner	7.9	4.5	female	8	yes	≤ 30 cm
LPR8Z-A5	Satinfin shiner	8.5	6	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	Satinfin shiner	8.5	6	female	8	yes	≤ 30 cm
LPR1Q-A4	Silver perch	3.9	0.6	indeterminant	1	no	≤ 30 cm
LPR8AB-A4	Silver shiner	6.6	3	indeterminant	8	yes	≤ 30 cm
LPR8AB-A4	Silver shiner	6.7	3.5	indeterminant	8	yes	≤ 30 cm
LPR8AB-A4	Silver shiner	7.5	4.5	indeterminant	8	yes	≤ 30 cm
LPR8AB-A4	Silver shiner	8	4.5	indeterminant	8	yes	≤ 30 cm
LPR8AB-A4	Silver shiner	6.6	3	indeterminant	8	yes	≤ 30 cm
LPR8AB-A4	Silver shiner	7.2	4.5	indeterminant	8	yes	≤ 30 cm
LPR8AB-A4	Silver shiner	7.4	3	indeterminant	8	yes	≤ 30 cm
LPR8AB-A4	Silver shiner	6.7	3	indeterminant	8	yes	≤ 30 cm
LPR8AB-A4	Silver shiner	6.3	2	indeterminant	8	yes	≤ 30 cm
LPR8AB-A4	Silver shiner	5.3	2	indeterminant	8	yes	≤ 30 cm
LPR8AB-A4	Silver shiner	7.2	4	indeterminant	8	yes	≤ 30 cm
LPR8AB-A4	Silver shiner	9.1	8.9	indeterminant	8	yes	≤ 30 cm
LPR8AB-A4	Silver shiner	6.7	3.2	indeterminant	8	yes	≤ 30 cm
LPR8AB-A4	Silver shiner	7.3	4.1	indeterminant	8	yes	≤ 30 cm
LPR8AB-A4	Silver shiner	7.5	5.1	indeterminant	8	yes	≤ 30 cm
LPR8AB-A4	Silver shiner	6.7	3.5	indeterminant	8	yes	≤ 30 cm
LPR8AB-A4	Silver shiner	6.5	3.9	indeterminant	8	yes	≤ 30 cm
LPR8AB-A4	Silver shiner	6.6	4.5	indeterminant	8	yes	≤ 30 cm
LPR8AB-A4	Silver shiner	7	4.1	indeterminant	8	yes	≤ 30 cm
LPR8AB-A4	Silver shiner	6.5	3.2	indeterminant	8	yes	≤ 30 cm
LPR8AB-A4	Silver shiner	6.5	3.9	indeterminant	8	yes	≤ 30 cm
LPR8AB-A4	Silver shiner	6.3	3.1	indeterminant	8	yes	≤ 30 cm
LPR8AB-A4	Silver shiner	7.1	4	indeterminant	8	yes	≤ 30 cm
LPR8AB-A4	Silver shiner	6.5	3.5	indeterminant	8	yes	≤ 30 cm
LPR8AB-A4	Silver shiner	7	3.9	indeterminant	8	yes	≤ 30 cm
LPR8AB-A4	Silver shiner	6.8	4	indeterminant	8	yes	≤ 30 cm

LPR8AB-A4	Silver shiner	6.5	3.5	indeterminant	8	yes	≤ 30 cm
LPR8AB-A4	Silver shiner	6.6	3.9	indeterminant	8	yes	≤ 30 cm
LPR8AB-A4	Silver shiner	6.5	3.9	indeterminant	8	yes	≤ 30 cm
LPR8AB-A4	Silver shiner	7	4.1	indeterminant	8	yes	≤ 30 cm
LPR8AB-A4	Silver shiner	6.5	3.1	indeterminant	8	yes	≤ 30 cm
LPR8AB-A4	Silver shiner	7.5	5.5	indeterminant	8	yes	≤ 30 cm
LPR8AB-A4	Silver shiner	6.6	3.1	indeterminant	8	yes	≤ 30 cm
LPR8AB-A4	Silver shiner	6.5	4.1	indeterminant	8	yes	≤ 30 cm
LPR8AB-A4	Silver shiner	6.5	3.1	indeterminant	8	yes	≤ 30 cm
LPR8AB-A4	Silver shiner	7.6	5.2	indeterminant	8	yes	≤ 30 cm
LPR8AB-A4	Silver shiner	7.1	4.1	indeterminant	8	yes	≤ 30 cm
LPR8AB-A4	Silver shiner	6.8	3.9	indeterminant	8	yes	≤ 30 cm
LPR8AB-A4	Silver shiner	7.1	3.8	indeterminant	8	yes	≤ 30 cm
LPR8AB-A4	Silver shiner	6.4	3.1	indeterminant	8	yes	≤ 30 cm
LPR8AB-A4	Silver shiner	6.6	3.4	indeterminant	8	yes	≤ 30 cm
LPR8AB-A4	Silver shiner	6.7	3.9	indeterminant	8	yes	≤ 30 cm
LPR8AB-A4	Silver shiner	6.8	4.2	indeterminant	8	yes	≤ 30 cm
LPR8AB-A4	Silver shiner	6.7	3.2	indeterminant	8	yes	≤ 30 cm
LPR8AB-A4	Silver shiner	6.5	3.5	indeterminant	8	yes	≤ 30 cm
LPR8AB-A4	Silver shiner	5.9	2.9	indeterminant	8	yes	≤ 30 cm
LPR8AB-A1	Silver shiner	6.7	2.1	indeterminant	8	yes	≤ 30 cm
LPR8AB-A1	Silver shiner	6.7	3.2	indeterminant	8	yes	≤ 30 cm
LPR8AB-A1	Silver shiner	6.8	3.1	indeterminant	8	yes	≤ 30 cm
LPR8AB-A1	Silver shiner	6.4	3.4	indeterminant	8	yes	≤ 30 cm
LPR8AB-A1	Silver shiner	6.8	3.6	indeterminant	8	yes	≤ 30 cm
LPR8AB-A1	Silver shiner	5.9	3.9	indeterminant	8	yes	≤ 30 cm
LPR8AB-A1	Silver shiner	6.4	3.2	indeterminant	8	yes	≤ 30 cm
LPR8AB-A1	Silver shiner	7.4	4.9	indeterminant	8	yes	≤ 30 cm
LPR8AB-A1	Silver shiner	6.6	3.1	indeterminant	8	yes	≤ 30 cm
LPR8AB-A3	Silver shiner	10.3	12.1	indeterminant	8	yes	≤ 30 cm
LPR8AB-A3	Silver shiner	8.8	10.1	indeterminant	8	yes	≤ 30 cm
LPR8AB-A3	Silver shiner	6.2	2.9	indeterminant	8	yes	≤ 30 cm
LPR8AB-A3	Silver shiner	6.8	3.5	indeterminant	8	yes	≤ 30 cm
LPR8AB-A3	Silver shiner	7.2	4.5	indeterminant	8	yes	≤ 30 cm
LPR8AB-A5	Silver shiner	6.6	2.6	indeterminant	8	yes	≤ 30 cm
LPR8AB-A5	Silver shiner	6.7	3.2	indeterminant	8	yes	≤ 30 cm
LPR4S-A1	Smallmouth bass	29.4	308	indeterminant	4	no	≤ 30 cm
LPR4S-A2	Smallmouth bass	23.4	158	indeterminant	4	no	≤ 30 cm
LPR5Q-A2	Smallmouth bass	31.9	373	indeterminant	5	no	> 30 cm
LPR5R-A1	Smallmouth bass	22.7	140	indeterminant	5	no	≤ 30 cm
LPR5T-A2	Smallmouth bass	9.7	12	indeterminant	5	no	≤ 30 cm
LPR6L-A1	Smallmouth bass	27	225	male	6	yes	≤ 30 cm
LPR6L-A2	Smallmouth bass	31.2	344	female	6	yes	> 30 cm
LPR6P-C1	Smallmouth bass	30.5	350	female	6	yes	> 30 cm
LPR8U-A4	Smallmouth bass	20.4	114	indeterminant	8	yes	≤ 30 cm
LPR8V-A5	Smallmouth bass	24.9	184	indeterminant	8	yes	≤ 30 cm
LPR8W-A5	Smallmouth bass	15.4	42	indeterminant	8	yes	≤ 30 cm
LPR8X-A1	Smallmouth bass	26.2	176	female	8	yes	≤ 30 cm
LPR8X-A2	Smallmouth bass	27.9	266	female	8	yes	≤ 30 cm
LPR8Z-A3	Smallmouth bass	19	109	indeterminant	8	yes	≤ 30 cm
LPR4TT-A5	Smallmouth bass	8.9	5	indeterminant	4	no	≤ 30 cm
LPR7UU-A11	Smallmouth bass	11.6	15.1	indeterminant	7	yes	≤ 30 cm
LPR7UU-A8	Smallmouth bass	7.1	4.6	indeterminant	7	yes	≤ 30 cm
LPR8AB-A3	Smallmouth bass	6.7	35	indeterminant	8	yes	≤ 30 cm
LPR8AB-A5	Smallmouth bass	7.4	5	indeterminant	8	yes	≤ 30 cm
LPR8Z-A4	Spineycheek crayfish	4.2	2	indeterminant	8	yes	≤ 30 cm

LPR8Z-A3	Spineycheek crayfish	4.4	2.3	indeterminant	8	yes	≤ 30 cm
LPR8Y-A3	Spineycheek crayfish	4.9	3	indeterminant	8	yes	≤ 30 cm
LPR8Y-A3	Spineycheek crayfish	4.9	3	indeterminant	8	yes	≤ 30 cm
LPR7I-C4	Spineycheek crayfish	8.1	20	indeterminant	7	yes	≤ 30 cm
LPR5B-B5	Spottail shiner	10	9	male	5	no	≤ 30 cm
LPR5P-A5	Spottail shiner	6.2	2	female	5	no	≤ 30 cm
LPR6C-C1	Spottail shiner	5.7	1.5	indeterminant	6	yes	≤ 30 cm
LPR8Z-A5	Spottail shiner	9.3	8	male	8	yes	≤ 30 cm
LPR8Z-A5	Spottail shiner	9.3	7	male	8	yes	≤ 30 cm
LPR4II-A26	Spottail shiner	4	0.5	indeterminant	4	no	≤ 30 cm
LPR8SS-A2	Spottail shiner	4.5	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A1	Spottail shiner	4.8	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A1	Spottail shiner	4.7	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A1	Spottail shiner	5	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A1	Spottail shiner	4	0.5	indeterminant	8	yes	≤ 30 cm
LPR8YY-A1	Spottail shiner	5	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A1	Spottail shiner	4.5	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A1	Spottail shiner	4.8	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A1	Spottail shiner	4.9	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A1	Spottail shiner	4.6	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A1	Spottail shiner	4.8	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A1	Spottail shiner	4.5	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A1	Spottail shiner	4.8	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A1	Spottail shiner	4.8	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A1	Spottail shiner	9.1	7	indeterminant	8	yes	≤ 30 cm
LPR8YY-A1	Spottail shiner	5.2	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A1	Spottail shiner	5	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A1	Spottail shiner	4.7	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A1	Spottail shiner	5.4	0.5	indeterminant	8	yes	≤ 30 cm
LPR8YY-A1	Spottail shiner	4.3	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A1	Spottail shiner	5	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A1	Spottail shiner	5	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A1	Spottail shiner	4.9	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A1	Spottail shiner	4.8	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A1	Spottail shiner	5	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A1	Spottail shiner	4.9	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A1	Spottail shiner	4.8	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A1	Spottail shiner	4.5	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A1	Spottail shiner	4.4	0.5	indeterminant	8	yes	≤ 30 cm
LPR8YY-A1	Spottail shiner	4.7	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A1	Spottail shiner	4.9	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A1	Spottail shiner	4.7	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A1	Spottail shiner	4.8	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A1	Spottail shiner	4.6	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A1	Spottail shiner	4.8	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A1	Spottail shiner	4.7	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A1	Spottail shiner	4.9	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A1	Spottail shiner	4.5	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A1	Spottail shiner	5	0.5	indeterminant	8	yes	≤ 30 cm
LPR8YY-A1	Spottail shiner	4.8	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A1	Spottail shiner	5.1	1.5	indeterminant	8	yes	≤ 30 cm
LPR8YY-A1	Spottail shiner	4.7	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A1	Spottail shiner	4.7	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A1	Spottail shiner	4.7	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A1	Spottail shiner	5	1.5	indeterminant	8	yes	≤ 30 cm
LPR8YY-A1	Spottail shiner	4.4	1	indeterminant	8	yes	≤ 30 cm

LPR8YY-A2	Spottail shiner	5.2	1.5	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	9	7	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	4.8	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	4.8	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	5.3	1.5	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	5.2	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	4.6	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	4.8	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	4.9	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	5.1	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	5.3	1.5	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	4.9	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	5.1	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	5	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	4.5	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	4.6	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	4.5	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	4.7	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	5.1	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	5.1	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	4.5	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	5	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	5	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	5.5	2	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	5.1	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	4.3	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	4.7	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	5	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	5.3	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	4.8	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	4.8	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	4.8	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	5	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	5.2	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	5.3	1.5	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	4.9	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	5	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	4.7	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	4.8	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	5.2	1.5	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	5.2	1.5	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	5.2	1.5	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	5.3	1.5	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	4.4	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	5.4	1.5	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	4.7	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	5.3	1.5	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	5.3	1.5	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	5	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	4.6	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	5	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	4.2	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	5.2	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	5	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	5	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	5	1.5	indeterminant	8	yes	≤ 30 cm

LPR8YY-A2	Spottail shiner	5	1.5	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	5.1	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	5.2	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	5	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	5	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	5.1	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	5.3	1.5	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	5	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	5.2	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	4.7	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	5.3	1.5	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	4.9	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	5	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	4.9	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	5.2	1.5	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	4.8	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	5	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	5.1	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	5	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	4.5	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	5	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	5.2	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	5.1	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	5.1	1.5	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	5.2	1.5	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	5	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	5.3	1.5	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	5.3	1.5	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	5	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	5	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	5	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	5	1.5	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	5.1	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	5.1	1.5	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Spottail shiner	5.1	1	indeterminant	8	yes	≤ 30 cm
LPR4TT-A8	Spottail shiner	7	1	indeterminant	4	no	≤ 30 cm
LPR4TT-A8	Spottail shiner	7	1	indeterminant	4	no	≤ 30 cm
LPR4TT-A8	Spottail shiner	7	1	indeterminant	4	no	≤ 30 cm
LPR4TT-A8	Spottail shiner	7.3	1	indeterminant	4	no	≤ 30 cm
LPR4TT-A8	Spottail shiner	7.2	1.5	indeterminant	4	no	≤ 30 cm
LPR4TT-A5	Spottail shiner	7.7	1.5	indeterminant	4	no	≤ 30 cm
LPR5SS-A5	Spottail shiner	5.7	1.5	indeterminant	5	no	≤ 30 cm
LPR5SS-A5	Spottail shiner	5.2	1	indeterminant	5	no	≤ 30 cm
LPR5SS-A5	Spottail shiner	5.6	2	indeterminant	5	no	≤ 30 cm
LPR5SS-A5	Spottail shiner	6	2	indeterminant	5	no	≤ 30 cm
LPR5SS-A5	Spottail shiner	5.1	1	indeterminant	5	no	≤ 30 cm
LPR5SS-A5	Spottail shiner	5.2	1.5	indeterminant	5	no	≤ 30 cm
LPR5SS-A5	Spottail shiner	5.6	1	indeterminant	5	no	≤ 30 cm
LPR5SS-A5	Spottail shiner	5.9	1	indeterminant	5	no	≤ 30 cm
LPR5SS-A4	Spottail shiner	5	1	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	Spottail shiner	7	1.5	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	Spottail shiner	7.4	1.5	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	Spottail shiner	7.7	2	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	Spottail shiner	6.5	0.5	indeterminant	5	no	≤ 30 cm
LPR5TT-A1	Spottail shiner	5.7	1	indeterminant	5	no	≤ 30 cm
LPR5TT-A1	Spottail shiner	5.3	1	indeterminant	5	no	≤ 30 cm

LPR5VV-A6	Spottail shiner	6	1.9	indeterminant	5	no	≤ 30 cm
LPR5VV-A5	Spottail shiner	5.6	1.8	indeterminant	5	no	≤ 30 cm
LPR5VV-A5	Spottail shiner	6	2	indeterminant	5	no	≤ 30 cm
LPR5VV-A5	Spottail shiner	5.8	1.9	indeterminant	5	no	≤ 30 cm
LPR5VV-A5	Spottail shiner	6.2	2.1	indeterminant	5	no	≤ 30 cm
LPR5VV-A5	Spottail shiner	5.8	2	indeterminant	5	no	≤ 30 cm
LPR5VV-A7	Spottail shiner	5.5	1.5	indeterminant	5	no	≤ 30 cm
LPR7UU-A8	Spottail shiner	5.1	1.8	indeterminant	7	yes	≤ 30 cm
LPR7VV-A2	Spottail shiner	5.1	1.1	indeterminant	7	yes	≤ 30 cm
LPR6TT-A2	Striped bass	6.3	3.1	indeterminant	6	yes	≤ 30 cm
LPR4TT-A6	Striped bass	10.2	9	indeterminant	4	no	≤ 30 cm
LPR6TT-A2	Striped bass	11.3	14.1	indeterminant	6	yes	≤ 30 cm
LPR8AB-A4	Striped bass	11.5	16	indeterminant	8	yes	≤ 30 cm
LPR6TT-A2	Striped bass	11.6	16.5	indeterminant	6	yes	≤ 30 cm
LPR5T-A1	Striped bass	12.6	18	indeterminant	5	no	≤ 30 cm
LPR6TT-A2	Striped bass	12.9	22.5	indeterminant	6	yes	≤ 30 cm
LPR4S-A2	Striped bass	13.6	24	indeterminant	4	no	≤ 30 cm
LPR6TT-A2	Striped bass	13.6	25	indeterminant	6	yes	≤ 30 cm
LPR4S-A2	Striped bass	14.3	25	female	4	no	≤ 30 cm
LPR4TT-A5	Striped bass	15.6	26	indeterminant	4	no	≤ 30 cm
LPR4T-A1	Striped bass	17.1	52	indeterminant	4	no	≤ 30 cm
LPR8V-A5	Striped bass	17.3	50	indeterminant	8	yes	≤ 30 cm
LPR6Q-A2	Striped bass	18.7	70	indeterminant	6	yes	≤ 30 cm
LPR8V-A5	Striped bass	21.2	74	indeterminant	8	yes	≤ 30 cm
LPR8V-A5	Striped bass	21.4	86	indeterminant	8	yes	≤ 30 cm
LPR3O-A4	Striped bass	21.6	100	male	3	no	≤ 30 cm
LPR3O-A3	Striped bass	22.6	100	female	3	no	≤ 30 cm
LPR8V-A5	Striped bass	26.5	162	indeterminant	8	yes	≤ 30 cm
LPR6O-C3	Striped bass	31.3	362	female	6	yes	> 30 cm
LPR8V-A5	Striped bass	33	328	indeterminant	8	yes	> 30 cm
LPR1H-C8	Striped bass	35.1	448	indeterminant	1	no	> 30 cm
LPR4L-A6	Striped bass	35.3	426	indeterminant	4	no	> 30 cm
LPR8V-A5	Striped bass	56.4	1600	indeterminant	8	yes	> 30 cm
LPR3O-A4	Striped bass	66	2900	male	3	no	> 30 cm
LPR8R-A3	Striped bass	68.5	3510	indeterminant	8	yes	> 30 cm
LPR1LL-A10	Striped killifish	10.5	18	female	1	no	≤ 30 cm
LPR1LL-A14	Striped killifish	10.8	18.5	female	1	no	≤ 30 cm
LPR1LL-A19	Striped killifish	8.5	8	male	1	no	≤ 30 cm
LPR1LL-A19	Striped killifish	11.2	19	female	1	no	≤ 30 cm
LPR1LL-A23	Striped killifish	3.5	0.5	indeterminant	1	no	≤ 30 cm
LPR4RR-A2	Striped killifish	7	1.5	indeterminant	4	no	≤ 30 cm
LPR4UU-A6	Striped killifish	5.5	0.5	indeterminant	4	no	≤ 30 cm
LPR5TT-A5	Striped killifish	6.9	1	indeterminant	5	no	≤ 30 cm
LPR5TT-A5	Striped killifish	4.9	0.5	indeterminant	5	no	≤ 30 cm
LPR5TT-A5	Striped killifish	5.9	0.5	indeterminant	5	no	≤ 30 cm
LPR5TT-A5	Striped killifish	5.5	0.5	indeterminant	5	no	≤ 30 cm
LPR5TT-A5	Striped killifish	5.1	0.5	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	Striped killifish	5.6	0.5	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	Striped killifish	6.8	1.5	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	Striped killifish	5.9	0.5	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	Striped killifish	5.1	0.5	indeterminant	5	no	≤ 30 cm
LPR5Q-A2	Striped mullet	17.2	59	indeterminant	5	no	≤ 30 cm
LPR1LL-A11	Striped mullet	5.6	2	indeterminant	1	no	≤ 30 cm
LPR1LL-A9	Striped mullet	6.7	3.5	indeterminant	1	no	≤ 30 cm
LPR1LL-A9	Striped mullet	4.9	1.5	indeterminant	1	no	≤ 30 cm
LPR1LL-A9	Striped mullet	5.3	1.5	indeterminant	1	no	≤ 30 cm

LPR4TT-A1	Striped mullet	15.9	36	indeterminant	4	no	≤ 30 cm
LPR4TT-A6	Striped mullet	12	22	indeterminant	4	no	≤ 30 cm
LPR5VV-A4	Striped mullet	11.8	23.5	indeterminant	5	no	≤ 30 cm
LPR6TT-A2	Striped mullet	7.1	3.9	indeterminant	6	yes	≤ 30 cm
LPR6TT-A2	Striped mullet	7	3.5	indeterminant	6	yes	≤ 30 cm
LPR6TT-A5	Striped mullet	7.1	4.1	indeterminant	6	yes	≤ 30 cm
LPR6TT-A5	Striped mullet	6.5	2.9	indeterminant	6	yes	≤ 30 cm
LPR6TT-A5	Striped mullet	6.7	3.2	indeterminant	6	yes	≤ 30 cm
LPR5A-C2	Tessellated darter	5	1.1	indeterminant	5	no	≤ 30 cm
LPR5M-A6	Tessellated darter	5.5	1	indeterminant	5	no	≤ 30 cm
LPR6C-A1	Tessellated darter	7	4	indeterminant	6	yes	≤ 30 cm
LPR6I-B5	Tessellated darter	5.2	1	indeterminant	6	yes	≤ 30 cm
LPR6J-A2	Tessellated darter	4.5	1	indeterminant	6	yes	≤ 30 cm
LPR7K-C2	Tessellated darter	5.3	1	indeterminant	7	yes	≤ 30 cm
LPR8W-A5	Tessellated darter	5.3	1.2	indeterminant	8	yes	≤ 30 cm
LPR8Y-A1	Tessellated darter	8	4	indeterminant	8	yes	≤ 30 cm
LPR8Y-A2	Tessellated darter	5.6	1.3	indeterminant	8	yes	≤ 30 cm
LPR8Y-A3	Tessellated darter	5.7	2	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	Tessellated darter	5.2	1	indeterminant	8	yes	≤ 30 cm
LPR8Z-A2	Tessellated darter	6	2	indeterminant	8	yes	≤ 30 cm
LPR8Z-A3	Tessellated darter	4.9	1	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	Tessellated darter	5.5	1	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	Tessellated darter	4.7	1	indeterminant	8	yes	≤ 30 cm
LPR8Z-A5	Tessellated darter	5.7	2	indeterminant	8	yes	≤ 30 cm
LPR6X-A4	Tessellated darter	7.8	4	male	6	yes	≤ 30 cm
LPR6HH-A5	Tessellated darter	4.3	0.5	indeterminant	6	yes	≤ 30 cm
LPR6HH-B5	Tessellated darter	7.5	3.5	indeterminant	6	yes	≤ 30 cm
LPR6HH-C5	Tessellated darter	7	2	indeterminant	6	yes	≤ 30 cm
LPR6HH-B7	Tessellated darter	7.8	4	indeterminant	6	yes	≤ 30 cm
LPR6II-A4	Tessellated darter	4.3	0.5	indeterminant	6	yes	≤ 30 cm
LPR6LL-A2	Tessellated darter	4	0.5	indeterminant	6	yes	≤ 30 cm
LPR8NN-A2	Tessellated darter	5	0.5	indeterminant	8	yes	≤ 30 cm
LPR8NN-A2	Tessellated darter	5.8	1.5	indeterminant	8	yes	≤ 30 cm
LPR8SS-A1	Tessellated darter	4.8	1	indeterminant	8	yes	≤ 30 cm
LPR8SS-B1	Tessellated darter	5	0.5	indeterminant	8	yes	≤ 30 cm
LPR8SS-A2	Tessellated darter	5	1.5	indeterminant	8	yes	≤ 30 cm
LPR8TT-C5	Tessellated darter	6.6	2.5	indeterminant	8	yes	≤ 30 cm
LPR8YY-A1	Tessellated darter	4.1	0.5	indeterminant	8	yes	≤ 30 cm
LPR8YY-A1	Tessellated darter	4.3	0.5	indeterminant	8	yes	≤ 30 cm
LPR8YY-A1	Tessellated darter	4.2	0.5	indeterminant	8	yes	≤ 30 cm
LPR8YY-A1	Tessellated darter	4.2	0.5	indeterminant	8	yes	≤ 30 cm
LPR8YY-A1	Tessellated darter	6.7	3	indeterminant	8	yes	≤ 30 cm
LPR8YY-A2	Tessellated darter	4.6	1	indeterminant	8	yes	≤ 30 cm
LPR8YY-A1	Tessellated darter	4	0.5	indeterminant	8	yes	≤ 30 cm
LPR8ZZ-A2	Tessellated darter	5.1	1.5	indeterminant	8	yes	≤ 30 cm
LPR8ZZ-A2	Tessellated darter	4.5	1	indeterminant	8	yes	≤ 30 cm
LPR8ZZ-A2	Tessellated darter	4.5	1	indeterminant	8	yes	≤ 30 cm
LPR8ZZ-A2	Tessellated darter	4.9	1	indeterminant	8	yes	≤ 30 cm
LPR8ZZ-A2	Tessellated darter	5	1	indeterminant	8	yes	≤ 30 cm
LPR8ZZ-A2	Tessellated darter	4.5	1.5	indeterminant	8	yes	≤ 30 cm
LPR8ZZ-A2	Tessellated darter	4.5	1	indeterminant	8	yes	≤ 30 cm
LPR8ZZ-A2	Tessellated darter	5.1	1	indeterminant	8	yes	≤ 30 cm
LPR8ZZ-A2	Tessellated darter	4.7	1	indeterminant	8	yes	≤ 30 cm
LPR8ZZ-A2	Tessellated darter	5.1	1	indeterminant	8	yes	≤ 30 cm
LPR4RR-A2	Tessellated darter	6.6	1	indeterminant	4	no	≤ 30 cm
LPR4TT-A2	Tessellated darter	5.6	0.5	indeterminant	4	no	≤ 30 cm

LPR4TT-A7	Tessellated darter	4.4	0.5	indeterminant	4	no	≤ 30 cm
LPR4TT-A6	Tessellated darter	4.5	0.5	indeterminant	4	no	≤ 30 cm
LPR4TT-A1	Tessellated darter	5	1	indeterminant	4	no	≤ 30 cm
LPR7UU-A5	Tessellated darter	5.1	0.5	indeterminant	7	yes	≤ 30 cm
LPR1K-A1	Weakfish	22.6	110	indeterminant	1	no	≤ 30 cm
LPR8R-A1	White catfish	54.1	1504	indeterminant	8	yes	> 30 cm
LPR8R-A1	White catfish	50.4	1366	indeterminant	8	yes	> 30 cm
LPR2K-A2	White catfish	35.5	778	indeterminant	2	no	> 30 cm
LPR3L-A1	White catfish	37	628	indeterminant	3	no	> 30 cm
LPR3L-C1	White catfish	47	1250	indeterminant	3	no	> 30 cm
LPR3L-B4	White catfish	29	310	indeterminant	3	no	≤ 30 cm
LPR3P-B4	White catfish	47.1	1250	indeterminant	3	no	> 30 cm
LPR3Q-B3	White catfish	34	510	indeterminant	3	no	> 30 cm
LPR4G-A4	White catfish	5.4	2	indeterminant	4	no	≤ 30 cm
LPR4L-A8	White catfish	43.7	1294	indeterminant	4	no	> 30 cm
LPR5H-C2	White catfish	31.5	422	indeterminant	5	no	> 30 cm
LPR5S-A1	White catfish	49	1695	indeterminant	5	no	> 30 cm
LPR6P-A2	White catfish	22.8	120	indeterminant	6	yes	≤ 30 cm
LPR6P-A2	White catfish	31.3	316	indeterminant	6	yes	> 30 cm
LPR6P-A5	White catfish	32.9	476	indeterminant	6	yes	> 30 cm
LPR6R-B1	White catfish	38.5	680	indeterminant	6	yes	> 30 cm
LPR6R-B1	White catfish	37.7	638	indeterminant	6	yes	> 30 cm
LPR6S-A2	White catfish	37.6	630	indeterminant	6	yes	> 30 cm
LPR6S-B3	White catfish	40	840	indeterminant	6	yes	> 30 cm
LPR7C-B3	White catfish	5	1.5	indeterminant	7	yes	≤ 30 cm
LPR7N-A5	White catfish	40.2	756	indeterminant	7	yes	> 30 cm
LPR7P-C3	White catfish	39.8	984	indeterminant	7	yes	> 30 cm
LPR8Q-C1	White catfish	40.2	900	indeterminant	8	yes	> 30 cm
LPR8S-A3	White catfish	35.8	590	indeterminant	8	yes	> 30 cm
LPR4BB-A1	White catfish	34	470	female	4	no	> 30 cm
LPR4BB-A1	White catfish	41.7	1044	male	4	no	> 30 cm
LPR8CC-A3	White catfish	44.9	1260	female	8	yes	> 30 cm
LPR4PP-A1	White catfish	41.1	1288	female	4	no	> 30 cm
LPR6PP-A1	White catfish	36	454	male	6	yes	> 30 cm
LPR1G-B1	White perch	25.5	220	indeterminant	1	no	≤ 30 cm
LPR1J-A1	White perch	21.8	148	indeterminant	1	no	≤ 30 cm
LPR1J-A1	White perch	19.7	142	indeterminant	1	no	≤ 30 cm
LPR1J-A1	White perch	20.5	128	indeterminant	1	no	≤ 30 cm
LPR1J-A2	White perch	32.1	544	indeterminant	1	no	> 30 cm
LPR1P-B3	White perch	5.6	4	indeterminant	1	no	≤ 30 cm
LPR1Q-A2	White perch	5.4	1	indeterminant	1	no	≤ 30 cm
LPR1Q-A2	White perch	8	5	indeterminant	1	no	≤ 30 cm
LPR1Q-B2	White perch	7	6	indeterminant	1	no	≤ 30 cm
LPR1Q-B3	White perch	4.4	0.9	indeterminant	1	no	≤ 30 cm
LPR2B-C5	White perch	6	3	indeterminant	2	no	≤ 30 cm
LPR2C-B2	White perch	4.7	0.7	indeterminant	2	no	≤ 30 cm
LPR2C-B2	White perch	6.1	2	indeterminant	2	no	≤ 30 cm
LPR2C-A5	White perch	4.8	1	indeterminant	2	no	≤ 30 cm
LPR2C-A5	White perch	5.1	1	indeterminant	2	no	≤ 30 cm
LPR2E-B1	White perch	3.8	0.5	indeterminant	2	no	≤ 30 cm
LPR2E-A4	White perch	4.4	0.7	indeterminant	2	no	≤ 30 cm
LPR2H-C4	White perch	26.2	272	indeterminant	2	no	≤ 30 cm
LPR2I-A4	White perch	18.2	90	indeterminant	2	no	≤ 30 cm
LPR2O-C1	White perch	5.2	1.5	indeterminant	2	no	≤ 30 cm
LPR2O-C1	White perch	7.1	3	indeterminant	2	no	≤ 30 cm
LPR2O-C2	White perch	3.8	0.2	indeterminant	2	no	≤ 30 cm

LPR2O-B2	White perch	5.5	1	indeterminant	2	no	≤ 30 cm
LPR2O-A2	White perch	4.2	0.5	indeterminant	2	no	≤ 30 cm
LPR2O-C3	White perch	5.1	1.1	indeterminant	2	no	≤ 30 cm
LPR2O-B4	White perch	6.5	6	indeterminant	2	no	≤ 30 cm
LPR2O-B5	White perch	4.7	1.5	indeterminant	2	no	≤ 30 cm
LPR3A-C1	White perch	7.4	4	indeterminant	3	no	≤ 30 cm
LPR3A-C4	White perch	6.5	1	indeterminant	3	no	≤ 30 cm
LPR3A-C4	White perch	5.8	1	indeterminant	3	no	≤ 30 cm
LPR3A-A5	White perch	6.7	4	indeterminant	3	no	≤ 30 cm
LPR3A-B5	White perch	6.2	4	indeterminant	3	no	≤ 30 cm
LPR3A-B5	White perch	6.8	4	indeterminant	3	no	≤ 30 cm
LPR3B-B3	White perch	5.4	1	indeterminant	3	no	≤ 30 cm
LPR3B-B3	White perch	7.4	6	indeterminant	3	no	≤ 30 cm
LPR3C-C4	White perch	7.4	6	indeterminant	3	no	≤ 30 cm
LPR3C-C4	White perch	7	4	indeterminant	3	no	≤ 30 cm
LPR3C-C4	White perch	5	1	indeterminant	3	no	≤ 30 cm
LPR3G-A1	White perch	18	88	indeterminant	3	no	≤ 30 cm
LPR3G-B1	White perch	14	40	indeterminant	3	no	≤ 30 cm
LPR3G-C1	White perch	17.6	58	indeterminant	3	no	≤ 30 cm
LPR3G-C1	White perch	16.2	58	indeterminant	3	no	≤ 30 cm
LPR3G-C2	White perch	6.8	2	indeterminant	3	no	≤ 30 cm
LPR3G-B2	White perch	20.2	110	indeterminant	3	no	≤ 30 cm
LPR3G-B2	White perch	16.4	56	indeterminant	3	no	≤ 30 cm
LPR3G-B2	White perch	17.8	76	indeterminant	3	no	≤ 30 cm
LPR3G-A2	White perch	12.1	24	indeterminant	3	no	≤ 30 cm
LPR3H-A3	White perch	7.7	6	indeterminant	3	no	≤ 30 cm
LPR3I-A3	White perch	5.5	1	indeterminant	3	no	≤ 30 cm
LPR3I-B5	White perch	6	1	indeterminant	3	no	≤ 30 cm
LPR3I-B5	White perch	6.2	4	indeterminant	3	no	≤ 30 cm
LPR3J-B3	White perch	6.7	4	indeterminant	3	no	≤ 30 cm
LPR3J-B3	White perch	7.1	4	indeterminant	3	no	≤ 30 cm
LPR3J-B3	White perch	7.7	6	indeterminant	3	no	≤ 30 cm
LPR3J-A3	White perch	6	1	indeterminant	3	no	≤ 30 cm
LPR3J-C4	White perch	5.8	1	indeterminant	3	no	≤ 30 cm
LPR3K-B2	White perch	6.7	3	indeterminant	3	no	≤ 30 cm
LPR3K-B2	White perch	6.5	2	indeterminant	3	no	≤ 30 cm
LPR3K-A2	White perch	7.2	7	indeterminant	3	no	≤ 30 cm
LPR3K-A2	White perch	6.6	2	indeterminant	3	no	≤ 30 cm
LPR3K-C2	White perch	6.7	4	indeterminant	3	no	≤ 30 cm
LPR3K-C2	White perch	5.3	2	indeterminant	3	no	≤ 30 cm
LPR3K-C3	White perch	7.5	6	indeterminant	3	no	≤ 30 cm
LPR3K-C5	White perch	6.1	4	indeterminant	3	no	≤ 30 cm
LPR3K-C5	White perch	6.4	4	indeterminant	3	no	≤ 30 cm
LPR3K-A5	White perch	6.5	4	indeterminant	3	no	≤ 30 cm
LPR3M-A1	White perch	15.8	62	indeterminant	3	no	≤ 30 cm
LPR3M-A1	White perch	16	62	indeterminant	3	no	≤ 30 cm
LPR3M-A1	White perch	13.1		indeterminant	3	no	≤ 30 cm
LPR3M-A1	White perch	16	66	indeterminant	3	no	≤ 30 cm
LPR3M-A1	White perch	15.5	54	male	3	no	≤ 30 cm
LPR3M-A1	White perch	8.5		indeterminant	3	no	≤ 30 cm
LPR3M-A1	White perch	18.2	98	indeterminant	3	no	≤ 30 cm
LPR3M-A2	White perch	16.3	58	indeterminant	3	no	≤ 30 cm
LPR3M-A2	White perch	10.8	65	indeterminant	3	no	≤ 30 cm
LPR3M-A2	White perch	17.1	62	indeterminant	3	no	≤ 30 cm
LPR3M-A2	White perch	17.7	78	indeterminant	3	no	≤ 30 cm
LPR3M-A2	White perch	18.4	86	indeterminant	3	no	≤ 30 cm

LPR3M-A2	White perch	16.2	60	indeterminant	3	no	≤ 30 cm
LPR3M-A2	White perch	17.7	76	indeterminant	3	no	≤ 30 cm
LPR3M-A2	White perch	18.6	108	indeterminant	3	no	≤ 30 cm
LPR3M-A2	White perch	19.8	92	indeterminant	3	no	≤ 30 cm
LPR3N-A3	White perch	15.2	54	indeterminant	3	no	≤ 30 cm
LPR3N-A4	White perch	17.4	84	indeterminant	3	no	≤ 30 cm
LPR3N-A4	White perch	15.9	66	indeterminant	3	no	≤ 30 cm
LPR3N-A4	White perch	16.9	78	indeterminant	3	no	≤ 30 cm
LPR3N-A4	White perch	15.9	56	indeterminant	3	no	≤ 30 cm
LPR3N-A4	White perch	17.6	78	indeterminant	3	no	≤ 30 cm
LPR3O-A1	White perch	16	56	indeterminant	3	no	≤ 30 cm
LPR3O-A1	White perch	17.6	82	indeterminant	3	no	≤ 30 cm
LPR3O-A1	White perch	17.4	76	indeterminant	3	no	≤ 30 cm
LPR3O-A1	White perch	16.3	58	indeterminant	3	no	≤ 30 cm
LPR3O-A1	White perch	14.9	50	indeterminant	3	no	≤ 30 cm
LPR3O-A3	White perch	22.6	190	indeterminant	3	no	≤ 30 cm
LPR3O-A3	White perch	17	88	indeterminant	3	no	≤ 30 cm
LPR3O-A3	White perch	18.7	100	indeterminant	3	no	≤ 30 cm
LPR3O-A3	White perch	20.2	124	indeterminant	3	no	≤ 30 cm
LPR3O-A3	White perch	21.1	156	indeterminant	3	no	≤ 30 cm
LPR3O-A3	White perch	17.5	82	indeterminant	3	no	≤ 30 cm
LPR3O-A3	White perch	16.2	70	indeterminant	3	no	≤ 30 cm
LPR3O-A3	White perch	17.3	80	indeterminant	3	no	≤ 30 cm
LPR3O-A3	White perch	17	70	indeterminant	3	no	≤ 30 cm
LPR3O-A3	White perch	17.8	82	indeterminant	3	no	≤ 30 cm
LPR3O-A3	White perch	17.3	84	indeterminant	3	no	≤ 30 cm
LPR3O-A3	White perch	18	98	indeterminant	3	no	≤ 30 cm
LPR3O-A3	White perch	16.1	64	indeterminant	3	no	≤ 30 cm
LPR3O-A3	White perch	18	80	indeterminant	3	no	≤ 30 cm
LPR3O-A3	White perch	18.8	98	indeterminant	3	no	≤ 30 cm
LPR3O-A3	White perch	17.5	76	indeterminant	3	no	≤ 30 cm
LPR3O-A3	White perch	19	106	indeterminant	3	no	≤ 30 cm
LPR3O-A3	White perch	16.2	62	indeterminant	3	no	≤ 30 cm
LPR3O-A3	White perch	18.2	84	indeterminant	3	no	≤ 30 cm
LPR3O-A3	White perch	17.8	76	indeterminant	3	no	≤ 30 cm
LPR3O-A3	White perch	16.5	70	indeterminant	3	no	≤ 30 cm
LPR3O-A3	White perch	19.2	110	indeterminant	3	no	≤ 30 cm
LPR3O-A3	White perch	15.8	62	indeterminant	3	no	≤ 30 cm
LPR3O-A3	White perch	16.2	60	indeterminant	3	no	≤ 30 cm
LPR3O-A3	White perch	17.1	80	indeterminant	3	no	≤ 30 cm
LPR3O-A3	White perch	18.8	100	indeterminant	3	no	≤ 30 cm
LPR3O-A3	White perch	16.9	60	indeterminant	3	no	≤ 30 cm
LPR3O-A3	White perch	15.9	65	indeterminant	3	no	≤ 30 cm
LPR3O-A3	White perch	17.1	70	indeterminant	3	no	≤ 30 cm
LPR3O-A3	White perch	14.6	47	indeterminant	3	no	≤ 30 cm
LPR3O-A3	White perch	18.2	95	indeterminant	3	no	≤ 30 cm
LPR3O-A3	White perch	15.9	57	indeterminant	3	no	≤ 30 cm
LPR3O-A3	White perch	17.7	85	indeterminant	3	no	≤ 30 cm
LPR3O-A4	White perch	16.7	62	indeterminant	3	no	≤ 30 cm
LPR3O-A4	White perch	16.6	64	indeterminant	3	no	≤ 30 cm
LPR3O-A4	White perch	17.5	78	indeterminant	3	no	≤ 30 cm
LPR3O-A4	White perch	17.8	72	indeterminant	3	no	≤ 30 cm
LPR3O-A4	White perch	17.2	66	indeterminant	3	no	≤ 30 cm
LPR3O-A5	White perch	16.6	68	indeterminant	3	no	≤ 30 cm
LPR3O-A5	White perch	18.5	92	indeterminant	3	no	≤ 30 cm
LPR4H-B1	White perch	13.6	40	indeterminant	4	no	≤ 30 cm

LPR4H-A2	White perch	7	4	indeterminant	4	no	≤ 30 cm
LPR4H-C3	White perch	12.5	32	indeterminant	4	no	≤ 30 cm
LPR4I-C4	White perch	4.3	1	indeterminant	4	no	≤ 30 cm
LPR4L-A9	White perch	15.9	58	indeterminant	4	no	≤ 30 cm
LPR4P-A6	White perch	18.3	84	indeterminant	4	no	≤ 30 cm
LPR4P-A8	White perch	22.4	190	indeterminant	4	no	≤ 30 cm
LPR4R-A1	White perch	13.4	34	indeterminant	4	no	≤ 30 cm
LPR4R-A1	White perch	15.5	56	indeterminant	4	no	≤ 30 cm
LPR4R-A1	White perch	13.8	38	indeterminant	4	no	≤ 30 cm
LPR4R-A1	White perch	15	48	indeterminant	4	no	≤ 30 cm
LPR4S-A1	White perch	12.4	30	indeterminant	4	no	≤ 30 cm
LPR4S-A1	White perch	16.2	78	indeterminant	4	no	≤ 30 cm
LPR4S-A1	White perch	13.9	38	indeterminant	4	no	≤ 30 cm
LPR4S-A1	White perch	15.2	62	indeterminant	4	no	≤ 30 cm
LPR4S-A1	White perch	16.6	66	indeterminant	4	no	≤ 30 cm
LPR4S-A2	White perch	24.5	182	indeterminant	4	no	≤ 30 cm
LPR4S-A2	White perch	17.1	74	indeterminant	4	no	≤ 30 cm
LPR4S-A2	White perch	14.5	40	indeterminant	4	no	≤ 30 cm
LPR4T-A1	White perch	20.9	134	indeterminant	4	no	≤ 30 cm
LPR4T-A1	White perch	13.7	36	indeterminant	4	no	≤ 30 cm
LPR4T-A1	White perch	18.3	92	indeterminant	4	no	≤ 30 cm
LPR4T-A1	White perch	15.3	46	indeterminant	4	no	≤ 30 cm
LPR4T-A1	White perch	14.4	40	indeterminant	4	no	≤ 30 cm
LPR4T-A1	White perch	15.4	52	indeterminant	4	no	≤ 30 cm
LPR4T-A1	White perch	16	78	indeterminant	4	no	≤ 30 cm
LPR4T-A1	White perch	7.5	4	indeterminant	4	no	≤ 30 cm
LPR4T-A1	White perch	4.3	1	indeterminant	4	no	≤ 30 cm
LPR4T-A2	White perch	17.5	72	indeterminant	4	no	≤ 30 cm
LPR4T-A2	White perch	18.2	88	indeterminant	4	no	≤ 30 cm
LPR4T-A2	White perch	13.6	32	indeterminant	4	no	≤ 30 cm
LPR4T-A2	White perch	22.7	166	indeterminant	4	no	≤ 30 cm
LPR5A-A2	White perch	4.1	0.5	indeterminant	5	no	≤ 30 cm
LPR5B-B3	White perch	7.3	40	indeterminant	5	no	≤ 30 cm
LPR5E-A7	White perch	15.5	60	indeterminant	5	no	≤ 30 cm
LPR5E-A7	White perch	17.3	72	indeterminant	5	no	≤ 30 cm
LPR5E-A8	White perch	15.6	52	indeterminant	5	no	≤ 30 cm
LPR5E-A9	White perch	17.6	74	indeterminant	5	no	≤ 30 cm
LPR5G-A1	White perch	15.9	64	indeterminant	5	no	≤ 30 cm
LPR5I-A4	White perch	17.5	62	indeterminant	5	no	≤ 30 cm
LPR5I-A4	White perch	14.8	66	indeterminant	5	no	≤ 30 cm
LPR5I-A-5	White perch	16.5	64	indeterminant	5	no	≤ 30 cm
LPR5I-A6	White perch	17.2	72	indeterminant	5	no	≤ 30 cm
LPR5J-A1	White perch	13.9	44	indeterminant	5	no	≤ 30 cm
LPR5K-B1	White perch	6.1	4	indeterminant	5	no	≤ 30 cm
LPR5L-B1	White perch	13	30	indeterminant	5	no	≤ 30 cm
LPR5M-C1	White perch	13.6	38	indeterminant	5	no	≤ 30 cm
LPR5O-B4	White perch	13.9	40	indeterminant	5	no	≤ 30 cm
LPR5Q-A2	White perch	14	36	indeterminant	5	no	≤ 30 cm
LPR5Q-A2	White perch	14.5	41	indeterminant	5	no	≤ 30 cm
LPR5Q-A2	White perch	13.9	36	indeterminant	5	no	≤ 30 cm
LPR5R-A1	White perch	24	294	indeterminant	5	no	≤ 30 cm
LPR5R-A1	White perch	20.3	138	indeterminant	5	no	≤ 30 cm
LPR5R-A1	White perch	19.6	130	indeterminant	5	no	≤ 30 cm
LPR5R-A1	White perch	16.1	58	indeterminant	5	no	≤ 30 cm
LPR5R-A1	White perch	15.4	48	indeterminant	5	no	≤ 30 cm
LPR5R-A1	White perch	16.6	62	indeterminant	5	no	≤ 30 cm

LPR5R-A1	White perch	17.5	80	indeterminant	5	no	≤ 30 cm
LPR5R-A1	White perch	13.8	32	indeterminant	5	no	≤ 30 cm
LPR5R-A1	White perch	14.4	44	indeterminant	5	no	≤ 30 cm
LPR5R-A1	White perch	12.8	28	indeterminant	5	no	≤ 30 cm
LPR5R-A2	White perch	15.9	56	indeterminant	5	no	≤ 30 cm
LPR5R-A2	White perch	20.4	124	indeterminant	5	no	≤ 30 cm
LPR5R-A2	White perch	14.7	41	indeterminant	5	no	≤ 30 cm
LPR5R-A2	White perch	22	144	indeterminant	5	no	≤ 30 cm
LPR5R-A2	White perch	17.8	78	indeterminant	5	no	≤ 30 cm
LPR5R-A2	White perch	12.7	26	indeterminant	5	no	≤ 30 cm
LPR5S-A1	White perch	21.7	132	indeterminant	5	no	≤ 30 cm
LPR5S-A1	White perch	13.2	36	indeterminant	5	no	≤ 30 cm
LPR5S-A1	White perch	13.5	32	indeterminant	5	no	≤ 30 cm
LPR5S-A2	White perch	14.5	46	indeterminant	5	no	≤ 30 cm
LPR5T-A1	White perch	16.4	72	indeterminant	5	no	≤ 30 cm
LPR5T-A1	White perch	17.9	80	indeterminant	5	no	≤ 30 cm
LPR5T-A1	White perch	13.3	42	indeterminant	5	no	≤ 30 cm
LPR5T-A1	White perch	12.9	28	indeterminant	5	no	≤ 30 cm
LPR5T-A1	White perch	13.6	46	indeterminant	5	no	≤ 30 cm
LPR5T-A1	White perch	13.1	32	indeterminant	5	no	≤ 30 cm
LPR5T-A1	White perch	15.5	70	indeterminant	5	no	≤ 30 cm
LPR5T-A1	White perch	12.8	28	indeterminant	5	no	≤ 30 cm
LPR5T-A1	White perch	13.5	40	indeterminant	5	no	≤ 30 cm
LPR5T-A1	White perch	13.1	36	indeterminant	5	no	≤ 30 cm
LPR5T-A1	White perch	13.6	32	indeterminant	5	no	≤ 30 cm
LPR5T-A1	White perch	14.7	54	indeterminant	5	no	≤ 30 cm
LPR5T-A1	White perch	12.3	28	indeterminant	5	no	≤ 30 cm
LPR5T-A1	White perch	13.7	48	indeterminant	5	no	≤ 30 cm
LPR5T-A1	White perch	13.6	36	indeterminant	5	no	≤ 30 cm
LPR5T-A1	White perch	11.8	30	indeterminant	5	no	≤ 30 cm
LPR6TT-A2	White perch	4	1	indeterminant	6	yes	≤ 30 cm
LPR6TT-A1	White perch	4.1	0.5	indeterminant	6	yes	≤ 30 cm
LPR6TT-A2	White perch	4.1	0.5	indeterminant	6	yes	≤ 30 cm
LPR6TT-A5	White perch	4.2	0.5	indeterminant	6	yes	≤ 30 cm
LPR6TT-A2	White perch	4.2	1	indeterminant	6	yes	≤ 30 cm
LPR6TT-A2	White perch	4.4	0.5	indeterminant	6	yes	≤ 30 cm
LPR6TT-A6	White perch	4.4	0.5	indeterminant	6	yes	≤ 30 cm
LPR6TT-A5	White perch	4.5	0.5	indeterminant	6	yes	≤ 30 cm
LPR6TT-A5	White perch	4.5	0.5	indeterminant	6	yes	≤ 30 cm
LPR6TT-A5	White perch	4.5	1	indeterminant	6	yes	≤ 30 cm
LPR6TT-A5	White perch	4.6	1	indeterminant	6	yes	≤ 30 cm
LPR6TT-A2	White perch	4.6	1	indeterminant	6	yes	≤ 30 cm
LPR6TT-A2	White perch	4.6	0.5	indeterminant	6	yes	≤ 30 cm
LPR6TT-A2	White perch	4.6	0.5	indeterminant	6	yes	≤ 30 cm
LPR6TT-A2	White perch	4.6	0.5	indeterminant	6	yes	≤ 30 cm
LPR6TT-A2	White perch	4.7	0.5	indeterminant	6	yes	≤ 30 cm
LPR6TT-A6	White perch	4.7	1	indeterminant	6	yes	≤ 30 cm
LPR6TT-A2	White perch	4.8	1	indeterminant	6	yes	≤ 30 cm
LPR6TT-A2	White perch	4.9	1	indeterminant	6	yes	≤ 30 cm
LPR6TT-A1	White perch	5	1.5	indeterminant	6	yes	≤ 30 cm
LPR6TT-A5	White perch	5	0.5	indeterminant	6	yes	≤ 30 cm
LPR6TT-A5	White perch	5	1	indeterminant	6	yes	≤ 30 cm
LPR6TT-A5	White perch	5	1	indeterminant	6	yes	≤ 30 cm
LPR6TT-A5	White perch	5	1	indeterminant	6	yes	≤ 30 cm
LPR6TT-A2	White perch	5	1	indeterminant	6	yes	≤ 30 cm
LPR6TT-A2	White perch	5	1	indeterminant	6	yes	≤ 30 cm

LPR6TT-A2	White perch	5	1	indeterminant	6	yes	≤ 30 cm
LPR6TT-A2	White perch	5	1	indeterminant	6	yes	≤ 30 cm
LPR6TT-A1	White perch	5.1	1	indeterminant	6	yes	≤ 30 cm
LPR6TT-A3	White perch	5.1	1	indeterminant	6	yes	≤ 30 cm
LPR6TT-A5	White perch	5.1	1	indeterminant	6	yes	≤ 30 cm
LPR6TT-A5	White perch	5.1	1.5	indeterminant	6	yes	≤ 30 cm
LPR6TT-A5	White perch	5.1	1.5	indeterminant	6	yes	≤ 30 cm
LPR6TT-A5	White perch	5.1	1	indeterminant	6	yes	≤ 30 cm
LPR6TT-A2	White perch	5.1	1	indeterminant	6	yes	≤ 30 cm
LPR6TT-A6	White perch	5.1	1	indeterminant	6	yes	≤ 30 cm
LPR6TT-A5	White perch	5.2	1	indeterminant	6	yes	≤ 30 cm
LPR6TT-A2	White perch	5.2	1.5	indeterminant	6	yes	≤ 30 cm
LPR6TT-A6	White perch	5.2	1.5	indeterminant	6	yes	≤ 30 cm
LPR6TT-A5	White perch	5.3	1.5	indeterminant	6	yes	≤ 30 cm
LPR6TT-A5	White perch	5.4	1.5	indeterminant	6	yes	≤ 30 cm
LPR6TT-A5	White perch	5.4	1.5	indeterminant	6	yes	≤ 30 cm
LPR6TT-A3	White perch	5.5	2	indeterminant	6	yes	≤ 30 cm
LPR6TT-A5	White perch	5.5	1.5	indeterminant	6	yes	≤ 30 cm
LPR6TT-A5	White perch	5.5	1	indeterminant	6	yes	≤ 30 cm
LPR6TT-A5	White perch	5.7	1.5	indeterminant	6	yes	≤ 30 cm
LPR6TT-A2	White perch	6	2	indeterminant	6	yes	≤ 30 cm
LPR6TT-A3	White perch	7.1	5	indeterminant	6	yes	≤ 30 cm
LPR3X-A2	White perch	12	18	indeterminant	3	no	≤ 30 cm
LPR4RR-A2	White perch	3.4	0.8	indeterminant	4	no	≤ 30 cm
LPR4RR-A3	White perch	2.9	0.5	indeterminant	4	no	≤ 30 cm
LPR4RR-A3	White perch	2.9	0.5	indeterminant	4	no	≤ 30 cm
LPR4RR-A3	White perch	4	1	indeterminant	4	no	≤ 30 cm
LPR4RR-A3	White perch	4.6	1.5	indeterminant	4	no	≤ 30 cm
LPR4RR-A3	White perch	4.2	1	indeterminant	4	no	≤ 30 cm
LPR4RR-A3	White perch	5	1.9	indeterminant	4	no	≤ 30 cm
LPR4RR-A2	White perch	4.5	1.2	indeterminant	4	no	≤ 30 cm
LPR4RR-A2	White perch	4.5	1.2	indeterminant	4	no	≤ 30 cm
LPR4RR-A2	White perch	4.6	1.1	indeterminant	4	no	≤ 30 cm
LPR4RR-A2	White perch	5.3	2	indeterminant	4	no	≤ 30 cm
LPR4RR-A2	White perch	5	1.9	indeterminant	4	no	≤ 30 cm
LPR4TT-A2	White perch	3.3	0.9	indeterminant	4	no	≤ 30 cm
LPR4TT-A2	White perch	3.3	0.8	indeterminant	4	no	≤ 30 cm
LPR4TT-A2	White perch	4	1	indeterminant	4	no	≤ 30 cm
LPR4TT-A2	White perch	4.4	1.1	indeterminant	4	no	≤ 30 cm
LPR4TT-A2	White perch	4.5	1	indeterminant	4	no	≤ 30 cm
LPR4TT-A2	White perch	4.5	1.2	indeterminant	4	no	≤ 30 cm
LPR4TT-A2	White perch	4.5	1.5	indeterminant	4	no	≤ 30 cm
LPR4TT-A2	White perch	5	2	indeterminant	4	no	≤ 30 cm
LPR4TT-A2	White perch	5	2	indeterminant	4	no	≤ 30 cm
LPR4TT-A2	White perch	5.2	2	indeterminant	4	no	≤ 30 cm
LPR4TT-A2	White perch	5.3	1.8	indeterminant	4	no	≤ 30 cm
LPR4TT-A1	White perch	4.2	1	indeterminant	4	no	≤ 30 cm
LPR4TT-A8	White perch	3.5	0.5	indeterminant	4	no	≤ 30 cm
LPR4TT-A8	White perch	3.5	0.9	indeterminant	4	no	≤ 30 cm
LPR4TT-A8	White perch	3.5	1	indeterminant	4	no	≤ 30 cm
LPR4TT-A8	White perch	3.8	0.9	indeterminant	4	no	≤ 30 cm
LPR4TT-A8	White perch	3.8	0.9	indeterminant	4	no	≤ 30 cm
LPR4TT-A8	White perch	3.9	1	indeterminant	4	no	≤ 30 cm
LPR4TT-A8	White perch	4	1	indeterminant	4	no	≤ 30 cm
LPR4TT-A8	White perch	4.1	1	indeterminant	4	no	≤ 30 cm
LPR4TT-A8	White perch	4.1	1.1	indeterminant	4	no	≤ 30 cm

LPR4TT-A8	White perch	4.1	1	indeterminant	4	no	≤ 30 cm
LPR4TT-A8	White perch	4	1	indeterminant	4	no	≤ 30 cm
LPR4TT-A8	White perch	4.2	1.1	indeterminant	4	no	≤ 30 cm
LPR4TT-A8	White perch	4.2	1.1	indeterminant	4	no	≤ 30 cm
LPR4TT-A8	White perch	4.2	1	indeterminant	4	no	≤ 30 cm
LPR4TT-A8	White perch	4.2	1	indeterminant	4	no	≤ 30 cm
LPR4TT-A8	White perch	4.2	1.1	indeterminant	4	no	≤ 30 cm
LPR4TT-A8	White perch	4.2	1	indeterminant	4	no	≤ 30 cm
LPR4TT-A8	White perch	4.2	1.1	indeterminant	4	no	≤ 30 cm
LPR4TT-A8	White perch	4.3	1.1	indeterminant	4	no	≤ 30 cm
LPR4TT-A8	White perch	4.3	1.2	indeterminant	4	no	≤ 30 cm
LPR4TT-A8	White perch	4.3	1.2	indeterminant	4	no	≤ 30 cm
LPR4TT-A8	White perch	4.4	1.5	indeterminant	4	no	≤ 30 cm
LPR4TT-A8	White perch	4.5	1.1	indeterminant	4	no	≤ 30 cm
LPR4TT-A8	White perch	4.5	1.5	indeterminant	4	no	≤ 30 cm
LPR4TT-A8	White perch	4.5	1.1	indeterminant	4	no	≤ 30 cm
LPR4TT-A8	White perch	4.5	1.5	indeterminant	4	no	≤ 30 cm
LPR4TT-A8	White perch	4.5	1.5	indeterminant	4	no	≤ 30 cm
LPR4TT-A8	White perch	4.5	1.5	indeterminant	4	no	≤ 30 cm
LPR4TT-A8	White perch	4.7	1.5	indeterminant	4	no	≤ 30 cm
LPR4TT-A8	White perch	4.7	1.5	indeterminant	4	no	≤ 30 cm
LPR4TT-A8	White perch	4.7	1.5	indeterminant	4	no	≤ 30 cm
LPR4TT-A8	White perch	4.7	1.5	indeterminant	4	no	≤ 30 cm
LPR4TT-A8	White perch	4.8	1.9	indeterminant	4	no	≤ 30 cm
LPR4TT-A8	White perch	4.8	1.8	indeterminant	4	no	≤ 30 cm
LPR4TT-A8	White perch	4.8	1.5	indeterminant	4	no	≤ 30 cm
LPR4TT-A8	White perch	4.9	1.9	indeterminant	4	no	≤ 30 cm
LPR4TT-A8	White perch	5	1.8	indeterminant	4	no	≤ 30 cm
LPR4TT-A8	White perch	5.1	2	indeterminant	4	no	≤ 30 cm
LPR4TT-A8	White perch	5.2	2	indeterminant	4	no	≤ 30 cm
LPR4TT-A8	White perch	5.3	2.5	indeterminant	4	no	≤ 30 cm
LPR4TT-A8	White perch	5.3	2.5	indeterminant	4	no	≤ 30 cm
LPR4TT-A8	White perch	5.6	2.5	indeterminant	4	no	≤ 30 cm
LPR4TT-A5	White perch	17	95	indeterminant	4	no	≤ 30 cm
LPR4TT-A5	White perch	3	0.1	indeterminant	4	no	≤ 30 cm
LPR4TT-A5	White perch	3	0.1	indeterminant	4	no	≤ 30 cm
LPR4TT-A5	White perch	3.8	1	indeterminant	4	no	≤ 30 cm
LPR4TT-A5	White perch	3.8	0.9	indeterminant	4	no	≤ 30 cm
LPR4TT-A5	White perch	4	1.1	indeterminant	4	no	≤ 30 cm
LPR4TT-A5	White perch	4.1	1	indeterminant	4	no	≤ 30 cm
LPR4TT-A5	White perch	4.1	1	indeterminant	4	no	≤ 30 cm
LPR4TT-A5	White perch	4.1	1	indeterminant	4	no	≤ 30 cm
LPR4TT-A5	White perch	4.3	1	indeterminant	4	no	≤ 30 cm
LPR4TT-A5	White perch	4.3	1.1	indeterminant	4	no	≤ 30 cm
LPR4TT-A5	White perch	4.3	1.1	indeterminant	4	no	≤ 30 cm
LPR4TT-A5	White perch	4.3	1	indeterminant	4	no	≤ 30 cm
LPR4TT-A5	White perch	4.5	1.5	indeterminant	4	no	≤ 30 cm
LPR4TT-A5	White perch	4.7	1.1	indeterminant	4	no	≤ 30 cm
LPR4TT-A5	White perch	5	1.9	indeterminant	4	no	≤ 30 cm
LPR4TT-A5	White perch	5.1	2	indeterminant	4	no	≤ 30 cm
LPR4TT-A5	White perch	5.3	2	indeterminant	4	no	≤ 30 cm
LPR4TT-A5	White perch	5.4	2	indeterminant	4	no	≤ 30 cm
LPR4TT-A5	White perch	5.7	2.5	indeterminant	4	no	≤ 30 cm
LPR4TT-A6	White perch	3.5	0.5	indeterminant	4	no	≤ 30 cm
LPR4TT-A6	White perch	3.5	0.5	indeterminant	4	no	≤ 30 cm
LPR4TT-A6	White perch	4	0.9	indeterminant	4	no	≤ 30 cm

LPR4TT-A6	White perch	4	0.9	indeterminant	4	no	≤ 30 cm
LPR4TT-A6	White perch	4.3	1.1	indeterminant	4	no	≤ 30 cm
LPR4TT-A6	White perch	4.5	1.1	indeterminant	4	no	≤ 30 cm
LPR4TT-A6	White perch	4.5	1.2	indeterminant	4	no	≤ 30 cm
LPR4TT-A6	White perch	4.5	1	indeterminant	4	no	≤ 30 cm
LPR4TT-A6	White perch	4.5	1	indeterminant	4	no	≤ 30 cm
LPR4TT-A6	White perch	4.6	1.5	indeterminant	4	no	≤ 30 cm
LPR4TT-A6	White perch	4.7	1.5	indeterminant	4	no	≤ 30 cm
LPR4TT-A7	White perch	4.4	1	indeterminant	4	no	≤ 30 cm
LPR4TT-A7	White perch	4	0.9	indeterminant	4	no	≤ 30 cm
LPR4TT-A7	White perch	4	0.9	indeterminant	4	no	≤ 30 cm
LPR4TT-A3	White perch	3.7	0.9	indeterminant	4	no	≤ 30 cm
LPR4TT-A3	White perch	4	1	indeterminant	4	no	≤ 30 cm
LPR4TT-A3	White perch	4	1	indeterminant	4	no	≤ 30 cm
LPR4TT-A3	White perch	4.2	1.1	indeterminant	4	no	≤ 30 cm
LPR4TT-A3	White perch	4.5	1	indeterminant	4	no	≤ 30 cm
LPR4TT-A3	White perch	4.4	1.1	indeterminant	4	no	≤ 30 cm
LPR4TT-A3	White perch	5	1.5	indeterminant	4	no	≤ 30 cm
LPR4TT-A3	White perch	5	1.9	indeterminant	4	no	≤ 30 cm
LPR4TT-A4	White perch	3.3	0.1	indeterminant	4	no	≤ 30 cm
LPR4TT-A4	White perch	2.7	0.1	indeterminant	4	no	≤ 30 cm
LPR4TT-A4	White perch	3.5	0.5	indeterminant	4	no	≤ 30 cm
LPR4TT-A4	White perch	3.7	1	indeterminant	4	no	≤ 30 cm
LPR4TT-A4	White perch	3.7	0.9	indeterminant	4	no	≤ 30 cm
LPR4TT-A4	White perch	3.7	0.9	indeterminant	4	no	≤ 30 cm
LPR4TT-A4	White perch	4	0.8	indeterminant	4	no	≤ 30 cm
LPR4TT-A4	White perch	4	1	indeterminant	4	no	≤ 30 cm
LPR4TT-A4	White perch	4	1	indeterminant	4	no	≤ 30 cm
LPR4TT-A4	White perch	4	1	indeterminant	4	no	≤ 30 cm
LPR4TT-A4	White perch	4.1	1	indeterminant	4	no	≤ 30 cm
LPR4TT-A4	White perch	4.1	1	indeterminant	4	no	≤ 30 cm
LPR4TT-A4	White perch	4.1	1	indeterminant	4	no	≤ 30 cm
LPR4TT-A4	White perch	4.1	1.1	indeterminant	4	no	≤ 30 cm
LPR4TT-A4	White perch	4.2	1	indeterminant	4	no	≤ 30 cm
LPR4TT-A4	White perch	4.3	1.1	indeterminant	4	no	≤ 30 cm
LPR4TT-A4	White perch	4.4	1	indeterminant	4	no	≤ 30 cm
LPR4TT-A4	White perch	4.4	1	indeterminant	4	no	≤ 30 cm
LPR4TT-A4	White perch	4.7	1.5	indeterminant	4	no	≤ 30 cm
LPR4TT-A4	White perch	4.7	1.5	indeterminant	4	no	≤ 30 cm
LPR4TT-A4	White perch	4.8	1.1	indeterminant	4	no	≤ 30 cm
LPR4TT-A4	White perch	4.8	1.5	indeterminant	4	no	≤ 30 cm
LPR4TT-A4	White perch	5	1.8	indeterminant	4	no	≤ 30 cm
LPR4TT-A4	White perch	5	1.9	indeterminant	4	no	≤ 30 cm
LPR4TT-A4	White perch	5	1.9	indeterminant	4	no	≤ 30 cm
LPR4VV-A1	White perch	5	2.1	indeterminant	4	no	≤ 30 cm
LPR4VV-A1	White perch	4.3	1.1	indeterminant	4	no	≤ 30 cm
LPR4VV-A1	White perch	4.2	1.1	indeterminant	4	no	≤ 30 cm
LPR4VV-A1	White perch	4.2	1.1	indeterminant	4	no	≤ 30 cm
LPR4VV-A1	White perch	4.7	1.8	indeterminant	4	no	≤ 30 cm
LPR4VV-A1	White perch	4.2	1.1	indeterminant	4	no	≤ 30 cm
LPR4VV-A4	White perch	5.7	3	indeterminant	4	no	≤ 30 cm
LPR4VV-A4	White perch	5.8	2.7	indeterminant	4	no	≤ 30 cm
LPR4VV-A3	White perch	3.7	0.9	indeterminant	4	no	≤ 30 cm
LPR4VV-A3	White perch	4.3	1.1	indeterminant	4	no	≤ 30 cm
LPR4VV-A3	White perch	4.5	1.2	indeterminant	4	no	≤ 30 cm
LPR4VV-A3	White perch	4.5	1.1	indeterminant	4	no	≤ 30 cm

LPR4VV-A3	White perch	4.6	1.5	indeterminant	4	no	≤ 30 cm
LPR4VV-A3	White perch	4.6	1.5	indeterminant	4	no	≤ 30 cm
LPR4VV-A3	White perch	4.7	1.5	indeterminant	4	no	≤ 30 cm
LPR4VV-A3	White perch	5	1.5	indeterminant	4	no	≤ 30 cm
LPR4VV-A3	White perch	5.3	2.1	indeterminant	4	no	≤ 30 cm
LPR4VV-A3	White perch	5.4	2.1	indeterminant	4	no	≤ 30 cm
LPR4VV-A3	White perch	5.4	2	indeterminant	4	no	≤ 30 cm
LPR5TT-A4	White perch	5	1.5	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	4.5	1.1	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	5	1.8	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	5.1	1.8	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	5	1.8	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	5	1.5	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	5	1.9	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	5.1	2	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	5.3	2	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	5.5	2.5	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	4.1	1.1	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	4.2	1	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	5.5	2.1	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	5.3	2	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	5.3	2	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	4.3	1	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	5	1.9	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	5.3	2	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	5.8	2.5	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	5	2	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	4.7	1.5	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	5.4	2	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	5.1	1.5	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	5	2	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	5	2	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	5.2	2	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	5.1	1.9	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	4.3	1.1	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	5.1	2	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	4.8	1.5	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	4.4	1.1	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	4.5	1.5	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	4	1	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	5	1.8	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	4.7	1.5	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	4.5	1.5	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	4.5	1.5	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	4.5	1	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	4.7	1.5	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	5	2	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	5.3	2	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	4.3	1	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	4.3	1	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	6.2	3	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	5.3	2	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	4.8	1.8	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	4.6	1.5	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	4.7	1.5	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	4	1	indeterminant	5	no	≤ 30 cm

LPR5TT-A4	White perch	3.8	1	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	5.5	2.1	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	4.7	1.5	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	4.3	1.1	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	4.7	1.5	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	4.7	1.5	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	3.5	1	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	5	1.9	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	4.5	1.5	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	5	1.5	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	5.2	2	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	4.7	1.5	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	5.5	2	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	4.9	1.5	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	4.7	1.5	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	5.3	2	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	4.7	1.5	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	6	3	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	5.2	2	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	5	2	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	4.4	1	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	5.5	2.5	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	3.7	1	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	4	1	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	3.7	1	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	4.7	1.5	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	5	1.8	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	5	2	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	5.3	1	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	4.5	1.5	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	4.7	1.5	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	4.7	1.5	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	4.7	1.8	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	4.7	1.8	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	4.7	1.5	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	4.7	1.5	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	5.2	2	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	4.3	1.5	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	4.3	1.1	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	4.3	1.1	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	4.3	1	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	4.3	1.1	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	4.3	1.1	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	4.4	1.5	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	4.4	1.1	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	5.3	2	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	5	2	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	5	1.5	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	4.6	1.5	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	4.2	1.1	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	4.5	1.5	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	4.5	1.1	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	4.5	1.5	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	4.5	1.5	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	4.5	1.2	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	4.5	1.1	indeterminant	5	no	≤ 30 cm

LPR5TT-A4	White perch	4.5	1	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	4.5	1.1	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	4.5	1	indeterminant	5	no	≤ 30 cm
LPR5TT-A1	White perch	5	1.9	indeterminant	5	no	≤ 30 cm
LPR5TT-A1	White perch	4.5	1.1	indeterminant	5	no	≤ 30 cm
LPR5TT-A1	White perch	4	1	indeterminant	5	no	≤ 30 cm
LPR5TT-A1	White perch	4	1	indeterminant	5	no	≤ 30 cm
LPR5TT-A1	White perch	4.3	1.5	indeterminant	5	no	≤ 30 cm
LPR5TT-A1	White perch	4.5	1.8	indeterminant	5	no	≤ 30 cm
LPR5TT-A1	White perch	4.7	1.5	indeterminant	5	no	≤ 30 cm
LPR5TT-A1	White perch	4.7	1.5	indeterminant	5	no	≤ 30 cm
LPR5TT-A1	White perch	5.3	2	indeterminant	5	no	≤ 30 cm
LPR5TT-A1	White perch	5.3	2	indeterminant	5	no	≤ 30 cm
LPR5TT-A1	White perch	5.3	2	indeterminant	5	no	≤ 30 cm
LPR5TT-A1	White perch	4.7	1.5	indeterminant	5	no	≤ 30 cm
LPR5TT-A1	White perch	4.6	1.3	indeterminant	5	no	≤ 30 cm
LPR5TT-A1	White perch	4.6	1.5	indeterminant	5	no	≤ 30 cm
LPR5TT-A1	White perch	4.7	1.5	indeterminant	5	no	≤ 30 cm
LPR5TT-A1	White perch	4.5	1.1	indeterminant	5	no	≤ 30 cm
LPR5TT-A1	White perch	3.7	0.5	indeterminant	5	no	≤ 30 cm
LPR5TT-A1	White perch	4.6	1.5	indeterminant	5	no	≤ 30 cm
LPR5TT-A1	White perch	3.9	0.5	indeterminant	5	no	≤ 30 cm
LPR5TT-A1	White perch	4.5	1.5	indeterminant	5	no	≤ 30 cm
LPR5TT-A1	White perch	4.2	1	indeterminant	5	no	≤ 30 cm
LPR5TT-A1	White perch	3.5	0.5	indeterminant	5	no	≤ 30 cm
LPR5TT-A1	White perch	3.6	0.9	indeterminant	5	no	≤ 30 cm
LPR5TT-A4	White perch	4.3	1	indeterminant	5	no	≤ 30 cm
LPR5UU-A3	White perch	5.4	2.1	indeterminant	5	no	≤ 30 cm
LPR5VV-A4	White perch	4.2	0.5	indeterminant	5	no	≤ 30 cm
LPR5VV-A4	White perch	5.8	1.5	indeterminant	5	no	≤ 30 cm
LPR5VV-A4	White perch	5.2	1	indeterminant	5	no	≤ 30 cm
LPR5VV-A4	White perch	5.3	1	indeterminant	5	no	≤ 30 cm
LPR5VV-A4	White perch	5.4	1.5	indeterminant	5	no	≤ 30 cm
LPR5VV-A4	White perch	5.2	1.5	indeterminant	5	no	≤ 30 cm
LPR5VV-A4	White perch	5.1	1	indeterminant	5	no	≤ 30 cm
LPR5VV-A4	White perch	5.7	1.5	indeterminant	5	no	≤ 30 cm
LPR5VV-A4	White perch	4.8	1	indeterminant	5	no	≤ 30 cm
LPR5VV-A4	White perch	3.4	0.5	indeterminant	5	no	≤ 30 cm
LPR5VV-A4	White perch	3.8	0.5	indeterminant	5	no	≤ 30 cm
LPR5VV-A4	White perch	5.6	2	indeterminant	5	no	≤ 30 cm
LPR5VV-A4	White perch	5.5	1.5	indeterminant	5	no	≤ 30 cm
LPR5VV-A4	White perch	5.5	2	indeterminant	5	no	≤ 30 cm
LPR5VV-A4	White perch	4.9	1	indeterminant	5	no	≤ 30 cm
LPR5VV-A4	White perch	6.3	3.5	indeterminant	5	no	≤ 30 cm
LPR5VV-A4	White perch	4.9	1	indeterminant	5	no	≤ 30 cm
LPR5VV-A4	White perch	4.7	0.5	indeterminant	5	no	≤ 30 cm
LPR5VV-A4	White perch	4.6	1	indeterminant	5	no	≤ 30 cm
LPR5VV-A4	White perch	4.5	0.5	indeterminant	5	no	≤ 30 cm
LPR5VV-A1	White perch	5.2	1.5	indeterminant	5	no	≤ 30 cm
LPR5VV-A1	White perch	5.1	1.5	indeterminant	5	no	≤ 30 cm
LPR5VV-A1	White perch	4.4	0.5	indeterminant	5	no	≤ 30 cm
LPR5VV-A1	White perch	5.6	2	indeterminant	5	no	≤ 30 cm
LPR5VV-A1	White perch	5.4	1.5	indeterminant	5	no	≤ 30 cm
LPR5VV-A1	White perch	5	1	indeterminant	5	no	≤ 30 cm
LPR5VV-A1	White perch	4.8	1	indeterminant	5	no	≤ 30 cm
LPR5VV-A1	White perch	4.7	1	indeterminant	5	no	≤ 30 cm

LPR5VV-A1	White perch	5.1	2	indeterminant	5	no	≤ 30 cm
LPR5VV-A6	White perch	4.6	1	indeterminant	5	no	≤ 30 cm
LPR5VV-A6	White perch	4.6	1	indeterminant	5	no	≤ 30 cm
LPR5VV-A6	White perch	5.5	1.5	indeterminant	5	no	≤ 30 cm
LPR5VV-A6	White perch	5.1	1	indeterminant	5	no	≤ 30 cm
LPR5VV-A6	White perch	5.8	2	indeterminant	5	no	≤ 30 cm
LPR5VV-A6	White perch	5.8	2	indeterminant	5	no	≤ 30 cm
LPR5VV-A6	White perch	6.2	2	indeterminant	5	no	≤ 30 cm
LPR5VV-A5	White perch	5.6	2	indeterminant	5	no	≤ 30 cm
LPR5VV-A5	White perch	5.7	1.5	indeterminant	5	no	≤ 30 cm
LPR5VV-A5	White perch	6	2.5	indeterminant	5	no	≤ 30 cm
LPR5VV-A5	White perch	5.1	1	indeterminant	5	no	≤ 30 cm
LPR5VV-A5	White perch	5.5	1.5	indeterminant	5	no	≤ 30 cm
LPR5VV-A2	White perch	5.7	1.5	indeterminant	5	no	≤ 30 cm
LPR5VV-A7	White perch	3.9	0.5	indeterminant	5	no	≤ 30 cm
LPR5VV-A7	White perch	3.6	0.5	indeterminant	5	no	≤ 30 cm
LPR5VV-A7	White perch	4.8	1.5	indeterminant	5	no	≤ 30 cm
LPR7G-B4	White perch	12.6	28	indeterminant	7	yes	≤ 30 cm
LPR7K-A5	White perch	12.7	32	indeterminant	7	yes	≤ 30 cm
LPR6H-B7	White perch	13.5	30	indeterminant	6	yes	≤ 30 cm
LPR6I-B4	White perch	13.8	34	indeterminant	6	yes	≤ 30 cm
LPR8U-A3	White perch	13.9	38	indeterminant	8	yes	≤ 30 cm
LPR7UU-A8	White perch	13.9	40	indeterminant	7	yes	≤ 30 cm
LPR7G-B4	White perch	14	36	indeterminant	7	yes	≤ 30 cm
LPR8U-A4	White perch	14.3	44	indeterminant	8	yes	≤ 30 cm
LPR6G-C3	White perch	14.4	44	indeterminant	6	yes	≤ 30 cm
LPR6V-A1	White perch	14.7	44	indeterminant	6	yes	≤ 30 cm
LPR8V-A5	White perch	14.9	42	indeterminant	8	yes	≤ 30 cm
LPR7Q-A4	White perch	15	44	indeterminant	7	yes	≤ 30 cm
LPR6Q-A2	White perch	15.3	52	indeterminant	6	yes	≤ 30 cm
LPR8U-A4	White perch	15.5	52	indeterminant	8	yes	≤ 30 cm
LPR7N-B2	White perch	15.6	52	indeterminant	7	yes	≤ 30 cm
LPR7J-B5	White perch	15.9	54	indeterminant	7	yes	≤ 30 cm
LPR8V-A1	White perch	15.9	54	indeterminant	8	yes	≤ 30 cm
LPR8V-A5	White perch	16.2	58	indeterminant	8	yes	≤ 30 cm
LPR8V-A5	White perch	16.2	52	indeterminant	8	yes	≤ 30 cm
LPR8V-A5	White perch	16.4	52	indeterminant	8	yes	≤ 30 cm
LPR6H-A10	White perch	16.5	58	indeterminant	6	yes	≤ 30 cm
LPR8V-A5	White perch	16.7	60	indeterminant	8	yes	≤ 30 cm
LPR8V-A5	White perch	16.9	60	indeterminant	8	yes	≤ 30 cm
LPR7J-C2	White perch	17	70	indeterminant	7	yes	≤ 30 cm
LPR8V-A5	White perch	17.3	62	indeterminant	8	yes	≤ 30 cm
LPR8V-A5	White perch	17.5	70	indeterminant	8	yes	≤ 30 cm
LPR8V-A5	White perch	17.5	70	indeterminant	8	yes	≤ 30 cm
LPR8V-A5	White perch	17.5	70	indeterminant	8	yes	≤ 30 cm
LPR8V-A5	White perch	17.5	66	indeterminant	8	yes	≤ 30 cm
LPR8V-A5	White perch	17.6	72	indeterminant	8	yes	≤ 30 cm
LPR8V-A5	White perch	17.9	82	indeterminant	8	yes	≤ 30 cm
LPR6N-A4	White perch	18	76	indeterminant	6	yes	≤ 30 cm
LPR8U-A4	White perch	18	82	indeterminant	8	yes	≤ 30 cm
LPR8V-A5	White perch	18	80	indeterminant	8	yes	≤ 30 cm
LPR6R-C2	White perch	18.1	78	indeterminant	6	yes	≤ 30 cm
LPR8V-A5	White perch	18.2	70	indeterminant	8	yes	≤ 30 cm
LPR8X-A1	White perch	18.2	82	indeterminant	8	yes	≤ 30 cm
LPR8V-A5	White perch	18.5	80	indeterminant	8	yes	≤ 30 cm
LPR8V-A5	White perch	18.7	92	indeterminant	8	yes	≤ 30 cm

LPR8V-A5	White perch	18.7	86	indeterminant	8	yes	≤ 30 cm
LPR8V-A5	White perch	18.7	86	indeterminant	8	yes	≤ 30 cm
LPR8V-A4	White perch	21.2	128	indeterminant	8	yes	≤ 30 cm
LPR8U-A4	White perch	21.5	130	indeterminant	8	yes	≤ 30 cm
LPR6Q-B3	White perch	21.6	136	indeterminant	6	yes	≤ 30 cm
LPR7Q-C1	White perch	23.6	202	indeterminant	7	yes	≤ 30 cm
LPR6N-A1	White perch	24.2	206	indeterminant	6	yes	≤ 30 cm
LPR8U-A4	White perch	24.9	159	indeterminant	8	yes	≤ 30 cm
LPR6R-A1	White perch	26	258	indeterminant	6	yes	≤ 30 cm
LPR6L-A1	White perch	31.5	630	indeterminant	6	yes	> 30 cm
LPR4S-A1	White sucker	32.5	362	indeterminant	4	no	> 30 cm
LPR4T-A1	White sucker	32.7	434	indeterminant	4	no	> 30 cm
LPR5I-A2	White sucker	42	964	indeterminant	5	no	> 30 cm
LPR5T-A1	White sucker	38.1	700	indeterminant	5	no	> 30 cm
LPR5T-A1	White sucker	37.5	616	indeterminant	5	no	> 30 cm
LPR5T-A2	White sucker	35	540	indeterminant	5	no	> 30 cm
LPR6N-A5	White sucker	35.5	562	male	6	yes	> 30 cm
LPR7R-A1	White sucker	37.2	496	female	7	yes	> 30 cm
LPR8V-A5	White sucker	38.6	620	indeterminant	8	yes	> 30 cm
LPR8V-A5	White sucker	35.5	456	indeterminant	8	yes	> 30 cm
LPR8V-A5	White sucker	40	712	indeterminant	8	yes	> 30 cm
LPR8V-A5	White sucker	37.6	566	indeterminant	8	yes	> 30 cm
LPR8W-A1	White sucker	25.8	192	female	8	yes	≤ 30 cm
LPR8W-A1	White sucker	40.9	780	female	8	yes	> 30 cm
LPR8W-A5	White sucker	41	788	indeterminant	8	yes	> 30 cm
LPR8W-A5	White sucker	45.3	1032	indeterminant	8	yes	> 30 cm
LPR8W-A5	White sucker	37	600	indeterminant	8	yes	> 30 cm
LPR8W-A5	White sucker	37.4	610	indeterminant	8	yes	> 30 cm
LPR8W-A5	White sucker	42	888	indeterminant	8	yes	> 30 cm
LPR8W-A5	White sucker	34.5	470	indeterminant	8	yes	> 30 cm
LPR8X-A1	White sucker	41.8	688	female	8	yes	> 30 cm
LPR8X-A5	White sucker	38.9	752	indeterminant	8	yes	> 30 cm
LPR8X-A5	White sucker	39.2	696	indeterminant	8	yes	> 30 cm
LPR8X-A5	White sucker	40.5	754	indeterminant	8	yes	> 30 cm
LPR1J-A4	Winter flounder	15.9	48	female	1	no	≤ 30 cm
LPR1K-A4	Winter flounder	20.3	92	indeterminant	1	no	≤ 30 cm
LPR2K-A3	Winter flounder	15.9	44	female	2	no	≤ 30 cm

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Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing

Species	TissueType	Event	Reach	SampleID
American eel	Whole body	2009 FSP2 Tissue Sampling	1	LPR1-ARWB-Comp03
American eel	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-ARWB-Ind085
American eel	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-ARWB-Comp04
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind001
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind009
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind012
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind024
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind025
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind043
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind060
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Comp11
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Ind039
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Ind062
American eel	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ARWB-Ind069
American eel	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ARWB-Ind074
American eel	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-ARWB-Ind070
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp13
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp15
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp16
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp18
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp19
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp01
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp02
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp03
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp04
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp06
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp07
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp11
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp13
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp14
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp15
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp17
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp18
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp19
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp20
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp24
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp26
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp27
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp28
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp30
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp31
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp32
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp33
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-CSWB-Comp34
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-CSWB-Comp35
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ANWB-Ind001
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ANWB-Ind007
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind003
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind004
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind005
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-ANWB-Ind006
Carp	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-CCWB-Ind002
Carp	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-CCWB-Ind005
Carp	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-CCWB-Ind175
Carp	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-CCWB-Ind186

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing

Species	TissueType	Event	Reach	SampleID
Carp	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-CCWB-Ind011
Carp	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-CCWB-Ind160
Carp	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-CCWB-Ind021
Carp	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-CCWB-Ind028
Carp	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-CCWB-Ind042
Carp	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-CCWB-Ind069
Carp	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-CCWB-Ind139
Carp	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-CCWB-Ind147
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-IPWB-Ind001
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-IPWB-Ind003
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-IPWB-Ind004
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-IPWB-Ind005
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-IPWB-Ind006
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind008
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind009
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind010
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind011
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind012
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind013
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-DCWB-Comp01
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-DCWB-Comp02
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	7	LPR7-DCWB-Comp03
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MSWB-Comp01
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MSWB-Ind009
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-MSWB-Ind002
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-MXWB-Comp01
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-MXWB-Comp02
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-MXWB-Comp03
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-MXWB-Comp04
Mummichog	Whole body	2010 FSP2 Tissue Sampling	1	LPR1-FHWB-Comp01
Mummichog	Whole body	2010 FSP2 Tissue Sampling	1	LPR1-FHWB-Comp02
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp03
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp04
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp05
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp06
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp07
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp08
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp09
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp10
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp11
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp12
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp13
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp14
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp15
Mummichog	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-FHWB-Comp16
Mummichog	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-FHWB-Comp17
Mummichog	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-FHWB-Comp18
Northern pike	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ELWB-Ind001
Pumpkinseed	Whole body	2010 FSP2 Tissue Sampling	7	LPR7-LGWB-Comp01
Silver shiner	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-NPWB-Comp01
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-MDWB-Comp01
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MDWB-Comp02
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-MDWB-Comp03
Spottail shiner	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-NHWB-Comp01
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-ACWB-Ind018

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing

Species	TissueType	Event	Reach	SampleID
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind001
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind002
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind003
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind005
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-ACWB-Ind023
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-ACWB-Ind006
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-ACWB-Ind024
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind008
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind009
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind010
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind013
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind016
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-ACWB-Ind014
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-ACWB-Ind017
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind019
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind020
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind021
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind022
White perch	Whole body	2009 FSP2 Tissue Sampling	1	LPR1-MAWB-Ind138
White perch	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-MAWB-Ind145
White perch	Whole body	2009 FSP2 Tissue Sampling	2	LPR2-MAWB-Ind158
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp06
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp09
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp10
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp11
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp12
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp30
White perch	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp14
White perch	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp15
White perch	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp33
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp18
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp19
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp23
White perch	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp34
White perch	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-MAWB-Ind128
White perch	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-MAWB-Comp25
White perch	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-MAWB-Ind123
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp28
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp29
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp32
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-WSWB-Ind023
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-WSWB-Ind019
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-WSWB-Ind020
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-WSWB-Ind009
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-WSWB-Ind013

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing prey concer

Species	TissueType	Event	Reach	SampleID	Exposu Sitewide?
American eel	Whole body	2009 FSP2 Tissue Sampling	1	LPR1-ARWB-Comp03	yes
American eel	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-ARWB-Ind085	yes
American eel	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-ARWB-Comp04	yes
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind001	yes
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind009	yes
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind012	yes
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind024	yes
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind025	yes
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind043	yes
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind060	yes
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Comp11	yes
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Ind039	yes
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Ind062	yes
American eel	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ARWB-Ind069	yes
American eel	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ARWB-Ind074	yes
American eel	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-ARWB-Ind070	yes
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp13	yes
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp15	yes
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp16	yes
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp18	yes
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp19	yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp01	yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp02	yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp03	yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp04	yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp06	yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp07	yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp11	yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp13	yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp14	yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp15	yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp17	yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp18	yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp19	yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp20	yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp24	yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp26	yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp27	yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp28	yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp30	yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp31	yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp32	yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp33	yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-CSWB-Comp34	yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-CSWB-Comp35	yes
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ANWB-Ind001	yes
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ANWB-Ind007	yes
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind003	yes
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind004	yes
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind005	yes
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-ANWB-Ind006	yes
Carp	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-CCWB-Ind002	yes
Carp	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-CCWB-Ind005	yes
Carp	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-CCWB-Ind175	yes
Carp	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-CCWB-Ind186	yes

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing prey concer

Species	TissueType	Event	Reach	SampleID	Exposu Sitewide?
Carp	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-CCWB-Ind011	yes
Carp	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-CCWB-Ind160	yes
Carp	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-CCWB-Ind021	yes
Carp	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-CCWB-Ind028	yes
Carp	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-CCWB-Ind042	yes
Carp	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-CCWB-Ind069	yes
Carp	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-CCWB-Ind139	yes
Carp	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-CCWB-Ind147	yes
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-IPWB-Ind001	yes
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-IPWB-Ind003	yes
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-IPWB-Ind004	yes
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-IPWB-Ind005	yes
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-IPWB-Ind006	yes
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind008	yes
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind009	yes
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind010	yes
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind011	yes
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind012	yes
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind013	yes
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-DCWB-Comp01	yes
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-DCWB-Comp02	yes
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	7	LPR7-DCWB-Comp03	yes
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MSWB-Comp01	yes
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MSWB-Ind009	yes
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-MSWB-Ind002	yes
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-MXWB-Comp01	yes
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-MXWB-Comp02	yes
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-MXWB-Comp03	yes
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-MXWB-Comp04	yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	1	LPR1-FHWB-Comp01	yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	1	LPR1-FHWB-Comp02	yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp03	yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp04	yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp05	yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp06	yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp07	yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp08	yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp09	yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp10	yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp11	yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp12	yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp13	yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp14	yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp15	yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-FHWB-Comp16	yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-FHWB-Comp17	yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-FHWB-Comp18	yes
Northern pike	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ELWB-Ind001	yes
Pumpkinseed	Whole body	2010 FSP2 Tissue Sampling	7	LPR7-LGWB-Comp01	yes
Silver shiner	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-NPWB-Comp01	yes
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-MDWB-Comp01	yes
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MDWB-Comp02	yes
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-MDWB-Comp03	yes
Spottail shiner	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-NHWB-Comp01	yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-ACWB-Ind018	yes

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing prey concer

Species	TissueType	Event	Reach	SampleID	Exposu Sitewide?
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind001	yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind002	yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind003	yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind005	yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-ACWB-Ind023	yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-ACWB-Ind006	yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-ACWB-Ind024	yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind008	yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind009	yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind010	yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind013	yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind016	yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-ACWB-Ind014	yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-ACWB-Ind017	yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind019	yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind020	yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind021	yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind022	yes
White perch	Whole body	2009 FSP2 Tissue Sampling	1	LPR1-MAWB-Ind138	yes
White perch	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-MAWB-Ind145	yes
White perch	Whole body	2009 FSP2 Tissue Sampling	2	LPR2-MAWB-Ind158	yes
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp06	yes
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp09	yes
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp10	yes
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp11	yes
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp12	yes
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp30	yes
White perch	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp14	yes
White perch	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp15	yes
White perch	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp33	yes
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp18	yes
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp19	yes
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp23	yes
White perch	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp34	yes
White perch	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-MAWB-Ind128	yes
White perch	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-MAWB-Comp25	yes
White perch	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-MAWB-Ind123	yes
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp28	yes
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp29	yes
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp32	yes
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-WSWB-Ind023	yes
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-WSWB-Ind019	yes
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-WSWB-Ind020	yes
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-WSWB-Ind009	yes
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-WSWB-Ind013	yes

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing ıtration distrib

Species	TissueType	Event	Reach	SampleID	ure Area ≥ RM 10?
American eel	Whole body	2009 FSP2 Tissue Sampling	1	LPR1-ARWB-Comp03	no
American eel	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-ARWB-Ind085	no
American eel	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-ARWB-Comp04	no
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind001	no
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind009	no
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind012	no
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind024	no
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind025	no
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind043	no
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind060	no
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Comp11	no
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Ind039	no
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Ind062	no
American eel	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ARWB-Ind069	yes
American eel	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ARWB-Ind074	yes
American eel	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-ARWB-Ind070	yes
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp13	yes
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp15	yes
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp16	yes
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp18	yes
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp19	yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp01	no
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp02	no
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp03	no
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp04	no
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp06	no
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp07	no
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp11	no
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp13	no
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp14	no
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp15	no
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp17	no
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp18	no
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp19	no
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp20	no
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp24	no
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp26	no
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp27	no
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp28	no
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp30	no
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp31	no
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp32	no
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp33	no
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-CSWB-Comp34	no
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-CSWB-Comp35	no
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ANWB-Ind001	no
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ANWB-Ind007	no
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind003	yes
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind004	yes
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind005	yes
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-ANWB-Ind006	yes
Carp	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-CCWB-Ind002	no
Carp	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-CCWB-Ind005	no
Carp	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-CCWB-Ind175	no
Carp	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-CCWB-Ind186	no

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing ıtration distrib

Species	TissueType	Event	Reach	SampleID	ure Area ≥ RM 10?
Carp	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-CCWB-Ind011	no
Carp	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-CCWB-Ind160	no
Carp	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-CCWB-Ind021	yes
Carp	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-CCWB-Ind028	yes
Carp	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-CCWB-Ind042	yes
Carp	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-CCWB-Ind069	yes
Carp	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-CCWB-Ind139	yes
Carp	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-CCWB-Ind147	yes
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-IPWB-Ind001	no
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-IPWB-Ind003	yes
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-IPWB-Ind004	yes
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-IPWB-Ind005	yes
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-IPWB-Ind006	yes
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind008	yes
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind009	yes
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind010	yes
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind011	yes
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind012	yes
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind013	yes
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-DCWB-Comp01	no
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-DCWB-Comp02	yes
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	7	LPR7-DCWB-Comp03	yes
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MSWB-Comp01	no
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MSWB-Ind009	no
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-MSWB-Ind002	yes
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-MXWB-Comp01	no
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-MXWB-Comp02	no
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-MXWB-Comp03	yes
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-MXWB-Comp04	yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	1	LPR1-FHWB-Comp01	no
Mummichog	Whole body	2010 FSP2 Tissue Sampling	1	LPR1-FHWB-Comp02	no
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp03	no
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp04	no
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp05	no
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp06	no
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp07	no
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp08	no
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp09	no
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp10	no
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp11	no
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp12	no
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp13	no
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp14	no
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp15	no
Mummichog	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-FHWB-Comp16	no
Mummichog	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-FHWB-Comp17	no
Mummichog	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-FHWB-Comp18	yes
Northern pike	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ELWB-Ind001	yes
Pumpkinseed	Whole body	2010 FSP2 Tissue Sampling	7	LPR7-LGWB-Comp01	yes
Silver shiner	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-NPWB-Comp01	yes
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-MDWB-Comp01	no
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MDWB-Comp02	no
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-MDWB-Comp03	yes
Spottail shiner	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-NHWB-Comp01	yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-ACWB-Ind018	no

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing ıtration distrib

Species	TissueType	Event	Reach	SampleID	ure Area ≥ RM 10?
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind001	no
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind002	no
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind003	no
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind005	no
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-ACWB-Ind023	no
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-ACWB-Ind006	no
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-ACWB-Ind024	no
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind008	yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind009	yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind010	yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind013	yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind016	yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-ACWB-Ind014	yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-ACWB-Ind017	yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind019	yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind020	yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind021	yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind022	yes
White perch	Whole body	2009 FSP2 Tissue Sampling	1	LPR1-MAWB-Ind138	no
White perch	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-MAWB-Ind145	no
White perch	Whole body	2009 FSP2 Tissue Sampling	2	LPR2-MAWB-Ind158	no
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp06	no
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp09	no
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp10	no
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp11	no
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp12	no
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp30	no
White perch	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp14	no
White perch	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp15	no
White perch	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp33	no
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp18	no
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp19	no
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp23	no
White perch	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp34	no
White perch	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-MAWB-Ind128	yes
White perch	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-MAWB-Comp25	yes
White perch	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-MAWB-Ind123	yes
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp28	yes
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp29	yes
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp32	yes
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-WSWB-Ind023	no
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-WSWB-Ind019	no
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-WSWB-Ind020	no
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-WSWB-Ind009	yes
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-WSWB-Ind013	yes

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing utions

Species	TissueType	Event	Reach	SampleID	Fish Size Category
American eel	Whole body	2009 FSP2 Tissue Sampling	1	LPR1-ARWB-Comp03	> 30 cm
American eel	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-ARWB-Ind085	> 30 cm
American eel	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-ARWB-Comp04	> 30 cm
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind001	> 30 cm
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind009	> 30 cm
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind012	> 30 cm
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind024	> 30 cm
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind025	> 30 cm
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind043	> 30 cm
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind060	> 30 cm
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Comp11	> 30 cm
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Ind039	> 30 cm
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Ind062	> 30 cm
American eel	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ARWB-Ind069	> 30 cm
American eel	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ARWB-Ind074	> 30 cm
American eel	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-ARWB-Ind070	> 30 cm
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp13	> 30 cm
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp15	≤ 30 cm
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp16	≤ 30 cm
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp18	≤ 30 cm
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp19	≤ 30 cm
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp01	na
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp02	na
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp03	na
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp04	na
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp06	na
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp07	na
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp11	na
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp13	na
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp14	na
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp15	na
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp17	na
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp18	na
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp19	na
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp20	na
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp24	na
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp26	na
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp27	na
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp28	na
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp30	na
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp31	na
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp32	na
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp33	na
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-CSWB-Comp34	na
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-CSWB-Comp35	na
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ANWB-Ind001	≤ 30 cm
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ANWB-Ind007	≤ 30 cm
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind003	≤ 30 cm
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind004	≤ 30 cm
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind005	≤ 30 cm
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-ANWB-Ind006	≤ 30 cm
Carp	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-CCWB-Ind002	> 30 cm
Carp	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-CCWB-Ind005	> 30 cm
Carp	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-CCWB-Ind175	> 30 cm
Carp	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-CCWB-Ind186	> 30 cm

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing utions

Species	TissueType	Event	Reach	SampleID	Fish Size Category
Carp	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-CCWB-Ind011	> 30 cm
Carp	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-CCWB-Ind160	> 30 cm
Carp	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-CCWB-Ind021	> 30 cm
Carp	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-CCWB-Ind028	> 30 cm
Carp	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-CCWB-Ind042	> 30 cm
Carp	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-CCWB-Ind069	> 30 cm
Carp	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-CCWB-Ind139	> 30 cm
Carp	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-CCWB-Ind147	> 30 cm
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-IPWB-Ind001	> 30 cm
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-IPWB-Ind003	> 30 cm
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-IPWB-Ind004	> 30 cm
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-IPWB-Ind005	> 30 cm
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-IPWB-Ind006	> 30 cm
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind008	> 30 cm
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind009	> 30 cm
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind010	> 30 cm
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind011	> 30 cm
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind012	> 30 cm
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind013	> 30 cm
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-DCWB-Comp01	≤ 30 cm
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-DCWB-Comp02	≤ 30 cm
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	7	LPR7-DCWB-Comp03	≤ 30 cm
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MSWB-Comp01	≤ 30 cm
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MSWB-Ind009	> 30 cm
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-MSWB-Ind002	> 30 cm
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-MXWB-Comp01	≤ 30 cm
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-MXWB-Comp02	≤ 30 cm
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-MXWB-Comp03	≤ 30 cm
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-MXWB-Comp04	≤ 30 cm
Mummichog	Whole body	2010 FSP2 Tissue Sampling	1	LPR1-FHWB-Comp01	≤ 30 cm
Mummichog	Whole body	2010 FSP2 Tissue Sampling	1	LPR1-FHWB-Comp02	≤ 30 cm
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp03	≤ 30 cm
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp04	≤ 30 cm
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp05	≤ 30 cm
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp06	≤ 30 cm
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp07	≤ 30 cm
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp08	≤ 30 cm
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp09	≤ 30 cm
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp10	≤ 30 cm
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp11	≤ 30 cm
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp12	≤ 30 cm
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp13	≤ 30 cm
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp14	≤ 30 cm
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp15	≤ 30 cm
Mummichog	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-FHWB-Comp16	≤ 30 cm
Mummichog	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-FHWB-Comp17	≤ 30 cm
Mummichog	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-FHWB-Comp18	≤ 30 cm
Northern pike	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ELWB-Ind001	> 30 cm
Pumpkinseed	Whole body	2010 FSP2 Tissue Sampling	7	LPR7-LGWB-Comp01	≤ 30 cm
Silver shiner	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-NPWB-Comp01	≤ 30 cm
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-MDWB-Comp01	≤ 30 cm
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MDWB-Comp02	> 30 cm
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-MDWB-Comp03	≤ 30 cm
Spottail shiner	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-NHWB-Comp01	≤ 30 cm
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-ACWB-Ind018	> 30 cm

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing utions

Species	TissueType	Event	Reach	SampleID	Fish Size Category
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind001	> 30 cm
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind002	> 30 cm
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind003	> 30 cm
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind005	> 30 cm
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-ACWB-Ind023	> 30 cm
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-ACWB-Ind006	> 30 cm
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-ACWB-Ind024	> 30 cm
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind008	> 30 cm
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind009	> 30 cm
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind010	> 30 cm
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind013	> 30 cm
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind016	> 30 cm
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-ACWB-Ind014	> 30 cm
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-ACWB-Ind017	> 30 cm
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind019	> 30 cm
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind020	> 30 cm
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind021	> 30 cm
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind022	> 30 cm
White perch	Whole body	2009 FSP2 Tissue Sampling	1	LPR1-MAWB-Ind138	≤ 30 cm
White perch	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-MAWB-Ind145	> 30 cm
White perch	Whole body	2009 FSP2 Tissue Sampling	2	LPR2-MAWB-Ind158	≤ 30 cm
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp06	≤ 30 cm
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp09	≤ 30 cm
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp10	≤ 30 cm
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp11	≤ 30 cm
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp12	≤ 30 cm
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp30	≤ 30 cm
White perch	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp14	≤ 30 cm
White perch	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp15	≤ 30 cm
White perch	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp33	≤ 30 cm
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp18	≤ 30 cm
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp19	≤ 30 cm
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp23	≤ 30 cm
White perch	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp34	≤ 30 cm
White perch	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-MAWB-Ind128	≤ 30 cm
White perch	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-MAWB-Comp25	≤ 30 cm
White perch	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-MAWB-Ind123	≤ 30 cm
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp28	≤ 30 cm
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp29	≤ 30 cm
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp32	≤ 30 cm
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-WSWB-Ind023	> 30 cm
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-WSWB-Ind019	> 30 cm
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-WSWB-Ind020	> 30 cm
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-WSWB-Ind009	> 30 cm
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-WSWB-Ind013	> 30 cm

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing

Species	TissueType	Event	Reach	SampleID	Blue Crab
American eel	Whole body	2009 FSP2 Tissue Sampling	1	LPR1-ARWB-Comp03	
American eel	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-ARWB-Ind085	
American eel	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-ARWB-Comp04	
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind001	
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind009	
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind012	
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind024	
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind025	
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind043	
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind060	
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Comp11	
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Ind039	
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Ind062	
American eel	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ARWB-Ind069	
American eel	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ARWB-Ind074	
American eel	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-ARWB-Ind070	
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp13	
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp15	
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp16	
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp18	
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp19	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp01	x
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp02	x
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp03	x
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp04	x
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp06	x
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp07	x
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp11	x
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp13	x
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp14	x
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp15	x
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp17	x
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp18	x
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp19	x
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp20	x
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp24	x
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp26	x
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp27	x
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp28	x
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp30	x
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp31	x
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp32	x
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp33	x
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-CSWB-Comp34	x
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-CSWB-Comp35	x
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ANWB-Ind001	
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ANWB-Ind007	
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind003	
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind004	
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind005	
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-ANWB-Ind006	
Carp	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-CCWB-Ind002	
Carp	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-CCWB-Ind005	
Carp	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-CCWB-Ind175	
Carp	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-CCWB-Ind186	

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing

Species	TissueType	Event	Reach	SampleID	Blue Crab
Carp	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-CCWB-Ind011	
Carp	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-CCWB-Ind160	
Carp	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-CCWB-Ind021	
Carp	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-CCWB-Ind028	
Carp	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-CCWB-Ind042	
Carp	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-CCWB-Ind069	
Carp	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-CCWB-Ind139	
Carp	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-CCWB-Ind147	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-IPWB-Ind001	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-IPWB-Ind003	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-IPWB-Ind004	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-IPWB-Ind005	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-IPWB-Ind006	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind008	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind009	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind010	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind011	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind012	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind013	
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-DCWB-Comp01	
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-DCWB-Comp02	
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	7	LPR7-DCWB-Comp03	
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MSWB-Comp01	
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MSWB-Ind009	
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-MSWB-Ind002	
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-MXWB-Comp01	
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-MXWB-Comp02	
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-MXWB-Comp03	
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-MXWB-Comp04	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	1	LPR1-FHWB-Comp01	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	1	LPR1-FHWB-Comp02	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp03	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp04	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp05	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp06	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp07	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp08	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp09	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp10	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp11	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp12	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp13	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp14	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp15	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-FHWB-Comp16	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-FHWB-Comp17	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-FHWB-Comp18	
Northern pike	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ELWB-Ind001	
Pumpkinseed	Whole body	2010 FSP2 Tissue Sampling	7	LPR7-LGWB-Comp01	
Silver shiner	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-NPWB-Comp01	
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-MDWB-Comp01	
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MDWB-Comp02	
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-MDWB-Comp03	
Spottail shiner	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-NHWB-Comp01	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-ACWB-Ind018	

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing

Species	TissueType	Event	Reach	SampleID	Blue Crab
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind001	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind002	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind003	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind005	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-ACWB-Ind023	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-ACWB-Ind006	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-ACWB-Ind024	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind008	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind009	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind010	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind013	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind016	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-ACWB-Ind014	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-ACWB-Ind017	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind019	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind020	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind021	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind022	
White perch	Whole body	2009 FSP2 Tissue Sampling	1	LPR1-MAWB-Ind138	
White perch	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-MAWB-Ind145	
White perch	Whole body	2009 FSP2 Tissue Sampling	2	LPR2-MAWB-Ind158	
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp06	
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp09	
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp10	
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp11	
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp12	
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp30	
White perch	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp14	
White perch	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp15	
White perch	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp33	
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp18	
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp19	
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp23	
White perch	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp34	
White perch	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-MAWB-Ind128	
White perch	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-MAWB-Comp25	
White perch	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-MAWB-Ind123	
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp28	
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp29	
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp32	
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-WSWB-Ind023	
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-WSWB-Ind019	
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-WSWB-Ind020	
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-WSWB-Ind009	
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-WSWB-Ind013	

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing

Species	TissueType	Event	Reach	SampleID	American eel
American eel	Whole body	2009 FSP2 Tissue Sampling	1	LPR1-ARWB-Comp03	x
American eel	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-ARWB-Ind085	x
American eel	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-ARWB-Comp04	x
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind001	x
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind009	x
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind012	x
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind024	x
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind025	x
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind043	x
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind060	x
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Comp11	x
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Ind039	x
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Ind062	x
American eel	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ARWB-Ind069	x
American eel	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ARWB-Ind074	x
American eel	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-ARWB-Ind070	x
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp13	x
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp15	x
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp16	x
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp18	x
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp19	x
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp01	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp02	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp03	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp04	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp06	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp07	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp11	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp13	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp14	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp15	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp17	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp18	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp19	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp20	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp24	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp26	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp27	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp28	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp30	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp31	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp32	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp33	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-CSWB-Comp34	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-CSWB-Comp35	
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ANWB-Ind001	
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ANWB-Ind007	
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind003	
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind004	
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind005	
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-ANWB-Ind006	
Carp	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-CCWB-Ind002	
Carp	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-CCWB-Ind005	
Carp	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-CCWB-Ind175	
Carp	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-CCWB-Ind186	

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing

Species	TissueType	Event	Reach	SampleID	American eel
Carp	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-CCWB-Ind011	
Carp	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-CCWB-Ind160	
Carp	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-CCWB-Ind021	
Carp	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-CCWB-Ind028	
Carp	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-CCWB-Ind042	
Carp	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-CCWB-Ind069	
Carp	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-CCWB-Ind139	
Carp	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-CCWB-Ind147	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-IPWB-Ind001	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-IPWB-Ind003	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-IPWB-Ind004	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-IPWB-Ind005	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-IPWB-Ind006	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind008	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind009	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind010	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind011	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind012	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind013	
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-DCWB-Comp01	
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-DCWB-Comp02	
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	7	LPR7-DCWB-Comp03	
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MSWB-Comp01	
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MSWB-Ind009	
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-MSWB-Ind002	
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-MXWB-Comp01	
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-MXWB-Comp02	
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-MXWB-Comp03	
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-MXWB-Comp04	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	1	LPR1-FHWB-Comp01	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	1	LPR1-FHWB-Comp02	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp03	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp04	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp05	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp06	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp07	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp08	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp09	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp10	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp11	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp12	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp13	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp14	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp15	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-FHWB-Comp16	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-FHWB-Comp17	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-FHWB-Comp18	
Northern pike	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ELWB-Ind001	
Pumpkinseed	Whole body	2010 FSP2 Tissue Sampling	7	LPR7-LGWB-Comp01	
Silver shiner	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-NPWB-Comp01	
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-MDWB-Comp01	
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MDWB-Comp02	
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-MDWB-Comp03	
Spottail shiner	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-NHWB-Comp01	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-ACWB-Ind018	

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing

Species	TissueType	Event	Reach	SampleID	American eel
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind001	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind002	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind003	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind005	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-ACWB-Ind023	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-ACWB-Ind006	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-ACWB-Ind024	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind008	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind009	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind010	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind013	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind016	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-ACWB-Ind014	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-ACWB-Ind017	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind019	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind020	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind021	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind022	
White perch	Whole body	2009 FSP2 Tissue Sampling	1	LPR1-MAWB-Ind138	
White perch	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-MAWB-Ind145	
White perch	Whole body	2009 FSP2 Tissue Sampling	2	LPR2-MAWB-Ind158	
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp06	
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp09	
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp10	
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp11	
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp12	
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp30	
White perch	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp14	
White perch	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp15	
White perch	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp33	
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp18	
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp19	
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp23	
White perch	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp34	
White perch	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-MAWB-Ind128	
White perch	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-MAWB-Comp25	
White perch	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-MAWB-Ind123	
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp28	
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp29	
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp32	
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-WSWB-Ind023	
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-WSWB-Ind019	
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-WSWB-Ind020	
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-WSWB-Ind009	
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-WSWB-Ind013	

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing

Species	TissueType	Event	Reach	SampleID	Bass species
American eel	Whole body	2009 FSP2 Tissue Sampling	1	LPR1-ARWB-Comp03	
American eel	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-ARWB-Ind085	
American eel	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-ARWB-Comp04	
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind001	
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind009	
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind012	
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind024	
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind025	
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind043	
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind060	
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Comp11	
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Ind039	
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Ind062	
American eel	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ARWB-Ind069	
American eel	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ARWB-Ind074	
American eel	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-ARWB-Ind070	
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp13	
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp15	
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp16	
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp18	
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp19	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp01	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp02	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp03	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp04	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp06	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp07	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp11	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp13	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp14	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp15	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp17	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp18	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp19	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp20	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp24	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp26	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp27	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp28	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp30	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp31	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp32	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp33	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-CSWB-Comp34	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-CSWB-Comp35	
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ANWB-Ind001	
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ANWB-Ind007	
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind003	
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind004	
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind005	
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-ANWB-Ind006	
Carp	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-CCWB-Ind002	
Carp	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-CCWB-Ind005	
Carp	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-CCWB-Ind175	
Carp	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-CCWB-Ind186	

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing

Species	TissueType	Event	Reach	SampleID	Bass species
Carp	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-CCWB-Ind011	
Carp	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-CCWB-Ind160	
Carp	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-CCWB-Ind021	
Carp	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-CCWB-Ind028	
Carp	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-CCWB-Ind042	
Carp	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-CCWB-Ind069	
Carp	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-CCWB-Ind139	
Carp	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-CCWB-Ind147	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-IPWB-Ind001	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-IPWB-Ind003	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-IPWB-Ind004	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-IPWB-Ind005	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-IPWB-Ind006	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind008	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind009	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind010	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind011	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind012	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind013	
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-DCWB-Comp01	
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-DCWB-Comp02	
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	7	LPR7-DCWB-Comp03	
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MSWB-Comp01	x
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MSWB-Ind009	x
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-MSWB-Ind002	x
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-MXWB-Comp01	
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-MXWB-Comp02	
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-MXWB-Comp03	
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-MXWB-Comp04	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	1	LPR1-FHWB-Comp01	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	1	LPR1-FHWB-Comp02	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp03	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp04	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp05	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp06	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp07	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp08	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp09	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp10	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp11	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp12	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp13	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp14	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp15	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-FHWB-Comp16	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-FHWB-Comp17	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-FHWB-Comp18	
Northern pike	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ELWB-Ind001	
Pumpkinseed	Whole body	2010 FSP2 Tissue Sampling	7	LPR7-LGWB-Comp01	
Silver shiner	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-NPWB-Comp01	
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-MDWB-Comp01	x
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MDWB-Comp02	x
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-MDWB-Comp03	x
Spottail shiner	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-NHWB-Comp01	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-ACWB-Ind018	

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing

Species	TissueType	Event	Reach	SampleID	Bass species
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind001	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind002	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind003	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind005	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-ACWB-Ind023	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-ACWB-Ind006	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-ACWB-Ind024	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind008	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind009	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind010	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind013	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind016	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-ACWB-Ind014	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-ACWB-Ind017	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind019	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind020	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind021	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind022	
White perch	Whole body	2009 FSP2 Tissue Sampling	1	LPR1-MAWB-Ind138	
White perch	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-MAWB-Ind145	
White perch	Whole body	2009 FSP2 Tissue Sampling	2	LPR2-MAWB-Ind158	
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp06	
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp09	
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp10	
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp11	
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp12	
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp30	
White perch	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp14	
White perch	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp15	
White perch	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp33	
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp18	
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp19	
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp23	
White perch	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp34	
White perch	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-MAWB-Ind128	
White perch	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-MAWB-Comp25	
White perch	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-MAWB-Ind123	
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp28	
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp29	
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp32	
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-WSWB-Ind023	
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-WSWB-Ind019	
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-WSWB-Ind020	
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-WSWB-Ind009	
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-WSWB-Ind013	

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing

Species	TissueType	Event	Reach	SampleID	Species
					Carp
American eel	Whole body	2009 FSP2 Tissue Sampling	1	LPR1-ARWB-Comp03	
American eel	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-ARWB-Ind085	
American eel	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-ARWB-Comp04	
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind001	
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind009	
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind012	
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind024	
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind025	
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind043	
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind060	
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Comp11	
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Ind039	
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Ind062	
American eel	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ARWB-Ind069	
American eel	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ARWB-Ind074	
American eel	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-ARWB-Ind070	
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp13	
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp15	
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp16	
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp18	
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp19	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp01	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp02	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp03	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp04	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp06	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp07	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp11	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp13	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp14	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp15	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp17	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp18	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp19	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp20	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp24	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp26	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp27	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp28	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp30	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp31	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp32	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp33	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-CSWB-Comp34	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-CSWB-Comp35	
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ANWB-Ind001	
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ANWB-Ind007	
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind003	
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind004	
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind005	
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-ANWB-Ind006	
Carp	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-CCWB-Ind002	x
Carp	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-CCWB-Ind005	x
Carp	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-CCWB-Ind175	x
Carp	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-CCWB-Ind186	x

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing

Species	TissueType	Event	Reach	SampleID	Species
					Carp
Carp	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-CCWB-Ind011	x
Carp	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-CCWB-Ind160	x
Carp	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-CCWB-Ind021	x
Carp	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-CCWB-Ind028	x
Carp	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-CCWB-Ind042	x
Carp	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-CCWB-Ind069	x
Carp	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-CCWB-Ind139	x
Carp	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-CCWB-Ind147	x
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-IPWB-Ind001	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-IPWB-Ind003	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-IPWB-Ind004	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-IPWB-Ind005	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-IPWB-Ind006	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind008	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind009	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind010	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind011	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind012	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind013	
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-DCWB-Comp01	
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-DCWB-Comp02	
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	7	LPR7-DCWB-Comp03	
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MSWB-Comp01	
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MSWB-Ind009	
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-MSWB-Ind002	
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-MXWB-Comp01	
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-MXWB-Comp02	
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-MXWB-Comp03	
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-MXWB-Comp04	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	1	LPR1-FHWB-Comp01	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	1	LPR1-FHWB-Comp02	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp03	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp04	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp05	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp06	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp07	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp08	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp09	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp10	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp11	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp12	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp13	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp14	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp15	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-FHWB-Comp16	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-FHWB-Comp17	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-FHWB-Comp18	
Northern pike	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ELWB-Ind001	
Pumpkinseed	Whole body	2010 FSP2 Tissue Sampling	7	LPR7-LGWB-Comp01	
Silver shiner	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-NPWB-Comp01	
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-MDWB-Comp01	
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MDWB-Comp02	
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-MDWB-Comp03	
Spottail shiner	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-NHWB-Comp01	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-ACWB-Ind018	

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing

Species	TissueType	Event	Reach	SampleID	Species
					Carp
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind001	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind002	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind003	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind005	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-ACWB-Ind023	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-ACWB-Ind006	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-ACWB-Ind024	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind008	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind009	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind010	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind013	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind016	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-ACWB-Ind014	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-ACWB-Ind017	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind019	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind020	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind021	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind022	
White perch	Whole body	2009 FSP2 Tissue Sampling	1	LPR1-MAWB-Ind138	
White perch	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-MAWB-Ind145	
White perch	Whole body	2009 FSP2 Tissue Sampling	2	LPR2-MAWB-Ind158	
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp06	
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp09	
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp10	
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp11	
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp12	
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp30	
White perch	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp14	
White perch	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp15	
White perch	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp33	
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp18	
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp19	
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp23	
White perch	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp34	
White perch	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-MAWB-Ind128	
White perch	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-MAWB-Comp25	
White perch	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-MAWB-Ind123	
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp28	
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp29	
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp32	
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-WSWB-Ind023	
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-WSWB-Ind019	
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-WSWB-Ind020	
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-WSWB-Ind009	
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-WSWB-Ind013	

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing

Species	TissueType	Event	Reach	SampleID	s Category Catfish species
American eel	Whole body	2009 FSP2 Tissue Sampling	1	LPR1-ARWB-Comp03	
American eel	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-ARWB-Ind085	
American eel	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-ARWB-Comp04	
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind001	
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind009	
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind012	
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind024	
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind025	
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind043	
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind060	
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Comp11	
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Ind039	
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Ind062	
American eel	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ARWB-Ind069	
American eel	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ARWB-Ind074	
American eel	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-ARWB-Ind070	
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp13	
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp15	
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp16	
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp18	
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp19	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp01	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp02	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp03	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp04	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp06	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp07	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp11	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp13	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp14	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp15	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp17	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp18	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp19	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp20	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp24	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp26	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp27	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp28	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp30	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp31	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp32	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp33	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-CSWB-Comp34	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-CSWB-Comp35	
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ANWB-Ind001	x
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ANWB-Ind007	x
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind003	x
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind004	x
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind005	x
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-ANWB-Ind006	x
Carp	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-CCWB-Ind002	
Carp	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-CCWB-Ind005	
Carp	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-CCWB-Ind175	
Carp	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-CCWB-Ind186	

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing

Species	TissueType	Event	Reach	SampleID	s Category Catfish species
Carp	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-CCWB-Ind011	
Carp	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-CCWB-Ind160	
Carp	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-CCWB-Ind021	
Carp	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-CCWB-Ind028	
Carp	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-CCWB-Ind042	
Carp	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-CCWB-Ind069	
Carp	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-CCWB-Ind139	
Carp	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-CCWB-Ind147	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-IPWB-Ind001	x
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-IPWB-Ind003	x
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-IPWB-Ind004	x
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-IPWB-Ind005	x
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-IPWB-Ind006	x
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind008	x
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind009	x
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind010	x
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind011	x
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind012	x
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind013	x
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-DCWB-Comp01	
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-DCWB-Comp02	
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	7	LPR7-DCWB-Comp03	
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MSWB-Comp01	
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MSWB-Ind009	
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-MSWB-Ind002	
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-MXWB-Comp01	
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-MXWB-Comp02	
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-MXWB-Comp03	
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-MXWB-Comp04	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	1	LPR1-FHWB-Comp01	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	1	LPR1-FHWB-Comp02	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp03	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp04	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp05	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp06	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp07	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp08	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp09	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp10	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp11	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp12	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp13	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp14	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp15	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-FHWB-Comp16	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-FHWB-Comp17	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-FHWB-Comp18	
Northern pike	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ELWB-Ind001	
Pumpkinseed	Whole body	2010 FSP2 Tissue Sampling	7	LPR7-LGWB-Comp01	
Silver shiner	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-NPWB-Comp01	
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-MDWB-Comp01	
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MDWB-Comp02	
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-MDWB-Comp03	
Spottail shiner	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-NHWB-Comp01	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-ACWB-Ind018	x

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing

Species	TissueType	Event	Reach	SampleID	s Category
					Catfish species
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind001	x
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind002	x
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind003	x
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind005	x
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-ACWB-Ind023	x
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-ACWB-Ind006	x
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-ACWB-Ind024	x
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind008	x
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind009	x
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind010	x
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind013	x
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind016	x
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-ACWB-Ind014	x
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-ACWB-Ind017	x
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind019	x
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind020	x
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind021	x
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind022	x
White perch	Whole body	2009 FSP2 Tissue Sampling	1	LPR1-MAWB-Ind138	
White perch	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-MAWB-Ind145	
White perch	Whole body	2009 FSP2 Tissue Sampling	2	LPR2-MAWB-Ind158	
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp06	
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp09	
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp10	
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp11	
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp12	
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp30	
White perch	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp14	
White perch	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp15	
White perch	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp33	
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp18	
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp19	
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp23	
White perch	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp34	
White perch	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-MAWB-Ind128	
White perch	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-MAWB-Comp25	
White perch	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-MAWB-Ind123	
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp28	
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp29	
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp32	
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-WSWB-Ind023	x
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-WSWB-Ind019	x
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-WSWB-Ind020	x
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-WSWB-Ind009	x
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-WSWB-Ind013	x

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing

Species	TissueType	Event	Reach	SampleID	Small forage fish (SFF)
American eel	Whole body	2009 FSP2 Tissue Sampling	1	LPR1-ARWB-Comp03	
American eel	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-ARWB-Ind085	
American eel	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-ARWB-Comp04	
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind001	
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind009	
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind012	
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind024	
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind025	
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind043	
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind060	
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Comp11	
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Ind039	
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Ind062	
American eel	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ARWB-Ind069	
American eel	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ARWB-Ind074	
American eel	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-ARWB-Ind070	
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp13	
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp15	
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp16	
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp18	
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp19	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp01	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp02	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp03	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp04	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp06	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp07	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp11	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp13	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp14	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp15	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp17	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp18	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp19	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp20	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp24	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp26	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp27	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp28	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp30	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp31	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp32	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp33	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-CSWB-Comp34	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-CSWB-Comp35	
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ANWB-Ind001	
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ANWB-Ind007	
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind003	
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind004	
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind005	
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-ANWB-Ind006	
Carp	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-CCWB-Ind002	
Carp	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-CCWB-Ind005	
Carp	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-CCWB-Ind175	
Carp	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-CCWB-Ind186	

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing

Species	TissueType	Event	Reach	SampleID	Small forage fish (SFF)
Carp	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-CCWB-Ind011	
Carp	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-CCWB-Ind160	
Carp	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-CCWB-Ind021	
Carp	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-CCWB-Ind028	
Carp	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-CCWB-Ind042	
Carp	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-CCWB-Ind069	
Carp	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-CCWB-Ind139	
Carp	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-CCWB-Ind147	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-IPWB-Ind001	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-IPWB-Ind003	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-IPWB-Ind004	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-IPWB-Ind005	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-IPWB-Ind006	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind008	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind009	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind010	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind011	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind012	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind013	
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-DCWB-Comp01	x
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-DCWB-Comp02	x
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	7	LPR7-DCWB-Comp03	x
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MSWB-Comp01	
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MSWB-Ind009	
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-MSWB-Ind002	
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-MXWB-Comp01	x
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-MXWB-Comp02	x
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-MXWB-Comp03	x
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-MXWB-Comp04	x
Mummichog	Whole body	2010 FSP2 Tissue Sampling	1	LPR1-FHWB-Comp01	x
Mummichog	Whole body	2010 FSP2 Tissue Sampling	1	LPR1-FHWB-Comp02	x
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp03	x
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp04	x
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp05	x
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp06	x
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp07	x
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp08	x
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp09	x
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp10	x
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp11	x
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp12	x
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp13	x
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp14	x
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp15	x
Mummichog	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-FHWB-Comp16	x
Mummichog	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-FHWB-Comp17	x
Mummichog	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-FHWB-Comp18	x
Northern pike	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ELWB-Ind001	
Pumpkinseed	Whole body	2010 FSP2 Tissue Sampling	7	LPR7-LGWB-Comp01	x
Silver shiner	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-NPWB-Comp01	x
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-MDWB-Comp01	
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MDWB-Comp02	
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-MDWB-Comp03	
Spottail shiner	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-NHWB-Comp01	x
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-ACWB-Ind018	

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing

Species	TissueType	Event	Reach	SampleID	Small forage fish (SFF)
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind001	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind002	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind003	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind005	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-ACWB-Ind023	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-ACWB-Ind006	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-ACWB-Ind024	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind008	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind009	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind010	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind013	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind016	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-ACWB-Ind014	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-ACWB-Ind017	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind019	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind020	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind021	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind022	
White perch	Whole body	2009 FSP2 Tissue Sampling	1	LPR1-MAWB-Ind138	
White perch	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-MAWB-Ind145	
White perch	Whole body	2009 FSP2 Tissue Sampling	2	LPR2-MAWB-Ind158	
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp06	
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp09	
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp10	
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp11	
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp12	
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp30	
White perch	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp14	
White perch	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp15	
White perch	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp33	
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp18	
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp19	
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp23	
White perch	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp34	
White perch	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-MAWB-Ind128	
White perch	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-MAWB-Comp25	
White perch	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-MAWB-Ind123	
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp28	
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp29	
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp32	
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-WSWB-Ind023	
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-WSWB-Ind019	
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-WSWB-Ind020	
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-WSWB-Ind009	
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-WSWB-Ind013	

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing

Species	TissueType	Event	Reach	SampleID	White perch
American eel	Whole body	2009 FSP2 Tissue Sampling	1	LPR1-ARWB-Comp03	
American eel	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-ARWB-Ind085	
American eel	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-ARWB-Comp04	
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind001	
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind009	
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind012	
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind024	
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind025	
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind043	
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind060	
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Comp11	
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Ind039	
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Ind062	
American eel	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ARWB-Ind069	
American eel	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ARWB-Ind074	
American eel	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-ARWB-Ind070	
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp13	
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp15	
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp16	
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp18	
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp19	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp01	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp02	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp03	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp04	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp06	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp07	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp11	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp13	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp14	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp15	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp17	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp18	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp19	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp20	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp24	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp26	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp27	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp28	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp30	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp31	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp32	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp33	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-CSWB-Comp34	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-CSWB-Comp35	
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ANWB-Ind001	
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ANWB-Ind007	
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind003	
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind004	
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind005	
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-ANWB-Ind006	
Carp	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-CCWB-Ind002	
Carp	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-CCWB-Ind005	
Carp	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-CCWB-Ind175	
Carp	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-CCWB-Ind186	

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing

Species	TissueType	Event	Reach	SampleID	White perch
Carp	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-CCWB-Ind011	
Carp	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-CCWB-Ind160	
Carp	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-CCWB-Ind021	
Carp	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-CCWB-Ind028	
Carp	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-CCWB-Ind042	
Carp	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-CCWB-Ind069	
Carp	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-CCWB-Ind139	
Carp	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-CCWB-Ind147	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-IPWB-Ind001	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-IPWB-Ind003	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-IPWB-Ind004	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-IPWB-Ind005	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-IPWB-Ind006	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind008	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind009	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind010	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind011	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind012	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind013	
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-DCWB-Comp01	
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-DCWB-Comp02	
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	7	LPR7-DCWB-Comp03	
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MSWB-Comp01	
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MSWB-Ind009	
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-MSWB-Ind002	
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-MXWB-Comp01	
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-MXWB-Comp02	
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-MXWB-Comp03	
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-MXWB-Comp04	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	1	LPR1-FHWB-Comp01	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	1	LPR1-FHWB-Comp02	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp03	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp04	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp05	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp06	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp07	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp08	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp09	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp10	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp11	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp12	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp13	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp14	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp15	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-FHWB-Comp16	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-FHWB-Comp17	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-FHWB-Comp18	
Northern pike	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ELWB-Ind001	
Pumpkinseed	Whole body	2010 FSP2 Tissue Sampling	7	LPR7-LGWB-Comp01	
Silver shiner	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-NPWB-Comp01	
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-MDWB-Comp01	
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MDWB-Comp02	
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-MDWB-Comp03	
Spottail shiner	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-NHWB-Comp01	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-ACWB-Ind018	

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing

Species	TissueType	Event	Reach	SampleID	White perch
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind001	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind002	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind003	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind005	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-ACWB-Ind023	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-ACWB-Ind006	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-ACWB-Ind024	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind008	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind009	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind010	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind013	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind016	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-ACWB-Ind014	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-ACWB-Ind017	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind019	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind020	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind021	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind022	
White perch	Whole body	2009 FSP2 Tissue Sampling	1	LPR1-MAWB-Ind138	x
White perch	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-MAWB-Ind145	x
White perch	Whole body	2009 FSP2 Tissue Sampling	2	LPR2-MAWB-Ind158	x
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp06	x
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp09	x
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp10	x
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp11	x
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp12	x
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp30	x
White perch	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp14	x
White perch	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp15	x
White perch	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp33	x
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp18	x
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp19	x
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp23	x
White perch	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp34	x
White perch	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-MAWB-Ind128	x
White perch	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-MAWB-Comp25	x
White perch	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-MAWB-Ind123	x
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp28	x
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp29	x
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp32	x
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-WSWB-Ind023	
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-WSWB-Ind019	
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-WSWB-Ind020	
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-WSWB-Ind009	
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-WSWB-Ind013	

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing

Species	TissueType	Event	Reach	SampleID	All fish
American eel	Whole body	2009 FSP2 Tissue Sampling	1	LPR1-ARWB-Comp03	x
American eel	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-ARWB-Ind085	x
American eel	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-ARWB-Comp04	x
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind001	x
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind009	x
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind012	x
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind024	x
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind025	x
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind043	x
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind060	x
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Comp11	x
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Ind039	x
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Ind062	x
American eel	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ARWB-Ind069	x
American eel	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ARWB-Ind074	x
American eel	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-ARWB-Ind070	x
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp13	x
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp15	x
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp16	x
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp18	x
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp19	x
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp01	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp02	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp03	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp04	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp06	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp07	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp11	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp13	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp14	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp15	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp17	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp18	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp19	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp20	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp24	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp26	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp27	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp28	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp30	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp31	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp32	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp33	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-CSWB-Comp34	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-CSWB-Comp35	
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ANWB-Ind001	x
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ANWB-Ind007	x
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind003	x
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind004	x
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind005	x
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-ANWB-Ind006	x
Carp	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-CCWB-Ind002	x
Carp	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-CCWB-Ind005	x
Carp	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-CCWB-Ind175	x
Carp	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-CCWB-Ind186	x

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing

Species	TissueType	Event	Reach	SampleID	All fish
Carp	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-CCWB-Ind011	x
Carp	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-CCWB-Ind160	x
Carp	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-CCWB-Ind021	x
Carp	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-CCWB-Ind028	x
Carp	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-CCWB-Ind042	x
Carp	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-CCWB-Ind069	x
Carp	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-CCWB-Ind139	x
Carp	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-CCWB-Ind147	x
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-IPWB-Ind001	x
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-IPWB-Ind003	x
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-IPWB-Ind004	x
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-IPWB-Ind005	x
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-IPWB-Ind006	x
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind008	x
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind009	x
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind010	x
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind011	x
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind012	x
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind013	x
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-DCWB-Comp01	x
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-DCWB-Comp02	x
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	7	LPR7-DCWB-Comp03	x
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MSWB-Comp01	x
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MSWB-Ind009	x
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-MSWB-Ind002	x
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-MXWB-Comp01	x
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-MXWB-Comp02	x
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-MXWB-Comp03	x
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-MXWB-Comp04	x
Mummichog	Whole body	2010 FSP2 Tissue Sampling	1	LPR1-FHWB-Comp01	x
Mummichog	Whole body	2010 FSP2 Tissue Sampling	1	LPR1-FHWB-Comp02	x
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp03	x
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp04	x
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp05	x
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp06	x
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp07	x
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp08	x
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp09	x
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp10	x
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp11	x
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp12	x
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp13	x
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp14	x
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp15	x
Mummichog	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-FHWB-Comp16	x
Mummichog	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-FHWB-Comp17	x
Mummichog	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-FHWB-Comp18	x
Northern pike	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ELWB-Ind001	x
Pumpkinseed	Whole body	2010 FSP2 Tissue Sampling	7	LPR7-LGWB-Comp01	x
Silver shiner	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-NPWB-Comp01	x
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-MDWB-Comp01	x
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MDWB-Comp02	x
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-MDWB-Comp03	x
Spottail shiner	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-NHWB-Comp01	x
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-ACWB-Ind018	x

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing

Species	TissueType	Event	Reach	SampleID	All fish
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind001	x
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind002	x
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind003	x
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind005	x
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-ACWB-Ind023	x
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-ACWB-Ind006	x
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-ACWB-Ind024	x
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind008	x
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind009	x
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind010	x
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind013	x
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind016	x
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-ACWB-Ind014	x
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-ACWB-Ind017	x
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind019	x
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind020	x
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind021	x
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind022	x
White perch	Whole body	2009 FSP2 Tissue Sampling	1	LPR1-MAWB-Ind138	x
White perch	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-MAWB-Ind145	x
White perch	Whole body	2009 FSP2 Tissue Sampling	2	LPR2-MAWB-Ind158	x
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp06	x
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp09	x
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp10	x
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp11	x
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp12	x
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp30	x
White perch	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp14	x
White perch	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp15	x
White perch	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp33	x
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp18	x
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp19	x
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp23	x
White perch	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp34	x
White perch	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-MAWB-Ind128	x
White perch	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-MAWB-Comp25	x
White perch	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-MAWB-Ind123	x
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp28	x
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp29	x
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp32	x
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-WSWB-Ind023	x
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-WSWB-Ind019	x
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-WSWB-Ind020	x
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-WSWB-Ind009	x
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-WSWB-Ind013	x

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing

Species	TissueType	Event	Reach	SampleID	Total Value
American eel	Whole body	2009 FSP2 Tissue Sampling	1	LPR1-ARWB-Comp03	1200
American eel	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-ARWB-Ind085	1300
American eel	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-ARWB-Comp04	1800
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind001	2400
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind009	5700
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind012	1300
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind024	880
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind025	1900
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind043	2000
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind060	3200
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Comp11	1500
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Ind039	880
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Ind062	1500
American eel	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ARWB-Ind069	950
American eel	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ARWB-Ind074	1200
American eel	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-ARWB-Ind070	730
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp13	980
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp15	590
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp16	420
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp18	600
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp19	1200
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp01	260
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp02	240
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp03	290
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp04	290
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp06	200
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp07	260
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp11	210
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp13	250
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp14	310
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp15	330
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp17	280
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp18	340
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp19	270
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp20	330
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp24	450
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp26	450
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp27	290
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp28	350
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp30	440
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp31	580
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp32	150
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp33	490
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-CSWB-Comp34	290
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-CSWB-Comp35	210
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ANWB-Ind001	1700
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ANWB-Ind007	1600
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind003	600
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind004	560
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind005	520
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-ANWB-Ind006	260
Carp	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-CCWB-Ind002	2800
Carp	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-CCWB-Ind005	3700
Carp	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-CCWB-Ind175	7900
Carp	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-CCWB-Ind186	4200

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing

Species	TissueType	Event	Reach	SampleID	Total Value
Carp	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-CCWB-Ind011	4600
Carp	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-CCWB-Ind160	5000
Carp	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-CCWB-Ind021	5200
Carp	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-CCWB-Ind028	4300
Carp	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-CCWB-Ind042	1800
Carp	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-CCWB-Ind069	7000
Carp	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-CCWB-Ind139	1500
Carp	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-CCWB-Ind147	1700
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-IPWB-Ind001	350
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-IPWB-Ind003	1300
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-IPWB-Ind004	1900
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-IPWB-Ind005	720
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-IPWB-Ind006	2400
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind008	440
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind009	1100
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind010	1800
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind011	780
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind012	2700
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind013	970
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-DCWB-Comp01	450
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-DCWB-Comp02	450
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	7	LPR7-DCWB-Comp03	250
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MSWB-Comp01	1100
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MSWB-Ind009	2100
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-MSWB-Ind002	7900
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-MXWB-Comp01	870
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-MXWB-Comp02	610
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-MXWB-Comp03	390
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-MXWB-Comp04	310
Mummichog	Whole body	2010 FSP2 Tissue Sampling	1	LPR1-FHWB-Comp01	240
Mummichog	Whole body	2010 FSP2 Tissue Sampling	1	LPR1-FHWB-Comp02	340
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp03	290
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp04	420
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp05	380
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp06	430
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp07	440
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp08	310
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp09	370
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp10	510
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp11	860
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp12	790
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp13	930
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp14	780
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp15	590
Mummichog	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-FHWB-Comp16	710
Mummichog	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-FHWB-Comp17	450
Mummichog	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-FHWB-Comp18	430
Northern pike	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ELWB-Ind001	2000
Pumpkinseed	Whole body	2010 FSP2 Tissue Sampling	7	LPR7-LGWB-Comp01	170
Silver shiner	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-NPWB-Comp01	480
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-MDWB-Comp01	630
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MDWB-Comp02	1400
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-MDWB-Comp03	980
Spottail shiner	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-NHWB-Comp01	400
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-ACWB-Ind018	2700

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing

Species	TissueType	Event	Reach	SampleID	Total Value
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind001	2300
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind002	3700
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind003	1500
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind005	5800
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-ACWB-Ind023	3800
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-ACWB-Ind006	680
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-ACWB-Ind024	7300
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind008	2000
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind009	630
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind010	1000
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind013	1900
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind016	2900
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-ACWB-Ind014	3000
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-ACWB-Ind017	3100
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind019	2000
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind020	3200
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind021	1800
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind022	1800
White perch	Whole body	2009 FSP2 Tissue Sampling	1	LPR1-MAWB-Ind138	1700
White perch	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-MAWB-Ind145	1100
White perch	Whole body	2009 FSP2 Tissue Sampling	2	LPR2-MAWB-Ind158	1300
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp06	2300
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp09	2600
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp10	2800
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp11	2500
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp12	2800
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp30	2700
White perch	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp14	3700
White perch	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp15	2000
White perch	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp33	1800
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp18	2900
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp19	5100
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp23	2700
White perch	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp34	500
White perch	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-MAWB-Ind128	290
White perch	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-MAWB-Comp25	2700
White perch	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-MAWB-Ind123	410
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp28	820
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp29	970
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp32	1000
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-WSWB-Ind023	1400
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-WSWB-Ind019	2900
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-WSWB-Ind020	1600
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-WSWB-Ind009	540
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-WSWB-Ind013	850

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing

Species	TissueType	Event	Reach	SampleID	PCB Cong µg/kg Qual
American eel	Whole body	2009 FSP2 Tissue Sampling	1	LPR1-ARWB-Comp03	J
American eel	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-ARWB-Ind085	J
American eel	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-ARWB-Comp04	J
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind001	J
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind009	J
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind012	J
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind024	J
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind025	J
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind043	J
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind060	J
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Comp11	J
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Ind039	J
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Ind062	J
American eel	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ARWB-Ind069	J
American eel	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ARWB-Ind074	J
American eel	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-ARWB-Ind070	J
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp13	J
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp15	J
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp16	J
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp18	J
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp19	J
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp01	J
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp02	J
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp03	J
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp04	J
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp06	J
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp07	J
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp11	J
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp13	J
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp14	J
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp15	J
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp17	J
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp18	J
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp19	J
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp20	J
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp24	J
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp26	J
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp27	J
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp28	J
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp30	J
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp31	J
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp32	J
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp33	J
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-CSWB-Comp34	J
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-CSWB-Comp35	J
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ANWB-Ind001	J
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ANWB-Ind007	J
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind003	J
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind004	J
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind005	J
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-ANWB-Ind006	J
Carp	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-CCWB-Ind002	J
Carp	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-CCWB-Ind005	J
Carp	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-CCWB-Ind175	J
Carp	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-CCWB-Ind186	J

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing

Species	TissueType	Event	Reach	SampleID	PCB Cong µg/kg Qual
Carp	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-CCWB-Ind011	J
Carp	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-CCWB-Ind160	J
Carp	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-CCWB-Ind021	J
Carp	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-CCWB-Ind028	J
Carp	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-CCWB-Ind042	J
Carp	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-CCWB-Ind069	J
Carp	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-CCWB-Ind139	J
Carp	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-CCWB-Ind147	J
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-IPWB-Ind001	J
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-IPWB-Ind003	J
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-IPWB-Ind004	J
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-IPWB-Ind005	J
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-IPWB-Ind006	J
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind008	J
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind009	J
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind010	J
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind011	J
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind012	J
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind013	J
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-DCWB-Comp01	J
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-DCWB-Comp02	J
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	7	LPR7-DCWB-Comp03	J
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MSWB-Comp01	J
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MSWB-Ind009	J
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-MSWB-Ind002	J
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-MXWB-Comp01	J
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-MXWB-Comp02	J
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-MXWB-Comp03	J
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-MXWB-Comp04	J
Mummichog	Whole body	2010 FSP2 Tissue Sampling	1	LPR1-FHWB-Comp01	J
Mummichog	Whole body	2010 FSP2 Tissue Sampling	1	LPR1-FHWB-Comp02	J
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp03	J
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp04	J
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp05	J
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp06	J
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp07	J
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp08	J
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp09	J
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp10	J
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp11	J
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp12	J
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp13	J
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp14	J
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp15	J
Mummichog	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-FHWB-Comp16	J
Mummichog	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-FHWB-Comp17	J
Mummichog	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-FHWB-Comp18	J
Northern pike	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ELWB-Ind001	J
Pumpkinseed	Whole body	2010 FSP2 Tissue Sampling	7	LPR7-LGWB-Comp01	J
Silver shiner	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-NPWB-Comp01	J
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-MDWB-Comp01	J
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MDWB-Comp02	J
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-MDWB-Comp03	J
Spottail shiner	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-NHWB-Comp01	J
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-ACWB-Ind018	J

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing

Species	TissueType	Event	Reach	SampleID	PCB Cong µg/kg Qual
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind001	J
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind002	J
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind003	J
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind005	J
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-ACWB-Ind023	J
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-ACWB-Ind006	J
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-ACWB-Ind024	J
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind008	J
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind009	J
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind010	J
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind013	J
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind016	J
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-ACWB-Ind014	J
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-ACWB-Ind017	J
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind019	J
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind020	J
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind021	J
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind022	J
White perch	Whole body	2009 FSP2 Tissue Sampling	1	LPR1-MAWB-Ind138	J
White perch	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-MAWB-Ind145	J
White perch	Whole body	2009 FSP2 Tissue Sampling	2	LPR2-MAWB-Ind158	J
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp06	J
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp09	J
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp10	J
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp11	J
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp12	J
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp30	J
White perch	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp14	J
White perch	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp15	J
White perch	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp33	J
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp18	J
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp19	J
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp23	J
White perch	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp34	J
White perch	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-MAWB-Ind128	J
White perch	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-MAWB-Comp25	J
White perch	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-MAWB-Ind123	J
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp28	J
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp29	J
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp32	J
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-WSWB-Ind023	J
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-WSWB-Ind019	J
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-WSWB-Ind020	J
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-WSWB-Ind009	J
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-WSWB-Ind013	J

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing

Species	TissueType	Event	Reach	SampleID	eners Detect
American eel	Whole body	2009 FSP2 Tissue Sampling	1	LPR1-ARWB-Comp03	Yes
American eel	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-ARWB-Ind085	Yes
American eel	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-ARWB-Comp04	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind001	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind009	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind012	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind024	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind025	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind043	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind060	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Comp11	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Ind039	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Ind062	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ARWB-Ind069	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ARWB-Ind074	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-ARWB-Ind070	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp13	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp15	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp16	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp18	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp19	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp01	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp02	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp03	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp04	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp06	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp07	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp11	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp13	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp14	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp15	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp17	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp18	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp19	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp20	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp24	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp26	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp27	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp28	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp30	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp31	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp32	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp33	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-CSWB-Comp34	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-CSWB-Comp35	Yes
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ANWB-Ind001	Yes
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ANWB-Ind007	Yes
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind003	Yes
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind004	Yes
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind005	Yes
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-ANWB-Ind006	Yes
Carp	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-CCWB-Ind002	Yes
Carp	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-CCWB-Ind005	Yes
Carp	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-CCWB-Ind175	Yes
Carp	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-CCWB-Ind186	Yes

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing

Species	TissueType	Event	Reach	SampleID	eners Detect
Carp	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-CCWB-Ind011	Yes
Carp	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-CCWB-Ind160	Yes
Carp	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-CCWB-Ind021	Yes
Carp	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-CCWB-Ind028	Yes
Carp	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-CCWB-Ind042	Yes
Carp	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-CCWB-Ind069	Yes
Carp	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-CCWB-Ind139	Yes
Carp	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-CCWB-Ind147	Yes
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-IPWB-Ind001	Yes
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-IPWB-Ind003	Yes
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-IPWB-Ind004	Yes
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-IPWB-Ind005	Yes
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-IPWB-Ind006	Yes
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind008	Yes
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind009	Yes
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind010	Yes
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind011	Yes
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind012	Yes
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind013	Yes
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-DCWB-Comp01	Yes
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-DCWB-Comp02	Yes
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	7	LPR7-DCWB-Comp03	Yes
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MSWB-Comp01	Yes
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MSWB-Ind009	Yes
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-MSWB-Ind002	Yes
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-MXWB-Comp01	Yes
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-MXWB-Comp02	Yes
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-MXWB-Comp03	Yes
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-MXWB-Comp04	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	1	LPR1-FHWB-Comp01	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	1	LPR1-FHWB-Comp02	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp03	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp04	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp05	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp06	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp07	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp08	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp09	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp10	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp11	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp12	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp13	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp14	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp15	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-FHWB-Comp16	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-FHWB-Comp17	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-FHWB-Comp18	Yes
Northern pike	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ELWB-Ind001	Yes
Pumpkinseed	Whole body	2010 FSP2 Tissue Sampling	7	LPR7-LGWB-Comp01	Yes
Silver shiner	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-NPWB-Comp01	Yes
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-MDWB-Comp01	Yes
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MDWB-Comp02	Yes
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-MDWB-Comp03	Yes
Spottail shiner	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-NHWB-Comp01	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-ACWB-Ind018	Yes

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing

Species	TissueType	Event	Reach	SampleID	eners Detect
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind001	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind002	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind003	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind005	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-ACWB-Ind023	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-ACWB-Ind006	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-ACWB-Ind024	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind008	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind009	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind010	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind013	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind016	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-ACWB-Ind014	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-ACWB-Ind017	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind019	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind020	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind021	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind022	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	1	LPR1-MAWB-Ind138	Yes
White perch	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-MAWB-Ind145	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	2	LPR2-MAWB-Ind158	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp06	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp09	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp10	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp11	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp12	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp30	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp14	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp15	Yes
White perch	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp33	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp18	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp19	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp23	Yes
White perch	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp34	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-MAWB-Ind128	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-MAWB-Comp25	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-MAWB-Ind123	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp28	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp29	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp32	Yes
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-WSWB-Ind023	Yes
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-WSWB-Ind019	Yes
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-WSWB-Ind020	Yes
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-WSWB-Ind009	Yes
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-WSWB-Ind013	Yes

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing

Species	TissueType	Event	Reach	SampleID	PCB TE Value
American eel	Whole body	2009 FSP2 Tissue Sampling	1	LPR1-ARWB-Comp03	13
American eel	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-ARWB-Ind085	13
American eel	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-ARWB-Comp04	14
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind001	9.9
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind009	15
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind012	6.1
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind024	3.3
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind025	8
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind043	17
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind060	8.5
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Comp11	6.2
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Ind039	6.8
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Ind062	12
American eel	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ARWB-Ind069	5.4
American eel	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ARWB-Ind074	7.1
American eel	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-ARWB-Ind070	2.8
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp13	10
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp15	4.9
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp16	4.7
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp18	6.1
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp19	14
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp01	7.9
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp02	7.3
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp03	8.3
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp04	8.7
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp06	7
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp07	8.8
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp11	5.9
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp13	8.5
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp14	7.4
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp15	9.4
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp17	7.1
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp18	3.6
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp19	6.7
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp20	9.7
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp24	7.8
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp26	10
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp27	8.7
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp28	9.4
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp30	11
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp31	12
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp32	3
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp33	12
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-CSWB-Comp34	7.4
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-CSWB-Comp35	4.4
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ANWB-Ind001	19
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ANWB-Ind007	23
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind003	9.3
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind004	11
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind005	8.5
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-ANWB-Ind006	6.1
Carp	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-CCWB-Ind002	27
Carp	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-CCWB-Ind005	45
Carp	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-CCWB-Ind175	86
Carp	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-CCWB-Ind186	48

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing

Species	TissueType	Event	Reach	SampleID	PCB TE Value
Carp	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-CCWB-Ind011	47
Carp	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-CCWB-Ind160	57
Carp	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-CCWB-Ind021	59
Carp	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-CCWB-Ind028	57
Carp	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-CCWB-Ind042	26
Carp	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-CCWB-Ind069	73
Carp	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-CCWB-Ind139	16
Carp	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-CCWB-Ind147	24
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-IPWB-Ind001	2.7
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-IPWB-Ind003	17
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-IPWB-Ind004	26
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-IPWB-Ind005	7.8
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-IPWB-Ind006	33
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind008	4.7
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind009	18
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind010	26
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind011	16
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind012	38
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind013	17
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-DCWB-Comp01	5.9
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-DCWB-Comp02	5.9
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	7	LPR7-DCWB-Comp03	3.3
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MSWB-Comp01	15
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MSWB-Ind009	27
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-MSWB-Ind002	240
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-MXWB-Comp01	11
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-MXWB-Comp02	7.5
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-MXWB-Comp03	5.4
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-MXWB-Comp04	4.5
Mummichog	Whole body	2010 FSP2 Tissue Sampling	1	LPR1-FHWB-Comp01	3.6
Mummichog	Whole body	2010 FSP2 Tissue Sampling	1	LPR1-FHWB-Comp02	6.5
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp03	5.7
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp04	7.2
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp05	5.3
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp06	6
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp07	6.9
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp08	4.6
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp09	4.7
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp10	5.8
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp11	11
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp12	9.7
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp13	12
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp14	9.7
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp15	7.2
Mummichog	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-FHWB-Comp16	8.9
Mummichog	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-FHWB-Comp17	6.2
Mummichog	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-FHWB-Comp18	6.4
Northern pike	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ELWB-Ind001	31
Pumpkinseed	Whole body	2010 FSP2 Tissue Sampling	7	LPR7-LGWB-Comp01	2.1
Silver shiner	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-NPWB-Comp01	7.2
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-MDWB-Comp01	9.4
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MDWB-Comp02	19
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-MDWB-Comp03	13
Spottail shiner	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-NHWB-Comp01	6.8
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-ACWB-Ind018	44

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing

Species	TissueType	Event	Reach	SampleID	PCB TE Value
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind001	27
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind002	41
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind003	21
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind005	86
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-ACWB-Ind023	47
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-ACWB-Ind006	13
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-ACWB-Ind024	95
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind008	26
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind009	7.8
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind010	19
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind013	24
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind016	32
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-ACWB-Ind014	30
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-ACWB-Ind017	39
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind019	26
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind020	49
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind021	30
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind022	26
White perch	Whole body	2009 FSP2 Tissue Sampling	1	LPR1-MAWB-Ind138	33
White perch	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-MAWB-Ind145	20
White perch	Whole body	2009 FSP2 Tissue Sampling	2	LPR2-MAWB-Ind158	15
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp06	24
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp09	28
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp10	29
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp11	29
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp12	26
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp30	27
White perch	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp14	41
White perch	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp15	19
White perch	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp33	23
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp18	28
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp19	36
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp23	24
White perch	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp34	6.5
White perch	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-MAWB-Ind128	2.9
White perch	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-MAWB-Comp25	26
White perch	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-MAWB-Ind123	5.8
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp28	13
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp29	14
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp32	14
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-WSWB-Ind023	21
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-WSWB-Ind019	45
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-WSWB-Ind020	19
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-WSWB-Ind009	11
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-WSWB-Ind013	16

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing

Species	TissueType	Event	Reach	SampleID	Q-Mammal ng/kg Qual
American eel	Whole body	2009 FSP2 Tissue Sampling	1	LPR1-ARWB-Comp03	
American eel	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-ARWB-Ind085	
American eel	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-ARWB-Comp04	
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind001	
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind009	
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind012	
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind024	
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind025	
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind043	
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind060	
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Comp11	
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Ind039	
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Ind062	
American eel	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ARWB-Ind069	
American eel	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ARWB-Ind074	
American eel	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-ARWB-Ind070	
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp13	
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp15	
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp16	
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp18	
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp19	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp01	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp02	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp03	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp04	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp06	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp07	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp11	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp13	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp14	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp15	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp17	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp18	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp19	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp20	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp24	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp26	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp27	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp28	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp30	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp31	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp32	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp33	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-CSWB-Comp34	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-CSWB-Comp35	
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ANWB-Ind001	
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ANWB-Ind007	
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind003	
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind004	
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind005	
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-ANWB-Ind006	
Carp	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-CCWB-Ind002	
Carp	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-CCWB-Ind005	
Carp	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-CCWB-Ind175	
Carp	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-CCWB-Ind186	

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing

Species	TissueType	Event	Reach	SampleID	Q-Mammal ng/kg Qual
Carp	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-CCWB-Ind011	
Carp	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-CCWB-Ind160	
Carp	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-CCWB-Ind021	
Carp	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-CCWB-Ind028	
Carp	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-CCWB-Ind042	
Carp	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-CCWB-Ind069	
Carp	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-CCWB-Ind139	
Carp	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-CCWB-Ind147	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-IPWB-Ind001	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-IPWB-Ind003	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-IPWB-Ind004	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-IPWB-Ind005	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-IPWB-Ind006	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind008	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind009	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind010	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind011	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind012	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind013	
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-DCWB-Comp01	
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-DCWB-Comp02	
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	7	LPR7-DCWB-Comp03	
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MSWB-Comp01	
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MSWB-Ind009	
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-MSWB-Ind002	
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-MXWB-Comp01	
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-MXWB-Comp02	
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-MXWB-Comp03	
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-MXWB-Comp04	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	1	LPR1-FHWB-Comp01	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	1	LPR1-FHWB-Comp02	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp03	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp04	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp05	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp06	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp07	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp08	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp09	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp10	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp11	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp12	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp13	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp14	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp15	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-FHWB-Comp16	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-FHWB-Comp17	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-FHWB-Comp18	
Northern pike	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ELWB-Ind001	
Pumpkinseed	Whole body	2010 FSP2 Tissue Sampling	7	LPR7-LGWB-Comp01	
Silver shiner	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-NPWB-Comp01	
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-MDWB-Comp01	
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MDWB-Comp02	
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-MDWB-Comp03	
Spottail shiner	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-NHWB-Comp01	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-ACWB-Ind018	

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing

Species	TissueType	Event	Reach	SampleID	Q-Mammal ng/kg Qual
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind001	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind002	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind003	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind005	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-ACWB-Ind023	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-ACWB-Ind006	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-ACWB-Ind024	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind008	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind009	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind010	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind013	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind016	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-ACWB-Ind014	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-ACWB-Ind017	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind019	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind020	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind021	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind022	
White perch	Whole body	2009 FSP2 Tissue Sampling	1	LPR1-MAWB-Ind138	
White perch	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-MAWB-Ind145	
White perch	Whole body	2009 FSP2 Tissue Sampling	2	LPR2-MAWB-Ind158	
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp06	
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp09	
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp10	
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp11	
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp12	
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp30	
White perch	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp14	
White perch	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp15	
White perch	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp33	
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp18	
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp19	
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp23	
White perch	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp34	
White perch	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-MAWB-Ind128	
White perch	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-MAWB-Comp25	
White perch	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-MAWB-Ind123	
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp28	
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp29	
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp32	
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-WSWB-Ind023	
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-WSWB-Ind019	
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-WSWB-Ind020	
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-WSWB-Ind009	
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-WSWB-Ind013	

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing

Species	TissueType	Event	Reach	SampleID	(KM) Detect
American eel	Whole body	2009 FSP2 Tissue Sampling	1	LPR1-ARWB-Comp03	Yes
American eel	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-ARWB-Ind085	Yes
American eel	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-ARWB-Comp04	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind001	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind009	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind012	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind024	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind025	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind043	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind060	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Comp11	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Ind039	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Ind062	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ARWB-Ind069	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ARWB-Ind074	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-ARWB-Ind070	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp13	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp15	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp16	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp18	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp19	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp01	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp02	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp03	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp04	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp06	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp07	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp11	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp13	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp14	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp15	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp17	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp18	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp19	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp20	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp24	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp26	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp27	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp28	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp30	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp31	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp32	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp33	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-CSWB-Comp34	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-CSWB-Comp35	Yes
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ANWB-Ind001	Yes
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ANWB-Ind007	Yes
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind003	Yes
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind004	Yes
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind005	Yes
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-ANWB-Ind006	Yes
Carp	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-CCWB-Ind002	Yes
Carp	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-CCWB-Ind005	Yes
Carp	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-CCWB-Ind175	Yes
Carp	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-CCWB-Ind186	Yes

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing

Species	TissueType	Event	Reach	SampleID	(KM) Detect
Carp	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-CCWB-Ind011	Yes
Carp	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-CCWB-Ind160	Yes
Carp	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-CCWB-Ind021	Yes
Carp	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-CCWB-Ind028	Yes
Carp	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-CCWB-Ind042	Yes
Carp	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-CCWB-Ind069	Yes
Carp	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-CCWB-Ind139	Yes
Carp	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-CCWB-Ind147	Yes
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-IPWB-Ind001	Yes
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-IPWB-Ind003	Yes
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-IPWB-Ind004	Yes
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-IPWB-Ind005	Yes
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-IPWB-Ind006	Yes
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind008	Yes
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind009	Yes
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind010	Yes
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind011	Yes
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind012	Yes
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind013	Yes
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-DCWB-Comp01	Yes
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-DCWB-Comp02	Yes
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	7	LPR7-DCWB-Comp03	Yes
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MSWB-Comp01	Yes
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MSWB-Ind009	Yes
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-MSWB-Ind002	Yes
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-MXWB-Comp01	Yes
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-MXWB-Comp02	Yes
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-MXWB-Comp03	Yes
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-MXWB-Comp04	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	1	LPR1-FHWB-Comp01	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	1	LPR1-FHWB-Comp02	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp03	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp04	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp05	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp06	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp07	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp08	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp09	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp10	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp11	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp12	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp13	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp14	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp15	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-FHWB-Comp16	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-FHWB-Comp17	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-FHWB-Comp18	Yes
Northern pike	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ELWB-Ind001	Yes
Pumpkinseed	Whole body	2010 FSP2 Tissue Sampling	7	LPR7-LGWB-Comp01	Yes
Silver shiner	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-NPWB-Comp01	Yes
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-MDWB-Comp01	Yes
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MDWB-Comp02	Yes
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-MDWB-Comp03	Yes
Spottail shiner	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-NHWB-Comp01	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-ACWB-Ind018	Yes

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing

Species	TissueType	Event	Reach	SampleID	(KM) Detect
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind001	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind002	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind003	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind005	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-ACWB-Ind023	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-ACWB-Ind006	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-ACWB-Ind024	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind008	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind009	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind010	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind013	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind016	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-ACWB-Ind014	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-ACWB-Ind017	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind019	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind020	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind021	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind022	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	1	LPR1-MAWB-Ind138	Yes
White perch	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-MAWB-Ind145	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	2	LPR2-MAWB-Ind158	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp06	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp09	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp10	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp11	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp12	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp30	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp14	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp15	Yes
White perch	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp33	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp18	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp19	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp23	Yes
White perch	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp34	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-MAWB-Ind128	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-MAWB-Comp25	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-MAWB-Ind123	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp28	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp29	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp32	Yes
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-WSWB-Ind023	Yes
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-WSWB-Ind019	Yes
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-WSWB-Ind020	Yes
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-WSWB-Ind009	Yes
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-WSWB-Ind013	Yes

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing

Species	TissueType	Event	Reach	SampleID	PCDD/PC Value
American eel	Whole body	2009 FSP2 Tissue Sampling	1	LPR1-ARWB-Comp03	29
American eel	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-ARWB-Ind085	28
American eel	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-ARWB-Comp04	28
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind001	21
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind009	32
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind012	5.9
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind024	14
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind025	19
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind043	39
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind060	48
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Comp11	27
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Ind039	37
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Ind062	34
American eel	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ARWB-Ind069	11
American eel	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ARWB-Ind074	7.2
American eel	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-ARWB-Ind070	5.1
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp13	1.8
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp15	1.5
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp16	0.81
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp18	0.82
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp19	3.4
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp01	47
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp02	46
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp03	60
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp04	59
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp06	32
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp07	48
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp11	33
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp13	44
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp14	53
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp15	64
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp17	58
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp18	67
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp19	50
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp20	56
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp24	76
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp26	79
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp27	50
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp28	67
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp30	61
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp31	76
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp32	26
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp33	93
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-CSWB-Comp34	56
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-CSWB-Comp35	32
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ANWB-Ind001	170
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ANWB-Ind007	200
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind003	77
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind004	85
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind005	37
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-ANWB-Ind006	8.5
Carp	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-CCWB-Ind002	270
Carp	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-CCWB-Ind005	320
Carp	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-CCWB-Ind175	1400
Carp	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-CCWB-Ind186	560

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing

Species	TissueType	Event	Reach	SampleID	PCDD/PC Value
Carp	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-CCWB-Ind011	410
Carp	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-CCWB-Ind160	530
Carp	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-CCWB-Ind021	650
Carp	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-CCWB-Ind028	230
Carp	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-CCWB-Ind042	35
Carp	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-CCWB-Ind069	550
Carp	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-CCWB-Ind139	8.2
Carp	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-CCWB-Ind147	50
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-IPWB-Ind001	23
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-IPWB-Ind003	76
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-IPWB-Ind004	110
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-IPWB-Ind005	54
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-IPWB-Ind006	150
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind008	22
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind009	50
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind010	89
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind011	38
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind012	170
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind013	31
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-DCWB-Comp01	47
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-DCWB-Comp02	37
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	7	LPR7-DCWB-Comp03	12
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MSWB-Comp01	65
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MSWB-Ind009	180
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-MSWB-Ind002	2.1
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-MXWB-Comp01	96
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-MXWB-Comp02	59
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-MXWB-Comp03	26
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-MXWB-Comp04	8.3
Mummichog	Whole body	2010 FSP2 Tissue Sampling	1	LPR1-FHWB-Comp01	11
Mummichog	Whole body	2010 FSP2 Tissue Sampling	1	LPR1-FHWB-Comp02	16
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp03	18
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp04	22
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp05	23
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp06	25
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp07	28
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp08	25
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp09	24
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp10	29
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp11	55
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp12	59
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp13	80
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp14	63
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp15	43
Mummichog	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-FHWB-Comp16	100
Mummichog	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-FHWB-Comp17	37
Mummichog	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-FHWB-Comp18	29
Northern pike	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ELWB-Ind001	100
Pumpkinseed	Whole body	2010 FSP2 Tissue Sampling	7	LPR7-LGWB-Comp01	7.9
Silver shiner	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-NPWB-Comp01	18
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-MDWB-Comp01	33
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MDWB-Comp02	76
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-MDWB-Comp03	8.6
Spottail shiner	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-NHWB-Comp01	3.8
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-ACWB-Ind018	170

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing

Species	TissueType	Event	Reach	SampleID	PCDD/PC Value
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind001	210
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind002	230
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind003	130
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind005	420
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-ACWB-Ind023	260
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-ACWB-Ind006	22
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-ACWB-Ind024	340
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind008	180
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind009	26
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind010	110
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind013	110
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind016	190
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-ACWB-Ind014	210
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-ACWB-Ind017	320
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind019	140
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind020	170
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind021	67
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind022	110
White perch	Whole body	2009 FSP2 Tissue Sampling	1	LPR1-MAWB-Ind138	110
White perch	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-MAWB-Ind145	100
White perch	Whole body	2009 FSP2 Tissue Sampling	2	LPR2-MAWB-Ind158	76
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp06	170
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp09	170
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp10	180
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp11	190
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp12	180
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp30	170
White perch	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp14	260
White perch	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp15	150
White perch	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp33	160
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp18	170
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp19	240
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp23	170
White perch	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp34	43
White perch	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-MAWB-Ind128	26
White perch	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-MAWB-Comp25	170
White perch	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-MAWB-Ind123	19
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp28	22
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp29	25
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp32	65
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-WSWB-Ind023	64
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-WSWB-Ind019	130
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-WSWB-Ind020	90
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-WSWB-Ind009	4.1
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-WSWB-Ind013	13

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing

Species	TissueType	Event	Reach	SampleID	DF TEQ-Mar ng/kg Qual
American eel	Whole body	2009 FSP2 Tissue Sampling	1	LPR1-ARWB-Comp03	
American eel	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-ARWB-Ind085	
American eel	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-ARWB-Comp04	
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind001	
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind009	
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind012	
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind024	
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind025	
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind043	
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind060	
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Comp11	
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Ind039	
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Ind062	
American eel	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ARWB-Ind069	
American eel	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ARWB-Ind074	
American eel	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-ARWB-Ind070	
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp13	
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp15	
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp16	
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp18	
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp19	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp01	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp02	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp03	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp04	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp06	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp07	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp11	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp13	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp14	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp15	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp17	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp18	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp19	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp20	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp24	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp26	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp27	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp28	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp30	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp31	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp32	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp33	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-CSWB-Comp34	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-CSWB-Comp35	
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ANWB-Ind001	
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ANWB-Ind007	
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind003	
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind004	
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind005	
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-ANWB-Ind006	
Carp	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-CCWB-Ind002	
Carp	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-CCWB-Ind005	
Carp	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-CCWB-Ind175	
Carp	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-CCWB-Ind186	

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing

Species	TissueType	Event	Reach	SampleID	DF TEQ-Mar ng/kg Qual
Carp	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-CCWB-Ind011	
Carp	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-CCWB-Ind160	
Carp	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-CCWB-Ind021	
Carp	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-CCWB-Ind028	
Carp	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-CCWB-Ind042	
Carp	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-CCWB-Ind069	
Carp	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-CCWB-Ind139	
Carp	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-CCWB-Ind147	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-IPWB-Ind001	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-IPWB-Ind003	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-IPWB-Ind004	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-IPWB-Ind005	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-IPWB-Ind006	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind008	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind009	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind010	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind011	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind012	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind013	
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-DCWB-Comp01	
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-DCWB-Comp02	
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	7	LPR7-DCWB-Comp03	
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MSWB-Comp01	J
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MSWB-Ind009	
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-MSWB-Ind002	
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-MXWB-Comp01	
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-MXWB-Comp02	
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-MXWB-Comp03	
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-MXWB-Comp04	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	1	LPR1-FHWB-Comp01	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	1	LPR1-FHWB-Comp02	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp03	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp04	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp05	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp06	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp07	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp08	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp09	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp10	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp11	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp12	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp13	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp14	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp15	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-FHWB-Comp16	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-FHWB-Comp17	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-FHWB-Comp18	
Northern pike	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ELWB-Ind001	
Pumpkinseed	Whole body	2010 FSP2 Tissue Sampling	7	LPR7-LGWB-Comp01	
Silver shiner	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-NPWB-Comp01	
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-MDWB-Comp01	
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MDWB-Comp02	
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-MDWB-Comp03	
Spottail shiner	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-NHWB-Comp01	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-ACWB-Ind018	

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing

Species	TissueType	Event	Reach	SampleID	DF TEQ-Mar ng/kg Qual
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind001	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind002	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind003	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind005	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-ACWB-Ind023	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-ACWB-Ind006	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-ACWB-Ind024	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind008	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind009	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind010	J
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind013	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind016	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-ACWB-Ind014	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-ACWB-Ind017	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind019	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind020	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind021	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind022	
White perch	Whole body	2009 FSP2 Tissue Sampling	1	LPR1-MAWB-Ind138	
White perch	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-MAWB-Ind145	
White perch	Whole body	2009 FSP2 Tissue Sampling	2	LPR2-MAWB-Ind158	
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp06	
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp09	
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp10	
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp11	
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp12	
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp30	
White perch	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp14	
White perch	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp15	
White perch	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp33	
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp18	
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp19	
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp23	
White perch	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp34	
White perch	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-MAWB-Ind128	
White perch	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-MAWB-Comp25	
White perch	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-MAWB-Ind123	
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp28	
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp29	
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp32	
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-WSWB-Ind023	
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-WSWB-Ind019	
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-WSWB-Ind020	
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-WSWB-Ind009	J
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-WSWB-Ind013	J

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing

Species	TissueType	Event	Reach	SampleID	nmal (KM) Detect
American eel	Whole body	2009 FSP2 Tissue Sampling	1	LPR1-ARWB-Comp03	Yes
American eel	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-ARWB-Ind085	Yes
American eel	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-ARWB-Comp04	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind001	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind009	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind012	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind024	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind025	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind043	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind060	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Comp11	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Ind039	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Ind062	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ARWB-Ind069	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ARWB-Ind074	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-ARWB-Ind070	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp13	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp15	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp16	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp18	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp19	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp01	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp02	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp03	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp04	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp06	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp07	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp11	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp13	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp14	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp15	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp17	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp18	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp19	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp20	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp24	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp26	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp27	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp28	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp30	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp31	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp32	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp33	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-CSWB-Comp34	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-CSWB-Comp35	Yes
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ANWB-Ind001	Yes
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ANWB-Ind007	Yes
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind003	Yes
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind004	Yes
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind005	Yes
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-ANWB-Ind006	Yes
Carp	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-CCWB-Ind002	Yes
Carp	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-CCWB-Ind005	Yes
Carp	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-CCWB-Ind175	Yes
Carp	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-CCWB-Ind186	Yes

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing

Species	TissueType	Event	Reach	SampleID	nmal (KM) Detect
Carp	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-CCWB-Ind011	Yes
Carp	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-CCWB-Ind160	Yes
Carp	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-CCWB-Ind021	Yes
Carp	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-CCWB-Ind028	Yes
Carp	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-CCWB-Ind042	Yes
Carp	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-CCWB-Ind069	Yes
Carp	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-CCWB-Ind139	Yes
Carp	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-CCWB-Ind147	Yes
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-IPWB-Ind001	Yes
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-IPWB-Ind003	Yes
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-IPWB-Ind004	Yes
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-IPWB-Ind005	Yes
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-IPWB-Ind006	Yes
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind008	Yes
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind009	Yes
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind010	Yes
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind011	Yes
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind012	Yes
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind013	Yes
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-DCWB-Comp01	Yes
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-DCWB-Comp02	Yes
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	7	LPR7-DCWB-Comp03	Yes
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MSWB-Comp01	Yes
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MSWB-Ind009	Yes
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-MSWB-Ind002	Yes
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-MXWB-Comp01	Yes
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-MXWB-Comp02	Yes
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-MXWB-Comp03	Yes
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-MXWB-Comp04	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	1	LPR1-FHWB-Comp01	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	1	LPR1-FHWB-Comp02	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp03	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp04	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp05	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp06	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp07	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp08	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp09	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp10	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp11	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp12	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp13	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp14	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp15	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-FHWB-Comp16	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-FHWB-Comp17	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-FHWB-Comp18	Yes
Northern pike	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ELWB-Ind001	Yes
Pumpkinseed	Whole body	2010 FSP2 Tissue Sampling	7	LPR7-LGWB-Comp01	Yes
Silver shiner	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-NPWB-Comp01	Yes
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-MDWB-Comp01	Yes
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MDWB-Comp02	Yes
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-MDWB-Comp03	Yes
Spottail shiner	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-NHWB-Comp01	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-ACWB-Ind018	Yes

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing

Species	TissueType	Event	Reach	SampleID	nmal (KM) Detect
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind001	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind002	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind003	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind005	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-ACWB-Ind023	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-ACWB-Ind006	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-ACWB-Ind024	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind008	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind009	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind010	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind013	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind016	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-ACWB-Ind014	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-ACWB-Ind017	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind019	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind020	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind021	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind022	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	1	LPR1-MAWB-Ind138	Yes
White perch	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-MAWB-Ind145	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	2	LPR2-MAWB-Ind158	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp06	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp09	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp10	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp11	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp12	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp30	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp14	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp15	Yes
White perch	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp33	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp18	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp19	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp23	Yes
White perch	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp34	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-MAWB-Ind128	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-MAWB-Comp25	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-MAWB-Ind123	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp28	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp29	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp32	Yes
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-WSWB-Ind023	Yes
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-WSWB-Ind019	Yes
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-WSWB-Ind020	Yes
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-WSWB-Ind009	Yes
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-WSWB-Ind013	Yes

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing

Species	TissueType	Event	Reach	SampleID	Total T Value
American eel	Whole body	2009 FSP2 Tissue Sampling	1	LPR1-ARWB-Comp03	42
American eel	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-ARWB-Ind085	40
American eel	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-ARWB-Comp04	42
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind001	30
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind009	46
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind012	9.8
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind024	17
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind025	27
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind043	56
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind060	56
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Comp11	31
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Ind039	43
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Ind062	46
American eel	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ARWB-Ind069	14
American eel	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ARWB-Ind074	14
American eel	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-ARWB-Ind070	7
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp13	12
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp15	6.3
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp16	5.5
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp18	6.9
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp19	18
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp01	55
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp02	53
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp03	69
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp04	68
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp06	40
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp07	57
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp11	38
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp13	53
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp14	60
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp15	73
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp17	65
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp18	69
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp19	57
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp20	65
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp24	86
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp26	91
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp27	58
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp28	77
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp30	73
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp31	89
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp32	28
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp33	100
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-CSWB-Comp34	64
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-CSWB-Comp35	35
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ANWB-Ind001	190
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ANWB-Ind007	220
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind003	86
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind004	96
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind005	45
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-ANWB-Ind006	15
Carp	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-CCWB-Ind002	300
Carp	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-CCWB-Ind005	370
Carp	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-CCWB-Ind175	1500
Carp	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-CCWB-Ind186	610

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing

Species	TissueType	Event	Reach	SampleID	Total T Value
Carp	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-CCWB-Ind011	460
Carp	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-CCWB-Ind160	590
Carp	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-CCWB-Ind021	710
Carp	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-CCWB-Ind028	290
Carp	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-CCWB-Ind042	61
Carp	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-CCWB-Ind069	620
Carp	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-CCWB-Ind139	24
Carp	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-CCWB-Ind147	74
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-IPWB-Ind001	25
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-IPWB-Ind003	92
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-IPWB-Ind004	130
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-IPWB-Ind005	62
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-IPWB-Ind006	190
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind008	27
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind009	68
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind010	120
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind011	54
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind012	210
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind013	48
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-DCWB-Comp01	53
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-DCWB-Comp02	43
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	7	LPR7-DCWB-Comp03	16
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MSWB-Comp01	83
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MSWB-Ind009	210
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-MSWB-Ind002	250
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-MXWB-Comp01	110
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-MXWB-Comp02	67
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-MXWB-Comp03	31
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-MXWB-Comp04	13
Mummichog	Whole body	2010 FSP2 Tissue Sampling	1	LPR1-FHWB-Comp01	15
Mummichog	Whole body	2010 FSP2 Tissue Sampling	1	LPR1-FHWB-Comp02	22
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp03	24
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp04	29
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp05	28
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp06	32
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp07	34
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp08	30
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp09	28
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp10	35
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp11	67
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp12	69
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp13	92
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp14	73
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp15	50
Mummichog	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-FHWB-Comp16	110
Mummichog	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-FHWB-Comp17	44
Mummichog	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-FHWB-Comp18	35
Northern pike	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ELWB-Ind001	130
Pumpkinseed	Whole body	2010 FSP2 Tissue Sampling	7	LPR7-LGWB-Comp01	10
Silver shiner	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-NPWB-Comp01	25
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-MDWB-Comp01	42
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MDWB-Comp02	96
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-MDWB-Comp03	22
Spottail shiner	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-NHWB-Comp01	11
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-ACWB-Ind018	220

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing

Species	TissueType	Event	Reach	SampleID	Total T Value
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind001	230
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind002	270
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind003	150
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind005	510
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-ACWB-Ind023	310
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-ACWB-Ind006	35
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-ACWB-Ind024	440
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind008	200
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind009	35
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind010	130
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind013	130
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind016	220
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-ACWB-Ind014	230
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-ACWB-Ind017	360
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind019	170
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind020	210
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind021	95
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind022	140
White perch	Whole body	2009 FSP2 Tissue Sampling	1	LPR1-MAWB-Ind138	150
White perch	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-MAWB-Ind145	120
White perch	Whole body	2009 FSP2 Tissue Sampling	2	LPR2-MAWB-Ind158	91
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp06	190
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp09	190
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp10	210
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp11	220
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp12	200
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp30	190
White perch	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp14	300
White perch	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp15	170
White perch	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp33	190
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp18	190
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp19	270
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp23	200
White perch	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp34	50
White perch	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-MAWB-Ind128	29
White perch	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-MAWB-Comp25	190
White perch	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-MAWB-Ind123	25
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp28	35
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp29	39
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp32	79
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-WSWB-Ind023	85
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-WSWB-Ind019	170
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-WSWB-Ind020	110
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-WSWB-Ind009	15
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-WSWB-Ind013	29

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing

Species	TissueType	Event	Reach	SampleID	TEQ-Mamma ng/kg Qual
American eel	Whole body	2009 FSP2 Tissue Sampling	1	LPR1-ARWB-Comp03	
American eel	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-ARWB-Ind085	
American eel	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-ARWB-Comp04	
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind001	
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind009	
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind012	
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind024	
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind025	
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind043	
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind060	
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Comp11	
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Ind039	
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Ind062	
American eel	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ARWB-Ind069	
American eel	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ARWB-Ind074	
American eel	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-ARWB-Ind070	
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp13	
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp15	
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp16	
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp18	
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp19	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp01	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp02	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp03	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp04	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp06	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp07	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp11	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp13	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp14	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp15	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp17	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp18	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp19	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp20	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp24	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp26	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp27	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp28	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp30	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp31	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp32	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp33	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-CSWB-Comp34	
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-CSWB-Comp35	
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ANWB-Ind001	
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ANWB-Ind007	
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind003	
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind004	
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind005	
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-ANWB-Ind006	
Carp	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-CCWB-Ind002	
Carp	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-CCWB-Ind005	
Carp	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-CCWB-Ind175	
Carp	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-CCWB-Ind186	

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing

Species	TissueType	Event	Reach	SampleID	TEQ-Mamma ng/kg Qual
Carp	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-CCWB-Ind011	
Carp	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-CCWB-Ind160	
Carp	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-CCWB-Ind021	
Carp	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-CCWB-Ind028	
Carp	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-CCWB-Ind042	
Carp	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-CCWB-Ind069	
Carp	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-CCWB-Ind139	
Carp	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-CCWB-Ind147	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-IPWB-Ind001	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-IPWB-Ind003	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-IPWB-Ind004	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-IPWB-Ind005	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-IPWB-Ind006	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind008	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind009	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind010	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind011	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind012	
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind013	
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-DCWB-Comp01	
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-DCWB-Comp02	
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	7	LPR7-DCWB-Comp03	
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MSWB-Comp01	
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MSWB-Ind009	
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-MSWB-Ind002	
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-MXWB-Comp01	
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-MXWB-Comp02	
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-MXWB-Comp03	
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-MXWB-Comp04	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	1	LPR1-FHWB-Comp01	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	1	LPR1-FHWB-Comp02	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp03	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp04	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp05	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp06	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp07	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp08	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp09	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp10	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp11	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp12	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp13	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp14	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp15	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-FHWB-Comp16	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-FHWB-Comp17	
Mummichog	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-FHWB-Comp18	
Northern pike	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ELWB-Ind001	
Pumpkinseed	Whole body	2010 FSP2 Tissue Sampling	7	LPR7-LGWB-Comp01	
Silver shiner	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-NPWB-Comp01	
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-MDWB-Comp01	
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MDWB-Comp02	
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-MDWB-Comp03	
Spottail shiner	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-NHWB-Comp01	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-ACWB-Ind018	

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing

Species	TissueType	Event	Reach	SampleID	TEQ-Mamma ng/kg Qual
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind001	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind002	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind003	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind005	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-ACWB-Ind023	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-ACWB-Ind006	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-ACWB-Ind024	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind008	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind009	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind010	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind013	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind016	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-ACWB-Ind014	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-ACWB-Ind017	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind019	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind020	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind021	
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind022	
White perch	Whole body	2009 FSP2 Tissue Sampling	1	LPR1-MAWB-Ind138	
White perch	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-MAWB-Ind145	
White perch	Whole body	2009 FSP2 Tissue Sampling	2	LPR2-MAWB-Ind158	
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp06	
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp09	
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp10	
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp11	
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp12	
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp30	
White perch	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp14	
White perch	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp15	
White perch	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp33	
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp18	
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp19	
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp23	
White perch	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp34	
White perch	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-MAWB-Ind128	
White perch	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-MAWB-Comp25	
White perch	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-MAWB-Ind123	
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp28	
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp29	
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp32	
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-WSWB-Ind023	
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-WSWB-Ind019	
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-WSWB-Ind020	
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-WSWB-Ind009	
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-WSWB-Ind013	

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing

Species	TissueType	Event	Reach	SampleID	I (KM) Detect
American eel	Whole body	2009 FSP2 Tissue Sampling	1	LPR1-ARWB-Comp03	Yes
American eel	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-ARWB-Ind085	Yes
American eel	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-ARWB-Comp04	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind001	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind009	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind012	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind024	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind025	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind043	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind060	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Comp11	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Ind039	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Ind062	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ARWB-Ind069	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ARWB-Ind074	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-ARWB-Ind070	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp13	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp15	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp16	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp18	Yes
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp19	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp01	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp02	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp03	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp04	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp06	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp07	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp11	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp13	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp14	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp15	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp17	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp18	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp19	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp20	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp24	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp26	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp27	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp28	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp30	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp31	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp32	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp33	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-CSWB-Comp34	Yes
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-CSWB-Comp35	Yes
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ANWB-Ind001	Yes
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ANWB-Ind007	Yes
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind003	Yes
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind004	Yes
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind005	Yes
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-ANWB-Ind006	Yes
Carp	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-CCWB-Ind002	Yes
Carp	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-CCWB-Ind005	Yes
Carp	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-CCWB-Ind175	Yes
Carp	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-CCWB-Ind186	Yes

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing

Species	TissueType	Event	Reach	SampleID	l (KM) Detect
Carp	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-CCWB-Ind011	Yes
Carp	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-CCWB-Ind160	Yes
Carp	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-CCWB-Ind021	Yes
Carp	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-CCWB-Ind028	Yes
Carp	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-CCWB-Ind042	Yes
Carp	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-CCWB-Ind069	Yes
Carp	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-CCWB-Ind139	Yes
Carp	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-CCWB-Ind147	Yes
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-IPWB-Ind001	Yes
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-IPWB-Ind003	Yes
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-IPWB-Ind004	Yes
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-IPWB-Ind005	Yes
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-IPWB-Ind006	Yes
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind008	Yes
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind009	Yes
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind010	Yes
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind011	Yes
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind012	Yes
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind013	Yes
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-DCWB-Comp01	Yes
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-DCWB-Comp02	Yes
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	7	LPR7-DCWB-Comp03	Yes
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MSWB-Comp01	Yes
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MSWB-Ind009	Yes
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-MSWB-Ind002	Yes
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-MXWB-Comp01	Yes
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-MXWB-Comp02	Yes
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-MXWB-Comp03	Yes
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-MXWB-Comp04	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	1	LPR1-FHWB-Comp01	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	1	LPR1-FHWB-Comp02	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp03	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp04	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp05	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp06	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp07	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp08	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp09	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp10	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp11	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp12	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp13	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp14	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp15	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-FHWB-Comp16	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-FHWB-Comp17	Yes
Mummichog	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-FHWB-Comp18	Yes
Northern pike	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ELWB-Ind001	Yes
Pumpkinseed	Whole body	2010 FSP2 Tissue Sampling	7	LPR7-LGWB-Comp01	Yes
Silver shiner	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-NPWB-Comp01	Yes
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-MDWB-Comp01	Yes
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MDWB-Comp02	Yes
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-MDWB-Comp03	Yes
Spottail shiner	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-NHWB-Comp01	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-ACWB-Ind018	Yes

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing

Species	TissueType	Event	Reach	SampleID	l (KM) Detect
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind001	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind002	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind003	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind005	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-ACWB-Ind023	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-ACWB-Ind006	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-ACWB-Ind024	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind008	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind009	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind010	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind013	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind016	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-ACWB-Ind014	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-ACWB-Ind017	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind019	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind020	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind021	Yes
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind022	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	1	LPR1-MAWB-Ind138	Yes
White perch	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-MAWB-Ind145	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	2	LPR2-MAWB-Ind158	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp06	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp09	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp10	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp11	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp12	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp30	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp14	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp15	Yes
White perch	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp33	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp18	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp19	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp23	Yes
White perch	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp34	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-MAWB-Ind128	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-MAWB-Comp25	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-MAWB-Ind123	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp28	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp29	Yes
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp32	Yes
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-WSWB-Ind023	Yes
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-WSWB-Ind019	Yes
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-WSWB-Ind020	Yes
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-WSWB-Ind009	Yes
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-WSWB-Ind013	Yes

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing

Species	TissueType	Event	Reach	SampleID
American eel	Whole body	2009 FSP2 Tissue Sampling	1	LPR1-ARWB-Comp03
American eel	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-ARWB-Ind085
American eel	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-ARWB-Comp04
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind001
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind009
American eel	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ARWB-Ind012
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind024
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind025
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind043
American eel	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ARWB-Ind060
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Comp11
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Ind039
American eel	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-ARWB-Ind062
American eel	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ARWB-Ind069
American eel	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ARWB-Ind074
American eel	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-ARWB-Ind070
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp13
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp15
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp16
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp18
American eel	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-ARWB-Comp19
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp01
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp02
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp03
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp04
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp06
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp07
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp11
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-CSWB-Comp13
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp14
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp15
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp17
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp18
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp19
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-CSWB-Comp20
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp24
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp26
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp27
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-CSWB-Comp28
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp30
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp31
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp32
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-CSWB-Comp33
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-CSWB-Comp34
Blue crab	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-CSWB-Comp35
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-ANWB-Ind001
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-ANWB-Ind007
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind003
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind004
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-ANWB-Ind005
Brown bullhead	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-ANWB-Ind006
Carp	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-CCWB-Ind002
Carp	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-CCWB-Ind005
Carp	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-CCWB-Ind175
Carp	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-CCWB-Ind186

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing

Species	TissueType	Event	Reach	SampleID
Carp	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-CCWB-Ind011
Carp	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-CCWB-Ind160
Carp	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-CCWB-Ind021
Carp	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-CCWB-Ind028
Carp	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-CCWB-Ind042
Carp	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-CCWB-Ind069
Carp	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-CCWB-Ind139
Carp	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-CCWB-Ind147
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-IPWB-Ind001
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-IPWB-Ind003
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-IPWB-Ind004
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-IPWB-Ind005
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-IPWB-Ind006
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind008
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind009
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind010
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind011
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind012
Channel catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-IPWB-Ind013
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-DCWB-Comp01
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-DCWB-Comp02
Gizzard shad	Whole body	2010 FSP2 Tissue Sampling	7	LPR7-DCWB-Comp03
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MSWB-Comp01
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MSWB-Ind009
Largemouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-MSWB-Ind002
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-MXWB-Comp01
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-MXWB-Comp02
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-MXWB-Comp03
Mixed forage fish	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-MXWB-Comp04
Mummichog	Whole body	2010 FSP2 Tissue Sampling	1	LPR1-FHWB-Comp01
Mummichog	Whole body	2010 FSP2 Tissue Sampling	1	LPR1-FHWB-Comp02
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp03
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp04
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp05
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp06
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp07
Mummichog	Whole body	2010 FSP2 Tissue Sampling	2	LPR2-FHWB-Comp08
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp09
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp10
Mummichog	Whole body	2010 FSP2 Tissue Sampling	3	LPR3-FHWB-Comp11
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp12
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp13
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp14
Mummichog	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-FHWB-Comp15
Mummichog	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-FHWB-Comp16
Mummichog	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-FHWB-Comp17
Mummichog	Whole body	2010 FSP2 Tissue Sampling	6	LPR6-FHWB-Comp18
Northern pike	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ELWB-Ind001
Pumpkinseed	Whole body	2010 FSP2 Tissue Sampling	7	LPR7-LGWB-Comp01
Silver shiner	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-NPWB-Comp01
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-MDWB-Comp01
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-MDWB-Comp02
Smallmouth bass	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-MDWB-Comp03
Spottail shiner	Whole body	2010 FSP2 Tissue Sampling	8	LPR8-NHWB-Comp01
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	2	LPR2-ACWB-Ind018

Table H2-2. BERA tissue chemistry data for the LPRSA used for the mammal sensivity analysis for developing

Species	TissueType	Event	Reach	SampleID
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind001
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind002
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind003
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	3	LPR3-ACWB-Ind005
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-ACWB-Ind023
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-ACWB-Ind006
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-ACWB-Ind024
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind008
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind009
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind010
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind013
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	6	LPR6-ACWB-Ind016
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-ACWB-Ind014
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	7	LPR7-ACWB-Ind017
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind019
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind020
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind021
White catfish	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-ACWB-Ind022
White perch	Whole body	2009 FSP2 Tissue Sampling	1	LPR1-MAWB-Ind138
White perch	Whole body (calc)	2009 FSP2 Tissue Sampling	1	LPR1-MAWB-Ind145
White perch	Whole body	2009 FSP2 Tissue Sampling	2	LPR2-MAWB-Ind158
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp06
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp09
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp10
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp11
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp12
White perch	Whole body	2009 FSP2 Tissue Sampling	3	LPR3-MAWB-Comp30
White perch	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp14
White perch	Whole body	2009 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp15
White perch	Whole body	2010 FSP2 Tissue Sampling	4	LPR4-MAWB-Comp33
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp18
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp19
White perch	Whole body	2009 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp23
White perch	Whole body	2010 FSP2 Tissue Sampling	5	LPR5-MAWB-Comp34
White perch	Whole body	2009 FSP2 Tissue Sampling	6	LPR6-MAWB-Ind128
White perch	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-MAWB-Comp25
White perch	Whole body	2009 FSP2 Tissue Sampling	7	LPR7-MAWB-Ind123
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp28
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp29
White perch	Whole body	2009 FSP2 Tissue Sampling	8	LPR8-MAWB-Comp32
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	4	LPR4-WSWB-Ind023
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-WSWB-Ind019
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	5	LPR5-WSWB-Ind020
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-WSWB-Ind009
White sucker	Whole body (calc)	2009 FSP2 Tissue Sampling	8	LPR8-WSWB-Ind013

APPENDIX I. MINK HABITAT ANALYSIS

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Acronyms

CPG	Cooperating Parties Group
GIS	geographic information system
HSI	habitat suitability index
LPRSA	Lower Passaic River Study Area
NJDEP	New Jersey Department of Environmental Protection
SIV	suitability index value
SWAC	spatially weighted average concentration
USFWS	US Fish and Wildlife Service
USGS	US Geological Survey
Windward	Windward Environmental LLC

1 Introduction

This appendix presents an estimate of the total number of mink that might be supported by the available habitat in the Lower Passaic River Study Area (LPRSA). Mink are rare in the LPRSA, likely as a result of poor habitat quality. Mink tracks were observed within the LPRSA along the bank near Dundee Dam in August 2010, (Windward 2011), but no other observations of mink in the LPRSA have been reported. In general, mink are associated with dense wooded vegetation along streams and wetlands (Allen 1986). The land surrounding the LPRSA is mostly urban and industrial, with little dense wooded vegetation. Suboptimal habitats are primarily used by dispersing mink (USFWS 2011; Linn as cited in Allen 1986) and are unlikely to support reproducing female mink or their offspring.

Anecdotal evidence from areas near the LPRSA also indicates that the LPRSA is unlikely to support more than a few mink. For example, use of the nearby Hackensack Meadowlands by mink is reported to be rare (Kiviat and MacDonald 2004), possibly due to limited woody vegetation.

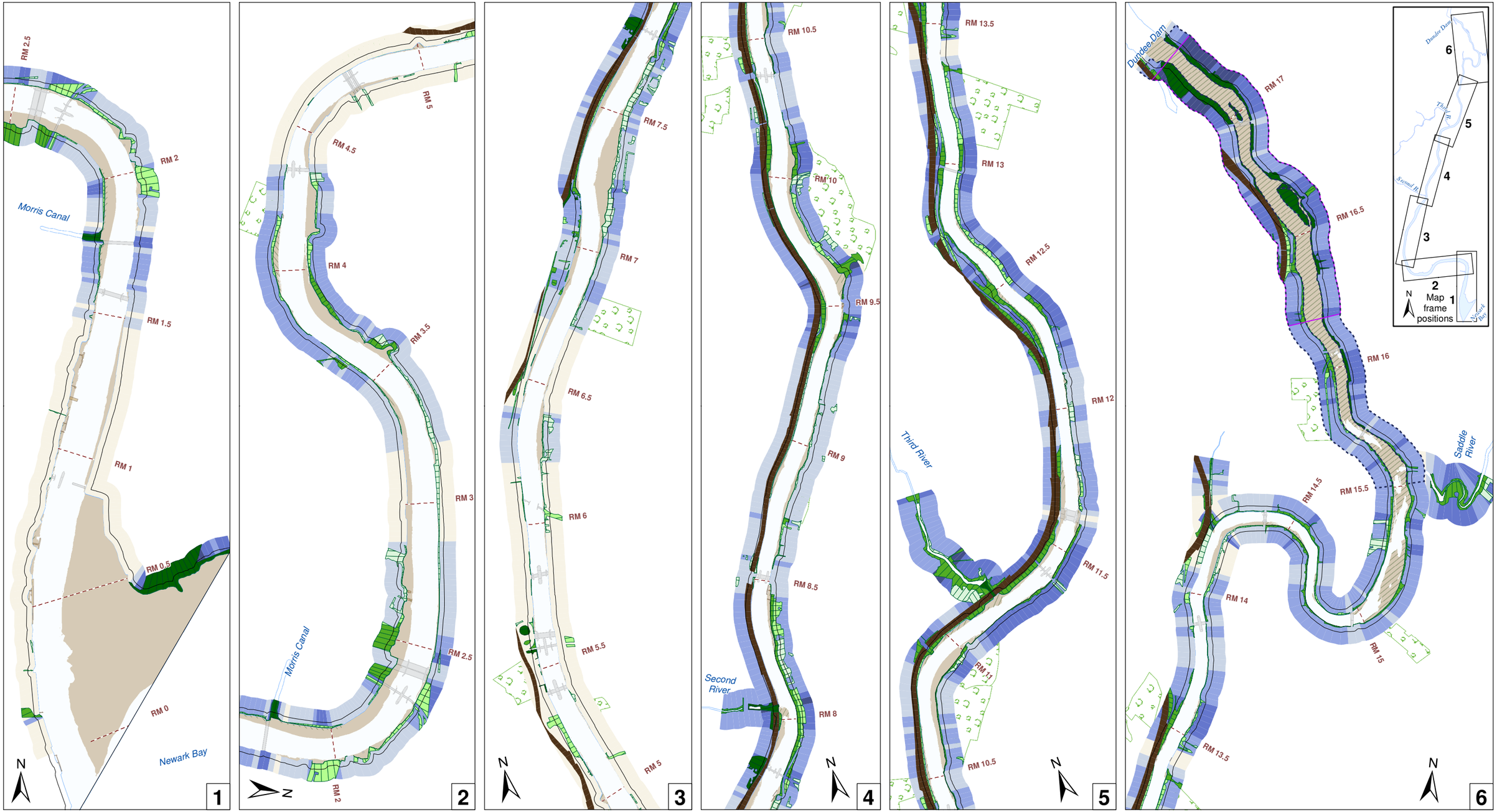
The remainder of this appendix presents the methods and results of the analyses conducted to estimate the total number of mink that might be supported by the available habitat in the LPRSA. Land use and land cover data, aerial photos, and field observations were used in a geographic information system (GIS) to evaluate the quantity and quality of mink habitat along the LPRSA. Literature data on mink habitat use and population density were then used to estimate the number of mink that might occupy the available habitat. Finally, land cover GIS data were used to estimate the approximate area needed to support a minimum viable population. This additional information provides context for the ecological significance of LPRSA habitat.

2 Methods

This section presents the methods for estimating the quantity of total tree and shrub cover habitat for mink along the shoreline. Two assumptions were used: 1) that mink use a distance of 100 m (328 ft) from the shoreline, consistent with the mink habitat suitability index (HSI) model (Allen 1986), and 2) that mink use a distance of 33 m (100 ft) from the shoreline, which area includes most of the riparian vegetation. Methods for estimating the mink population and the area necessary to support a minimum viable population are also presented in this section.

2.1 HABITAT QUANTITY

Land cover within 100-ft (estimate of the riparian cover based on the Windward Environmental LLC [Windward] habitat survey) and 100-m buffers (default value used in mink population model) along either side of the LPRSA and its tributaries was classified in ArcGIS 10.2 as suitable or unsuitable for mink using ortho-rectified aerial photographs; vegetation cover class judgments were informed by site visits during the avian surveys conducted in 2010 and 2011. Habitat was determined along tributaries to head of tide, as determined by a GIS layer from the New Jersey Department of Environmental Protection (NJDEP). Editing was done with 1-m-resolution orthophotos taken during the growing season (National Agricultural Imagery Program, August 2006, USDA-FSA-APFO Aerial Photography Field Office and US Geological Survey [USGS]) and the 2007 Cooperating Parties Group (CPG)-commissioned orthophotos of the LPRSA (GeoD Corporation, Inc, March 12, 2007). Current conditions for all habitat were confirmed by viewing 1-ft-resolution Google satellite maps taken during the winter (i.e., leaf-off) (Google Earth 2013), and the map layer was edited as appropriate using permanent structures, such as roads, to reconcile the locations. Highway 21 was assumed to be an impassable barrier. However, cover beyond (i.e., upland of) the highway was included if it was within 100 m of a discernible underpass or culvert. The resulting GIS layer was combined with 1-m, 100-ft, and 100-m buffers of the river. The site was divided into a grid of cells, and the amount of suitable habitat within each cell was determined from the GIS. Cells were created by dividing the river into segments 30 m long and extending 100 ft and 100 m from the river bank on either side of the river (Map 1).



Windward environmental LLC

0 0.25 0.5 Miles

0 0.25 0.5 Kilometers

Tree or shrub cover > 0 (patchy)
- > 75% and ≤ 100%
- > 50% and ≤ 75%
- > 25% and ≤ 50%
- > 0 and ≤ 25%

HSI score of 30 m x 200 m cell
- > 0.600 and ≤ 0.866
- > 0.400 and ≤ 0.600
- > 0.200 and ≤ 0.400
- > 0.000 and ≤ 0.200
- 0.000

- Maximum 3 kilometer HSI (0.40)
- Maximum 1.8 km HSI (0.44)
- 100-ft riparian buffer
- Impassable highway

- Bridge
- Abutment
- Dock
- Park
- River mile
- Mudflat
- Gravel with fines
- LPRSA

Mudflat areas for ecological receptors are those areas where the river bottom slope is ≤ 6° and the depth is ≥ -2 ft MLLW, based on the 2007 CPG bathymetric survey.

Map 1. Potential mink habitat in the LPRSA

Appendix I. Lower Passaic River Study Area Baseline Ecological Risk Assessment

FINAL

Prepared by mikey , W:\Projects\06-58-01 Passaic RI\Data\GIS\Maps_and_Analysis\BERA\Revised BERA 2016\5773_Mink habitat and HSI in the LPRSA_LSM_20131216.mxd

2.2 HABITAT QUALITY

As an additional indication of the value of LPRSA land cover to mink, habitat quality within the LPRSA was evaluated using the US Fish and Wildlife Service (USFWS) mink HSI model (Allen 1986). The HSI model produces an index value between 0.0 (unsuitable habitat) and 1.0 (optimal habitat), assuming population density increases with habitat quality.

The mink HSI value was calculated as the geometric mean of two separate suitability index values (SIVs), SIV1 (tree and shrub cover within 100 ft and 100 m of the shoreline) and SIV2 (total cover within 1 m of the shoreline):

- SIV1 is calculated using Equation 1:

  SIV1 = 1.2 × (% canopy cover) + 0.1 **Equation 1**

  Maximal SIV1 scores of 1.0 were assigned to 75% or greater canopy cover.

- SIV2 was calculated assuming a direct linear relationship between % cover and SIV2 (e.g., 50% cover results in a SIV2 value of 0.5).

SIV1 was calculated for each cell as the percent of the cell with tree or shrub cover. Highway 21, inaccessible areas beyond it, and other large paved areas (> 90% impervious surface and > 500 m^2) were considered to be non-habitat, based on the assumption that the SIV1 equation does not apply where habitat is absent.

SIV2 was calculated for each cell as the percent of cover within 1 m of the shoreline. Spatially weighted average concentrations (SWACs) were used to average areas of differing canopy values within each cell's shoreline and riparian area. Bulkheads and riprap were scored as 0, regardless of their condition, height, slope, or overhanging vegetation.

2.3 LPRSA MINK POPULATION ESTIMATES

The total number of mink potentially present in the LPRSA was estimated using the habitat map and mink population density and home range information reported in the literature for other areas.

Studies of mink in riverine systems in Montana and Michigan (Marshall 1936; Mitchell 1961) have reported densities ranging from 1 mink per 13 ha to 1 mink per 31 ha. This range of densities is consistent with a recent study on the Housatonic River, Massachusetts, where, based on several years of tracking data, density estimates ranged from 1 mink per 12 to 30 ha (Bernstein et al. 2003).

Linscombe et al. (1982, as cited in Bernstein et al. 2003) report that the average stream length for a female mink's home range is 1.8 km. Yamaguchi and MacDonald (2003, as cited in MacDonald and Rushton 2003) indicate that on the River Thames, England, mink rarely have ranges more than 3 km in length.

Based on these population density and home range data, two estimates of the potential LPRSA mink population were calculated from the following assumptions:

1. An individual mink requires 31 ha of habitat within a maximum 1.8-km-long home range.
2. An individual mink requires 12 ha of habitat within a maximum 3-km-long home range.

Starting at Dundee Dam, possible territories of individual mink were delineated. Individual habitat cells (described in Section 3.1) were consecutively added to a territory until sufficient habitat was accumulated to meet the minimum habitat requirement, or until the maximum home range was reached. If a territory could not be established within the home range based on any configuration of contiguous cells on one or both sides of the river, the analysis started again beginning with the next cell, and proceeded until all possible home ranges had been explored.

2.4 Minimum Viable Population Area

Pertoldi et al. (2013) estimated that at least 50, and probably more than 100, mink are necessary for a viable population. The area around the LPRSA necessary to support 50 mink was determined using GIS. Land use/land cover data for the counties adjacent to the LPRSA (NJDEP 2007) were overlaid with stream data (USGS 2013) to create a GIS layer of forest land cover within 100 m of a water body. Assuming 1 mink/30 ha, the area needed to support 50 mink was determined by consecutively adding 1-mi concentric rings around the LPRSA until sufficient habitat had been attained. This process resulted in 1,500 ha needed to support a minimum viable population.

3 Results

The habitat quantity analysis identified 79.7 ha of potential mink habitat within the LPRSA assuming 100 m from the shoreline, and 49.2 ha assuming 100 ft from the shoreline (Map 1). This habitat is generally patchily dispersed throughout the LPRSA.

The HSI scores indicate that, on average, habitat quality throughout the LPRSA is poor (Map 1). Using the 100-m buffer, the average HSI score for all 1.8-km mink home range areas is 0.20, the median is 0.22, and the maximum is 0.44. Assuming a 100-ft buffer, the average 1.8-km HSI score is 0.28, the median is 0.28, and the maximum is 0.66. The highest HSI scores (> 0.8) in individual cells correspond with the areas of tree and shrub cover shown on Map 1, the area near Dundee Dam, and the area near the mouth of the river, on Kearney Point (RM 0.5).

When mink home ranges are considered in the habitat analysis, it is clear that mink habitat in the LPRSA is likely too patchy to support even a single resident female mink. There are no areas within the LPRSA with the minimum habitat (12 ha) necessary within the larger maximum home range estimate (3 km) to support a mink. The largest block of habitat identified is near Dundee Dam, where 8.62 ha of habitat exist within 1.8 km, but the next 1.8 km, past Saddle River, have only 4.78 ha of habitat. The best 3 km maximum home range near the dam has 96% of a mink's required habitat. Three areas with 80–83% of the necessary habitat per maximum home range occur near Third River (RM 10.9 to RM 12.7), near Second River (RM 6.8 to RM 8.4), and in the large bend near the mouth (RM 2.3 to RM 4.0), but this last area is interrupted by a stretch with zero cover on both banks. In the stretches between these four areas, there is an average of only 2.0 ha of habitat per kilometer, half the required area.

The analysis conducted to determine the area, in addition to the LPRSA, needed to support a minimum viable population of 50 mink indicates that a buffer "habitat" around the LPRSA greater than 7 mi would be needed. The 7 mi around the LPRSA contain approximately 1,450 ha of forest within 100 m of stream, slightly less than the 1,500 ha needed to support 50 mink at 1 mink/30 ha.

4 Conclusions

This analysis shows that there is insufficient tree and shrub cover along the LPRSA to provide the minimum amount of habitat needed within the maximum home range to support even a single reproducing female mink. In order to support a minimum viable population of 50 mink, habitat from an area extending more than 7 mi outward in all directions would be needed in addition to LPRSA habitat. The contribution of LPRSA habitat to the total amount of habitat in this area is negligible.

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Acronyms

BERA	baseline ecological risk assessment
CARP	Contaminant Assessment and Reduction Project
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
COC	chemical of concern
COPEC	chemical of potential ecological concern
CPG	Cooperating Parties Group
CSM	conceptual site model
CSO	combined sewer overflow
EMAP	Environmental Monitoring and Assessment Program
ERA	ecological risk assessment
ESP	ecological sampling program
HHRA	human health risk assessment
HQ	hazard quotient
IQR	interquartile range
LOAEL	lowest-observed-affect-effect level
LPR	Lower Passaic River
LPRSA	Lower Passaic River Study Area
LRC	low-resolution coring
MPI	Malcolm Pirnie
NCA	National Coastal Assessment
PAH	polycyclic aromatic hydrocarbon
PCB	polychlorinated biphenyl
PCDD/PCDF	polychlorinated dibenzodioxins/polychlorinated dibenzofurans
REMAP	Regional Environmental Monitoring and Assessment Program
RI/FS	remedial investigation/feasibility study
RM	river mile

SSO	sanitary sewer overflow
TCDD	tetrachlorodibenzo-*p*-dioxin
TEQ	toxic equivalent
UCL	upper confidence limit on the mean
USEPA	US Environmental Protection Agency
Windward	Windward Environmental LLC

1 Introduction

The Lower Passaic River Study Area (LPRSA) is a highly urbanized watershed that has received inputs of industrial and municipal wastes since the mid-19th century. The LPRSA has also been subject to a wide variety of physical changes and stressors (e.g., chemical and biological), resulting in deleterious effects on the overall ecological "health" of the river. These historical changes and the introduction of stressors have resulted in widespread loss of habitat and biodiversity, the accumulation of chemicals in river sediments and biota, and negative impacts on water quality—the cumulative effects of which have substantially degraded the ecosystems within and in the vicinity of the LPRSA and severely limited its potential use by humans. The input of water and suspended particulates into the LPRSA from areas not influenced by the site also contributes to the presence of hazardous substances and other stressors in the LPRSA, each of which has a corresponding contribution to the overall risks posed to humans and ecological receptors.

The LPRSA is the subject of a remedial investigation/feasibility study (RI/FS), which includes the performance of a human health risk assessment (HHRA) and baseline ecological risk assessment (BERA) for the entire 17.4 mi of the LPRSA in accordance with Section IX.37.d of the May 2007 Settlement Agreement (USEPA 2007). Although the primary focus of the RI/FS is historically contaminated sediment within the LPRSA, it is also important to acknowledge other potential sources of hazardous substances and environmental stressors to the LPRSA from surface water and associated suspended solids that enter the LPRSA from 1) the watershed above Dundee Dam; 2) tributaries to the LPRSA; 3) combined sewer overflows (CSOs), sanitary sewer overflows (SSOs), and point source discharges, including stormwater outfalls; and 4) tidal inputs from Newark Bay. These additional inputs need to be characterized separately from the historically contaminated LPRSA sediment.

Conceptual site models (CSMs) of the LPRSA presented in summary reports and planning documents (e.g., Battelle (2005), Windward Environmental LLC [Windward] and AECOM (2009), Malcolm Pirnie (2007a, b), and Malcolm Pirnie et al. (2005)), as well as in US Environmental Protection Agency (USEPA) guidance and recommendations (USEPA 2002, 2008), recognize that conditions within the LPRSA and ongoing inputs of chemical and environmental stressors originating from areas both inside and outside the LPRSA need to be taken into account during the risk assessment and remedial decision-making processes.

The ecological CSM (Figure 3-1 of the main document) depicts the LPRSA CSM components and the various routes by which receptors within the LPRSA can be exposed to site-related and non-site-related hazardous substances. One of the challenges of the HHRA and BERA is to quantify and differentiate between potential

risks associated with exposures to Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA; 42 USC 9601 - 9675) hazardous substances (42 USC 9601[14]) corresponding to each of the sources and pathways depicted in the CSM, and those risks that may be associated with regional anthropogenic background inputs into the LPRSA. Moreover, within the BERA, it is necessary to distinguish impacts on biota caused by exposure to CERCLA hazardous substances from impacts caused by exposure to other stressors, including physical stressors. Consequently, there are unique data needs associated with developing a comparative evaluation of contributions from the various sources of chemical and abiotic stressors (e.g., habitat characteristics) within the risk characterization.

Background and reference area data were evaluated as part of the BERA for the LPRSA. These data were compiled based on regional freshwater and estuarine data. Reference information based on regional freshwater and estuarine data was evaluated to determine the "level of impact associated with substances present in the environment as a result of human activities that should be differentiated from effects from site releases" (USEPA 2002, 2005).[1] USEPA (1994) recommends that reference site conditions match those of the Superfund site, to the extent practicable, in all aspects except contamination. Reference area information was defined for benthic toxicity and benthic community and is discussed in Section 6 of the main document. Appendix L includes the raw data of both the background and reference datasets, as well as a comparison of the LPRSA and reference area data in order to address the recommendation by USEPA (1994) noted above.

The remainder of this appendix discusses background. Background is defined by USEPA (2002) as "Substances or locations that are not influenced by the release from a site and are usually described as naturally occurring or anthropogenic: (1) Naturally occurring substances are present in the environment in forms that have not been influenced by human activity, (2) Anthropogenic substances are natural and human-made substances present in the environment as a result of human activities (not specifically related to the CERCLA site in question)." All of the definitions provided by USEPA identify background as concentrations of contaminants in environmental media. Therefore, for the purposes of the BERA and HHRA, background will refer to concentrations of contaminants found in the surface water, sediment, and tissue collected from background locations.

[1] Earlier USEPA documentation (1994) defines reference conditions as "the least impacted area of the Site or a nearby site that is ecologically similar but not affected by the Site's contaminants."

Background data were used to develop a range of values for comparison to data collected from the LPRSA. Background data were not used to negate or subtract from the calculated quantitative site risk estimates. However, understanding the contribution of background concentrations to risks associated with CERCLA releases is expected to be important for refining specific cleanup levels for risk drivers that warrant remedial action (USEPA 2002).[2]

[2] In this BERA, chemicals of potential ecological concern (COPECs) with calculated hazard quotients (HQs) ≥ 1.0 were assessed to determine a list of preliminary chemicals of concern (COCs). The preliminary COCs were further evaluated based on a comparison to background concentrations (USEPA 2016a) and the uncertainty of the assessment to identify risk drivers to be further evaluated in the FS.

2 Background Dataset

In agreement with USEPA, the information available in existing regional datasets for surface sediment chemistry, surface water chemistry, and tissue chemistry in freshwater and estuarine areas from Delaware Bay to southern New England was evaluated to determine if these data were sufficient and appropriate to define a regional background dataset for the LPRSA. These data sources were evaluated to define regional background consistent with USEPA's (2002) definition of "constituents or locations that are not influenced by the releases from a site but represent an influence on the site." Following a review of the existing datasets compiled by the Cooperating Parties Group (CPG), USEPA (2013) selected the following areas to represent a range of background conditions for the LPRSA:

- The Passaic River above Dundee Dam
- Jamaica Bay
- Mullica River (including Great Bay)

Background data from these areas are discussed in the following subsections. Appendix L includes the raw data of both the background and reference datasets. Also included in Appendix L are box plot figures comparing LPRSA sediment concentrations for a number of COPECs to sediment concentrations in the Passaic River above Dundee Dam, Jamaica Bay, and Mullica River/ Great Bay.

2.1 Selected Datasets

The following areas were used to define background for the LPRSA:

- For the freshwater background, two datasets were defined:
  - One dataset included surface water, sediment, and tissue data collected by CPG from above Dundee Dam on the Passaic River between 2008 and 2012. Surface water collected from the single location just above Dundee Dam was used to define background surface water concentrations. Background sediment data were based on data collected in the area between Dundee Dam and I-80 (approximately river mile [RM] 19); this area represents a likely primarily depositional area for sediment impacted by urban sources from the upper Passaic River.
  - The second dataset was based on existing sediment data from the freshwater portion of the Mullica River.

- For the estuarine background, two datasets were defined:
  - One dataset was based on existing sediment and tissue data from Jamaica Bay and tissue data from Lower Harbor[3] (the lower portion of the New York/New Jersey [NY/NJ] Harbor estuary).
  - A second dataset was based on existing sediment and tissue data from Great Bay and the estuarine portion of the Mullica River.

The data used to define the freshwater and estuarine datasets are summarized in Table 2-1. Details on the tissue data used in the background datasets are presented in Table 2-2. Maps of background locations are presented in Section 4 of the main document.

Table 2-1. Summary of background chemistry data

Area	Dataset	Sampling Event	Sampling Period
Freshwater background			
LPR above Dundee Dam	surface sediment (n = 6 locations)	2008 LRC program (AECOM 2014)	September to October 2008
	surface sediment (n = 24 locations[a])	2012 upstream sediment sampling (Windward 2019b)	November 2012
	surface water (n = 5 locations)	2011–2012 chemical water column monitoring (ddms 2013a, b, c, d, e)	August 2011 to August 2012
	tissue (n = 56 whole-body samples[b])	2012 upstream tissue sampling (Windward 2019a)	October 2012
Mullica River	surface sediment (n = 5 locations)	2000 to 2006 NCA Program New Jersey Atlantic Coast (NOAA 2013)	September 2000 to August 2006
Estuarine background			
Jamaica Bay/ Lower Harbor[c]	surface sediment (n = 1 location)	1999 CARP sediment ambient study (NOAA 2013)	August 1999
	surface sediment (n = 9 locations)	2000 to 2005 NCA Program NY/NJ Harbor (NOAA 2013)	August 2000 to August 2005
	surface sediment (n = 84 locations)	1993 to 1998 REMAP (NOAA 2013) and 2003 REMAP (USEPA 2016c)	September 1993 to August 1998 and July to September 2003
	tissue (n = 2 whole-body samples[b])	fall 1999 harbor fish collection (NOAA 2013)	November 1999
	tissue (n = 5 whole-body samples[b])	summer 1999 harbor fish collection (Litten 2003)	September 1999

[3] Data from Lower Harbor included in the estuarine background dataset included only tissue data (i.e., sediment data from Lower Harbor were not included). Tissue data from Lower Harbor were included to augment the tissue dataset from Jamaica Bay.

Area	Dataset	Sampling Event	Sampling Period
Mullica River/ Great Bay	surface sediment (n = 3 locations)	1999 late summer/early fall RI-ESP sampling program (NOAA 2013)	October 1999
	surface sediment (n = 4 locations)	1990 to 1991 EMAP-Delaware Bay (NOAA 2013)	August 1990 to July 1991
	surface sediment (n = 10 locations)	2000 to 2002 NCA Program New Jersey Atlantic Coast (NOAA 2013)	October 2003 to August 2006
	surface sediment (n = 7 locations)	2003 to 2006 NCA Program New Jersey Atlantic Coast (NOAA 2013)	October 2003 to August 2006
	surface sediment (n = 1 locations)	2010 NCCA Program (NOAA 2013)	August 2010
	tissue (n = 9 whole-body samples[b])	1999 late summer/early fall RI-ESP sampling program (NOAA 2013)	October 1999
	tissue (n = 3 whole-body samples[b])	2000 spring RI-ESP sampling program (NOAA 2013)	May 2000

[a] Sediment data collected in the area between Dundee Dam and I-80 (approximately RM 19) were used to define the freshwater background dataset; this area represents a likely primarily depositional area for sediment impacted by urban sources from the Upper Passaic River.

[b] Details on tissue samples are provided in Table 2-2.

[c] Data from Lower Harbor includes only tissue data.

CARP – Contaminant Assessment and Reduction Project
EMAP – Environmental Monitoring and Assessment Program
ESP – ecological sampling program
LPR – Lower Passaic River
LRC – low-resolution coring
NCA – National Coastal Assessment
NCCA – National Coastal Condition Assessment
NY/NJ – New York/New Jersey
REMAP – Regional Environmental Monitoring and Assessment Program
RI – remedial investigation

Table 2-2. Summary of background tissue data

Sampling Event	Sampling Period	Species	Tissue Type	Number of Samples
Passaic River above Dundee Dam				
2012 upstream tissue sampling (Windward 2019a)	October 2012	American eel	whole-body individuals	6
			whole-body (calculated) composites and individuals[a]	10
		banded killifish	whole-body composite	1
		brown bullhead	whole-body individuals	6
		carp	whole-body individuals	5
			whole-body (calculated) individuals[a]	5
		channel catfish	whole-body (calculated) individuals[a]	4
		northern pike	whole-body (calculated)[a] individual	1
		pumpkinseed	whole-body composite	1
		silver shiner	whole-body composite	1
		smallmouth bass	whole-body (calculated) composites[a]	3
		white perch	whole-body (calculated) composites	8
		white sucker	whole-body (calculated) individuals[a]	5
Jamaica Bay/Lower Harbor				
Fall 1999 harbor fish collection (NOAA 2013)	November 1999	mummichog	whole-body composites	2
Summer 1999 harbor fish collection (Litten 2003)	September 1999	mummichog	whole-body composites	5
Mullica River/Great Bay				
1999 late summer/early fall RI-ESP sampling program (NOAA 2013)	October 1999	mummichog	whole-body composites	9
2000 spring RI-ESP sampling program (NOAA 2013)	May 2000			3

[a] Fish whole-body tissue concentrations were calculated using fillet and carcass tissue concentrations, as described in BERA Section 4.2.3.

BERA – baseline ecological risk assessment

ESP – ecological sampling program

RI – remedial investigation

Most of the fish (95%) collected during fish tissue sampling efforts above Dundee Dam in 2012 were classified as benthic omnivores or invertibores/omnivores. The remaining fish collected were classified as piscivores (3%) and piscivores/invertivores (2%). No planktivore species were observed above Dundee Dam (Figure 2-1). The general numbers of fish caught within each feeding guild during these surveys are

assumed to represent the relative numbers of fish present above Dundee Dam. The sampling event above Dundee Dam was not conducted throughout the year; the only sampling event occurred in October 2012, so the uncertainty of the representativeness of this dataset should be considered. Figure 2-1 is based on only data collected in October 2012. Other regional datasets did not contain community abundance data.

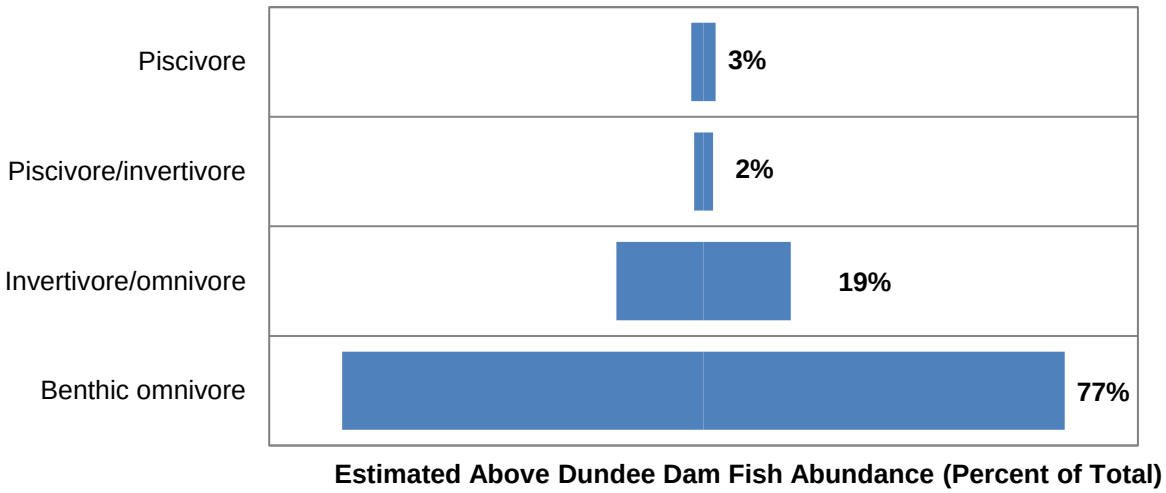

Figure 2-1. General fish feeding guild abundance from October 2012 fish community surveys above Dundee Dam

2.2 LIMITATIONS OF BACKGROUND DATASETS

Limitations inherent to the compiled background datasets are discussed in the following subsections.

2.2.1 Sediment

The evaluation of regional sediment data was conducted primarily in order to develop reference area values for the benthic invertebrate assessment (Section 6 of the main document). Only sediment chemistry data that were co-located with toxicity data were compiled as part of the background and reference area evaluation. Sediment chemistry data from the estuarine regional areas that were not co-located with toxicity data were not compiled, and are not included in the background dataset.

Background freshwater sediment data were compiled based on data collected from the area between Dundee Dam and I-80 (approximately RM 19) on the Lower Passaic River (LPR). Additional freshwater sediment data from an upstream portion of the Mullica River were compiled as well. No other regional freshwater sediment data were compiled as part of the background dataset; however, regional freshwater sediment data were considered in the evaluation of reference conditions for benthic invertebrates (Section 6 of the main document).

2.2.2 Tissue

Only whole-body data were evaluated as part of the ERA calculations; therefore, only whole-body data from the background datasets were used. For the freshwater tissue dataset, whole-body concentrations for some fish (Table 2-2) were derived from fish fillet and carcass concentrations based on the methods described in Section 4.3.3 of the main document. Whole-body (or calculated whole-body) concentrations were available for the following fish species as part of the freshwater dataset based on data collected above Dundee Dam: American eel, brown bullhead, carp, channel catfish, northern pike, smallmouth bass, white perch, white sucker, and small forage fish (i.e., pumpkinseed, silver shiner, and banded killifish).

For the estuarine tissue dataset, whole-body data were limited to mummichog. Fillet data were available for other species of interest in the LPRSA (including white perch and American eel), and muscle/hepatopancreas tissue data were available for blue crab; however, carcass concentrations were not available for these species, so whole-body tissue concentrations could not be derived. Thus, the estuarine background dataset is limited to mummichog.

2.2.3 Surface water

Background freshwater surface water data were compiled based on data collected from upstream of Dundee Dam on the LPR. No other regional freshwater or estuarine surface water data were compiled as part of the background dataset.

2.3 METHODS FOR DETERMINING BACKGROUND VALUES

For sediment and tissue, background values were determined for only COPEC-ecological receptor pairs with effects-based hazard quotients (HQs) ≥ 1.0 calculated in the BERA. Background values were defined per COPEC and given dataset (e.g., freshwater sediment or mummichog tissue) as the maximum concentration in a given dataset excluding any outlier concentrations. Outlier concentrations were identified as the 75th percentile (i.e., third quartile) plus three times the interquartile range (IQR) of the data distribution based on log-transformed concentrations. Outliers were also identified as the 75th percentile plus 1.5 times the IQR (USEPA 2015a, b; 2016b; and other communications with USEPA throughout 2015 and 2016) but not removed from the background dataset.

For surface water, background values were also only determined only for COPECs with HQs ≥ 1.0 calculated in the BERA. Background surface water data were limited to data collected from one location above Dundee Dam over several seasonal sampling events. Because of the limited surface water dataset, the range of concentrations based on the data collected from the single location was identified as the surface water background concentration.

3 Background Concentrations

The following presents the background values for all media: sediment, tissue, and surface water. Background values were determined for only COPEC-ecological receptor pairs with effects-based HQs ≥ 1.0,[4] as calculated in the BERA.

Tables 3-1 through 3-3 present the background sediment, tissue, and surface water concentrations evaluated in the BERA for those chemicals and media identified as COPEC-ecological receptor pairs with HQs ≥ 1.0 in the BERA. Tables 3-4 through 3-6 present summary statistics on the background sediment, tissue, and surface water data.

A comparison of sediment and tissue concentrations with background values derived using the 75th percentile plus 3 times the IQR and 1.5 times the IQR are provided in Tables 3-7 and 3-8, respectively.

Table 3-1. Background sediment concentrations

COPEC	Units	Freshwater				Estuarine			
		Above Dundee Dam		Mullica River		Jamaica Bay		Mullica River/ Great Bay	
		Max	UCL	Max	UCL	Max	UCL	Max	UCL
Metals									
Arsenic	mg/kg	4.3	6.4	5	nc	20.7	7.3	32.8	12
Cadmium	mg/kg	4.95	3.8	1	nc	4.8	1.7	2.8	1.5
Chromium	mg/kg	54.9	48.2	15.9	nc	126	56	93	64
Cobalt	mg/kg	12.1	6.43	na	na	0.56	nc	10.2	nc
Copper	mg/kg	209	150	4.2	nc	196	84	36.8	19
Lead	mg/kg	405	440	17.2	nc	195	93	55.9	33
Mercury	µg/kg	2,000	2,910	33	nc	1,000	470	390	180
Methyl mercury	µg/kg	1.35	0.595	na	na	0.09	nc	na	na
Nickel	mg/kg	24.4	14	4.75	na	52	25	36	23
Selenium	mg/kg	2.7	27	0.87	nc	3.58	1.4	2.2	0.82
Vanadium	mg/kg	35.6	17	na	na	2.9	nc	69.5	nc
Zinc	mg/kg	822	1,130	24	nc	451	150	156	97
OC Pesticides									
Total DDx	µg/kg	38	41	1	nc	25	11	4.9	1.7

[4] For fish, birds, and mammals, only COPEC-ecological receptor pairs with lowest-observed-adverse-effect level (LOAEL) HQs ≥ 1.0 were evaluated.

Table 3-1. Background sediment concentrations

COPEC	Units	Freshwater				Estuarine			
		Above Dundee Dam		Mullica River		Jamaica Bay		Mullica River/ Great Bay	
		Max	UCL	Max	UCL	Max	UCL	Max	UCL
PAHs									
Benzo(a)pyrene	µg/kg	12,700	36,000	2300	nc	470	370	108	39
Total HPAHs	µg/kg	73,300	300,000	na	na	5,900	3,600	700	370
PCB Congeners									
PCB TEQ-Bird	ng/kg	120	228	na	na	na	na	35	nc
PCB TEQ-Fish	ng/kg	2.38	0.788	na	na	na	na	0.086	nc
PCB TEQ-Mammal	ng/kg	4.02	9.91	na	na	na	na	0.16	nc
Total PCBs	µg/kg	383	1090	na	na	167[a]	74[a]	14[a]	nc
PCDDs/PCDFs									
2,3,7,8-TCDD	ng/kg	1.63	9.21	na	na	8.01	6.4	nd	nc
PCDD/PCDF TEQ-Bird	ng/kg	58.8	89.9	na	na	98	33	12	nc
PCDD/PCDF TEQ-Fish	ng/kg	102	18.8	na	na	39	12	0.9	nc
PCDD/PCDF TEQ-Mammal	ng/kg	35	21.4	na	na	51	38	2.5	nc
Total TEQ-Bird	ng/kg	117	311	na	na	na	na	46	nc
Total TEQ-Fish	ng/kg	104	19.5	na	na	na	na	0.99	nc
Total TEQ-Mammal	ng/kg	52.2	27.3	na	na	na	na	2.7	nc

[a] Background values for total PCB congeners are based on historical sums that cannot be recreated using BERA data processing rules.

BERA – baseline ecological risk assessment
DDD – dichlorodiphenyldichloroethane
DDE – dichlorodiphenyldichloroethylene
DDT – dichlorodiphenyltrichloroethane
COPEC – chemical of potential ecological concern
HPAH – high-molecular-weight polycyclic aromatic hydrocarbon
na – no data
nc – not calculated (data are insufficient for UCL or outlier analysis)
PAH – polycyclic aromatic hydrocarbon
PCB – polychlorinated biphenyl
PCDD/PCDF – polychlorinated dibenzodioxins/polychlorinated dibenzofurans
TEQ – toxic equivalent
total DDx – sum of all six DDT isomers (2,4′-DDD, 4,4′-DDD, 2,4′-DDE, 4,4′-DDE, 2,4′-DDT and 4,4′-DDT)
UCL – upper confidence limit on the mean

Table 3-2. Background fish tissue concentrations

Species and COPEC	Units (ww)	Background Concentrations[a]					
		Above Dundee Dam		Jamaica Bay/Lower Harbor		Mullica River/Great Bay	
		Max	UCL	Max	UCL	Max	UCL
American eel							
Arsenic	mg/kg	0.225	1.3	na	na	na	na
Cadmium	mg/kg	0.0689	0.05	na	na	na	na
Cobalt	mg/kg	0.0374	0.028	na	na	na	na
Copper	mg/kg	0.818	0.747	na	na	na	na
Lead	mg/kg	0.702	0.36	na	na	na	na
Mercury	µg/kg	324	250	na	na	na	na
Methylmercury	µg/kg	255	190	na	na	na	na
Nickel	mg/kg	0.518	0.7	na	na	na	na
Selenium	mg/kg	0.794	0.682	na	na	na	na
Vanadium	mg/kg	0.0916	0.063	na	na	na	na
Benzo(a)pyrene	µg/kg	0.43	nc	na	na	na	na
Total HPAHs	µg/kg	13	8.4	na	na	na	na
Total PCB Congeners	µg/kg	1,880	1,080	na	na	na	na
PCB TEQ-Bird	ng/kg	17.5	13.6	na	na	na	na
PCB TEQ-Fish	ng/kg	1.23	0.963	na	na	na	na
PCB TEQ-Mammal	ng/kg	15.5	11.1	na	na	na	na
2,3,7,8-TCDD	ng/kg	0.389	0.282	na	na	na	na
PCDD/PCDF TEQ-Bird	ng/kg	2.60	1.50	na	na	na	na
PCDD/PCDF TEQ-Fish	ng/kg	2.52	1.44	na	na	na	na
PCDD/PCDF TEQ-Mammal	ng/kg	2.50	1.44	na	na	na	na
Total TEQ-Bird	ng/kg	19.2	14.8	na	na	na	na
Total TEQ-Fish	ng/kg	3.74	2.37	na	na	na	na
Total TEQ-Mammal	ng/kg	16.9	12.5	na	na	na	na
Dieldrin	µg/kg	127	74	na	na	na	na
Total DDx	µg/kg	490	270	na	na	na	na
Brown bullhead							
Arsenic	mg/kg	0.091	0.071	na	na	na	na
Cadmium	mg/kg	0.0387	0.031	na	na	na	na
Cobalt	mg/kg	0.231	0.197	na	na	na	na
Copper	mg/kg	2.17	1.79	na	na	na	na

Table 3-2. Background fish tissue concentrations

Species and COPEC	Units (ww)	Background Concentrations[a]					
		Above Dundee Dam		Jamaica Bay/Lower Harbor		Mullica River/Great Bay	
		Max	UCL	Max	UCL	Max	UCL
Lead	mg/kg	2.63	2.08	na	na	na	na
Mercury	µg/kg	254	189	na	na	na	na
Methyl mercury	µg/kg	276	203	na	na	na	na
Nickel	mg/kg	6.78	5.9	na	na	na	na
Selenium	mg/kg	0.401	0.375	na	na	na	na
Vanadium	mg/kg	0.689	0.536	na	na	na	na
Benzo(a)pyrene	µg/kg	67.8	nc	na	na	na	na
Total HPAHs	µg/kg	229	416	na	na	na	na
Total PCB Congeners	µg/kg	614	519	na	na	na	na
PCB TEQ-Bird	ng/kg	27.3	23.0	na	na	na	na
PCB TEQ-Fish	ng/kg	0.676	0.583	na	na	na	na
PCB TEQ-Mammal	ng/kg	9.27	7.91	na	na	na	na
2,3,7,8-TCDD	ng/kg	1.19	0.845	na	na	na	na
PCDD/PCDF TEQ-Bird	ng/kg	3.67	3.39	na	na	na	na
PCDD/PCDF TEQ-Fish	ng/kg	2.64	2.24	na	na	na	na
PCDD/PCDF TEQ-Mammal	ng/kg	2.44	2.10	na	na	na	na
Total TEQ-Bird	ng/kg	30.6	26.3	na	na	na	na
Total TEQ-Fish	ng/kg	3.32	2.79	na	na	na	na
Total TEQ-Mammal	ng/kg	11.7	9.87	na	na	na	na
Dieldrin	µg/kg	25.8	18	na	na	na	na
Total DDx	µg/kg	76	67	na	na	na	na
Carp							
Arsenic	mg/kg	0.071	0.095	na	na	na	na
Cadmium	mg/kg	0.066	0.04	na	na	na	na
Cobalt	mg/kg	0.0637	0.047	na	na	na	na
Copper	mg/kg	1.65	1.32	na	na	na	na
Lead	mg/kg	0.859	0.692	na	na	na	na
Mercury	µg/kg	133	110	na	na	na	na
Methyl mercury	µg/kg	131	110	na	na	na	na
Nickel	mg/kg	2.49	1.3	na	na	na	na
Selenium	mg/kg	0.758	0.677	na	na	na	na

Table 3-2. Background fish tissue concentrations

Species and COPEC	Units (ww)	Background Concentrations[a]					
		Above Dundee Dam		Jamaica Bay/Lower Harbor		Mullica River/Great Bay	
		Max	UCL	Max	UCL	Max	UCL
Vanadium	mg/kg	0.23	0.15	na	na	na	na
Benzo(a)pyrene	µg/kg	6.3	3.6	na	na	na	na
Total HPAHs	µg/kg	83	68.9	na	na	na	na
Total PCB Congeners	µg/kg	2560	2100	na	na	na	na
PCB TEQ-Bird	ng/kg	163	132	na	na	na	na
PCB TEQ-Fish	ng/kg	4.68	2.56	na	na	na	na
PCB TEQ-Mammal	ng/kg	81.1	38.7	na	na	na	na
2,3,7,8-TCDD	ng/kg	2.27	1.69	na	na	na	na
PCDD/PCDF TEQ-Bird	ng/kg	13.5	10.8	na	na	na	na
PCDD/PCDF TEQ-Fish	ng/kg	7.27	5.94	na	na	na	na
PCDD/PCDF TEQ-Mammal	ng/kg	6.60	5.43	na	na	na	na
Total TEQ-Bird	ng/kg	171	142	na	na	na	na
Total TEQ-Fish	ng/kg	9.18	8.23	na	na	na	na
Total TEQ-Mammal	ng/kg	85.2	43.6	na	na	na	na
Dieldrin	µg/kg	34	31.8	na	na	na	na
Total DDx	µg/kg	280	220	na	na	na	na
Channel catfish							
Arsenic	mg/kg	0.041	nc	na	na	na	na
Cadmium	mg/kg	0.023	nc	na	na	na	na
Cobalt	mg/kg	0.17	nc	na	na	na	na
Copper	mg/kg	0.745	nc	na	na	na	na
Lead	mg/kg	0.32	nc	na	na	na	na
Mercury	µg/kg	555	nc	na	na	na	na
Methyl mercury	µg/kg	559	nc	na	na	na	na
Nickel	mg/kg	7.72	nc	na	na	na	na
Selenium	mg/kg	0.332	nc	na	na	na	na
Vanadium	mg/kg	0.18	nc	na	na	na	na
Benzo(a)pyrene	µg/kg	nd	nd	na	na	na	na
Total HPAHs	µg/kg	43.4	nc	na	na	na	na
Total PCB Congeners	µg/kg	2130	nc	na	na	na	na
PCB TEQ-Bird	ng/kg	60.5	nc	na	na	na	na

Table 3-2. Background fish tissue concentrations

Species and COPEC	Units (ww)	Background Concentrations[a]					
		Above Dundee Dam		Jamaica Bay/Lower Harbor		Mullica River/Great Bay	
		Max	UCL	Max	UCL	Max	UCL
PCB TEQ-Fish	ng/kg	3.37	nc	na	na	na	na
PCB TEQ-Mammal	ng/kg	45.5	nc	na	na	na	na
2,3,7,8-TCDD	ng/kg	4.99	nc	na	na	na	na
PCDD/PCDF TEQ-Bird	ng/kg	10.1	nc	na	na	na	na
PCDD/PCDF TEQ-Fish	ng/kg	8.83	nc	na	na	na	na
PCDD/PCDF TEQ-Mammal	ng/kg	8.43	nc	na	na	na	na
Total TEQ-Bird	ng/kg	70.3	nc	na	na	na	na
Total TEQ-Fish	ng/kg	12.1	nc	na	na	na	na
Total TEQ-Mammal	ng/kg	53.8	nc	na	na	na	na
Dieldrin	µg/kg	27.7	nc	na	na	na	na
Total DDx	µg/kg	340	nc	na	na	na	na
Mummichog/killifish							
Arsenic	mg/kg	0.067[b]	nc	na	na	0.96	nc
Cadmium	mg/kg	0.0088[b]	nc	0.00558	0.00397	0.066	0.058
Cobalt	mg/kg	0.0486[b]	nc	na	na	nd	nd
Copper	mg/kg	1.49[b]	nc	na	na	4.2	4.4
Lead	mg/kg	0.35[b]	nc	na	na	0.23	nc
Mercury	µg/kg	40.4[b]	nc	76.7	64.2	38	24
Methyl mercury	µg/kg	34.5[b]	nc	71.4	nc	na	na
Nickel	mg/kg	1.45[b]	nc	na	na	0.19	nc
Selenium	mg/kg	0.488[b]	nc	na	na	0.65	0.53
Vanadium	mg/kg	0.132[b]	nc	na	na	0.3	0.23
Benzo(a)pyrene	µg/kg	2.6[b]	nc	3.04	2.25	nd	nd
Total HPAHs	µg/kg	29.2[b]	nc	17	23	nd	nd
Total PCB Congeners	µg/kg	219[b]	nc	3200	1900	na	na
PCB TEQ-Bird	ng/kg	10.9[b]	nc	410	630	5.8	4.9
PCB TEQ-Fish	ng/kg	0.275[b]	nc	4.2	6.7	0.18	0.18
PCB TEQ-Mammal	ng/kg	4.05[b]	nc	70	400	3.4	4.9
2,3,7,8-TCDD	ng/kg	0.143[b]	nc	8.02	8.2	nd	nd
PCDD/PCDF TEQ-Bird	ng/kg	0.858[b]	nc	30	23	0.7	0.5
PCDD/PCDF TEQ-Fish	ng/kg	0.400[b]	nc	16	20	0.47	0.43

Table 3-2. Background fish tissue concentrations

Species and COPEC	Units (ww)	Background Concentrations[a]					
		Above Dundee Dam		Jamaica Bay/Lower Harbor		Mullica River/Great Bay	
		Max	UCL	Max	UCL	Max	UCL
PCDD/PCDF TEQ-Mammal	ng/kg	0.368[b]	nc	12	17	0.48	0.33
Total TEQ-Bird	ng/kg	11.8[b]	nc	430	640	6.5	5.6
Total TEQ-Fish	ng/kg	0.676[b]	nc	25	20	0.49	0.35
Total TEQ-Mammal	ng/kg	4.42[b]	nc	74	200	3.4	5.2
Dieldrin	µg/kg	18.9[b]	nc	15.2	21.5	0.92	nc
Total DDx	µg/kg	45[b]	nc	240	180	na	na
Northern pike							
Arsenic	mg/kg	0.053	nc	na	na	na	na
Cadmium	mg/kg	0.0057	nc	na	na	na	na
Cobalt	mg/kg	0.0093	nc	na	na	na	na
Copper	mg/kg	0.481	nc	na	na	na	na
Lead	mg/kg	0.052	nc	na	na	na	na
Mercury	µg/kg	364	nc	na	na	na	na
Methyl mercury	µg/kg	316	nc	na	na	na	na
Nickel	mg/kg	0.264	nc	na	na	na	na
Selenium	mg/kg	0.417	nc	na	na	na	na
Vanadium	mg/kg	0.044	nc	na	na	na	na
Benzo(a)pyrene	µg/kg	nd	nd	na	na	na	na
Total HPAHs	µg/kg	20.2	nc	na	na	na	na
Total PCB Congeners	µg/kg	1880	nc	na	na	na	na
PCB TEQ-Bird	ng/kg	138	nc	na	na	na	na
PCB TEQ-Fish	ng/kg	2.56	nc	na	na	na	na
PCB TEQ-Mammal	ng/kg	35.1	nc	na	na	na	na
2,3,7,8-TCDD	ng/kg	1.72	nc	na	na	na	na
PCDD/PCDF TEQ-Bird	ng/kg	16.1	nc	na	na	na	na
PCDD/PCDF TEQ-Fish	ng/kg	4.74	nc	na	na	na	na
PCDD/PCDF TEQ-Mammal	ng/kg	4.89	nc	na	na	na	na
Total TEQ-Bird	ng/kg	154	nc	na	na	na	na
Total TEQ-Fish	ng/kg	7.30	nc	na	na	na	na
Total TEQ-Mammal	ng/kg	40.0	nc	na	na	na	na
Dieldrin	µg/kg	38	nc	na	na	na	na

Table 3-2. Background fish tissue concentrations

Species and COPEC	Units (ww)	Background Concentrations[a]					
		Above Dundee Dam		Jamaica Bay/Lower Harbor		Mullica River/Great Bay	
		Max	UCL	Max	UCL	Max	UCL
Total DDx	µg/kg	230	nc	na	na	na	na
Other forage fish							
Arsenic	mg/kg	0.065	nc	na	na	na	na
Cadmium	mg/kg	0.0228	nc	na	na	na	na
Cobalt	mg/kg	0.207	nc	na	na	na	na
Copper	mg/kg	0.916	nc	na	na	na	na
Lead	mg/kg	0.476	nc	na	na	na	na
Mercury	µg/kg	125	nc	na	na	na	na
Methyl mercury	µg/kg	110	nc	na	na	na	na
Nickel	mg/kg	8.6	nc	na	na	na	na
Selenium	mg/kg	0.697	nc	na	na	na	na
Vanadium	mg/kg	0.295	nc	na	na	na	na
Benzo(a)pyrene	µg/kg	5.7	nc	na	na	na	na
Total HPAHs	µg/kg	82.4	nc	na	na	na	na
Total PCB Congeners	µg/kg	853	nc	na	na	na	na
PCB TEQ-Bird	ng/kg	136	nc	na	na	na	na
PCB TEQ-Fish	ng/kg	0.968	nc	na	na	na	na
PCB TEQ-Mammal	ng/kg	10.8	nc	na	na	na	na
2,3,7,8-TCDD	ng/kg	0.910	nc	na	na	na	na
PCDD/PCDF TEQ-Bird	ng/kg	10.7	nc	na	na	na	na
PCDD/PCDF TEQ-Fish	ng/kg	2.50	nc	na	na	na	na
PCDD/PCDF TEQ-Mammal	ng/kg	2.73	nc	na	na	na	na
Total TEQ-Bird	ng/kg	147	nc	na	na	na	na
Total TEQ-Fish	ng/kg	3.47	nc	na	na	na	na
Total TEQ-Mammal	ng/kg	13.5	nc	na	na	na	na
Dieldrin	µg/kg	22	nc	na	na	na	na
Total DDx	µg/kg	120	nc	na	na	na	na
Smallmouth bass							
Arsenic	mg/kg	0.161	nc	na	na	na	na
Cadmium	mg/kg	0.0045	nc	na	na	na	na
Cobalt	mg/kg	0.017	nc	na	na	na	na

Table 3-2. Background fish tissue concentrations

Species and COPEC	Units (ww)	Background Concentrations[a]					
		Above Dundee Dam		Jamaica Bay/Lower Harbor		Mullica River/Great Bay	
		Max	UCL	Max	UCL	Max	UCL
Copper	mg/kg	0.396	nc	na	na	na	na
Lead	mg/kg	0.053	nc	na	na	na	na
Mercury	µg/kg	236	nc	na	na	na	na
Methyl mercury	µg/kg	162	nc	na	na	na	na
Nickel	mg/kg	0.37	nc	na	na	na	na
Selenium	mg/kg	0.685	nc	na	na	na	na
Vanadium	mg/kg	0.046	nc	na	na	na	na
Benzo(a)pyrene	µg/kg	nd	nd	na	na	na	na
Total HPAHs	µg/kg	10.8	nc	na	na	na	na
Total PCB Congeners	µg/kg	1310	nc	na	na	na	na
PCB TEQ-Bird	ng/kg	113	nc	na	na	na	na
PCB TEQ-Fish	ng/kg	1.47	nc	na	na	na	na
PCB TEQ-Mammal	ng/kg	18.0	nc	na	na	na	na
2,3,7,8-TCDD	ng/kg	0.948	nc	na	na	na	na
PCDD/PCDF TEQ-Bird	ng/kg	3.82	nc	na	na	na	na
PCDD/PCDF TEQ-Fish	ng/kg	2.00	nc	na	na	na	na
PCDD/PCDF TEQ-Mammal	ng/kg	1.86	nc	na	na	na	na
Total TEQ-Bird	ng/kg	117	nc	na	na	na	na
Total TEQ-Fish	ng/kg	3.48	nc	na	na	na	na
Total TEQ-Mammal	ng/kg	19.8	nc	na	na	na	na
Dieldrin	µg/kg	21	nc	na	na	na	na
Total DDx	µg/kg	150	nc	na	na	na	na
White perch							
Arsenic	mg/kg	0.064	0.081	na	na	na	na
Cadmium	mg/kg	0.031	0.029	na	na	na	na
Cobalt	mg/kg	0.18	0.13	na	na	na	na
Copper	mg/kg	16.2	14.4	na	na	na	na
Lead	mg/kg	0.58	0.87	na	na	na	na
Mercury	µg/kg	390	300	na	na	na	na
Methyl mercury	µg/kg	373	270	na	na	na	na
Nickel	mg/kg	9.85	6.6	na	na	na	na

Table 3-2. Background fish tissue concentrations

Species and COPEC	Units (ww)	Background Concentrations[a]					
		Above Dundee Dam		Jamaica Bay/Lower Harbor		Mullica River/Great Bay	
		Max	UCL	Max	UCL	Max	UCL
Selenium	mg/kg	1.7	1.45	na	na	na	na
Vanadium	mg/kg	0.46	0.32	na	na	na	na
Benzo(a)pyrene	µg/kg	7.2	10	na	na	na	na
Total HPAHs	µg/kg	79	144	na	na	na	na
Total PCB Congeners	µg/kg	1130	834	na	na	na	na
PCB TEQ-Bird	ng/kg	99.6	85.1	na	na	na	na
PCB TEQ-Fish	ng/kg	1.04	0.924	na	na	na	na
PCB TEQ-Mammal	ng/kg	13.7	11.9	na	na	na	na
2,3,7,8-TCDD	ng/kg	0.969	0.805	na	na	na	na
PCDD/PCDF TEQ-Bird	ng/kg	9.39	7.15	na	na	na	na
PCDD/PCDF TEQ-Fish	ng/kg	3.09	2.52	na	na	na	na
PCDD/PCDF TEQ-Mammal	ng/kg	3.02	2.44	na	na	na	na
Total TEQ-Bird	ng/kg	109	92.2	na	na	na	na
Total TEQ-Fish	ng/kg	4.14	3.45	na	na	na	na
Total TEQ-Mammal	ng/kg	16.7	14.3	na	na	na	na
Dieldrin	µg/kg	25	22	na	na	na	na
Total DDx	µg/kg	170	150	na	na	na	na
White sucker							
Arsenic	mg/kg	0.075	nc	na	na	na	na
Cadmium	mg/kg	0.015	nc	na	na	na	na
Cobalt	mg/kg	0.22	nc	na	na	na	na
Copper	mg/kg	1.5	nc	na	na	na	na
Lead	mg/kg	1.1	nc	na	na	na	na
Mercury	µg/kg	229	nc	na	na	na	na
Methyl mercury	µg/kg	196	nc	na	na	na	na
Nickel	mg/kg	21.8	nc	na	na	na	na
Selenium	mg/kg	0.645	nc	na	na	na	na
Vanadium	mg/kg	0.54	nc	na	na	na	na
Benzo(a)pyrene	µg/kg	25	nc	na	na	na	na
Total HPAHs	µg/kg	230	nc	na	na	na	na
Total PCB Congeners	µg/kg	872	nc	na	na	na	na

Table 3-2. Background fish tissue concentrations

Species and COPEC	Units (ww)	Background Concentrations[a]					
		Above Dundee Dam		Jamaica Bay/Lower Harbor		Mullica River/Great Bay	
		Max	UCL	Max	UCL	Max	UCL
PCB TEQ-Bird	ng/kg	104	nc	na	na	na	na
PCB TEQ-Fish	ng/kg	1.15	nc	na	na	na	na
PCB TEQ-Mammal	ng/kg	14.3	nc	na	na	na	na
2,3,7,8-TCDD	ng/kg	0.717	nc	na	na	na	na
PCDD/PCDF TEQ-Bird	ng/kg	9.16	nc	na	na	na	na
PCDD/PCDF TEQ-Fish	ng/kg	2.55	nc	na	na	na	na
PCDD/PCDF TEQ-Mammal	ng/kg	2.55	nc	na	na	na	na
Total TEQ-Bird	ng/kg	111	nc	na	na	na	na
Total TEQ-Fish	ng/kg	3.70	nc	na	na	na	na
Total TEQ-Mammal	ng/kg	16.8	nc	na	na	na	na
Dieldrin	µg/kg	43.9	nc	na	na	na	na
Total DDx	µg/kg	170	nc	na	na	na	na

[a] Background value based on the maximum whole-body tissue concentration, except as noted in Table 3-5.

[b] Based on a single banded killifish sample collected above Dundee Dam.

COPEC – chemical of potential ecological concern
DDD – dichlorodiphenyldichloroethane
DDE – dichlorodiphenyldichloroethylene
DDT – dichlorodiphenyltrichloroethane
DL – detection limit
nc – not calculated (data are insufficient for UCL or outlier analysis)
na – no data available
nd – no detected concentrations
PCB – polychlorinated biphenyl
TCDD – tetrachlorodibenzo-*p*-dioxin
TEQ – toxic equivalent
total DDx – sum of all six DDT isomers (2,4′-DDD, 4,4′-DDD, 2,4′-DDE, 4,4′-DDE, 2,4′-DDT and 4,4′-DDT)
UCL – upper confidence limit on the mean

Table 3-3. Background surface water concentrations

COPEC	Unit	Background Concentration[a] Above Dundee Dam
Metals		
Copper (dissolved)	µg/l	1.78–3.36
Zinc (dissolved)	µg/l	3.38–9.8
Butyltin		
Tributyltin	µg/l	nd
PCDDs/PCDFs		
2,3,7,8-TCDD	ng/l	0.00422
Other		
Cyanide	mg/l	0.003

[a] Background value based on the range of concentrations measured above Dundee Dam at a single location.

COPEC – chemical of potential ecological concern
nd – no detected concentrations
PCDD – polychlorinated dibenzo-*p*-dioxin
PCDF – polychlorinated dibenzofuran
TCDD – tetrachlorodibenzo-*p*-dioxin

Table 3-4. Summary statistics of background sediment data

COPEC	Unit	n	Number of Detects	Detected Concentration		Detected Concentration (3×IQR Outliers Removed)		Detected Concentration (1.5×IQR Outliers Removed)		
				Min	Max	Max Detect (background value)	Outliers?	Max. Detect	Outliers?	UCL
Above Dundee Dam (freshwater)										
Metals										
Arsenic	mg/kg	30	30	0.76	24	4.3	yes, n=3	2.51	yes, n=6	6.4
Cadmium	mg/kg	30	30	0.237	13.2	4.95	yes, n=1	4.69	yes, n=2	3.8
Chromium	mg/kg	30	30	7.5	113	54.9	yes, n=3	29.6	yes, n=6	48.2
Cobalt	mg/kg	30	30	3.97	12.1	12.1	none	9.14	yes, n=1	6.43
Copper	mg/kg	36	36	17.3	537	209	yes, n=2	126	yes, n=3	150
Lead	mg/kg	30	30	37.9	1,560	405	yes, n=2	264	yes, n=3	440
Mercury	µg/kg	29	29	189	10,400	2,000	yes, n=3	1660	yes, n=5	2,910
Methyl mercury	µg/kg	25	25	0.042	1.35	1.35	none	1.35	none	0.595
Nickel	mg/kg	36	36	8.45	24.4	24.4	none	24.4	none	14
Selenium	mg/kg	30	24	0.04	71.8	2.7	yes, n=1	1.34	yes, n=2	27
Vanadium	mg/kg	30	30	7.79	35.6	35.6	none	28.9	yes, n=1	17
Zinc	mg/kg	30	30	98.1	3,820	822	yes, n=4	478	yes, n=5	1130
PAHs										
Benzo(a)pyrene	µg/kg	30	30	368	136,000	12,700	yes, n=5	12700	yes, n=5	36,000
Total HPAHs	µg/kg	30	30	4,940	917,000	73,300	yes, n=5	73300	yes, n=5	300,000
PCB Congeners										
Total PCB Congeners	µg/kg	30	30	13.4	5,110	383	yes, n=5	183	yes, n=6	1,090
PCB TEQ-Bird	ng/kg	30	30	3.39	875	120	yes, n=3	86.3	yes, n=5	228
PCB TEQ-Fish	ng/kg	30	30	0.0438	2.38	0.632	yes, n=3	0.507	yes, n=5	0.788

Table 3-4. Summary statistics of background sediment data

COPEC	Unit	n	Number of Detects	Detected Concentration		Detected Concentration (3×IQR Outliers Removed)		Detected Concentration (1.5×IQR Outliers Removed)		UCL
				Min	Max	Max Detect (background value)	Outliers?	Max. Detect	Outliers?	
PCB TEQ-Mammal	ng/kg	30	30	0.441	31	4.02	yes, n=6	4.02	yes, n=6	9.91
PCDDs/PCDFs										
2,3,7,8-TCDD	ng/kg	30	21	0.164	36.6	1.63	yes, n=1	1	yes, n=4	9.21
PCDD/PCDF TEQ-Bird	ng/kg	30	30	2.31	411	58.8	yes, n=2	44.4	yes, n=3	89.9
PCDD/PCDF TEQ-Fish	ng/kg	30	30	1.04	102	14.5	yes, n=4	14.5	yes, n=4	18.8
PCDD/PCDF TEQ-Mammal	ng/kg	30	30	1.1	146	35	yes, n=2	27.3	yes, n=3	21.4
Total TEQ-Bird	ng/kg	30	30	9	1290	117	yes, n=5	111	yes, n=6	311
Total TEQ-Fish	ng/kg	30	30	1.05	104	14.5	yes, n=4	14.5	yes, n=4	19.5
Total TEQ-Mammal	ng/kg	30	30	1.51	157	52.2	yes, n=2	32.4	yes, n=3	27.3
OC Pesticides										
Total DDx	µg/kg	30	30	0.59	350	38	yes, n=2	35	yes, n=3	41
Mullica River (freshwater)										
Metals										
Arsenic	mg/kg	5	5	1	5	5	nc	5	nc	nc
Cadmium	mg/kg	5	4	0.02	1	1	nc	1	nc	nc
Chromium	mg/kg	5	5	5.2	15.9	15.9	nc	15.9	nc	nc
Copper	mg/kg	5	4	2.62	4.2	4.2	nc	4.2	nc	nc
Lead	mg/kg	5	5	7.33	17.2	17.2	nc	17.2	nc	nc
Mercury	µg/kg	5	3	17	33	33	nc	33	nc	nc
Nickel	mg/kg	5	5	0.54	4.75	4.75	nc	4.75	nc	nc
Selenium	mg/kg	5	3	0.05	0.87	0.87	nc	0.87	nc	nc

Table 3-4. Summary statistics of background sediment data

COPEC	Unit	n	Number of Detects	Detected Concentration		Detected Concentration (3×IQR Outliers Removed)		Detected Concentration (1.5×IQR Outliers Removed)		UCL
				Min	Max	Max Detect (background value)	Outliers?	Max. Detect	Outliers?	
Zinc	mg/kg	5	5	4.9	24	24	nc	24	nc	nc
PAHs										
Benzo(a)pyrene	µg/kg	5	4	12	2300	2300	nc	2300	nc	nc
OC Pesticides										
Total DDx	µg/kg	5	2	0.69	1	1	nc	1	nc	nc
Jamaica Bay (estuarine)										
Metals										
Arsenic	mg/kg	91	88	0.73	20.7	20.7	none	20.7	none	7.3
Cadmium	mg/kg	73	63	0.041	8.79	4.8	yes, n=1	3	yes, n=2	1.7
Chromium	mg/kg	94	94	1	126	126	none	126	none	56
Cobalt	mg/kg	1	1	0.56	0.56	0.56	nc	0.56	nc	nc
Copper	mg/kg	89	88	1.04	589	196	yes, n=2	108	yes, n=4	84
Lead	mg/kg	94	94	2	651	195	yes, n=2	155	yes, n=3	93
Mercury	µg/kg	85	77	27.2	2150	1,000	yes, n=1	1,000	yes, n=1	470
Methyl mercury	µg/kg	1	1	0.09	0.09	0.09	nc	0.09	nc	nc
Nickel	mg/kg	90	89	0.43	181	52	yes, n=1	52	yes, n=1	25
Selenium	mg/kg	71	58	0.04	6.89	3.58	yes, n=3	2.5	yes, n=4	1.4
Vanadium	mg/kg	1	1	2.9	2.9	2.9	nc	2.9	nc	nc
Zinc	mg/kg	86	86	4.81	1280	451	yes, n=2	344	yes, n=3	150
PAHs										
Benzo(a)pyrene	µg/kg	76	64	0.12	3000	470	yes, n=3	330	yes, n=10	370

Table 3-4. Summary statistics of background sediment data

COPEC	Unit	n	Number of Detects	Detected Concentration		Detected Concentration (3×IQR Outliers Removed)		Detected Concentration (1.5×IQR Outliers Removed)		UCL
				Min	Max	Max Detect (background value)	Outliers?	Max. Detect	Outliers?	
Total HPAHs	µg/kg	85	80	2.2	38,000	5,900	yes, n=2	38000	yes, n=5	3,600
PCB Congeners										
Total PCB Congeners	µg/kg	10	9	1.69[a]	167[a]	167[a]	none	167[a]	yes, n=1	74[a]
PCDDs/PCDFs										
2,3,7,8-TCDD	ng/kg	68	65	0.09	38.9	8.01	yes, n=3	8.01	yes, n=3	6.4
PCDD/PCDF TEQ-Bird	ng/kg	85	85	0.0011	120	98	yes, n=2	59	yes, n=7	33
PCDD/PCDF TEQ-Fish	ng/kg	85	85	0.0011	84	39	yes, n=4	26	yes, n=7	12
PCDD/PCDF TEQ-Mammal	ng/kg	85	85	0.0033	120	51	yes, n=3	34	yes, n=6	38
OC Pesticides										
Total DDx	µg/kg	80	72	0.16	45	25	yes, n=3	19	yes, n=7	11
Mullica River and Great Bay (estuarine)										
Metals										
Arsenic	mg/kg	23	22	0.4	32.8	32.8	none	32.8	yes, n=1	12
Cadmium	mg/kg	25	23	0.05	2.8	2.8	none	2.8	yes, n=1	1.5
Chromium	mg/kg	23	23	2	93	93	none	93	none	64
Cobalt	mg/kg	4	4	1	10.2	10.2	nc	10.2	nc	nc
Copper	mg/kg	24	24	1	36.8	36.8	none	36.8	none	19
Lead	mg/kg	23	23	2.4	55.9	55.9	none	55.9	none	33
Mercury	µg/kg	25	23	13	390	390	none	390	none	180
Nickel	mg/kg	22	22	1	36	36	none	36	none	23
Selenium	mg/kg	21	15	0.19	2.2	2.2	none	2.2	yes, n=2	0.82

Table 3-4. Summary statistics of background sediment data

COPEC	Unit	n	Number of Detects	Detected Concentration		Detected Concentration (3×IQR Outliers Removed)		Detected Concentration (1.5×IQR Outliers Removed)		UCL
				Min	Max	Max Detect (background value)	Outliers?	Max. Detect	Outliers?	
Vanadium	mg/kg	4	4	8.4	69.5	69.5	nc	69.5	nc	nc
Zinc	mg/kg	22	22	5	156	156	none	156	none	97
PAHs										
Benzo(a)pyrene	µg/kg	23	15	0.1	108	108	none	108	none	39
Total HPAHs	µg/kg	10	9	23	700	700	none	700	none	370
PCB Congeners										
Total PCB Congeners	µg/kg	7	3	0.36	14[a]	14[a]	nc	14[a]	nc	nc
PCB TEQ-Bird	ng/kg	3	3	0.075	35	35	nc	35	nc	nc
PCB TEQ-Fish	ng/kg	3	3	0.011	0.086	0.086	nc	0.086	nc	nc
PCB TEQ-Mammal	ng/kg	3	3	0.068	0.16	0.16	nc	0.16	nc	nc
PCDDs/PCDFs										
2,3,7,8-TCDD	ng/kg	3	0	nd	nd	nd	nc	nd	nc	nc
PCDD/PCDF TEQ-Bird	ng/kg	3	3	8.1	12	12	nc	12	nc	nc
PCDD/PCDF TEQ-Fish	ng/kg	3	3	0.74	0.9	0.9	nc	0.9	nc	nc
PCDD/PCDF TEQ-Mammal	ng/kg	3	3	2.2	2.5	2.5	nc	2.5	nc	nc
Total TEQ-Bird	ng/kg	3	3	8.2	46	46	nc	46	nc	nc
Total TEQ-Fish	ng/kg	3	3	0.75	0.99	0.99	nc	0.99	nc	nc
Total TEQ-Mammal	ng/kg	3	3	2.2	2.7	2.7	nc	2.7	nc	nc
OC Pesticides										
Total DDx	µg/kg	18	11	0.031	4.9	4.9	none	3	yes, n=1	1.7

[a] Background values for total PCB congeners are based on historical sums that cannot be recreated using BERA data processing rules.

BERA – baseline ecological risk assessment

COPEC – chemical of potential ecological concern

DDD – dichlorodiphenyldichloroethane

DDE – dichlorodiphenyldichloroethylene

DDT – dichlorodiphenyltrichloroethane

HPAH – high-molecular-weight polycyclic aromatic hydrocarbon

IQR – interquartile range

nc – not calculated (dataset insufficient for UCL or outlier analysis)

nd – no detected concentrations

PAH – polycyclic aromatic hydrocarbon

PCB – polychlorinated biphenyl

PCDD/PCDF – polychlorinated dibenzodioxins/polychlorinated dibenzofurans

TEQ – toxic equivalent

total DDx – sum of all six DDT isomers (2,4′-DDD, 4,4′-DDD, 2,4′-DDE, 4,4′-DDE, 2,4′-DDT and 4,4′-DDT)

UCL – upper confidence limit on the mean

Table 3-5. Summary statistics of background tissue data

Species	Units (ww)	N	Number of Detects	Detected Concentration		Detected Concentration (3×IQR Outliers Removed)		Detected Concentration (1.5×IQR Outliers Removed)		UCL
				Min Detect	Max Detect	Max Detect (background value)	Outliers?	Max Detect	Outliers?	
Above Dundee Dam										
Arsenic										
American eel	mg/kg	16	13	0.021	2.78	0.225	yes, n=1	0.225	yes, n=1	1.3
Brown bullhead	mg/kg	6	6	0.013	0.091	0.091	none	0.091	none	0.071
Carp	mg/kg	10	10	0.046	0.13	0.071	yes, n=1	0.071	yes, n=2	0.095
Channel catfish	mg/kg	4	4	0.014	0.041	0.041	nc	0.041	nc	nc
Mummichog/killifish	mg/kg	1	1	0.067	0.067	0.067	nc	0.067	nc	nc
Northern pike	mg/kg	1	1	0.053	0.053	0.053	nc	0.053	nc	nc
Other forage fish[a]	mg/kg	2	2	0.054	0.065	0.065	nc	0.065	nc	nc
Smallmouth bass	mg/kg	3	3	0.107	0.161	0.161	nc	0.161	nc	nc
White perch	mg/kg	8	8	0.026	0.11	0.11	yes, n=1	0.11	yes, n=1	0.081
White sucker	mg/kg	5	5	0.04	0.075	0.075	nc	0.075	nc	nc
Cadmium										
American eel	mg/kg	16	16	0.012	0.0689	0.0689	none	0.0689	none	0.05
Brown bullhead	mg/kg	6	6	0.0077	0.0387	0.0387	none	0.0387	none	0.031
Carp	mg/kg	10	10	0.0092	0.066	0.066	none	0.066	none	0.04
Channel catfish	mg/kg	4	4	0.0074	0.023	0.023	nc	0.023	nc	nc
Mummichog/killifish	mg/kg	1	1	0.0088	0.0088	0.0088	nc	0.0088	nc	nc
Northern pike	mg/kg	1	1	0.0057	0.0057	0.0057	nc	0.0057	nc	nc
Other forage fish[a]	mg/kg	2	2	0.0061	0.0228	0.0228	nc	0.0228	nc	nc
Smallmouth bass	mg/kg	3	3	0.003	0.0045	0.0045	nc	0.0045	nc	nc

Table 3-5. Summary statistics of background tissue data

Species	Units (ww)	N	Number of Detects	Detected Concentration		Detected Concentration (3×IQR Outliers Removed)		Detected Concentration (1.5×IQR Outliers Removed)		
				Min Detect	Max Detect	Max Detect (background value)	Outliers?	Max Detect	Outliers?	UCL
White perch	mg/kg	8	8	0.015	0.031	0.031	none	0.031	none	nc
White sucker	mg/kg	5	5	0.009	0.015	0.015	nc	0.015	nc	nc
Cobalt										
American eel	mg/kg	16	16	0.0171	0.0374	0.0374	none	0.0374	none	nc
Brown bullhead	mg/kg	6	6	0.0208	0.231	0.231	none	0.231	none	nc
Carp	mg/kg	10	10	0.0214	0.0637	0.0637	none	0.0637	none	nc
Channel catfish	mg/kg	4	4	0.016	0.17	0.17	nc	0.17	nc	nc
Mummichog/killifish	mg/kg	1	1	0.0486	0.0486	0.0486	nc	0.0486	nc	nc
Northern pike	mg/kg	1	1	0.0093	0.0093	0.0093	nc	0.0093	nc	nc
Other forage fish[a]	mg/kg	2	2	0.024	0.207	0.207	nc	0.207	nc	nc
Smallmouth bass	mg/kg	3	3	0.012	0.017	0.017	nc	0.017	nc	nc
White perch	mg/kg	8	8	0.023	0.18	0.18	none	0.18	none	nc
White sucker	mg/kg	5	5	0.038	0.22	0.22	nc	0.22	nc	nc
Copper										
American eel	mg/kg	16	16	0.415	1.15	1.15	yes, n=2	1.15	yes, n=2	nc
Brown bullhead	mg/kg	6	6	0.487	2.17	2.17	none	2.17	none	nc
Carp	mg/kg	10	10	0.926	1.65	1.65	none	1.65	none	nc
Channel catfish	mg/kg	4	4	0.39	0.745	0.745	nc	0.745	nc	nc
Mummichog/killifish	mg/kg	1	1	1.49	1.49	1.49	nc	1.49	nc	nc
Northern pike	mg/kg	1	1	0.481	0.481	0.481	nc	0.481	nc	nc
Other forage fish[a]	mg/kg	2	2	0.655	0.916	0.916	nc	0.916	nc	nc

Table 3-5. Summary statistics of background tissue data

Species	Units (ww)	N	Number of Detects	Detected Concentration		Detected Concentration (3×IQR Outliers Removed)		Detected Concentration (1.5×IQR Outliers Removed)		
				Min Detect	Max Detect	Max Detect (background value)	Outliers?	Max Detect	Outliers?	UCL
Smallmouth bass	mg/kg	3	3	0.315	0.396	0.396	nc	0.396	nc	nc
White perch	mg/kg	8	8	4.94	16.2	16.2	none	16.2	none	nc
White sucker	mg/kg	5	5	0.736	1.5	1.5	nc	1.5	nc	nc
Lead										
American eel	mg/kg	16	16	0.073	0.702	0.702	none	0.702	yes, n=1	nc
Brown bullhead	mg/kg	6	6	0.288	2.63	2.63	none	2.63	none	nc
Carp	mg/kg	10	10	0.256	0.859	0.859	none	0.859	none	nc
Channel catfish	mg/kg	4	4	0.11	0.32	0.32	nc	0.32	nc	nc
Mummichog/killifish	mg/kg	1	1	0.35	0.35	0.35	nc	0.35	nc	nc
Northern pike	mg/kg	1	1	0.052	0.052	0.052	nc	0.052	nc	nc
Other forage fish[a]	mg/kg	2	2	0.209	0.476	0.476	nc	0.476	nc	nc
Smallmouth bass	mg/kg	3	3	0.045	0.053	0.053	nc	0.053	nc	nc
White perch	mg/kg	8	8	0.26	1.22	1.22	yes, n=1	1.22	yes, n=1	nc
White sucker	mg/kg	5	5	0.1	1.1	1.1	nc	1.1	nc	nc
Mercury										
American eel	µg/kg	16	16	148	324	324	none	324	none	nc
Brown bullhead	µg/kg	6	6	29.7	254	254	none	254	none	nc
Carp	µg/kg	10	10	43.4	133	133	none	133	none	nc
Channel catfish	µg/kg	4	4	146	555	555	nc	555	nc	nc
Mummichog/killifish	µg/kg	1	1	40.4	40.4	40.4	nc	40.4	nc	nc
Northern pike	µg/kg	1	1	364	364	364	nc	364	nc	nc

Table 3-5. Summary statistics of background tissue data

Species	Units (ww)	N	Number of Detects	Detected Concentration		Detected Concentration (3×IQR Outliers Removed)		Detected Concentration (1.5×IQR Outliers Removed)		UCL
				Min Detect	Max Detect	Max Detect (background value)	Outliers?	Max Detect	Outliers?	
Other forage fish[a]	µg/kg	2	2	71.9	125	125	nc	125	nc	nc
Smallmouth bass	µg/kg	3	3	198	236	236	nc	236	nc	nc
White perch	µg/kg	8	8	139	390	390	none	390	yes, n=1	nc
White sucker	µg/kg	5	5	60.9	229	229	nc	229	nc	nc
Methyl mercury										
American eel	µg/kg	16	16	121	255	255	none	255	none	nc
Brown bullhead	µg/kg	6	6	29.7	276	276	none	276	none	nc
Carp	µg/kg	10	10	47.5	131	131	none	131	none	nc
Channel catfish	µg/kg	4	4	140	559	559	nc	559	nc	nc
Mummichog/killifish	µg/kg	1	1	34.5	34.5	34.5	nc	34.5	nc	nc
Northern pike	µg/kg	1	1	316	316	316	nc	316	nc	nc
Other forage fish[a]	µg/kg	2	2	61.7	110	110	nc	110	nc	nc
Smallmouth bass	µg/kg	3	3	139	162	162	nc	162	nc	nc
White perch	µg/kg	8	8	120	373	373	none	373	yes, n=1	nc
White sucker	µg/kg	5	5	51.3	196	196	nc	196	nc	nc
Nickel										
American eel	mg/kg	16	16	0.18	1.09	1.09	yes, n=2	1.09	yes, n=2	nc
Brown bullhead	mg/kg	6	6	0.887	6.78	6.78	none	6.78	none	nc
Carp	mg/kg	10	10	0.157	2.49	2.49	none	2.49	yes, n=1	nc
Channel catfish	mg/kg	4	4	0.444	7.72	7.72	nc	7.72	nc	nc
Mummichog/killifish	mg/kg	1	1	1.45	1.45	1.45	nc	1.45	nc	nc

Table 3-5. Summary statistics of background tissue data

Species	Units (ww)	N	Number of Detects	Detected Concentration		Detected Concentration (3×IQR Outliers Removed)		Detected Concentration (1.5×IQR Outliers Removed)		
				Min Detect	Max Detect	Max Detect (background value)	Outliers?	Max Detect	Outliers?	UCL
Northern pike	mg/kg	1	1	0.264	0.264	0.264	nc	0.264	nc	nc
Other forage fish[a]	mg/kg	2	2	0.623	8.6	8.6	nc	8.6	nc	nc
Smallmouth bass	mg/kg	3	3	0.354	0.37	0.37	nc	0.37	nc	nc
White perch	mg/kg	8	8	1.13	9.85	9.85	none	9.85	none	nc
White sucker	mg/kg	5	5	1.21	21.8	21.8	nc	21.8	nc	nc
Selenium										
American eel	mg/kg	16	16	0.464	0.794	0.794	none	0.794	none	nc
Brown bullhead	mg/kg	6	6	0.294	0.401	0.401	none	0.401	none	nc
Carp	mg/kg	10	10	0.542	0.758	0.758	none	0.758	none	nc
Channel catfish	mg/kg	4	4	0.238	0.332	0.332	nc	0.332	nc	nc
Mummichog/killifish	mg/kg	1	1	0.488	0.488	0.488	nc	0.488	nc	nc
Northern pike	mg/kg	1	1	0.417	0.417	0.417	nc	0.417	nc	nc
Other forage fish[a]	mg/kg	2	2	0.653	0.697	0.697	nc	0.697	nc	nc
Smallmouth bass	mg/kg	3	3	0.494	0.685	0.685	nc	0.685	nc	nc
White perch	mg/kg	8	8	1.01	1.7	1.7	none	1.7	none	nc
White sucker	mg/kg	5	5	0.508	0.645	0.645	nc	0.645	nc	nc
Vanadium										
American eel	mg/kg	16	16	0.022	0.0916	0.0916	none	0.0916	yes, n=1	nc
Brown bullhead	mg/kg	6	6	0.14	0.689	0.689	none	0.689	none	nc
Carp	mg/kg	10	10	0.047	0.23	0.23	none	0.23	none	nc
Channel catfish	mg/kg	4	4	0.067	0.18	0.18	nc	0.18	nc	nc

Table 3-5. Summary statistics of background tissue data

Species	Units (ww)	N	Number of Detects	Detected Concentration		Detected Concentration (3×IQR Outliers Removed)		Detected Concentration (1.5×IQR Outliers Removed)		
				Min Detect	Max Detect	Max Detect (background value)	Outliers?	Max Detect	Outliers?	UCL
Mummichog/killifish	mg/kg	1	1	0.132	0.132	0.132	nc	0.132	nc	nc
Northern pike	mg/kg	1	1	0.044	0.044	0.044	nc	0.044	nc	nc
Other forage fish[a]	mg/kg	2	2	0.119	0.295	0.295	nc	0.295	nc	nc
Smallmouth bass	mg/kg	3	3	0.03	0.046	0.046	nc	0.046	nc	nc
White perch	mg/kg	8	8	0.11	0.46	0.46	none	0.46	yes, n=1	nc
White sucker	mg/kg	5	5	0.13	0.54	0.54	nc	0.54	nc	nc
Benzo(a)pyrene										
American eel	µg/kg	16	4	0.25	0.43	0.43	nc	0.43	nc	nc
Brown bullhead	µg/kg	6	5	1.46	67.8	67.8	nc	67.8	nc	nc
Carp	µg/kg	10	9	0.91	6.3	6.3	none	6.3	yes, n=1	nc
Channel catfish	µg/kg	4	0	nd	nd	nd	nc	nd	nc	nc
Mummichog/killifish	µg/kg	1	1	2.6	2.6	2.6	nc	2.6	nc	nc
Northern pike	µg/kg	1	0	nd	nd	nd	nc	nd	nc	nc
Other forage fish[a]	µg/kg	2	2	1	5.7	5.7	nc	5.7	nc	nc
Smallmouth bass	µg/kg	3	0	nd	nd	nd	nc	nd	nc	nc
White perch	µg/kg	8	8	1.3	20	20	yes, n=1	20	yes, n=1	nc
White sucker	µg/kg	5	3	8.1	25	25	nc	25	nc	nc
Total HPAHs										
American eel	µg/kg	16	16	0.95	13	13	none	13	none	nc
Brown bullhead	µg/kg	6	6	10.6	732	732	yes, n=1	732	yes, n=1	nc
Carp	µg/kg	10	10	23.3	83	83	none	83	none	nc

Table 3-5. Summary statistics of background tissue data

Species	Units (ww)	N	Number of Detects	Detected Concentration		Detected Concentration (3×IQR Outliers Removed)		Detected Concentration (1.5×IQR Outliers Removed)		
				Min Detect	Max Detect	Max Detect (background value)	Outliers?	Max Detect	Outliers?	UCL
Channel catfish	µg/kg	4	4	5.08	43.4	43.4	nc	43.4	nc	nc
Mummichog/killifish	µg/kg	1	1	29.2	29.2	29.2	nc	29.2	nc	nc
Northern pike	µg/kg	1	1	20.2	20.2	20.2	nc	20.2	nc	nc
Other forage fish[a]	µg/kg	2	2	25.8	82.4	82.4	nc	82.4	nc	nc
Smallmouth bass	µg/kg	3	3	6.52	10.8	10.8	nc	10.8	nc	nc
White perch	µg/kg	8	8	25.5	218	218	yes, n=1	218	yes, n=1	nc
White sucker	µg/kg	5	5	7.4	230	230	nc	230	nc	nc
Total PCB Congeners										
American eel	µg/kg	16	16	206	1880	1880	none	1880	none	nc
Brown bullhead	µg/kg	6	6	183	614	614	none	614	none	nc
Carp	µg/kg	10	10	755	2560	2560	none	2560	none	nc
Channel catfish	µg/kg	4	4	948	2130	2130	nc	2130	nc	nc
Mummichog/killifish	µg/kg	1	1	219	219	219	nc	219	nc	nc
Northern pike	µg/kg	1	1	1880	1880	1880	nc	1880	nc	nc
Other forage fish[a]	µg/kg	2	2	107	853	853	nc	853	nc	nc
Smallmouth bass	µg/kg	3	3	1000	1310	1310	nc	1310	nc	nc
White perch	µg/kg	8	8	408	1130	1130	none	1130	none	nc
White sucker	µg/kg	5	5	327	872	872	nc	872	nc	nc
PCB TEQ-Bird										
American eel	ng/kg	16	16	2.51	17.5	17.5	none	17.5	none	nc
Brown bullhead	ng/kg	6	6	9.04	27.3	27.3	none	27.3	none	nc

Table 3-5. Summary statistics of background tissue data

Species	Units (ww)	N	Number of Detects	Detected Concentration		Detected Concentration (3×IQR Outliers Removed)		Detected Concentration (1.5×IQR Outliers Removed)		
				Min Detect	Max Detect	Max Detect (background value)	Outliers?	Max Detect	Outliers?	UCL
Carp	ng/kg	10	10	77.2	163	163	none	163	none	nc
Channel catfish	ng/kg	4	4	33.5	60.5	60.5	nc	60.5	nc	nc
Mummichog/killifish	ng/kg	1	1	10.9	10.9	10.9	nc	10.9	nc	nc
Northern pike	ng/kg	1	1	138	138	138	nc	138	nc	nc
Other forage fish[a]	ng/kg	2	2	15.6	136	136	nc	136	nc	nc
Smallmouth bass	ng/kg	3	3	90.3	113	113	nc	113	nc	nc
White perch	ng/kg	8	8	53.5	99.6	99.6	none	99.6	none	nc
White sucker	ng/kg	5	5	31.4	104	104	nc	104	nc	nc
PCB TEQ-Fish										
American eel	ng/kg	16	16	0.143	1.23	1.23	none	1.23	none	nc
Brown bullhead	ng/kg	6	6	0.261	0.676	0.676	none	0.676	none	nc
Carp	ng/kg	10	10	0.688	4.68	4.68	none	4.68	yes, n=1	nc
Channel catfish	ng/kg	4	4	1.28	3.37	3.37	nc	3.37	nc	nc
Mummichog/killifish	ng/kg	1	1	0.275	0.275	0.275	nc	0.275	nc	nc
Northern pike	ng/kg	1	1	2.56	2.56	2.56	nc	2.56	nc	nc
Other forage fish[a]	ng/kg	2	2	0.147	0.968	0.968	nc	0.968	nc	nc
Smallmouth bass	ng/kg	3	3	1.17	1.47	1.47	nc	1.47	nc	nc
White perch	ng/kg	8	8	0.519	1.04	1.04	none	1.04	none	nc
White sucker	ng/kg	5	5	0.318	1.15	1.15	nc	1.15	nc	nc
PCB TEQ-Mammal										
American eel	ng/kg	16	16	0.867	15.5	15.5	none	15.5	none	nc

Table 3-5. Summary statistics of background tissue data

Species	Units (ww)	N	Number of Detects	Detected Concentration		Detected Concentration (3×IQR Outliers Removed)		Detected Concentration (1.5×IQR Outliers Removed)		UCL
				Min Detect	Max Detect	Max Detect (background value)	Outliers?	Max Detect	Outliers?	
Brown bullhead	ng/kg	6	6	3.74	9.27	9.27	none	9.27	none	nc
Carp	ng/kg	10	10	7.49	81.1	81.1	none	81.1	yes, n=1	nc
Channel catfish	ng/kg	4	4	17.5	45.5	45.5	nc	45.5	nc	nc
Mummichog/killifish	ng/kg	1	1	4.05	4.05	4.05	nc	4.05	nc	nc
Northern pike	ng/kg	1	1	35.1	35.1	35.1	nc	35.1	nc	nc
Other forage fish[a]	ng/kg	2	2	1.74	10.8	10.8	nc	10.8	nc	nc
Smallmouth bass	ng/kg	3	3	14.6	18	18	nc	18	nc	nc
White perch	ng/kg	8	8	6.34	13.7	13.7	none	13.7	none	nc
White sucker	ng/kg	5	5	3.82	14.3	14.3	nc	14.3	nc	nc
2,3,7,8-TCDD										
American eel	ng/kg	16	13	0.115	0.389	0.389	none	0.389	none	nc
Brown bullhead	ng/kg	6	6	0.22	1.19	1.19	none	1.19	none	nc
Carp	ng/kg	10	10	0.929	2.27	2.27	none	2.27	none	nc
Channel catfish	ng/kg	4	4	0.911	4.99	4.99	nc	4.99	nc	nc
Mummichog/killifish	ng/kg	1	1	0.143	0.143	0.143	nc	0.143	nc	nc
Northern pike	ng/kg	1	1	1.72	1.72	1.72	nc	1.72	nc	nc
Other forage fish[a]	ng/kg	2	2	0.0814	0.91	0.91	nc	0.91	nc	nc
Smallmouth bass	ng/kg	3	3	0.856	0.948	0.948	nc	0.948	nc	nc
White perch	ng/kg	8	8	0.431	0.969	0.969	none	0.969	none	nc
White sucker	ng/kg	5	5	0.189	0.717	0.717	nc	0.717	nc	nc

Table 3-5. Summary statistics of background tissue data

Species	Units (ww)	N	Number of Detects	Detected Concentration		Detected Concentration (3×IQR Outliers Removed)		Detected Concentration (1.5×IQR Outliers Removed)		
				Min Detect	Max Detect	Max Detect (background value)	Outliers?	Max Detect	Outliers?	UCL
PCDD/PCDF TEQ-Bird										
American eel	ng/kg	16	16	0.136	2.6	2.6	none	2.6	none	nc
Brown bullhead	ng/kg	6	6	1.73	3.67	3.67	none	3.67	none	nc
Carp	ng/kg	10	10	5.84	13.5	13.5	none	13.5	none	nc
Channel catfish	ng/kg	4	4	4.28	10.1	10.1	nc	10.1	nc	nc
Mummichog/killifish	ng/kg	1	1	0.858	0.858	0.858	nc	0.858	nc	nc
Northern pike	ng/kg	1	1	16.1	16.1	16.1	nc	16.1	nc	nc
Other forage fish[a]	ng/kg	2	2	0.452	10.7	10.7	nc	10.7	nc	nc
Smallmouth bass	ng/kg	3	3	3.19	3.82	3.82	nc	3.82	nc	nc
White perch	ng/kg	8	8	4.11	9.39	9.39	none	9.39	none	nc
White sucker	ng/kg	5	5	1.51	9.16	9.16	nc	9.16	nc	nc
PCDD/PCDF TEQ-Fish										
American eel	ng/kg	16	16	0.135	2.52	2.52	none	2.52	none	nc
Brown bullhead	ng/kg	6	6	1.09	2.64	2.64	none	2.64	none	nc
Carp	ng/kg	10	10	3.13	7.27	7.27	none	7.27	none	nc
Channel catfish	ng/kg	4	4	3.3	8.83	8.83	nc	8.83	nc	nc
Mummichog/killifish	ng/kg	1	1	0.4	0.4	0.4	nc	0.4	nc	nc
Northern pike	ng/kg	1	1	4.74	4.74	4.74	nc	4.74	nc	nc
Other forage fish[a]	ng/kg	2	2	0.11	2.5	2.5	nc	2.5	nc	nc
Smallmouth bass	ng/kg	3	3	1.72	2	2	nc	2	nc	nc
White perch	ng/kg	8	8	1.42	3.09	3.09	none	3.09	none	nc

Table 3-5. Summary statistics of background tissue data

Species	Units (ww)	N	Number of Detects	Detected Concentration		Detected Concentration (3×IQR Outliers Removed)		Detected Concentration (1.5×IQR Outliers Removed)		
				Min Detect	Max Detect	Max Detect (background value)	Outliers?	Max Detect	Outliers?	UCL
White sucker	ng/kg	5	5	0.619	2.55	2.55	nc	2.55	nc	nc
PCDD/PCDF TEQ-Mammal										
American eel	ng/kg	16	16	0.168	2.5	2.5	none	2.5	none	nc
Brown bullhead	ng/kg	6	6	1.03	2.44	2.44	none	2.44	none	nc
Carp	ng/kg	10	10	2.89	6.6	6.6	none	6.6	none	nc
Channel catfish	ng/kg	4	4	2.97	8.43	8.43	nc	8.43	nc	nc
Mummichog/killifish	ng/kg	1	1	0.368	0.368	0.368	nc	0.368	nc	nc
Northern pike	ng/kg	1	1	4.89	4.89	4.89	nc	4.89	nc	nc
Other forage fish[a]	ng/kg	2	2	0.138	2.73	2.73	nc	2.73	nc	nc
Smallmouth bass	ng/kg	3	3	1.64	1.86	1.86	nc	1.86	nc	nc
White perch	ng/kg	8	8	1.38	3.02	3.02	none	3.02	none	nc
White sucker	ng/kg	5	5	0.599	2.55	2.55	nc	2.55	nc	nc
Total TEQ-Bird										
American eel	ng/kg	16	16	2.47	19.2	19.2	none	19.2	none	nc
Brown bullhead	ng/kg	6	6	10.8	30.6	30.6	none	30.6	none	nc
Carp	ng/kg	10	10	84	171	171	none	171	none	nc
Channel catfish	ng/kg	4	4	37.8	70.3	70.3	nc	70.3	nc	nc
Mummichog/killifish	ng/kg	1	1	11.8	11.8	11.8	nc	11.8	nc	nc
Northern pike	ng/kg	1	1	154	154	154	nc	154	nc	nc
Other forage fish[a]	ng/kg	2	2	16.1	147	147	nc	147	nc	nc
Smallmouth bass	ng/kg	3	3	93.4	117	117	nc	117	nc	nc

Table 3-5. Summary statistics of background tissue data

Species	Units (ww)	N	Number of Detects	Detected Concentration		Detected Concentration (3×IQR Outliers Removed)		Detected Concentration (1.5×IQR Outliers Removed)		
				Min Detect	Max Detect	Max Detect (background value)	Outliers?	Max Detect	Outliers?	UCL
White perch	ng/kg	8	8	57.6	109	109	none	109	none	nc
White sucker	ng/kg	5	5	32.9	111	111	nc	111	nc	nc
Total TEQ-Fish										
American eel	ng/kg	16	16	0.285	3.74	3.74	none	3.74	none	nc
Brown bullhead	ng/kg	6	6	1.35	3.32	3.32	none	3.32	none	nc
Carp	ng/kg	10	10	3.97	9.18	9.18	none	9.18	none	nc
Channel catfish	ng/kg	4	4	4.57	12.1	12.1	nc	12.1	nc	nc
Mummichog/killifish	ng/kg	1	1	0.676	0.676	0.676	nc	0.676	nc	nc
Northern pike	ng/kg	1	1	7.3	7.3	7.3	nc	7.3	nc	nc
Other forage fish[a]	ng/kg	2	2	0.265	3.47	3.47	nc	3.47	nc	nc
Smallmouth bass	ng/kg	3	3	2.98	3.48	3.48	nc	3.48	nc	nc
White perch	ng/kg	8	8	1.94	4.14	4.14	none	4.14	none	nc
White sucker	ng/kg	5	5	0.937	3.7	3.7	nc	3.7	nc	nc
Total TEQ-Mammal										
American eel	ng/kg	16	16	0.902	16.9	16.9	none	16.9	none	nc
Brown bullhead	ng/kg	6	6	4.76	11.7	11.7	none	11.7	none	nc
Carp	ng/kg	10	10	11.2	85.2	85.2	none	85.2	yes, n=1	nc
Channel catfish	ng/kg	4	4	20.4	53.8	53.8	nc	53.8	nc	nc
Mummichog/killifish	ng/kg	1	1	4.42	4.42	4.42	nc	4.42	nc	nc
Northern pike	ng/kg	1	1	40	40	40	nc	40	nc	nc
Other forage fish[a]	ng/kg	2	2	1.88	13.5	13.5	nc	13.5	nc	nc

Table 3-5. Summary statistics of background tissue data

Species	Units (ww)	N	Number of Detects	Detected Concentration		Detected Concentration (3×IQR Outliers Removed)		Detected Concentration (1.5×IQR Outliers Removed)		
				Min Detect	Max Detect	Max Detect (background value)	Outliers?	Max Detect	Outliers?	UCL
Smallmouth bass	ng/kg	3	3	16.4	19.8	19.8	nc	19.8	nc	nc
White perch	ng/kg	8	8	7.68	16.7	16.7	none	16.7	none	nc
White sucker	ng/kg	5	5	4.42	16.8	16.8	nc	16.8	nc	nc
Dieldrin										
American eel	µg/kg	16	16	3.1	127	127	none	127	none	nc
Brown bullhead	µg/kg	6	6	2.54	25.8	25.8	none	25.8	yes, n=1	nc
Carp	µg/kg	10	10	12.7	34	34	none	34	none	nc
Channel catfish	µg/kg	4	4	12.4	27.7	27.7	nc	27.7	nc	nc
Mummichog/killifish	µg/kg	1	1	18.9	18.9	18.9	nc	18.9	nc	nc
Northern pike	µg/kg	1	1	38	38	38	nc	38	nc	nc
Other forage fish[a]	µg/kg	2	2	9.4	22	22	nc	22	nc	nc
Smallmouth bass	µg/kg	3	3	18	21	21	nc	21	nc	nc
White perch	µg/kg	8	8	16	25	25	none	25	none	nc
White sucker	µg/kg	5	5	4.7	43.9	43.9	nc	43.9	nc	nc
Total DDx										
American eel	µg/kg	16	16	62	490	490	none	490	yes, n=1	nc
Brown bullhead	µg/kg	6	6	27	76	76	none	76	none	nc
Carp	µg/kg	10	10	87	280	280	none	280	none	nc
Channel catfish	µg/kg	4	4	120	340	340	nc	340	nc	nc
Mummichog/killifish	µg/kg	1	1	45	45	45	nc	45	nc	nc
Northern pike	µg/kg	1	1	230	230	230	nc	230	nc	nc

Table 3-5. Summary statistics of background tissue data

Species	Units (ww)	N	Number of Detects	Detected Concentration		Detected Concentration (3×IQR Outliers Removed)		Detected Concentration (1.5×IQR Outliers Removed)		
				Min Detect	Max Detect	Max Detect (background value)	Outliers?	Max Detect	Outliers?	UCL
Other forage fish[a]	µg/kg	2	2	30	120	120	nc	120	nc	nc
Smallmouth bass	µg/kg	3	3	140	150	150	nc	150	nc	nc
White perch	µg/kg	8	8	85	170	170	none	170	none	nc
White sucker	µg/kg	5	5	33	170	170	nc	170	nc	nc
Jamaica Bay/Lower Harbor										
Cadmium										
Mummichog/killifish	mg/kg	7	6	0.00128	0.00558	0.00558	none	0.00558	none	nc
Mercury										
Mummichog/killifish	µg/kg	7	7	14.6	76.7	76.7	none	76.7	yes, n=1	nc
Methyl mercury										
Mummichog/killifish	µg/kg	2	2	69.2	71.4	71.4	nc	71.4	nc	nc
Benzo(a)pyrene										
Mummichog/killifish	µg/kg	7	6	0.491	3.04	3.04	none	3.04	none	nc
Total HPAHs										
Mummichog/killifish	µg/kg	7	7	12	29	29	yes, n=1	29	yes, n=1	nc
Total PCB Congeners										
Mummichog/killifish	µg/kg	7	7	55	3200	3200	none	3200	yes, n=1	nc
PCB TEQ-Bird										
Mummichog/killifish	ng/kg	7	7	0.11	1100	1100	yes, n=1	1100	yes, n=1	nc
PCB TEQ-Fish										
Mummichog/killifish	ng/kg	7	7	0.0079	13	13	yes, n=1	13	yes, n=1	nc

Table 3-5. Summary statistics of background tissue data

Species	Units (ww)	N	Number of Detects	Detected Concentration		Detected Concentration (3×IQR Outliers Removed)		Detected Concentration (1.5×IQR Outliers Removed)		
				Min Detect	Max Detect	Max Detect (background value)	Outliers?	Max Detect	Outliers?	UCL
PCB TEQ-Mammal										
Mummichog/killifish	ng/kg	7	7	0.047	240	240	yes, n=1	240	yes, n=1	nc
2,3,7,8-TCDD										
Mummichog/killifish	ng/kg	7	6	1.49	8.02	8.02	none	8.02	none	nc
PCDD/PCDF TEQ-Bird										
Mummichog/killifish	ng/kg	7	7	10	30	30	none	30	none	nc
PCDD/PCDF TEQ-Fish										
Mummichog/killifish	ng/kg	7	7	7.1	25	25	yes, n=1	25	yes, n=1	nc
PCDD/PCDF TEQ-Mammal										
Mummichog/killifish	ng/kg	7	7	7	25	25	yes, n=1	25	yes, n=1	nc
Total TEQ-Bird										
Mummichog/killifish	ng/kg	7	7	28	1100	1100	yes, n=1	1100	yes, n=1	nc
Total TEQ-Fish										
Mummichog/killifish	ng/kg	7	7	8.9	25	25	none	25	none	nc
Total TEQ-Mammal										
Mummichog/killifish	ng/kg	7	7	27	250	250	yes, n=1	250	yes, n=1	nc
Dieldrin										
Mummichog/killifish	µg/kg	7	7	2.16	34.3	34.3	yes, n=1	34.3	yes, n=1	nc
Total DDx										
Mummichog/killifish	µg/kg	7	7	10	240	240	none	240	yes, n=1	nc

Table 3-5. Summary statistics of background tissue data

Species	Units (ww)	N	Number of Detects	Detected Concentration		Detected Concentration (3×IQR Outliers Removed)		Detected Concentration (1.5×IQR Outliers Removed)		
				Min Detect	Max Detect	Max Detect (background value)	Outliers?	Max Detect	Outliers?	UCL
Mullica River and Great Bay										
Arsenic										
Mummichog/killifish	mg/kg	10	4	0.45	0.96	0.96	nc	0.96	nc	nc
Cadmium										
Mummichog/killifish	mg/kg	10	6	0.05	0.066	0.066	none	0.066	none	nc
Cobalt										
Mummichog/killifish	mg/kg	10	0	nd	nd	nd	nc	nd	nc	nc
Copper										
Mummichog/killifish	mg/kg	10	10	2.7	6	6	yes, n=1	6	yes, n=2	nc
Lead										
Mummichog/killifish	mg/kg	5	3	0.16	0.23	0.23	nc	0.23	nc	nc
Mercury										
Mummichog/killifish	µg/kg	10	10	6.8	38	38	none	38	none	nc
Nickel										
Mummichog/killifish	mg/kg	10	2	0.17	0.19	0.19	nc	0.19	nc	nc
Selenium										
Mummichog/killifish	mg/kg	10	10	0.34	0.65	0.65	none	0.65	none	nc
Vanadium										
Mummichog/killifish	mg/kg	10	10	0.091	0.3	0.3	none	0.3	none	nc
Benzo(a)pyrene										
Mummichog/killifish	µg/kg	10	0	nd	nd	nd	nc	nd	nc	nc

Table 3-5. Summary statistics of background tissue data

Species	Units (ww)	N	Number of Detects	Detected Concentration		Detected Concentration (3×IQR Outliers Removed)		Detected Concentration (1.5×IQR Outliers Removed)		
				Min Detect	Max Detect	Max Detect (background value)	Outliers?	Max Detect	Outliers?	UCL
Total HPAHs										
Mummichog/killifish	µg/kg	10	0	nd	nd	nd	nc	nd	nc	nc
Total PCB Aroclors[b]										
Mummichog/killifish	µg/kg	10	0	nd	nd	nd	none	nd	none	nc
PCB TEQ-Bird										
Mummichog/killifish	ng/kg	10	10	3	5.8	5.8	none	5.8	none	nc
PCB TEQ-Fish										
Mummichog/killifish	ng/kg	10	10	0.15	0.18	0.18	none	0.18	none	nc
PCB TEQ-Mammal										
Mummichog/killifish	ng/kg	10	10	3	8.8	8.8	yes, n=1	8.8	yes, n=2	nc
2,3,7,8-TCDD										
Mummichog/killifish	ng/kg	12	0	nd	nd	nd	nc	nd	nc	nc
PCDD/PCDF TEQ-Bird										
Mummichog/killifish	ng/kg	12	11	0.14	0.7	0.7	none	0.7	yes, n=1	nc
PCDD/PCDF TEQ-Fish										
Mummichog/killifish	ng/kg	12	11	0.018	0.47	0.47	none	0.47	yes, n=1	nc
PCDD/PCDF TEQ-Mammal										
Mummichog/killifish	ng/kg	12	11	0.036	0.48	0.48	yes, n=1	0.48	yes, n=1	nc
Total TEQ-Bird										
Mummichog/killifish	ng/kg	10	10	3.4	6.5	6.5	none	6.5	none	nc

Table 3-5. Summary statistics of background tissue data

Species	Units (ww)	N	Number of Detects	Detected Concentration		Detected Concentration (3×IQR Outliers Removed)		Detected Concentration (1.5×IQR Outliers Removed)		
				Min Detect	Max Detect	Max Detect (background value)	Outliers?	Max Detect	Outliers?	UCL
Total TEQ-Fish										
Mummichog/killifish	ng/kg	10	10	0.18	0.49	0.49	none	0.49	none	nc
Total TEQ-Mammal										
Mummichog/killifish	ng/kg	10	10	3.3	9.5	9.5	yes, n=2	9.5	yes, n=2	nc
Dieldrin										
Mummichog/killifish	µg/kg	10	1	0.92	0.92	0.92	nc	0.92	nc	nc

[a] The "other forage fish" group includes silver shiner (n = 1) and pumpkinseed (n = 1).

[b] Total PCB congener data not available; only total PCB Aroclor data available from dataset.

COPEC – chemical of potential ecological concern
DDD – dichlorodiphenyldichloroethane
DDE – dichlorodiphenyldichloroethylene
DDT – dichlorodiphenyltrichloroethane
DL – detection limit
nc – not calculated (insufficient data for UCL or outlier analysis)
nd – no detected concentrations
PCB – polychlorinated biphenyl
PCDD/PCDF – polychlorinated dibenzodioxins/polychlorinated dibenzofurans
TCDD – tetrachlorodibenzo-*p*-dioxin
TEQ – toxic equivalent
total DDx – sum of all six DDT isomers (2,4′-DDD, 4,4′-DDD, 2,4′-DDE, 4,4′-DDE, 2,4′-DDT and 4,4′-DDT)
UCL – upper confidence limit on the mean
ww – wet weight

Table 3-6. Summary statistics of background surface water data

COPEC	Units	N	Number of Detects	Detected Concentration	
				Min.	Max.
Metals					
Copper (dissolved)	µg/l	17	17	1.78	3.36
Zinc (dissolved)	µg/l	10	10	3.38	9.8
Butyltin					
Tributyltin	µg/l	10	0	nd	nd
PCDDs/PCDFs					
2,3,7,8-TCDD	ng/l	18	1	0.00422	0.00422
Other					
Cyanide	mg/l	10	1	0.003	0.003

[a] Neither bis-(2-ethylhexyl)phthalate nor hexachlorobenzene were detected above Dundee Dam; reported values are DLs.

COPEC – chemical of potential ecological concern
DL – detection limit
nd – no detected concentrations
PCDD/PCDF – polychlorinated dibenzodioxins/polychlorinated dibenzofurans
TCDD – 2,3,7,8-tetrachlorodibenzo-*p*-dioxin

Table 3-7. Comparison of background sediment concentrations derived by 3×IQR and 1.5×IQR outlier tests

Chemical	Unit	N	Max. without 3×IQR Outliers	Max. without 1.5×IQR Outliers	RPD (%)
Above Dundee Dam (freshwater)					
Mercury	µg/kg	29	2,000	1660	19
Methylmercury	µg/kg	25	no outliers		
Total PCB Congeners	µg/kg	30	383	183	71
PCB TEQ-bird	ng/kg	30	120	86.3	33
PCB TEQ-mammal	ng/kg	30	4.02	4.02	0
PCDD/PCDF TEQ-bird	ng/kg	30	58.8	44.4	28
PCDD/PCDF TEQ-mammal	ng/kg	30	35	27.3	25
Total TEQ-bird	ng/kg	30	117	111	5.3
Total TEQ-mammal	ng/kg	30	52.2	32.4	47
Mullica River (freshwater)					
Mercury	µg/kg	5	20	20	0
Jamaica Bay (estuarine)					
Mercury	µg/kg	66	750	750	0
Methylmercury	µg/kg	1	insufficient data for outlier test		
Total PCB Congeners	µg/kg	10	167	70.6	81
PCDD/PCDF TEQ-bird	ng/kg	57	98	54	58

Table 3-7. Comparison of background sediment concentrations derived by 3×IQR and 1.5×IQR outlier tests

Chemical	Unit	N	Max. without 3×IQR Outliers	Max. without 1.5×IQR Outliers	RPD (%)
PCDD/PCDF TEQ-mammal	ng/kg	57	38	28	30
Mullica River and Great Bay (estuarine)					
Mercury	µg/kg	25	no outliers		
Total PCB Congeners	µg/kg	10	no outliers		
PCB TEQ-bird	ng/kg	3	no outliers		
PCB TEQ-mammal	ng/kg	3	no outliers		
PCDD/PCDF TEQ-bird	ng/kg	3	no outliers		
PCDD/PCDF TEQ-mammal	ng/kg	3	no outliers		
Total TEQ-Bird	ng/kg	3	no outliers		
Total TEQ-Mammal	ng/kg	3	no outliers		

IQR – interquartile range
PCB – polychlorinated biphenyl
PCDD/PCDF – polychlorinated dibenzodioxins/polychlorinated dibenzofurans
RPD – relative percent difference
TEQ – toxic equivalent

Table 3-8. Comparison of background tissue concentrations derived by 3×IQR and 1.5×IQR outlier tests

Chemical	Unit	Max. without 3×IQR Outliers	Max. without 1.5×IQR Outliers	RPD (%)	Species
Above Dundee Dam					
Methylmercury	µg/kg	373	271	32	white perch (n = 8)
		196	98.2	66	white sucker (n = 5)
Total PCB Congeners	µg/kg	no outliers			
PCB TEQ-bird	ng/kg	no outliers			
PCB TEQ-fish	ng/kg	4.68	2.49	61	carp (n = 10)
		1.15	0.75	42	white sucker (n = 5)
PCB TEQ-mammal	ng/kg	81.1	34.8	80	carp (n = 10)
		14.3	9.1	44	white sucker (n = 5)
2,3,7,8-TCDD	ng/kg	no outliers			
PCDD/PCDF TEQ-bird	ng/kg	6.38	6.38	0	white sucker (n = 5)
PCDD/PCDF TEQ-fish	ng/kg	2.55	1.81	34	white sucker (n = 5)
PCDD/PCDF TEQ-mammal	ng/kg	2.55	1.89	30	white sucker (n = 5)
Total TEQ-bird	ng/kg	no outliers			
Total TEQ-fish	ng/kg	3.7	2.5	39	white sucker (n = 5)

Table 3-8. Comparison of background tissue concentrations derived by 3×IQR and 1.5×IQR outlier tests

Chemical	Unit	Max. without 3×IQR Outliers	Max. without 1.5×IQR Outliers	RPD (%)	Species
Total TEQ-mammal	ng/kg	85.2	40.9	70	carp (n = 10)
		16.8	10.8	43	white sucker (n = 5)
Jamaica Bay/Lower Harbor					
Methylmercury	µg/kg	no outliers			
Total PCB Congeners	µg/kg	3200	1600	67	mummichog (n = 7)
PCB TEQ-bird	ng/kg	410	410	0	mummichog (n = 7)
PCB TEQ-fish	ng/kg	4.2	4.2	0	mummichog (n = 7)
PCB TEQ-mammal	ng/kg	70	70	0	mummichog (n = 7)
2,3,7,8-TCDD	ng/kg	no outliers			
PCDD/PCDF TEQ-bird	ng/kg	no outliers			
PCDD/PCDF TEQ-fish	ng/kg	16	16	0	mummichog (n = 7)
PCDD/PCDF TEQ-mammal	ng/kg	12	12	0	mummichog (n = 7)
Total TEQ-bird	ng/kg	430	430	0	mummichog (n = 7)
Total TEQ-fish	ng/kg	no outliers			
Total TEQ-mammal	ng/kg	74	74	0	mummichog (n = 7)
Mullica River/Great Bay					
Methylmercury	µg/kg	no data			
Total PCB Congeners	µg/kg	no outliers			
PCB TEQ-bird	ng/kg	no outliers			
PCB TEQ-fish	ng/kg	no outliers			
PCB TEQ-mammal	ng/kg	3.4	3.2	6.1	mummichog (n = 10)
2,3,7,8-TCDD	ng/kg	no outliers			
PCDD/PCDF TEQ-bird	ng/kg	0.7	0.7	0	mummichog (n = 12)
PCDD/PCDF TEQ-fish	ng/kg	0.47	0.47	0	mummichog (n = 12)
PCDD/PCDF TEQ-mammal	ng/kg	0.48	0.48	0	mummichog (n = 12)
Total TEQ-bird	ng/kg	no outliers			
Total TEQ-fish	ng/kg	no outliers			
Total TEQ-mammal	ng/kg	3.4	3.4	0	mummichog (n = 10)

IQR – interquartile range
PCB – polychlorinated biphenyl
PCDD/PCDF – polychlorinated dibenzodioxins/polychlorinated dibenzofurans
RPD – relative percent difference
TCDD – 2,3,7,8-tetrachlorodibenzo-*p*-dioxin
TEQ – toxic equivalent

4 Comparison of LPRSA to background concentrations

Graphics of background sediment and tissue data for select key chemicals in the LPRSA are presented in Figures 4-1 through 4-14.

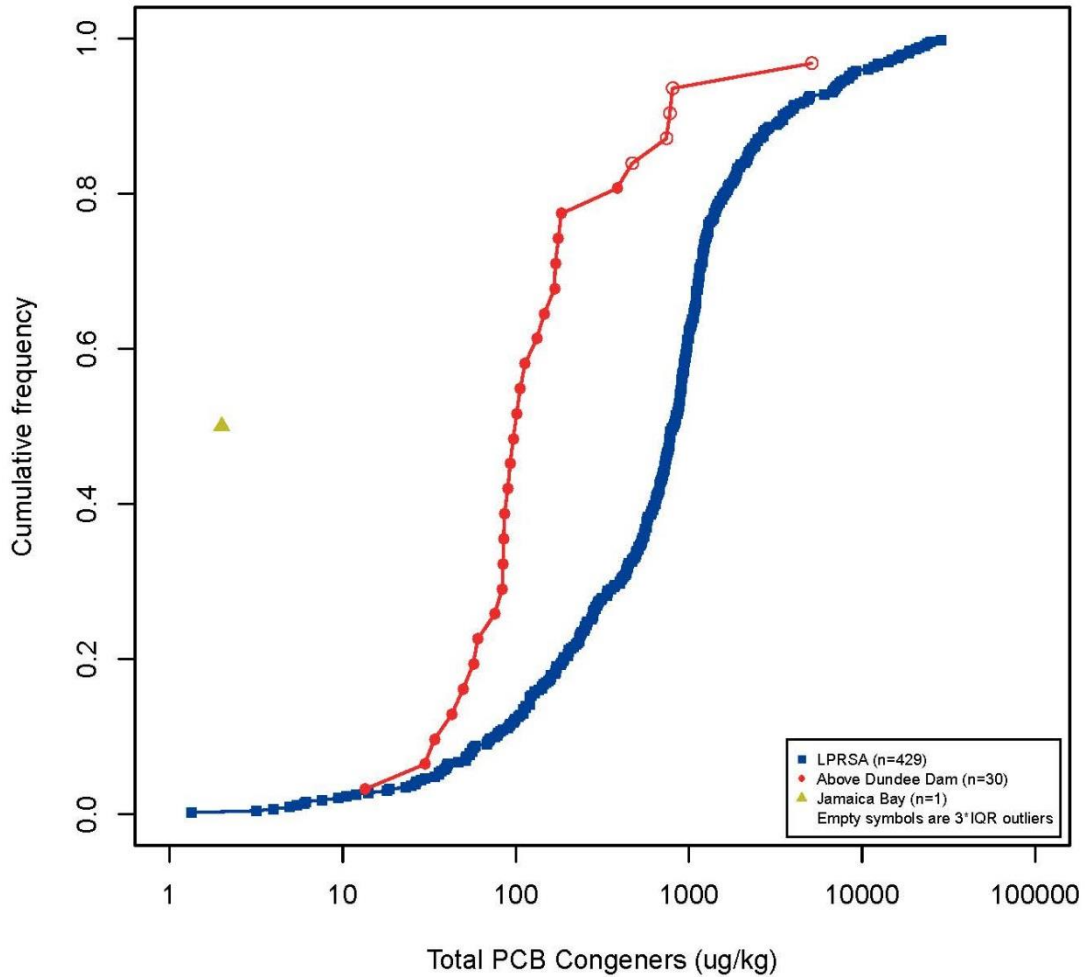

Figure 4-1. Cumulative frequency of LPRSA and background total PCB congeners sediment concentrations

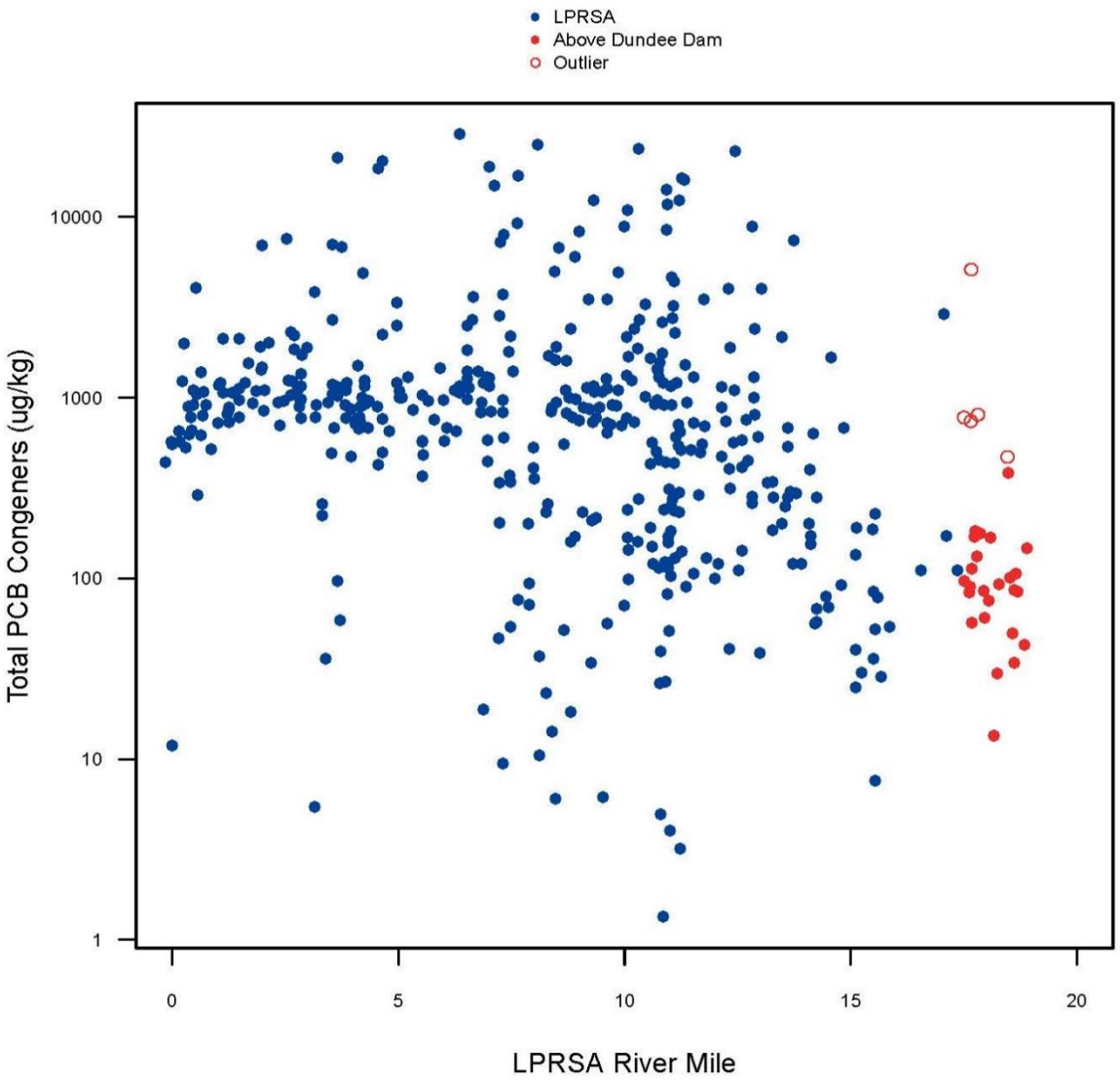

Figure 4-2.Total PCB congeners sediment concentration by river mile

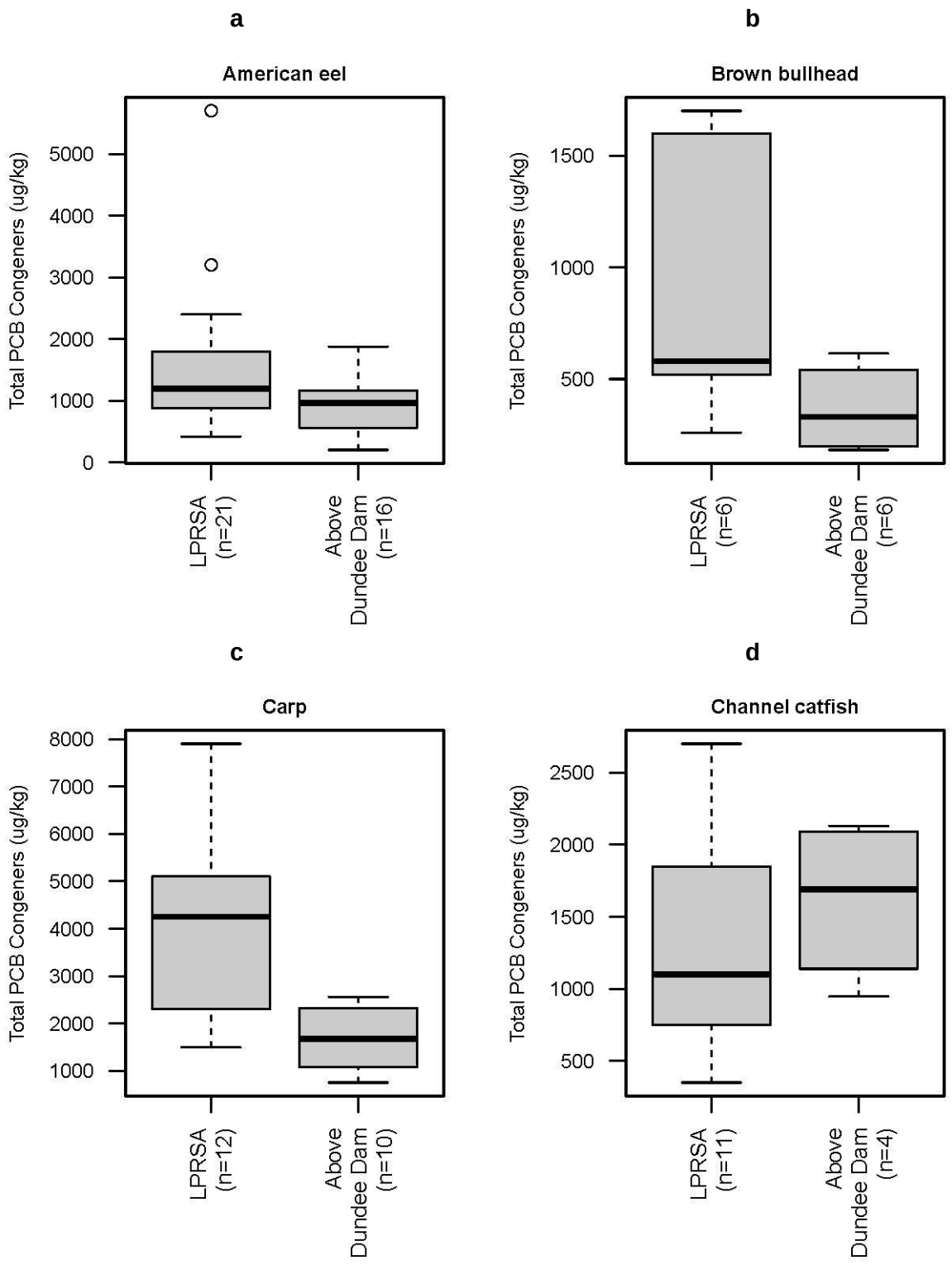

Figure 4-3a-d. LPRSA and background total PCB congener concentrations

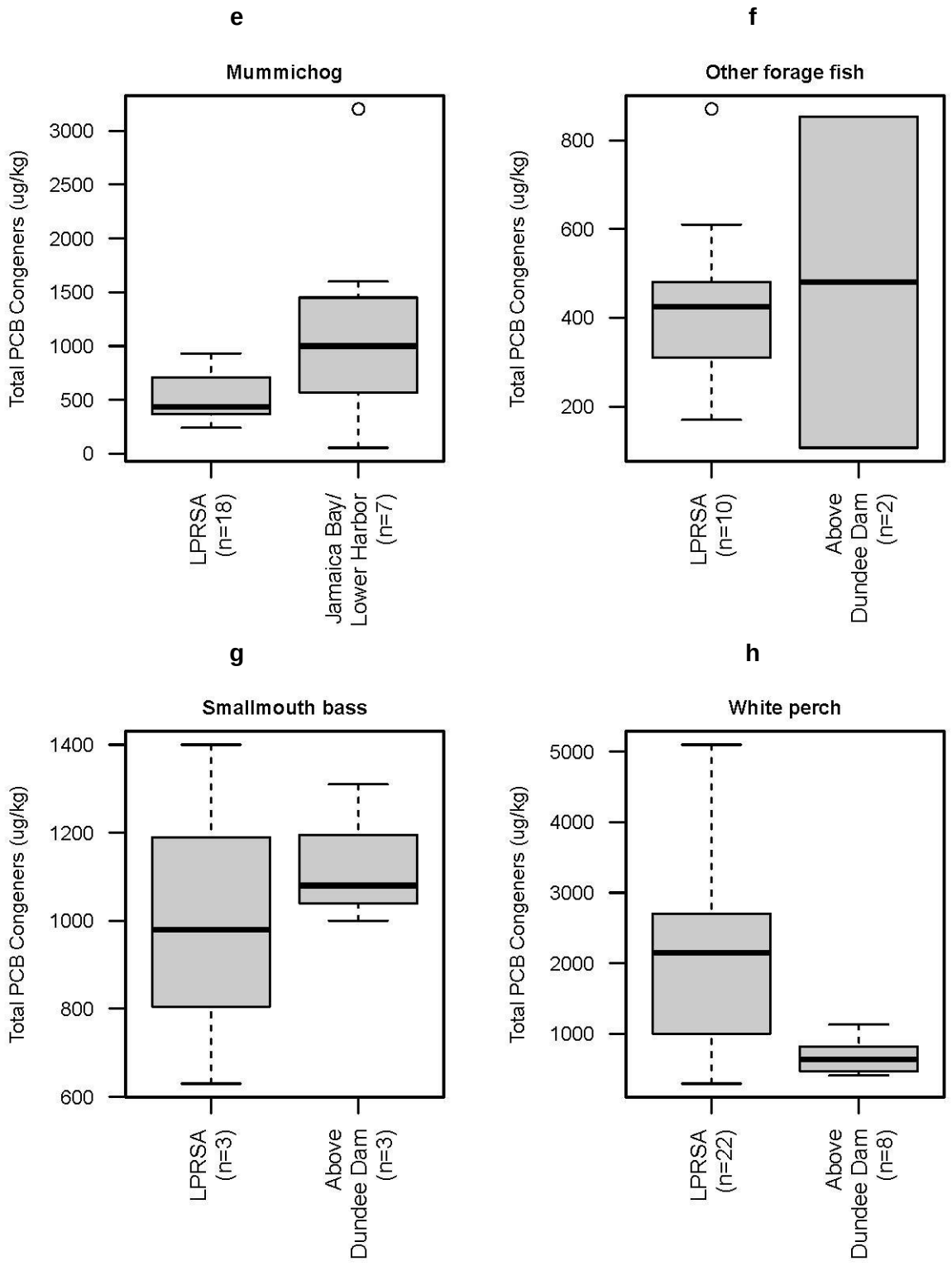

Figure 4-3e-h. LPRSA and background total PCB congener concentrations

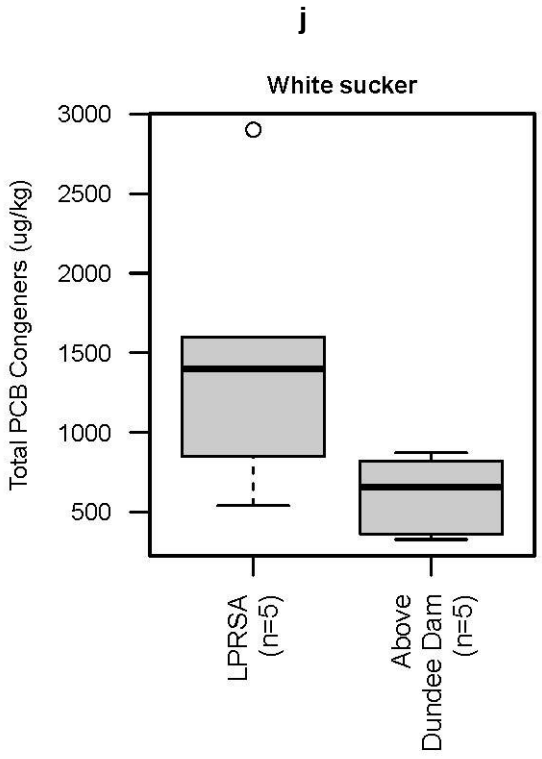

Figure 4-3i. LPRSA and background total PCB congener concentrations

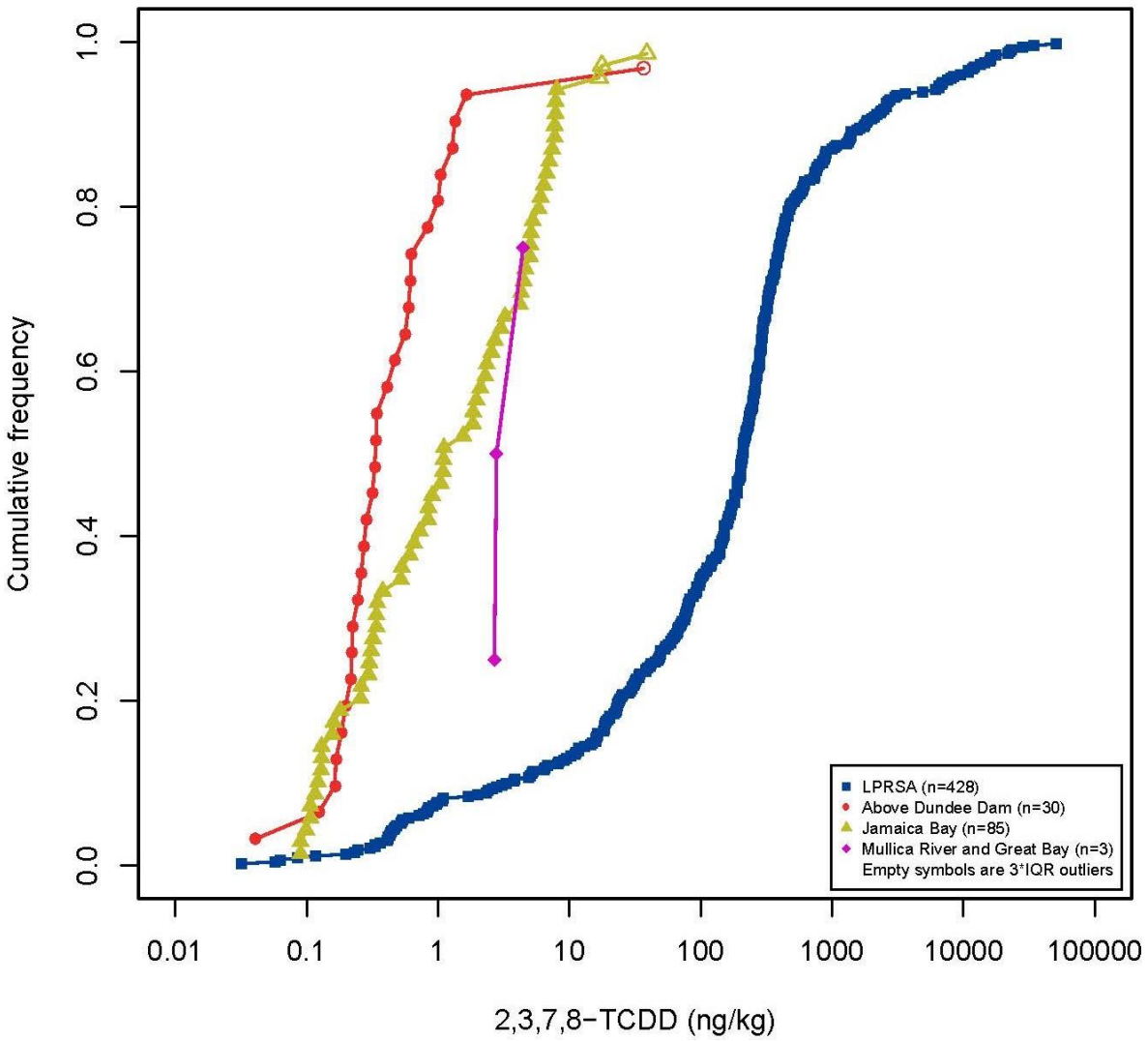

Figure 4-4. Cumulative frequency of LPRSA and background 2,3,7,8-TCDD sediment concentrations

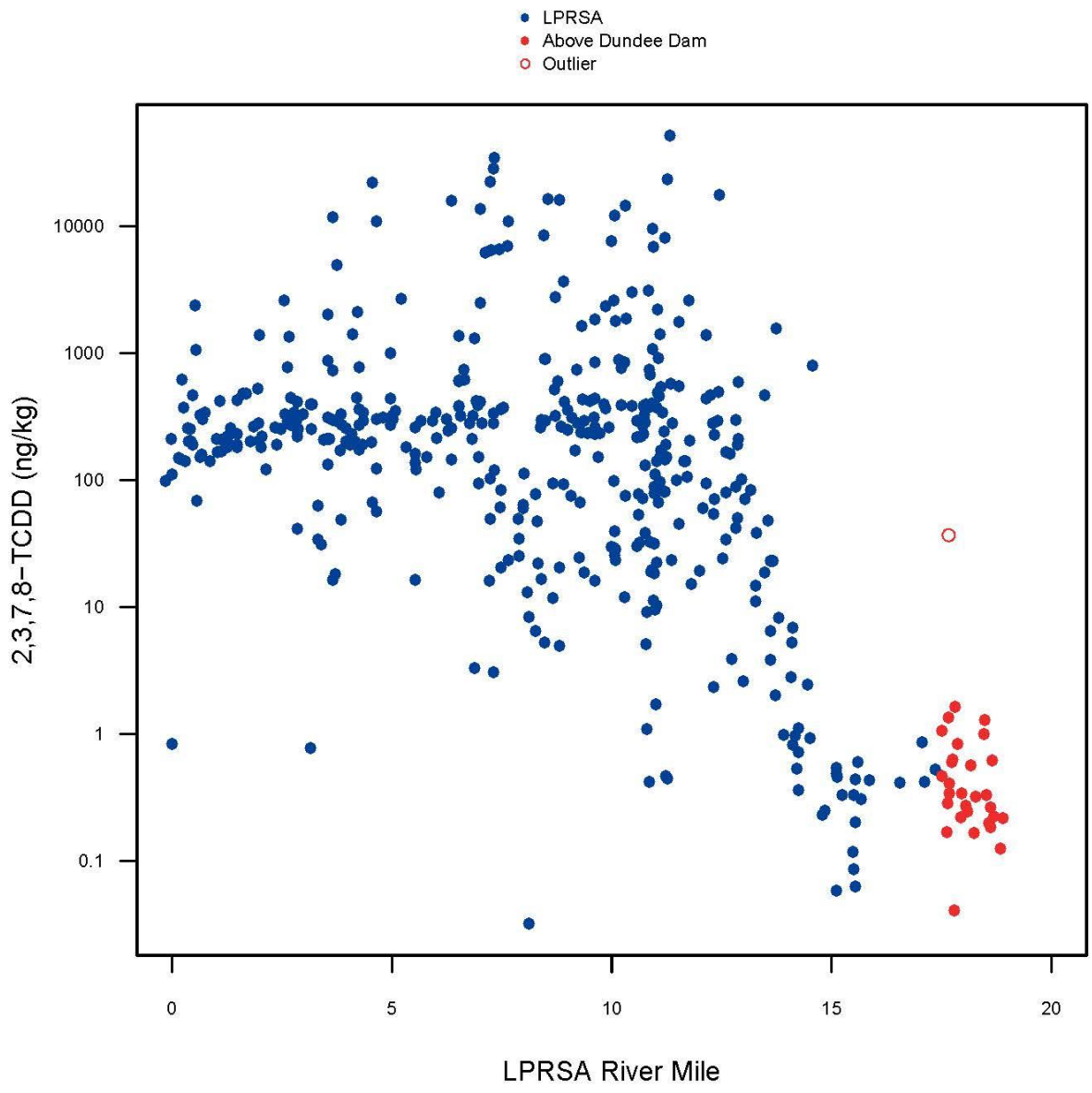

Figure 4-5. 2,3,7,8-TCDD sediment concentration by river mile

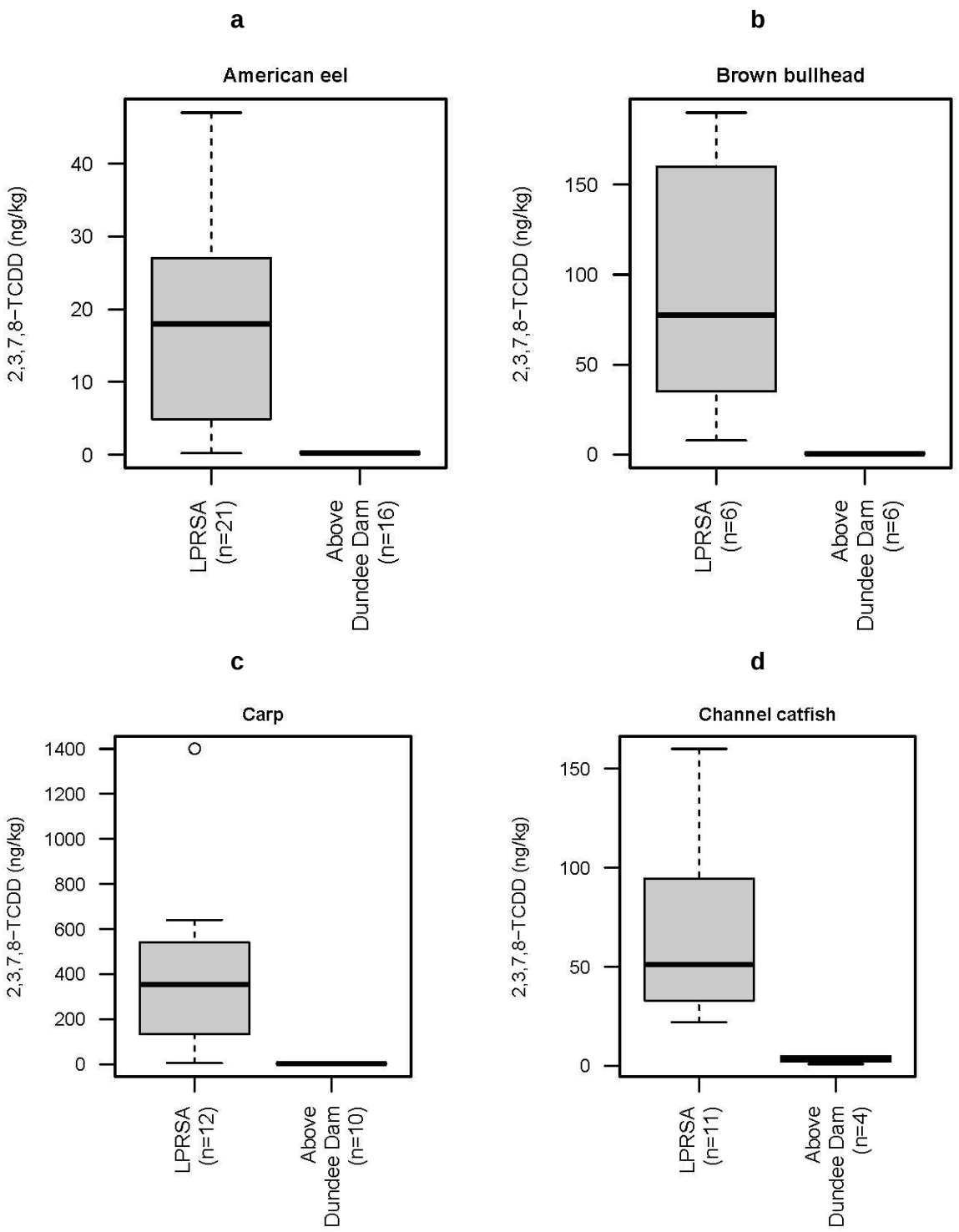

Figure 4-6a-d. LPRSA and background 2,3,7,8-TCDD concentrations

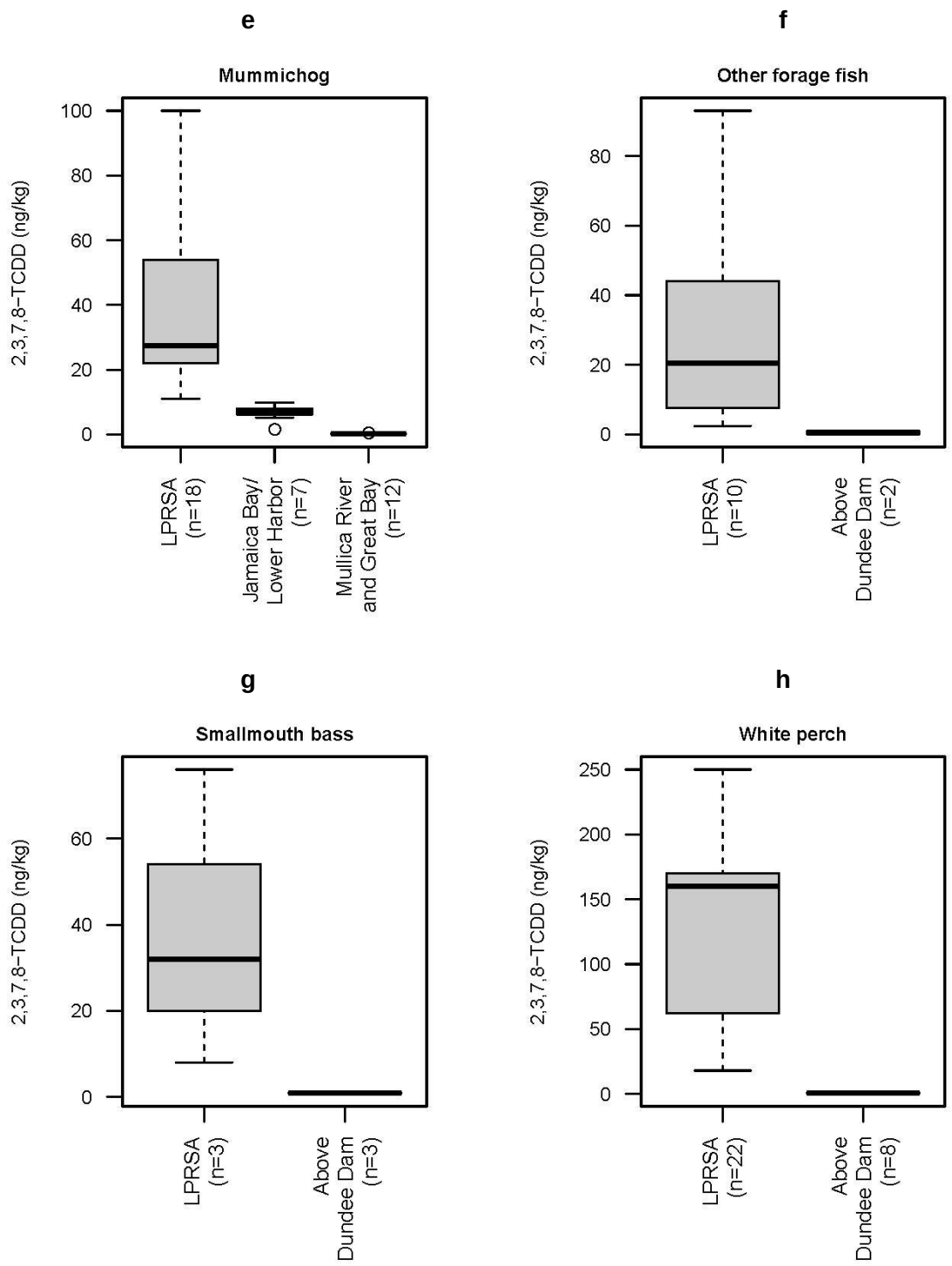

Figure 4-6e-h. LPRSA and background 2,3,7,8-TCDD concentrations

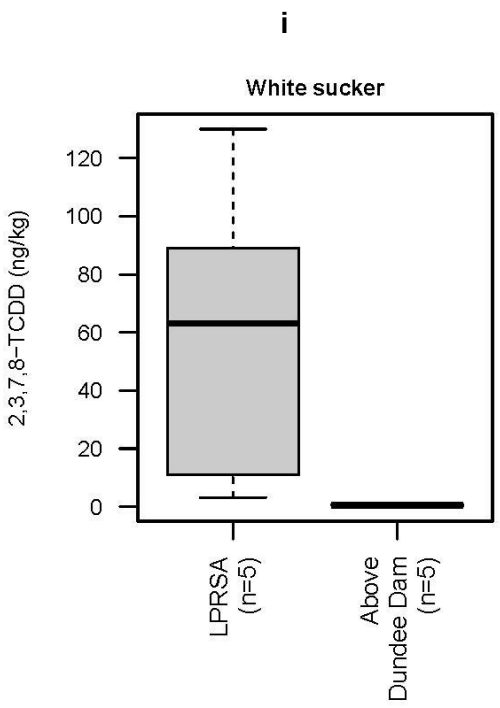

Figure 4-6i. LPRSA and background 2,3,7,8-TCDD concentrations

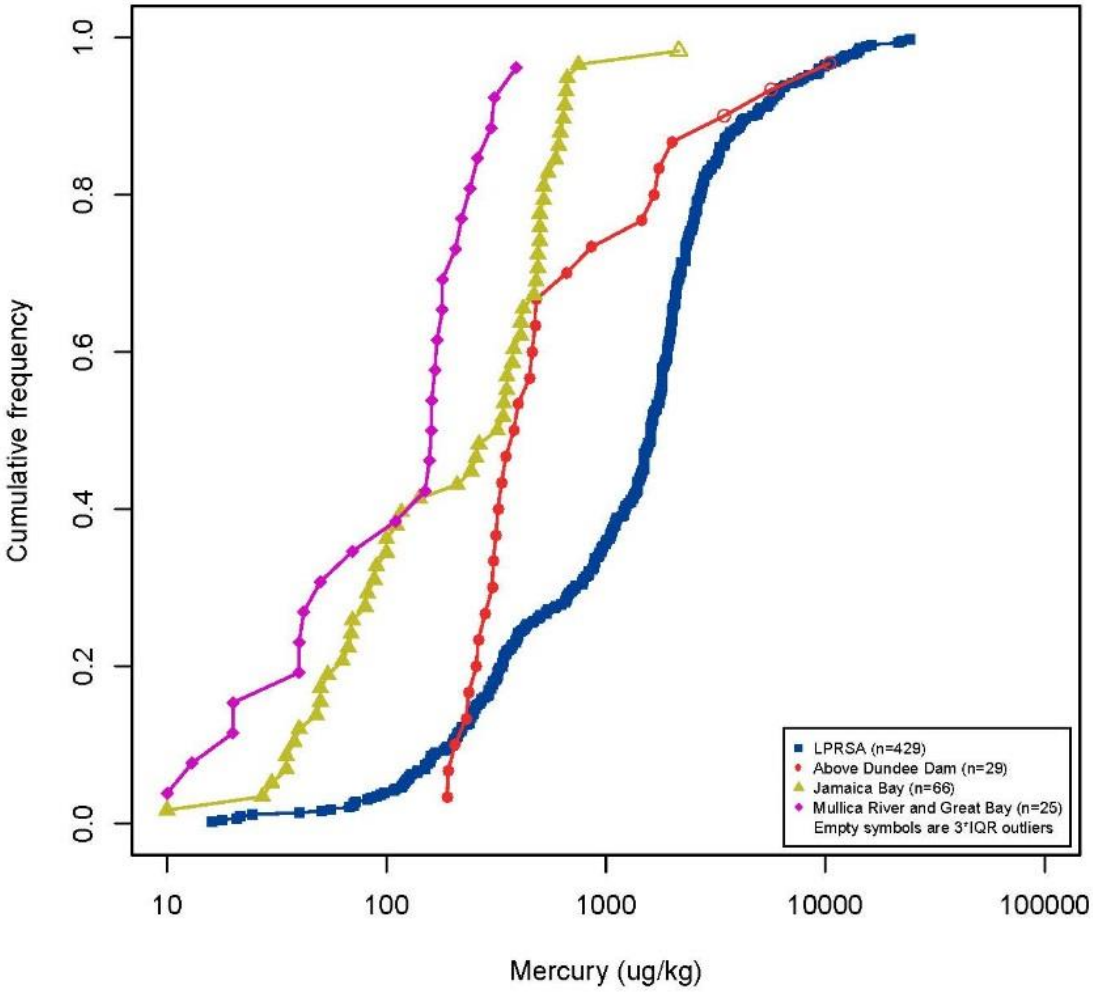

Figure 4-7. Cumulative frequency of LPRSA and background mercury sediment concentrations

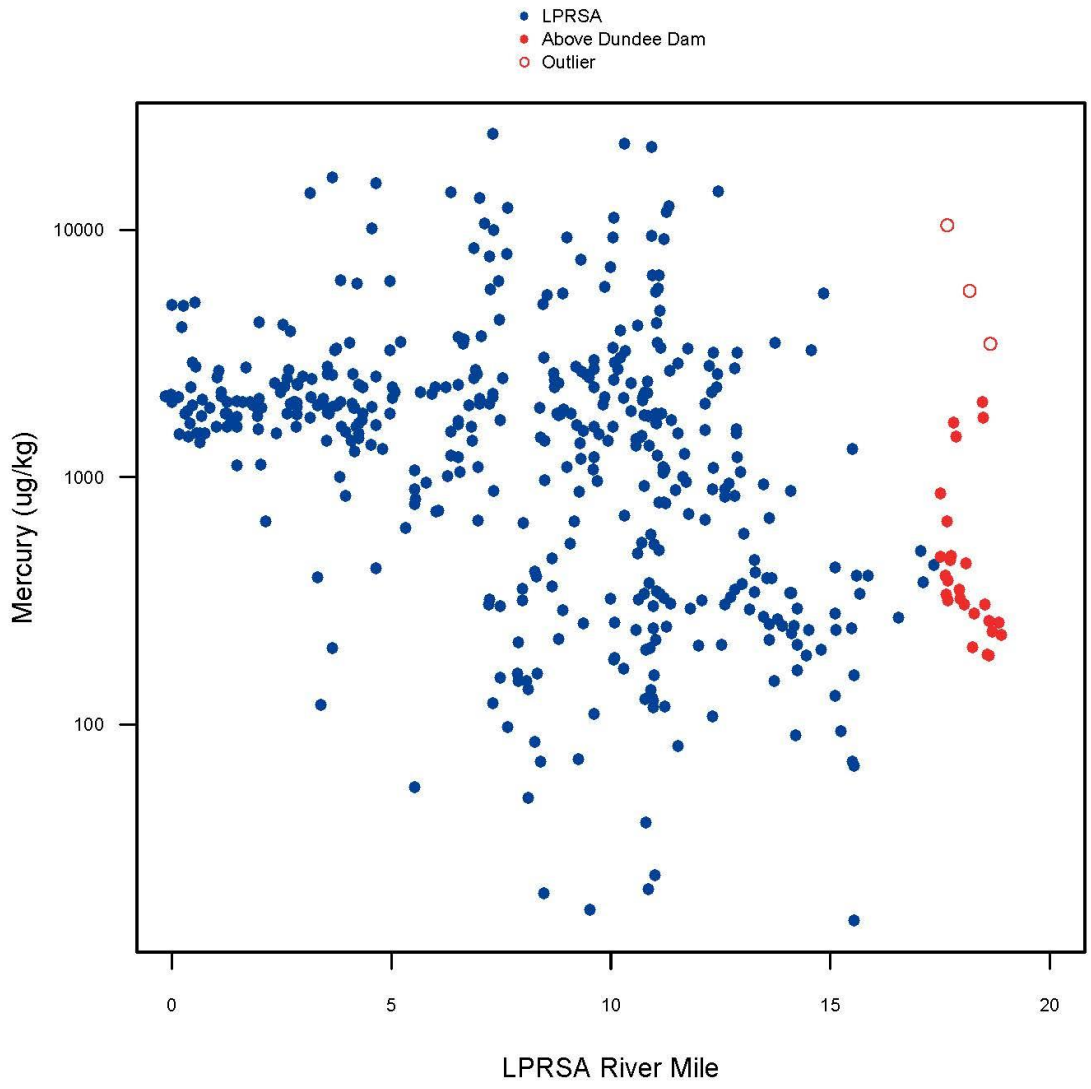

Figure 4-8.Mercury sediment concentration by river mile

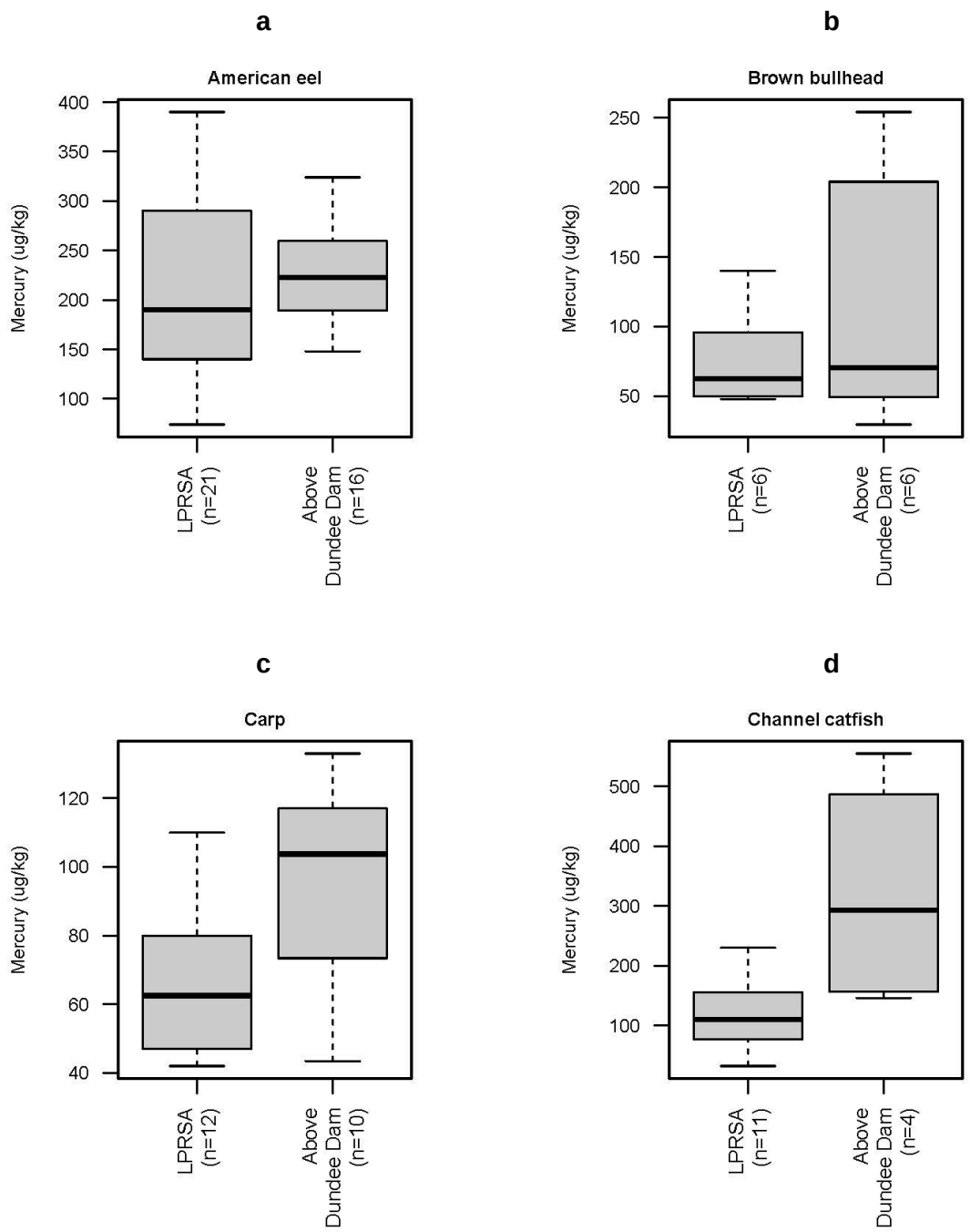

Figure 4-9a-d. LPRSA and background mercury concentrations

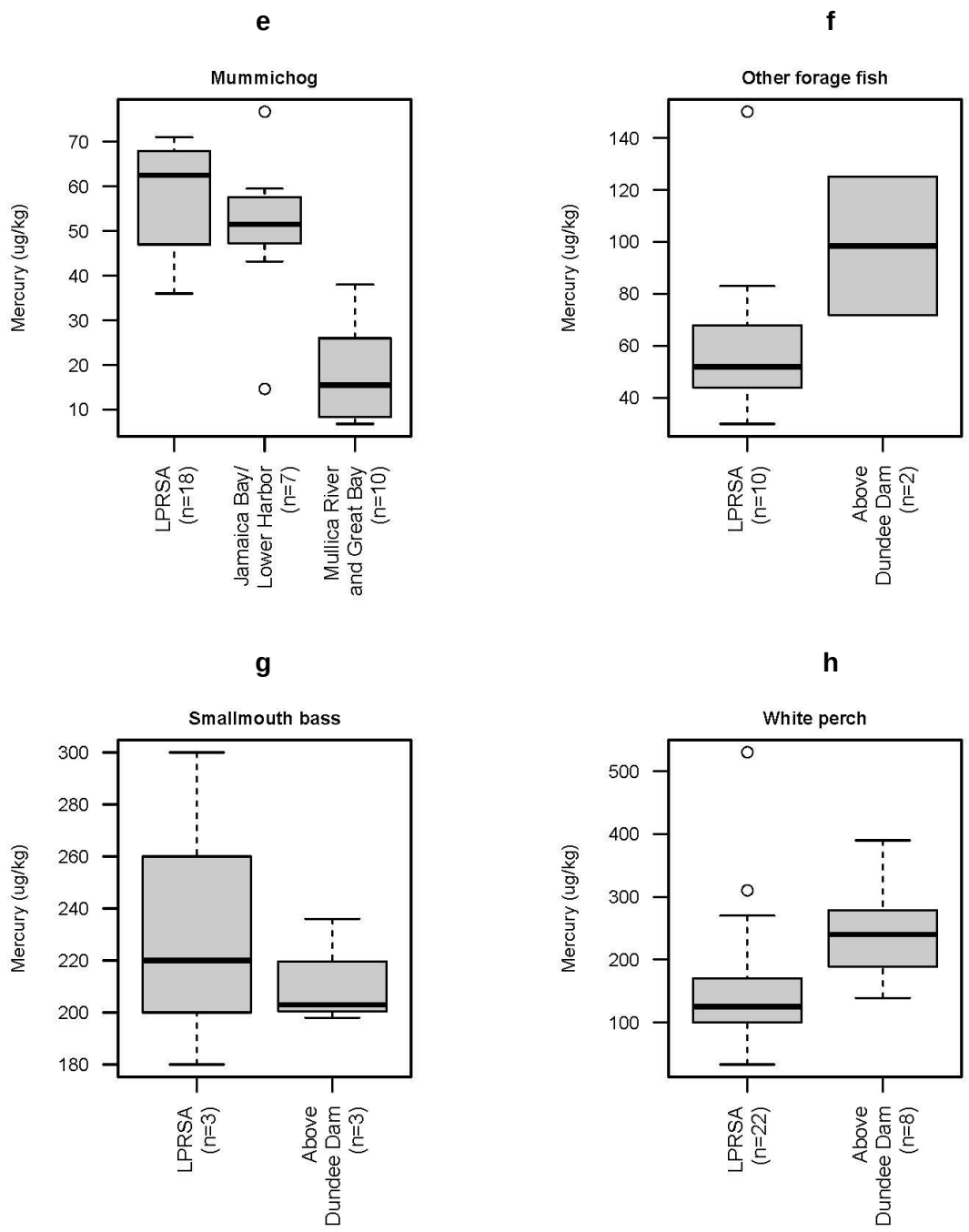

Figure 4-9e-h. LPRSA and background mercury concentrations

i

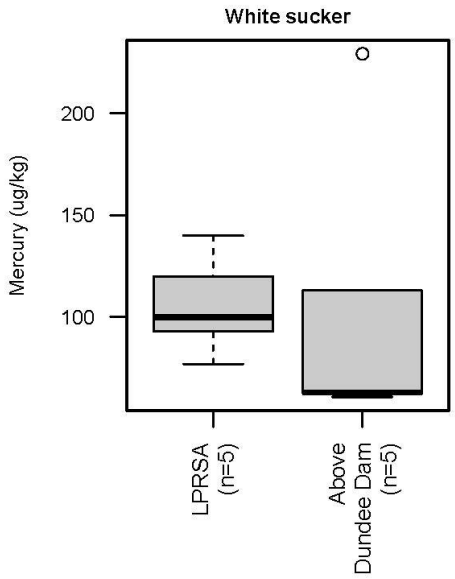

Figure 4-9i. LPRSA and background mercury concentrations

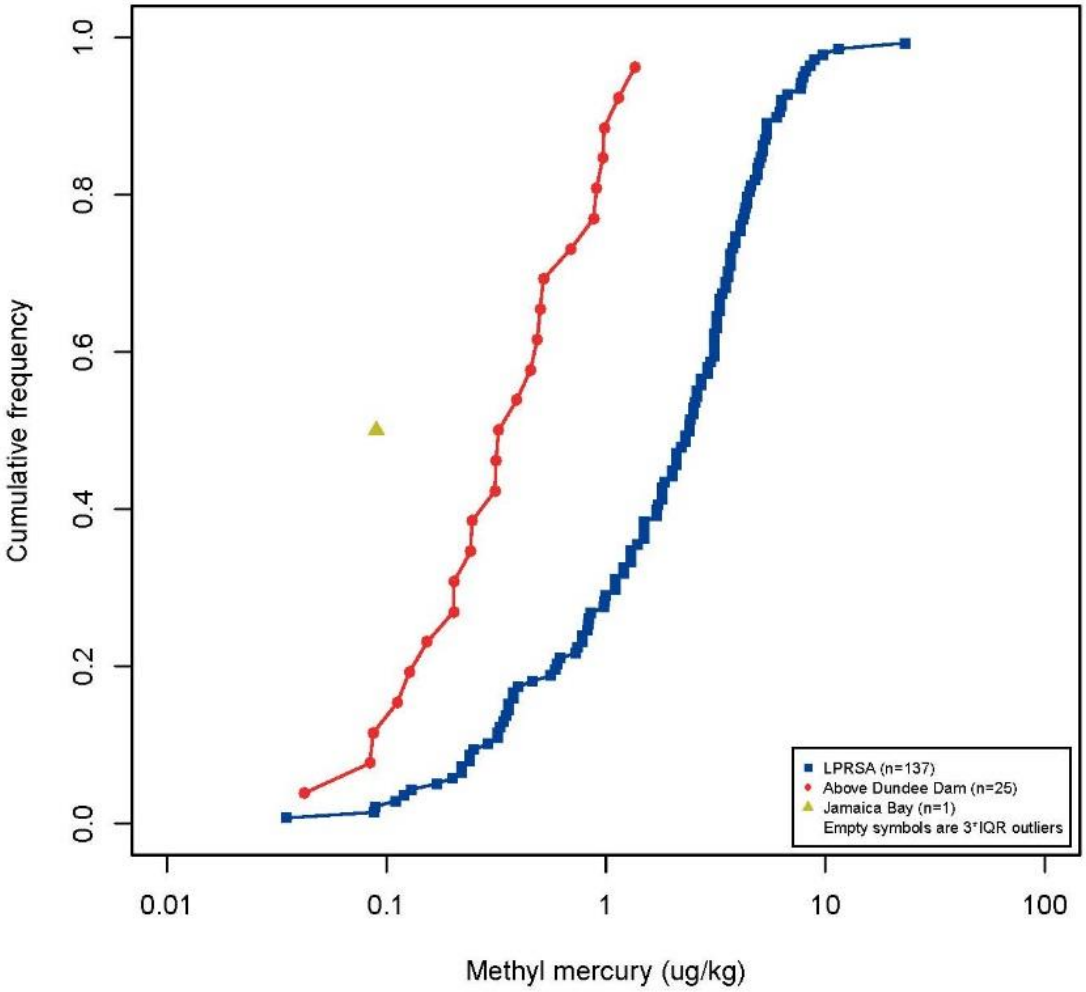

Figure 4-10. Cumulative frequency of LPRSA and background methyl mercury sediment concentrations

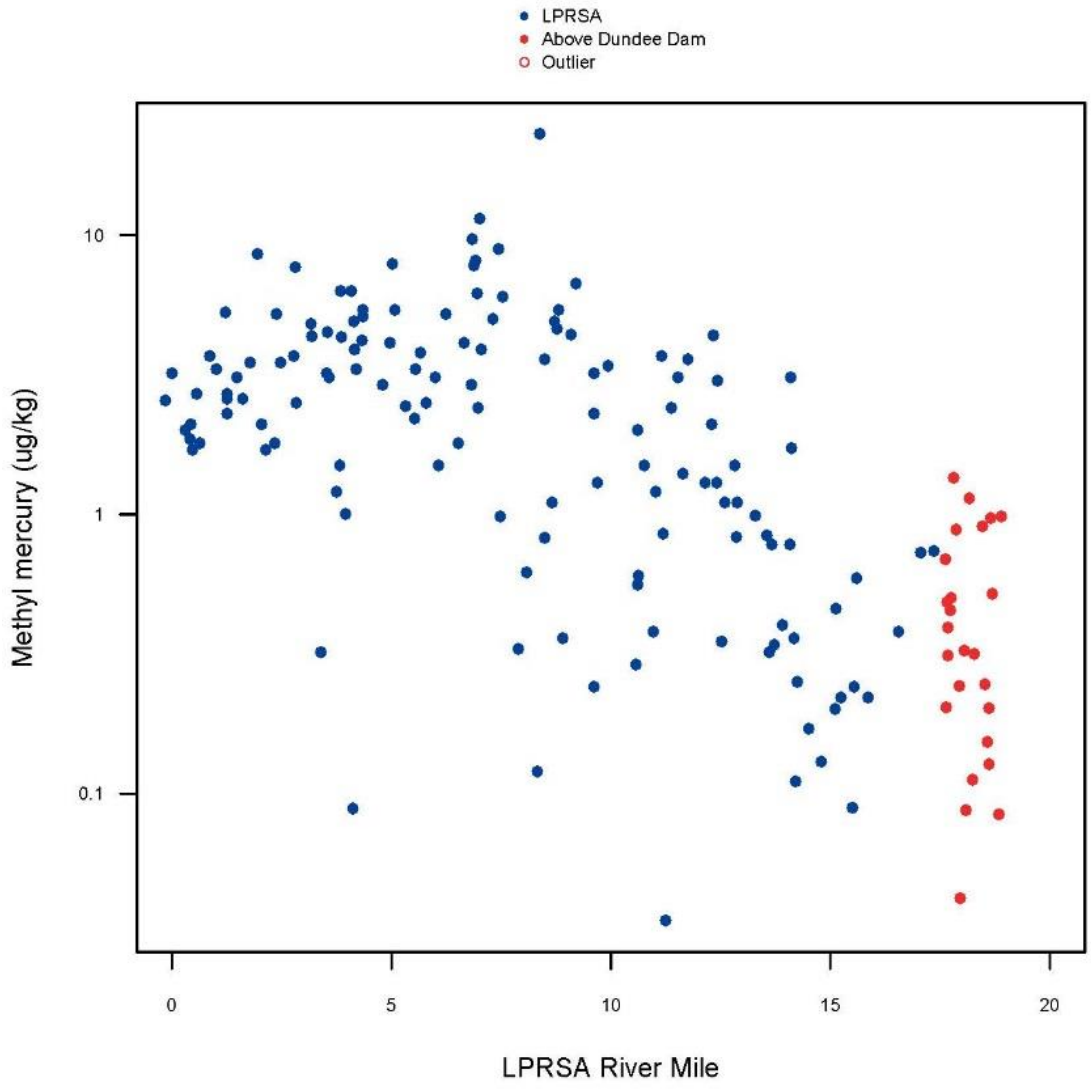

Figure 4-11. Methyl mercury sediment concentration by river mile

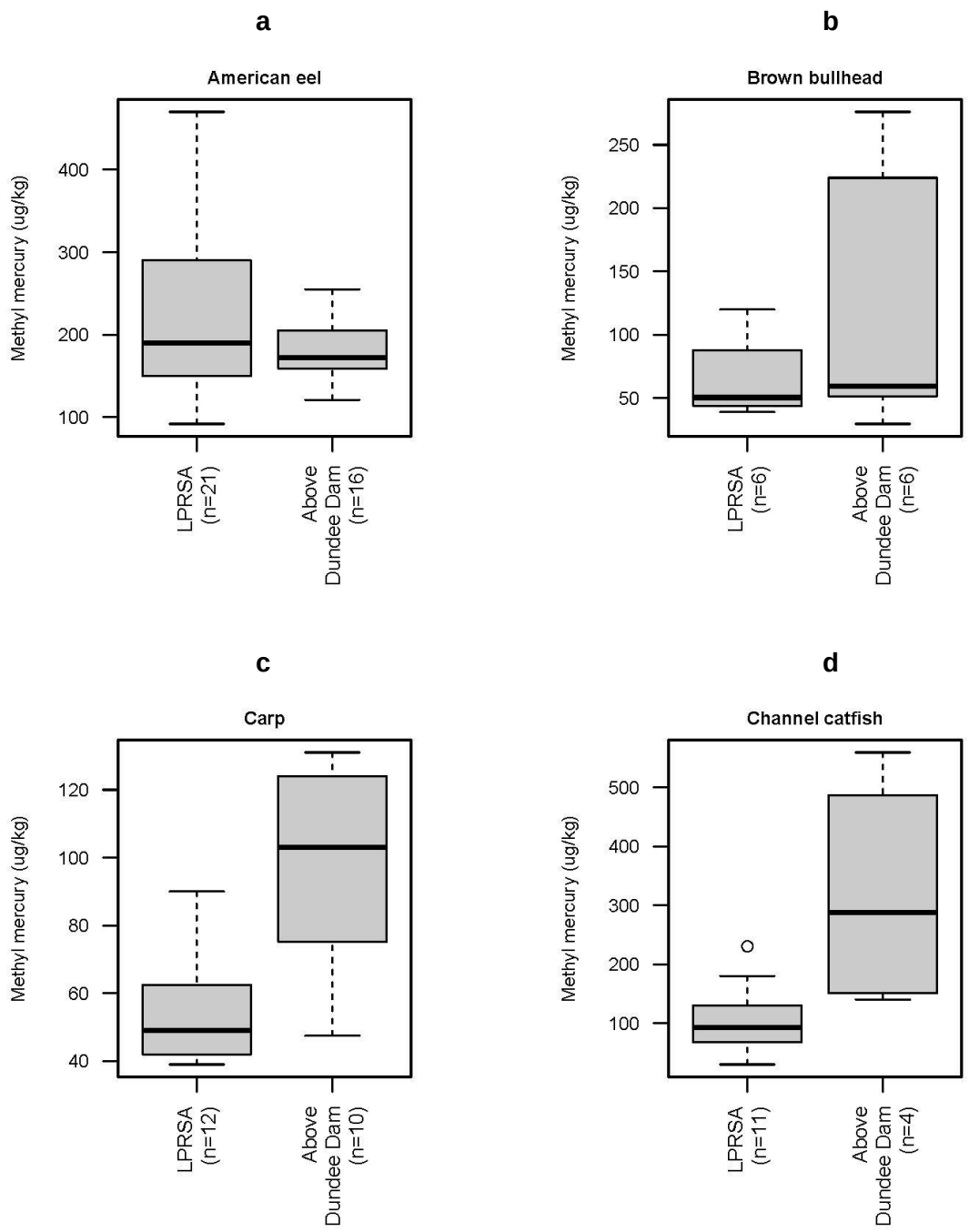

Figure 4-12a-d. LPRSA and background methyl mercury concentrations

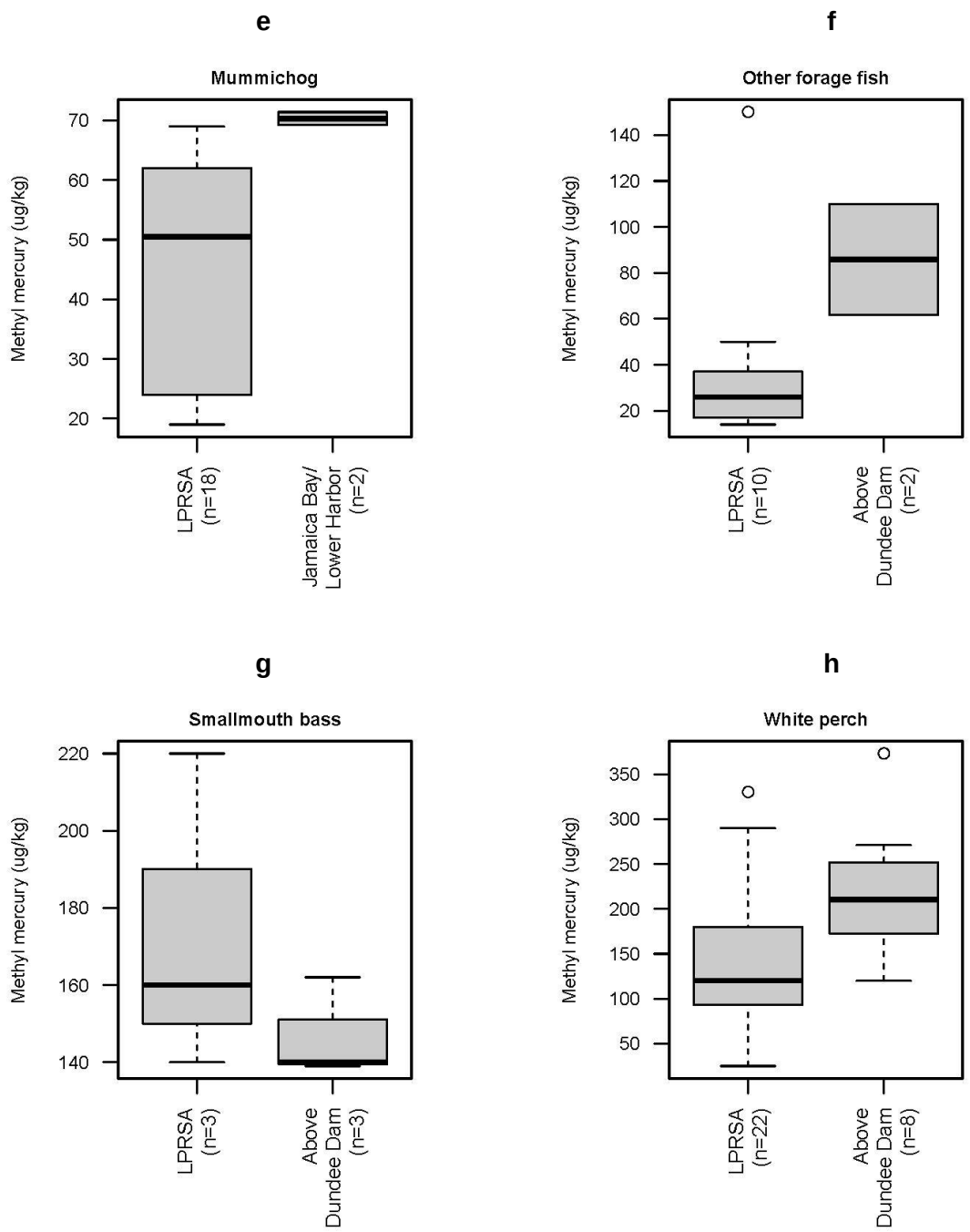

Figure 4-12e-h. LPRSA and background methyl mercury concentrations

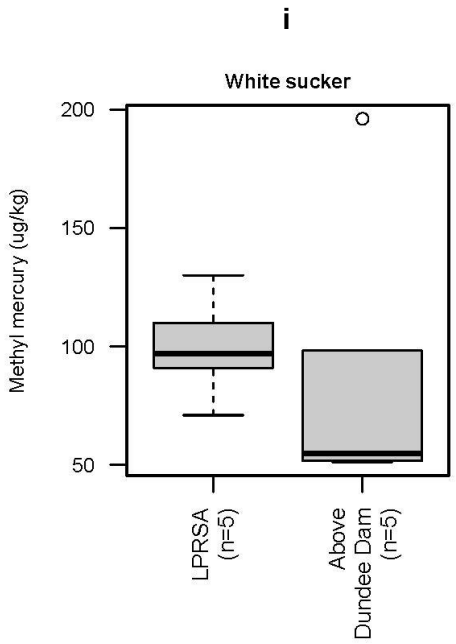

Figure 4-12i. LPRSA and background methyl mercury concentrations

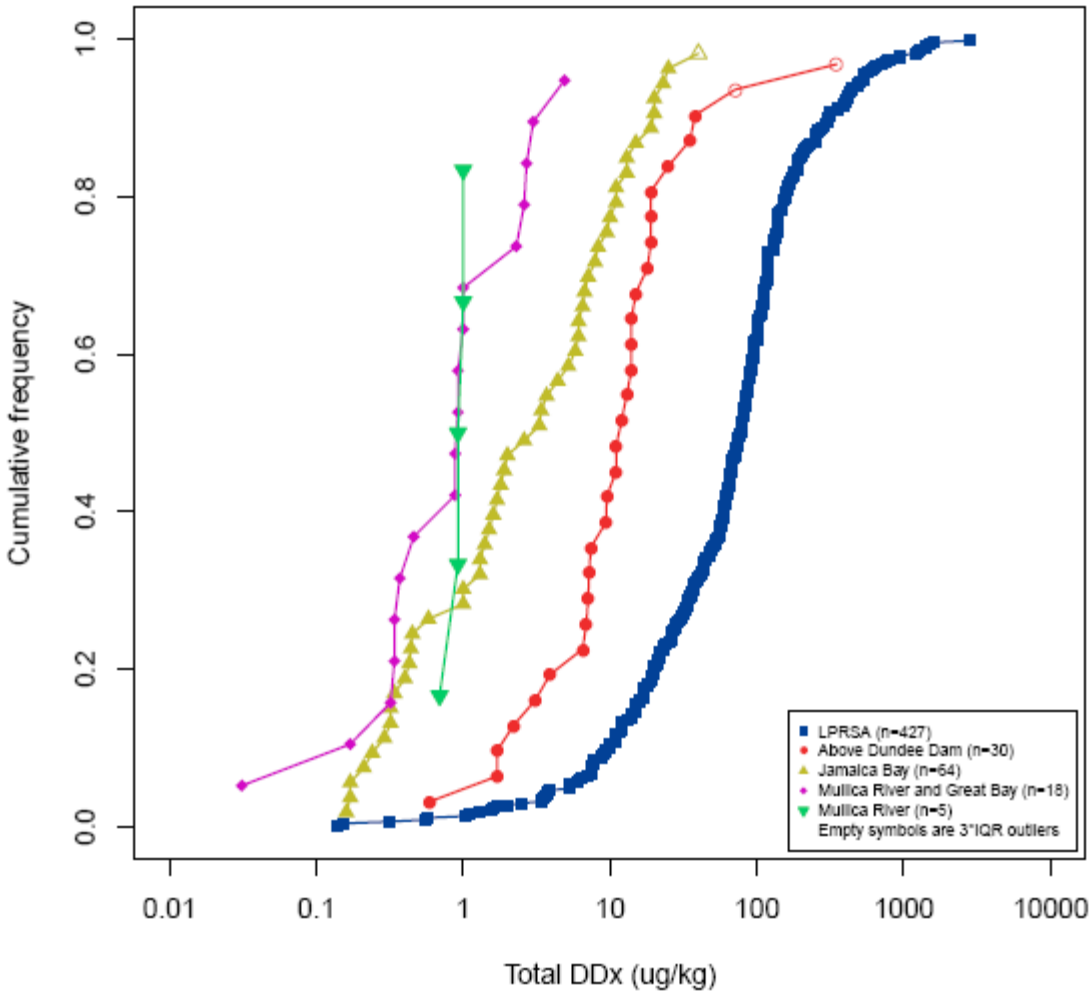

Figure 4-13. Cumulative frequency of LPRSA and background total DDx sediment concentrations

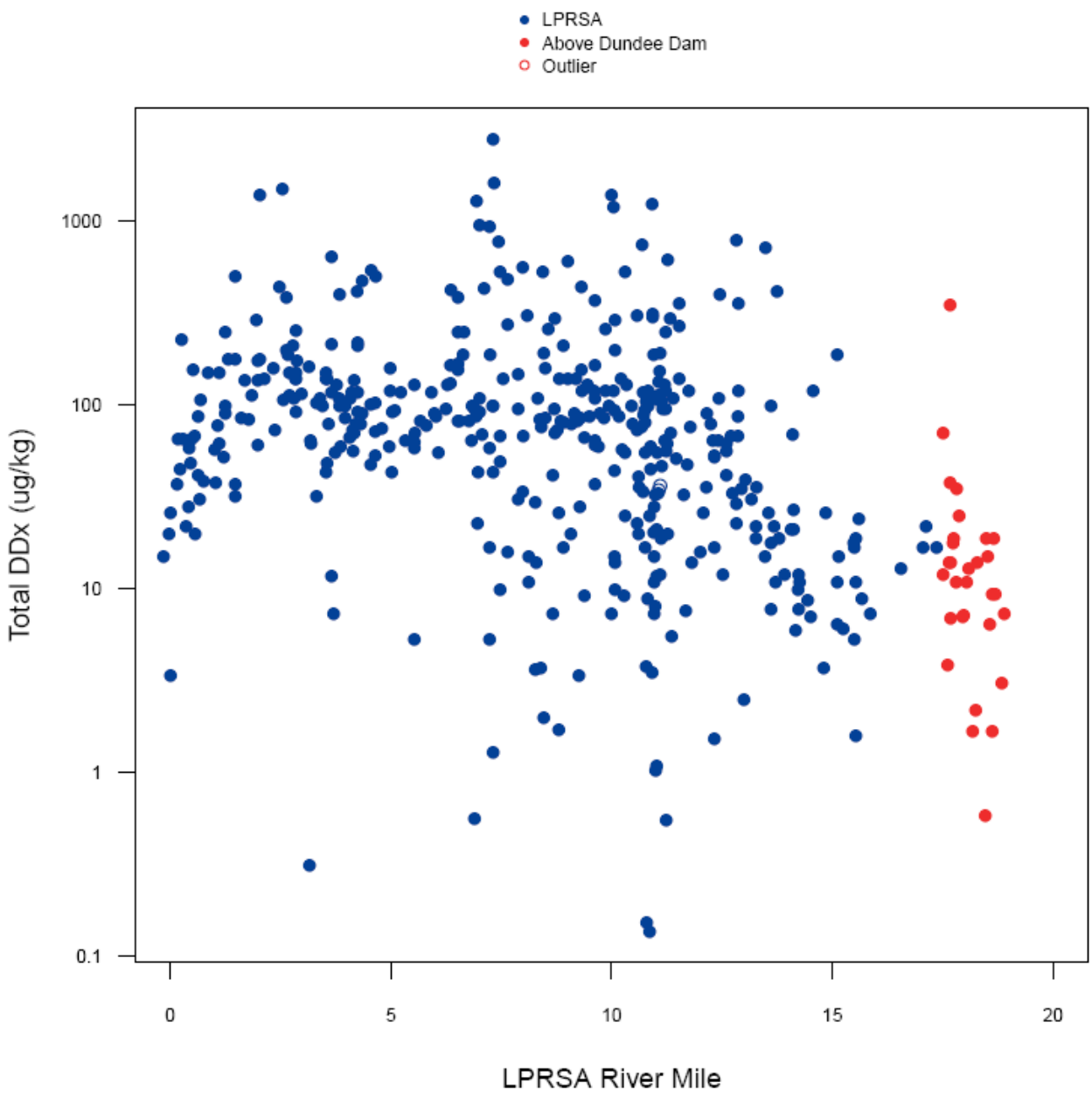

Figure 4-14. Total DDx sediment concentration by river mile

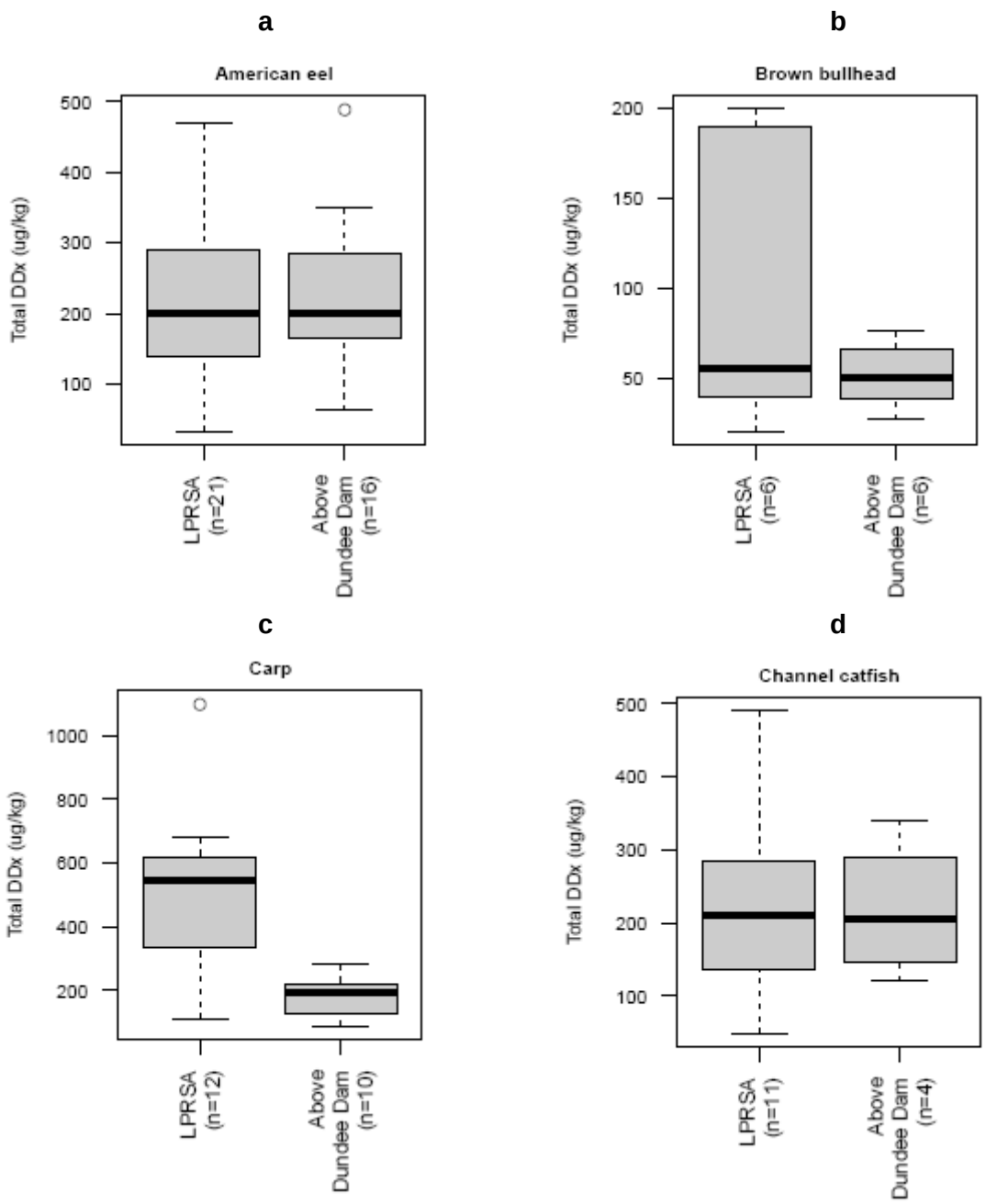

Figure 4-15a-d. LPRSA and background total DDx concentrations

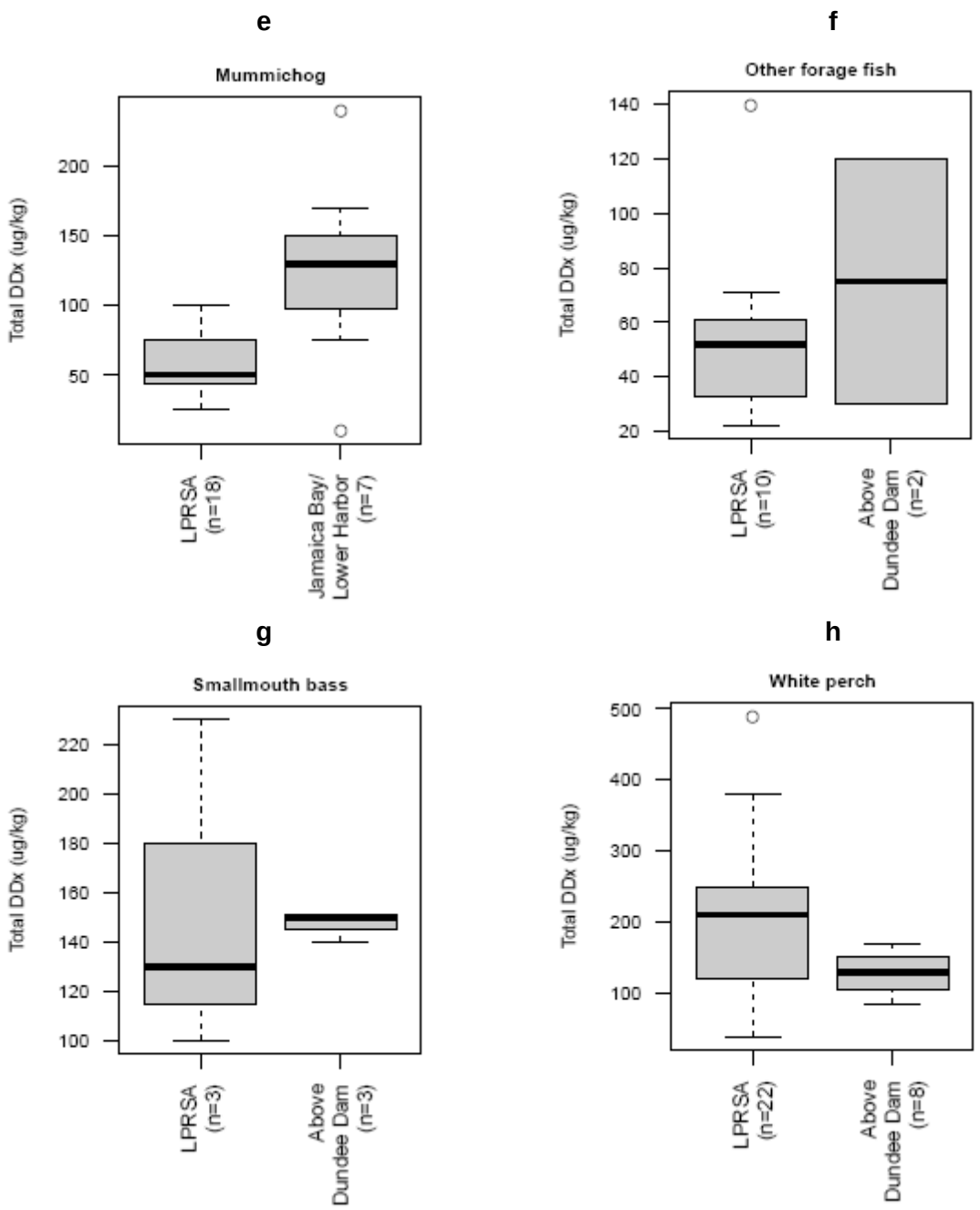

Figure 4-15e-h. LPRSA and background total DDx concentrations

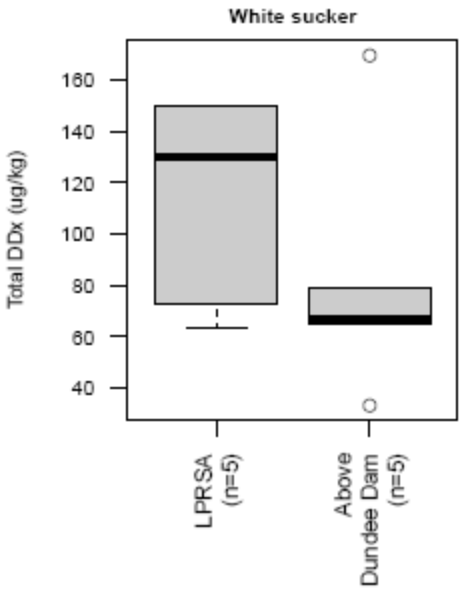

Figure 4-15i. LPRSA and background total DDx concentrations

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