Framework Issue Summary
August 24, 2006

Issue	Status	Where Documented
Ecological Risk Assessment		
Measurement Endpoint Table	The Measurement Endpoint Table was finalized and submitted to the LWG as an attachment to EPA comments on the PRG TM. Additional minor comments were received from Jeremy Buck on July 24, 2006 and John Toll on August 1, 2006. The Round 2 Report will consider all lines of evidence. Initial PRGs should be developed for all LOE with the exception of the benthic community. *For the benthic community, a check-in will take place to reach agreement on the lines of evidence for which we will develop initial PRGs.*	Measurement Endpoint Table was attached to EPA Comments on PRG Technical Memorandum dated June 30, 2006. Updated table with minor revisions sent to LWG via Eric Blischke email dated August 24, 2006
Weight of Evidence Key	ERA Work Group has developed a draft WOE Key. *Collaborative discussions are expected to continue through late August/early September.*	The latest version of the draft weight of evidence key was provided to LWG technical representatives on July 21, 2006
Weight of Evidence Framework/Matrix	ERA Work Group has begun to populate the Weight of Evidence Matrix/Framework. *Collaborative discussions are expected to continue through late August/early September.*	The latest version of the draft weight of evidence matrix/framework was provided to LWG technical representatives on July 21, 2006
Provisional TRVs	EPA submitted clarification of the TRVs for use in the Round 2 Report in a letter dated July 6, 2006. Some additional comments were received from Burt Shepard and Jeremy Buck after July 6, and provided to LWG in Eric Blischke's email dated August 24, 2006. *Further discussion is required to determine whether these changes should be incorporated into the Round 2 report or should wait until the baseline risk assessment.*	EPA provided clarification on TRVs for use in the Round 2 Comprehensive Report on July 6, 2006.
Summation Rules for ERA	Summation rules for the initial evaluation of ecological risk will be based on a combination of comments on PRE and HHRA summation rules. The LWG has agreed to use ½ the detection limit as directed by EPA in its comments on the PRE. *Further discussion may be required due to differences in exposure areas between the human health and ecological risk approaches.*	Agreement on the summation rules was summarized in Eric Blischke's email to the LWG dated June 30, 2006 and John Toll's email to Eric Blischke dated July 6, 2006.
Dietary composition	EPA has provided general comments on dietary composition in its comments on the PRE. In addition, an approach was developed for looking at a range of diets for the food web model. However, it is unclear how the dietary evaluation of fish and wildlife will be refined to move beyond the conservative dietary assumptions presented in the PRE. *Further discussion is required regarding the dietary assumptions for the evaluation of risk to fish and wildlife.*	EPA comments on PRE dated April 28, 2006. Dietary Matrix for food web model as described below.

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Framework Issue Summary
August 24, 2006

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TZW Evaluation	Transition zone water will be compared to AWQC or other surface water screening values on a point by point basis as a screening step. This is described in the Measurement Endpoint Table. A partitioning analysis will be used as appropriate. *Further discussion to resolve the details and outcomes of the TZW evaluation is required.*	Direction regarding the use of AWQC or other surface water screening values was provided in EPA's comments on the PRG TM and attached measurement endpoint table dated June 30, 2006.
Round 2 Benthic Assessment Interpretation Report:	EPA submitted comments on the Benthic Assessment Interpretation Report on July 6, 2006. It it's comments EPA proposed the following: 1. Apply the alternative set of logistic regression models developed by NOAA on EPA's behalf to the Portland Harbor data set to improve the predictive ability of these tools. 2. Apply the approach recommended by the LWG (Floating Percentile Method) in conjunction with the alternative logistic regression models developed by NOAA as complimentary lines of evidence. Areas where both models predict risk or do not predict risk should be identified as such. Areas where the models are not in agreement should be identified as areas of indeterminate risk. Areas of indeterminate risk should be refined based on other lines of evidence used to evaluate risk to the benthic community. 3. The sediment quality value for total PAHs of 1270 mg/kg proposed by the LWG should not be applied to the data set because it is more than 50 times the concentration of the consensus based probable effects concentration (PEC) of 23 mg/kg developed by MacDonald and Ingersoll. Rather, the LWG recommended floating percentile method should rely on the SQV developed for diesel range hydrocarbons as a surrogate for total PAHs.	EPA direction is summarized it its comments on the Benthic Interpretation Report dated July 6, 2006.
Surface Water Screening Table	A revised surface water screening table was submitted by LWG on May 26, 2006. EPA plans on providing comments on the screening table by August 25, 2006.	EPA will provide direction in comments on screening table.
Spatial Scale of the ERA and Development of Exposure Point Concentrations (EPCs)	The food web model will be calibrated on a site-wide basis. Thiessen polygon maps will be prepared that show exceedances of initial PRGs on a sample by sample basis. AOPCs will be based on exposure area-averaged sediment concentrations. For the benthic community, clams, crayfish, and sculpin, exposure point concentrations will be on a point by point basis. For smallmouth bass, a range of 1/3 to 1 mile that lines up with the contaminant	Agreement on the spatial scale for the food web model was described in John Toll's email to Eric Blischke dated July 6, 2006. As described in EPA's comments on the PRG TM dated June 30, 2006, "Further

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	fate and transport model segments will be considered. For fish species with a large home range, EPCs will be developed on a site-wide basis. *Further discussion between EPA and the LWG is required to agree on calculation of appropriate exposure point concentrations for other ecological receptors.*	discussion between EPA and the LWG is required to agree on calculation of appropriate exposure point concentrations for each line of evidence."
Identification of Seeps to be evaluated in ERA	EPA has identified the following seeps for evaluation: Exxon Mobil, Outfall 22C, Brix Maritime, Gunderson (Areas 2 and 3)	EPA is providing direction herein.
Human Health Risk Assessment		
Transition Zone Water Screening	A risk characterization for human health for (TZW) will not be done in the Round 2 Report. Rather, TZW should be screened on a point-by-point basis against the preliminary PRGs as described below. (a) Protection of Surface Water – To ensure protection of surface water as potential future source of drinking water, PRGs developed for surface water should be applied to transition zone water. Relevant PRGs to be used include the federal Safe Drinking Water Act Maximum Contaminant Levels (SDWA MCLs) and EPA Region 9 residential and industrial drinking water PRGs. The fact that neither of these values includes dermal exposure and/or inhalation will need to be discussed as an uncertainty. (b) Potential Risks from Ingestion of Crayfish and Bivalves To ensure protection of human health from consumption of crayfish and bivalves that may bioconcentrate or bioaccumulate contaminants in transition zone water, the results of the transition zone water sampling should be compared to human health AWQC (based on a biota consumption rate of 17.5 g/day) as a surrogate for uptake of contaminants into bivalves and crayfish. This comparison should be performed for all chemicals detected in transition zone water. In areas where transition zone water is unavailable, partitioning factors should be applied to sediment and the resulting pore water concentrations compared to human health AWQC (based on 17.5 g/day) as a surrogate for uptake of contaminants into bivalves and crayfish.	EPA Direction on screening TZW is provided in its comments on the PRG Technical Memorandum dated June 30, 2006.

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	Further discussion to resolve the details and outcomes of the TZW evaluation is required.	
Drinking Water Exposure Scenario	As described in EPA's September 27, 2005 letter, drinking water supply is a designated use for the lower Willamette River. Although EPA has agreed that a risk characterization need not be done in the Round 2 Report for the residential drinking water pathway, PRGs developed for surface water need to consider future drinking water exposure scenarios for residential users and workers. Relevant PRGs to be used include the federal Safe Drinking Water Act Maximum Contaminant Levels (SDWA MCLs) and EPA Region 9 residential and industrial drinking water PRGs (10^{-6} cancer risk and an HQ of 0.1). Surface water data should be screened on a point-by-point basis against these initial PRGs. The fact that neither of these values includes dermal exposure and/or inhalation of volatiles will need to be discussed as an uncertainty.	EPA provided direction in its letter dated September 27, 2005 and in its comments on the PRG Technical Memorandum dated June 30, 2006.
Application of ARARs (MCLs, AWQCs)	MCLs and Water Quality Criteria (WQC) should not be referred to as ARARs in the Round 2 Report	EPA provided direction in its comments on the PRG Technical Memorandum dated June 30, 2006.
Ingestion of Bivalves	As stated in EPA's December 2, 2005 Data Gaps Memo, the risk from consumption of bivalves must be characterized in the Round 2 Report and the human health risk assessment (HHRA). This determination is based on the known consumption of bivalves by divers and transients within Portland Harbor and because EPA considers bivalves a resource that should be protected for human consumption now and in the future. Individual bivalve composite results should be utilized to evaluate this exposure pathway based on appropriate bivalve consumption rates, including 18 g/day. Initial PRGs developed for sediment and transition zone water must also consider the human consumption of bivalves.	EPA provided direction in its December 2, 2005 Identification of Round 3 data gaps memo and in its comments on the PRG Technical Memorandum dated June 30, 2006.
Diver Exposure Scenarios	A risk characterization for divers should also be included in Section 8 of the Round 2 Report. Further discussion is required to finalize the exposure factors for the diver exposure scenario.	Discussions on the application of the diver scenario are ongoing.
Development of Exposure Point Concentrations	Surface water data and transition zone water should be screened on a point-by-point basis against these initial PRGs. Sediment data should be screened as described in the approved	EPA provided direction in its comments on the PRG Technical Memorandum dated June 30, 2006.
Supplemental Guidance on early life stage exposures	Further discussion required; not considered critical to Round 2 Report.	
PBTs in Breast milk	Further discussion required; not considered critical to Round 2 Report.	

Framework Issue Summary
August 24, 2006

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Riparian Soil	Not a viable exposure pathway for human receptors.	
Food Web Model		
Linkage between Fate and Transport and Hydrodynamic Sedimentation Modeling	Agreed to timeframe for linking up models. Further discussion is required on the logistics of linking up models.	Approach was summarized in an email from Carl Stivers to John Marsh dated June 13, 2006 and to Eric Blischke and Chip Humphrey dated August 4, 2006.
Finalization of modeling matrix	Updated modeling matrix presented at June 6th meeting. Line 3, column E should have an "X"	Approach was summarized in an email from Carl Stivers to John Marsh dated June 13, 2006.
Fish to be Modeled	EPA and the LWG agreed to model the following fish species: Clams, crayfish, sculpin, carp, sucker, smallmouth bass and northern pikeminnow. For the benthic community, three compartments will be considered: Epibenthic (crayfish), filter feeder (clam) and small detritivore.	The fish species were agreed to at a June 6, 2006 meeting between EPA and the LWG. Agreement on the benthic compartments is described in an email from Eric Blischke to the LWG dated June 30, 2006.
Chemicals to be Modeled	Agreed to perform initial modeling on PCBs, dioxins and DDX. If time allows, the food web model will also consider chlordane. For other chemicals, PRGs will be based on BSAFs. *Further discussion of the development of BSAFs is required.*	Agreement on the chemicals to be modeled in the Round 2 Comprehensive Report is described in John Toll's email to Eric Blischke dated July 6, 2006.
Modeling Language	EPA and the LWG agreed to utilize both visual basic and excel spread sheet versions of the food web model. The two model versions are currently producing consistent results. Finalization of parameters will take place of the next 6 - 8 weeks to meet the Round 2 Report schedule.	Agreement on the two modeling languages is described in an email from Eric Blischke to the LWG dated June 30, 2006.
Dietary Matrix and other Modeling Parameters	EPA and the LWG agreed to consider a range of certain model parameter estimates (dietary matrix, average water temperature, average body weights, average lipid contents, K_{ow}s and average sediment and water concentrations) and run Monte Carlo simulations. This information will be used to support a sensitivity analysis; probability distributions on model outputs will not be produced. A table of parameter ranges will be developed by LWG for a quick agency review (~one-day turnaround).	Agreement on the dietary matrix and how ranges of parameters will be addressed is summarized in John Toll's email to Eric Blischke dated July 6, 2006.
Spatial Scale	See above discussion on spatial scale of the ERA.	See above discussion on spatial scale of the ERA.
Performance Goals	EPA and the LWG agreed that an order of magnitude was a good initial expectation. The results of the sensitivity analysis will be used to identify	Performance goals were agreed to at a June 6, 2006 meeting between EPA

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	approaches for improving model performance.	and the LWG.
Surface Area Weighted Averages	EPA and the LWG agreed to consider a range of average sediment concentrations (See Above).	See above
Other		
Project Schedule	EPA and the LWG management team developed a range of target dates for the major project milestones based on various assumptions. The range between the two schedules (2010 ROD, 2012 ROD) reflects some of the factors that could impact the schedule, and highlights the management challenges ahead. Schedule delays could result from submittal of poor quality documents, an expanded scale and scope of sampling for data gaps, slow data turnaround from labs, additional review/response and negotiation time, and administrative processes for the proposed plan and ROD. The goal of the project management team is to manage the project to meet the first schedule (2010 ROD), and to evaluate and take advantage of any opportunities to shorten the schedule further. The near-term goal is to manage development of a high quality Round 2 report and completion of Round 3A and 3B data gathering over the next 18 months to avoid delays in submitting the draft RI and baseline risk assessment reports. During that time the project managers will also be working to ensure continued progress of other ongoing work (including food web modeling, fate and transport and hydrodynamic modeling) and evaluating opportunities to accelerate appropriate elements of the Feasibility Study. The EPA/LWG project management team will have a clearer, more definitive project schedule when we have reached resolution on the Round 3B scope of work designed to fill the project data gaps presented in the Round 2 Report. We should finalize the Round 3B scope of work with EPA's approval of the Round 3B FSPs (6/07 or 12/07). As discussed at the check-in meeting, it is critical that the Round 2 report be objective and transparent, with no major “surprises”, since it is the key to identifying Round 3B data gaps and getting the field work underway.	The schedule projections are described in Chip Humphrey’s June 28, 2006 email to LWG and MOU Partners.
Lamprey and Sturgeon	The following lamprey and sturgeon sampling will be conducted in Round 3A : a) Collect ammocoetes from the Portland Harbor study area, and perform chemical analysis on the whole body tissues. Results of the	Discussions are ongoing

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	measured tissue residues in ammocoetes should be compared to whole body tissue based toxicity reference values as a screening level evaluation of ecological risk. b) Collect live ammocoetes from a relatively uncontaminated area. And perform water column toxicity tests to evaluate the sensitivity of lamprey to contaminants to the sensitivity of other fish species c) Collect sub-adult sturgeon (i.e. non-breeding) whole body tissue samples from the lower Willamette River within the study area. Compare measured tissue residues in the sturgeon to whole body tissue based toxicity reference values as a screening level evaluation of ecological risk. EPA is developing a set of objectives for the lamprey and sturgeon studies. Tentative agreement to have fish subgroup work on development of FSPs for three studies	
Round 3A vs. 3B	The LWG has agreed to classify all outstanding data gaps into 3A or 3B. 3A: • Sediment Traps (Draft FSP submitted) • Surface Water (Draft FSP submitted) • Upstream/downstream sediment to support site boundary, background, recontamination level determinations; and downstream extent of COIs migrating from the Study Area • Juvenile Lamprey • Pre-breeding Sturgeon • Additional Transition Zone Water (N&E – under discussion • MNR Sampling 3B: • Sediment for AOPC Delineation • Additional FS Cores • Final Background Sediment/Surface Water • TZW: SPMDs	3A/3B construct agreed to at May 23, 2006 meeting between EPA and the LWG.

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	• TZW: In-situ Bioassays • Sediment Toxicity Bioassays • Sediment Bioaccumulation Tests • Multiplate Invertebrate Tissue • Additional Clams or Mussels • Adult Sturgeon • Adult Lamprey • Crayfish • Sculpin • Smallmouth Bass • Pikeminnow, crappie, LS sucker • Gut contents - sucker, bass, pikeminnow, sturgeon (linked to fish tissue data collection efforts) • Fish Lesions (linked to fish tissue data collection efforts) • Zooplankton • Bird/Fish Eggs • Riparian Soil	
Transition Zone Water	Transition Zone Water was sampled in the fall of 2005. The Round 2 TZW characterization report was received on August 7, 2006. TZW sampling will likely not be pursued for 2006. Further discussion of the risk framework for TZW is required.	Discussions are ongoing
Report Outline/CSM	EPA and the LWG have reached agreement on the outline to the report and the information that must be considered in the Site Conceptual Model.	EPA comments on report outlined provided in June 2, 2006 email from Eric Blischke to LWG.
Upland Integration	AOPC CSM and Stormwater discussions have highlighted need for upland integration	Discussions are ongoing