



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
5 POST OFFICE SQUARE – SUITE 100
BOSTON, MASSACHUSETTS 02109-3912

MEMORANDUM

DATE: See E-Signature Block Below

SUBJ: **Action Memorandum** - Approval for a Non-Time-Critical Removal Action at the Lower Neponset Superfund Site, Boston and Milton, Suffolk/Norfolk County, Massachusetts

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TO: John W. Busterud, Assistant Administrator
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I. PURPOSE

The purpose of this Action Memorandum is to request and document approval of the non-time-critical removal action (NTCRA) under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. §§ 9601 et seq., described herein, for the Lower Neponset River Superfund Site (the “Site”), located in Boston and Milton, Massachusetts. The proposed NTCRA addresses the most upstream one-mile reach of the Site, from the Neponset River confluence with the Mother Brook downstream to the Tileston & Hollingsworth Dam (T&H Dam) (the “Phase 1 Reach”). This Action Memorandum also requests and documents the approval of exemptions from the \$2 million and 12-month statutory limits, which would apply in the event the NTCRA is performed as a fund-lead action by the United States Environmental Protection Agency (EPA). The NTCRA is estimated to cost approximately \$78.6 million.

The overall objectives of this NTCRA are to abate and control a time-sensitive threat posed by the current conditions at the Site, including the presence of highly contaminated and mobile source material in the Phase 1 Reach and the potential uncontrolled and catastrophic release of hazardous substances that would result from failure of the T&H Dam, and to mitigate human health and ecological risks associated with polychlorinated biphenyls (PCBs) and other hazardous substances identified as Contaminants of Potential Concern (COPCs) in sediment and floodplain soil within the Phase 1 Reach of the Site.

Consistent with EPA policy, the proposed NTCRA is an early action that is being utilized as part of the overall Site strategy, and is expected to achieve significant risk reduction, address immediate risks to human health and the environment, and control migration of contamination.¹ The action is expected to be complementary and consistent with future remedial actions. While the NTCRA will accelerate the overall Site cleanup by significantly reducing site contamination and facilitating long-term remedial efforts, it is not expected to constitute the complete and final cleanup plan for the Site, which extends an additional 2.7 miles downstream from the end of the Phase 1 Reach. A site-wide remedial investigation and feasibility study (RI/FS) is ongoing to complete the characterization of the nature and extent of contamination at the Lower Neponset River Superfund Site, and to identify whether further response actions will be necessary, following implementation of this NTCRA, to protect human health and the environment. EPA will document the selection of any future remedial action activities in a Record of Decision (ROD).

II. SITE CONDITIONS AND BACKGROUND

City and State: Boston and Milton, Massachusetts
County: Suffolk/Norfolk
EPA ID: MAN000102204
SITE ID. No: 01PX
CATEGORY: Non-Time-Critical

A. Site Description

The Lower Neponset River Superfund Site is an approximately 3.7-mile segment of the Neponset River and associated floodplains,² located in Boston and Milton, Massachusetts. Recognized as the second watershed to be industrialized in the United States, the Neponset River has a complex history of contamination from both point and non-point sources. Used historically

¹ EPA, *Use of Early Actions at Superfund National Priorities List Sites and Sites with Superfund Alternative Approach Agreements* (Aug. 23, 2019), available at <https://semspub.epa.gov/work/HQ/100002212.pdf>.

² For the purposes of this NTCRA, the floodplain is defined by the Federal Emergency Management Agency (FEMA) 100-year floodplain. This is the boundary of the flood that has a 1-percent chance of being equalled or exceeded in any given year, as depicted in FEMA flood maps.

for hydro-powered factories, the Neponset River has been home to a significant number of industrial land use ventures, many of which discharged industrial waste directly into the river. Suspected sources of the accumulated contamination in sediment at the Site include inflowing tributaries, urban stormwater runoff, overland flow, and direct discharges from adjacent sites. In 1955, catastrophic flooding led to multiple dam failures within the 3.7-mile stretch of the Neponset River comprising the Site, which contributed to contaminated sediment being transported downstream into segments of the river comprising the Site and beyond.

The proposed NTCRA addresses the segment of the Site defined as the Phase 1 Reach, which encompasses the most upstream one-mile reach of the Site, from the Neponset River confluence with the Mother Brook, located in the Boston neighborhood of Hyde Park, downstream to the T&H Dam, located in Hyde Park and the Town of Milton.

1. Removal site evaluation

Based upon the results of the previous investigations performed by EPA, the U.S. Army Corps of Engineers, the U.S. Geological Survey, and the Massachusetts Department of Environmental Protection (MassDEP), and data collected as part of the Remedial Investigation for the Site, EPA performed an Engineering Evaluation/Cost Analysis (EE/CA). The EE/CA assessed various options to address highly contaminated sediment and floodplain soil within the Phase 1 Reach that poses an immediate and/or direct risk to human health and the environment, as well as the potential for an uncontrolled release of such contamination from potential failure of the T&H Dam. Additional information on these previous investigations is provided Section II.B.1.a of this Action Memorandum and in Section 2.3 of the EE/CA Report. The EE/CA Report is included in the Administrative Record for this Action Memorandum and is available at <https://semspub.epa.gov/work/01/691456.pdf>.

No previous removal or remedial actions have been undertaken within the Site's boundaries. However, two EPA removal actions about the Phase 1 Reach.³ Furthermore, from 2007 through 2010, MassDEP oversaw a large removal of contaminated sediments in the Mother Brook, a tributary of the Neponset River that feeds into the Site. Additional information on these response actions is presented in Section 2.2.2 of the EE/CA Report. EPA is currently conducting the RI/FS for the Site.

2. Physical location

The Site is an approximately 3.7-mile segment of the Neponset River extending from the confluence of the Neponset River and the Mother Brook, located in the Boston neighborhood of

³ These EPA removal actions include the ongoing removal action at the Riverside Square PCB Site and the Lewis Chemical Site, which was completed in October 2024.

Hyde Park, downstream to the Walter Baker Chocolate Dam in the Boston neighborhood of Dorchester and the Town of Milton. The section of the Site that is the subject of this NTCRA is defined as the Phase 1 Reach, which encompasses the most upstream one-mile reach of the Site, from the Neponset River confluence with the Mother Brook downstream to the T&H Dam, located in the Boston neighborhood of Hyde Park and the Town of Milton. A Site overview figure is provided in Attachment 1.

3. Site characteristics

The Site contains a portion of an urban river, bordered by residential, commercial, industrial, and public land, including the Neponset River Greenway, and is used daily by the surrounding communities. Several active kayak and canoe launches are utilized along the Site. The Lower Neponset River channel ranges from approximately 40 feet to 300 feet wide and comprises an estimated 40 acres. The area surrounding the Site has a high population density, with approximately 19,000 people living within 0.5 miles of the Phase 1 Reach, and approximately 30 residential properties within 250 feet of the Phase 1 Reach.

The Site is located within the Neponset River Watershed. The Neponset River drains approximately 101 square miles of land and flows approximately 29 miles from its headwaters in Foxboro, Massachusetts, into the Neponset River Estuary, downstream of the Site. See Section 2.1 of the EE/CA Report for a summary of the Site's physical setting, including climate, regional and local geology, sediment profile, hydrology and hydrogeology, and ecological setting.

The T&H Dam is a key characteristic of the Phase 1 Reach. The T&H Dam impounds water and sediment, including contaminated sediment, that is upstream of the dam. The T&H Dam is not currently used for active flood control and the gates do not hold stage (i.e., the water level upstream of the dam cannot be controlled or maintained at its target elevation) due to significant deterioration. A 2021 inspection of the T&H Dam concluded that the dam is in "Poor Condition," due to the presence of significant structural, operational, and maintenance deficiencies. Under Commonwealth of Massachusetts Dam Safety regulations (Chapter 302, Code of Massachusetts Regulations (CMR), Section 10.00), the dam is classified as an intermediate-sized, Significant Hazard Potential (Class II) dam because failure of the dam may result in property damage and possible loss of life. A review of documents regarding the safety and stability of the T&H Dam can be found in Appendix C of the EE/CA Report.

4. Release or threatened release into the environment of a hazardous substance, or pollutant or contaminant

EPA has documented the presence of hazardous substances, as defined by Section 101(14) of CERCLA, 42 U.S.C. § 9601(14), including PCBs, dioxins/furans, pesticides, metals, cyanide, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), and asbestos,

in sediment and floodplain soils within the Phase 1 Reach of the Site. Hazardous substances are present above background area concentrations throughout the Site.

The extent of contamination in sediment and floodplain soil within the Phase 1 Reach is summarized in Section 2.4 of the EE/CA Report. Based upon the extent and level of risk associated with PCBs throughout the Phase 1 Reach, PCBs are the primary Contaminants of Concern (COCs). Streamlined Risk Evaluations performed as part of the EE/CA concluded that PCBs in the Phase 1 Reach pose an unacceptable risk to human and ecological receptors from exposure to contaminated sediment and floodplain soil. The risk evaluations can be found in Appendix D of the EE/CA Report. Other hazardous substances are also present in sediment and floodplain soil in the Phase 1 Reach at levels above human health and ecological screening levels, and have been identified as COPCs and may pose a risk to human health and the environment.⁴ EPA has determined that the COPCs are largely co-located with PCBs in sediment and floodplain soil, and that focusing on PCBs in the Phase 1 Reach NTCRA will reduce any additional risk presented by co-located COPCs.

Potential sources of PCBs to the Phase 1 Reach of the Site include historical operations along the Neponset River in the Phase 1 Reach, along the Mother Brook, and along the Neponset River upstream of the confluence with Mother Brook. Data collected as part of previous investigations suggest that major sources of PCBs to the Lower Neponset River are from the lower Mother Brook, and that releases began prior to the early 1950s. Catastrophic dam failure caused by flooding in 1955 likely released contaminated sediment downstream throughout the length of the Site. Data collected in 2023 in the Phase 1 Reach as part of the Remedial Investigation of the Site support the conclusions drawn from previous investigations. In addition, the 2023 investigations, particularly when considered alongside data collected at the Lewis Chemical Removal Site, indicate that there were significant releases of PCBs and COPCs from the

⁴ As part of the EE/CA, an evaluation was conducted using the full Phase 1 sediment data to determine whether contaminants with elevated concentrations in sediment are likely to remain in the Phase 1 Reach following implementation of the removal action. Dioxins/furans were not included because based on an evaluation of Phase 1 data, EPA determined that focusing on PCBs for the EE/CA would incorporate areas with elevated levels of dioxins and furans. For the purposes of this evaluation, which can be found in Appendix E of the EE/CA Report, COPCs were identified as analytes for which three parameters were met: (1) detected in the Phase 1 Reach in 5% or more of samples; (2) present at concentrations at or above the maximum concentration in background area sediment; and (3) present at or above human health and/or ecological project action limits. Project action limits for sediment were selected based on the lower of the human health and ecological based levels – with human health levels based on EPA regional screening levels for residential soil (updated in November 2024) based on a non-cancer hazard quotient of 0.1 and a target cancer risk level of 1E-06, and ecological levels based on EPA Region 4 ecological screening values for freshwater sediment. This evaluation identified 46 COPCs. See Appendix E of the EE/CA Report. For the purposes of this Action Memorandum, COPCs include dioxins/furans and those 46 analytes identified in Appendix E. Note that although such analytes were screened based on background concentrations and ecological and human health project action limits, a baseline risk assessment has not been completed for the purposes of this NTCRA and will be completed as part of the RI/FS for the Site.

historical operations of the Lewis Chemical Corp. facility into the Phase 1 Reach.⁵ Additional details on potential sources of contamination can be found in Section 2.4 of the EE/CA Report.

The Phase 1 data and Hydraulics and Sediment Stability Analysis, which can be found in Appendix B of the EE/CA Report, indicate that PCBs and COPCs in sediment are mobilizing downstream during normal and high flow conditions. There are continuing releases of PCBs and COPCs from historically contaminated bottom sediment in the Phase 1 Reach. The former Lewis Chemical facility depositional area and the T&H Dam impoundment, in particular, contain highly contaminated source material, with concentrations of total PCBs within the T&H Dam impoundment area detected at up to 11,000 mg/kg. The contaminated sediment in these areas is continuing to mobilize in the water column and while much of the contaminated sediment is impounded behind the T&H Dam, some contaminated sediment continues to migrate downstream of the Phase 1 Reach. In 2002, U.S. Geological Survey measured the sediment thickness in the Lower Neponset River. The maximum sediment thickness was 9.7 feet, on the right side of the river (looking downstream) upstream of the T&H Dam. A 2021 inspection of the T&H Dam similarly found the thickest sediment to be located on the right side of the river upstream of the dam; however, the 2021 inspection found that the maximum sediment thickness decreased to 4.8 feet. The large reduction in sediment thickness clearly indicates an ongoing release via erosion of highly contaminated sediment, which is being transported downstream and polluting the rest of the river.

Additionally, the potential failure of the T&H Dam threatens a catastrophic and uncontrolled release of the highly contaminated sediment and floodplain soil downstream. The T&H Dam has been identified as being in Poor Condition, as defined by the Commonwealth of Massachusetts Dam Safety regulations, due to significant structural, operational, and maintenance deficiencies and its inability to maintain the headwater elevation. As further described in Section III below, the time-sensitivity of the threats posed by the Phase 1 Reach is due to a confluence of factors: toxicity of the contaminants in the sediment, the increased risk of floods and intensity of rain events, and the poor condition of the dam, which suffers from several deficiencies that compound its vulnerability to dam failure during major storm events.

The presence of PCBs and COPCs in the Phase 1 Reach and the current Site conditions constitute a release or threat of release of hazardous substances into the environment that may present an imminent and substantial endangerment to public health or welfare. The Site conditions meet the general criteria for a removal action, as set forth in 40 C.F.R. § 300.415(b)(1), in that “there is a threat to public health or welfare of the United States or the environment,” and in consideration of the factors set forth in 40 C.F.R. § 300.415(b)(2), as

⁵ The former Lewis Chemical Corp. facility is located on Fairmount Court in Hyde Park and abuts the Phase 1 Reach. A time-critical removal action was performed at this location from 2023-2024. The Lewis Chemical Removal Site is further discussed below.

described in Section III below. Further, the conditions at the Site present a time-sensitive threat that is appropriately addressed through a removal action.

5. National Priority List status

On September 9, 2021, EPA proposed the Site to the National Priorities List (NPL). On March 16, 2022, the Site was included in the final listing of NPL sites (Federal Register, Vol. 87, No. 51).

6. Maps, pictures and other graphic representations

A Site overview figure is provided in Attachment 1 of this Action Memorandum. Additional figures can be found in the EE/CA Report. Updated EE/CA Report Figures 3, 7, 9, and 11 can be found in Attachment 6 of this Action Memorandum.

B. Other Actions to Date

1. Previous actions

a. Investigations

Starting in 2001, state and federal agencies, including EPA, U.S. Army Corps of Engineers, the U.S. Geological Survey, and MassDEP performed investigations of sediment and floodplain soil at the Site. The following is a summary of some of the previous investigations taken at the Site. Additional information can be found in Section 2.3 of the EE/CA Report, included in the Administrative Record.

- **U.S. Army Corps of Engineers – 2001**

Two composite sediment cores samples were collected and analyzed. Results showed elevated concentrations of PCBs in the sediment. Metals, petroleum hydrocarbons and polycyclic aromatic hydrocarbons were also detected.

- **U.S. Geological Survey – First Study: 2004 Report**

Analytical results from the 2002 and 2003 sampling events showed PCB Aroclor concentrations as high as 78.3 mg/kg upstream of the Walter Baker Chocolate Dam, 68.9 mg/kg within the braided channel,⁶ and 229.3 mg/kg upstream of the T&H Dam. The data

⁶ The Walter Baker Chocolate Dam and the braided channel are features of the Site located downstream of the Phase 1 Reach.

indicated that a major source was likely on or near the confluence of the Neponset River and the Mother Brook.

- **U.S. Geological Survey – Second Study: 2011 and 2014 Version 1.1**

Based on the conclusions of the 2002-2003 study, additional samples were collected in 2002 and between 2004 and 2006. The abstract for the Second Study states: “The data suggest that widespread PCB contamination of the lower Neponset River originated from Mother Brook, a Neponset River tributary, starting sometime around the early 1950s or earlier. In 1955, catastrophic dam failure caused by flooding likely released PCB-contaminated sediment downstream and into the Neponset River Estuary. PCBs from this source area likely continued to be released after the flood and during subsequent rebuilding of downstream dams. Today (2007), PCBs are mostly trapped behind these dams; however, some PCBs either diffuse or are entrained back into the water column and are transported downstream by river water into the estuary or volatilize into the atmosphere.”

- **MassDEP – 2013 Sampling**

Sediment core sampling was performed at four areas along the Neponset River, both downstream and upstream of the confluence of the Neponset River and the Mother Brook. Sampling results show that PCB concentrations were highest downstream of the Mother Brook confluence with the Neponset River.

- **EPA – 2017 and 2018 Sampling Events**

Analytical results for PCBs (as Aroclors and congeners) show that all the samples collected within the Lower Neponset River Superfund Site had concentrations above reference/background levels. Total PCB congener concentrations were as high as 1,100 mg/kg in the vicinity of the Lewis Chemical Removal Site, 11,000 mg/kg upstream of the T&H Dam, 47 mg/kg within the braided channel, and 70 mg/kg upstream of the Walter Baker Chocolate Dam.

b. Response Actions

Several response actions have been conducted both upstream of and adjacent to the Site along the Phase 1 Reach, including:

- Two sites with a history of PCB contamination are located on the Neponset River upstream of the confluence of Mother Brook and the Neponset River, including the Canton Airport site (located approximately 6 miles upstream of the confluence) and the Norwood PCBs Superfund Site (located approximately 7.5 miles upstream of the confluence). Both sites have been remediated and are no longer considered to be ongoing sources of PCB contamination in the Neponset River.

- In 2007-2010, response actions performed pursuant to the Massachusetts Contingency Plan, under the oversight of MassDEP, addressed PCB contamination adjacent to and within the Mother Brook (from the area adjacent to the former L.E. Mason Company facility downstream to approximately 50 feet upstream of the confluence of the Mother Brook and the Neponset River); additional response actions performed under the Massachusetts Contingency Plan addressed upland properties along the Mother Brook.
- Between 2008 and 2010, response actions performed under the oversight of MassDEP at the former Bay State Paper Company facility, located at 892 River Street in the Boston neighborhood of Hyde Park, included off-site disposal of transformers, railroad ties, concrete rubble, sluiceway sludge material, and soil contaminated with dioxin and PCBs.
- From 2023-2024 a time-critical removal action was performed at the former Lewis Chemical Corp. facility on Fairmount Court in Hyde Park. The Lewis Chemical Removal Site abuts the Phase 1 Reach. The removal action included the excavation and off-site disposal of soils contaminated with PCBs, metals, and VOCs. Releases into the Neponset River were not addressed as part of this removal action.
- In October 2024, EPA began performing a time-critical removal action at the Riverside Square PCB Site, which is located in the primarily residential Riverside Square area of Hyde Park abutting the Phase 1 Reach. The removal action, which includes the excavation and off-site disposal of soils contaminated with PCBs and metals, is ongoing.

Additional details on these response actions are included in Section 2.2.2 of the EE/CA Report.

2. Current actions

EPA is currently performing the RI/FS for the Site. In 2023, EPA began investigations in the Phase 1 Reach, both as part of RI activities for the Site and to collect data to support the EE/CA. These investigations included, among other things, geospatial data collection, historical and cultural resource surveys, ecological evaluations and wetlands survey, and sampling and analysis of environmental media for a range of constituents.

In June 2025, EPA completed an EE/CA in support of a NTCRA proposed by this Action Memorandum. The EE/CA evaluated, based on cost, effectiveness, and implementability, various response action alternatives to address risks posed by PCBs and COPCs in the Phase 1 Reach of the Site, and presented a recommended cleanup plan. The EE/CA Report was issued for a 30-day public comment period on June 13, 2025. The public comment period was subsequently extended to August 1, 2025. EPA carefully considered all comments submitted during the public comment period. EPA's responses to the comments are provided in the Responsiveness Summary attached herein (Attachment 2).

The cleanup action selected in this Action Memorandum, which addresses the Phase 1 Reach of the Site, does not constitute the complete and final cleanup plan for the Site. Additional response actions, either removal or remedial, may be considered as more information regarding the Site conditions become available. The NTCRA is expected to be complementary and consistent with the long-term remedial response at the Site.

As described above, EPA is currently conducting a time-critical removal action at the Riverside Square PCB Site, which abuts the Phase 1 Reach along the northern bank of the Neponset River. The Riverside Square PCB Site is located within the Riverside Square area in the Boston neighborhood of Hyde Park and is located in a primarily residential area. Removal action activities began in 2024 and include excavation and off-site disposal of soils contaminated with PCBs and metals. This NTCRA includes remediation of riverbank areas bordering the Riverside Square PCB Site as well as sediment within the general vicinity.

C. State and Local Authorities' Roles

1. State and local actions to date

In 2008, the Massachusetts Department of Fish and Game requested that MassDEP, the Division of Marine Fisheries, and the Massachusetts Department of Conservation and Recreation (DCR) review reports completed by the U.S. Geological Survey on the Lower Neponset River. In 2008, MassDEP completed an evaluation of the U.S. Geological Survey reports, collected and evaluated additional sediment data upstream and downstream of the confluence of Mother Brook and the Neponset River (as described above in Section II.B), and completed a preliminary evaluation of technical reports submitted for PCB waste sites within the Neponset River Basin. As described in Section II.B above, MassDEP also oversaw a number of investigations and response actions taken at properties abutting the Site and along the Mother Brook, from which contaminants may have been released into the Phase 1 Reach.

The Massachusetts Department of Public Health placed a public health fish consumption advisory for the Neponset River between the Hollingsworth and Vose Dam in Walpole and the Baker Dam in Boston (an area that includes the Site) due to the presence of PCBs and dichlorodiphenyltrichloroethane, commonly known as DDT.

On October 27, 2015, MassDEP requested that EPA evaluate the Neponset River for potential listing on the NPL. On June 25, 2021, then Governor Charles Baker requested EPA propose the Lower Neponset River for inclusion as a National Priorities List site.

EPA continues to consult with various stakeholders under the umbrella of Executive Office of Energy and Environmental Affairs, particularly MassDEP, DCR, and the Division of Ecological Restoration regarding the ongoing RI/FS and impending NTCRA.

MassDEP has provided EPA with a letter of concurrence regarding the NTCRA (Attachment 3).

2. Potential for continued State/local response

EPA has taken the lead on CERCLA response activities at the Site. The State and local authorities are expected to maintain a high level of interest in the Site throughout and beyond the NTCRA. MassDEP is expected to review and comment on the upcoming RI/FS activities, as well as the final selection of a remedial action for the Site. EPA will coordinate with DCR, the owner of the T&H Dam and multiple properties along the Phase 1 Reach, regarding this action. Local governments are expected to remain highly involved during the design and implementation of the cleanup, both for the NTCRA and for any future remedial action at the Site. EPA expects to work cooperatively with city of Boston and the town of Milton regarding access to properties owned by the municipalities near the Phase 1 Reach during implementation of this NTCRA and future response actions.

III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

As described below, the conditions at the Site meet the criteria for a removal action as set forth in 40 C.F.R. Section 300.415(b)(1) in that “there is a threat to public health or welfare of the United States or the environment,” and in consideration of the factors set forth in 40 C.F.R. Section 300.415(b)(2), as described below.

A. Section 300.415(b)(2)(i) – Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants

Previous and recent investigations at the Site demonstrate that there are currently actual and potential exposures from PCBs and COPCs to human populations, animals, and the food chain at and near the Phase 1 Reach. More specifically, investigations reveal that PCBs are widespread and at high concentrations throughout the Phase 1 Reach, including in sediment, floodplain soil, surface water, pore water, and fish tissue. In addition, other hazardous substances have been found in the Phase 1 Reach, including dioxins/furans, pesticides, metals, cyanide, VOCs, SVOCs, and asbestos. Among detected constituents in the Phase 1 Reach, select PCB congeners, dioxins/furans, metals, pesticides, and SVOCs had a relatively high percentage of sediment samples with concentrations above human health and/or ecological project action limits.

The Phase 1 Reach segment of the Lower Neponset River is designated by the Commonwealth of Massachusetts as a Class B surface water body (314 CMR 4.06). Class B waters are designated for primary and secondary contact recreation and are a habitat for fish, other aquatic life, and wildlife, for their reproduction, migration, growth, and other critical functions. The Phase 1 Reach is bordered by a nearly continuous forested riparian corridor, which provides habitat for a variety of bird and mammal species. Certain constituents present in the Phase 1 Reach, including metals, pesticides, PCBs, and dioxins, have the potential to biomagnify, which means that they have the potential to increase concentration as they are transferred from one link in the food chain to another. Animals that are currently or potentially exposed to PCBs and COPCs in the Phase 1 Reach include aquatic invertebrates and fish, infaunal benthic invertebrates, aquatic-dependent birds and mammals foraging on food items within the river, and terrestrial birds and mammals foraging on food items within riparian areas. Fish tissue data from the Phase 1 Reach document the presence of PCBs in fish tissue.⁷

There is a high population density surrounding the Phase 1 Reach. According to U.S. Census data, there are 2,115 people living within 0.1 miles of the Phase 1 Reach, and there are approximately 30 residential properties within 250 feet. Recreational activities within the Phase 1 Reach include walking, biking, kayaking, and canoeing. Swimming and wading are not recommended but are not prohibited. Access to the river is unrestricted, except in areas where private properties prevent access to the river. Large segments of the Phase 1 Reach abut recreational and/or conservation land. People engaging in recreational activities in the Phase 1 Reach may be exposed to contaminants in floodplain soil, surface water, and sediment via ingestion and dermal contact. Fishing in the Phase 1 Reach is not prohibited and has been observed throughout the Site. Although the 1995 Massachusetts Department of Public Health fish consumption advisories are still in effect, these advisories may not be followed and anglers (or others) who consume their catch may be exposed to contaminants that have bioaccumulated in fish tissue. Community interviews conducted by EPA in 2022 and 2023 document that some people rely on fish from the river as a food source.

The Streamlined Risk Evaluations performed to support the EE/CA determined that concentrations of PCBs in sediment and floodplain soil pose unacceptable risks to human health and the environment throughout the Phase 1 Reach. The United States Department of Health and Human Services, Agency for Toxic Substances and Disease Registry (ATSDR), and EPA consider PCBs a probable human carcinogen; noncarcinogenic health effects have also been

⁷ Historical fish tissue data (from 2003 and 2005) indicate the presence of PCBs in fish tissue (June 2014), Breault, Robert F., Concentrations, Loads, and Source of Polychlorinated Biphenyls, Neponset River and Neponset River Estuary, Eastern Massachusetts, *U.S. Geological Survey Scientific Investigations Report 2011-5004*, Version 1.1 (June 2014), <https://pubs.usgs.gov/sir/2011/5004/pdf/sir2011-5004.pdf>. EPA collected fish tissue data in 2024 as part of the sitewide Remedial Investigation. A preliminary review of the data indicates that total PCBs (and other hazardous substances) are present in fish tissue at levels exceeding ecological and human health screening levels. This data will be evaluated as part of the RI/FS for the Site.

associated with PCBs (e.g., immune, reproductive, eye and skin effects).⁸ Additional contaminants, identified as COPCs, are present in the Phase 1 Reach at levels at or above Site-specific background concentrations and human health and/or ecological screening levels.⁹ These COPCs are expected to increase cumulative risk to human health and the environment.¹⁰

In addition to current and future potential exposures to PCBs and COPCs within the Phase 1 Reach, contaminated sediment behind the T&H Dam continues to migrate downstream. As discussed above, the maximum measured sediment thickness in the T&H Dam impoundment decreased from 9.7 feet in 2002 to 4.8 feet in 2021, (an over 50% decrease), indicating that contaminated sediment is migrating downstream. There is potential for significantly greater exposure due to the risk of failure of the T&H Dam, which has been determined to be in Poor Condition. In the event of dam failure, there would be an uncontrolled release of contaminated sediment and floodplain soil from the Phase 1 Reach, impacting both the Phase 1 Reach and downstream areas of the Site.

B. Section 300.415(b)(2)(ii) – Actual or potential contamination of drinking water supplies or sensitive ecosystems

There is currently actual and potential contamination from PCBs and COPCs to sensitive ecosystems at and near the Phase 1 Reach. The Neponset River is a protected water body under the federal Clean Water Act.¹¹ On December 6, 2023, EPA completed an ecological reconnaissance of the Site, including the Phase 1 Reach. These reconnaissance activities identified several ecosystems overlapping with the Phase 1 Reach that would be particularly vulnerable to contamination. Findings of this effort are reported in the Site Reconnaissance Summary, which is available in the Administrative Record. The Site Reconnaissance Summary

⁸ EPA, *Integrated Risk Information System Chemical Assessment Summary: Polychlorinated biphenyls (PCBs)*, CASRN 13336-36-3 (Oct. 1, 1996), https://iris.epa.gov/static/pdfs/0294_summary.pdf; U.S. Department of Human Health and Services, ATSDR, *Toxicological Profile for Polychlorinated Biphenyls (PCBs)* (Nov. 2000), <https://www.atsdr.cdc.gov/ToxProfiles/tp17.pdf>; and ATSDR, *Addendum to the Toxicological Profile for Polychlorinated Biphenyls* (Apr. 2011), https://www.atsdr.cdc.gov/toxprofiles/pcbs_addendum.pdf.

⁹ EPA performed a qualitative analysis, included in Appendix E, which evaluates other contaminants, identified as contaminants of potential concern (COPCs), in the Phase 1 Reach and provides a supporting line of evidence to determine what compounds should be retained for further evaluation in future risk assessments. The analysis in Appendix E screens COPCs in comparison to Site-specific background concentrations identified in sediment and human health and/or ecological screening levels.

¹⁰ The streamlined risk evaluation performed to support the EE/CA focused on PCBs. The streamlined risk evaluation concluded that the risk at the Site posed by PCBs warrant the performance of a removal action, and therefore, risks from COPCs were not evaluated to support the EE/CA. Risks to human health and the environment from these COPCs will be fully evaluated in a baseline risk assessment to support the long-term remedial action. These COPCs are largely co-located with PCBs in the Phase 1 Reach and the NTCRA is expected to reduce risks from these COPCs. For more information, see Section 2.4.2 and Appendix E of the EE/CA.

¹¹ The Neponset River constitutes “waters of the United States,” as that term is used in 33 U.S.C. § 1362(7).

documented the presence of aquatic vegetation and wildlife in the riverine environments of Phase 1 Reach, demonstrating the presence or evidence of use for 22 species of ecological receptors. This indicates that Phase 1 Reach supports a diverse ecosystem, including species that may also be Federal species of concern and may be particularly sensitive to environmental change and site contamination.

To supplement the information obtained for the Site Reconnaissance Summary and to further assess potential ecological impact from contamination in the Phase 1 Reach, an Information for Planning and Consultation (IPaC) assessment was completed by a trained EPA ecological risk assessor for the Site (see IPaC Report, Sept. 16, 2025). Overall, the IPaC assessment supports the data presented in the Action Memorandum and the in the Site Reconnaissance Summary but it also provides additional information about ecosystem protection needs directly in the footprint of the Phase 1 Reach and the immediate vicinity.

The IPaC assessment reviewed threatened and endangered species that may overlap with the Phase 1 Reach and identified the following species: Northern Long-eared Bat (Endangered); Tricolored Bat (Proposed Endangered); Roseate Tern (Endangered); and the Monarch Butterfly (Proposed Threatened). These species necessitate additional ecological risk consideration and present populations may be vulnerable to contamination. The IPaC assessment also reveals 26 bird species that may overlap with the Phase 1 Reach for all or portions of the year that are protected by the Migratory Bird Treaty Act. They are the Bald Eagle, Black-billed Cuckoo, Blue-winged Warbler, Bobolink, Canada Warbler, Cerulean Warbler, Chimney Swift, Eastern Whip-poor-will, Grasshopper Sparrow, Kentucky Warbler, Lease Tern, Lesser Yellowlegs, Long-eared Owl, Pectoral Sandpiper, Prairie Warbler, Prothonotary Warbler, Red-headed Woodpecker, Ruddy Turnstone, Rusty Blackbird, Saltmarsh Sparrow, Scarlet Tanager, Semipalmated Sandpiper, Short-billed Dowitcher, Whimbrel Willet, and Wood Thrush.

The Phase 1 Reach also overlaps with freshwater Palustrine emergent persistent wetlands, both seasonally and permanently flooded. Additionally, the Phase 1 Reach overlaps Palustrine forested systems that support primarily broad-leaved deciduous trees that are seasonally or semi-permanently flooded. The Site Reconnaissance Summary identified Wetland 3 (located on the southeast bank of the Neponset River within the Phase 1 Reach) as having significant ecological value that makes it vulnerable to the contamination present at the Site, especially any contamination mobilizing from the Phase 1 Reach.

C. Section 300.415(b)(2)(iv) – High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate

The Site, including the Phase 1 Reach of the Site, contains a substantial amount of high-level PCB-contaminated sediment and floodplain soils, among other hazardous substances, both at depth and at or near the surface. In surface sediment (0- to 0.5-feet), total PCBs range from 0.11 mg/kg to 437 mg/kg. PCB concentrations greater than 100 mg/kg were measured in surface

sediment at 24 out of 85 sediment core locations throughout the Phase 1 Reach. Figure 3 of the EE/CA Report illustrates the spatial distribution of total PCB congeners in sediment and concentrations by depth interval. In floodplain soil, total PCB congeners were detected in 135 out of 138 samples taken from 109 locations along the Phase 1 Reach during 2023 field investigations. Concentrations were above 25 mg/kg at 15 locations, and above 100 mg/kg at seven of those locations. The maximum concentrations of PCBs in the Phase 1 Reach (173 mg/kg and 145 mg/kg) were detected in surface soil (in the 0- to 1-foot interval). Figure 4 of the EE/CA Report illustrates PCB concentrations in floodplain surface soil.

Data collected at the Site indicate that contaminated materials in the Phase 1 Reach are currently migrating and, if not addressed by this NTCRA, will continue to migrate. Floodplain soil and sediment located near the river's edge and instream are susceptible to erosion and scouring. The Phase 1 data and the Hydraulics and Sediment Stability analysis performed as part of the EE/CA (Appendix B of the EE/CA Report) indicate that PCBs and COPCs in sediment are mobilizing downstream during normal and high flow conditions. During high water events, increases in river velocity create conditions that may potentially result in additional releases of PCBs and COPCs to the Lower Neponset River and downstream of the Site. While elevated levels of hazardous substances reside in sediment and floodplain soil throughout the 3.7-mile extent of the Site, previous investigations have indicated that the highest levels of Site contamination are found in the Phase 1 Reach, which is upstream of and contributes contaminated sediment to the rest of the Site. As discussed above, the maximum sediment thickness behind the T&H Dam decreased by over 50% between 2002 and 2021, indicating that contaminated sediment from the Phase 1 Reach is migrating to downstream areas. In addition, highly contaminated depositional source areas within the Phase 1 Reach have the potential to become fully entrained (i.e., to lift the sediment from the riverbed and become completely suspended in the water thereby transporting sediment downstream) if the T&H Dam fails, resulting in a catastrophic and uncontrolled release of contaminated sediment and floodplain soil downstream.

D. Section 300.415(b)(2)(v) – Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released

Water flows into the Lower Neponset River from the upper segment of the Neponset River and from the Mother Brook. Heavy spring rains and/or summer storms increase stream volume and flow velocity, which may lead to increased scouring and erosion of the river bottom and riverbanks. Site changes or vulnerabilities include weather-related events, such as seasonal changes in precipitation or temperatures and increasing risk of floods and intensity of rain events that may cause contaminated sediments to migrate or be released from areas within the Phase 1 Reach, including to downstream portions of the Site and the Neponset River Estuary. Floods have generally become larger in rivers and streams across the Northeast, and large floods have

become more frequent.¹² These forces may increase the extent of PCB and COPC contamination in the Lower Neponset River. In addition, such factors may contribute to the potential for failure of the T&H Dam, which would result in the uncontrolled release of highly contaminated materials.

According to the Association of State Dam Safety Officials (ASDSO), which collects information on incidents of dam failures in the United States, the leading incident driver for dam failure in the United States was “hydraulic/flooding,” accounting for over 65% of dam failure occurrences recorded in the ASDSO database between 2010 and 2019, indicating that weather conditions contribute greatly to the risk of dam failure. In accordance with Massachusetts Dam Safety regulations in place at the time the T&H Dam was built, the largest flood event that the T&H Dam spillway was designed to safely pass is the 100-year flood, or a flood event with a one percent (1%) chance of occurring or being exceeded in any given year. However, such flood events are becoming more frequent, heightening the risk of dam failure already presented by the deteriorating condition of the T&H Dam. An acknowledgment of the increasing frequency and intensity of flooding is also reflected in the current Massachusetts Dam Safety regulations: while existing dams are required to have spillway systems with a capacity to pass a flow from a 100-year design storm, the spillway system for new dams are required to have a capacity to pass a 500-year design storm flow. 302 CMR 10.14(6). The T&H Dam was most recently inspected in 2021, as required by the Dam Safety regulations, and was determined to be in Poor Condition.¹³ The inspection determined that the T&H Dam can no longer maintain the headwater elevation. ASDSO data indicates that the likeliest primary mechanism for dam failure is overtopping caused by water spilling over the top of a dam, which accounted for over one-third of all dam failures in the United States between 2010 and 2019. In almost all cases of dam failures recorded in the ASDSO database with overtopping as the primary mechanism, “hydraulic/flooding” was noted as the incident driver.¹⁴ The inability of the T&H Dam to maintain headwater elevation increases the potential for overtopping during flooding events, the leading driver and mechanism of dam failure.

Further, multiple additional deficiencies of the T&H Dam compound the risk of dam failure during extreme weather. The 2021 inspection determined that there are significant structural, operational, and maintenance deficiencies, which further illustrates that conditions at the Phase 1 Reach of the Site pose a time-sensitive threat, particularly when taking into consideration the

¹² See EPA, Climate Change Indicators: River Flooding (Aug. 21, 2025), <https://www.epa.gov/climate-indicators/climate-change-indicators-river-flooding>.

¹³ GEI Consultants Inc., *Tileston and Hollingsworth Dam Phase II Inspection and Investigation Report* (2021), available at <https://semspub.epa.gov/work/01/694742.pdf> <https://semspub.epa.gov/work/01/100033633.pdf>.

¹⁴ Association of State Dam Safety Officials, Dam Incident Database (Jan. 6, 2025), <https://damsafety.org/incidents>.

leading causes of dam failure incidents. According to the ASDSO, “deterioration or poor condition” ranks as the fourth leading driver of dam failure incidents. More specifically, deficiencies identified in the 2021 inspection of the T&H Dam reveal additional potential causes for dam failure:

- **Seepage/Internal Erosion** (second leading dam failure incident driver): the inspection revealed erosion of the concrete sill and undermining at the downstream toe of the right concrete sill and right training wall.
- **Malfunction of Equipment/Gate** (sixth leading dam failure incident driver): the inspection revealed electrical equipment deficiencies; mechanical deficiencies; water intake deficiencies; piers and control structures deficiencies; and severe bascule gate deficiencies (for example, operators attempted to lower and raise both the left and right gates during the inspection, but the left gate became stuck due to large timber pieces obstructing its movement).
- Additionally, the inspection identified issues at the T&H Dam that were common primary mechanisms of dam failure incidents, including to **pipng** (third most common), **deterioration of bascule gates** (seventh most common), **erosion** (thirteenth most common), **debris clogging** (eighteenth most common), and **cracking** (nineteenth most common).¹⁵

The condition of the T&H Dam and the nature of the contamination in the Phase 1 Reach, together with weather conditions and their increasing unpredictability, present a confluence of factors that heighten the immediacy of the threat presented by conditions at the Site.

E. Section 300.415(b)(2)(vii) – The availability of other appropriate Federal or State response mechanisms to respond to the release

There are likely no other appropriate Federal, State or local response mechanisms available to respond to this release. In its Letter of Support for the NTCRA, included as Attachment 3, MassDEP stated that it lacks sufficient state resources to address the identified immediate and direct risk to public health and the environment. EPA is continuing to identify potentially responsible parties and will continue working with State and Federal partners to address the PCB and COPC contamination in the Phase 1 Reach.

¹⁵ Association of State Dam Safety Officials, Dam Incident Database (Jan. 6, 2025), <https://damsafety.org/incidents>.

F. Section 300.415(b)(2)(viii) – Other situations or factors that may pose threats to public health or welfare of the United States or the environment

The T&H Dam, if not addressed by this NTCRA, may pose additional threats to public health and the environment. As discussed above, the deteriorating condition of the dam, in combination with the increasing frequency and intensity of flooding events in the region, presents multiple risk factors that have been the leading causes of dam failure in the country. Total PCBs in sediment were detected during 2023 field investigations in the Phase 1 Reach at concentrations up to 2,670 mg/kg, and in previous investigations, were found at levels up to 11,000 mg/kg within the T&H impoundment. Were the dam to fail, highly contaminated material, currently impounded behind the dam, may become fully entrained in the event of dam failure, and be released to downstream areas of the Site and beyond, increasing the risk of exposure of PCBs and co-located COPCs to human and ecological receptors.

Taken together, conditions at the Site—including the risks to human health and the environment presented by contamination in the Phase 1 Reach, the poor condition of the T&H Dam, and the imminent risk that the dam may fail—constitute time-sensitive threats to public health or welfare of the United States or the environment, which the response actions outlined in this Action Memorandum will effectively address.

IV. ENDANGERMENT DETERMINATION

EPA has determined that actual or threatened releases of hazardous substances at this Site, including at the Phase 1 Reach, if not addressed by implementing the response action proposed in this Action Memorandum, may present an imminent and substantial endangerment to public health, welfare, or the environment. EPA's determination is based on the EE/CA, investigations conducted in the Lower Neponset River.

In accordance with the Guidance on Conducting Non-Time Critical Removal Actions Under CERCLA, OSWER Directive 9360.0-34 (August 19, 1993), an endangerment determination is made based on "appropriate Superfund policy or guidance, or collaboration with a trained risk assessor." For this action, a determination by trained EPA risk assessors was made that PCBs in the Phase 1 Reach pose an unacceptable risk to human and ecological receptors from exposure to contaminated sediment and floodplain soil. This determination was based on sampling data collected at the Site and Streamlined Risk Evaluations conducted as part of the EE/CA. Additional detail on the Streamlined Risk Evaluation conducted in support of this NTCRA can be found in Sections 2.5.3 through 2.5.5 and Appendix D of the attached EE/CA Report (Attachment 3). While the risk evaluations performed in support of the EE/CA focused on PCBs, co-located COPCs in sediment and floodplain soil are expected to increase cumulative risk to human health and the environment.

V. EXEMPTION FROM STATUTORY LIMITS

CERCLA § 104(c)(1) and 40 C.F.R. § 300.415(b)(5) state that removal actions funded by the Hazardous Substance Superfund established by 26 U.S. Code § 9507 may not exceed \$2 million or 12 months unless EPA determines that either of the following exemptions apply:

- There is an immediate risk to public health or welfare of the United State or the environment; continued response actions are immediately required to prevent, limit, or mitigate an emergency; and such assistance will not otherwise be provided on a timely basis (the “emergency exemption”); or
- Continued response action is otherwise appropriate and consistent with the remedial action to be taken (the “consistency exemption”).

The proposed removal action is estimated to cost \$78.6 million and take approximately three years and 10 months to complete, exceeding both the \$2 million and 12-month statutory limits. These statutory limits do not apply if the NTCRA is funded by potentially responsible parties. If the action proceeds fund-lead, however, conditions at the Site meet both the criteria for the emergency exemption and the consistency exemption, as further described below.

A. Emergency Exemption

As further described below, conditions at the Site meet the emergency exemption criteria listed in CERCLA § 104(c)(1)(A) and 40 C.F.R. § 300.415(b)(5)(i).

1. There is an immediate risk to public health or welfare or the environment.

PCBs and COPCs in sediment and floodplain soil pose an immediate risk to human health and the environment from exposure to contaminants residential and recreational users of the Phase 1 Reach, which is in a densely populated and highly recreated area. As described in Section III.A., there are currently actual and potential exposures from PCBs and COPCs to human populations, animals, and the food chain at and near the Phase 1 Reach. The Streamlined Risk Evaluations determined that there are unacceptable risks to human health and the environment due to such exposures throughout the Phase 1 Reach. Further, the risk is compounded by the potential for sudden and uncontrolled release of highly contaminated material from failure of the T&H Dam, which is currently rated in Poor Condition.

2. Continued response actions are immediately required to prevent, limit, or mitigate an emergency.

EPA has determined that conditions at the Site—including the risks to human health and the environment presented by contamination in the Phase 1 Reach, the poor condition of the T&H Dam, and the imminent risk that the dam may fail—constitute an emergency. Continued response

actions are immediately required to prevent, limit or mitigate the continuing release of highly contaminated material from the Phase 1 Reach, and the potential for a sudden and uncontrolled release of such contaminated material from failure of the T&H Dam.

Investigations have shown that while the dam impounds a significant amount of contaminated sediment, due to the condition of the dam, contaminated sediment continues to migrate downstream, exacerbating the threats to human health and the environment at the Site. Further the T&H Dam is classified as an intermediate-sized, Significant Hazard Potential dam, under Commonwealth of Massachusetts Dam Safety regulations, because failure of the dam may result in property damage and possible loss of life. As discussed above, the T&H Dam was determined to be in “Poor Condition,” indicating that the dam’s condition presents significant risk to public safety located downstream of the dam due to the presence of significant structural, operational, and maintenance deficiencies. As discussed in Section III.D and F, the deteriorating condition of the dam, in combination with the increasing frequency and intensity of flooding events in the region, presents multiple risk factors that are among the leading causes of dam failure. As previously discussed, failure of the dam would result in the uncontrolled downstream transport of a significant amount of highly contaminated sediment that has accumulated upstream of the dam, which may significantly increase exposure of hazardous substances to human and ecological receptors and complicate long-term remedial efforts at the Site. The response actions outlined in this Action Memorandum will prevent, limit, or mitigate the emergency conditions present in the Phase 1 Reach.

3. Assistance will not otherwise be provided on a timely basis.

There are likely no other appropriate Federal, State or local response mechanisms available to respond to this release. In its Letter of Support for the NTCRA, included as Attachment 3, MassDEP stated that it lacks sufficient state resources to address the identified immediate and direct risk to public health and the environment. Further, if the NTCRA is not performed, remedial action to address these risks is not expected to take place for several years, so assistance in mitigating these risks would not otherwise be provided on a timely basis.

B. Consistency Exemption

As further described below, conditions at the Site meet the criteria for the consistency exemption provided in CERCLA § 104(c)(1)(C) and 40 C.F.R. § 300.415(b)(5)(ii).

1. Continued response action is appropriate.

Consistent with EPA guidance on implementation of the consistency exemption, the NTCRA is appropriate because action is necessary to avoid a foreseeable threat and to prevent further

migration of contaminants.¹⁶ The proposed removal action avoids the foreseeable threat to the environment and to human receptors being exposed to PCBs and COPCs at the Phase 1 Reach. By stabilizing and removing contaminated floodplain soil and sediment and removing the T&H Dam, the NTCRA abates and controls time-sensitive threats posed by the conditions of the Phase 1 Reach. Implementing this proposed Action Memorandum will limit further migration of contamination in the Phase 1 Reach, prevent the foreseeable failure of the T&H Dam, and eliminate the threats associated with the consequent uncontrolled release of highly contaminated sediment and floodplain soil from the Phase 1 Reach to downstream areas of the Site and beyond.¹⁷

2. Continued response action is consistent with the remedial action to be taken.

The NTCRA will remediate the sediment bed and floodplain soil in the Phase 1 Reach and will not conflict with, and be consistent with, any remedial action to be taken at the Site. Further, the NTCRA is expected to facilitate and promote the effectiveness of long-term remedial efforts by removing the T&H Dam. Removal of the dam eliminates the potential for the dam to impair completed and future cleanup work, including the potential for a sudden and uncontrolled release of impounded water in the event of dam failure, which would compromise any ongoing remedial investigations and cleanup work, as well as the integrity of both upstream and downstream removal and remedial components.¹⁸

¹⁶ EPA, OSWER Directive 9360.0-12A, *Final Guidance on Implementation of the “Consistency” Exemption to the Statutory Limits on Removal Actions* (June 12, 1989), pp. 3-4, available at <https://semsub.epa.gov/work/HQ/174424.pdf> (stating that an action is appropriate if the activity is necessary for any one of the following reasons: to avoid a foreseeable threat; to prevent further migration of contaminants; to use alternatives to land disposal; or to comply with the offsite policy.)

¹⁷ See EPA, *Use of Non-Time-Critical Removal Authority in Superfund Response Actions* (Feb. 14, 2000), p. 4, available at <https://semsub.epa.gov/work/HQ/174826.pdf> (“even expensive and complex response actions may be removal action candidates if they are relatively time-sensitive For example, dredging large quantities of contaminated sediment could be conducted using removal authority where such action was the appropriate course for abating or controlling a time-sensitive threat.”)

¹⁸ When a dam fails, the changes in hydrodynamic conditions due to dam failure can alter current patterns and wave dynamics. The sudden release of water can increase the flow rate both upstream and downstream, leading to heightened erosive forces that can compromise response action components, including damaging capped areas. This increased water flow can lead to greater erosion of the riverbed and bank, transport contaminated sediment and floodplain soils, and dislodge or erode the protective layers of a cap, potentially exposing the underlying contaminated sediments. See, e.g., EPA, Assessment and Remediation of Contaminated Sediments (ARCS) Program, *Guidance for In-Situ Subaqueous Capping of Contaminated Sediments*, EPA 905-B-96-004 (Sept. 1998), p. 70 (“[A]fter a cap is constructed, the removal of an upstream dam or modification to a breakwater could have significant impacts on the current- or wave-induced erosion at the cap.”), available at <https://semsub.epa.gov/work/HQ/189670.pdf>; Tullos, Desiree D., et al., Synthesis of Common Management Concerns Associated with Dam Removal, *Journal of American Water Resources Association* (2016), p. 6 (summarizing case studies that indicated that removal of a dam leads to channel incision in the upstream impoundment), available at https://www.fs.usda.gov/pnw/pubs/journals/pnw_2016_tullos001.pdf.

VI. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Actions

1. Removal Action Objectives

Removal Action Objectives (RAOs) define the goals for the removal action. The RAOs established for the NTCRA include:

- **RAO 1 – Sediment:** Reduce risk to human health from PCBs and COPCs in sediment, including reducing the residential and recreational receptors' unacceptable cancer and non-cancer risks pertaining to direct contact with PCBs.
- **RAO 2 – Sediment:** Reduce ecological risk from PCBs and COPCs in sediment, including reducing the unacceptable risk to aquatic and terrestrial ecological receptors due to PCB exposure.
- **RAO 3 – Floodplain Soil:** Reduce risk to human health from PCBs and COPCs in floodplain soil, including reducing the residential and recreational receptors' unacceptable cancer and non-cancer risks pertaining to direct contact with PCBs.
- **RAO 4 – Floodplain Soil:** Reduce ecological risk from PCBs and COPCs in floodplain soil, including reducing the unacceptable risk to aquatic and terrestrial ecological receptors due to PCB exposure.
- **RAO 5 – Sediment and Floodplain Soil:** Remove the potential for an uncontrolled release of contaminated sediment and eroding floodplain soils in the event of dam failure.
- **RAO 6 – Sediment and Floodplain Soil:** Prevent the transport of PCBs to both remediated and unremediated areas.

2. Proposed Action Description

As described in the EE/CA Report (Attachment 3), four removal action alternatives were developed to address contamination in the Phase 1 Reach. Section 4 of the EE/CA Report provides a description and analysis of each alternative.¹⁹ A comparative analysis was performed

¹⁹ As noted in Section 4.1.2 (Technology Screening) of the EE/CA Report, dredging was included as a major component for each of the removal action alternatives due to the nature and extent of contamination, waterway usage (regulatory floodway, flood storage, recreational use), high sediment mobility, sedimentation and impoundment, and the condition of the T&H Dam. Treatment technologies were considered during the screening of technologies. Due to the nature of the contamination and implementation barriers in the urban setting of the Site, many treatment options were determined to be unsuitable. However, treatment options including pretreatment,

of the removal action alternatives, which evaluated the relative performance of each alternative with respect to three evaluation criteria: effectiveness, implementability, and cost. For the full comparative analysis of the alternatives, see Section 5 of the EE/CA Report. Based on the comparative analysis, Removal Action Alternative 4 (Comprehensive Removal, Permanent In Situ Amendment Cap, and Dam Removal) was identified in the EE/CA Report as representing the best balance between the evaluation criteria of effectiveness, implementability, and cost.

The removal action proposed in this Action Memorandum was developed based on documents in the Administrative Record, the analysis provided in the EE/CA Report, and in consideration of public comments received during the public comment period for the EE/CA Report.

The proposed removal action will abate direct exposure of human and ecological receptors to total PCBs exceeding 1 mg/kg in sediment and floodplain soil and will remove the T&H Dam. To address contaminated sediments and floodplain soil, the technologies EPA has chosen to employ are excavation, dredging, and capping.

The proposed removal action includes the following activities:

- Removing highly contaminated sediment in source areas within the Phase 1 Reach that is continuing to migrate downstream. Specifically, sediment in the T&H Dam impoundment and the former Lewis Chemical facility depositional area exceeding 1 mg/kg total PCBs will be removed where practicable. Pre-design investigations will take place to clarify the extent of contamination in these source areas and determine dredge depths.
- In the remaining areas of the Phase 1 Reach, removing at least the top three feet of sediment where practicable. Pre-design investigations will be necessary to clarify sediment thickness throughout the Phase 1 Reach to inform dredge depths.
- Greater than three feet of sediments may be removed where any remaining total PCBs are greater than 1 mg/kg. A decision matrix will be developed during removal design to determine whether additional dredging will occur and will be based on a variety of considerations, including the volume of PCB-contaminated sediment, cost effectiveness, sediment and channel stability, slope stability, stability of existing structures, maintaining

immobilization and solidification/stabilization, particle size separation, and effluent treatment were carried forward as elements of the removal action alternatives. The proposed removal action includes limited treatment of water generated by sediment dredging and dewatering. Additional treatment processes, such as pretreatment, immobilization and solidification/ stabilization, and particle size separation may be implemented during processing of contaminated sediment and floodplain soil. While it is not expected, ex situ treatment may be utilized if higher levels of lead or other metals are detected during pre-dredging in situ waste characterization sampling that result in exceedances of Toxicity Characteristic Leaching Procedure leachate limits to meet TSCA landfill requirements.

the Site's status as a regulatory floodway,²⁰ potential exposure pathways, ARARs, COPCs, value engineering, long-term maintenance requirements, and other factors determined during removal design. Pre-design investigations will be necessary to clarify sediment thickness throughout the Phase 1 Reach to inform dredge depths.

- Constructing a permanent cap throughout the Phase 1 Reach to stabilize the riverbed, adjacent floodplain soils, impacted abutting structures, minimize surface water elevation changes to conform to regulatory floodway designation, and to provide ecological habitat. The final cap design will be determined during the removal design and will vary in different areas depending on site conditions. In areas where 1 mg/kg total PCBs cannot be met through removal, the cap will physically stabilize the contaminated sediments and prevent PCBs and COPCs that remain at depth from impacting the biologically active zone in the restored riverbed. Pre-design investigations will be necessary to clarify sediment thickness throughout the Phase 1 Reach to inform cap thickness and cap design. A decision matrix will be developed during removal design to outline how the design of capping will be determined. The final cap design will be determined during the removal design and will vary in different areas depending on site conditions.
- Removing additional sediment and underlying dense riverbed soil immediately upstream of the T&H Dam as necessary to establish a 10-foot horizontal to 1-foot vertical grade, or other necessary grade identified determined during design, in the riverbed in advance of removing the T&H Dam.
- Removing floodplain soil exceeding 1 mg/kg total PCBs.
- Conveying removed sediment and floodplain soil to a dedicated processing area.
- Dewatering sediment and excavated floodplain soil (as necessary).
- Transporting and disposing the dewatered sediment and soil off-site. Transportation and disposal at the Site will be completed in compliance with Section 121(d)(3) of CERCLA.
- Removing the T&H Dam.
- Restoring and stabilizing the impacted channel and floodplain soils.
- Restoring access, staging, and processing areas.
- Monitoring and maintenance.
- Implementing Institutional Controls as appropriate.

Key aspects of the proposed removal action are outlined below.

²⁰ The Lower Neponset River Superfund Site is designated as a Regulatory Floodway: Zone AE by FEMA. A "regulatory floodway" means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height. 44 C.F.R. § 59.1. The design of the removal action will conform to this designation.

a. Removal of Contaminated Sediment

Pre-design investigations will be completed to clarify the extent of contamination and determine the necessary dredge depth in the T&H Dam impoundment and former Lewis Chemical facility depositional area necessary to abate exposure risk to sediment contaminated with total PCBs above 1 mg/kg. In addition, the removal design will take COPCs into consideration to ensure the long-term effectiveness of the removal action and will consider potential continuing sources of contamination.

In the remainder of the Phase 1 Reach, it is anticipated that at least the top three feet of sediment will be removed, where practicable, which is expected to address sediment exceeding 1 mg/kg total PCBs. Pre-design investigations will be conducted to clarify sediment thickness throughout the Phase 1 Reach, and the removal depth and capping extent necessary to address sediment contaminated with total PCBs over 1 mg/kg and co-located COPCs.

In some areas, greater than three feet of sediments may be removed. A decision matrix will be developed during removal design to determine whether additional dredging will occur and will be based on a variety of considerations, including the volume of PCB-contaminated sediment, cost effectiveness, sediment and channel stability, slope stability, stability of existing structures, maintaining the Site's status as a regulatory floodway, potential exposure pathways, ARARs, COPCs, value engineering, long-term maintenance requirements, and other factors determined during design. For example, if cleanup level exceedances are to a depth of four or five feet, it may be more cost effective or consistent with other design considerations to remove the deeper contaminated sediments through dredging instead of constructing a multi-layer cap with an in situ amendment.

It is anticipated that hydraulic dredging will be utilized for submerged sediment removal. During the removal design, when additional data are collected to support the design basis, the most appropriate and cost-effective method to remove sediment will be determined. Large debris or other items in the riverbed may need to be removed prior to hydraulic dredging, or may also be left in place and capped, if appropriate. If bedrock or consolidated deposits not amenable to dredging are encountered, the unconsolidated sediment above the bedrock targeted for dredging will be removed.

All dredging and backfilling of sediment will proceed from upstream to downstream to prevent potentially contaminated sediment from impacting downstream portions of the Phase 1 Reach.

Dredging will be implemented in a manner to minimize the risk of:

- Suspending contaminated sediment in the water column in a manner that could contaminate remediated or downstream areas or cause negative impacts to ecological communities in the water column.
- Releasing contaminants to the river water from resuspended sediment particles, the dredging cut face, or by other means.
- Generating dredging residuals with contaminant levels that exceed the cleanup level.

It is anticipated that various engineering and operational controls may be necessary to manage these processes and to minimize risks associated with resuspension, release, and residuals during dredging. Specific approaches and best management practices will be determined in removal design.

Potential impacts to historical and cultural resources will be further evaluated during the removal design. Efforts will be made during the removal action to avoid/minimize impacts to any historical and cultural resources at the Site. During the removal design, a plan outlining the process for addressing historical or cultural resources that are discovered during the removal action will be developed. The plan will outline how the appropriate stakeholders will be notified.

b. Capping within the River Channel

After dredging, a permanent cap will be constructed over the entire Phase 1 Reach that will stabilize the river channel, adjacent floodplain soils, and impacted abutting structures, minimize surface water elevation changes, and provide ecological habitat.²¹ The final cap design will be determined during the removal design and will vary in different areas depending on site conditions. In areas where the exposure risk to sediment with over 1 mg/kg total PCBs cannot be abated through removal of sediment, the cap will physically isolate and stabilize the contaminated sediments, preventing PCBs and COPCs remaining at depth from impacting the biologically active zone in the restored riverbed.

The cap will be comprised of clean materials suitable for aquatic invertebrate recolonization to promote recovery of benthic communities. With the exception of soft sediment, backfill material will be replaced with a similar particle size of removed contaminated material to minimize disruptions to the ecological habitat. Soft sediment will be backfilled with larger material to increase accuracy of dredge placement and reduce the migration of residuals throughout the water column. As with dredging activities, specific approaches and best management practices to minimize risks from residual contaminated sediment, resuspension, and release during capping activities will be determined in removal design. Due to the removal of the T&H Dam, a series of grade control riffles through the regraded channel and dam breach zone will be constructed to

²¹ It may not be necessary to restore the original bathymetry of the riverbed to maintain sediment stability across the Phase 1 Reach in entirety. In some areas, particularly in depositional areas, capping may not be necessary, as these areas are expected to gradually fill in via natural processes.

minimize reductions in surface water elevation and to conform to the river's designation as a regulatory floodway.

Pre-design investigations will take place to clarify existing sediment thickness throughout the Phase 1 Reach and inform cap thickness and cap design. During the removal design, a thorough decision matrix shall be developed to clearly outline how the appropriate design of capping will be determined for a particular area.

The EE/CA Report outlined a conceptual design for the permanent cap with an in situ amendment.²² In areas where the cleanup level of 1 mg/kg total PCBs cannot be met through removal, the cap will be designed to isolate contaminated sediment remaining at depth, mitigate erosion, prevent breakthrough and the upward migration of contamination, and protect benthic communities. Based on the extent of dredging, and the current understanding of contamination, EPA anticipates that a multi-layer cap with an in situ amendment, conceptually designed for areas where 1 mg/kg total PCBs remain in sediment, will only be necessary in limited areas. To ensure effectiveness of the permanent cap in these areas, total PCB concentrations, volume of sediments contaminated with PCBs remaining after removal, erosion potential, COPCs, and potential ongoing sources of contamination will be considered during removal design. Cap design will vary in different areas depending on site conditions. Conceptually, in areas where 1 mg/kg total PCBs remain in sediment, the cap from bottom to top may consist of:

- A minimum of 3-inches of sand with two percent (2%) activated carbon ("isolation" layer) overlain by a sand filtration layer to mitigate loss of carbon amended sand. For costing purposes, the carbon amended "isolation" layer and sand filtration layer was assumed to have a 6-inch total thickness with 2% activated carbon added to the entire 6-inch layer. The particular extent of in-situ amendment will be determined during removal design and will vary based on site conditions.
- A 12-inch-thick stone armor layer to protect the underlying isolation layer. The material for this layer will have a median particle diameter of 4 inches, sufficient to withstand a 500-year flood.²³ The extent to which armoring will be incorporated into particular areas of the permanent cap will be determined during removal design and will vary based on site conditions.
- A 9-inch-thick sand habitat layer to support aquatic invertebrate recolonization and promote recovery of benthic communities. This will be designed to be consistent with capping that will occur throughout the Phase 1 Reach, as described below.

²² Amendment sediment capping generally includes amendments that are mixed into the capping materials or placed as separate layers to both isolate and treat contaminated sediment. Where an in situ amendment is used, the cap is expected to consist of sand and activated carbon as the primary contaminant isolation and treatment cap layer.

²³ In general, armored capping places an additional layer of stone or rip rap over a conventional cap to provide additional protection from high velocity currents.

Based on the extent of dredging and the current understanding of contamination, EPA does not expect that the multi-layer cap, as presented conceptually above, will be needed over the entire Phase 1 Reach, and it may only be necessary in limited areas.

Grading and contouring of the permanent cap will be necessary to smooth the cap material throughout the Phase 1 Reach and into the riverbank to avoid abrupt changes that could lead to disruption. The most appropriate and cost-effective capping method to stabilize sediment will be determined during removal design.

c. Removal of Dense Riverbed Soil to Facilitate Dam Removal

Consolidated riverbed soil will be removed to facilitate the removal of the T&H Dam and to create a stable channel bottom slope between the existing channel grades upstream and downstream of the T&H Dam. The removal of riverbed soil beneath the T&H Dam sediment impoundment is anticipated to be performed in the same manner as described for contaminated sediment removal. Pre-design investigations will be completed to further evaluate and inform the best method to remove the dense riverbed soil, to clarify the extent of contamination in the T&H Dam impoundment, the amount of dense riverbed soil and sediment to be removed prior to dam removal, and the necessary grade needed to prepare for dam removal. As necessary, significant reductions in surface water elevation will be minimized by creating a series of grade control riffles through the regraded channel and dam breach zone. Installation of riffles would improve river functioning, habitat, and could be designed to allow fish passage.

d. Removal of Floodplain Soil

Floodplain soils¹ be excavated throughout the Phase 1 Reach to a cleanup level of 1 mg/kg for total PCBs. Removal activities targeting PCBs are expected to reduce risk from co-located COPCs. The average depth of contamination is estimated to be approximately 1.5 feet. Vegetation and tree removal may be required to prepare areas for excavation. Floodplain soil may be removed from the river using a barge-mounted excavator and scows or from the shore using traditional excavation equipment. Floodplain soil removed by barge may encounter challenges due to the two low underpass MBTA bridges in the Phase 1 Reach, which may restrict transport of contaminated material by river. Floodplain soil removed from the shore may require construction of multiple staging areas and access roads following clearing and grubbing.

Where soil removal activities will be occurring in floodplains and wetlands, harmful impacts to wetland and floodplain resources will be minimized to the extent practicable and best management practices for construction will be determined during removal design.

In areas where the floodplain soils are excavated, the area will be reconstructed such that it is stable and resistant to erosion under normal and high flow conditions while also supporting

future ecological habitat. Stabilization methods used will vary depending on the grade, height, floodplain soil use, and flow conditions at each restoration location. Stabilization measures will likely include the use of one or more of the following methods:

- Rip rap;
- Rip rap with living stakes/vegetation planting;
- Gabions;
- Vegetated geolifts;
- Coir logs with vegetative plantings;
- Topsoil bank layers wrapped in geotextile with native vegetative plantings; and
- Erosion control blankets with native vegetative plantings.

Where possible, the last three methods will be prioritized to minimize the potential ecological impacts resulting for construction. Restoration activities will be determined in removal design. Floodplain soil stabilization procedures to be implemented where floodplain soil is removed will be specified during the design. If any wetlands are affected by excavation and fill replacement, wetlands to the extent practicable will be restored at the same surface elevation as pre-existing wetlands.

In the event that haul roads and staging area were constructed to support floodplain soil removal, all haul roads and staging areas will be restored to a similar to prior conditions.

Potential impacts to historical and cultural resources will be further evaluated during the removal design. Efforts will be made during the removal action to avoid/minimize impacts to any historical and cultural resources at the Site. During the removal design, a plan outlining the process for addressing historical or cultural resources that are discovered during the removal action will be developed. The plan will outline how the appropriate stakeholders will be notified.

e. Dewatering and Staging of Removed Sediment and Soil

The location for the dewatering, staging, and loadout area for the dredged sediment and excavated soil is anticipated to be located on DCR-owned property near the T&H Dam. The final location for the dewatering, staging, and loadout area will be determined during design.

Slurry generated during dewatering operations is anticipated to be conditioned with polymer or other conditioning agent (as necessary for effective dewatering), processed through a thickener, and then pumped to geotextile dewatering tubes. Bench and/or pilot testing of dewatering using representative sediment samples from the Phase 1 Reach will be performed during the design to select the most cost-effective dewatering equipment.

Filtrate from dewatering of the sediment will be processed through a water treatment system consisting of multi-media filters (as necessary depending on the level of suspended solids in the

filtrate) and activated carbon adsorption, prior to discharge downstream of the T&H Dam into the Lower Neponset River. It is assumed that the effluent from the water treatment system will be required to comply with the substantive requirements of the National Pollutant Discharge Elimination System Remediation General Permit for Massachusetts.

f. Transportation and Disposal of Dewatered Sediment and Soil

Dewatered sediment and soil will be shipped off-site for disposal. Transportation and disposal at the Site will be completed in compliance with Section 121(d)(3) of CERCLA. Off-site transportation will include loading the dewatered sediment and floodplain soil into lined dump trailers or roll-off “gondolas” for transport to an EPA-approved disposal facility. Contaminated sediment and floodplain soil removed from the Site will require additional waste profile characterization to determine their off-site disposal location. A traffic control plan will be developed prior to mobilization and implemented to manage truck traffic and any damage to public roads will be repaired.

Once all soil and sediment are removed from the processing area for transportation and disposal, all site-related equipment with the potential of contamination will be thoroughly cleaned and decontaminated. Once all equipment and support infrastructure are removed from the Site, the staging and processing area will be restored.

Combined soil and dewatered sediment tonnage for the proposed removal action is estimated to be 84,400 tons, and it is estimated that 2,800 truckloads of contaminated material will be transported off site to an EPA-approved disposal facility.

g. Removal of the T&H Dam

Conceptually, the T&H Dam is anticipated to be removed as described in the 2021 T&H Dam Inspection and Investigation Report prepared by GEI Consultants, which can be found in the Administrative Record. The design of the dam removal will be refined during removal design.

Prior to removal of the T&H Dam, evaluations of the revised shear stresses on the upstream bridge structures and floodplain soils will be performed to determine if scour countermeasures are required. Additionally, a geomorphic assessment will be conducted to predict channel adjustments (including post-dam removal channel erosion and sediment transport) following dam removal. The regrading needed to adjust the river channel to continue operating as a regulatory floodway will be considered during design and will inform both dredging depth and the extent of capping throughout the Phase 1 Reach. As necessary, significant reductions in surface water elevation will be minimized by creating a series of grade control riffles through the regraded channel and dam breach zone. Installation of riffles would improve river functioning, habitat,

and could be designed to allow fish passage. Sampling of the concrete structure of the dam shall be conducted to determine disposal requirements.²⁴

EPA will coordinate with the dam owner, DCR, regarding the removal of the dam. The dam removal will be implemented in a manner to minimize the risk of suspending sediment into the water column and causing negative impacts downstream human receptors. PCB-contaminated sediment exceeding the cleanup level of 1 mg/kg PCBs will be abated or stabilized prior to removing the T&H Dam.

h. Monitoring and Maintenance

A site-specific monitoring and maintenance plan will be developed during the removal design and is expected to include, but not be limited to, the following:

- Backfill and permanent cap placement monitoring to minimize and monitor resuspension, release, and residual impacts during and after construction.
- Permanent cap performance monitoring, including during and shortly after placement operations, immediately after unusual events (e.g., severe storms), and long-term monitoring. The cap shall be monitored to demonstrate its physical, chemical, and biological quality. Monitoring shall include bathymetric surveys,²⁵ chemical sampling, and sediment camera work as appropriate. The frequency of cap monitoring will be determined in an EPA-approved workplan.
- Dredge performance monitoring including monitoring of the post-removal sediments to ensure that cleanup levels are met in areas where dredging is intended to remove all sediments greater than 1 mg/kg total PCBs. Sampling will also consider COPCs.
- Sediment impoundment monitoring behind the T&H Dam.
- Monitoring of restoration effectiveness.
- Environmental monitoring before, during, and immediately following construction, including analysis of sediment, floodplain soils, surface water, pore water, fish tissue, and air. EPA will ensure that residents are informed of air monitoring locations and provide frequent, real-time air monitoring information during the removal action.

²⁴ See EPA, *Technical Guidance for Determining the Presence of Manufactured PCB Products in Buildings and Other Structures*, EPA-530-R-23-0115 (Sep. 2023), https://www.epa.gov/system/files/documents/2023-09/Technical_Guidance_Determining_Presence_Manufactured_PCB_Products_Buildings_Structures.pdf. PCBs can migrate into porous surfaces, including concrete. Due to the high concentrations of PCBs in sediment in the T&H Dam impoundment adjacent to the dam and the length of time such materials have been in contact with the concrete structure of the dam, EPA expects that the dam itself may be contaminated with PCBs.

²⁵ A bathymetric survey maps the terrain of a riverbed.

- An Air Quality Management and Monitoring Plan shall be developed that includes the following: means and methods used to perform the excavation and waste handling that minimizes airborne particulates; air monitoring procedures, parameters, and detection limits; air action levels; and corrective measures. Air monitoring and dust suppression measures for PCBs shall be maintained until all removal activities are complete, including dredging, excavation, capping, backfilling, and transport of PCB-contaminated sediment and soil.
- Institutional control monitoring and maintenance, as necessary (e.g., signage maintenance and/or repair).

Long-term monitoring of removal action effectiveness is expected to be incorporated into the future remedial action and will be included in a Record of Decision.

i. Institutional Controls

Signage and educational outreach will be used as institutional controls throughout the Superfund process. Massachusetts Department of Public Health has installed fishing advisory signs around the Site. The current fish advisory and existing signage will be updated as necessary during the Superfund process. EPA will collaborate with the Site's Community Advisory Group and public health agencies in the development of Superfund signage to be placed around the Site.

In addition, institutional controls under the proposed removal action will include land use and/or access restrictions limiting land use activities during and after implementation of the removal action, as appropriate, and waterway restrictions to limit river use activities during and after implementation of the removal action, as appropriate. The evaluation and implementation of waterway use restrictions will be needed to protect the integrity and maintain the purpose of any caps in relation to current and future uses of the Site. Additional institutional control mechanisms may be developed during the design of this removal action.

3. Community Relations

The EE/CA Report was issued for a 30-day public comment period on June 13, 2025. The public comment period was subsequently extended to August 1, 2025. EPA carefully considered all comments submitted during the public comment period. EPA's responses to the comments are provided in the Responsiveness Summary attached herein (Attachment 2).

EPA will continue working closely with the community, state, the city of Boston and the town of Milton, and local businesses. EPA will keep the community updated throughout the design phase of the removal action and seek input from the community where appropriate and will continue to engage with the local community during the removal action, including through press releases, fact sheets, updates on EPA's website, and public meetings. EPA will continue following the

site-specific strategy outlined in the November 2023 Community Involvement Plan²⁶ to enable meaningful community involvement throughout the Superfund cleanup process and will update the Community Involvement Plan as needed.

4. Contribution to Remedial Performance

The NTCRA proposed in this Action Memorandum is expected to contribute significantly to the long-term remedial action. The NTCRA will remediate the sediment bed and floodplain soil in the Phase 1 Reach and is anticipated to be complementary and consistent with any remedial action to be taken at the Site. Due to the comprehensiveness of the proposed removal action, it is unlikely that EPA would need to significantly mobilize during the remedial action to address any remaining threats in the Phase 1 Reach. Further, the NTCRA is expected to facilitate and promote the effectiveness of long-term remedial efforts by removing the T&H Dam. Removal of the dam eliminates the potential for the dam to impair future cleanup work, including the potential for a sudden and uncontrolled release of impounded water in the event of dam failure, which would likely compromise any ongoing remedial investigations and cleanup work, as well as the integrity of both upstream and downstream remedial components.

5. Applicable or Relevant and Appropriate Requirements (ARARs)

In accordance with 40 C.F.R. § 300.415(j), removal actions shall attain applicable or relevant and appropriate requirements (ARARs) “to the extent practicable considering the exigencies of the situation.” As summarized in Section 3.1 of the EE/CA Report, Federal and State ARARs and To Be Considered standards and guidance (TBCs) were identified for this NTCRA. The selected chemical-specific, action-specific, and location-specific ARARs and TBCs are presented in Attachment 4 of this Action Memorandum.

In accordance with certain Location-Specific ARARs identified for this NTCRA, EPA specifically sought comments from the public regarding EPA’s determinations about impacts to wetlands and floodplains, and EPA’s determination that the recommended alternative represents the least environmentally damaging practicable alternative (LEDPA) for protecting wetland/aquatic habitat. These determinations are provided in Section 7 of the EE/CA Report. During the public comment period for the EE/CA, EPA received public comments regarding these determinations. Responses to these comments are provided in the Responsiveness Summary, Attachment 2 of this Action Memorandum.

Consistent with Toxic Substances Control Act (TSCA) and federal regulations, EPA has determined that PCB-contaminated sediment and floodplain soil in the Phase 1 Reach of the Site

²⁶ EPA, Lower Neponset River Community Involvement Plan (Nov. 2023), available at <https://semspub.epa.gov/work/01/677693.pdf>.

meet the definition of a PCB Remediation Waste as defined under 40 C.F.R. § 761.3. Therefore, these PCB-contaminated sediment and floodplain soil are regulated for cleanup and disposal under federal regulations at 40 C.F.R. § 761. Under 40 C.F.R. § 761.61(c), EPA may authorize disposal of PCBs in a manner not otherwise prescribed provided that EPA determines that the disposal will not pose an unreasonable risk of injury to health or the environment. EPA sought public comments regarding EPA's draft determination under TSCA regulations at 40 C.F.R. § 761.61(c) that the recommended removal action alternative does not result in an unreasonable risk of injury to health or the environment as long as certain conditions are met. EPA did not receive comments regarding the draft TSCA Determination. EPA's TSCA Determination, provided below, is being finalized through approval of this Action Memorandum.²⁷

Consistent with TSCA regulations at 40 C.F.R. § 761.61(c), EPA has reviewed the Administrative Record for the proposed removal action, under which approximately 56,000 cubic yards of contaminated sediment and floodplain soil above the cleanup level of 1 mg/kg total PCBs will be removed, dewatered, and disposed of off-site. The cleanup level was derived based on streamlined risk evaluations that concluded that PCBs in the Phase 1 Reach pose an unacceptable risk to human health and ecological receptors from exposure to contaminated sediment and floodplain soil. EPA has determined that the NTCRA described in this Action Memorandum does not result in an unreasonable risk of injury to health or the environment as long as the following conditions are met:

1. Compliance with water quality and turbidity performance standards specified in EPA-approved workplans are maintained.
2. The channel is backfilled and/or capped with clean, suitable material of sufficient thickness to isolate the PCB remediation waste physically, chemically, and biologically from the surrounding benthic environment. A bathymetric survey shall be performed upon completion of the channel restoration.
3. All caps are monitored to demonstrate their physical, chemical, and biological quality. This monitoring shall include bathymetric surveys, chemical sampling, and sediment camera work as appropriate. The frequency of this monitoring will be determined in an EPA-approved workplan.
4. An annual report summarizing the cap monitoring shall be completed beginning with placement of the cap material. This report shall include a summary discussion of all activities associated with the cap placement or cap monitoring, and shall include, if

²⁷ Minor non-substantive clarifications of the Draft TSCA Determination were made to the text of the listed conditions.

necessary, any recommendations for corrective action to maintain the physical, chemical, or biological quality of the cap.

5. Corrective actions recommended in the annual reports, or alternatively, those required by EPA based on information in the annual reports, shall be implemented in a timely manner. Corrective actions may include, but are not limited to, installation of additional engineering controls or removal and disposal of PCB remediation waste from the Site if information indicates that the remedy is not effective in isolating and/or controlling migration of PCBs from the Site.
6. The EPA shall coordinate with federal, state, and local entities to ensure that any as-built cap locations become included in all future navigational or waterway charts with any other required navigational or anchorage controls.
7. All dredged and excavated sediment and floodplain soil is disposed of in accordance with TSCA based on in situ PCB concentrations and not subject to dilution.
8. Engineering controls for the collection and management of liquids from dewatering of sediment and floodplain soils, surface water runoff, dust suppression water, and decontamination water shall be used during dredging, excavation, storage, dewatering, and decontamination activities to ensure that the PCB concentrations in any dewatered liquids, surface water runoff, dust suppression water, and decontamination water from the Site comply with applicable discharge requirements prior to discharge to a publicly owned treatment works or to surface water.
9. Decontamination procedures for excavation equipment and other moveable equipment and vehicles shall be established to ensure that equipment and vehicles are appropriately decontaminated prior to leaving each work area.
10. Engineering controls for dust suppression shall be used during excavation activities. An Air Quality Management and Monitoring Plan shall be developed that includes the following: means and methods used to perform the excavation and waste handling that minimizes airborne particulates; air monitoring procedures, parameters, and detection limits; air action levels; and corrective measures. Air monitoring and dust suppression measures for PCBs shall be maintained until all removal activities are complete, including dredging, excavation, capping, backfilling, and transport of PCB-contaminated sediment and soil.

6. Project Schedule

If this NTCRA proceeds as a fund-lead action, upon approval of this removal action, removal design will begin immediately and mobilization is expected to begin in the winter of 2026 or

early 2027. The proposed removal action is anticipated take three years and 10 months. Due to the substantial efforts necessary to support the removal action, dredging is expected to take place during three field seasons, and the required restoration efforts will follow. A detailed conceptual schedule is provided in Table 18-3 in the EE/CA Report.

B. Estimated Costs

The estimated cost of the proposed removal action is \$78,600,000. A detailed cost estimate is provided in Attachment 5 of this Action Memorandum.

VII. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

If the NTCRA is delayed or not implemented, PCBs and COPCs in sediment will continue to migrate downstream during normal and high flow conditions. Additionally, the T&H Dam is in poor condition and at risk of failure under certain hydraulic conditions. If the T&H Dam were to fail, it could lead to the sudden release of impounded contaminated sediment, exacerbating the spread of PCBs and COPCs downstream, increasing exposure risks, and complicating future remediation efforts. Timely action is crucial to mitigate these risks, protect public health, and prevent further environmental degradation.

VIII. OUTSTANDING POLICY ISSUES

None.

IX. ENFORCEMENT

EPA is continuing to identify potentially responsible parties. In the event this NTCRA is performed as a fund-lead action, the total EPA costs for this removal action that will be eligible for cost recovery are estimated to be \$78,600,000 (direct extramural costs) + \$7,860,000 (EPA direct intramural costs) = \$86,460,000 x 1.3393 (regional indirect rate²⁸) = \$115,795,878.

These estimates do not include pre-judgment interest, do not take into account other enforcement costs, including Department of Justice costs, and may be adjusted during the course of a removal action. The estimates are for illustrative purposes only and their use is not intended to create any rights for responsible parties. Neither the lack of a total cost estimate nor deviation of actual total costs from this estimate will affect the United States' right to cost recovery.

²⁸ Indirect costs are calculated by using regional indirect rate in effect at time cost estimate is prepared and is expressed as a percentage of site-specific direct costs, consistent with EPA's full accounting methodology. The current regional indirect rate is 33.93% (effective January 6, 2025).

X. RECOMMENDATION

This decision document represents the proposed NTCRA for the Phase 1 Reach of the Lower Neponset River Superfund Site in Boston and Milton, Massachusetts, developed in accordance with CERCLA, as amended, and is not inconsistent with the National Contingency Plan. The basis for this decision is documented in the Administrative Record for this Action Memorandum. As signified by approval in this Action Memorandum, EPA has also determined that the proposed removal action described herein will not pose an unreasonable risk of injury to health or the environment, in accordance with 40 C.F.R. § 761.61(c), as long as the conditions described in Section VI.A.5 of this Action Memorandum are met.

As discussed in Section III of this Action Memorandum, conditions at the Site meet the criteria for a removal action as specified at 40 C.F.R. § 300.415(b)(1) and in consideration of factors set forth in 40 C.F.R. § 300.415(b)(2). Further, as discussed in Section V above, conditions at the Site meet the criteria for the emergency and consistency exemptions from the \$2 million and 12-month statutory limits, as provided in CERCLA § 104(c)(1) and 40 C.F.R. § 300.415(b)(5), and approval of this removal action constitutes approval of these exemptions.

I recommend that you approve the proposed removal action. The total extramural removal action project ceiling if approved will be \$78,600,000.

APPROVE:

**JOHN
BUSTERUD**

Digitally signed by JOHN
BUSTERUD
Date: 2025.11.05
12:29:14 -05'00'

John W. Busterud, Assistant Administrator
Office of Land and Emergency Management
United States Environmental Protection Agency

DISAPPROVE:

John W. Busterud, Assistant Administrator
Office of Land and Emergency Management
United States Environmental Protection Agency

ATTACHMENTS

Attachment 1: Site Figure

Attachment 2: Responsiveness Summary

Attachment 3: MassDEP Letter of Support

Attachment 4: Applicable or Relevant and Appropriate Requirements Tables

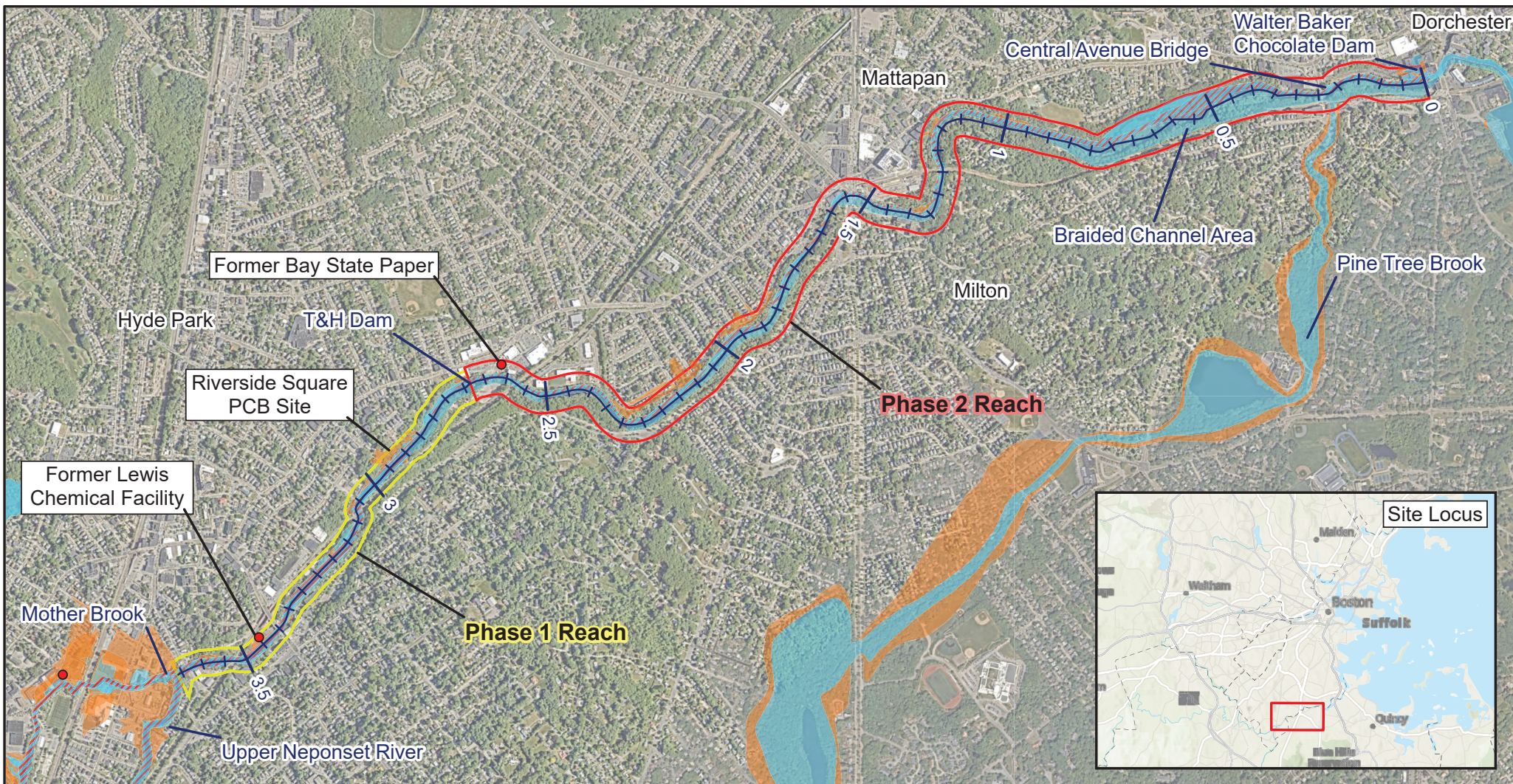
Attachment 5: Updated Removal Action Cost Estimate

Attachment 6: Updated EE/CA Report Figures 3, 7, 9, and 11

Attachment 7: Administrative Record Index

Attachment 1

Site Figure



Site Overview Lower Neponset River Superfund Site		Legend — LNR River Miles ● Suspected Source of PCB Contamination to the Site — Phase 1 Reach — Phase 2 Reach — FEMA 100 Year Flood Zone — Regulatory Floodway — FEMA 500 Year Flood Zone

Attachment 2

Responsiveness Summary

Responsiveness Summary
Engineering Evaluation/Cost Analysis (EE/CA)
Phase 1 Reach
Lower Neponset River Superfund Site
October 2025

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Introduction

The purpose of this Responsiveness Summary is to document the United States Environmental Protection Agency's (EPA) responses to comments raised during the public comment period concerning the Engineering Evaluation and Cost Analysis (EE/CA) Report, and associated Administrative Record, for a proposed Non-Time Critical Removal Action (NTCRA) in the Lower Neponset River Superfund Site (the "Site"). EPA considered all comments summarized in this document before selecting the NTCRA for the Phase 1 Reach of the Site under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. §§ 9601 et seq.

On June 13, 2025, a notice was placed in the Boston Globe, and a press release was issued by EPA announcing a 30-day public comment period (June 13 – July 13, 2025) on an EE/CA for a proposed NTCRA for the Phase 1 Reach of the Site. The press release and newspaper notice also announced a public hearing to be held on July 9, 2025, and invited the public to submit comments during the 30-day public comment period. EPA published an informational video on the EE/CA on June 24, 2025, which outlined key details from the EE/CA Report, and provided information on submitting public comments on the EE/CA Report. EPA published two fact sheets regarding the EE/CA Report, on June 1 and July 1, 2025, announcing the comment period, and providing information on the EE/CA Report. On July 2, 2025, EPA published a press release announcing that the public comment period was extended through August 1, 2025.

A public hearing was held on July 9, 2025. Prior to the public hearing, EPA showed an informational video produced by the EPA site team and published on June 24, which outlined key details from the EE/CA Report. During the public hearing, which was recorded, verbal comments from the public were transcribed by a stenographer.

During the comment period, EPA provided hard copies of the EE/CA Report at local information repositories, including the Hyde Park Library. EPA provided translated EE/CA fact sheets and transcriptions of the informational video in both Spanish and Haitian Creole. The EE/CA Report is included in the Administrative Record for the Action Memorandum for the NTCRA and is also available at <https://semspub.epa.gov/work/01/691456.pdf>.

EPA received 126 comment submissions during the comment period. The full text of both the written and oral comments received during the comment period and the public hearing transcript is included in the Administrative Record for the Action Memorandum, available online at <https://www.epa.gov/neponsetriver>. EPA received substantive comments regarding details of the recommended removal action alternative, which were considered and addressed in this Responsiveness Summary and, where appropriate, incorporated into the final Action Memorandum for the removal action.

Removal Action Summary

The selected removal action is an early action that is being utilized as part of the overall site strategy for the Lower Neponset River Superfund Site, and is expected to achieve significant risk reduction, address immediate risks to human health and the environment, and control migration of contamination. The subject of the removal action is the Phase 1 Reach of the Site, which includes the most upstream one-mile reach of the Site, from the Neponset River confluence with the Mother Brook downstream to the Tileston & Hollingsworth (T&H) Dam. The selected removal action presented in the Action Memorandum, with specific detail explained in Section VI of the Action Memorandum. Based upon public comments and further consideration, EPA has made minor modifications to the removal action recommended in the EE/CA Report to allow flexibility for the possibility of removing contaminated sediment at depths below three feet throughout the Phase 1 Reach. In addition, estimated costs related to removal design have been modified to include the costs associated with pre-design investigations. The cost estimate for the NTCRA has been updated accordingly. The Updated Removal Action Cost Estimate is provided in Attachment 5 of the Action Memorandum. These minor changes to the Action Memorandum are a logical outgrowth of the alternative and do not require additional public comment because they do not materially change the substance or basic approach of the selected alternative.

Summary of Public Comments and EPA Responses

The National Oil and Hazardous Substances Pollution Contingency Plan, commonly called the National Contingency Plan or the NCP, requires EPA to prepare a written response to significant comments submitted during the public comment period for the EE/CA Report. See 40 C.F.R. Section 300.415(n)(2)(iii). In this Responsiveness Summary, EPA summarizes, acknowledges, and intends to provide responses to all comments received during the public comment period. Please note that some language was simplified and/or paraphrased in the summaries provided below and may differ from how the original comment was received. All comments, as originally received, are available in the Administrative Record.

Comments were received from private citizens, including residents of Hyde Park, Dorchester, Fairmount Hill, Mattapan, Milton, Roslindale, Norwood, Quincy, Westwood, Carver, Lunenburg, Brookline, Jamaica Plain, Sharon, Dedham, Newton, North Reading, Braintree, South Walpole, and Walpole; the Lower Neponset River Superfund Site Community Advisory Group; commenters associated with Boston College; local faith leaders; non-government organizations, including the Appalachian Mountain Club, the Boston Harbor Women of Color Coalition, Friends of Blue Hills, Boston Area Beekeepers Association, Courageous Conversations Toward Racial Justice, Friends of the Boston Harborwalk, the Hyde Park Historical Society, Hyde Park Neighborhood Association, the Neponset River Greenway Council, the Neponset River Watershed Association (NepRWA), Edgewater Neighborhood Association, Climate Justice at the Fairmount Indigo CDC Collaborative, the Milton Garden Club, and Southwest Boston Community Development Corporation; local and State government

officials, including Boston City Council Member Enrique Pepén, the Town of Milton, Massachusetts State Senators (Senators Rush, Miranda, and Consalvo), and the Massachusetts Department of Fish and Game; and from ABB Installation Products, Inc., Siemens Industries Inc., and Archer Well Company, Inc.¹

Comments are summarized and addressed below. Where appropriate, EPA has grouped and summarized similar comments.

1. EPA received over 100 comment submissions voicing support for EPA's removal action. Comments in support of the removal action represent the largest portion of comments received in response to the EE/CA Report. Some commenters expressed general support for EPA's cleanup efforts of the Neponset River. One commenter noted the importance of EPA's cleanup of the river, specifically citing to impressionistic painter and Hyde Park resident John J. Enneking (1841-1916), who painted the Neponset River and "tried to save his beloved Neponset River but became melancholy and discouraged with the lack of achieving this goal." The commenter shared images of Enneking's paintings of the Neponset River, which can be viewed in the Administrative Record. Other commenters expressed specific support for EPA's recommended removal action alternative.

Commenters cited many reasons for supporting EPA's removal action. The following provides a summary of the reasons cited for support:

- Personal connection to the river and desire to advocate for the river;
- Abating unacceptable risk posed by contaminants in the river;
- Comprehensive nature of the proposed action;
- Taking care of the problem with fewer mobilizations;
- Personal relationship to the river and support of environmental remediation;
- Support for the T&H Dam removal, identifying that the T&H Dam is a hazard, including during storm events;
- The proposed removal provides the greatest long-term protection;
- Current and future recreational opportunities in the river, including fishing, kayaking, boating, and canoeing;
- New businesses benefiting from increased recreation in the river;
- Concern for health of wildlife within and surrounding the Neponset River;
- Limiting risk of future pollution if the T&H Dam fails;
- Interest in increasing accessibility to the river (trails, canoe launches);
- Preserving the history of the waterway;
- Restoring fish species, including herring;

¹ EPA received a letter with comments from the Port Norfolk Yacht Club, postmarked August 30, 2025. Since this letter was received outside of the public comment period, which closed on August 1, 2025, EPA will not be responding to these comments.

- The proposed removal action best aligns with community aspirations: clean river, open spaces, public access, restored ecological balance;
- Cleaning up the river as quickly as possible; and
- Concern for the health and wellbeing of the community in the area.

EPA RESPONSE: EPA acknowledges these comments and recognizes that commenters from the surrounding community and beyond support EPA moving forward with the removal action for the Phase 1 Reach of the Site.

A subset of commenters who voiced support for the removal action also posed questions and/or provided additional comments on the removal action. EPA's responses to those questions and comments can be found below.

2. Several comments were received regarding air quality monitoring during the removal action. Some commenters requested specific information regarding air quality control measures and monitoring. Commenters stated that EPA should commit to real-time air quality monitoring program for all phases of sediment removal, soil excavation, and transport related to the removal action. Commenters also asked about how air quality information will be reported to the public. One commenter asked that EPA collaborate with a community agency for air quality monitoring with clear consistent public reporting.

EPA RESPONSE: Real-time air monitoring will be conducted during the removal action. Engineering controls for dust suppression shall be used during excavation activities. An Air Quality Management and Monitoring Plan shall be developed during removal design and will include means and methods used to perform the excavation and waste handling that minimizes airborne particulates; air monitoring procedures, parameters, and detection limits; air action levels; and corrective measures. Air monitoring and dust suppression measures shall be maintained until all removal activities are complete, including dredging, excavation, capping, backfilling, and transport of contaminated sediment and soil. EPA will ensure that residents are informed of air monitoring locations and provide frequent, real-time air monitoring information during the removal action. EPA intends to coordinate with the Lower Neponset Community Advisory Group (CAG) when developing the Air Quality Management and Monitoring Plan. For more information regarding monitoring and maintenance, see Section VI.A.2.h of the Action Memorandum. See EPA Response to Comment 3 for additional information on public and community involvement.

3. Several comments were received regarding EPA's community outreach and communication efforts. One commenter noted that residents of properties abutting or near the river have not been hearing much from EPA. The commenters emphasized the importance of good communication and engagement throughout the cleanup process, including informing people about ongoing response activities and helping

people understand the length of the overall cleanup. Commenters requested regular updates on cleanup progress, signage before and during work, and suggested that EPA improve multilingual communications. One commenter noted that EPA needs to distribute professional notices to neighbors as the start of the project approaches, keep the language simple and provide notices in all languages that serve the neighborhood. Commenters also asked about opportunities for public comment during the removal design.

EPA RESPONSE: As stated in Section VI.A.3 of the Action Memorandum, EPA will keep the community updated throughout the removal design and seek input from the community where appropriate. While there is no formal public comment period during the removal design or removal action, all final workplans and design documents will be published on the Lower Neponset River Superfund Site webpage and be made available throughout the removal design. During the removal action, EPA will publish periodic Site Updates about ongoing response activities that will be provided via the Lower Neponset River Superfund Site email list and will be available on EPA's webpage. EPA's webpage for the Site can be accessed at: www.epa.gov/neponsetriver. A link to join EPA's mailing list is provided on the webpage.

EPA will continue to engage with the local community during the removal action, including through press releases, fact sheets, public meetings, email updates, and updates on EPA's website. EPA will continue to follow the site-specific strategy outlined in the November 2023 Community Involvement Plan² to enable meaningful community involvement throughout the Superfund cleanup process and will update the Plan as needed. EPA will continue to provide communications in multiple languages.

As discussed in Section VI.A.2.i of the Action Memorandum, signage will be used throughout the Site, including in the Phase 1 Reach, and will be updated as needed during the Superfund process. EPA will collaborate with the Lower Neponset CAG and public health agencies in the development of Superfund signage to be placed around the Site during the removal action.

EPA will continue responding to inquiries from the public on site activities throughout the removal design and removal action.

4. EPA received many comments expressing that EPA should consider removing more contaminated sediment and rely less on capping. Some commenters asked if all sediments over 1 mg/kg of total polychlorinated biphenyls (PCBs) can be removed within the Phase 1 Reach and not utilize any capping.

EPA RESPONSE: Based upon public comments and further consideration, EPA has made minor modifications to the removal action recommended in the EE/CA Report. The removal

² EPA, Lower Neponset River Community Involvement Plan (Nov. 2023), <https://semspub.epa.gov/work/01/677693.pdf>.

action alternative recommended in the EE/CA Report included addressing contaminated sediment by removing the top three feet of sediment over the full length of the Phase 1 Reach (except for the former Lewis Chemical Corp. facility depositional area and T&H Dam impoundment area, where it is expected that the depth of sediment removal will exceed three feet) and installing a permanent cap with an in situ amendment over the full length of the Phase 1 Reach.

Based on EPA's review of public comments and further consideration, EPA has modified the removal action recommended in the EE/CA Report to allow for greater flexibility in determining the extent of dredging in the Phase 1 Reach to address contaminated sediment with total PCBs over 1 mg/kg and co-located Contaminants of Potential Concern (COPCs).³ Further, the Action Memorandum clarifies that while a permanent cap will be constructed throughout the Phase 1 Reach, the design of the cap will vary in different areas depending on site conditions. The multi-layer conceptual cap design presented in the EE/CA Report, which includes an in situ amendment isolation layer, will apply only to areas where the cleanup level of 1 mg/kg total PCBs cannot be met through sediment removal. Based on the extent of dredging and the current understanding of contamination, EPA does not expect that the multi-layer cap, as presented conceptually in the EE/CA Report and the Action Memorandum, will be needed over the entire Phase 1 Reach, and it may only be necessary in limited areas. Throughout the Phase 1 Reach, the permanent cap will be constructed following dredging to stabilize the river channel, adjacent floodplain soils, and impacted abutting structures, minimize surface water elevation changes, and provide ecological habitat. See Action Memorandum, Section VI.A.2.b.

Pre-design investigations will be completed to clarify the extent of PCB contamination and sediment thickness to inform dredge depths, cap thickness, and cap design. While it is expected that the top three feet of sediment will be removed throughout the Phase 1 Reach where practicable, greater than three feet of sediment may be removed in some areas where contamination above 1 mg/kg total PCBs is found at greater depths, based on a decision matrix to be developed during removal design. For example, if total PCB concentrations exceeding 1 mg/kg are detected at a depth of 4 feet or 5 feet, it may be more cost-effective or consistent with other design considerations to remove the deeper contaminated sediments instead of installing a multi-layer cap with an in situ amendment.

The decisions on performing additional dredging below the top three feet and the design of the permanent cap in different areas will be based on a variety of factors, including, without limitation, the volume of PCB contaminated sediment remaining after removal, sediment and channel stability, slope stability, stability of existing structures, maintaining the Site's regulatory floodway status, applicable or relevant and appropriate requirements, potential exposure pathways, COPCs, value engineering, and long-term maintenance requirements. In areas where

³ The minor modifications to the Action Memorandum are a logical outgrowth of the recommended removal action alternative in the EE/CA Report and does not require additional public comment because it does not change the substance or basic approach of the recommended alternative.

the cleanup level of 1 mg/kg cannot be met through removal alone, the cap will be designed to isolate contaminated sediment that remains at depth, mitigate erosion, prevent breakthrough and the upward migration of contamination, and protect benthic communities. The decision matrix will be developed during removal design and will clearly outline how to determine when additional dredging will occur to address exceedances of the cleanup level and how the design of capping will be determined.

While some commenters expressed a preference for not utilizing any capping, EPA notes that after dredging occurs, capping will be necessary to stabilize the river channel, adjacent floodplain soils, and impacted abutting structures, minimize surface water elevation changes, and provide ecological habitat. To the extent the commenters' concerns relate specifically to the multi-layer cap with in an in situ amendment isolation layer, as conceptually presented in the EE/CA Report and in the Action Memorandum, due to a number of considerations to be included in the decision matrix, EPA expects that there will be some areas where additional dredging cannot be used to address total PCBs exceeding 1 mg/kg, including, for example, areas where deeper dredging is technically impracticable or may compromise the stability of the channel or existing structures. In these areas, such a multi-layer cap will be necessary.

For cost estimating purposes, EPA has retained the estimated costs of capping developed in the EE/CA, which assumes installation of a multi-layer cap with an in situ amendment over the entire Phase 1 Reach, as this provides a conservative estimate of costs. The cost estimates associated with dredging, which assumed an average dredge depth of three feet, have also been retained. Based on the 2023 Phase 1 Reach investigations, while it is expected that dredging below three feet will occur in some areas, EPA assumes that dredging to a depth of three feet will not be practicable in other areas (due to, for example, channel stability, slope stability, stability of existing structures, refusal, among other factors). In addition, sediment thickness analysis was performed as part of 2023 Phase 1 Reach investigations, which indicated that the average sediment thickness in the Phase 1 Reach is 3.18 feet. See Memorandum – Phase 1 Sediment Thickness, Table 1, EE/CA Report, Appendix F. Therefore, significant dredging over an average of three feet is not anticipated, and EPA believes the dredging costs associated with the NTCRA selected in the Action Memorandum will be similar to the estimated dredging costs for the recommended alternative in the EE/CA Report. Additional information and data will be collected during the removal design, including during pre-design investigations, that will further refine material removal volumes and costs. EPA has updated removal design cost estimates to include estimated costs of pre-design investigations. The Updated Removal Action Cost Estimate is provided in Attachment 5 of the Action Memorandum.

5. Some commenters expressed concern about the extent of the floodplain soil excavation and that contamination may be left in place beyond the defined site boundary. One commenter recommended that during the final design process additional floodplain soil samples be collected inland of the ordinary high-water line to clarify the lateral extent of soil contamination. One commenter asked how many

feet away from the river will EPA excavate when excavating riverbank soils. One commenter asks, what happens if the excavation reaches the defined site boundary and contamination is still present beyond that point; and who will address areas that are beyond the defined site boundary?

EPA RESPONSE: During the Phase 1 Reach removal action, EPA will remove soils within the 100-year floodplain, as depicted in Federal Emergency Management Agency flood maps, that exceed 1 mg/kg for total PCBs, which is also expected to reduce risk from co-located COPCs. EPA will take confirmation samples within the 100-year floodplain as the soil removal is completed to ensure the removal of soils contaminated with total PCBs exceeding 1 mg/kg. The ordinary high-water mark is within the boundaries of the 100-year floodplain throughout the Phase 1 Reach. EPA does not intend to take additional floodplain soil samples as part of this removal action outside of the 100-year floodplain. However, EPA will continue to evaluate the need to address Site-related contamination within floodplain soils during the ongoing remedial investigation.

6. Several comments were received regarding beneficial reuse along the river following the cleanup. Commenters asked if there would be improved public access for recreation, trail connectivity, and that the restoration allow for building a paved trail along the river. One commenter asked which parties have responsibility to turn what remains into a viable and useful resource for abutting communities and asked if there is an overall coordinated plan amongst all the parties for remediation and rebuilding of the river basin and its banks.

EPA RESPONSE: The removal action will prioritize abating the risk of exposure to contaminated sediment and soils, ensuring slope stability, promoting a stable river channel, and preventing increases in surface water elevations beyond a designated height consistent with the Lower Neponset River's status as a regulatory floodway. The removal action will also include restoration of the floodplain following excavation of contaminated floodplain soils. See Action Memorandum Section VI.A.2.d. Although EPA strongly supports the reuse of Superfund sites and will consider reuse where possible, EPA's annual Congressional appropriations acts and CERCLA Section 111, 42 U.S.C. § 9611, do not allow EPA's cleanup funds to be spent directly on redevelopment or improvements not necessary to the response action. Using funds the Agency is not authorized to spend violates federal law. See Anti-Deficiency Act, 31 U.S.C. § 1341(a). Further, 40 C.F.R. § 300.515(f) prohibits EPA from funding an "enhancement of [a] remedy." Generally, an enhancement is a facility or an activity that is not necessary to support the effectiveness of a remedy.

EPA can work with local governments to provide community reuse planning efforts for Superfund sites. For example, EPA conducted a Reuse Assessment for the Site.⁴ However, how a property will be used following cleanup will depend on the landowner and state and local land use decisions and regulations. EPA is committed to working with interested stakeholders to consider anticipated reuse opportunities in the cleanup and to ensure that any reuse is compatible with the Site response actions following completion of the removal action.

7. Some commenters asked about plans for restoring the riverbed, and whether the river will be repopulated with fish and other aquatic wildlife. A commenter asked if EPA is planning to help establish aquatic species post-removal.

EPA RESPONSE: Following dredging of contaminated sediment, a permanent cap will be constructed throughout the Phase 1 Reach to stabilize the river channel, adjacent floodplain soils, and impacted abutting structures, minimize surface water elevation changes, and provide ecological habitat. In areas where the cleanup level of 1 mg/kg total PCBs cannot be met through removal, the cap will be designed to isolate contaminated sediment that remains at depth, mitigate erosion, prevent breakthrough and the upward migration of contamination, and protect benthic communities.

Specific plans for site restoration, including the riverbed, will be determined during the removal design. Throughout the Phase 1 Reach, the cap will incorporate a sand habitat layer, which will be comprised of clean material suitable for aquatic invertebrate recolonization to promote recovery of benthic communities. With the exception of soft sediment, backfill material will be replaced with a similar particle size of removed contaminated material to minimize disruptions to the ecological habitat. Any remaining PCB-contaminated sediment will be isolated physically, chemically, and biologically from the surrounding benthic environment. A bathymetric survey shall be performed upon completion of the channel restoration. Long-term monitoring of the permanent cap will include additional bathymetric surveys, chemical sampling, and sediment camera work as appropriate, to demonstrate their physical, chemical, and biological quality. See Section VI of the Action Memorandum for more details about the selected removal action.

There is currently no plan for EPA to repopulate the river with fish or other aquatic wildlife through stocking as a part of this removal action. Based on similar ecosystems and climate areas, EPA expects that the aquatic habitat will return to a robustly functioning ecosystem in a relatively short period of time (on the order of five years or less⁵), as instream habitat features will be replaced as part of the cleanup and water column and benthic invertebrates are anticipated to rapidly recolonize from recruitment from both upstream and downstream areas

⁴ EPA, Reuse Assessment Report (Final), Lower Neponset River Superfund Site (Dec. 2023), p. 13, available at <https://semspub.epa.gov/work/01/675764.pdf>. The Reuse Assessment Report can also be found in the Administrative Record.

⁵ Wilber, D. H., & Clarke, D. G., Defining and Assessing Benthic Recovery Following Dredging and Dredged Material Disposal (2007), *Proceedings XXVII World Dredging Congress*, Vol. 2007, at p. 603-618.

following the removal of the T&H Dam. With the base of the food chain restored, fish populations should also return, with recruits dispersing from upstream and downstream areas, followed by aquatic-dependent wildlife (for example, insect- and fish-feeding birds and mammals). EPA expects that assessment of ecosystem recovery in the Phase 1 Reach will be included in the long-term remedial process. Future assessments may be completed as part of the ongoing Remedial Investigation/Feasibility Study (RI/FS) process, the remedial action, or post-remedial monitoring. Any additional response actions, including long-term monitoring requirements, will be documented in a Record of Decision for the Site.

8. Several comments were received regarding environmental monitoring following the removal action to monitor the effectiveness of the removal action.

EPA RESPONSE: A monitoring and maintenance plan will be developed during the removal design and will include post-removal monitoring. Post-removal monitoring, including long-term monitoring, will be performed to monitor and ensure the effectiveness of the removal action. Following the removal of contaminated sediment, dredge performance monitoring will be performed to ensure cleanup levels are met in areas where dredging is intended to remove all sediments greater than 1 mg/kg total PCBs. Sampling will also consider COPCs. Long-term cap performance monitoring will be performed to demonstrate the physical, chemical, and biological quality of the permanent cap. Cap monitoring will include bathymetric surveys, chemical sampling, and sediment camera work as appropriate. Annual reports will be required to summarize cap monitoring. See EPA Response to Comment 98.

Further, the effectiveness of the NTCRA will be assessed during the continuing performance of the RI/FS and the remedial process for the Site. EPA will determine whether additional response actions are necessary to address the Phase 1 Reach following the completion of the NTCRA based on information collected during the performance of the Remedial Investigation and post-removal monitoring. Long-term monitoring of removal action effectiveness is expected to be incorporated into the future remedial action. EPA also expects that assessment of ecosystem recovery in the Phase 1 Reach will be included in the long-term remedial process. See EPA Response to Comment 7. Future assessments may be completed as part of the ongoing RI/FS process, the remedial action, or post-remedial monitoring. Any additional response actions and continuing long-term monitoring requirements for the entire Site (including any surface water and pore water analysis and biological indicator evaluations), will be documented in an EPA-issued Record of Decision.

9. Several comments were received regarding the design and stability and long-term effectiveness of the cap. Commenters expressed concern about erosion, breakthroughs, and upward migration of contaminated sediment and asked how the cap will be maintained and monitored in the long term.

EPA RESPONSE: Capping is a vetted technology that is commonly used to isolate contaminated sediments in rivers, and EPA has a successful history of using capping to address contaminated sediment at other Superfund Sites. The permanent cap design will be finalized during the removal design and will vary in different areas depending on site conditions. In areas where the cleanup level of 1 mg/kg total PCBs cannot be met through removal, the cap will be constructed to mitigate erosion, prevent breakthrough and the upward migration of contamination, and protect benthic communities. To ensure effectiveness of the permanent cap in these areas, total PCB concentrations, volume of sediment contaminated with PCBs, COPCs, and potential ongoing sources of contamination will be considered during removal design.

To ensure long-term protectiveness, the cap will be monitored in the long-term to demonstrate physical, chemical, and biological quality. A long-term monitoring plan will be developed during removal design. This monitoring shall include bathymetric surveys (which map the terrain of the riverbed), chemical sampling, and sediment camera work as appropriate. The frequency of monitoring will be determined in an EPA-approved workplan. An annual report summarizing the cap monitoring shall be submitted to EPA beginning with placement of the cap material. This report shall include a summary discussion of all activities associated with the cap placement or cap monitoring, and shall include, if necessary, any recommendations for corrective action to maintain the physical, chemical, or biological quality of the cap. Since the design of the permanent cap is expected to vary in different areas depending on site conditions and whether PCBs exceeding the cleanup level remains in sediment at depth, there may be different monitoring and maintenance requirements for different areas.

In addition, long-term monitoring of removal action effectiveness, including of the permanent cap, is expected to be incorporated into the future remedial action and will be included in an EPA-issued Record of Decision.

10. Some commenters asked about the discovery of historical artifacts and items.

Commenters asked what plans and practices are in place should historical items be found in this clean up, including who will be contacted and whether the public will be made aware.

EPA RESPONSE: In 2023, EPA began investigations in the Phase 1 Reach, both as part of RI activities for the Site and to collect data to support the EE/CA. These investigations included, among other things, a historical and cultural resource survey, which identified potential sites of interest. See Site Reconnaissance Summary, p. 2 and Attachment 2.⁶ Potential impacts to historical and cultural resources will be further evaluated during the removal design. Efforts will be made during the removal action to avoid and minimize impacts to any historical and cultural resources at the Site. During the removal design, a plan outlining the process for addressing historical or cultural resources that are discovered during the removal action will be developed.

⁶ Available at <https://semspub.epa.gov/work/01/678308.pdf>. The Site Reconnaissance Summary is also included in the Administrative Record.

The plan will outline how the appropriate stakeholders will be notified. See also Action Memorandum, Sections VI.A.2.a. and d.

11. Some commenters asked about the location of staging areas, trucking routes and haul roads, and EPA's plans for traffic safety. Commenters wanted to know when the information will be made available to the public.

EPA RESPONSE: For purposes of the EE/CA and cost estimates, EPA assumed that the staging area would be located on DCR-owned property near the T&H Dam. However, the final location for dewatering, staging, haul roads, and loadout areas for the dredged sediment and excavated soil will be determined during removal design. Once determined, EPA will make this information available to the public.

A traffic plan will be developed and implemented to manage truck traffic during implementation of the removal action. The traffic plan will include trucking routes and be made available to the public prior to initiating trucking. EPA intends to keep the community informed in advance of any anticipated trucking activities. See also EPA Response to Comment 3.

12. A commenter from Milton asked during the July 9, 2025, public hearing if the Superfund process is going to address ongoing pollution from tributaries and water runoff from construction sites, development, artificial turf fields, pesticides, and other sources of pollution. If not, can the Superfund cleanup be successful in the long run?

EPA RESPONSE: EPA's overarching goal under CERCLA, commonly referred to as Superfund, is to reduce and eliminate threats to human health, welfare, and the environment posed by actual and threatened releases of hazardous substances, pollutants, and contaminants. EPA's authority is to respond to actual and threatened releases of hazardous substances, pollutants, and contaminants, such as what has been identified in the Phase 1 Reach of the Site. The selected removal action will abate the risk of exposure to contaminated sediment and floodplain soils with total PCBs exceeding 1 mg/kg, and co-located COPCs, within the Phase 1 Reach. A remedial investigation is ongoing throughout the full 3.7-mile extent of the Site as part of the Superfund remedial process. In addition, EPA has identified, and is continuing to identify, potentially responsible parties that may have historically contributed, or are currently contributing, hazardous substances, pollutants, or contaminants to the Site, including to the Phase 1 Reach.

To ensure the effectiveness of the removal action, potential continuing sources of contamination in the Phase 1 Reach will be considered during removal design. Further, as part of the long-term remedial process, EPA will determine whether additional actions are necessary in the Phase 1 Reach to address any remaining threats. As part of the remedial process, a baseline risk assessment will be performed to support the long-term remedial action, which will fully evaluate actual and potential risks to human health and the environment posed by the Site, including from PCBs and other hazardous substances. Any future remedial actions will be documented in an

EPA-issued Record of Decision for the Site. EPA expects that long-term monitoring of the effectiveness of the removal action and any future remedial actions will be included in the Record of Decision.

There are limitations to the Superfund program's ability to address all environmental pollution that may affect the river. Contamination into the Neponset River originates from both point sources (for example in discrete and discernable locations) and nonpoint sources (from untraceable to a single identifiable source and coming from diffuse sources such as runoff from rainfall or snowmelt that carry contaminants into the river).⁷ EE/CA Report, p. 19. The response actions EPA will undertake at the Site will address existing contamination from both point and nonpoint sources, and the sitewide remedial action will continue to monitor the Site and the effectiveness of those response actions in the long term.

The Superfund program, however, has limited authority to address future impacts of urban runoff. The primary federal tool for managing nonpoint source pollution is the Clean Water Act.⁸ The Superfund program also does not generally address surface water quality issues arising from nutrient pollution and bacteria,⁹ which are not hazardous substances. However, such pollution is regulated through other state and federal authorities, including the Massachusetts Surface Water Quality Standards (314 CMR 4.00) and programs under the federal Clean Water Act.¹⁰

13. A commenter from Hyde Park made the following comments during the July 9, 2025, public hearing and in written comments.

- a. The commenter suggested that EPA include the Lower Mill Library for document repository due to its proximity to the Baker Dam and residents living in Lower Mills and parts of Mattapan.

EPA RESPONSE: In response to this comment, EPA spoke with the librarian at the Lower Mill Library in Dorchester who agreed to have this library serve as a physical repository, as needed,

⁷ See EPA, Basic Information about Nonpoint Source (NPS) Pollution (Nov. 22, 2024), <https://www.epa.gov/nps/basic-information-about-nonpoint-source-nps-pollution>.

⁸ See Clean Water Act Section 319, 33 U.S.C. § 1329. See also EPA, Nonpoint Source (NPS) Pollution (Sep. 29, 2025), <https://www.epa.gov/nps>.

⁹ See EE/CA Report, p. 36 (“The Neponset River Watershed Association’s Community Water Monitoring Network (CWMN) monitors water quality in the Neponset River Watershed. Results from water sampling performed by CWMN inform the EPA’s Water Quality Report Card. According to the 2022 Neponset River Report Card the Lower Neponset River is 70.9% in compliance with Massachusetts bacterial standards for water-based recreation (Neponset River Watershed Association, 2022). In other words, the Lower Neponset River was unsuitable for swimming or boating approximately 30% of the time within the two-year period due to elevated bacteria levels.”)

¹⁰ For example, provisions under the Clean Water Act addressing nutrient pollution and bacteria include Section 303(d) (total maximum daily loads for impaired waters); Section 304(a) (water quality criteria); Section 319 (nonpoint source pollution management); Section 402 (National Pollution Discharge Elimination System (NPDES) permit program). 33 U.S.C. §§ 1313(d), 1314(a), 1329, 1342. See also EPA, The EPA’s Ongoing Efforts to Reduce Nutrient Pollution (June 20, 2025), <https://www.epa.gov/nutrientpollution/epas-ongoing-efforts-reduce-nutrient-pollution>; EPA, Water Quality Criteria (Aug. 18, 2025), <https://www.epa.gov/wqc>.

for important site related documents, including the Action Memorandum for the NTCRA with its attachments. This library has computer and internet access for full viewing of the documents in the Administrative Record. The Administrative Record and other documents related to the Site are available online and can be accessed at <https://www.epa.gov/neponsetriver>.

- b. The commenter raised points regarding public health in the surrounding community of the Site. The commenter raised that residents surrounding the Lower Neponset River experience a variety of stressors. The commenter noted issues of behavioral and mental health issues, such as PTSD and other traumas, that can be triggered during the Phase 1 Reach cleanup. The commenter wants to continue to focus on issues of public health and how we are going to care for the residents in the area as the removal action unfolds. The commenter would like to know which public health concerns EPA will monitor during the Phase 1 Reach removal action.

EPA RESPONSE: EPA is committed to minimizing impacts to the community during the performance of the removal action, including performing real-time air quality monitoring, and to ensuring the community is informed about removal action activities throughout the process. See EPA Responses to Comments 2 and 323.

- c. The commenter notes that they think the role of communication and engagement with the actual residents impacted is critical at this juncture and asks what resources EPA can bring to ensure that the residents are given adequate and timely information in order to anticipate how they will manage some of their stressors. The commenter hopes EPA has a plan to ensure ongoing timely communication and updates to the residents in Phase 1. The commenter notes that with brief interactions with people whose homes abut the river and live within blocks of the river have not been hearing much from EPA. The commenter hopes the CAG and EPA can work together to fill the void and help people understand that the process is long and that there will be good communication with them because they have to manage their lives and daily stressors. The commenter also requested that EPA provide regular written updates (monthly or quarterly) on contaminants and cleanup progress.

EPA RESPONSE: EPA acknowledges this comment. Please see EPA's Response to Comment 3 regarding EPA's community outreach activities.

- d. The commenter wants to understand how EPA uses tools and other measures that might help to monitor and safeguard the environmental justice needs of communities in Hyde Park and Milton, along with Mattapan and the Lower Mills.

EPA RESPONSE: Please see Executive Order 14151 for the Agency's policy on such matters.

- e. The commenter would like information specifically on how air quality measures will be monitored and how that information can be reported back to the community. The commenter asked that EPA collaborate with a community agency for air quality monitoring with clear consistent public reporting.

EPA RESPONSE: See EPA Responses to Comments 2 and 3.

- f. The commenter would like to ensure that RAA-4 be implemented in full – not downgraded due to shifting EPA priorities.

EPA RESPONSE: The Action Memorandum selected a removal response that will be implemented in its entirety. The selected removal action reflects minor modifications from the removal action alternative recommended in the EE/CA Report, which were made based on EPA’s review of comments submitted during the public comment period. See EPA Response to Comment 4.

- g. The commenter asked that EPA publish a timeline of coordination with the Boston Public Health Department and other agencies and report the status and role of U.S. Public Health Service (USPHS) Commissioned Corps representatives present since November 2024.

EPA RESPONSE: EPA understands this comment to be requesting information on EPA’s coordination and communication with other agencies. EPA coordinates with many agencies at the federal, state, and municipal levels and does not keep a timeline of these communications. EPA is working closely with partner agencies, including the Massachusetts Department of Public Health, the Boston Public Health Commission, and the Agency for Toxic Substances and Disease Registry. Although EPA has not directly coordinated with the USPHS regarding the Site, some of these partner agencies may employ members of the USPHS.

- h. The commenter asks that EPA maintain communication with the Department of Transportation and share updates with residents, schools, and businesses, and the EPA coordinates with local police and traffic departments to monitor pedestrian and traffic safety.

EPA RESPONSE: A traffic plan will be prepared to manage truck traffic during the implementation of the removal action. See EPA Responses to Comment 3 for further information regarding community outreach efforts and Comment 11 for further information regarding the traffic plan. EPA will also coordinate with relevant stakeholders throughout the removal design and removal action as appropriate. EPA may coordinate with the Department of Transportation regarding waste manifests and rules regarding hauling wastes generated as part of the removal action (for example, specific types of placards to be placed on trucks and types of trucks to use to haul certain types of wastes).

- i. The commenter asks that EPA acknowledge the mental health impacts of environmental stress, housing instability, and health disparities. Communicate respectfully with this diverse community.

EPA RESPONSE: EPA acknowledges this comment. See EPA Responses to Comments 3 and 13.b.

- j. Improve multilingual signage, especially regarding fishing and boating restrictions. Eliminate the outdated “two fish per week” guidance.

EPA RESPONSE: Please note that the Massachusetts Department of Public Health is responsible for providing and updating fish advisories. As mentioned in Section 4.4.9 of the EE/CA Report and Section VI.A.2.i of the Action Memorandum, EPA intends to utilize signage and educational outreach as institutional controls throughout the Superfund process. EPA plans to collaborate with the Community Advisory Group and the community to assist in the development of Superfund signage to be placed around the Site. EPA collected fish tissue data in 2024 and has shared this data with the Massachusetts Department of Public Health. This information will also be utilized to bolster the effectiveness of the existing fish consumption advisory by improving outreach through public education programs, brochures, postings in bait/tackle shops, fishing license proprietors, talks to community groups or schools, and discussion about alternatives to fishing. See also EPA Response to Comment 3 for a general discussion on EPA community outreach efforts.

- k. Prioritize timely public communication via newspapers and social media – include advance alerts, not just post-event summaries

EPA RESPONSE: See EPA Response to Comment 3.

- l. Treat reuse planning as iterative, with sustained outreach to ensure diverse resident input

EPA RESPONSE: See EPA Responses to Comments 3 and 6.

14. A commenter from Hyde Park provided comments during the July 9, 2025, hearing, and in writing:

- a. What are the plans for restoring the riverbed? Will the river be repopulated with fish and other wildlife?

EPA RESPONSE: See EPA Response to Comment 7.

- b. Is there going to be improved access for recreation?

EPA RESPONSE: See EPA Response to Comment 6.

- c. Where is the staging area going to be and the trucking routes, and when will this information be available to the public?

EPA RESPONSE: See EPA Response to Comment 11.

- d. How slowly or quickly will work progress down the river?

EPA RESPONSE: EPA anticipates that the removal action will take three years and 10 months. Due to the substantial efforts necessary to support the removal action, dredging is expected to take place during three field seasons, and the required restoration efforts will follow. The schedule for the removal action will be refined during the removal design. See Table 18-3 of the EE/CA Report for a conceptual schedule for the removal action.

- e. What rules does Army Corps have regarding the river channel restoration?

EPA RESPONSE: Appropriate guidance from the U.S. Army Corps of Engineers regarding river channel restoration will be identified and considered during removal design.

- f. How will water level change when the T&H Dam comes out?

EPA RESPONSE: It is anticipated that water levels will decrease within the Phase 1 Reach following removal of the T&H Dam. Water level changes following dam removal will be modeled during the removal design. The removal action will be performed to minimize surges in surface water elevation and to conform to the river's designation as a regulatory floodway by the Federal Emergency Management Agency (which ensures that the river and adjacent land areas are reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height).

15. A commenter from Hyde Park provided comments during the July 9 public hearing and submitted written remarks:

- a. Only one of the four alternatives presented in the EE/CA Report will reach Removal Action Objectives (RAOs) and so the other alternatives are not true alternatives. How do we know there's not a better alternative? More information is needed to know if this is the best selection of alternatives and to do a comparative analysis. EPA should have provided more realistic alternatives that actually meet the RAOs.

EPA RESPONSE: EPA followed the NCP and EPA guidance in selecting and evaluating the removal action alternatives presented in the EE/CA Report. The NCP provides that "[w]hen a planning period of at least six months exists before on-site activities must be initiated, and the lead agency determines, based on a site evaluation, that a [non-time-critical] removal action is appropriate: (i) The lead agency shall conduct an engineering evaluation/cost analysis (EE/CA) or its equivalent. The EE/CA is an analysis of removal alternatives for a site...." 40 C.F.R. §

300.415(b)(4). The NCP does not provide additional requirements regarding removal action alternatives for the EE/CA.

EPA has published guidance on conducting NTCRAs. See EPA, *Guidance on Conducting Non-Time-Critical Removal Actions under CERCLA*, OSWER Directive 9360.0-34 (Aug. 19, 1993) (“1993 NTCRA Guidance”).¹¹ The 1993 NTCRA Guidance recognizes that NTCRAs may be conducted in a wide variety of situations, including at sites like this one, where: 1) the NTCRA is one in a series of response actions, 2) a completed Remedial Investigation is or will be available, and 3) the nature and extent of contamination and the risk presented by the site have been or will be determined. At such sites, the EE/CA should “concentrat[e] on the analysis of perhaps two or three appropriate alternatives and provid[e] reference to existing information on the nature and extent of contamination and risks.” 1993 NTCRA Guidance, p. 19. Further, the 1993 NTCRA Guidance provides that “only a few viable alternatives *relevant to* the EE/CA objectives should be identified and analyzed.” *Id.* at 20 (emphasis added).

In an EE/CA, EPA should “analyze the effectiveness, implementability, and cost of various alternatives that *may satisfy* [the removal action] objectives.” *Id.* (emphasis added). The alternatives analyzed in the EE/CA should be “relevant to” the removal action objectives, *id.*, but nothing in the NCP or the 1993 NTCRA Guidance requires EPA to analyze only alternatives that *achieve all* of the removal action objectives identified in the EE/CA.

The removal action alternatives evaluated in the EE/CA Report for the Phase 1 Reach are relevant to the removal action objectives. The removal action alternatives each involve dredging contaminated sediments and excavating contaminated floodplain soils, because those are vetted technologies that can address the risks posed by the contaminated materials in the Phase 1 Reach.¹² The removal action objectives reflect the same site-specific risks: risks to human health and the environment from contaminated sediments and floodplain soils (see, Removal Action Objectives Nos. 1-4) and the risk that contaminated sediments and soils in the Phase 1 Reach may spread within the Reach and migrate to other areas (see, Removal Action Objectives Nos. 5 & 6). Except for the “no action alternative” (RAA-1), which EPA considered as a baseline for evaluating the other alternatives, each removal action alternative reflects, among other things, EPA’s evaluation and screening of the potential technologies that could be implemented to achieve the removal action objectives. EE/CA Report, p. 58. In developing the removal action alternatives, EPA also considered such site-specific factors as PCB concentrations, soil/sediment characteristics, regulatory requirements, and available resources. During the EE/CA process,

¹¹ Available at <https://semspub.epa.gov/src/document/11/122068>.

¹² Dredging has been used at many other Superfund sites, including but not limited to New Bedford Harbor in Massachusetts; GE-Housatonic in Massachusetts; and the Hudson River PCBs in New York.

EPA eliminated from consideration potential response actions and/or technologies that it determined were inappropriate for the site-specific conditions.¹³ EE/CA Report p. 58.

EPA evaluated an appropriate range of alternatives in the EE/CA. The active removal action alternatives evaluated in the EE/CA Report meet the removal action objectives to varying degrees. As described in the analyses of each removal action alternative in the EE/CA Report, EPA evaluated how well each alternative meets the removal action objectives. RAA-2 is minimally effective in achieving four of the six objectives (Removal Action Objectives 1-4); RAA-3 is moderately effective in achieving five of the six objectives (Removal Action Objectives 1-5); RAA-4 is effective at achieving all six objectives. See EE/CA Report, Sections 4.4.10, 4.5.12, and 4.6.12. EPA performed a comparative evaluation of the alternatives based on effectiveness (including the effectiveness of each alternative at attaining removal action objectives), implementability, and cost, and determined that RAA-4 represented the best balance of the three evaluation criteria. See EE/CA Report Section 7.

- b. EPA should consider the “hot spot” removal approach at the Lewis Chemical depositional area and T&H Dam impoundment, i.e., removing sediment down to 0.88 ppm of PCBs, for the remaining portions of the Phase 1 Reach, rather than relying on the permanent cap. The commenter states that removing deeper sediment from the proposed cap area after 3 ft, confirmatory sampling, and dredging the remaining material to reach .88 ppm would be less damaging to the environment, better for ecology of the river, reduce risk of cap seepage, and provide opportunities for future habitat and flood storage capacity.

EPA RESPONSE: See EPA Response to Comment 4.

- c. The commenter expressed concern regarding the multilayer structural cap from an ecological perspective. Removal instead of capping provides a quicker start to benthic organisms’ recolonization of the river bottom. Even if confirmatory sampling results had dredging going down to bedrock, an added substrate similar to that proposed for the top of the cap, would work better to invite benthic recolonization of the river bottom. In the Lower Neponset’s shallow flows, fill in the form of a cap is detrimental to the ecology of the river and should only be used as a last resort to manage risk.

¹³ There is a narrow range of technologies that have the potential to effectively address the nature and extent of the contamination found in the Phase 1 Reach of the Site. A screening of technologies was performed to reduce the number of technologies that were potentially applicable to a manageable number prior to performing a more stringent screening. During the screening, process options and technology types were evaluated based on technical implementability. Those process options and technology types that could not be implemented effectively were eliminated from further consideration. Process options and technology types retained for further evaluation were combined to create the removal action alternatives evaluated in the EE/CA. EE/CA Report, p. 59. The PCB remediation treatment technology screening and site-specific technology screening performed as part of the EE/CA are presented in Tables 16-1 and 16-2 of the EE/CA Report.

EPA RESPONSE: EPA has made minor modifications to the removal action recommended in the EE/CA Report to allow flexibility to remove contaminated sediments at depths greater than three feet, based on considerations to be included in a decision matrix that will be developed during removal design. Further, the Action Memorandum clarifies that the permanent cap design will vary in different areas depending on site conditions. Based on the extent of dredging and the current understanding of contamination, EPA does not expect that the multi-layer cap, as presented conceptually in the EE/CA Report and Action Memorandum, will be needed over the entire Phase 1 Reach, and it may only be necessary in limited areas. See EPA Response to Comment 4. The selected removal action will mitigate the unacceptable ecological risk from exposure to total PCBs (and co-located COPCs). Ecosystem recovery and receptor survivability will be taken into account in the design process for the removal action.

After dredging occurs, capping will be necessary to stabilize the river channel, adjacent floodplain soils, and impacted abutting structures, minimize surface water elevation changes, and provide ecological habitat. Throughout the Phase 1 Reach, cap material will comprise of clean material suitable for aquatic invertebrate recolonization to promote recovery of benthic communities. With the exception of soft sediment, backfill material will be replaced with a similar particle size of removed contaminated material to minimize disruptions to the ecological habitat. In areas where PCBs exceeding 1 mg/kg total PCBs will remain, the cap will be designed to mitigate erosion, prevent breakthrough and the upward migration of contamination, and protect benthic communities. Any remaining PCB-contaminated sediment will be isolated physically, chemically, and biologically from the surrounding benthic environment. The cap in these areas may be designed consistent with the multi-layer conceptual design presented in the EE/CA Report and the Action Memorandum, consisting of an in situ amendment isolation layer and stone armor layer below the habitat layer consistent with the remainder of the cap. A bathymetric survey shall be performed upon completion of the channel restoration. Long-term monitoring of the permanent cap will include additional bathymetric surveys, chemical sampling, and sediment camera work as appropriate, to demonstrate their physical, chemical, and biological quality. See Section VI.A.2.b of the Action Memorandum for more details regarding capping. See also EPA Response to Comment 7 regarding riverbed restoration and ecosystem recovery.

- d. How do the EPA and the consulting agencies know if RAA-4 meets the Least Environmentally Damaging Practicable Alternative (LEDPA) standard if EPA does not evaluate engineering and cost of removing deeper sediment?

EPA RESPONSE: EPA determined that the recommended removal action alternative (RAA-4) was the least environmentally damaging practicable alternative due to (1) the harmful impacts from contamination present in the aquatic environment and (2) impacts of expected future remedial work in the Phase 1 Reach after the NTCRA is completed. EPA determined that RAA-4 is environmentally preferable as it would minimize repeated disturbance to ecological communities, waterway and wetland hydrology, vegetation, and habitat integrity. Under the removal action selected in the Action Memorandum, most of the contaminated sediments from

the Phase 1 Reach will be addressed through dredging and/or capping.¹⁴ As a result, EPA does not expect that significant future remedial work will be required in the Phase 1 Reach after the removal action is completed. By contrast, RAA-2 and RAA-3 would leave large amounts of contaminated materials in the Phase 1 Reach. Under those alternatives, the remaining contamination would need to be addressed by future remedial action, which would cause further damage to the river's ecosystem. During expected future response actions, the disturbance to ecological communities, which may have recovered by that time (see EPA Response to Comment 7), will recur.

Based on EPA's review of public comments, EPA has modified the removal action to allow for greater flexibility in determining the extent of dredging and design of the permanent cap in various locations in the Phase 1 Reach to address contaminated sediment. See EPA Response to Comment 4. The decision to perform additional dredging beyond three feet in some areas, or to rely on a multi-layer cap design in such areas, will consider a variety of factors using a decision matrix that will be developed during removal design. Engineering and cost considerations will be further refined during removal design. The minor modifications made to the selected removal action from RAA-4 does not change EPA's LEDPA determination. The selected removal action, as modified, represents the least environmentally damaging practicable alternative.

- e. The information used to evaluate removal action alternatives is not sufficient, and the data quality is suspect. EPA should collect additional technical information needed such as bathymetry, additional sediment thickness probes, and confirmatory bulk chemistry sampling. The data necessary to support the selection of a response action alternative and determine which is the least environmentally damaging and practicable alternative is not included in the EE/CA Report.

EPA RESPONSE: EPA's evaluation of removal action alternatives, determination of the least environmentally damaging practicable alternative,¹⁵ and the selection of a removal action for the Phase 1 Reach was based on sufficient information, which was properly validated. EPA considered previous investigations performed at the Site, including in the Phase 1 Reach, and information gathered during EPA's 2023 Phase 1 Reach investigations. For a summary of previous and recent investigations, see Section II.B of the Action Memorandum. The data supporting EPA's determinations are available in the Administrative Record, including but not limited to, in the Site Reconnaissance Summary, Data Evaluation Summary Memorandum – Phase 1, Data Evaluation Summary Memorandum – Phase 1, and Data Evaluation Summary

¹⁴ The selected removal action will address sediment contaminated with total PCBs exceeding 1 mg/kg and co-located contaminants of potential concern.

¹⁵ See also EPA Response to Comment 15.d regarding EPA's LEDPA determination 15.d15.d.

Memorandum – Phase 1 Attachments.¹⁶ See EPA Response to Comment 73.a (discussing the amount of information required at the EE/CA stage).

The investigations suggested by the commenter have been performed, and these data have been used to support the EE/CA and the selected removal action. In addition to the numerous investigations performed at the Site, including in the Phase 1 Reach, which sampled for PCBs and other contaminants in sediment, surface water, pore water, and fish tissue, EPA performed the 2023 Phase 1 Reach investigations, with an objective of collecting the data needed to complete an EE/CA for a potential NTCRA to address contaminated media in the Phase 1 Reach. As part site reconnaissance activities, EPA conducted a geospatial data survey, which included topographical surveys of the riverbanks, a bathymetric survey of the river, and a magnetometer survey of the river. In addition, sediment profile imaging was performed to map the physical, geochemical, and biological conditions of the riverbed. Site reconnaissance activities also included a historical and cultural resource survey and ecological evaluations including a wetland survey. See Site Reconnaissance Summary.¹⁷ As part of the EE/CA, a Phase 1 Reach sediment thickness analysis was also performed, using the results of the bathymetric survey, sediment coring, and sediment probing. See EE/CA Report, Appendix F. Finally, the investigations included sampling and analysis of PCBs and COPCs of sediment, floodplain soil, surface water, and pore water. The investigations were performed, and the data were validated, in accordance with a project-specific Quality Assurance and Project Plan. The full data set, validation memoranda, and laboratory data are reported in the Phase 1 Data Evaluation Summary Memorandum.¹⁸ For a summary of the 2023 Phase 1 Reach investigations, see Section 2.3.8 of the EE/CA Report.

Further, as described in the Action Memorandum, to support the removal design and the removal action, pre-design investigations will be performed, including to delineate the extent of contamination in source areas, to clarify existing sediment thickness throughout the Phase 1 Reach, and inform dredge depths, cap thickness, and cap design.

- f. The schedule presented in the EE/CA Report does not show additional sampling. Confirmation sampling during removal is critical.

EPA RESPONSE: The schedule provided in Table 18-3 of the EE/CA Report is a conceptual schedule. Pre-design investigations, including additional sampling, will take place during the removal design prior to cleanup, and a schedule for this work will be refined during design. EPA will require confirmatory sampling during the removal action.

¹⁶ Available, respectively, at <https://semspub.epa.gov/work/01/678308.pdf>, <https://semspub.epa.gov/src/document/01/100032178>, and <https://semspub.epa.gov/src/document/01/100032179>.

¹⁷ Available at <https://semspub.epa.gov/work/01/678308.pdf>. The Site Reconnaissance Summary is also in the Administrative Record.

¹⁸ Available at <https://semspub.epa.gov/src/document/01/100032178>.

- g. Confirmation sediment depth probing is warranted due to refusal results. Additional probes can help determine how deep additional dredging would go.

EPA RESPONSE: Pre-design investigations will be conducted to clarify existing sediment thickness throughout the Phase 1 Reach and inform dredge depth, cap thickness, and cap design.

- h. Removal of the T&H Dam, and later the Baker Dam, will alter water levels and velocity, which could expose the cap or create erosive forces on the cap. The cap may be subject to erosion, breakthroughs, and upward migration of contaminated sediment.

EPA RESPONSE: Final cap design will be determined during removal design and will take into account potential erosive forces. See also EPA Response to Comment 9.

- i. The commenter requests that EPA modify the approach to reducing risk and do additional thickness probes if necessary and use confirmatory post dredge bulk chemistry sampling to determine how much more dredging would be needed for complete removal or drastically reduced cap coverage. Also determine the cost difference so that agencies and the public can understand what is practicable with a goal to match the risk reduction with restoration of the river's ecology.

EPA RESPONSE: See EPA Responses to Comment 4 regarding minor modifications to the removal action, Comment 7 regarding ecosystem recovery, and Comment 15.a regarding the selection and evaluation of removal action alternatives.

- 16. A commenter from Milton expressed concern about the reduction of EPA staff and asked during the July 9, 2025, public hearing for EPA to assure the residents that this project will be completed as intended and that the EPA staff will not be cut off during this project.

EPA RESPONSE: The NCP requires that a Remedial Project Manager be assigned to manage remedial or other response actions at listed National Priorities List sites. 40 C.F.R. § 300.120. A Remedial Project Manager has been assigned to the Site, and to manage the NTCRA, consistent with that requirement. Although EPA personnel decisions or policies are beyond the scope of this action, EPA is committed to performing the work, or overseeing the performance of the work, as described in the Action Memorandum for the Phase 1 Reach of the Site.

- 17. A commenter from Quincy commented that EPA should also work to remove the Walter Baker (Chocolate) Dam, as this structure continues to block fish passage and hinders the full restoration of native migratory species. This resident also suggested that EPA should remove the smaller non-jurisdictional boulder dam located between the T&H and Baker Dam.

EPA RESPONSE: Both dams identified by the commenter are outside the scope of the removal action for the Phase 1 Reach and will not be removed as a part of this removal action.

18. A commenter from Hyde Park submitted the following comments and questions:

- a. Is there another option that takes the clean up further and does not require a cap?

EPA RESPONSE: Although minor modifications have been made to allow for greater flexibility during the removal action, there is not another option being evaluated which eliminates the need to use a cap. See EPA Responses to Comments 4 and 15.a.

- b. If a cap is in place, how does this affect the ability to construct bridges with respect to support pylons or deeper base foundations at the water's edge? If support is needed, below 3 ft, how does this cap affect construction projects?

EPA RESPONSE: The permanent cap will require monitoring and maintenance to ensure it remains effective, which may impact the ability for construction to take place in certain areas of the river. Section VI.A.2.h of the Action Memorandum outlines specific aspects of the monitoring and maintenance plan. Additionally, institutional controls may be necessary to ensure that the cap remains effective and may also impact the ability for construction to take place in certain areas of the river. Note, however, that because the design of the permanent cap is expected to vary in different areas depending on site conditions and whether PCBs exceeding the cleanup level remains in sediment at depth, there may be different monitoring, maintenance, and institutional control requirements for different areas. The details of any such requirements will be determined during removal design. See Action Memorandum, Section VI.A.2.b for more information regarding the permanent cap. See also EPA Response to Comment 9 regarding cap effectiveness, monitoring, and maintenance.

- c. Section 2.5.5.2 of the EE/CA Report alludes to stipulations and goal priorities for the robin and short-tailed shrew as the surrogate species. How does this protect and give data on other wildlife impacts such as waterfowl and resident beavers in the Neponset? Are there measures in place to also have goal priorities for beavers that use and live in the river at this site and up and down the stream of the site as well? What is the impact the cleanup will affect the beaver and other larger animals' natural pathways and resources? Is there any cause for concern of animals feeding or removing potentially contaminated materials and bringing those contaminants to other sites up the river?

EPA RESPONSE: The selected removal action incorporates cleanup levels for PCBs determined to be protective for wildlife in the Phase 1 Reach. Previous studies and ecological reconnaissance activities performed as part of the 2023 Phase 1 Reach field investigations identified a variety of wildlife within the Phase 1 Reach, including the American Beaver,

mentioned by the commenter. See Site Reconnaissance Summary, pp. 6-7;¹⁹ EE/CA Report, pp. 36-37. The Streamlined Ecological Risk Evaluations of PCBs in sediment and floodplain soil evaluated risk to wildlife in the Phase 1 Reach. Although the risk evaluations specifically evaluate risk to a subset of species, the risk evaluations are performed to be protective of all ecological receptor groups.²⁰

In ecological risk assessment, it is not possible to directly evaluate risks to all species and populations in an ecosystem. Therefore, surrogate species were selected to represent omnivorous (eating plants and animals) and piscivorous (fish-eating) birds and mammals. Because PCBs bioaccumulate in wildlife, meaning they build up within a single organism over its lifetime, birds and mammals that eat prey items such as fish, amphibians, or benthic invertebrates are likely to be exposed to higher concentrations of PCBs than herbivores consuming vegetation (such as beavers). Birds and mammals may be exposed to PCBs in sediment via incidental ingestion while foraging via ingestion of prey items (for example, shellfish, amphibians, fish) that have bioaccumulated PCBs from the sediment and water column. PCB exposure may also occur via ingestion of surface water, but this level of exposure is expected to be much lower than exposure through the diet. Birds and mammals such as heron or mink may consume larger fish contaminated by PCBs that have consumed smaller fish contaminated by PCBs. These piscivorous receptors are typically exposed to the highest level of PCBs in diet.²¹ Streamlined Risk Evaluation for Sediment, p. 5-3 (EE/CA Report, Appendix D). See also EE/CA Report, p. 38.

Surrogate species were chosen in consideration of their suitability to evaluate risk from bioaccumulating and biomagnifying contaminants such as PCBs. EE/CA Report, p. 57. The American robin and the short-tailed shrew were selected as surrogate species to represent omnivorous birds and mammals for evaluation of ecological risk arising from total PCBs in floodplain soil using a food web model. Streamlined Ecological Risk Evaluation of PCBs in Soil, p. 2 (EE/CA Report, Appendix D). These species commonly are used to represent omnivorous feeding guilds in risk assessments throughout New England and are well suited to evaluate the risk at sites affected by PCB contamination. *Id.* The great blue heron and mink were selected as representative piscivorous species for evaluation in the food web model to assess risks to mammals and birds due to PCB exposure via bioaccumulation due to ingestion of fish and sediment. Streamlined Risk Evaluation for Sediment, p. 5-5 – 5-6 (EE/CA Report, Appendix D). The great blue heron occupies a variety of aquatic habitats where small fish are abundant in

¹⁹ Available at <https://semspub.epa.gov/work/01/678308.pdf>. The Site Reconnaissance Summary is also available in the Administrative Record.

²⁰ Note that the Streamlined Ecological Risk Evaluations performed as part of the EE/CA addressed only risks related to total PCBs in sediment and floodplain soil. However, COPCs identified in the Phase 1 Reach were determined to be largely co-located with PCBs and the removal action is expected to address risks from these co-located contaminants, which will be further considered during removal design. A baseline risk assessment will be performed as part of the RI/FS for the Site and will fully evaluate ecological risks from Site contaminants.

²¹ This phenomenon, where the concentration of contaminants increases in organisms at successively higher levels in a food chain, is known as biomagnification.

shallow areas. In addition to fish, they also feed on amphibians, reptiles, insects, crustaceans, birds, and mammals. Mink, the most abundant and widespread carnivorous mammal in North America, are active year-round and are often chosen as a surrogate species for mammalian piscivores at PCB sites because they are particularly sensitive to PCBs. The selection of these two receptors allows the evaluation of piscivorous exposure pathways within the river. *Id.* at 5-6. The evaluation of these surrogate species to determine ecological risk is expected to be protective of other species of wildlife found in the Phase 1 Reach.

Construction activities associated with the removal action (including dredging of sediment, excavation of floodplain soil, capping and backfilling, processing of dredged and excavated sediment and soil, and removal of the T&H Dam) are expected to have substantial short-term impacts on ecological communities in and adjacent to the Phase 1 Reach during the construction. Wildlife in the Phase 1 Reach is expected to be displaced in the short-term.²² However, the selected removal action is designed to focus on the big picture restoration of the ecological health of the river as part of the overall site strategy for the Site. EPA expects that the aquatic habitat will return to a robustly functioning ecosystem in a relatively short period of time (five years or less). See EPA Response to Comment 7.

- d. Removal of Trees: Will old tall growth trees be replaced? Is the plan to only fill with short shrubs and grasses? What is the plan for remediation of the tree removal? The commenter notes that they feel strongly that wildlife impacts are minimized where possible and the loss of tall trees is negligible, while still supporting the removal action.

EPA RESPONSE: To prepare the areas for excavation, it is anticipated that floodplain soils may require vegetation and tree removal. Where possible, EPA will minimize the loss of tall trees. EPA will coordinate with applicable landowners during site restoration, including whether the trees are replanted. EPA will take efforts to minimize impacts to wildlife and the environment during the removal action. Following the removal action, vegetation and engineering controls will be used to stabilize the banks and provide appropriate wildlife habitat in the riparian corridor. While stabilization measures will vary depending on grade, height, floodplain soil use, and flow conditions at each restoration location, the use of native vegetative plantings will be prioritized where possible (this may include the use of coir logs with native vegetative plantings; topsoil bank layers wrapped in geotextile with native vegetative plantings; and erosion control blankets with native vegetative plantings). See Action Memorandum, Section VI.A.2.d. The EPA Superfund program cannot directly redevelop land and is unable to perform site improvements that would greatly alter the ecosystem as it exists currently. See EPA Response to Comment 6. EPA, however, is committed to working with interested stakeholders to consider restoration and anticipated reuse opportunities in the cleanup and to ensure that any reuse is compatible with the Site response actions following completion of the removal action.

²² Please note that there is no concern that wildlife is transporting contamination to other locations.

Restoration activities will be determined in removal design. See also EPA Response to Comment 7 regarding ecosystem recovery.

- e. What plans and practices are in place should historical items be found in this clean up? Who will be contacted, and will the public be made aware? The commenter suggests the local historical society be notified and have an opportunity to photo and log the items at a minimum.

EPA RESPONSE: See EPA Response to Comment 10.

19. A commenter from Hyde Park submitted the following comments and questions:

- a. When the riverbank soils are being excavated, how many feet away from the river will EPA excavate? What if the excavation reaches the defined site boundary and contamination is still present beyond that point? Who will address areas that are beyond the defined site boundary?

EPA RESPONSE: See EPA Response to Comment 5.

- b. The commenter noted a strong desire to see reuse that includes trails, share trees, parks and benches, areas for community gatherings, improved fishing access, bike paths, paddling kiosks, and boat launches.

EPA RESPONSE: EPA acknowledges this comment. See EPA Response to Comment 6.

- c. The comments noted a desire to see the river cleaned up to its natural state of unlimited reuse, to clean up the pollution as much as possible to minimize the need for a cap, to restore natural low flow to the riverbed, and to see fish migrations patterns restored.

EPA RESPONSE: EPA acknowledges this comment. Based on EPA's review of public comments and further consideration, EPA has made minor modifications to the removal action to allow for greater flexibility in determining the extent of dredging. Further, the Action Memorandum clarifies that while a permanent cap will be constructed throughout the Phase 1 Reach, the design of the cap will vary in different areas depending on site conditions. See EPA Response to Comment 44. For information on riverbed restoration and ecosystem recovery, see EPA Response to Comment 77. See also EPA Response to Comment 6 regarding beneficial reuse.

- d. To what extent would the removal of the T&H Dam contribute to improvements in fish migration patterns and habitat health?

EPA RESPONSE: The Neponset River supports valuable anadromous fish populations. By removing the T&H Dam and completing the removal action in the Phase 1 Reach, it is anticipated that habitat health will be improved for fish living in the Lower Neponset River. Dam removal at other locations in New England, such as from the Penobscot River in Maine, have

resulted in improved fish survival and an increased trend towards native species recolonization of the area.²³ It is likely that similar patterns will occur with anadromous fishes in the Lower Neponset River. See also EPA Response to Comment 7 regarding ecosystem recovery. Larger-scale migration patterns for fish will continue to be influenced by activities downstream of the T&H Dam, including downstream dams, which present obstacles for fish migration. Dams downstream of the T&H Dam, including the Walter Baker Dam, are outside the scope of this removal action.

- e. How was flow calculated when anticipating river hydrology post-dam removal?

EPA RESPONSE: As part of the hydraulics and sediment stability analysis completed as part of the EE/CA (included as Attachment B to the EE/CA Report), flow data was retrieved from the U.S. Geological Survey Gage #011055566 and used when completing this analysis.

- f. Is EPA planning to help establish aquatic species post-removal?

EPA RESPONSE: See EPA Response to Comment 7.

- g. Will there be some way to prevent fine particles from flowing downstream when the dam is being removed?

EPA RESPONSE: As outlined in Section VI of the Action Memorandum and described in Section 4.4.2.3 of the EE/CA Report, best management practices will be employed during the removal action to minimize downstream migration of fine particles during dredging and capping activities. In addition, backfill and capping material will be applied slowly and uniformly which can minimize the amount of sediment disruption and resuspension. Specific approaches and best management practices to minimize risks from residual contaminated sediment, resuspension, and release during and after construction will be determined during removal design. Removal of the T&H Dam will take place following the removal of contaminated sediments upstream of the dam, which will also limit the downstream transport of fine particles during dam removal, since the riverbed upstream of the dam will be stabilized. Because sediments contaminated with PCBs exceeding the cleanup level will have been removed or stabilized under the permanent cap prior to the removal of the T&H Dam, the downstream transport of contamination is expected to be negligible. During removal of the dam, measures will be taken to ensure the integrity of remediated areas in the Phase 1 Reach and minimize sediment disruption, erosion, and resuspension. Such measures may include, for example the use of silt curtains, which are floating barriers designed to minimize the spread of disturbed sediment. The design for the removal of the T&H Dam will be finalized during removal design.

- h. How will the discovery of historical artifacts be handled?

EPA RESPONSE: See EPA Response to Comment 10.

²³ See Zydlewski, J., et al., Seven dam challenges for migratory fish: insights from the Penobscot River, *Frontiers in Ecology and Evolution*, Vol. 11 (Oct. 15, 2023), <https://doi.org/10.3389/fevo.2023.1253657>.

20. The president of the Hyde Park Neighborhood Association submitted the following comments and questions:

- a. While the commenter supports the selected removal action, the commenter expresses concern that RAA-4 may not be a rigorous enough cleanup and asks whether there a better option than what was proposed in the EE/CA Report that could have been presented which would results in a safer, deeper, fuller, and more impactful cleaning. The commenter notes that the community of Hyde Park, Mattapan, Dorchester, and Milton have been exposed to these and other urban toxins for decades, and these factors significantly increase the severity of health impacts on the local population.

EPA RESPONSE: EPA acknowledges this comment. See EPA Responses to Comment 4 regarding minor modifications to the removal action 4and Comment 15.a regarding the selection and evaluation of removal action alternatives.

- b. How do we know that a cap can withhold changes due to climate change or invasive plants?

EPA RESPONSE: See EPA Response to Comment 9 regarding the effectiveness of the cap and long-term cap performance monitoring and maintenance^{15.h}. The conceptual cap design (presented in Appendix G of the EE/CA Report and described in Section VI.A.2.b of the Action Memorandum), which will apply to areas where the cleanup level of 1 mg/kg cannot be met through sediment removal, includes a 12-inch-thick stone armor layer designed to withstand a 500-year flood. This conceptual design takes into account the increasing frequency and intensity of floods in the region and provides a conservative approach to ensure cap effectiveness. As described in Comment 4, the Action Memorandum clarifies that while a permanent cap will be constructed throughout the Phase 1 Reach, the design of the cap will vary in different areas depending on site conditions. The final cap design will be determined during the removal design. See EPA Response to Comment 60.b.

Post-removal monitoring will be performed to monitor and ensure the effectiveness of the removal action. See EPA Response to Comment 8. As part of post-removal monitoring, including long-term monitoring which will be incorporated into the sitewide remedial action, EPA will assess potential impacts from invasive species to remedy effectiveness. EPA may take action to address invasive species if they impact the effectiveness of the removal action or disturb the permanent cap, which may be addressed as part of the long-term remedial strategy at the Site. See also EPA Response to Comment 47.

- c. What is the difference between having a cap across the site vs cleaning deeper than 3 ft and not installing a cap? What is the cost difference between full

removal of contaminated sediment versus capping? What is the safest outcome for the community? There is no comparative analysis.

EPA RESPONSE: See EPA Responses to Comment 4 regarding minor modifications to the removal action 4 and Comment 15.a regarding the selection and evaluation of removal action alternatives.

- d. The commenter asked when in the Superfund process EPA would show the community plans for haul roads.

EPA RESPONSE: See EPA Response to Comment 11.

- e. Who will monitor the removal and how intensive will the monitoring be?

EPA RESPONSE: EPA understands the commenter to be referring to oversight of the removal action. EPA, through a Remedial Project Manager (RPM), will perform oversight of the removal action. If the NTCRA proceeds Fund-lead (which means that it is funded by the federal government, primarily from the Superfund Trust Fund established by CERCLA), EPA will oversee work performed by EPA contractors and any other entities involved with the performance of the removal action.²⁴ Alternatively, the removal action may be performed by potentially responsible parties (PRPs), either under an administrative settlement agreement or a unilateral administrative order. EPA will monitor the PRPs' compliance to ensure that they are meeting the terms of the agreement or order, including the performance of the removal design and removal action.²⁵ Under either a Fund-lead (performed by EPA contractor) or PRP-lead action, work will proceed under a scope of work outlining the activities to be performed. All deliverables detailed in the scope of work, including workplans, health and safety plans, sampling plans, and quality assurance project plans, design documents, and monitoring and maintenance plans, will be submitted for EPA review and approval. EPA will also oversee removal action field activities during performance of the NTCRA and ensure that the project proceeds on schedule and that the removal action is protective of human health and the environment throughout the life of the project.

For details regarding monitoring of the NTCRA, see Section VI.A.2.h of the Action Memorandum. See also EPA Responses to Comments 2 and 8.

- f. The commenter asked how much sediment needs to be removed.

²⁴ See 40 C.F.R. § 300.120(f)(1) ("Fund-financed response: The RPM coordinates, directs, and reviews the work of EPA, states and local governments, the U.S. Army Corps of Engineers, and all other agencies and contractors to assure compliance with the NCP.")

²⁵ See 40 C.F.R. § 300.120(f)(2) ("Federal-lead non-Fund-financed response: The RPM coordinates, directs, and reviews the work of ... responsible parties, and contractors to assure compliance with the NCP, [the decision document] ... administrative order, and lead agency-approved plans applicable to the response.")

EPA RESPONSE: As outlined in the EE/CA Report, Section 4.6.8, EPA estimated that 50,900 cubic yards of dredged sediment will be removed in the removal action.²⁶

- g. The commenter notes that there is no opportunity for further formal public comment during the final design nor during the implementation of construction activities. The commenter asks EPA to commit to ongoing process of sharing further data, draft design plans, regular construction progress updates on at least a monthly basis through participation in CAG meetings and other presentations as needed. The commenter further requests that EPA commit to receiving and acknowledging informal public comment during design and construction and incorporating community recommendations to the maximum extent possible.

EPA RESPONSE: See EPA Response to Comment 33.

- 21. A commenter from Dorchester submitted the following comment: The discussion at the public meeting suggested that we need more details about the in situ cap, specifically, the dredging and capping should be deep enough to allow for a viable river flow, including suitable conditions for plants and animals, and should be covered over to provide the equivalent of a natural river bottom. This is vital for the long-term health of the river.

EPA RESPONSE: The depth of dredging and the design of the permanent cap (which will vary in different areas) will be based on a number of considerations, including but not limited to sediment and channel stability, slope stability, stability of existing structures, and maintaining the Site's status as a regulatory floodway (so that water surface elevation does not increase beyond a designated height). See Action Memorandum, Section VI, and EPA Response to Comment 4. Following dredging, capping will occur throughout the Phase 1 Reach to stabilize the river channel, adjacent floodplain soils, and impacted abutting structures, minimize surface water elevation changes, provide and ecological habitat. The cap will be comprised of clean materials suitable for aquatic invertebrate recolonization to promote recovery of benthic communities. Except for soft sediment, backfill material will be replaced with a similar particle size of removed contaminated material to minimize disruptions to the ecological habitat. See Action Memorandum, Section VI.A.2.b. See also EPA Response to Comment 7 regarding riverbed restoration and ecosystem recovery.

- 22. A commenter from Hyde Park provided the following comments for EPA to address related to the removal action:

²⁶ EPA made minor modifications to the selected removal action to allow flexibility of dredging PCB-contaminated sediment at depths greater than three feet in some areas. However, EPA does not expect that modifications to significantly change volumes estimated in the EE/CA. See EPA Response to Comment 4.

- a. Control pest and animals being driven from their habitats.

EPA RESPONSE: It is expected that wildlife in the Phase 1 Reach will be displaced in the short term. See EPA Response to Comment 18.c. Pest control is not included as part of the Superfund program or this removal action. If, however, pests are displaced and present a public health threat as a result of work being performed during the Phase 1 Reach, EPA may coordinate with the local health organizations.

- b. Respect the time of day and days of the week when work is performed.

EPA RESPONSE: EPA acknowledges this comment. EPA anticipates that work for this removal action will occur during the work week during normal working hours. EPA will provide updates to the community regarding the work schedule before and during the removal action.

- c. Post signs regarding the project; keep neighbors informed on the progress; inform neighbors of what the contractors will be wearing during work; respect the neighborhood and be transparent of what people could be exposed to during the work.

EPA RESPONSE: See EPA Responses to Comments 2 and 33, regarding air quality monitoring during the removal action and EPA's community outreach efforts, respectively³. With respect to what contractors will be wearing, all contractors working on site will be expected to wear high-visibility gear with clear demarcation of affiliation, along with the appropriate level of Personal Protective Equipment (PPE) for the activity they are performing. Types of PPE may include high-visibility vests, hard hats, eye and ear protection, full body coveralls, and gloves.

- d. Keep river accessible during project.

EPA RESPONSE: Due to the nature of the removal action, EPA anticipates that there will be times during the removal action that segments of the river will not be accessible. EPA will communicate the work schedule to the community and keep the community informed of river usage during the removal action.

- e. The commenter suggested using Arlington Street and Metropolitan Avenue to access site.

EPA RESPONSE: EPA acknowledges this comment. A traffic plan will be developed prior to the start of any trucking activities and will be provided to the public. See EPA Response to Comment 11.

- f. The commenter noted concerns about flooding into homes during the removal action.

EPA RESPONSE: EPA does not anticipate that the removal action will result in the flooding into nearby homes during the removal action. Engineered controls may be devised during removal design, and implemented during construction, to maintain water levels within the Phase 1 Reach to facilitate dredging operations. Due to the anticipated use of hydraulic dredging for the

removal action, EPA does not anticipate diverting the river when conducting the removal action (which would potentially lead to surface water elevation changes that may increase vulnerability to flooding). However, if another dredge technology that requires river diversion becomes necessary, EPA will implement best management practices to ensure nearby homes are not impacted.

- g. Will work be completed during the winter months?

EPA RESPONSE: EPA anticipates that work will continue during the winter months throughout the removal action. Please refer to Table 18-3 of the EE/CA Report for a detailed conceptual schedule for the removal action. The schedule will be refined during removal design.

- h. The commenter notes that EPA needs to distribute professional notices to neighbors as we get close to the project happening, and to keep the language simple and provide in all languages that serve the neighborhood.

EPA RESPONSE: EPA acknowledges this comment. See EPA Response to Comment 3.

23. The Neponset River Greenway Council submitted the following comments:

- a. The Council asks that, if possible, EPA should eliminate the need for capping the river bottom and next to the river by removing contaminants deep enough that it is not necessary to cap.

EPA RESPONSE: See EPA Response to Comment 4.

- b. The Council asks the T&H Dam to be removed only after the upstream contamination is totally removed.

EPA RESPONSE: Removal of the T&H Dam will take place following the removal of contaminated sediments (or their isolation under a permanent cap) upstream of the dam. See Section VI.A.2 of the Action Memorandum for more information.

- c. Please make sure that any remediation of the banks make it possible to build a paved trail along the river, especially on the west side of Hyde Park and Mattapan.

EPA RESPONSE: See EPA Response to Comment 6.

- d. The Council asks that weather-caused flooding of the banks of the river is minimized during the entire time the dredging process is underway.

EPA RESPONSE: Engineered controls may be devised during removal design, and implemented during construction, to maintain water levels within the Phase 1 Reach to facilitate dredging operations. Due to the anticipated use of hydraulic dredging for the removal action, EPA does not plan to divert the river during the removal action (which would potentially lead to surface water elevation changes that may increase vulnerability to flooding). If, however, another

dredge technology that requires river diversion becomes necessary, EPA will implement best management practices to minimize flooding of the banks of the river. As the removal action is conducted, EPA will ensure that the riverbanks are stabilized following removal and ensure that weather-caused flooding does not erode the restored riverbanks.

- e. The Council asks that warning signs be added along the Neponset Trail and the trail on the west side of the river before and during work on the river and its banks.

EPA RESPONSE: EPA will ensure that signage is clearly established before and during the removal action to inform the community of removal activities. EPA plans to coordinate with the Lower Neponset Community Advisory Group to develop signage, including the appropriate location of signs during the removal action. See EPA Response to Comment 33.

24. A commenter from Milton submitted the following comments:

- a. The commenter voiced concerns about the details of the actual remediation plan. Will the public have visibility into the details of the plan, and will they be able to provide comment?

EPA RESPONSE: See EPA Response to Comment 3.

- b. Once the remediation action has started, will there be regular reports on the progress, specifically, in regards to the sampling during the dredging and removal activities? It would be ideal if we could get regular reviews that highlight the progress and results of what is being removed.

EPA RESPONSE: Once the removal action begins, EPA will provide community updates on the progress of the removal action and make sampling data available once it is validated. For more information see EPA Response to Comment 33.

- c. Is there an overall coordinated plan amongst all the parties for remediation and rebuilding of the river basin and its banks? Many parties seem to be involved. EPA seems to be responsible for cleaning and removing the hazardous material, but once that is completed, who has the responsibility turn what remains into a viable and useful resource for the communities that abut the river?

EPA RESPONSE: See EPA Response to Comment 6.

Massachusetts Department of Fish and Game

The Commonwealth of Massachusetts Department of Fish and Game (DFG) submitted a letter of support to EPA that included the following comments.

25. DFG states that restoration of the Lower Neponset River has been a priority of the DFG and its Divisions for over twenty years. DFG describes that numerous ecological, engineering, and preliminary design studies examines the challenges and opportunities to restore fish passage near the T&H Dam and the Baker Dam. DFG states that removal of the T&H Dam is a priority for the agency.

EPA RESPONSE: EPA acknowledges this comment. The selected removal action includes removal of the T&H Dam which will achieve unobstructed fish passage within the Phase 1 Reach and immediately downstream of the T&H Dam, but fish passage will continue to be obstructed due to the downstream dams. See also EPA Response to Comment 19.d. The removal action selected in the Action Memorandum is limited to the Phase 1 Reach of the Site and the Walter Baker Dam is outside of the Phase 1 Reach.

26. DFG asked that EPA coordinate with DFG on the design of the dam removal and remediation and channel reconstruction upstream of the T&H Dam.

EPA RESPONSE: EPA will coordinate with DFG, along with other departments of the Commonwealth, when designing the T&H Dam removal and channel reconstruction in the Phase 1 Reach.

27. DFG recommends that EPA consult with an engineering firm with deep experience in dam removal in New England rivers and streams.

EPA RESPONSE: EPA will ensure that all engineering firms working on the Phase 1 Reach removal action are qualified to perform the removal action selected in the Action Memorandum, including removal of the T&H Dam.

28. DFG notes that the Baker Dam is located at head-of-tide in the river, and may be removed in the future, noting that it is therefore important that remediation is carried out in a way the provides habitat for migratory fish that will be passing through or spawning, in addition to the resident fish.

EPA RESPONSE: EPA notes that the Phase 2 Reach, the segment of the Site between the T&H Dam and the Walter Baker Chocolate Dam, is not being addressed by the selected removal action. However, the removal action will contribute to the efficient performance of any long-term remedial action to be taken, which includes the remediation of the Phase 2 Reach. By completing this removal action in the Phase 1 Reach and providing ecological habitat when capping the Phase 1 Reach, EPA anticipates that habitat will be provided for migratory fish. Additionally, any work completed during the removal action in the Phase 1 Reach will be performed in segments that will allow water to flow continuously, thereby providing for uninterrupted fish passage for resident, migratory, and spawning fishes. See also EPA Response to Comment 7 regarding riverbed restoration and ecosystem recovery.

Lower Neponset River Community Advisory Group (CAG)

The Lower Neponset River Superfund Site CAG submitted the following comments:

29. EPA should explain why a more comprehensive removal alternative – one that explicitly targets sediment and soil PCB concentrations approaching site-specific background levels – was not developed and formally evaluated in the EE/CA Report. EPA should clarify whether removal to background was deemed technically infeasible cost prohibitive, or inconsistent with EPA’s Superfund guidance, and provide a documented rationale for this exclusion.

EPA RESPONSE: See EPA Response to Comment 15.a regarding EPA’s selection and evaluation of removal action alternatives. In addition, the cleanup level for total PCBs in sediment selected for the removal action is protective of human health and the environment, and EPA appropriately considered concentrations from background/reference locations in selecting the cleanup level, consistent with CERCLA, the NCP, and EPA guidance. The cleanup level of 1 mg/kg total PCBs for sediment was based on the risk-based preliminary removal goal developed as part of the EE/CA, which corresponds to an increased lifetime cancer risk of 1E-06 (1 in 1,000,000) for a recreator and results in a non-cancer hazard quotient below the target limit of 1 for both child and adult recreational receptors. The cleanup level was developed in accordance with EPA’s Risk Assessment Guidance for Superfund and is consistent with the NCP, 40 C.F.R. § 300.430.²⁷

During the 2023 Phase 1 Reach field investigations, surface sediment grab samples were collected from background/reference locations in the Mother Brook and the Neponset River immediately upstream of its confluence with Mother Brook. Figure 2 of the EE/CA Report depicts background sediment core locations. PCBs were detected at all the background/reference locations, with concentrations ranging from 0.00891 mg/kg to 1.13 mg/kg. The average concentration of total PCBs within the background area is 0.3 mg/kg. Seventy-five percent of background/reference samples had PCB concentrations less than 0.51 mg/kg and 95% had total PCB concentrations less than 1 mg/kg. One background/reference sample had total PCB concentrations over 1 mg/kg (location 23A-080, which had 1.13 mg/kg total PCBs in the original sample and 1.07 mg/kg total PCBs in the field duplicate). EE/CA Report, p. 28.

In general, EPA determines cleanup levels based on an evaluation of applicable or relevant and appropriate requirements, To-Be-Considered criteria, and risk-based goals. Background concentrations may play a role in determining site-specific cleanup levels depending on site-

²⁷ “For known or suspected carcinogens, acceptable exposure levels are generally concentration levels that represent an excess upper bound lifetime cancer risk to an individual of between 10^{-4} and 10^{-6} using information on the relationship between dose and response. The 10^{-6} risk level shall be used as the point of departure for determining remediation goals for alternatives when ARARs are not available or are not sufficiently protective because of the presence of multiple contaminants at a site or multiple pathways of exposure.” 40 C.F.R. § 300.430(e)(2)(i)(A)(2).

specific circumstances.²⁸ For example, in cases where a risk-based cleanup goal for a contaminant of concern is below background concentrations, the cleanup level may be established based on background because cleanup levels are generally not set at concentrations below background levels (natural or anthropogenic).²⁹ Where background concentrations fall below risk-based goals, however, CERCLA and the NCP do not require more stringent cleanup. In fact, cleanup levels more stringent than levels corresponding to an increased lifetime cancer risk of 1E-06 (the more protective end of EPA's acceptable risk range) are only "allow[ed] ... when warranted by exceptional circumstances." NCP Preamble, 55 Fed. Reg. 8666, 8716 (Mar. 8, 1990).³⁰ The Preamble continues: "CERCLA does not require the complete elimination of risk or of all known or anticipated adverse effects. ... Remedies at Superfund sites comply with these statutory mandates when the amount of exposure is reduced so that the risk posed by contaminants is very small, i.e., at an acceptable level. EPA's risk range of 10⁻⁴ to 10⁻⁶ represents EPA's opinion on what are generally acceptable levels." *Id.* at 8716.

Regarding the use of background levels as cleanup levels specifically, the NCP Preamble states:

EPA does not agree that cleanup levels should always be to background levels. In some cases, background levels are not necessarily protective of human health, such as in urban or industrial areas; in other cases, cleanup to background levels may not be necessary to achieve protection of human health because the background level for a particular contaminant may be close to zero, as in pristine areas.

Id. at 8717-8718.

The cleanup level of 1 mg/kg total PCBs selected for the removal action is within the range of concentrations identified at background/reference locations detected during 2023 Phase 1 Reach field investigations (which ranged from 0.00891 mg/kg to 1.13 mg/kg). Consistent with CERCLA, the NCP, and EPA guidance, because 95% of background concentrations detected did not exceed the risk-based cleanup level, with the average detected value (0.3 mg/kg) falling far below 1 mg/kg, EPA did not further revise the selected cleanup level, which corresponds to risk at the more protective end of EPA's acceptable risk range.

²⁸ EPA guidance recommends statistical methods for characterizing background concentrations of chemicals in soil. EPA, *Guidance for Comparing Background and Chemical Concentrations in Soil for CERCLA Sites*, OSWER 9285.7-41 (Sept. 2002), <https://www.epa.gov/sites/default/files/2015-11/documents/background.pdf>. A statistical evaluation of sediment background data is not available for this NTCRA. However, PCB samples were collected from background/reference areas which detected concentrations of total PCBs ranging from 0.00891 mg/kg to 1.13 mg/kg.

²⁹ EPA, *Role of Background in the CERCLA Cleanup Program*, OSWER 9285.6-07P (Apr. 26, 2002), p. 7, https://www.epa.gov/sites/default/files/2015-11/documents/bkgpol_jan01.pdf.

³⁰ See *id.* at 8717 ("[S]ite-specific exposure factors [that may indicate the need to establish a risk goal more protective than the overall goal of 10⁻⁶] include but are not limited to: the cumulative effect of multiple contaminants; the potential for human exposure from other pathways at the site; population sensitivities; potential impacts on environmental receptors; and cross-media impacts.")

30. EPA should revise and expand its hydraulic and sediment transport modeling to account for future climate conditions, including projected increases in precipitation intensity, streamflow variability, and flood frequency associated with climate change. The CAG recommends that EPA consider integrating more advanced modeling transport tools to ensure the long-term stability of caps and the effectiveness of sediment removal.

EPA RESPONSE: EPA acknowledges this comment. Hydraulic and sediment transport modeling will be refined during removal design. See EPA Response to Comment 41 for more information. As the analysis is refined during removal design, these recommendations will be taken into consideration.

31. EPA should design the Phase 1 Reach action with long-term public access, trail connectivity, and native habitat restoration in mind. Future use should be considered in the evaluation of cap placement, access points, and final contours.

EPA RESPONSE: See EPA Response to Comment 6 regarding beneficial reuse and redevelopment.

EPA is committed to working with interested stakeholders, including the CAG and others, to consider anticipated reuse opportunities in the cleanup and to ensure that any reuse is compatible with the Site response actions following completion of the removal action.

32. EPA should clearly commit to a robust Pre-Design Investigation (PDI) to guide all final construction plans for the Phase 1 Reach. This investigation must include comprehensive horizontal and vertical delineation of PCB contamination in both sediment and floodplain soils; assessment of riverbank stability and erosion risk; and targeted sampling in currently under-characterized wetland areas, including backwater zones, oxbows, and seasonal seeps. PDI should inform elements such as dredge depth, prism width, final grading, cap placement, and the restoration contour. The PDI should be used to re-evaluate where capping can be avoided. The CAG also notes that the PDI should be made publicly available.

EPA RESPONSE: EPA intends to conduct pre-design investigations in preparation for the removal in the Phase 1 Reach. The PDI activities, along with removal design activities, will inform the aspects of the removal action outlined in this comment. Pre-design investigations are outlined in Section VI of the Action Memorandum, and will be completed to:

- Clarify the extent of PCB contamination in source areas within the Phase 1 Reach, specifically the T&H Dam impoundment and the former Lewis Chemical Corp. facility depositional area;
- Clarify sediment thickness throughout the Phase 1 Reach to inform dredge depths, cap thickness, and cap design; and

- Clarify the amount of dense riverbed soil and sediment to be removed prior to dam removal and what necessary grade is needed to prepare for dam removal.

In addition, archaeological surveying and dredge technology screening may be performed as part of pre-design investigation activities. See Updated Removal Action Cost Estimate (Attachment 5 to the Action Memorandum.) EPA will rely on the data collected to date and during the pre-design investigations to inform the removal design. Pre-design investigation findings will be made publicly available throughout the removal design and will be clearly incorporated into removal design milestones.

In addition, EPA clarifies that while a permanent cap will be constructed throughout the Phase 1 Reach, the design of the cap will vary in different areas depending on site conditions. Based on the extent of dredging and the current understanding of contamination, EPA does not expect that the multi-layer cap, as presented conceptually in the EE/CA Report and Action Memorandum, will be needed over the entire Phase 1 Reach, and it may only be necessary in limited areas. See EPA Response to Comment 4.

33. EPA should commit to real-time air quality monitoring program for all phases of sediment removal, soil excavation, and transport associated with the Phase 1 Reach Removal Action. The data should be publicly accessible via a dashboard and summarized in weekly updates. The commenter also asked for public disclosure of the action thresholds that will trigger mitigation responses when exceeded and that EPA ensure that BMPs are implemented to reduce dust suppression, noise, and odor.

EPA RESPONSE: See EPA Response to Comment 2 regarding air quality control measures and monitoring and reporting of information to the public. EPA will also ensure that any thresholds that could trigger a suspension in construction activities, or trigger other best management practices, are made publicly available. See also EPA Response to Comment 3 regarding EPA's community outreach efforts. Air monitoring and dust suppression measures for PCBs shall be maintained until all removal activities are complete, including dredging, excavation, capping, and transport of PCB-contaminated sediment and soil. Air monitoring will also ensure that any odors that may be attributable to the removal action are not toxic. The use of odor suppressants as a contingency for uncovering volatile materials will be evaluated during design. Local noise ordinances will be complied with during the removal action and EPA anticipates most construction related activities to take place during normal working hours.

34. EPA should define clear and measurable performance metrics for the Phase 1 Reach that extend beyond sediment PCB concentrations to include outcomes that reflect public health protection, ecological restoration, and community experience. The CAG also suggested establishing benchmarks, timelines for improvement, and adaptive triggers-thresholds at which additional investigation or corrective measures will be

considered. The comment also asks for performance outcomes to be monitored and shared in a public facing dashboard or report card.

EPA RESPONSE: See EPA Responses to Comments 3 and 8. EPA acknowledges this comment and will consider the suggestions provided by the CAG in the development of the monitoring and maintenance plan during removal design.

35. EPA should clearly explain how Clean Water Act Section 404 mitigation requirements will be addressed in the Phase 1 Reach removal action and should commit to meaningful public involvement in the development of the wetland mitigation plan. EPA should clarify how its Section 404 compliance process will coordinate with the USACE and MassDEP, and relevant local conservation commissions.

EPA RESPONSE: EPA will minimize harmful impacts to wetlands to the extent practicable, and best management practices for construction will be used as determined during the removal design. If any wetlands are affected by excavation and fill replacement, wetlands will be restored at the same surface elevation as pre-existing wetlands to the extent practicable. The details of wetland avoidance, mitigation, and restoration will be determined in the removal design.

EPA will coordinate with relevant stakeholders to comply with all applicable and relevant and appropriate requirements to the extent practicable (including Section 404 of the Clean Water Act) and in the development of a wetland mitigation plan.

36. EPA should commit to transparent, long term post-construction monitoring and adaptive management plan for the Phase 1 Reach.

EPA RESPONSE: EPA acknowledges the monitoring plan components that are suggested in this comment submission. As discussed in the Action Memorandum, a monitoring and maintenance plan will be developed during the removal design. Section VI.A.2.h of the Action Memorandum provides additional details for the anticipated components of the monitoring and maintenance plan. See EPA Response to Comment 8.

37. EPA should formalize ongoing community involvement and public engagement throughout the design and implementation of the Phase 1 Reach removal action. Requested commitments include Design Review Presentation, CAG Integration into Oversight and Updates, and On-Site Educational Signage and Interpretation.

EPA RESPONSE: See EPA Response to Comment 3.

38. EPA should revise the proposed removal strategy in RAA-4 to reduce reliance on extensive sediment capping and prioritize targeted sediment removal wherever practicable. The CAG also states that post-dredge confirmation sampling should

drive final cap placement decisions, and that capping should be explicitly justified in floodplain and wetland zones.

EPA RESPONSE: See EPA Response to Comment 4. Based on the review of public comments, EPA has made minor modifications to the removal action selected in the Action Memorandum to allow flexibility for the possibility of removing contaminated sediment at depths below three feet throughout the Phase 1 Reach. Further, the Action Memorandum clarifies that while a permanent cap will be constructed throughout the Phase 1 Reach, the design of the cap will vary in different areas depending on site conditions. Based on the extent of dredging and the current understanding of contamination, EPA does not expect that the multi-layer cap, as presented conceptually in the EE/CA Report and Action Memorandum, will be needed over the entire Phase 1 Reach, and it may only be necessary in limited areas. A decision matrix will be developed during removal design to clearly outline how to determine when additional dredging will occur to address exceedances of the cleanup level and how the design of capping will be determined at different locations. EPA does not anticipate that capping will be utilized in the floodplain or wetlands. Floodplain soils will be excavated to a cleanup level of 1 mg/kg total PCBs and will be reconstructed such that it is stable and resistant to erosion under normal and high flow conditions while also supporting future ecological habitat. If any wetlands are affected by excavation and fill replacement, wetlands to the extent practicable will be restored at the same surface elevation as pre-existing wetlands. See Action Memorandum, Section VI.A.2.d.

The Neponset River Watershed Association (NepRWA)

In written comments submitted to EPA during the public comment period, the Neponset River Watershed Association (NepRWA) voiced strong support for the implementation of the selected removal action. Representatives from NepRWA provided comments of support and additional remarks during the public hearing. NepRWA submitted the following comments.

39. NepRWA strongly urges EPA to commit to expanding its engagement with the community as it moves through the pre-design investigation and final design process, and to do so in a manner that is more transparent and timelier than what has occurred to date (for example, NepRWA would like to see draft plans and provide feedback on draft plans earlier in the process and for sampling data to be shared more timely). NepRWA goes on to raise specific areas for which it urges future public input (for example, scope of pre-design investigations, plans for post-construction restoration and mitigation of wetland and floodplain habitats, and alternatives for construction access points). NepRWA requests that EPA commit to an ongoing process of sharing data, plans, updates, and informal public comment and committing to receiving and acknowledging informal public comment.

EPA RESPONSE: EPA acknowledges the comment and will consider the suggestions. See Section VI.A.3 of the Action Memorandum and EPA Responses to Comment 33 and Comment 37. While EPA does not intend to solicit public input on draft deliberative documents, EPA will

continue to share removal design information and look for public input for specific and appropriate aspects of the removal design, such as locations for air monitoring locations and signage throughout the removal action.

40. NepRWA notes that removal of the T&H Dam is a central component of the Phase 1 Reach Removal action. The T&H Dam poses a significant risk of catastrophic failure during a future flooding event which would produce a catastrophic release of contaminants downstream. This failure risk would be present even if the Dam were in a state of good repair, but the risk is elevated due to its condition. The Dam also has a critical influence on erosive forces and geomorphic behavior in the stream channel in this area and consequently on-stream channel stability, the future stability of any contaminants that may be left behind, and any cap constructed as part of response actions. It is not possible to design a lasting solution to the Neponset's contamination issues without removing the T&H Dam.

EPA RESPONSE: EPA acknowledges this comment. The selected removal action includes removal of the T&H Dam.

41. NepRWA comments that hydraulic and hydrologic modeling needs to be substantially improved as part of the pre-design investigations, by ensuring that hydraulic modeling is built around a full understanding of plans for removal of the T&H Dam. NepRWA provided several considerations for EPA to incorporate when revisiting the hydraulic modeling for the Phase 1 Reach through a process that places dam removal first rather than last in the design sequence.

EPA RESPONSE: EPA acknowledges the modeling considerations outlined in this comment. Hydraulic modeling will be refined during the removal design to at a minimum ensure an understanding of future stream stability and inform final cap designs. Additionally, prior to removal of the T&H Dam, evaluations of the revised shear stresses on the upstream bridge structures and floodplain soils will be performed to determine if scour countermeasures are required. A geomorphic assessment will also be conducted to predict channel adjustments (including post-dam removal channel erosion and sediment transport) following dam removal. EPA will further consider the suggestions in this comment during refinement of the modeling during removal design.

42. NepRWA agrees that wetland impacts are unavoidable due to necessary sediment remediation activities and recommends that the focus of wetland remediation activities be directed toward onsite rather than offsite improvements, with the goal of enhancing the environmental functions of the stream bed, stream banks, and floodplain all of which are critical wetland resources. The commenter states that the unnaturally flat and wide river configuration, resulting from modifications in the 1960s, causes and contributes to higher water temperatures and impairment for

Dissolved Oxygen. The commenter further requests that required mitigation activities be focused on improving the ecological function of the riverbanks and stream channel, ameliorating these ongoing violations of the Federal Clean Water Act, and that detailed plans for this ecological restoration be shared for public feedback during the final design process.

EPA RESPONSE: EPA acknowledges and will consider this comment. As stated in Section VI.A.2.d of the Action Memorandum, where soil removal activities will be occurring in floodplains and wetlands, harmful impacts to wetland and floodplain resources will be minimized to the extent practicable and best management practices for construction will be determined during design. If any wetlands are affected by excavation and fill replacement, wetlands to the extent practicable will be restored onsite at the same surface elevation as pre-existing wetlands. Impacts to ecological function of the riverbank and stream channel will be assessed and restored to the extent practicable following the removal action. Restoration activities will be determined in removal design and will be shared with the public. See EPA Response to Comment 7 and 18.d.

43. NepRWA recommends that during the design process, EPA conduct further evaluation of the costs and benefits of fully removing contaminated sediments from some portions of the Phase 1 Reach and no capping, as compared to removing only the top three feet and capping.

EPA RESPONSE: See EPA Response to Comment 4.

44. NepRWA recommends that during the final design process additional floodplain soil samples be collected inland of the ordinary high-water line to clarify the lateral extent of soil contamination. The commenter further notes that the historical modification of the floodplain and the likelihood of the deposition of contaminants above the ordinary high water line in past storm events justifies additional sampling in this area.

EPA RESPONSE: See EPA Response to Comment 5.

45. NepRWA asks: Does the dredging and excavation plan assume that present day water levels will be maintained by the T&H impoundment to float barges, and is it reasonable to assume the T&H dam can maintain those water levels for 4-5 years without interim repairs?

EPA RESPONSE: The dredging and excavation plans will be developed during the removal design. It is anticipated that the water level within the Phase 1 Reach will be capable of floating barges needed to complete hydraulic dredging in the river for the duration of the removal action. Engineered controls may be devised during removal design, and implemented during construction, to maintain water levels within the Phase 1 Reach to facilitate dredging operations.

If conditions change, other technologies will be assessed for use to clean up sediment and floodplain soils in the Phase 1 Reach. These decisions will be made during the removal design.

46. NepRWA comments that the RAOs in the EE/CA Report should be amended to include an objective or portion of an objective that reflects community concern regarding the need to reduce risk due to fish consumption even if this risk cannot be entirely eliminated by the Phase 1 removal alone.

EPA RESPONSE: Historical fish tissue data (collected in 2003 and 2005) were used in the Streamlined Risk Evaluation in a screening level analysis only, since more recent fish tissue data was not available at the time the Streamlined Risk Evaluation was performed. See EE/CA Report, p. 40. Although this screening level analysis provides additional evidence to support the need to perform a NTCRA to limit the potential for human health risks from PCBs, it was not used to develop preliminary removal goals or cleanup levels. Sitewide fish tissue was collected in 2024 as part of the remedial efforts and will be utilized to support sitewide risk assessments as part of the RI/FS for the Site, which will determine whether additional actions are necessary to address any remaining risks in the Phase 1 Reach (including from fish consumption). EPA does not intend to change the Removal Action Objectives for this removal action.

47. NepRWA comments that EPA should commit to ensuring that all backfill materials imported to the Site will be analyzed to determine contaminant concentrations prior to use to minimize introduction of contaminants to the Site, to ensure that they do not introduce invasive species to the Site, and take steps to ensure that any contaminants or invasive species introduced will be remediated.

EPA RESPONSE: Regarding contaminant concentrations, EPA intends to screen backfill materials for contaminants before placement within the Phase 1 Reach as part of the permanent cap. EPA will ensure clean, suitable materials are used to backfill the Site. Regarding invasive species, EPA does not anticipate screening backfill specifically for invasive species. EPA, however, does not anticipate that the backfill materials will contain invasive species, and EPA will prioritize using locally sourced materials when capping the Phase 1 Reach. As part of post-removal monitoring, including the long-term monitoring that will be incorporated into the sitewide remedial action, EPA will assess potential impacts from invasive species to remedy effectiveness. EPA may take action to address invasive species if they impact the effectiveness of the removal action or disturb the permanent cap, which may be addressed as part of the long-term remedial strategy at the Site.

48. NepRWA asks: Will other species be suitably protected by the goals developed for the American robin and short-tailed shrew?

EPA RESPONSE: The selected removal action incorporates cleanup levels for PCBs determined to be protective for wildlife in the Phase 1 Reach. Although the risk evaluations

specifically evaluate risk to a subset of species (called “surrogate species”), the risk evaluations are performed to be protective of all ecological receptor groups. See EPA Response to Comment 18.c.

49. NepRWA noted that EPA should identify measures to be collected, including surface water and porewater analysis for PCBs and biological indicators (such as benthic macroinvertebrate density and diversity, and pollutant concentrations in fish and shellfish), beyond those described in the EE/CA Report, to provide more evidence that the removal activities have effectively controlled the Site’s contamination both in the Phase 1 Reach, in the Site downstream, and in the Neponset River Estuary Area of Critical Environmental Concern downstream of the Site.

EPA RESPONSE: EPA acknowledges this comment. See EPA Response to Comment 8. Long-term monitoring of removal action effectiveness is expected to be incorporated into the future sitewide remedial action. Any additional response actions and continuing long-term monitoring requirements for the Site (including surface water and pore water analysis and evaluation of biological indicators) will be documented in an EPA-issued Record of Decision.

50. NepRWA noted that EPA should provide additional details on planned construction period monitoring activities to assure that monitoring is timely enough to trigger effective control measures to address any inadvertent contamination released and that the spatial resolution and timing of confirmatory sampling will be adequate to ensure pollutants have been removed to target levels. To facilitate generation of timely results, we recommend that the project incorporate onsite laboratory facilities.

EPA RESPONSE: A monitoring plan will be developed during the removal design that will provide the details requested in this comment. Post-removal sediment and floodplain soil sampling is a key component of this cleanup and will take place to ensure that EPA has met the removal objectives. Sampling of removed sediment and soil will be necessary to determine the appropriate disposal location for those materials. As discussed in EPA Response to Comment 2, real time air monitoring will be conducted during the implementation of the removal action. Section VI.A.2.h of the Action Memorandum provides specific aspects of the monitoring and maintenance plan. EPA will further consider the use of an on-site laboratory.

Tetra Tech, Inc. (on behalf of NepRWA)

Tetra Tech, Inc., on behalf of NepRWA, submitted the following comments:

51. TetraTech provided general comments regarding the Removal Action Objectives (RAOs) identified in the EE/CA Report and suggested that EPA consider key goals from NepRWA’s strategic plan. To achieve the goals from NepRWA’s strategic plan, TetraTech recommends that EPA explicitly evaluate how the selected remedy will

support long-term public access and fish passage while still meeting all remedial goals.

EPA RESPONSE: EPA's authority under CERCLA is to respond to actual and threatened releases of hazardous substances, pollutants, and contaminants, such as what has been identified in the Phase 1 Reach of the Site. The goals of a response action under CERCLA cannot be based on the strategic plan of another organization, though such objectives may have some overlap with EPA's objectives in a response action. EPA developed removal action objectives for the NTCRA, which are described in Section VI.A.1 of the Action Memorandum. See also EPA Response to Comment 15.a. During the removal action in the Phase 1 Reach, EPA will abate the risks from direct exposure to sediments and floodplain soils that exceed 1 mg/kg for total PCBs and co-located COPCs. See Action Memorandum, Section VI.A.2. As to the future reuse opportunities for the Phase 1 Reach, see EPA Response to Comment 7. As to fish passage, EPA anticipates that removal of the T&H Dam will achieve unobstructed fish passage within the Phase 1 Reach and immediately downstream of the T&H Dam, but fish passage will continue to be obstructed due to the downstream dams. See also EPA Response to Comment 19.d.

52. TetraTech supports the proposed alternative, but proposes the following refinements to better align the RAA-4 with the broader objectives and ensure consistency across future removal actions:

- a. **Pre-Design Investigations:** Map the full depth of the contamination throughout the entire floodplain upstream of the T&H Dam; engage the T&H Dam owner early in the investigation phase to synchronize sampling, access, and timing with any planned dam-removal or modification work.

EPA RESPONSE: See EPA Response to Comment 5 regarding the removal of floodplain soil. EPA will coordinate closely with the T&H Dam owner throughout the removal design and removal action. Pre-design investigations will be completed to clarify, among other things, the extent of contamination in the Phase 1 Reach source areas (T&H Dam impoundment and the former Lewis Chemical Corp. facility depositional area). See also EPA Response to Comment 32 regarding expected pre-design investigations.

- b. **Sediment Removal and Capping:** Excavate all sediment exceeding 1 mg/kg PCBs wherever site logistics and bank stability permit safe removal; install a targeted sediment cap only over residual areas above 1 mg/kg PCBs where excavation is impractical.

EPA RESPONSE: See EPA Response to Comment 4. Based on EPA's review of public comments, EPA has made minor modifications to the removal action recommended in the EE/CA Report to allow for greater flexibility in determining the extent of dredging. Further, the Action Memorandum clarifies that while a permanent cap will be constructed throughout the Phase 1 Reach, the design of the cap will vary in different areas depending on site conditions.

- c. Post-Removal Grading and Restoration: Design final slopes and banks to support native vegetation, stabilized walkways, and unobstructed fish passage; ensure grading plans accommodate both ecological restoration targets and accessible, low gradient connections to existing greenway trails.

EPA RESPONSE: See EPA Response to Comment 6 for information on post-removal reuse of the Phase 1 Reach. With respect to fish passage, EPA anticipates that removal of the T&H Dam will achieve unobstructed fish passage within the Phase 1 Reach and immediately downstream of the T&H Dam, but fish passage will continue to be obstructed due to the downstream dams. See EPA Response to Comment 19.d. Grading plans for floodplain soil and riverbank restoration will be determined during the removal design and will consider these comments. The use of native vegetative plantings will be prioritized where practicable, in coordination with the property owners. See EPA Response to Comment 18.d.

53. TetraTech noted that the EE/CA Report identified the need to place caps over areas where PCB concentrations meet the 1 mg/kg threshold. While capping provides long-term protection, a more effective use of the budget would prioritize greater removal of contamination and less reliance on capping. This approach would also improve consistency with future remedial actions at the site as the need to protect capped areas may not align with remedial actions downstream of the Phase 1 Reach. Pre-design work needs to support more complete removal for deeper zones and focused capping.

EPA RESPONSE: See EPA Responses to Comments 4 and 32.

54. Why was removal to background levels of PCBs not considered as a cleanup alternative? The EE/CA Report identifies background sediment PCB concentrations averaging approximately 0.27 mg/kg with 95% of the samples below 1 mg/kg. Yet even the most aggressive alternative (RAA-4) sets a cleanup level of 1 mg/kg and relies on capping for deeper contamination. While we understand the technical and cost limitations, we believe the document should more clearly explain why full removal to background levels was not evaluated as a formal alternative, and whether such an approach was deemed infeasible, unnecessary, or inconsistent with EPA policy.

EPA RESPONSE: See EPA Response to Comment 29.

55. EPA should more clearly explain how residual contamination below the cap will be monitored and managed long-term.

EPA RESPONSE: See EPA Response to Comment 9.

56. TetraTech asked: Does the modeling meet the requirements outlined under MEPA Interim Protocol on Climate Change Adaptation and Resiliency?

EPA RESPONSE: The protocol referenced in this comment was not identified as an Applicable or Relevant and Appropriate Requirement (ARAR) for the removal action and was not considered when developing the model.

57. TetraTech commented that post-remediation backfill elevations should be determined based on surface water modeling results to restore the river. If remediation is successful, this is an opportunity to increase flood storage capacity of the channel by reducing the base elevation of the river, instead of backfilling to the current grades. Rivers transport sediment continuously, sedimentation will occur naturally in areas when water velocity drops, which should be considered during stream restoration design. The less reliance on capping (if the river is remediated to below 1 mg/kg PCBs) would allow the river to equilibrate and restore naturally.

EPA RESPONSE: EPA acknowledges this comment and will take it into consideration during removal design. Dredging and capping will be primarily driven by total PCB concentrations. Dredge depths and the design of the permanent cap, including cap thickness, will be carefully evaluated during removal design through the development of a decision matrix. The decision matrix will consider factors such as the volume of PCB contaminated sediment remaining after removal, sediment and channel stability, slope stability, stability of existing structures, the Site's status as a regulatory floodway, applicable or relevant and appropriate requirements, potential exposure pathways, COPCs, value engineering, and long-term maintenance requirements. Capping will occur throughout the Phase 1 Reach to stabilize adjacent floodplain soils and impacted abutting structures, minimize surface water elevation changes, provide ecological habitat, and ensure a stable river channel throughout the Phase 1 Reach. As acknowledged in the Action Memorandum, it may not be necessary to restore the original bathymetry of the riverbed to maintain sediment stability across the Phase 1 Reach in entirety. In some areas, particularly in depositional areas, capping may not be necessary, as these areas are expected to gradually fill in via natural processes. Sedimentation and changes in water velocity will be further considered during the removal design. See EPA Response to Comment 94. See also EPA Response to Comment 4 regarding the minor modifications to the selected removal action to allow for greater flexibility in determining the extent of dredging and the design of the permanent cap in various locations in the Phase 1 Reach to address contaminated sediment.

58. TetraTech noted that while limited capping may be useful, a permanent cap along the entire Phase 1 Reach will prevent the river from naturally downcutting its channel causing the river to migrate laterally. This can erode adjacent wetlands and floodplains, potentially exposing contaminated sediment previously isolated by natural river movement. To mitigate these risks, it is essential to conduct surface water modeling during the design phase including hydraulic analyses to evaluate

flood levels and river hydrodynamics after remediation. The dredge prism and the permanent cap design must account for these dynamics, to minimize impacts on wetlands and floodplains and prevent unintended spread of contamination through lateral river migration. Careful hydraulic and geomorphological assessments avoid creating new contamination pathways and ecological risks.

EPA RESPONSE: The issues raised in this comment, such as the capping causing lateral migration of the river, will be addressed as hydraulic and sediment transport modeling are refined during the removal design. The design of the dredging and capping will account for flood levels and river hydrodynamics after the removal action. The Action Memorandum clarifies that while a permanent cap will be constructed throughout the Phase 1 Reach, the design of the cap will vary in different areas depending on site conditions. Based on the extent of dredging and the current understanding of contamination, EPA does not expect that the multi-layer cap, as presented conceptually in the EE/CA Report and Action Memorandum, will be needed over the entire Phase 1 Reach, and it may only be necessary in limited areas. See EPA Response to Comment 4. The cap design will take into account the considerations raised by the commenter, which will be further evaluated as the hydraulic modeling is refined during removal design.

59. TetraTech provided comments regarding the following topics concerning the PCB data discussed in Sections 2.3 and 2.4 of the EE/CA Report: (i) whether PCB sediment samples were collected by sediment layer or a prescribed sediment interval; (ii) recommended focusing figures and data on the critical metric if PCBs are greater than 1 mg/kg, rather than the number of detections; (iii) whether the horizontal and vertical extent of PCB contamination has been fully characterized in the T&H impoundment area; and (iv) a recommendation that a more comprehensive hydraulic analysis be completed before the removal approach is finalized.

EPA RESPONSE: First, regarding how samples were collected from sediment cores, samples were collected from the surface interval (0-0.5 feet), 0.5 feet to an intermediate depth, and the intermediate depth to the bottom of the core. The intermediate depth used for sampling was from 0.5 feet to either half the depth of the remaining sediment core or to where there was an obvious change in lithology (for example, from silt to sand). Data Evaluation Summary Memorandum – Phase 1, p. 3.³¹ Second, EPA acknowledges the request to present the figures and data in a certain manner and will consider doing so in future reports. Third, additional sampling will take place during the pre-design investigations to further delineate PCB contamination in source areas within the Phase 1 Reach, including the T&H impoundment area and the former Lewis Chemical Corp. facility depositional area. Additionally, pre-design investigations will take place to determine the extent of dense riverbed soil and sediment removal necessary to remove the T&H Dam. See also EPA Response to Comment 32 regarding expected pre-design investigations. Fourth, the hydraulic modeling performed as part of the EE/CA, which evaluates sediment

³¹ Available at <https://semspub.epa.gov/src/document/01/100032178>.

stability and the impact of the T&H Dam removal, is sufficient to select an appropriate removal action. See EPA Response to Comment 73.a (discussing the amount of information required at the EE/CA stage). EPA will refine the hydraulic modeling as part of the removal design, including the design of the permanent cap (which will vary in different areas). EPA does not intend to revise the EE/CA Report.

60. TetraTech provided comments regarding the cap design presented in the EE/CA report, primarily in Appendix G, with specific comments related to the chemical isolation layer design and cap armoring design.

- a. TetraTech provided recommendations for consideration during cap isolation layer design, including refining the porewater PCB data, using the actual total organic carbon values collected concurrently with the PCB data, and referencing published literature, site specific data, or experimental results to support the validity of key input parameters into the design of the isolation layer.

EPA RESPONSE: EPA acknowledges this comment. When finalizing the cap design during removal design, EPA will consider these recommendations.

- b. TetraTech discussed the need for additional details supporting Isbash calculation of the stone size used for armoring and asked why using a 500-year simulation was appropriate during this design.

EPA RESPONSE: EPA's 2005 *Contaminated Sediment Remediation Guidance* states: "The design of the erosion protection features of an in-situ cap (i.e., armor layers) should be based on the magnitude and probability of occurrence of relatively extreme erosive forces estimated at the capping site. Generally, in-situ caps should be designed to withstand forces with a probability of 0.01 per year, for example, the 100-year storm. ... [I]n some circumstances, higher or lower probability events should also be considered."³²

As discussed in the Action Memorandum, Section III.D, floods have generally become larger in rivers and streams across the Northeast, and large floods have become more frequent. An acknowledgment of the increasing frequency and intensity of flooding is also reflected in the current Massachusetts Dam Safety regulations: while existing dams are required to have spillway systems with a capacity to pass a flow from a 100-year design storm, the spillway system for new dams are required to have a capacity to pass a 500-year design storm flow. 302 CMR 10.14(6). Further, the Lower Neponset River may have additional vulnerabilities to increased flow. Up to one-third of the flow from the Charles River is diverted to the Neponset River via the

³² EPA, *Contaminated Sediment Remediation Guidance*, OSWER 9550-85 (Dec. 2005), p. 5-9 <https://semspub.epa.gov/work/HQ/174471.pdf>.

Mother Brook, which was constructed as a flood-diversion canal for the Charles River.³³ During high flow conditions such as heavy precipitation events, the Neponset River may experience even higher peak flows due to this diversion.³⁴

The conceptual cap design presented in Appendix G of the EE/CA Report and described in the Action Memorandum includes a 12-inch-thick stone armor layer designed to withstand 500-year peak velocities.³⁵ Action Memorandum, Section VI.A.2.b. This takes into account the increasing frequency and intensity of floods in the region and provides a conservative approach for contaminant breakthrough modeling to ensure cap effectiveness. The final design of the permanent cap (which will vary in different areas) will be determined during the removal design. Details on the final Isbash calculations for the final cap design will be provided in the final removal design.

- c. TetraTech notes that the analysis of the erosion on the cap does not consider erosion of the overlying sand layer.

EPA RESPONSE: EPA acknowledges this comment. Future analysis of the erosion of the cap will include consideration of the overlying sand layer while the cap design is finalized.

- d. TetraTech recommends adding in published literature, site specific data, or experimental results to support the validity of key input parameters into the assumptions in Equation 1, as this would improve transparency and defensibility of the modeling approach.

EPA RESPONSE: EPA acknowledges this recommendation and will take this into consideration as the cap design is finalized.

- e. TetraTech recommended a contingency action be outlined clearly based on the post-dredge confirmation sampling results, which would provide flexibility to install either reactive cap with armoring or regular residual management backfill to allow habitat and stream restoration.

³³ Weston Solutions, Final Site Inspection Report, Lower Neponset River PCB Site (Apr. 19, 2019), p. 4, available at <https://semspub.epa.gov/src/collection/01/SC39491>.

³⁴ See, for example, EPA, Causal Analysis/Diagnosis Decision Information System: Flow Alteration (Feb. 7, 2025), <https://www.epa.gov/caddis/flow-alteration> (“Redirecting flow from one watershed to another, or transbasin diversions, also may increase flow in one stream..., while decreasing flow in another...”); Serra-Llobet, et al., Flood diversions and bypasses: Benefits and challenges, *Wiley Interdisciplinary Reviews: Water* (Jan. 2022), Vol. 9(1), available at <https://doi.org/10.1002/wat2.1562>, p. 15 (“In general, interbasin floodwater transfers can be complicated by impacts of increased flows in the receiving basins ...”).

³⁵ In the conceptual cap design presented in Appendix G of the EE/CA Report and presented in the Action Memorandum, the armor stone diameter was sized using the Isbash formula (that is, a formula used to determine the minimum diameter of rock to resist movement by flowing water) and the 500-year storm channel velocity modeled by the Army Corps of Engineers’ Hydrologic Engineering Center’s River Analysis System (HEC-RAS). Based on these calculations, the armor layer will consist of stone with a 4-inch median diameter. Appendix G of EE/CA Report, p. 2/4.

EPA RESPONSE: EPA acknowledges this comment. Based on EPA’s review of public comments, EPA has made minor modifications to the removal action to allow for greater flexibility in determining the extent of dredging. Further, the Action Memorandum clarifies that while a permanent cap will be constructed throughout the Phase 1 Reach, the design of the cap will vary in different areas depending on site conditions in the Phase 1 Reach to address contaminated sediment. Based on the extent of dredging and the current understanding of contamination, EPA does not expect that the multi-layer cap, as presented conceptually in the EE/CA Report and Action Memorandum, will be needed over the entire Phase 1 Reach, and it may only be necessary in limited areas. A decision matrix will be developed during removal design and will clearly outline how to determine when additional dredging will occur to address exceedances of the cleanup level and how the design of capping in different areas will be determined. See EPA Response to Comment 44.

61. TetraTech recommends minimizing the extent of capping and dredging while still meeting the 1 ppm cleanup goal.

EPA RESPONSE: See EPA Responses to Comments 44 and 60.e60.

62. TetraTech provided comments on the pre-design investigations, with a variety of recommendations for the pre-design investigation workplan.

EPA RESPONSE: EPA acknowledges the recommendations provided by TetraTech related to the pre-design investigation workplan. EPA will consider these recommendations during workplan development. See EPA Response to Comment 32 regarding expected pre-design investigations. Elements of the conceptual restoration plan outlined in the provided comment will be incorporated into the final removal design.

63. TetraTech provided recommendations for EPA to consider during long-term ecological and habitat restoration. Some recommendations also focused on community engagement and public availability of monitoring data.

EPA RESPONSE: EPA acknowledges the recommendations provided on long-term ecological and habitat restoration and will take these into consideration throughout the removal design and removal action. See EPA Responses to Comment 7 (regarding riverbed restoration and ecosystem recovery), Comment 8 (regarding post-removal monitoring), and Comment 9 (regarding cap effectiveness, monitoring, and maintenance). See also EPA Response to Comment 3 (regarding community outreach activities).

64. TetraTech provided comments focusing on the need for additional information and considerations when completing the Hydraulics and Sediment Stability Analysis. Specific recommendations include: provide detailed documentation on the

downstream boundary condition treatment; share the model inputs and outputs for reproducibility; consider the Baker Dam removal in modeling scenarios; consider T&H Dam conditions including changes in channel geometry and sediment transport dynamics post-dam removal; account for changes in bathymetry; use a 2D or 3D model to provide a more accurate representation of the floodplain and potential impacts of dam removal or capping; and consider potential increases in precipitation, runoff and streamflow due to climate change. TetraTech emphasizes that addressing these issues in the analysis would improve reliability and applicability of the modeling results, leading to more informed decision making for the removal.

EPA RESPONSE: EPA acknowledges the recommendations and considerations provided by TetraTech. The hydraulics and sediment stability analysis will be refined during the removal design. As the analysis is refined in design, these considerations and recommendations will be taken into consideration. Further, the analysis will be published during the removal design, ensuring that the model in the analysis is reproducible.

The Town of Milton

The Town of Milton submitted a letter to EPA. The letter voices support for the preferred option outlined in the EE/CA Report. The Town also voiced commitment to engaging thoroughly with EPA to ensure the Milton community is well represented, supported, and included in the cleanup process. The letter included additional comments:

65. The EE/CA Report identified the “Paper Mill Site” as a potential staging and loadout area. The Town would expect continued dialog and communication with the EPA about potential use of this site for staging and loadout.

EPA RESPONSE: EPA will coordinate with all landowners when determining final staging and loadout locations. The final location for the dewatering, staging, and loadout area will be determined and made public during removal design. See EPA Response to Comment 11.

66. The Town notes that it is focused on efforts to maintain and improve the Milton Landing, a waterfront area located downstream of the Walter Baker Dam, discusses contamination south of the Walter Baker Dam, and states that extending the cleanup to this area would be a worthwhile endeavor.

EPA RESPONSE: EPA acknowledges the information presented by the Town of Milton. The area discussed is outside the scope of the removal action.

Beveridge & Diamond PC and Roux Associates Inc. on behalf of Siemens Industry, Inc. and Archer Well Company

Beveridge & Diamond PC and Roux Associates Inc. (on behalf of Siemens Industry, Inc. and Archer Well Company) submitted the following comments:

67. The commenters state that Siemens Industry, Inc. and Archer Well Company demonstrated that they are not liable for any contamination.

EPA RESPONSE: EPA sought public input on the alternatives presented in the EE/CA Report for the Phase 1 Reach. Potential liability of parties falls outside the scope of the EE/CA Report. Therefore, EPA is not responding to liability issues in this Responsiveness Summary.

68. The commenters provided several related comments, asserting that EPA’s selected removal action constitutes a remedial action and should therefore undergo review through a Remedial Investigation/Feasibility Study.
 - a. The commenters reference portions of statutory definitions of “removal” and “remedial,” 42 U.S.C. § 9601(23) and (24), and EPA guidance, stating that CERCLA distinguishes “removal actions” from “remedial actions,” and that a

removal action is a short-term response intended to address an immediate release while a remedial action uses long-term response meant to achieve a permanent remedy.

EPA RESPONSE: The response action selected in the Action Memorandum fits squarely within CERCLA’s definition of a removal action. In CERCLA, “removal” and “remedial” are broadly defined terms, indicating that Congress gave EPA the flexibility to choose the appropriate type of action based on site-specific conditions. CERCLA Section 101(23) broadly defines a removal action to mean:

“the cleanup or removal of released hazardous substances from the environment, such actions as may be necessary taken in the event of the threat of release of hazardous substances into the environment, such actions as may be necessary to monitor, assess, and evaluate the release or threat of release of hazardous substances, the disposal of removed material, or the taking of such other actions as may be necessary to prevent, minimize, or mitigate damage to the public health or welfare or to the environment, which may otherwise result from a release or threat of release...”

42 U.S.C. § 9601(23). The “removal” definition also provides a non-exhaustive list of additional actions included in the definition:

“The term includes, *in addition, without being limited to*, security fencing or other measures to limit access, provision of alternative water supplies, temporary evacuation and housing of threatened individuals not otherwise provided for...”

Id. (emphasis added). Commenters appear to point to this list of ostensibly short-term measures to support the assertion that removal actions are inherently short-term responses. But the plain text of Section 101(23) shows that the non-exhaustive list of actions provided *is additive* to and *expands upon* the types of actions described earlier in the definition. *Id.* (“The term *includes, in addition...*”).

Meanwhile, CERCLA Section 101(24) defines a remedial action as, in part, “those actions consistent with permanent remedy taken instead of or in addition to removal actions in the event of a release or threatened release of a hazardous substance into the environment, to prevent or minimize the release of hazardous substances so that they do not migrate to cause substantial danger to present or future public health or welfare or the environment.” 42 U.S.C. § 9601(24). Both “removals” and “remedial actions” encompass actions to address releases of hazardous substances into the environment. And the definition of “remedial action” explicitly contemplates coordination between removal and remedial actions. Thus, neither definition supports the commenters’ argument that the selected NTCRA is remedial in nature. On the contrary, by defining both terms broadly, Congress provided flexibility to EPA, so that EPA could select and undertake appropriate response actions based on site-specific circumstances.

In seeking support for their assertion regarding the distinctions between removal and remedial actions, commenters mischaracterize EPA’s *Use of Non-Time-Critical Removal Authority in*

Superfund Response Actions (“2000 NTCRA Guidance”),³⁶ stating that this EPA guidance “describes removal actions as those that ‘achieve *quick*’ results” (citation omitted, emphasis added by commenters). To provide greater context, the 2000 NTCRA Guidance states:

“[Since 1992], it has been a central feature of EPA’s Superfund program philosophy to integrate the removal and remedial programs in order to achieve the greatest human health and environmental protection in the most efficient fashion. To this end, EPA has urged Superfund decision makers to broadly use the CERCLA removal authority to achieve quick, protective results at Superfund sites....”

Id. at 1. Further, the guidance goes on to provide that “[removal actions] certainly can be long-running responses, too.” *Id.* at 3, fn 2.

The commenters also note that the statutory definition of “remedial action” provides a non-exhaustive list of examples, which include activities like “dredging or excavations,” 42 U.S.C. § 9601(24), which are components of the selected NTCRA. However, the inclusion of this list within the “remedial action” definition does not suggest that dredging or excavations may not be performed in removal actions. As explained above, both removals and remedial actions address releases of hazardous substances, and technologies such as “dredging or excavations” may be suitable for either type of response action depending on the site-specific circumstances. In fact, EPA guidance states that “dredging large quantities of sediment could be conducted using removal authority where such action was the appropriate course for abating or controlling a time-sensitive threat.” 2000 NTCRA Guidance, p. 4.

Further, as commenters acknowledge, response actions that achieve a permanent cleanup may also be removal actions.³⁷ As discussed above, the statutory scheme, which defines remedial actions as “those actions consistent with permanent remedy taken instead of or in addition to removal actions,” assumes that removal actions also include “those actions consistent with permanent remedy.” 42 U.S.C. § 9601(24). The NCP also clearly contemplates that removal actions may, at times, result in permanent cleanups. See 40 C.F.R. § 300.415(g). And, at other times, where EPA determines that a removal action will not fully address the threat posed by a release and may require remedial action, the NCP requires “an orderly transition from removal to remedial response actions.” *Id.*

As described in Section III of the Action Memorandum, EPA determined that a removal action is appropriate to address the Phase 1 Reach of the Site. Conditions of the Site meet the criteria for a removal action as set forth in Section 300.415(b)(1) in that “there is a threat to public health or welfare of the United States or the environment,” and in consideration of the factors set forth in

³⁶ EPA, *Use of Non-Time-Critical Removal Authority in Superfund Response Actions* (Feb. 2000), available at <https://semspub.epa.gov/work/HQ/174826.pdf>.

³⁷ While the removal action selected in the Action Memorandum does not constitute a final cleanup for the Site, it is expected to be complementary and consistent with future remedial action, and, due to the comprehensiveness of the selected action, it is unlikely that significant mobilization will be needed during the remedial action to address remaining threats in the Phase 1 Reach.

40 C.F.R. § 300.415(b)(2). Consistent with CERCLA, the NCP, and EPA policy, the selected NTCRA is an early action that EPA is appropriately using as part of the overall Site strategy. It will be complimentary and consistent with future remedial actions, and is expected to achieve significant risk reduction, address immediate risks to human health and the environment, and to control migration of contamination.³⁸ A site-wide RI/FS is ongoing to complete the characterization of the nature and extent of contamination, and to identify whether further response actions will be necessary following the implementation of the NTCRA, both in the Phase 1 Reach and the remaining 2.7 miles of the Site downstream from the Phase 1 Reach. EPA will document the selection of any future remedial action in a Record of Decision.

- b. The commenters state the following: The scope and cost of the selected removal action is inconsistent with typical removal actions. The selected removal action is extremely comprehensive in nature. It seeks the removal of all sediments in the Reach, regardless of PCB concentrations and potential associated risks, and even if sediment is not *highly* contaminated, at the expense of widescale short- and long-term disturbance to the ecological health of the Reach. While some removal actions can be permanent solutions, the complete removal of sediment in the Phase 1 Reach is beyond “typical soil removal” contemplated for removal actions and is atypical and because it does not focus on specific hot spots or areas limited to immediate or especially serious potential risks to human health or the environment.

EPA RESPONSE: To clarify, EPA’s selected removal action does not seek to remove all sediment in the Phase 1 Reach regardless of PCB concentrations and associated risks. As described in Section VI of the Action Memorandum, with respect to Phase 1 Reach sediment, the selected removal action will address sediment contaminated with total PCBs exceeding 1 mg/kg (and co-located contaminants of potential concern) through dredging and capping. In the former Lewis Chemical facility depositional area and the T&H Dam impoundment area, sediment exceeding 1 mg/kg total PCBs will be removed where practicable. In the remainder of the Reach, it is anticipated that at least the top three feet of sediment will be removed where practicable. Greater than three feet of sediment may be removed in areas where total PCBs exceed 1 mg/kg at greater depths, based on a decision matrix that will be developed during the removal design. Alternatively, in areas where total PCBs exceeding 1 mg/kg remain in sediments, the permanent cap will be designed to isolate contaminated sediment remaining at depth, mitigate erosion, prevent breakthrough and the upward migration of contamination, and protect benthic communities. See Action Memorandum, Section VI.A.2.b. Pre-design investigations will be

³⁸ EPA, *Use of Early Actions at Superfund National Priorities List Sites and Sites with Superfund Alternative Approach Agreements* (Aug. 23, 2019), p. 2, available at <https://semspub.epa.gov/work/HQ/100002212.pdf>.

conducted to clarify sediment thickness to inform dredge depths, cap thickness, and to determine the design of the permanent cap (which will vary in different areas).³⁹

CERCLA and the NCP do not prescribe any specific scope or cost for NTCRAs. While CERCLA Section 104(c)(1) and the NCP at 40 C.F.R. § 300.415(b)(5) set limits for fund-financed removal actions (\$2 million and 12 months), CERCLA and the NCP also provide for unqualified waivers for these limits. As noted in EPA’s 2000 NTCRA Guidance, “[t]hese limits (which can be waived) apply only to fund-financed actions, and serve as a fiscal check; they are not found in the statutory definition of ‘removal’ and do not control which actions can be taken as removals.”⁴⁰ As stated in EPA’s 1993 NTCRA guidance, “[NTCRAs] will be the appropriate response for a variety of sites and will range in scope from small-scale, low-cost actions to complicated multi-media response actions requiring exemptions from the statutory time and/or dollar limits.” EPA, *Guidance on Conducting Non-Time Critical Removal Actions Under CERCLA*, OSWER Directive 9360.0-34 (Aug. 19, 1993), p. 19. It is not uncommon for exemptions to be utilized for non-time-critical removal actions with costs far exceed the \$2 million statutory limit.⁴¹

Commenters note that EPA’s selected removal action is comprehensive, does not focus on “hot spots,” and that EPA’s cleanup level of 1 mg/kg total PCBs does not constitute “*highly* contaminated sediment.” Commenters point to 40 C.F.R. § 300.415(e) for what they refer to as “typical examples” of removal actions, which they point out include “[e]xcavation, consolidation, or removal of *highly* contaminated soils from drainage or other areas – where such actions will reduce the spread of, or direct contact with, the contamination” (emphasis added by commenter).⁴² CERCLA and the NCP, however, do not limit EPA’s removal authority to addressing “hot spots” or “highly contaminated” media. In fact, the NCP section cited by the

³⁹ The removal action selected in the Action Memorandum was modified from the recommended removal action alternative in the EE/CA Report following EPA review of public comments and further consideration. See EPA Response to Comment 4.

⁴⁰ EPA, *Use of Non-Time-Critical Removal Authority in Superfund Response Actions* (Feb. 2000), p. 4 fn 4, available at <https://semspub.epa.gov/work/HQ/174826.pdf>.

⁴¹ Examples of NTCRA actions taken include those at the Elizabeth Mine Superfund Site (\$62 million); American Creosote Works (Jackson Plant) Site (\$62.6 million); Nuclear Metals, Inc. Superfund Site (\$64 million); Big John Salvage-Hoult Road Site (\$79.4 million); Diamond Alkali Site (\$100 million); GE Pittsfield/Housatonic River Site (\$108 million); and Mississippi Phosphates Corporation Site (\$198.6 million). See also *United States v. W.R. Grace & Co.*, 429 F.3d 1224, 1232, 1247-48 (9th Cir. 2005) (finding a \$55.6 million removal action of a “size and cost not previously seen” fell within the bounds of a removal action and EPA’s decision to exceed the statutory cap outlined in 42 U.S.C. 9604 was not arbitrary and capricious as the action fulfilled the emergency and consistency exemptions); *New York v. Next Millennium Realty, LLC*, 732 F.3d 117, 130 (2nd Cir. 2013) (citing to EPA guidance as “persuasively provid[ing]” that neither cost nor duration of a project is dispositive of whether the project is removal or remedial and that removal actions can “involve considerable expense”).

⁴² Commenters also compare the scope of the selected removal action to what they refer to as a “typical soil removal,” citing to EPA, *Use of Non-Time-Critical Removal Authority in Superfund Response Actions* (Feb. 14, 2000), at 3-4 fn 3. However, “a typical soil or drum removal” was merely provided in the EPA guidance as an example to illustrate that removal actions often achieve permanent solutions, and to express EPA’s position that “consideration of permanence per se is sometimes misleading in making a determination regarding whether to employ removal or remedial authorities.” *Id.*

commenters explicitly states, “this list is not exhaustive and is not intended to prevent [EPA] from taking any other actions deemed necessary under CERCLA....” 40 C.F.R. § 300.415(e). Further, many of the components of the selected removal action fall within the § 300.415(e) list, including: capping of contaminated soils where needed to reduce migration of hazardous substances (§ 300.415(e)(4)); excavation or removal of highly contaminated soils from drainage or other areas to reduce the spread of, or direct contact with, the contamination (§ 300.415(e)(6)); and containment or disposal of hazardous materials where needed to reduce the likelihood of human, animal, or food chain exposure (§ 300.415(e)(8)).

Commenters also assert that EPA’s data indicate that much of the sediment to be addressed (in the top three feet) is below the cleanup level selected for the removal action.⁴³ However, while there are some discrete samples within the top three feet of the Phase 1 Reach with total PCB concentrations below 1 mg/kg, EPA does not determine risk using any single sampling point. Conditions often change significantly over different locations and at different times and concentrations of contaminants may vary widely across a site, so a single data point cannot reliably represent the overall environment. Therefore, EPA recommends using an exposure point concentration to represent “a reasonable estimate of the concentration likely to be contacted over time.”⁴⁴ The exposure concentration is generally defined as the 95% upper confidence limit (UCL) of the arithmetic mean and is calculated using EPA’s ProUCL software.⁴⁵ The Phase 1 Reach was broken into five exposure areas for sampling. Based on the sampling results, none of the exposure point concentrations in the five exposure areas in the Phase 1 Reach were at or below 1 mg/kg total PCBs (in both surface sediment and all sediment). See Table 10 of Streamlined Risk Evaluation in Sediment, Appendix D of EE/CA Report.

EPA considered a range of alternatives in the EE/CA, including an alternative that focused on the removal of only highly contaminated material.⁴⁶ EPA developed distinct cleanup levels for total PCBs in sediment and floodplain soil for each active removal action alternative. RAA-2 (hot spot removal and temporary containment) included the removal of contaminated sediment exceeding 100 mg/kg total PCBs, which EPA considers “principal threat waste,” or those source materials considered to be highly toxic or highly mobile that generally cannot be contained in a reliable

⁴³ Commenters assert that out of the 64 sediment sample locations in the Phase 1 Reach, 25 contain total PCB concentrations less than 1 mg/kg in the top three feet of sediment, implying that sediment removal for over a third of the areal extent of the Phase 1 Reach is unnecessary. However, this is a mischaracterization of the data. While there are 25 locations where samples in depth intervals within the top three feet are below 1 mg/kg, only five of these locations have total PCB concentrations below 1 mg/kg at all depth intervals within the top three feet. For all other such sampling locations, while PCB concentrations may fall below the cleanup level at one sampling depth interval, concentrations exceed the cleanup level elsewhere within the top three feet at that location.

⁴⁴ EPA, *Risk Assessment Guidance for Superfund, Volume I, Health Evaluations (Part A)* (Dec. 1989), p. 6-19, available at <https://www.epa.gov/risk/risk-assessment-guidance-superfund-rags-part>.

⁴⁵ See EPA, *Supplemental Guidance to RAGS: Calculating the Concentration Term* (1992), p. 1, available at https://www.epa.gov/sites/default/files/2015-11/documents/1992_0622_concentrationterm.pdf.

⁴⁶ The EE/CA evaluated three active removal action alternatives alongside a no action alternative. Dredging of contaminated sediment was selected as a major component of each of the active removal action alternatives. See EPA Response to Comment 15.a.

manner or would represent a significant risk to human health or the environment should exposure occur.⁴⁷ RAA-3 included removal of contaminated sediment exceeding 14 mg/kg total PCBs, which corresponds to a non-cancer total hazard quotient of 3 for direct contact for a child recreational receptor for sediment, consistent with EPA's derivation of Removal Management Levels. The RAA-4 cleanup level of 1 mg/kg corresponds to an incremental lifetime cancer risk of 1 in 1,000,000 for a combined adult and child recreational and residential receptor (rounded up from 0.88 mg/kg for sediment). This cleanup level was developed in accordance with EPA's 1993 NTCRA Guidance, which states that "[s]ince removal and remedial action cleanup levels may differ, all early action decisions should consider the possible long-term action and corresponding cleanup levels."⁴⁸ For more information about EPA's development of removal action alternative cleanup levels, see Sections 3.3-3.5 of the EE/CA Report. EPA's recommendation of RAA-4 (comprehensive removal, permanent in situ cap, and dam removal) was based on a comparative analysis of the removal action alternatives. The comparative analysis of alternatives is presented in Section 5 of the EE/CA Report. EPA determined that RAA-4 (on which the selected removal action is based) represents the best balance between the evaluation criteria of effectiveness, implementability, and cost.

Further, EPA weighed the short- and long-term impacts to ecological communities in the Phase 1 Reach when evaluating the removal alternatives. RAA-4 was designed to focus on the big picture restoration of the ecological health of the river, as described in the comparative analysis. EE/CA Report, p. 95. Under RAA-4, the likelihood of any substantial additional disturbance to ecological communities during future remedial action activities will be minimal. Under RAAs 2 and 3, contaminants presenting an unacceptable ecological risk will remain in place, continuing to impact the ecological health of the river, and additional remedial activities will likely be required to address the remaining threats in the Phase 1 Reach in the future. During expected future response actions, the disturbance to ecological communities, which may have recovered by that time (see EPA Response to Comment 7), will recur.

While RAA-4 and the selected removal action are more comprehensive than the other alternatives considered in the EE/CA, the selected removal action still falls squarely within EPA's removal authority under CERCLA and the NCP. See EPA Response to Comment 68.a

CERCLA Section 104(a)(2) and the NCP also provide that any removal action should, to the extent practicable, contribute to the efficient performance of any long-term remedial action. 42 U.S.C. § 9604(a)(2); 40 C.F.R. § 300.415(d). And EPA guidance states that removal actions should be designed to avoid wasteful, repetitive, short-term actions that do not contribute to the efficient, cost-effective performance of a long-term remedial action. EPA, *Final Guidance on*

⁴⁷ EPA, *Quick Reference Fact Sheet: A Guide to Principal Threat and Low Level Threat Wastes* (Nov. 1991), available at <https://semspub.epa.gov/work/05/382007.pdf>; EPA, *Guidance on Remedial Actions for Superfund Sites with PCB Contamination* (Aug. 1990), p. 6, Word-searchable version available at <https://semspub.epa.gov/work/HQ/175876.pdf>.

⁴⁸ EPA, *Guidance on Conducting Non-Time-Critical Removal Actions under CERCLA*, OSWER Directive 9360.0-34 (Aug. 19, 1993), p. 29, available at <https://semspub.epa.gov/src/document/11/122068>.

Implementation of the “Consistency” Exemption to the Statutory Limits on Removal Actions (1989), at p. 3.⁴⁹ EPA determined that RAA-4 will be consistent with future final remedy requirements and avoid wasteful, duplication of efforts and that RAA-4 would best contribute to the efficient performance of any long-term remedial action, in accordance with 42 U.S.C. § 9604(a)(2). EE/CA, pp. 95, 99. “Even expensive and complex response actions may be removal action candidates if they are relatively time-sensitive For example, dredging large quantities of contaminated sediment could be conducted using removal authority where such action was the appropriate course for abating or controlling a time-sensitive threat.”⁵⁰ Due to the time-sensitive threat presented by conditions in the Phase 1 Reach of the Site, RAA-4 is the most appropriate response given its completeness, permanence, and cost-effectiveness, in consideration of the long-term remedial strategy for the Site.

- c. The commenters state the following: The selected removal action goes beyond the statutory limits of a NTCRA outlined in 42 U.S.C. § 9604(c)(1), and 40 C.F.R. § 300.415(b)(5), because it surpasses the \$2 million dollar and 12-month cap, as the action will cost approximately \$78 million and will take four years to complete. The EE/CA provides only a conclusory analysis that the exceptions to these limits apply. Additional analysis is necessary to justify the extreme cost and multi-year removal action EPA selected. Further, EPA’s application of the “emergency exemption” is overbroad and an immediate risk has not been identified. EPA’s statement that the “consistency exemption” has been met is without basis because there is no rationale as to why all surficial sediment of the Phase 1 Reach should be removed.

EPA RESPONSE: As outlined in the Action Memorandum, the removal action is estimated to cost \$78.4 million and take approximately three years and 10 months to complete, exceeding both the \$2 million and 12-month statutory limits to fund-lead removal actions. See CERCLA, 42 U.S.C. § 9604(c)(1); 40 C.F.R. § 300.415(b)(5). These statutory limits do not apply if the NTCRA is funded by potentially responsible parties. If the action proceeds fund-lead, EPA has determined that conditions in the Phase 1 Reach of the Site meet both the criteria for the emergency exemption and the consistency exemption and has approved the use of these exemptions in the Action Memorandum.⁵¹ For a detailed discussion of how conditions meet the criteria for the emergency and consistency exemptions to the statutory limits, see Section V of the Action Memorandum.

See also EPA Response to Comment 68.b.

⁴⁹ Available at <https://semspub.epa.gov/work/HQ/174424.pdf>.

⁵⁰ EPA, *Use of Non-Time-Critical Removal Authority in Superfund Response Actions* (Feb. 2000), p. 4, available at <https://semspub.epa.gov/work/HQ/174826.pdf>.

⁵¹ The emergency exemption is provided at 42 U.S.C. § 9604(c)(1)(A) and 40 C.F.R. § 300.415(b)(5)(i). The consistency exemption is provided at 42 U.S.C. § 9604(c)(1)(C) and 40 C.F.R. § 300.415(b)(5)(ii).

- d. The commenters state the following: The scope of the remedy selected by EPA in the EE/CA exceeds the scope of EPA's approval to perform an EE/CA at the Site as provided in the April 10, 2023, Approval Memorandum to perform the EE/CA.

EPA RESPONSE: The scope of the NTCRA does not exceed EPA's approval to perform the EE/CA. The April 10, 2023, Approval Memorandum to perform the EE/CA (Appendix A of the EE/CA Report) did not limit the scope of the NTCRA. Rather, the Approval Memorandum approved EPA's performance of an EE/CA and the development of removal action alternatives. While the Approval Memorandum stated that the EE/CA should evaluate alternatives that address "the threat of release and migration of PCB-contaminated sediment from the T&H dam impoundment and hotspots upstream of the T&H dam"—threats that the removal action alternatives evaluated in the EE/CA do address—the Approval Memorandum did not require the selection of a removal action that includes hot spot removal only. Instead, the Approval Memorandum states that "[i]n developing the range of alternatives to be evaluated in the EE/CA, EPA will, pursuant to Section 300.415(d) of the NCP, consider actions that shall, to the extent practicable, contribute to the efficient performance of any anticipated long-term remedial action with respect to the releases concerned, as well as other relevant guidance." EE/CA Approval Memorandum (EE/CA Report Appendix A), p. 8.

Since the issuance of the EE/CA Approval Memorandum, EPA performed further investigations and collected additional data in the Phase 1 Reach. Based on this data, EPA's streamlined risk evaluations concluded that PCBs in floodplain soil and sediment throughout the Phase 1 Reach present unacceptable risk to human health and the environment. EPA evaluated several removal action alternatives in the EE/CA, including a hot spot removal alternative (RAA-2). Based on a comparative analysis of alternatives, see Section 5 of the EE/CA Report, EPA recommended RAA-4, on which the selected NTCRA is based. As described in the EE/CA Report, EPA determined that the recommended removal action represents the best balance between the evaluation criteria of effectiveness, implement ability, and cost, and that it would best contribute to the efficient performance of the long-term remedial action, in accordance with CERCLA, EPA Guidance, and the scope of the EE/CA described in the Approval Memorandum. See also EPA Response to Comment 68.b68.b.

- e. The commenters state the following: EPA has not demonstrated that the scope of the EE/CA meets the endangerment thresholds required for a NTCRA, as an endangerment determination was not included in the EE/CA.

EPA RESPONSE: The EE/CA Report included an endangerment determination. As acknowledged by the commenters, the EE/CA Report states: "EPA determined that there has been, and continues to be, a release into the environment of hazardous substances that may present an imminent and substantial danger to public health or welfare." EE/CA Report, p. 2. This determination is fully supported, in detail, by streamlined risk evaluations performed by EPA risk assessors as part of the EE/CA, which evaluated PCBs in sediment and soil in the Phase 1 Reach. These streamlined risk evaluations, which are summarized in Section 2.5.3

through 2.5.5 of the EE/CA Report and provided in Appendix D to the EE/CA Report, concluded that PCBs in the Phase 1 Reach pose an unacceptable risk to human and ecological receptors from exposure to contaminated sediment and floodplain soil. Further, EPA included an endangerment determination in the Action Memorandum, stating, “EPA has determined that actual or threatened releases of hazardous substances at this Site, including at the Phase 1 Reach, if not addressed by implementing the response action proposed in this Action Memorandum, may present an imminent and substantial endangerment to public health, welfare, or the environment.” Action Memorandum, Section IV.

EPA notes that the comment is premised on what appears to be a misunderstanding of CERCLA provisions regarding EPA’s removal action authority. While EPA did make an endangerment determination in the EE/CA, and again in the Action Memorandum, a finding of “imminent and substantial” endangerment is not a threshold requirement for EPA to utilize removal authority at the Site. Instead, under Section 104(a), removal action is authorized whenever “(A) any hazardous substance is released or there is a substantial threat of such release into the environment, or (B) there is a release or substantial threat of release into the environment of *any pollutant or contaminant which may present an imminent and substantial danger to the public health or welfare.*” 42 U.S.C. § 9604(a) (emphasis added). Where, as here, EPA has determined there is a release of a *hazardous substance*, a removal action is authorized without a finding of a possible “imminent and substantial danger.” Rather, such a finding is required only where such release or threatened release is of *pollutants or contaminants* (not hazardous substances). EPA has documented actual and threatened releases of hazardous substances in the Phase 1 Reach. See Action Memorandum, Section II.A.4. Additionally, a finding that there may be imminent and substantial endangerment is required under CERCLA Section 106(a), EPA’s authority to order, or ask a court to order, potentially responsible parties to perform cleanups. 42 U.S.C. § 9606(a).⁵²

- f. The commenters state the following: Removal of the T&H Dam is being attributed to the need to remediate the Phase 1 Reach, when, in fact, the T&H Dam is failing and needs to be addressed by the dam owner regardless of the presence of contamination. Further, riverbed soil removal is not exclusively related to remediation of the contaminated sediment, but rather to dam removal.

EPA RESPONSE: The T&H Dam removal component of the NTCRA is consistent with CERCLA and the NCP. Whenever there is a release or substantial threat of release of any hazardous substance into the environment, CERCLA authorizes EPA to “remove or arrange for the removal of” such hazardous substances, “or take any other response measure,” consistent with the NCP, which EPA deems “necessary to protect public health or welfare or the

⁵² Commenters also suggest that some threshold is not met because EPA stated that releases only “may” present an imminent and substantial endangerment to public health and welfare. EPA notes that the relevant CERCLA provisions require only that “there *may* be an imminent and substantial” endangerment. See 42 U.S.C. §§ 9604(a), 9606(a).

environment.” 42 U.S.C. § 9604(a). Similarly, the NCP provides that EPA “may take any appropriate removal action to abate, prevent, minimize, stabilize, mitigate, or eliminate the release or threat of release.” 40 C.F.R. § 300.415(b)(1).

EPA acknowledges that the T&H Dam is in poor condition. As discussed in detail in the Action Memorandum, the T&H Dam is unable to maintain the headwater elevation and suffers from multiple structural, operational, and maintenance deficiencies that increase the risk of dam failure, particularly during intense rain and flooding events. The T&H Dam impounds highly contaminated sediment. Concentrations of total PCBs detected in the T&H Dam impoundment area were as high as 11,000 mg/kg.⁵³ While much of the contamination remains impounded, data indicates that the dam is unable to prevent migration of contaminated material downstream. Failure of the dam would result in the uncontrolled and sudden release of a significant amount of accumulated contaminated sediment behind the dam, which may significantly increase exposure of hazardous substances to human and ecological receptors and complicate long-term remedial efforts at the Site. EPA determined that the conditions at the Site—including the risks to human health and the environment presented by the Phase 1 Reach, the poor condition of the T&H Dam, and the imminent risk that the dam may fail—constitute time-sensitive threats to public health or welfare. See Action Memorandum, Sections III.C, D, and F. As authorized by CERCLA and the NCP, the selected removal action, including the removal of the T&H Dam, will abate, minimize, and prevent ongoing releases of hazardous substances, and eliminate the threat of an uncontrolled release of highly contaminated material in the event of dam failure.

Further, the removal of the T&H Dam is expected to facilitate long-term remedial efforts and promote the effectiveness of both the removal action and future remedial actions. Removal of the dam eliminates the potential for the dam to impair completed and future cleanup work, including the potential for a sudden and uncontrolled release of impounded water in the event of dam failure, which would compromise any ongoing investigations and cleanup work, as well as the integrity of both upstream and downstream removal and remedial components.⁵⁴ Action Memorandum, Section V.B.2. Consistent with CERCLA Section 104(a)(2), removal of the dam

⁵³ The T&H Dam is a concrete structure. PCBs can migrate into porous surfaces, including concrete. Due to the high concentrations of PCBs in sediment in the T&H Dam impoundment adjacent to the dam and the length of time such materials have been in contact with the concrete structure of the dam, EPA expects that the dam itself may be contaminated with PCBs.

⁵⁴ When a dam fails, the changes in hydrodynamic conditions due to dam failure can alter current patterns and wave dynamics. The sudden release of water can increase the flow rate both upstream and downstream, leading to heightened erosive forces that can compromise response action components, including damaging capped areas. This increased water flow can lead to greater erosion of the riverbed and bank, transport contaminated sediment and floodplain soils, and dislodge or erode the protective layers of a cap, potentially exposing the underlying contaminated sediments. See, e.g., EPA, Assessment and Remediation of Contaminated Sediments (ARCS) Program, *Guidance for In-Situ Subaqueous Capping of Contaminated Sediments*, EPA 905-B-96-004 (Sept. 1998), p. 70 (“[A]fter a cap is constructed, the removal of an upstream dam or modification to a breakwater could have significant impacts on the current- or wave-induced erosion at the cap.”), available at <https://semspub.epa.gov/work/HQ/189670.pdf>; Tullos, Desiree D., et al., Synthesis of Common Management Concerns Associated with Dam Removal, *Journal of American Water Resources Association* (2016), p. 6 (summarizing case studies that indicated that removal of a dam leads to channel incision in the upstream impoundment), available at https://www.fs.usda.gov/pnw/pubs/journals/pnw_2016_tullos001.pdf.

therefore contributes to the efficient performance of the long-term remedial action. 42 U.S.C. § 9604(a)(2).

The selected removal action includes removal of dense riverbed soil. As described in the EE/CA Report, three of the four coring locations extending to six-foot depth within the T&H impoundment area, which overlays the dense riverbed soil, contained PCB concentrations greater than 100 mg/kg in the deepest interval. Accordingly, EPA anticipates that contamination is present in the dense riverbed soil to be removed at concentrations greater than 1 mg/kg. EE/CA Report, at p. 80. EPA acknowledges that removal of this riverbed soil will facilitate the removal of the T&H Dam. The removal of dense riverbed soil is also necessary to create a stable channel bottom slope between the existing channel grades upstream and downstream of the T&H Dam. Throughout the Phase 1 Reach, following the removal of sediment and riverbed soil, capping will occur to stabilize adjacent floodplain soils, stabilize impacted abutting structures, minimize surface water elevation changes to maintain the river's designation as a regulatory floodway, provide ecological habitat, and ensure a stable river channel throughout the Phase 1 Reach. As with the removal of the dam itself, these components of the removal action are necessary parts of the response action to protect public health or welfare or the environment, and are authorized by CERCLA and the NCP. Further, restoration of the waterway and floodplain soils are required as applicable and relevant and appropriate requirements that must be complied with to the extent practicable. The Applicable and Relevant and Appropriate Requirements Tables for the removal action are available as Attachment 4 of the Action Memorandum.

69. The commenters state the following: EPA's selected removal action does not satisfy the factors for removal actions under the NCP at 40 C.F.R. § 300.415(b)(2), or EPA Guidance. EPA does not properly consider several of the factors and misapplies others, resulting in the incorrect conclusion that a NTCRA is proper for the Site. On balance, the Section 300.415(b)(2) factors weigh against implementing a NTCRA at the Site. Commenters then provide discussion on specific factors of Section 300.415(b)(2).

EPA RESPONSE: The NCP at Section 300.415(b)(1) provides that EPA “may take any appropriate removal action to abate, prevent, minimize, stabilize, mitigate, or eliminate the release or threat of release” where, based on factors in Section 300.415(b)(2), there is a “threat to public health or welfare of the United States or the environment.” 40 C.F.R. § 300.415(b)(1). Section 300.415(b)(2) provides “factors that shall be considered in determining the appropriateness of a removal action.” 40 C.F.R. § 300.415(b)(2). In the Action Memorandum and the EE/CA Report, EPA clearly established that the conditions in the Phase 1 Reach pose a threat to public health or welfare of the United States or the environment, and demonstrated that a NTCRA is appropriate in consideration of the factors set forth in 40 C.F.R. § 300.415(b)(2). See Section III of the Action Memorandum for a discussion of how Site conditions apply to specific factors and fully support the implementation of a NTCRA. EPA also addresses specific comments from commenters below.

- a. The commenters state the following: EPA did not properly assess whether there is actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants. 40 C.F.R. § 300.415(b)(2)(i).

EPA RESPONSE: EPA disagrees with this comment. EPA properly assessed and determined that there are actual and potential exposures to nearby human populations, animals, and the food chain from hazardous substances in the Phase 1 Reach. See Action Memorandum, Section III.A.

- b. The commenters state the following: There is no evidence of actual or potential contamination of drinking water supplies. 40 C.F.R. § 300.415(b)(2)(ii). There are no drums, barrels, tanks, or other bulk storage containers that pose a threat of release. 40 C.F.R. § 300.415(b)(2)(iii). There is no threat of fire or explosion. 40 C.F.R. § 300.415(b)(2)(vi).

EPA RESPONSE: EPA did not rely on factors in Sections 300.415(b)(2)(iii) and (vi). There is no requirement that all the factors listed in Section 300.415(b)(2) be present for EPA to conduct a removal action. EPA notes that Site conditions support performance of a NTCRA in consideration of Section 300.415(b)(2)(ii), which states: “Actual or potential contamination of drinking water supplies *or sensitive ecosystems*.” 40 C.F.R. § 300.415(b)(2)(ii) (emphasis added). EPA determined that there is actual and potential contamination of sensitive ecosystems. See Action Memorandum, Section III.B.

- c. The commenters state the following: EPA’s analysis of high levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface that may migrate is skewed due to high PCB concentrations behind the T&H Dam. 40 C.F.R. § 300.415(b)(2)(iv).

EPA RESPONSE: Total PCBs exceeding 100 mg/kg were detected in surface sediment (in 24 out of 85 sediment core locations) and surface soil (in seven out of 109 locations) throughout the Phase 1 Reach and not just immediately behind the T&H Dam. Data collected at the Site indicate that materials in the Phase 1 Reach are currently migrating and, if not addressed by the NTCRA, will continue to migrate. See Action Memorandum, Section III.C. See also EPA Response to Comment 72.a.

- d. The commenters state the following: EPA’s assessment of weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released is cursory and without evidence. 40 C.F.R. § 300.415(b)(2)(v).

EPA RESPONSE: EPA disagrees with this comment. See Action Memorandum, Section III.D.

- e. The commenters state the following: EPA did not assess whether state or local response mechanisms are available. 40 C.F.R. § 300.415(b)(2)(vii).

EPA RESPONSE: EPA disagrees with this comment. See Action Memorandum, Section III.E.

- f. The commenters state the following: Factors included in EPA guidance (time-sensitivity, complexity of the problem and action, comprehensiveness of the action, and likely cost) weigh against a NTCRA.

EPA RESPONSE: EPA disagrees with this comment. EPA has determined that site conditions present time-sensitive threats that are appropriately addressed through the selected NTCRA. See Action Memorandum, Sections II.A.4, III, IV and V.A. See also EPA Response to Comment 68.b.

70. The commenters state the following: EPA ignores balancing criteria for specific design elements of the preferred remedy, or design elements are not developed sufficiently to be evaluated using relevant balancing criteria.

EPA RESPONSE: EPA believes that part of this comment is referring to the nine balancing criteria used for the selection of a remedial action in a Record of Decision. The nine balancing criteria do not apply to the selection of a removal action. In accordance with Section 2.6 of EPA's *Guidance on Conducting Non-Time Critical Removal Actions Under CERCLA*, OSWER Directive 9360.0-34 (August 19, 1993), each Remedial Action Alternative (RAA) was evaluated with respect to effectiveness, implementability and cost. This is further described in Section 4.2 of the EE/CA Report and throughout Sections 4 and 5 of the EE/CA Report. In addition, in Section 7 of the EE/CA Report, these criteria were further discussed as the basis for EPA's recommendation for alternative RAA-4 which represents the best balance between the evaluation criteria of effectiveness, implementability and cost. EPA addresses specific additional comments below.

- a. The commenters state the following: The cap design specifies using sand amended with 2% activated carbon, but the cap modeling analysis in Appendix G indicates that a cap amended with 1% activated carbon results in equivalent performance. The modeling analysis also uses the maximum PCB concentration remaining following dredging, which yields already conservative results for the analysis. Selecting a cap design with twice as much activated carbon than that was modeled as necessary is unjustified based on the sediment data.

EPA RESPONSE: EPA will take this comment into consideration when developing the cap design. See EPA Response to Comment 4. The Action Memorandum clarifies that the design of the cap will vary in different areas depending on site conditions. EPA does not expect that the multi-layer cap with an in situ amendment isolation layer, as presented conceptually in the EE/CA Report, will be needed over the entire Phase 1 Reach. See Action Memorandum, Section VI.A.2. The cap design presented in the EE/CA Report is conceptual and was developed to assist with cost estimations and implementability. While the cap model presented in Appendix G of the EE/CA Report demonstrated effectiveness of both 1% and 2% activated carbon by weight of the isolation layer, the model evaluated cap effectiveness based on concentrations of PCBs and did

not consider the cumulative impact of COPCs in its performance. The presence of other COPCs could shorten the lifespan of the activated carbon. The conceptual cap presented in EPA's recommended removal alternative included sand amended with 2% activated carbon as a conservative measure to account for the presence of co-located COPCs. As stated in Section VI.A.2.c of the Action Memorandum, the design of the permanent cap (which will vary in different areas) will be finalized during the removal design.

- b. The commenters state the following: The preferred remedy cap design for the entirety of the Phase 1 Reach is based on the highest concentrations of PCBs in one sample that would be left in place below the cap (over 2000 mg/kg). EPA needs to consider whether these locations are outliers that warrant a unique remedy (e.g., hot spot removal, localized capping).

EPA RESPONSE: See EPA Response to Comment 44.

- c. The commenters state the following: EPA failed to consider ongoing impacts to floodplain and aquatic environment required by maintenance of an engineered cap, including maintaining or reconstructing heavy equipment staging areas and access roads to the waterway necessary to perform cap maintenance.

EPA RESPONSE: EPA does not anticipate the need for maintaining or reconstructing heavy equipment staging areas or the construction of additional access roads for purposes of cap maintenance. The cap will be designed to mitigate erosion, prevent breakthrough and the upward migration of contamination, and protect benthic communities. Monitoring and maintenance of the permanent cap will take place following this removal action to ensure the cap remains effective. See EPA Response to Comment 9. While EPA anticipates future maintenance of the cap, significant mobilizations for maintenance are not expected. In addition, EPA is continuing to complete Remedial Investigation work at the Site and will continue to maintain access where appropriate for those actions. Such access may also be used for future monitoring and maintenance of the cap.

- d. The commenters state the following: The landfills regulated under TSCA used for cost estimate purposes are not licensed to accept RCRA hazardous waste. If sediment qualifies as RCRA hazardous waste (due to concentrations of non-PCB contaminants), CERCLA balancing criteria may favor a different remedy selection because of extreme changes in cost and implementability associated with sediment disposal.

EPA RESPONSE: Landfills are regulated under the Resource Conservation and Recovery Act Subtitle D (solid waste) and Subtitle C (hazardous waste) or under the Toxic Substances Control Act (TSCA). EPA acknowledges that the landfills used for cost estimation purposes in the EE/CA, while permitted to accept waste regulated by TSCA (including PCBs), are not licensed to accept RCRA hazardous waste. As noted in Section 4.4.7 of the EE/CA Report, results from the 2023 Phase 1 Reach field investigations do not indicate a likely potential for exceedance of

the RCRA hazardous waste criteria. While it is not expected, if higher levels of lead or other metals are detected during pre-dredging in situ waste characterization sampling that results in exceedances of Toxicity Characteristic Leaching Procedure (also called TCLP) leachate limits, ex situ treatment may be utilized to meet TSCA landfill requirements. See EE/CA Report, p. 72.

71. The commenters state the following: The preferred remedy will introduce much more significant short-and long term-adverse impacts to the Phase 1 Reach than necessary to achieve an acceptable level of risk at the Site.

- a. The commenters state the following: EPA is incorrect that RAA-4 is the only means of achieving all RAOs. Less extensive Removal Actions can achieve all RAOs and reduce unacceptable risk. A cleanup threshold of TCR of 1E-06 and THQ of 1 are more typical of remedial actions, rather than removal action intended to address the most severe contamination requiring immediate response actions. A remedy using a 14 mg/kg cleanup level for sediment is appropriate (consistent with EPA's derivation of Removal Management Levels) and will result in reduced short-term impacts.

EPA RESPONSE: See EPA Responses to Comments 15.a and 68.b.

EPA considered a range of alternatives, including an alternative that focused on addressing contamination exceeding 14 mg/kg (RAA-3). EPA developed distinct cleanup levels for total PCBs in sediment and floodplain soil for each active removal action alternative. RAA-2 (hot spot removal and temporary containment) included the removal of contaminated sediment exceeding 100 mg/kg total PCBs. RAA-3 included removal of contaminated sediment exceeding 14 mg/kg total PCBs, which corresponds to a non-cancer total hazard quotient of 3 for direct contact for a child recreational receptor for sediment, consistent with EPA's derivation of Removal Management Levels. The RAA-4 cleanup level of 1 mg/kg corresponds to an incremental lifetime cancer risk of 1 in 1,000,000 for a combined adult and child recreational and residential receptor (rounded up from 0.88 mg/kg for sediment). This cleanup level was developed in accordance with EPA guidance, which states that "[s]ince removal and remedial action cleanup levels may differ, all early action decisions should consider the possible long-term action and corresponding cleanup levels." EPA, *Conducting Non-Time Critical Removal Actions Under CERCLA* (1993), p. 29. For more information about EPA's development of removal action alternative cleanup levels, see Sections 3.3-3.5 of the EE/CA Report. EPA's recommendation of RAA-4 (comprehensive removal, permanent in situ cap, and dam removal) was based on a comparative analysis of the removal action alternatives. The comparative analysis of alternatives is presented in Section 5 of the EE/CA Report. EPA determined that RAA-4 (on which the selected removal action is based) represents the best balance between the evaluation criteria of effectiveness, implementability, and cost.

Further, EPA weighed the short- and long-term impacts to ecological communities in the Phase 1 Reach when evaluating the removal alternatives. RAA-4 (on which the selected removal action is

based) was designed to focus on the big picture restoration of the ecological health of the river, as described in the comparative analysis. EE/CA Report, p. 95. Under the selected removal action, the likelihood of any substantial additional disturbance to ecological communities during future remedial action activities will be minimal. Under RAAs 2 and 3, contaminants presenting an unacceptable ecological risk will remain in place, continuing to impact the ecological health of the river, and additional remedial activities will likely be required to address the remaining threats in the Phase 1 Reach in the future. During expected future response actions, the disturbance to ecological communities, which may have recovered by that time, will recur. Therefore, EPA determined that RAA-4 would likely result in the least overall short- and long-term adverse impacts to ecological community. See EPA Response to Comment 7 regarding ecosystem recovery.

- b. The commenters state the following: EPA did not appropriately evaluate more targeted Removal Actions to achieve RAOs. The commenters suggested a sediment remediation strategy that includes an exposure analysis based on an area-wide exposure assessment, such as a surface-weighted average concentration (SWAC). The commenter states that EPA did not perform a spatial analysis that could more appropriately target the most impacted areas of sediment.

EPA RESPONSE: EPA appropriately evaluated more targeted removal action alternatives. See EPA Responses to Comments 15.a, 68.b, and 71.a.

As part of the exposure assessment in the Streamlined Risk Evaluation, EPA appropriately selected exposure areas based on professional judgment and site-specific factors, and consistent with EPA guidance. See EPA Response to Comment 72.c. As described in the Streamlined Risk Evaluation for Sediment, the exposure point concentrations for the five exposure areas ranged from 16.8 mg/kg to 146 mg/kg total PCBs for surface sediment, and from 43.5 mg/kg to 434 mg/kg total PCBs for sediment at all depths. See Table 10 of Streamlined Risk Evaluation in Sediment, Appendix D of EE/CA Report.

EPA did not believe that a surface-weighted average concentration (SWAC) approach was appropriate when conducting the exposure analysis for the Phase 1 Reach of the Site. The SWAC technique is used to reduce the influence of sampling bias and interpolate contaminant concentrations in areas with limited sampling locations and can be used to define remedial footprints.⁵⁵ EPA's sampling plan had adequate spatial coverage, which included 60 locations using a randomized systematic sampling approach and 10 biased locations (five adjacent to the

⁵⁵ See Naval Facilities Engineering Systems Command, *Technical Report: Case Studies Using Surface Weighted Average Concentration Methods at Sediment Remediation Sites*, TR-NAVFAC-EXWC-SH-2315 (May 2023), p. 1, available at https://exwc.navy.mil/Portals/88/Documents/EXWC/Restoration/er_pdfs/s/Final%20SWAC%20Case%20Study%20Technical%20Report%20_5_2023.pdf?ver=93dNskvJwGla5_qHjoEXOg%3D%3D.

Former Lewis Chemical Facility, and five upstream of the T&H Dam) to further investigate areas of known or suspected impact. Data Evaluation Summary Memorandum – Phase 1, p. 3.⁵⁶

- c. The commenters state the following: By selecting an extensive dredging program rather than focusing on efficient removal of smaller sediment areas that result in reducing risks to acceptable levels, EPA's preferred remedy will cause widespread impacts to both the waterway (including ecological impacts associated with widespread disruption of benthic and aquatic habitats) and surrounding community (including longer durations of vehicle traffic, increased emissions, safety concerns from trucking activities, and increased potential exposure to workers and the community contaminated sediment). EPA assumes that the preferred removal action will result in no additional future remedial work, but that outcome remains uncertain until the RI/FS is completed and a ROD is issued. It may alternatively be true that a more limited RAA would result in limited future remedial work.

EPA RESPONSE: See EPA Response to Comment 68.b. As discussed in the EE/CA Report, under more limited removal action alternatives, such as RAA-2 and RAA-3, unacceptable risks to human health and the environment would remain in the Phase 1 Reach and future response actions will be required to address remaining risks. As such, additional remedial activities, including the costs of site preparation, mobilization, construction of support infrastructure, and demobilization, to address contamination in sediment and floodplain soils, would be expected. Section 5.3 of the EE/CA Report, p. 97. In addition, temporary containment components of RAA-2 and RAA-3 are anticipated to result in additional costs to the future long-term remedial action due to their impact on future investigations and response actions. *Id.* EPA acknowledges that the need for any additional future remedial work will be determined during the performance of the RI/FS for the Site and will be documented in the Record of Decision. However, based on the comprehensiveness of the selected removal action, EPA does not expect that significant mobilization will be necessary to address remaining threats in the Phase 1 Reach.

72. The commenters state the following: The parameters that EPA uses to evaluate risk may not be appropriate for Site conditions and therefore, result in an unnecessarily more extensive remedy.
 - a. The commenters state the following: The Streamlined Risk Assessment states that the reach-wide UCL for all sediment may be skewed high due to a few samples with very high concentrations near the former Lewis Chemical facility. The suggested Reach-wide UCL for surface sediment is approximately three times higher than the Reach-wide mean, which indicates it also may be skewed high due to a few samples with very high

⁵⁶ Available at <https://semspub.epa.gov/src/document/01/100032178>.

concentrations. EPA did not perform any type of outlier or hotspot analysis, which may have improved the statistical evaluation and may have also pointed to specific locations with significant impacts on Reach-wide average PCB concentrations.

EPA RESPONSE: The statistical evaluation performed in the Streamlined Risk Evaluation is well supported and consistent with EPA guidance and recommended best practices. As stated in the Streamlined Risk Evaluation, exposure point concentrations for surface and all sediment were calculated as the 95% upper confidence limit (UCL), consistent with EPA's Risk Assessment for Superfund.⁵⁷ Best practices recommended by the EPA User Guide for ProUCL (a comprehensive statistical software package), were followed in selection of UCL values, which included using the ProUCL recommended value and consultation with a statistician as appropriate.⁵⁸ For Reach-wide sediment, the ProUCL software identified the dataset as lognormal and recommended the H-UCL,⁵⁹ which does have sensitivity to a few very low or very high values and could result in a Reach-wide UCL that is skewed high due to a few samples with very high concentrations. See Streamlined Risk Evaluation for Sediment, p. 3-4, Appendix D, EE/CA Report. However, the Reach-wide UCLs did not impact the assessment of human health risks in the Streamlined Risk Evaluation, and it is unlikely that use of an alternate Reach-wide UCL would impact the risk conclusions determined by the risk evaluation for sediment.

Human health risk was not evaluated on a Reach-wide basis. Instead, human health risk was evaluated for five exposure areas for sediment to improve accuracy of risk estimates for the different segments along the Phase 1 Reach, inform decisions on the removal action, and ensure that there is a targeted approach. See EPA Response to Comment 72.c. None of the five exposure areas had UCLs that were below 16 mg/kg. See Streamlined Risk Evaluation for Sediment, at Table 10, Appendix D, EE/CA Report. While ecological risk was evaluated using surface sediment concentrations by exposure area and Reach-wide (see *id.* at pp. 5-8 – 5-10 and Table 13), sediment preliminary removal goals (on which the cleanup level for total PCBs in sediment is based) were derived based on human health risk. See EE/CA Report, Section 3.4.

- b. The commenters state the following: The Streamlined Risk Evaluation uses historical fish data collected from over 20 years ago, from the T&H Dam and Watler Baker Chocolate Dam impoundment areas, which may not be representative of current Site conditions.

⁵⁷ EPA, *Risk Assessment Guidance for Superfund, Volume I, Health Evaluations (Part A)* (Dec. 1989), <https://www.epa.gov/risk/risk-assessment-guidance-superfund-rags-part>.

⁵⁸ EPA, *ProUCL Version 5.2.0 User Guide: Statistical Software for Environmental Applications for Data Sets with and without Nondetect Observations* (June 14, 2022), available for download at <https://www.epa.gov/land-research/proucl-software>.

⁵⁹ The H-UCL, or the Land's H-Statistic, is a method to calculate the 95% UCL that EPA recommends for lognormal data. See EPA, *Calculating Upper Confidence Limits for Exposure Point Concentrations at Hazardous Waste Sites*, OSWER 9285.6-10 (Dec. 2002), p. 1, <https://www.epa.gov/sites/default/files/2016-03/documents/upper-conf-limits.pdf>.

EPA RESPONSE: As noted in the EE/CA Report, the principal human exposure pathway of concern evaluated in the Streamlined Risk Evaluation was direct contact with river sediment. Consumption of fish was recognized as a potentially important exposure pathway at sediment sites with bioaccumulative compounds such as PCBs. Therefore, historical fish tissue data (collected in 2003 and 2005) were used in the Streamlined Risk Evaluation in a screening level analysis only, since more recent fish tissue data was not available at the time the Streamlined Risk Evaluation was performed. See EE/CA Report, p. 40. Although this screening level analysis provides additional evidence to support the need to perform a NTCRA to limit the potential for human health risks from PCBs, it was not used to develop preliminary removal goals or cleanup levels. EPA collected fish tissue data in 2024 as part of the sitewide Remedial Investigation. A preliminary review of the data indicates that total PCBs (and other hazardous substances) are present in fish tissue at levels exceeding ecological and human health screening levels. This data will be evaluated as part of the RI/FS for the Site.

- c. The commenters state the following: EPA provides no basis for certain exposure assumptions or for how exposure areas were determined. The areas do not appear to be aligned with use and exposure of any specific potential human or ecological receptor. Closer alignment of exposure areas and potential receptor use would allow for further refinement of exposure criteria and allow for targeted areas of sediment remediation rather than extensive Reach-wide removal.

EPA RESPONSE: The EE/CA Report and the Administrative Record fully support the exposure assumptions and exposure areas used to determine potential risks to human and ecological receptors at the Phase 1 Reach. The human health and ecological streamlined risk evaluations for PCBs in sediment and floodplain soil in the Phase 1 Reach can be found in Appendix D of the EE/CA Report.

The Streamlined Risk Evaluation estimated risks for recreational users who may be exposed to PCBs in sediment and floodplain soil (through direct contact), and through fish consumption (as a screening level analysis). A residential scenario was also evaluated for floodplain soil due to the proximity of homes to the Site. According to U.S. Census data, there are 2,115 people living within 0.1 miles of the Phase 1 Reach, and there are approximately 30 residential properties within 250 feet.

Recreational use was determined to be an appropriate exposure scenario because public access to the Site is unrestricted except in areas where private properties block walking access to the river. Within the 3.7-mile Site, there are eight public canoe and/or kayak launches, 1.5 miles of developed recreational multi-use walking/biking trails, and seven recreation areas that border the river. The Phase 1 Reach includes the following abutting recreational and/or conservation land: Walnut Street Conservation Land, West Street Park, Doyle Park, Riverside Conservation land, and Neponset River Reservoir Conservation land. EE/CA Report, p. 36. Recreational activities within the Phase 1 Reach include walking, biking, kayaking, and canoeing. Swimming and wading are not recommended but are not prohibited. A commenter noted during the public

comment period that they observed kayakers and likely swimmers in the area of the T&H Dam impoundment. Fishing in the Phase 1 Reach is not prohibited and has been observed throughout the Phase 1 Reach. In spite of Massachusetts Department of Public Health fish consumption advisories, these advisories may not be followed, and anglers (or others) who consume their catch may be exposed to contaminants, such as PCBs and metals, that have bioaccumulated in fish tissue. Community interviews conducted by EPA in 2022 and 2023 document that some people rely on fish from the river as a food source.⁶⁰ In addition, as documented in the Reuse Assessment Report for the Site, there are several DCR master plans guiding future development activities along the Site, including within the Phase 1 Reach (for example, creating a new trail connection between West Street and Doyle Park).⁶¹ Greater public access to the Phase 1 Reach increases risk and exposure prevalence and opportunity for fish consumption, incidental ingestion, and dermal contact with river sediment and floodplain soils. EE/CA Report, p. 36.

Consistent with EPA guidance, an exposure assessment was performed to estimate the magnitude, frequency, duration, and routes of both current and reasonably anticipated future human exposure to PCBs in sediment and floodplain soil in the Phase 1 Reach.⁶² For human health, the site-specific exposure parameters selected for the recreator and resident represent reasonable maximum exposure (RME) levels, consistent with EPA's *Risk Assessment Guidance for Superfund (RAGS)*, which states that risk management decisions at Superfund sites "should be based on an estimate of the risk to a reasonably maximum exposed receptor, considering both current and future land-use conditions. The RME is defined as the highest exposure that is reasonably expected to occur at a site." EPA, *Risk Assessment Guidance for Superfund (RAGS), Volume III, Part A* (Dec. 2001), p. 1-21.⁶³ In general, this includes risks corresponding to the upper percentile, or the 90th to 99.9th percentiles of the risk distribution. *Id.* The intent of the RME is to estimate a conservative exposure case (meaning, well above the average case) that is still within the range of possible exposures. *Id.* at 1-3. For more information about the exposure assumptions utilized in the streamlined risk evaluations for PCBs in sediment and floodplain soil in the Phase 1 Reach, see Appendix D of the EE/CA Report.

EPA's selection of exposure areas in the streamlined risk evaluations was based on professional judgment and site-specific factors and was consistent with EPA guidance.⁶⁴ Risk was evaluated

⁶⁰ EPA, Lower Neponset River Community Involvement Plan (Nov. 2023), available at <https://semspub.epa.gov/work/01/677693.pdf>, p. 23. The Community Involvement Plan can also be found in the Administrative Record.

⁶¹ EPA, Reuse Assessment Report (Final), Lower Neponset River Superfund Site (Dec. 2023), p. 13, available at <https://semspub.epa.gov/work/01/675764.pdf>. The Reuse Assessment Report can also be found in the Administrative Record.

⁶² See Streamlined Risk Evaluation in Sediment, p. 3-5, EE/CA Report, Appendix D.

⁶³ Available at <https://www.epa.gov/risk/risk-assessment-guidance-superfund-rags-volume-iii-part>.

⁶⁴ See EPA, *Risk Assessment Guidance for Superfund, Volume I, Health Evaluations (Part A)* (Dec. 1989), p. 6-25 – 6-26, available at <https://www.epa.gov/risk/risk-assessment-guidance-superfund-rags-part> ("When evaluating chemical contamination at a site ... consider where the contamination is with respect to known or anticipated

for exposure areas for floodplain soil and sediment to improve accuracy of risk estimates for the different segments along the Phase 1 Reach, inform decisions on the removal action, and ensure that there is a targeted approach. As described in the Streamlined Risk Evaluation documents found in Appendix D of the EE/CA Report, the exposure areas for sediment and soil are defined by major features along the Phase 1 Reach. The five exposure areas for sediment are described in the EE/CA Report at pp. 40-41 and illustrated in Figure 5 of the EE/CA Report. Nine floodplain soil exposure areas were also determined according to major features along the Phase 1 Reach and are listed in the EE/CA Report at p. 44 and illustrated in Figure 6 of the EE/CA Report.⁶⁵ Consistent with EPA guidance, exposure areas were selected in consideration of “the intersection of [population] activity patterns and contamination.”⁶⁶ For example, sediment Exposure Area 1 (sediment located immediately upstream of the T&H Dam, including impounded sediment) is where current recreational use of the river (for example, observed kayaking and swimming) intersects with highly contaminated sediment (in an area considered a “hot spot”). In another “hot spot” area, floodplain soil Exposure Area 6 and sediment Exposure Area 4 (floodplain soil at the north bank at the location of the former Lewis Chemical Corp. facility and sediment near and slightly downstream of the facility) are areas where contamination in the Phase 1 Reach intersects with anticipated future reuse of a recently remediated City-owned property.⁶⁷

73. The commenters state the following: EPA did not demonstrate PCB source control and must consider the likelihood of recontamination before implementing a remedy.⁶⁸

- a. The commenters state the following: EPA did not fully assess the Lewis Chemical Site’s impact on the Phase 1 Reach. It is inappropriate for the EPA to evaluate and propose a remedy prior to completion of a pre-design investigation that may significantly impact balancing criteria.

population activity patterns.... It is the intersection of activity patterns and contamination that defines an exposure area.”)

⁶⁵ For ecological risk from PCBs in floodplain soil and sediment, the Streamlined Risk Evaluation was performed for the nine floodplain exposure areas, but also on a reach-wide basis. As explained in the streamlined ecological risk evaluation for PCBs in floodplain soil, this was recommended because the Phase 1 Reach is bordered by a nearly continuous forested riparian corridor, providing habitat for a variety of bird and mammal species, and there is no significant distinction between the riparian segments because the majority of the Phase 1 Reach is a suitable habitat for the surrogate species selected to represent omnivorous birds and mammals (American robin and short-tailed shrew). See *Technical Memorandum: Streamlined Ecological Risk Evaluation of Polychlorinated Biphenyls in Soil for the Lower Neponset River Superfund Site* (Mar. 25, 2025), p. 3, EE/CA Report, Appendix D.

⁶⁶ EPA, *Risk Assessment Guidance for Superfund, Volume I, Health Evaluations (Part A)* (Dec. 1989), p. 6-25 – 6-26, available at <https://www.epa.gov/risk/risk-assessment-guidance-superfund-rags-part>.

⁶⁷ The former Lewis Chemical facility comprises of three parcels; two parcels are owned by the city of Boston and one is owned by the Commonwealth of Massachusetts. As documented in the Reuse Assessment Report for the Site, the city is planning for reuse of the area. The area is zoned for commercial uses and future uses may also include open space. See EPA, *Reuse Assessment Report (Final), Lower Neponset River Superfund Site* (Dec. 2023), p. 12-13, available at <https://semspub.epa.gov/work/01/675764.pdf>.

⁶⁸ Commenters at times refer to a “remedy.” EPA understands commenters to be referring to the removal action. See also EPA Responses to Comment 68.

EPA RESPONSE: EPA recognizes that additional assessment of the former Lewis Chemical Corp. facility depositional area is needed prior to completing the removal action in the Phase 1 Reach. Pre-design investigations will take place to determine the extent of contamination and determine the dredge depth necessary to abate exposure risk to sediment and floodplain soils contaminated above 1 mg/kg total PCBs near the former Lewis Chemical Corp. facility. Removal design will also consider potential continuing sources of contamination. Action Memorandum, Section VI.A.2.a.

By definition, pre-design investigations take place prior to completion of the removal design, *after* the publication of the EE/CA Report and selection of a removal action in the Action Memorandum. Consistent with CERCLA, congressional intent, the NCP, and EPA guidance, EPA may select a response action once sufficient information is available to support an informed risk management decision, even where such information is incomplete in some respects. In drafting CERCLA, Congress expressed its preference for speedy and cost-effective cleanups, stating:

It is recognized that government response will often be *necessary prior to receipt of evidence which conclusively establishes the substances or materials released or the origin of their release, discharge or disposal*. Because delay will often exacerbate an already serious situation, the bill authorizes [EPA] to respond when a substantial threat of release may exist.⁶⁹

See also EPA Responses to Comments 68 and 696869. In the response action selection process (including in the EE/CA and the RI/FS),⁷⁰ EPA is not required to eliminate uncertainties. As acknowledged in EPA's RI/FS Guidance, the objective of the process is "not the unattainable goal of removing all uncertainty."⁷¹ EPA Guidance further recognizes the tension between achieving certainty and making progress, stating:

These uncertainties can be numerous, ranging from potential unknowns regarding site hydrogeology and the actual extent of contamination, to the performance of treatment and engineering controls being considered as part of the remedial strategy. While these uncertainties foster a natural desire to want to know more, this desire competes with the Superfund program's mandate to perform cleanups within designated schedules.⁷²

⁶⁹ See S. REP. NO. 848, 96th Cong., 2d Sess. at 56 (1980), reprinted in 1 SENATE COMM. ON ENVIRONMENT & PUBLIC WORKS, 97th Cong. 2d Sess., *A Legislative History of the Comprehensive Environmental Response, Compensation and Liability Act of 1980*, at 363 (Comm. Print 1983) (emphasis added).

⁷⁰ The EE/CA serves an analogous function to the RI/FS conducted for remedial actions but is less comprehensive and more streamlined. See EPA, *Guidance on Conducting Non-Time-Critical Removal Actions Under CERCLA*, EPA540-R-93-057 (Aug. 1993), p. 6, 20, available at <https://semspub.epa.gov/work/HQ/122068.pdf>.

⁷¹ EPA, *Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA*, OSWER Directive 9355.3-01 (Oct. 1988), p. 1-3, available at <https://semspub.epa.gov/work/HQ/100001529.pdf>.

⁷² *Id.*

The EE/CA stage represents 0% to 10% design completion, at which stage “concepts are not typically developed enough to identify all project components or quantities.”⁷³ Instead, these detailed tasks are fully developed after the selection of the removal action, during the removal design phase. As noted above, for the Phase 1 Reach NTCRA, EPA will conduct or oversee the performance of additional assessments during pre-design investigations and the removal design.

- b. The commenters state the following: EPA did not fully assess upstream sites as a source of PCBs, including the Canton Airport Site and Norwood PCBs Superfund Site, referenced in the EE/CA Report. The 2019 Final Site Inspection for the Lower Neponset River Site states that “other potential sites, sources, and/or releases, which have not yet been identified... are likely to exist and potentially have contributed to the PCB-contaminated sediment.” This may include discharges from point sources or nonpoint sources. It is important to understand the processes potentially resulting in ongoing PCB contamination prior to implementing any removal or remedial efforts intended to be final.

EPA RESPONSE: EPA disagrees with this comment. For the purposes of the EE/CA, evaluating removal action alternatives, and selecting a removal action, EPA adequately assessed potential ongoing sources, including upstream sources, of contamination to the Site. See EPA Response to Comment 73.a.

The upstream sites identified by Commenters (the Canton Airport Site and Norwood PCBs Superfund Site) have been remediated and are not ongoing sources of PCBs to the Site. EE/CA Report, p. 20. Commenters refer to the 2019 Final Site Inspection Report,⁷⁴ which states that there are likely other potential sites, sources, or releases that have potentially contributed to PCB contamination at the Site that have not been identified. EPA has performed additional investigations since the completion of the 2019 Final Site Inspection Report. Regarding upstream sources, as noted in the Action Memorandum, Section II.A.4, data collected as part of previous investigations suggest that major sources of PCBs to the Lower Neponset River are from the lower Mother Brook, and that releases began prior to the early 1950s. Catastrophic dam failure caused by flooding in 1955 likely released contaminated sediment downstream throughout the length of the Site. Data collected in 2023 in the Phase 1 Reach as part of the Remedial Investigation of the Site support the conclusions drawn from previous investigations. See Action Memorandum, Section II.A.4.

⁷³ See EPA, *A Guide to Developing and Documenting Cost Estimates During the Feasibility Study*, OSWER 9355.0-75 (July 2000), p. 5-10, available at <https://semspub.epa.gov/work/05/918808.pdf>. Note that although this EPA guidance document addresses cost estimates of remedial alternatives developed during the Feasibility Study to support the Superfund remedy process, the guidance states that the same concepts may be applied to other projects, including Superfund removal actions. *Id.* at 1-2.

⁷⁴ Weston Solutions, Final Site Inspection Report, Lower Neponset River PCB Site (Apr. 19, 2019), available at <https://semspub.epa.gov/src/collection/01/SC39491>. The Final Site Inspection Report is also available in the Administrative Record.

A remedial investigation is ongoing throughout the full 3.7-mile extent of the Site as part of the Superfund remedial process. In addition, EPA has identified, and is continuing to identify, potentially responsible parties that may have historically contributed, or are currently contributing, contamination to the Site. To ensure the effectiveness of the removal action, potential continuing sources of contamination in the Phase 1 Reach will be considered during removal design. See also EPA Response to Comment 12.

- c. The commenters state the following: EPA did not fully assess the risks of other COPCs. The potential sources and loading of these contaminants should be evaluated before implementing any remedy, particularly if COPCs are identified during the baseline human health and ecological risk assessments. If the removal action is intended to be a final remedy, the potential sources and loading of all COPCs should be understood and documented and considered through an RI/FS.

EPA RESPONSE: Identified contaminants present within the Phase 1 Reach include PCBs, dioxins/furans, pesticides, metals, cyanide, volatile organic compounds, semi-volatile organic compounds, and asbestos. Based upon the extent and level of risk associated with PCBs throughout the Phase 1 Reach, PCBs are the primary Contaminants of Concern. Streamlined risk evaluations performed as part of the EE/CA concluded that PCBs in the Phase 1 Reach pose an unacceptable risk to human and ecological receptors from exposure to contaminated sediment and floodplain soil. The risk evaluations can be found in Appendix D of the EE/CA Report.

Because the streamlined risk evaluations concluded that the risks at the Site from PCBs alone warrant the performance of a removal action, COPCs were not included in the evaluation. However, COPCs are being considered to ensure the effectiveness of the removal action. As part of the EE/CA, an evaluation was conducted using the full Phase 1 sediment data to determine whether contaminants with elevated concentrations in sediment are likely to remain in the Phase 1 Reach following implementation of the removal action. Dioxins/furans were not included because based on an evaluation of Phase 1 data, EPA determined that focusing on PCBs for the EE/CA would incorporate areas with elevated levels of dioxins and furans. For the purposes of this evaluation, which can be found in Appendix E of the EE/CA Report, COPCs were identified as analytes for which three parameters were met: (1) detected in the Phase 1 Reach in 5% or more of samples; (2) present at concentrations at or above the maximum concentration in background area sediment; and (3) present at or above human health and/or ecological project action limits. Project action limits for sediment were selected based on the lower of the human health and ecological based levels – with human health levels based on EPA regional screening levels for residential soil (updated in November 2024) based on a non-cancer hazard quotient of 0.1 and a target cancer risk level of 1E-06 (1 in 1,000,000), and ecological levels based on EPA Region 4 ecological screening values for freshwater sediment. This evaluation identified 46 COPCs. See Appendix E of the EE/CA Report. For the purposes of the Action Memorandum, COPCs include dioxins/furans and those 46 analytes identified in Appendix E of the EE/CA. See Action Memorandum, Section II.A.4, at footnote 3.

The evaluation in Appendix E of the EE/CA Report indicated that COPCs are largely co-located with PCBs in the Phase 1 Reach and the selected removal action will address or reduce exposure to COPCs due to the comingled nature of contamination on site. In addition, the evaluation identified limited locations where COPCs would remain following dredging under the recommended removal action alternative. EE/CA Report, Appendix E, Table 2.⁷⁵ To ensure the long-term effectiveness of the removal action, COPCs (including the data identified in Appendix E) will be considered during removal design, including as part of the decision matrix to be developed during removal design. The decision matrix will clearly outline how to determine when additional dredging will occur to address exceedances of the cleanup level and how the design of capping (which will vary in different areas) will be determined.

Further, EPA clarifies that the selected removal action does not constitute the final remedy for the Phase 1 Reach. Risks to human health and the environment from these COPCs will be fully evaluated in a baseline risk assessment to support the long-term remedial action. Any additional remedial action to be taken in the Phase 1 Reach will be documented in a Record of Decision for the Site.

74. The commenters state the following: There are notable discrepancies between EPA's Site analytical data and visual representations of that data. Accurate communication of data is necessary for shareholders to make informed decisions. Figure 11 in the EE/CA Report are not consistent with analytical data presented in the EE/CA, or with analytical data and figures presented in the Phase 1 Data Summary Evaluation Memorandum.

EPA RESPONSE: Following EPA's review of comments submitted during the public comment period, EPA and its contractor AECOM performed a thorough review of EE/CA Report figures to identify discrepancies, determine the cause of the discrepancies, and verify that any discrepancies did not impact the removal action alternatives or the evaluation of alternatives in the EE/CA. The results of that review are presented in Attachment 6 of the Action Memorandum. While inaccuracies were identified in some EE/CA Report figures, EPA has verified that these inaccuracies affected those figures alone and were unrelated to the underlying data. The inaccuracies did not affect the removal action alternatives (including the extent of the areas for sediment or floodplain soil removal, volumes, and costs) and the evaluation of alternatives presented in the EE/CA Report.

EPA determined that there were errors in four of the figures included in the EE/CA Report: Figures 3, 7, 9, and 11. These figures all depicted concentrations of total PCBs in Phase 1 Reach sediment. EPA's contractor AECOM, which had generated the figures for the EE/CA Report,

⁷⁵ Due to the minor modifications made to the selected removal action from the recommended alternative, which provides additional flexibility to potentially dredge to depths greater than three feet in some areas where sediment exceeds 1 mg/kg total PCBs (see Response to Comment 4), EPA expects that there may be fewer locations where COPCs remain following excavation of contaminated sediment.

identified the cause of the discrepancies. AECOM explained that ArcGIS Pro, the desktop GIS software used to generate the figures, includes a data query toggle for each reported data interval at each location sampled. When a toggle is not activated, the logic in the program is to report the highest concentration interval for that sampling location in its place. In Figures 3, 7, 9, and 11 of the EE/CA Report, the query toggle was not activated for surface sediment samples (representing the interval at the uppermost 0 - 0.5 feet of sediment) in these figures. Consequently, the symbology (meaning, the color) at the top sediment sample depth interval at each location reflected the maximum concentration value across all depth intervals, rather than the value from the top interval alone. This affected the display of contaminant concentration at the top sediment layer only. See Attachment 6 of the Action Memorandum.

EPA determined that for 20 of the 63 sediment core locations depicted in affected EE/CA Report Figures, the color of the top sediment layer was incorrect, depicting a higher concentration range than reported in the data. A summary of sample locations with these color changes is provided in the Table included in Attachment 6 of the Action Memorandum. However, because the effect of the inactivated query toggle was to report the highest concentration interval for that sample location, and the effect was in the top interval alone, the Figures still accurately reflected concentrations of total PCBs at each location as a whole. EPA recognizes the importance of accurate communications of data to shareholders. Updated EE/CA Report Figures 3, 7, 9, and 11 are included in Attachment 6 of the Action Memorandum.

ABB Installation Products, Inc.

ABB Installation Products, Inc. ("ABB") submitted the following comments:

75. The commenter states the following: The EE/CA does not justify EPA's use of a NTCRA, an interim action conducted during a larger remedial effort, rather than a remedial approach, to address Site conditions because Site conditions described in the EE/CA do not support a finding of a threatened release or imminent risk that would justify use of a NTCRA.

EPA RESPONSE: See EPA Responses to Comments 68.a, 68.e, and 69.f. See also Action Memorandum, Sections II.A.4, III, IV, and V.A.

76. The commenter states the following: EPA has not provided adequate justification from the change of approach from a remedial action to a NTCRA to clean up the Phase 1 Reach.

EPA RESPONSE: EPA did not change its approach from a remedial action to a NTCRA. Rather, EPA is performing the NTCRA in the Phase 1 Reach as an early action (an action taken before the completion of a Remedial Investigation/Feasibility Study (RI/FS)), as part of the overall site strategy for the Lower Neponset River Superfund Site. The use of a NTCRA as an early action is authorized under CERCLA and the NCP and consistent with EPA policy. The

preamble to the NCP states that the decision to take an early action should balance the desire to definitively characterize site risks and analyze alternatives for addressing threats in great detail with the desire to implement protective measures quickly. 55 Fed. Reg. 8666, 8704 (March 8, 1990). It further states: “EPA intends to perform this balancing with a bias for initiating response actions necessary or appropriate to eliminate, reduce, or control hazards posed by a site *as early as possible*. EPA ... encourage[es] action prior to or concurrent with conduct of an RI/FS as information is sufficient to support remedy selection. These actions may be taken under *removal or remedial authorities*, as appropriate.” *Id.* (emphasis added). EPA guidance also encourages the use of early actions, including NTCRAs, at Superfund sites as part of an overall sitewide cleanup strategy. EPA, *Use of Early Actions at Superfund National Priorities List Sites and Sites with the Superfund Alternative Approach Agreements*, EPA OSWER (Aug. 23, 2019), p. 1.⁷⁶ Actions are to be implemented as soon as site data and information make it possible to do so. *Id.* at 3.

On April 10, 2023, EPA issued an Approval Memorandum authorizing the performance of an EE/CA, which is required by 40 C.F.R. § 300.415(b)(4)(i) for all NTCRAs. A copy of the Approval Memorandum is provided in Appendix A of the EE/CA Report. Between June and November of 2023, EPA conducted sampling activities in the Phase 1 Reach. As stated in the Data Evaluation Summary Memorandum – Phase 1 (Nov. 1, 2024),⁷⁷ “[t]he data from activities conducted within the Phase 1 Reach will be used to support the comprehensive [RI/FS] for the 3.7-mile Site that will be conducted in the future. In addition, these data are being used to complete the [EE/CA] for the Phase 1 Reach. The EE/CA will support a potential [NTCRA].”⁷⁸ Consistent with CERCLA, the NCP, and EPA guidance, the NTCRA early action will achieve significant risk reduction, address immediate risks to human health and the environment, and control migration of contamination. See EPA Responses to Comments 68.a and 68.b. See also EPA, *Use of Early Actions at Superfund National Priorities List Sites and Sites with Superfund Alternative Approach Agreements* (2019).⁷⁹

77. The commenter states the following: NTCRAs are not typically applied to projects of the size and scope of the Phase 1 Reach. Although the statutory limits of \$2 million and 12-months may be exceeded if a project falls under an exception, the proposed RAAs significantly exceed these criteria; in particular, the proposed alternative would cost approximately 40 times the statutory limit for a NTCRA and would take nearly four times as long to complete. EPA guidance only allows for “reasonable increases”

⁷⁶ Available at <https://semspub.epa.gov/work/HQ/100002212.pdf>.

⁷⁷ Available at <https://semspub.epa.gov/src/document/01/100032178>.

⁷⁸ AECOM, Data Evaluation Summary Memorandum – Phase 1 (Nov. 1, 2024), available at <https://semspub.epa.gov/work/01/100032178.pdf>.

⁷⁹ Available at <https://semspub.epa.gov/work/HQ/100002212.pdf>.

to the \$2 million limit, meaning “not more than \$1 or \$2 million above the statutory limits.”

EPA RESPONSE: CERCLA and the NCP do not prescribe any specific scope or cost for NTCRAs. While CERCLA Section 104(c)(1) and the NCP at 40 C.F.R. § 300.415(b)(5) set default limits for fund-financed removal actions (\$2 million and 12 months), CERCLA and the NCP also provide for unqualified waivers for these limits. As noted in EPA guidance, “[t]hese limits (which can be waived) apply only to fund-financed actions, and serve as a fiscal check; they are not found in the statutory definition of ‘removal’ and do not control which actions can be taken as removals.” *Use of Non-Time-Critical Removal Authority in Superfund Response Actions* (EPA, 2000), at 4 fn 4.

The commenter wrongly asserts that EPA’s *Final Guidance on Implementation of the “Consistency” Exemption to the Statutory Limits on Removal Actions*⁸⁰ only allows for increases of \$1 to \$2 million above the statutory limits. Rather, the 1989 Guidance states that, with respect to cost, “only reasonable increases will be granted” and that “[g]enerally, this means not more than \$1 to \$2 million above the statutory limits” for use of the consistency exemption. *Id.* at 4 (emphasis added). But this *general* guideline is not a specific or mandatory limitation. Rather, the reasonableness of the estimated NTCRA cost should be assessed in consideration of the broader statutory and regulatory scheme. The default statutory limits and the “consistency” exception together “are intended to promote and enhance efficiency and continuity in the Superfund program as a whole.” *Id.* at 2. “The ‘consistency’ exemption promotes efficiency by allowing removals to exceed the statutory limits for time and cost when to do so will result in lower overall cleanup cost as well as enhanced protection of public health and the environment.” *Id.* at 3.

Here, EPA determined that the recommended removal action alternative, on which the selected removal action is based, is the most cost-effective alternative in consideration of overall Site cleanup costs. EE/CA Report at 97. In addition, EPA determined that Site conditions meet the criteria for both a consistency exemption and an emergency exemption pursuant to 42 U.S.C. § 9604(c)(1) and 40 C.F.R. § 300.415(b)(5). See Action Memorandum Section, Section V. Therefore, the estimated cost of the NTCRA (and the increase above the default statutory limit) is “reasonable” and consistent with EPA guidance.

See also EPA Response to Comment 68.b

78. The commenter states the following: The EE/CA does not justify EPA’s NTCRA based on risk considerations. EPA’s findings that PCBs and other contamination “pose an immediate risk to human health and the environment” compounded by “the

⁸⁰ EPA, *Final Guidance on Implementation of the “Consistency” Exemption to the Statutory Limits on Removal Actions* (1989), available at <https://semspub.epa.gov/work/HQ/174424.pdf>.

potential for sudden and uncontrolled release of highly contaminated material from failure of the T&H Dam” are not supported by the EE/CA.

EPA RESPONSE: EPA’s determination that Site conditions pose an immediate risk to human health and the environment is supported by the EE/CA Report and the Administrative Record. See Action Memorandum, Sections III and V.A, and EPA Responses to Comment 69. EPA responds to specific related comments below.

- a. The commenter states the following: The T&H Dam assessment from the 2021 Inspection and Investigation Report on which EPA relies concludes that, while there are several deficiencies, the Dam is not at risk of structural failure. The Dam owner may be required to address deficiencies, but there is no indication that the Dam is at risk of sudden and uncontrolled release.

EPA RESPONSE: EPA disagrees with this comment. The Administrative Record, including the 2021 T&H Dam Inspection and Investigation Report⁸¹ and the 2024 AECOM Memorandum (Appendix C of the EE/CA Report), support EPA’s determination that the T&H Dam is at risk of failure. While the 2024 AECOM Memorandum notes that “the dam appears to be stable geotechnically,” this observation does not alter EPA’s determination that the dam may fail, due to the variety of factors that may contribute to dam failure. See Action Memorandum, Sections III.D and F. See also EPA Response to Comment 68.f. Conditions in the Phase I Reach—including the risks to human health and the environment presented by highly contaminated sediment and floodplain soil, the ongoing migration of contamination, the risk that the T&H Dam may fail and the potential uncontrolled and catastrophic release of contamination that would result from such failure—justify the NTCRA. See Action Memorandum, Section III and Responses to Comment 69.

- b. The commenter states the following: The Streamlined Risk Evaluation mischaracterizes current exposure at the Site because it relies on exposure assumptions that are not consistent with current Site conditions. The Lower Neponset River’s natural features, urban setting, local climate, access limitations, flow controls, water quality impairments, and other factors are inconsistent with, or may interfere with recreational and residential use scenarios on which the SRE is based. The SRE should modify use and exposure scenarios based on current Site conditions to better match the actual frequency and duration of the recreational activities described.

EPA RESPONSE: See EPA Response to Comment 72.c.

- c. The commenter states the following: While not used to estimate preliminary removal goals, the SRE relies on older, limited quantity and quality fish data

⁸¹ GEI Consultants, Inc., Tileston and Hollingsworth Dam, Phase II Inspection and Investigation Report (Dec. 2021), available at <https://semspub.epa.gov/work/01/100033633.pdf>.

to estimate risks due to fish consumption. This data is likely not representative of current conditions and should not be included in the EE/CA.

EPA RESPONSE: See EPA Response to Comment 72.b.

79. The commenter states the following: EPA has not adequately evaluated the potential for on-going sources of PCB contamination to re-contaminate the LNR. None of the proposed removal action alternatives would address the potential for ongoing discharges to the Site from the Upper Neponset River (Neponset River upstream of the confluence with Mother Brook), Lewis Chemical, Bay State Paper, or potential nonpoint sources such as combined sewer overflow. Given the potential for these sources to recontaminate the Phase 1 Reach, it is premature to evaluate removal action alternative effectiveness without evaluating the impact of these potential source areas.

EPA RESPONSE: EPA adequately evaluated potential sources of PCB contamination in the EE/CA for the purpose of evaluating and comparing removal action alternatives. See EPA Responses to Comments 73.a and 73.b. Potential continuing sources of contamination will be considered during removal design. See also EPA Response to Comment 12.

80. The commenter states the following: There is no evidence of significant downstream transport of PCB-contaminated sediments in or beyond the Phase 1 Reach. EPA's use of its hydraulic model is flawed because it lacks calibration/validation, particularly for high flows for which it was exclusively used, and it fails to consider cohesive sediments or armoring. Phase 1 data indicates that surface sediment PCB concentrations downstream of the T&H Dam are substantially lower than in the Phase 1 Reach and there is accumulation of soft sediment behind the dam, indicating that the dam is effectively containing sediment contamination in the Phase 1 Reach.

EPA RESPONSE: EPA disagrees with this comment. Multiple studies have concluded that sediment from the Phase 1 Reach is migrating downstream beyond the T&H Dam. For example, based on sediment, water, and fish tissue samples collected in the Neponset River in 2002 and 2004-2006, the U.S. Geological Survey concluded that while PCBs are mostly trapped behind the T&H Dam and Walter Baker Chocolate Dam, some PCBs are entrained back into the water column and are transported downstream.⁸² And between 2002 and 2021, the maximum measured sediment thickness in the T&H Dam impoundment behind the dam decreased by over 50%, from

⁸² Breault, Robert F., Concentrations, Loads, and Source of Polychlorinated Biphenyls, Neponset River and Neponset River Estuary, Eastern Massachusetts, *U.S. Geological Survey Scientific Investigations Report 2011-5004*, Version 1.1 (June 2014), p. 46, <https://pubs.usgs.gov/sir/2011/5004/pdf/sir2011-5004.pdf>.

9.7 feet to 4.8 feet.⁸³ This large reduction in sediment thickness clearly indicates an ongoing release via erosion of highly contaminated sediment, which is being transported downstream and polluting the rest of the river. See Action Memorandum, Section II.A.4. The Phase 1 data and Hydraulics and Sediment Stability Analysis, found in Appendix B of the EE/CA Report, also indicate that PCBs and COPCs in sediment are mobilizing downstream during normal and high flow conditions. Previous investigations have detected PCBs in sediment downstream of the T&H Dam. Additional sampling downstream of the T&H Dam is being performed as part of the Remedial Investigation for the Site.

EPA appropriately utilized the hydraulic model developed for the EE/CA. In developing the hydraulic model, EPA did consider cohesive sediments and armoring in its analysis. The extent to which sediment cohesion and armoring may impact sediment stability is largely a function of sediment particle size. EPA's hydraulic model considered sediment particle size. As described in Appendix B of the EE/CA Report, the hydraulic model results for the 100-year and 500-year flood event developed using the Hydrologic Engineering Center – River Analysis System (HEC-RAS)⁸⁴ fluid dynamics modeling software were used to compute sediment stability by following the methodology developed by Albert F. Shields. The Shields method, which considers the size of granular particles and the shear stress⁸⁵ exerted on them by the flow of water, was applied to the Phase 1 Reach at each sediment sample location using surficial grain size data (top 0.5 feet). Hydraulics and Sediment Stability Analysis, Appendix B of the EE/CA Report, p. 5. Given the particle size distribution in the Phase 1 Reach, neither sediment cohesion nor armoring have significant impact on sediment stability.

As described in Section 4.4.2.3 of the EE/CA Report, particle size distribution analyses (sieve and hydrometer analyses) were conducted as part of 2023 Phase 1 Reach investigations. For the Phase 1 Reach, the particle size distribution analyses demonstrated that fine sand (greater than 0.125-0.25 millimeters (mm)) was the dominant grain size classification in the majority of samples (90 out of 154). Clay was identified as the dominant grain size in fewer than 30 samples. EE/CA Report, p. 65. This is significant because sand and gravel are considered non-cohesive, while clay and silt, which consist of much smaller particle sizes and larger surface area (per unit of mass), are very cohesive. Given the predominance of sand particles, sediment cohesion is not likely a significant mechanism affecting erosion rates in the Phase 1 Reach. Further, the results of the particle size distribution analyses also indicate that armoring does not have a significant

⁸³ Breault, Robert F., et al., Sediment Quality and Polychlorinated Biphenyls in the Lower Neponset River, Massachusetts, and Implications for Urban River Restoration, U.S. Geological Survey Scientific Investigations Report 2004-5109 (2004), p. 6-7; Milone & MacBroom, Inc., *Environmental Restoration Report and Environmental Assessment, Neponset River Fish Passage and Habitat Restoration Project, Neponset River Basin* (Nov. 2006), p. 3-10; GEI Consultants, Inc., Tileston and Hollingsworth Dam, Phase II Inspection and Investigation Report (Dec. 2021), p. 10, <https://semspub.epa.gov/work/01/100033633.pdf>.

⁸⁴ HEC-RAS software has been developed for the U.S. Army Corps of Engineers. This software allows the user to perform one-dimensional steady flow, one and two-dimensional unsteady flow calculations, sediment transport/mobile bed computations, and water temperature/water quality modeling. This software is available to the public at: <https://www.hec.usace.army.mil/software/hec-ras/download.aspx>.

⁸⁵ Shear stress is the frictional force per unit area that flowing water exerts on the bed of a channel or other surface.

impact on sediment stability in the Phase 1 Reach. In EPA's conceptual design of the permanent cap with an in situ amendment,⁸⁶ it modeled the size of coarse material that would be required to armor the finer cap materials below it, and determined that 4-inch median diameter stones would be required to serve as a cap erosion protection layer. See Appendix G of the EE/CA Report, p. 2/4. The sieve analysis data shows that 100% of all sediment samples in the Phase 1 Reach passed the 0.75-inch sieve, which indicates that there were no materials larger than 0.75 inches in diameter in the retrieved sediment cores. See Data Evaluation Summary Memorandum – Phase 1, Table 12.⁸⁷ The data indicates that there is not a significant distribution of large enough materials that could act as an armoring layer.

The Hydraulics and Sediment Stability Analysis further provides a discussion of its limitations and remaining uncertainty. To address the potential uncertainty in the analysis, the analysis was performed for the 100-year and 500-year storm. The extreme flow conditions provide a more conservative estimate of areas susceptible to instability. Hydraulics and Sediment Stability Analysis, Appendix B of the EE/CA Report, p. 6. Hydraulic and sediment stability modeling will be further refined during the removal design.

81. The commenter raised several comments related to EPA's development of removal action alternatives in the EE/CA, stating that EPA provided only one true option because only one of the removal action alternatives presented was designed to meet the RAOs, and suggests that EPA should have considered a natural recovery component to the removal action alternatives.⁸⁸

- a. The commenter states the following: The process by which EPA developed its RAAs for the Phase 1 Reach is inconsistent with Agency guidance. Only one of the four Removal Action Alternatives ("RAAs") presented was designed to meet the stated RAOs, creating a false choice in the selection of an alternative. Other potential RAAs would meet EPA's RAOs. EPA only provided one true option.

EPA RESPONSE: Consistent with the NCP, 40 C.F.R. § 300.415, EPA analyzed removal action alternatives in the EE/CA for the Phase 1 Reach. The alternatives analysis presented in the

⁸⁶ The Action Memorandum clarifies that the permanent cap design will vary in different areas depending on site conditions. Based on the extent of dredging and the current understanding of contamination, EPA does not expect that the multi-layer cap with an in situ amendment isolation layer, as presented conceptually in the EE/CA Report and Action Memorandum, will be needed over the entire Phase 1 Reach

⁸⁷ Available at <https://semspub.epa.gov/src/document/01/100032178>.

⁸⁸ EPA notes that ABB's comment submission refers at times to "remedial alternatives." EPA understands ABB to be referring to removal action alternatives when references are to alternatives evaluated in the EE/CA; this correction is reflected in EPA's summary of ABB's comments.

EE/CA Report is consistent with the NCP and EPA Guidance.⁸⁹ See EPA Response to Comment 15.a. The comment with respect to “natural recovery” is addressed below.

- b. The commenter states the following: EPA’s interpretation of RAOs does not consider a full range of remediation outcomes, including those that do not meet cleanup levels at the end of active remediation. By failing to consider a natural recovery component of the proposed remedial alternatives, RAA-4 is presented as the only viable option. The removal alternatives analysis should consider the beneficial effects of natural recovery for alternatives that would leave lower PCB concentrations in place following active remediation. This is a common element of EPA-approved remedial alternatives and has been used at many sediment sites. Natural recovery is not an element of RAA-4, and other alternatives were rejected without assessing the remaining sediment’s natural recovery potential and vulnerability to erosion.

EPA RESPONSE: Nothing in the NCP requires EPA to evaluate removal action alternatives that include Monitored Natural Recovery (MNR), and MNR would not be an effective response action component for the Phase 1 Reach of the Site. MNR is a remedy for contaminated sediment that typically uses ongoing, naturally occurring processes to contain, destroy, or reduce the bioavailability or toxicity of contaminants in sediment. While MNR has been selected as a component of response actions for contaminated sediment at other sites, it is not an appropriate remedy approach in the Phase 1 Reach of the Site, given the nature and extent of contamination and other site conditions. As discussed in EPA’s *Contaminated Sediment Guidance for Hazardous Waste Sites*, EPA OSWER 9355.0-85 (December 2005) (“Contaminated Sediment Guidance”),⁹⁰ MNR should be considered at sites where certain conditions are present, including but not limited to:

- Natural recovery processes have a reasonable degree of certainty to continue at rates that will contain, destroy, or reduce the bioavailability or toxicity of contaminants within an acceptable time frame;
- Expected human exposure is low and/or can be reasonably controlled by institutional controls;
- Sediment bed is reasonably stable and likely to remain so;
- Sediment is resistant to resuspension (e.g., cohesive or well-armored sediment);
- Contaminant concentrations in biota and the biologically active zone of sediment are moving towards risk-based goals on their own;
- Contaminants already biodegrade or transform to lower toxicity forms;

⁸⁹ EPA notes that ABB cites to a draft guidance document (*Draft Engineering Evaluation/Cost Analysis Guidance for Non-Time-Critical Removal Actions Guidance*) that was not finalized by EPA (copies of this draft guidance are clearly marked “Draft/Do Not Cite or Quote”). This draft guidance was replaced by EPA, *Guidance on Conducting Non-Time-Critical Removal Actions under CERCLA*, OSWER Directive 9360.0-34 (Aug. 19, 1993). See *id.* at p. 19.

⁹⁰ Available <https://semspub.epa.gov/work/HQ/174471.pdf>.

- Contaminant concentrations are low and cover diffuse areas; and
- Contaminants have low ability to bioaccumulate.

See *id.* at Highlight 4.2, p. 4-3. To date, natural recovery processes have not contained, destroyed, or reduced the bioavailability or toxicity of contaminants in the Phase 1 Reach in any significant sense, and EPA does not expect that natural recovery processes will do so within an acceptable time frame. PCBs were released into the Site beginning around the 1950s, when PCBs became widely used in the United States, through 1979 when the manufacture, processing, and distribution of PCBs were banned. During 2023 investigations, high concentrations of PCBs were found throughout the Phase 1 Reach, at concentrations up to 2,670 mg/kg of total PCBs. The high concentrations of PCBs at the Site, after up to seven decades after their release, illustrate the persistence of PCBs in the environment.

In addition, as determined in the Hydraulics and Sediment Stability Analysis performed as part of the EE/CA (Appendix B of the EE/CA Report), contaminated sediment in the Phase 1 Reach is mobilizing during both normal and high flow conditions. Contamination left in place in sediment will continue to be released and migrate to downstream portions of the Site and beyond. While natural physical processes such as sedimentation are occurring, high levels of PCB contamination persist in surface sediment and throughout the biologically active zone and are not moving toward risk-based goals on their own.

Further, PCBs are considered persistent bioaccumulative toxics, which not only persist in the environment but also bioaccumulate and biomagnify. There are currently actual and potential exposures to contaminated sediment to human populations, animals, and the food chain in the Phase 1 Reach, which present unacceptable risks to human health and the environment. Institutional controls are not expected to be effective as primary measures to control exposures. See Section III.A of the Action Memorandum.

Given these site conditions, EPA appropriately excluded MNR from the removal action alternatives considered in the EE/CA.

82. The commenter states that EPA's cost evaluation underestimates the potential costs and technical challenges associated with RAA-4.

- a. The commenter states the following: The costs alternatives evaluated vary widely. EPA states that, in light of additional work that would be required following the completion of RAA-2 or RAA-3, RAA-4 "may be the most cost-effective in the long term in consideration of future response action costs necessary to address long term risk." In this way, the relative cost-effectiveness of RAA-4 appears to be a factor that was considered favorably in EPA's evaluation, but EPA has not provided adequate support for this conclusion.

EPA RESPONSE: See EPA Response to Comment 71.c.

- b. The commenter states the following: Dam removal is presented as a cost saving measure based on a finding that it likely would cost more to repair the Dam than to remove it. However, that determination wrongly assumes that the cost of Dam repair should be included in NTCRA project costs. However, the costs of such maintenance, upkeep, and repair are the responsibility of the Dam owner. The current functionality of the T&H Dam and the cost to repair is not an appropriate consideration for the EE/CA Report cost analysis.

EPA RESPONSE: The EE/CA Report does not present dam removal as a cost saving measure as compared with the cost of dam repair. The costs for maintenance, upkeep, or repair of the T&H Dam were not included in the cost estimate of any of the removal action alternatives presented in the EE/CA Report. The commenter cites to Appendix C of the EE/CA Report, an AECOM memorandum presenting the findings of a document review and stability evaluation of the T&H Dam, which was prepared during the development of removal alternatives. Appendix C reviews dam repair and dam removal options discussed in the 2021 T&H Dam Inspection and Investigation Report prepared by GEI Consultants (“2021 GEI Report”)⁹¹ and a 2006 Environmental Restoration Report and Environmental Assessment conducted by Milone and MacBroom.⁹² While Appendix C does note that the costs for dam repair would be higher than the costs of dam removal, the commenter appears to conflate the options reviewed in Appendix C with the evaluation of removal alternatives performed in the EE/CA. The removal alternatives considered in the EE/CA Report do not include a dam repair alternative.

EPA agrees that under a removal action alternative that does not include dam removal (see RAA-2), the costs for maintenance, upkeep, or repair of the dam would be the responsibility of the owner. Accordingly, such costs were not included for any removal action alternative evaluated in the EE/CA Report. While the estimated costs of dam repair (based on a dam repair option presented in the 2021 GEI Report) were noted in Table 17-2 (Estimated Costs for RAA-2), line item 1.10, these costs were excluded from the cost estimate for this alternative; a cost of \$0 was assigned to this line item.

- c. The commenter states the following: The process EPA used for evaluating, analyzing, and comparing RAAs is based on just three criteria: effectiveness, implementability, and cost. However, several of the estimates included in the EE/CA substantially underestimate the costs associated with the work to be performed. Because the true cost of RAA-4 is likely far higher, an accurate comparison of cost among the alternatives could not be performed. To fairly and accurately evaluate “cost” as a consideration for comparing and selecting

⁹¹ GEI Consultants, Inc., Tileston and Hollingsworth Dam, Phase II Inspection and Investigation Report (Dec. 2021), available at <https://semspub.epa.gov/work/01/100033633.pdf>. The 2021 GEI Report is included in the Administrative Record.

⁹² Milone & MacBroom, Inc., *Environmental Restoration Report and Environmental Assessment, Neponset River Fish Passage and Habitat Restoration Project, Neponset River Basin* (Nov. 2006), available at <https://semspub.epa.gov/work/01/100022824.pdf>. This report is included in the Administrative Record.

alternatives, the EE/CA should better estimate true costs associated with the RAAs, including addressing the items below.

EPA RESPONSE: EPA recognizes that many components of a removal action are subject to a great degree of uncertainty, particularly during early stages of its development. The EE/CA stage represents 0% to 10% design completion, at which stage “concepts are not typically developed enough to identify all project components or quantities.”⁹³ Cost estimates at the EE/CA stage are expected to be accurate within a range of +50% to -30% and costs associated with the removal action will be refined during removal design. EPA addresses the commenter’s specific comments regarding costs below.

- i. The commenter states the following: Costs associated with overdredging were not included, but the scope includes that potential work. This would increase dredge volumes and costs.

EPA RESPONSE: Overdredging was not included in the scope for RAA-4, nor should it have been included. As noted in U.S. Army Corps of Engineers’ *Technical Guidelines for Environmental Dredging of Contaminated Sediments* (Sept. 2008),⁹⁴ overdredging provides benefits for environmental dredging with respect to meeting a cleanup level, minimizing residuals, and increasing dredging effectiveness. Excessive overdredging is less desirable when dredging contaminated sediments because it increases the volume of dredged material to be treated and disposed. Increased precision is therefore desired for environmental dredging of contaminated sediments. Some overdredging may be recommended for projects in which contaminated sediments overlies clean sediments and in which the sediments at the interface have relatively high contaminant concentrations.⁹⁵

Under RAA-2 and RAA-3 (which had associated cleanup levels of 100 mg/kg and 14 mg/kg, respectively), EPA determined that overdredging was appropriate, and estimated volumes of sediment to be removed were calculated by evaluating the thickness of sediment based upon 2023 sediment sampling penetration depth prior to encountering refusal, in consideration of the cleanup level specific to the alternative, combined with a one-foot overdredge. The average dredge depth, including overdredge, for RAA-2 and RAA-3 were determined to be 2.7 feet and 2.5 feet, respectively. These were used to calculate volumes and costs. Under RAA-4,

⁹³ See EPA, *A Guide to Developing and Documenting Cost Estimates During the Feasibility Study*, OSWER 9355.0-75 (July 2000), p. 5-10, available at <https://semspub.epa.gov/work/05/918808.pdf>. Note that although this EPA guidance document addresses cost estimates of remedial alternatives developed during the Feasibility Study to support the Superfund remedy process, the guidance states that the same concepts may be applied to other projects, including Superfund removal actions. *Id.* at 1-2.

⁹⁴ U.S. Army Engineer Research and Development Center, *Technical Guidelines for Environmental Dredging of Contaminated Sediments* (Sept. 2008), available at <https://semspub.epa.gov/work/HQ/174468.pdf>. This report was prepared for EPA and provides technical guidelines for evaluating environmental dredging as a sediment remedy component and supports EPA’s guidance document, *Contaminated Sediment Remediation Guidance*, OSWER 9550-85 (Dec. 2025), <https://semspub.epa.gov/work/HQ/174471.pdf>.

⁹⁵ U.S. Army Engineer Research and Development Center, *Technical Guidelines for Environmental Dredging of Contaminated Sediments* (Sept. 2008), p. 230, available at <https://semspub.epa.gov/work/HQ/174468.pdf>.

overdredge was not included to calculate volumes or cost based on sediment thickness in the Phase 1 Reach. A sediment thickness analysis was performed as part of 2023 Phase 1 Reach investigations. Results of the analysis are presented in Appendix F of the EE/CA Report. Based on the results of the sediment thickness analysis, the average sediment thickness in the Phase 1 Reach was 3.18 feet.⁹⁶ Sediment thickness in the Phase 1 Reach would therefore not allow for overdredge beyond the assumed average dredge depth of three feet for RAA-4 (and for the selected removal action).⁹⁷ Pre-design investigations will be performed to clarify sediment thickness throughout the Phase 1 Reach to inform removal action dredge depths.

- ii. The commenter states the following: Contingency costs are not consistent with EPA guidance. The cost estimates assume a contingency of 20% of the construction cost. EPA's guidance for cost estimating during the FS stage notes that contingency should include both "scope contingency" (typically ranging from 10 to 25 percent) and "bid contingency" (typically ranging from 10 to 20 percent).

EPA RESPONSE: The 20% contingency applied in the EE/CA Report is appropriate and consistent with EPA guidance. As stated in Chapter 5.4 of EPA's *A Guide to Developing and Documenting Cost Estimates During the Feasibility Study* ("FS Cost Guidance"), "[c]ontingency is factored into a cost estimate to cover unknowns, unforeseen circumstances, or unanticipated conditions that are not possible to evaluate from the data on hand at the time the estimate is prepared."⁹⁸ Two main types of contingency are "scope contingency" and "bid contingency." Scope contingency covers unknown costs due to scope changes that may occur during design. Bid contingency covers unknown costs associated with constructing or implementing a given project scope. The FS Cost Guidance further states that scope and bid contingencies may be added together. *Id.* Consistent with the guidance, a contingency percentage of 20% was assigned based on engineering judgment and is within the typical range described for combined scope and bid contingencies.

- iii. The commenter states the following: Survey costs appear significantly underestimated. On a project of this scale, surveying could be a continuous operation throughout the construction and dedicated full-time surveyors will be required.

EPA RESPONSE: EPA disagrees with this comment. Extensive surveys were performed as part of reconnaissance activities performed in the Phase 1 Reach, including a geospatial data survey, a historical and cultural resource survey, a sediment profiling survey, and a wetland survey. See

⁹⁶ See Memorandum – Phase 1 Sediment Thickness, Table 1, EE/CA Report, Appendix F.

⁹⁷ EPA made modifications to the selected removal action from RAA-4. See EPA Response to Comment 4. However, these modifications did not change the estimated average dredge depth for contaminated sediment.

⁹⁸ EPA, *A Guide to Developing and Documenting Cost Estimates During the Feasibility Study*, OSWER 9355.0-75 (July 2000), p. 5-9, available at <https://semspub.epa.gov/work/05/918808.pdf>.

the Site Reconnaissance Summary.⁹⁹ To the extent the commenter is referring to property boundary surveys, EPA has already performed boundary surveys on some properties during the 2023 Phase 1 Reach field investigations. Additionally, the Commonwealth of Massachusetts is a predominant landowner of properties abutting the Phase 1 Reach that are subject to this removal action, thereby reducing the necessity to perform property boundary surveys for large swaths of the Phase 1 Reach. In the cost estimate for the selected removal action, EPA included costs of surveying property that will be used for staging and dewatering activities, costs for potential additional archeological surveys, and costs for bathymetric surveys following dredging and capping. See Updated Removal Action Cost Estimate, Attachment 5 of the Action Memorandum. EPA does not expect that significant additional surveying activities will need to be performed.

- iv. The commenter states the following: The costs for “Engineering, Design, and Permitting” appear significantly underestimated. The \$467,053 for “Engineering, Design, and Permitting” presented in Table 17-4 represents 0.6% of the total capital costs. Consistent with EPA and USACE guidance for cost estimating during the FS stage, remedial design costs are typically 6% of total construction costs for projects exceeding \$10 million in total costs. The guidance also acknowledges that “...these values may be adjusted up for more complex projects...based on engineering judgment.”

EPA RESPONSE: EPA performed a careful review of the cost estimate included in the EE/CA Report following EPA’s review of comments and subsequent minor modifications to the selected removal action (see EPA Response to Comment 4). Estimated costs related to removal design for the selected removal action have been modified to include costs associated with pre-design investigations. The Updated Removal Action Cost Estimate is included as Attachment 5 to the Action Memorandum.

EPA does not agree that EPA’s removal design costs are underestimated. The commenter points to EPA’s FS Cost Guidance, which indicates that professional/technical services costs (including Remedial Design costs) may be estimated by applying a percentage to the total of construction costs plus contingency. EPA, *A Guide to Developing and Documenting Cost Estimates During the Feasibility Study*, OSWER 9355.0-75 (July 2000), pp. 5-12 – 5-13.¹⁰⁰ Alternatively, the FS Cost Guidance provides that cost elements can be broken down into sub-elements. *Id.* at 5-12.

⁹⁹ Available at <https://semspub.epa.gov/work/01/678308.pdf>. The Site Reconnaissance Summary is also in the Administrative Record.

¹⁰⁰ Available at <https://semspub.epa.gov/work/05/918808.pdf>. The FS Cost Guidance addresses cost estimates of remedial alternatives developed during the Feasibility Study to support the Superfund remedy process. However, the guidance states that the same concepts may be applied to other projects, including Superfund removal actions. *Id.* at 1-2.

Consistent with EPA guidance, rather than applying a rule-of-thumb percentage to estimate design costs, EPA elected to estimate costs of sub-elements of removal design. EPA clarifies that the removal design costs are comprised of more than just the “Engineering, Design, and Permitting” line item identified by the commenter. As detailed in the Updated Removal Action Cost Estimate (Attachment 5 to the Action Memorandum), the sub-elements of removal design are included within the “Engineering, Site Prep, Permitting, Project Management” category of Capital Costs (Category 1.1) and as a portion of the Dam Removal cost estimate (Category 1.10). Specifically, these sub-elements include:

- Pre-Design Investigations: cost estimates for individual investigations (including investigations for sediment thickness profiling, sampling and reporting, archaeological survey, and dredge technology screening) were included as lump sum estimates based on costs of similar investigations.
- Engineering, Design, and Permitting¹⁰¹: cost estimate based on an assumption of 2,730 design hours for preparation of design reports (including engineering calculations) and drawings for preliminary, intermediate, and final designs, technical specifications, and construction workplans.
- Pilot Testing of Geotextile Tubes: cost estimate for bench and/or pilot testing to select the most cost-effective dewatering equipment was included as a lump sum estimate.
- Project Management: the “contractor project management and coordination” line item within Category 1.1 includes estimated costs for project management throughout the 46-month projected lifetime of the removal action. A portion of these costs will be allocated to the removal design phase. See Table 18-3 (Estimated schedules for Removal Action Alternative 4) of the EE/CA Report, which indicates that the “planning, permitting” phase of the removal action is estimated to take 90 days.
- Design for removal of the dam: removal design costs also include the costs for the design of the T&H Dam removal. These costs are incorporated in the cost estimate for Dam Removal (Category 1.10), which is based on costs for the dam removal alternative presented in the 2021 GEI Report,¹⁰² and adjusted for inflation.

The assumptions used in estimating removal design costs were developed based on professional judgment and costs of similar design components and investigations. Additionally, a contingency

¹⁰¹ Pursuant to Section 121(e) of CERCLA, permits are not required for on-site response activities. 42 U.S.C. § 9621(e)(1). However, to the extent practicable, performance of the removal action will comply with the substantive requirements of applicable and relevant and appropriate requirements. The costs associated with complying with the substantive provisions of permitting requirements are incorporated into the removal design cost sub-elements.

¹⁰² GEI Consultants, Inc., Tileston and Hollingsworth Dam, Phase II Inspection and Investigation Report (Dec. 2021), available at <https://semspub.epa.gov/work/01/100033633.pdf>. Dam removal was evaluated as Option 4 in the 2021 GEI Report and a conceptual design cost estimate summary was provided for Option 4 in Appendix F of the Report. See *id.* at Section 7.2.4 and Appendix F. The 2021 GEI Report is included in the administrative Record.

of 20% was applied to all costs within the “Engineering, Site Prep, Permitting, Project Management” category, and a 25% contingency was applied to design costs for Dam Removal.

- d. The commenter states the following: Hydraulic dredging is likely to encounter very significant challenges given the substrates/debris, urban setting and infrastructure, and shallow river stretches. The likely potential need for mechanical dredging was not included in the cost estimate. Data presented from sediment cores and Sediment Profile Imaging indicate that the sediment and underlying consolidated material may be dense and the LNR may be dominated by a hard or debris-laden bottom. Roughly a third of the profiling attempts were unsuccessful due to the presence of large materials like cobbles and tree branches. Removal of this material using conventional hydraulic dredge equipment to be used for contaminated sediment removal may be infeasible. Also, based on Appendix F, there is a layer of riprap lining at least a portion of the Phase 1 Reach around bridge piers and along the shoreline. Hydraulic dredging of these areas will not be feasible. The EE/CA Report should reassess the feasibility of hydraulic dredging in light of Site conditions.

EPA RESPONSE: As stated in section 4.4.2.2 of the EE/CA Report, the use of hydraulic dredging for submerged sediment removal was assumed for purposes of the cost estimate. EPA also stated that mechanical dredging may be used in limited areas if needed, for example for shallow sediments removed along with floodplain soil. EE/CA Report, p. 63. As anticipated in the EE/CA Report, if large debris or other items in the riverbed are identified as part of pre-dredge surveys, those items may be removed separately using a barge-mounted excavator prior to dredging. If bedrock or consolidated deposits not amenable to dredging are encountered, the unconsolidated sediment above the bedrock targeted for dredging will be removed. *Id.* at 63-64. Further, EPA anticipates that pre-design investigations may be performed to further evaluate and inform the best technology method to remove dense riverbed soil. *Id.* at 80. The most appropriate and cost-effective method to remove sediment will be determined during the removal design.

83. The commenter states the following: There are inherent limitations on the recreational use and ecological health of the Lower Neponset River (including local climate and drought conditions, high bacteria counts, phosphorus and dissolved oxygen, safe access for ingress and egress to the river, urban runoff and sewer contributions) that are beyond the scope of any removal action and not considered by EPA. As a result, the RAAs may not result in the long-term improvements desired for the river.

EPA RESPONSE: See EPA Response to Comment 12.

84. The commenter states the following: The recommended alternative does not take account of important Site-specific information and best practices.

- a. The commenter states the following: Bank-to-bank removal does not account for reduced post-remedial PCB concentrations. Averaging in background

concentrations in remediated areas would show that the PRG may be achieved with less than bank-to-bank removal. This is a common approach that assumes remediated areas have background PCB concentration. The remedy also fails to consider Monitored Natural Recovery.

EPA RESPONSE: EPA disagrees with this approach. Averaging large swaths of remediated areas with unremediated areas may skew the data low, which if implemented, could result in unacceptable levels of contamination remaining in sediments. Furthermore, this approach does not consider that the contaminated sediments could become potential sources to the remediated riverbed and floodplain soils if the contamination is not removed. This approach would also not be consistent with Removal Action Objective 6, which clearly states that the removal action should prevent the transport of PCBs to both remediated and unremediated areas. See EPA Response to Comment 81.b for a discussion on Monitored Natural Recovery.

- b. The commenter states the following: The engineered cap design is inconsistent with Site conditions and EPA guidance.
 - i. The commenter states the following: RAA-4 targets almost all the PCB inventory in the Phase 1 Area; the recommended removal action need not include the type of engineered cap that has been proposed. Further, future design analyses may determine that a different cap design without an amendment may be appropriate and the cap design may vary within the remediation area.

EPA RESPONSE: See EPA Response to Comment 4. The Action Memorandum clarifies that while a permanent cap will be constructed throughout the Phase 1 Reach, the design of the cap will vary in different areas depending on site conditions. EPA does not expect that the multi-layer cap with an in situ amendment isolation layer, as presented conceptually in the EE/CA Report, will be needed over the entire Phase 1 Reach. See Action Memorandum, Section VI.A.2.

- ii. The commenter states the following: Appendix G of the EE/CA notes that the cap was designed to withstand a 500-year peak flow but does not provide a basis for this design life. EPA's Contaminated Sediment Remediation Guidance for Hazardous Waste Sites provides that generally, in situ caps should be designed to withstand a 100-year storm.

EPA RESPONSE: See EPA Response to Comment 60.b.

- c. The commenter states the following: The dredge depth does not take the depth to bedrock into account. The EE/CA states that the average depth is approximately 3 feet, but the text also states that in some areas, bedrock is within one foot of the surface.

EPA RESPONSE: As stated in Section VI.A.2 and Section VI.A.2.a of the Action Memorandum, the top three feet of sediment will be removed where practicable. In some areas,

removal down to three feet will not be practicable (due to, for example, channel stability, slope stability, stability of existing structures, refusal, among other factors). A thorough decision matrix shall be developed during removal design to refine dredge depth. See also EPA Response to Comment 4.

[End of Responsiveness Summary]

Attachment 3

MassDEP Letter of Support



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

Maura T. Healey
Governor

Kimberley Driscoll
Lieutenant Governor

Rebecca L. Tepper
Secretary

Bonnie Heiple
Commissioner

September 19, 2025

Mr. Bryan Olson
Superfund and Emergency Division
Office of Site Remediation and Restoration
U.S Environmental Protection Agency
5 Post Office Square
Boston, MA 02109-3919

Re: MassDEP Letter of Support
Non-Time Critical Removal Action
Lower Neponset River Superfund Site
Boston and Milton, MA
MassDEP RTN 3-0031548

Dear Mr. Olson:

The Massachusetts Department of Environmental Protection (MassDEP) has reviewed the Action Memorandum prepared by the U.S. Environmental Protection Agency (EPA) for the Phase 1 Reach of the Lower Neponset River Superfund Site. This letter is written to articulate MassDEP's support of the USEPA's proposed Non-Time Critical Removal Action (NTCRA) for the Phase 1 Reach of the Lower Neponset River Superfund Site in Boston and Milton, Massachusetts, as discussed below.

Background

As documented in the Action Memorandum, conditions at the Site pose an immediate and direct risk to public health and the environment within the Phase 1 Reach, which extends from the confluence of the Neponset River and Mother Brook in Hyde Park for approximately 1 mile to the Tileston & Hollingsworth (T&H) Dam in Boston-Milton. In addition, the T&H Dam is

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currently rated in Poor Condition as per Massachusetts Department of Conservation and Recreation's (DCR) Dam Safety regulations and poses an imminent risk of failure. Such a failure could result in a catastrophic and uncontrolled release of highly contaminated sediment downstream, as well as potential property damage and potential public safety impacts.

To address these immediate and potential threats, EPA has determined that there is an urgent need for an NTCRA to be conducted within the Phase 1 Reach of the Site. The NTCRA, which would be performed under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. §§ 9601 et seq, is proposed as an early action to address immediate risks to human health and the environment and to control the migration of contamination, which will result in significant risk reduction. The NTCRA is intended to be complementary to and consistent with future remedial actions for the rest of the Site, which extends an additional 2.7 miles downstream beyond the end of the Phase 1 Reach. A Site-wide Remedial Investigation / Feasibility Study (RI/FS) is ongoing to define the nature and extent of contamination at the Site, and to identify whether further response actions will be necessary following implementation of this NTCRA. EPA will document the selection of any future remedial action activities in a Record of Decision (ROD).

The Action Memorandum also identifies EPA's chosen Removal Action Alternative for the NTCRA and provides EPA's rationale supporting that selection. The selected alternative and selection rationale are described in the *Engineering Evaluation/Cost Analysis (EE/CA) Removal Action Alternatives Selection* section below. EPA Region 1 is requesting approval and funding from EPA Headquarters to conduct the chosen Removal Action Alternative as an NTCRA within the Phase 1 Reach of the Site.

MassDEP review of previous Supporting Documents

Streamlined Risk Evaluation (SRE) – EPA performed an Endangerment Evaluation (i.e., a Streamlined Risk Evaluation) as part of an Engineering Evaluation /Cost Analysis (EE/CA). The SRE evaluated risk for human and ecological receptors within the Phase 1 Reach of the Site, focusing on total polychlorinated biphenyls (PCB) contamination, which is the primary contaminant of concern within the Phase 1 Reach. The SRE results indicate that PCB-contaminated sediment and floodplain soils within the Phase 1 Reach pose unacceptable risk to human health and the environment. While the SRE focused on PCB contamination, co-located contaminants of potential concern are expected to increase cumulative risk to human health and the environment. SRE findings indicate that PCB contamination in sediment and floodplain

soils within the Phase 1 reach warrant remediation under an NTCRA. MassDEP has previously reviewed the SRE and concurs with the conclusions.

Applicable or Relevant and Appropriate Requirements (ARARs)

MassDEP worked with the EPA to develop, review, and agree upon the NTCRA-specific ARARs which are presented in the final EE/CA report (June 2025).

EE/CA Removal Action Alternatives (RAA) Selection

As part of the June 2025 EE/CA, EPA performed an analysis of various options to mitigate risks posed by highly contaminated sediment and floodplain soil within the Phase 1 Reach, as well as the potential collapse of the T&H Dam. The alternatives ranged from a no action alternative (RAA1), to a hot spot removal alternative (RAA2, with a cleanup goal of 100 mg/Kg total PCBs in sediment and floodplain soils), to a targeted removal alternative (RAA3, with a cleanup goal of 14 mg/Kg for sediment and floodplain soils and dam removal), to a comprehensive removal action alternative (RAA4, with a cleanup goal of 1 mg/Kg for sediment and floodplain soils and dam removal).

RAA4 is the most protective and comprehensive of the proposed alternatives and is EPA's recommended removal action alternative for the Phase 1 Reach. The proposed removal action will eliminate direct exposure of humans and wildlife to total PCBs exceeding 1 mg/kg and co-located Contaminants of Potential Concern (COPCs) in sediment and floodplain soil in the Phase 1 Reach (through excavation, dredging, and capping) and remove the T&H Dam. The RAA4 cleanup goal of 1 mg/Kg for total PCBs corresponds to a Total Cancer Risk of 1E-06 (1 in 1,000,000) and Total Hazard Quotient of 1 for a combined adult and child recreational and residential receptor. The RAA-4 cleanup level is also consistent with the selected floodplain soil preliminary removal goal for the Short-tailed Shrew (representing the omnivorous mammal) corresponding to a Hazard Quotient of 1, which EPA determined would reduce the potential for unacceptable risk to ecological receptors.

Although the recommended removal action is the most expensive of the alternatives that were evaluated (with an estimated cost of \$78.4 million), it is also the RAA most likely to achieve the expected Remedial Action Objectives. If implemented, this alternative may negate the need to return to the Phase 1 Reach of the Site to address residual contamination later in the CERCLA process.

It should be noted that the selected removal action (RAA4), as presented in the EE/CA, is considered *conceptual* in nature for the purpose of estimating costs as part of the EE/CA. In summary, the selected removal action includes:

- Removal of all floodplain soils exceeding 1 mg/kg total PCBs within Phase 1 Reach;
- Removal of all contaminated sediment exceeding 1 mg/kg total PCBs within the T&H Dam impoundment area and the former Lewis Chemical facility depositional area;
- Removal of the top three feet of sediment in remaining areas;
- Construction of a permanent cap in areas where 1 mg/kg total PCBs cannot be achieved through removal (note: for cost estimating purposes, it was assumed that the cap would extend the entire extent of the Phase 1 Reach with the exception of the T&H Dam impoundment area and the Lewis Chemical depositional area);
- Removal of additional sediment and underlying dense riverbed soil immediately upstream of the T&H Dam to establish a 10-foot horizontal to 1-foot vertical grade in the riverbed in advance of dam removal; and
- Removal of the T&H dam.

MassDEP understands that the extent to which dredging and capping will occur will be carefully evaluated during the design phase (after a robust pre-design phase), which will consider factors such as sediment and channel stability, slope stability, stability of existing structures, use of LNR as a Regulatory Floodway, potential exposure pathways, ARARs, value engineering, and long-term maintenance requirements.

MassDEP reviewed the June 2025 EE/CA and supports EPA's selection of the recommended removal action (RAA4), as well as EPA's selection of the 1 mg/kg cleanup goal for total PCBs in sediment and floodplain soils, as well as the identified ARARs.

MassDEP Support of EPA's proposed NTCRA

Given the overall time-sensitive nature of the removal action, the estimated cleanup cost, and the lack of sufficient state resources to address the identified immediate and direct risk to public health and the environment, MassDEP supports addressing Site risks through the NTCRA process and agrees with EPA's proposed removal action, provided EPA consider the following during the forthcoming pre-design and design phases:

MassDEP Letter of Support
Proposed Non-Time Critical Removal Action
Phase 1 Reach, Lower Neponset River Superfund Site
Boston – Milton, MA
MassDEP RTN 3-0031548

- MassDEP requests that the future pre-design and design work consider approaches and measures to minimize necessary long-term operation and maintenance (O&M) of any capped areas; and
- MassDEP requests that the future pre-design and design work consider approaches and measures to restore the river to its full ecological potential.

MassDEP is deeply grateful for the EPA's continued attention and responsiveness to the LNR Site to meet our shared goals of protecting human health and the environment.

If you have any questions concerning this letter, please contact the MassDEP project manager, Jennifer McWeeney at 781-915-9656 or jennifer.mcweeney@mass.gov

Sincerely,



Millie Garcia-Serrano
Assistant Commissioner, BWSC
MassDEP

Cc: Matthew Audet, USEPA Superfund Section Chief
Alexander Pluta, USEPA Remedial Project Manager
Emma Minker, USEPA Remedial Project Manager
John Beling, MassDEP, Deputy Commissioner
Diane Baxter, MassDEP Division Director-Federal Sites
Jennifer McWeeney, MassDEP Remedial Project Manager
Michelle Wu, Mayor, City of Boston
Dr. Bisola Ojikutu, Director, Boston Public Health Commission
Benjamin Zoll, Chair, Town of Milton Select Board
Caroline Kinsella, Director, Town of Milton Health Department
Robert Lowell, Deputy Chief, Design & Engineering, DCR

Attachment 4

Applicable or Relevant and Appropriate Requirements Tables

Attachment 4
Applicable and Relevant and Appropriate Requirements (ARARs) and To Be Considered (TBC) Criteria
Non-Time-Critical Removal Action – Lower Neponset River Superfund Site, Phase 1 Reach
Table 1 – Chemical-Specific ARARs

Requirement	Citation	Status	Synopsis of Requirement	Action to be Taken to Attain ARAR
Chemical-Specific				
Federal				
Cancer Slope Factors (CSFs)	EPA Integrated Risk Information System	TBC	Guidance values used to evaluate the potential carcinogenic hazards caused by exposure to PCBs.	CSFs have been used to compute the individual cancer risk resulting from exposure to carcinogens in site media.
Reference Doses (RfDs)	EPA Integrated Risk Information System	TBC	Guidance values used to evaluate the non-cancer hazards associated with exposure to PCBs.	RfDs have been used to characterize human health risks due to non-carcinogens in site media.
PCBs: Cancer Dose Response Assessment and Application in Environmental Mixtures (EPA 1996)	EPA/600/P-96/001F (National Center for Environmental Assessment, Office of Research and Development, September 1996)	TBC	Guidance describing EPA's reassessment regarding the carcinogenicity of PCBs.	The guidance has been used in characterization of site risks.
Guidelines for Carcinogenic Risk Assessment (EPA, 2005)	EPA/630/P-03/001F (EPA Risk Assessment Forum, March 2005)	TBC	Framework and guidelines for assessing potential cancer risks from exposure to pollutants and other environmental agents.	Guidelines have been used in assessing risk.
Supplemental Guidance for Assessing Susceptibility from Early-Life Exposure to Carcinogens	EPA/630/R-03/003F (EPA Risk Assessment Forum, March 2005)	TBC	Guidance on issues related to assessing cancer risks associated with early-life exposures, including an adjustment for carcinogens acting through a mutagenic mode of action.	Guidance has been used in assessing risks.
Guidance on Remedial Actions for Superfund Sites with PCB Contamination	EPA/540/G-90/007 (OSWER Directive No. 955.4-01, August 1990)	TBC	Guidance describing recommended approach for evaluating and remediating Superfund sites with PCB contamination.	Guidance has been considered in determining proposed cleanup levels for PCB contaminated media.

Attachment 4
Applicable and Relevant and Appropriate Requirements (ARARs) and To Be Considered (TBC) Criteria
Non-Time-Critical Removal Action – Lower Neponset River Superfund Site, Phase 1 Reach
Table 2 – Location-Specific ARARs

Requirement	Citation	Status	Synopsis of Requirement	Action to be Taken to Attain ARAR
Location-Specific				
Federal				
Floodplain Management and Protection of Wetlands	44 CFR Part 9	Relevant and Appropriate	Federal Emergency Management Agency (FEMA) regulations set forth the policy, procedure, and responsibilities to implement and enforce Executive Order 11988 (Floodplain Management) and Executive Order 11990 (Protection of Wetlands). These regulations prohibit activities that adversely affect a federally-regulated wetland unless there is no practicable alternative and the proposed action includes all practicable measures to minimize harm to wetlands that may result from such use. These regulations require the avoidance of impacts associated with the occupancy and modification of federally-designated 100-year and 500-year floodplains and require the avoidance of development within a floodplain wherever there is a practicable alternative.	EPA has determined that there is no practicable alternative method to work in federal jurisdictional wetlands, or 100-year or 500-year floodplains. All practicable measures will be taken to minimize and mitigate any adverse impacts. Appropriate avoidance, minimization, mitigation, and/or restoration will be taken to the extent practicable. EPA requested public comment on the proposed impacts to federal floodplain and wetland resources. EPA's response to comments is provided in the Responsiveness Summary, Attachment 2 of the Action Memorandum.
Clean Water Act Section 404(b)(1) Guidelines for Specification of Disposal Sites for Dredged or Fill Material and regulations	33 USC § 1344 40 CFR Parts 230-231 33 CFR Parts 320-323	Applicable	Outlines requirements for the discharge of dredged or fill material into surface waters, including wetlands. Such discharges are not allowed if there are practicable alternatives with less adverse impact. Discharge cannot cause or contribute to violation of state water quality standards or toxic effluent standards or jeopardize threatened or endangered species; discharge cannot significantly degrade waters of U.S.; practicable steps must be taken to minimize and mitigate adverse impacts; and impacts on flood level, flood velocity, and flood storage capacity must be evaluated. Sets standards for restoration and mitigation required as a result of unavoidable impacts to aquatic resources. EPA must determine which	The removal action will comply with the substantive provisions of these requirements to the extent practicable through appropriate avoidance, minimization, mitigation, and/or restoration. EPA has determined that the selected removal action is the least environmentally damaging practicable alternative because (a) there is no practicable alternative method that will achieve cleanup objectives with less adverse impact and (b) all practicable measures would be taken to minimize and mitigate any adverse impacts from the work. EPA requested public comment on EPA's draft LEDPA determination. EPA's response to

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Applicable and Relevant and Appropriate Requirements (ARARs) and To Be Considered (TBC) Criteria
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Table 2 – Location-Specific ARARs

Requirement	Citation	Status	Synopsis of Requirement	Action to be Taken to Attain ARAR
			alternative is the Least Environmentally Damaging Practicable Alternative (LEDPA) to protect wetland and aquatic resources.	comments is provided in the Responsiveness Summary, Attachment 2 of the Action Memorandum.
National Historic Preservation Act and regulations	54 USC § 300101 <i>et seq.</i> 36 CFR Part 800	Potentially Applicable	Establishes a requirement for federal agencies to take into account the effect of any federally-assisted undertaking or licensing on any district, site, building, structure, or object that is included in or eligible for inclusion in the National Register of Historic Places.	If this removal action affects historic properties/structures subject to these requirements, activities will be coordinated with the state, tribal, and federal authorities and conducted in accordance with the substantive requirements of these regulations to the extent practicable.
Preservation of Historical and Archeological Data and regulations	54 USC § 312501 <i>et seq.</i> 43 CFR Part 7	Potentially Applicable	Establishes procedures to provide for preservation of historical and archeological data which might be destroyed through alterations of terrain as a result of a federal construction project or a federally licensed activity program.	If during the removal action, it is determined that this removal action may cause irreparable loss or destruction of significant scientific, prehistorical, historical, or archaeological data, EPA will notify state, tribal, or federal authorities and comply with the substantive requirements in the statute and regulations to the extent practicable.
Endangered Species Act and regulations	16 USC § 1531 <i>et seq.</i> 50 CFR §§ 17.11-17.12 and Part 402	Potentially Applicable	Provides for protection and conservation of various species of fish, wildlife, and plants. Establishes requirements for actions to conserve endangered species within critical habitats upon which endangered species depend. If a location contains a federal endangered or threatened species or its critical habitat, and an action may impact the species or its habitat, the U.S. Fish and Wildlife Service (FWS) or the National Marine Fisheries Service must be consulted.	Endangered species were not observed at the site during the site investigation. If, however, threatened or endangered species or critical habitat are identified, removal action will comply with the substantive requirements in the statute and regulations to the extent practicable.
Fish and Wildlife Coordination Act	16 USC § 661 <i>et seq.</i>	Applicable	Requires consideration of the effects of a proposed action on wetlands and areas affecting streams (including floodplains), as well as other protected habitats. Federal agencies must consult with U.S. FWS prior to authorizing any modification of any stream or other water body and requires adequate	This removal action will modify a water body as provided under the Act. Any removal activities subject to these provisions will comply with any substantive requirements to the extent practicable.

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Non-Time-Critical Removal Action – Lower Neponset River Superfund Site, Phase 1 Reach
Table 2 – Location-Specific ARARs

Requirement	Citation	Status	Synopsis of Requirement	Action to be Taken to Attain ARAR
			consideration to protect fish and wildlife resources and their habitats.	
Migratory Bird Treaty Act and regulations	169 USC §§ 703-712 50 CFR Part 10	Potentially Applicable	Requires consultation with U.S. FWS during design and construction to ensure the cleanup of the site does not unnecessarily impact migratory birds. Protects native birds and migratory birds, as listed in 50 CFR 10.13, their nests, and eggs from unregulated “take,” which can include disturbing active nests. Managed by U.S. FWS.	Removal action activities will be evaluated to protect migratory birds, their nests, and eggs. If migratory birds are present within the removal action area, the substantive requirements of these provisions will be complied with to the extent practicable.
Bald and Golden Eagle Protection Act and regulations	16 USC §§ 668a-668d 50 CFR §§ 22.200-22.400	Potentially Applicable	Provisions control the taking, possession, and transportation within the United States of bald eagles and golden eagles and their parts, nests, and eggs for various purposes, including to protect other interests in a particular locality.	Bald eagles have been identified as being in the vicinity of the Site. If any bald eagle individuals overlap with the Phase 1 Reach during the performance of the removal action, measures will be taken to avoid disturbance of bald eagles or the incidental take of bald eagles, their nests, or eggs, and the substantive requirements of these provisions will be complied with to the extent practicable.
State				
Massachusetts Wetland Protection Act and regulations	MGL c. 131 § 40 310 CMR 10.00 (including but not limited to 10.51-10.60)	Applicable	These regulations set performance standards for dredging, filling, altering of inland wetland resource areas and sets buffer zones within 100 feet of vegetated wetland and 200 feet from a perennial stream. The standards include mitigation requirements for alteration of regulated wetland resources areas. Resource areas at the site covered by the regulations include: banks (310 CMR 10.54), bordering vegetated wetlands (310 CMR 10.55), land under bodies of water (310 CMR 10.56), land subject to flooding (310 CMR 10.57), and riverfront (310 CMR 10.58).	Any temporary disturbances of a wetland during removal or monitoring will be restored. Mitigation of impacts on wetlands will be addressed. The substantive requirements of these provisions will be complied with to the extent practicable.

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Applicable and Relevant and Appropriate Requirements (ARARs) and To Be Considered (TBC) Criteria
Non-Time-Critical Removal Action – Lower Neponset River Superfund Site, Phase 1 Reach
Table 2 – Location-Specific ARARs

Requirement	Citation	Status	Synopsis of Requirement	Action to be Taken to Attain ARAR
Public Waterfront Act Waterway and regulations	MGL c. 91, § 1.00 <i>et seq.</i> 310 CMR 9	Applicable	The statute establishes the State's ownership and management of submerged, intertidal, and filled tidal land and non-tidal rivers and streams throughout the State. Applicable regulatory provisions include Restrictions on Fill and Structures 9.32(l)(a)(2)(b)(4)(b); Preserving Water-Related Public Rights 9.35(1), (2)(a and b) and (3)(b), 3(a); Protecting Water Dependent Uses 9.36(3); Engineering and Construction Standards 9.37(l)(c); and Dredging and Dredged Material Disposal 9.40(2), (3)(a) and (4).	Any placement of structures and fill, changes in use of existing licensed structures and fill, and dredging in state waterways will meet the substantive requirements of the statute and regulations, to the extent practicable.
Massachusetts Clean Water Act; Massachusetts Water Quality Certification for Discharge of Dredged or Fill Material	MGL c. 21, §§ 26-53 314 CMR 9.00 (including but not limited to 9.06 and 9.07)	Applicable	Regulates discharges of dredged or fill material to protect aquatic ecosystems.	The effects of removal activities on the aquatic ecosystem will be evaluated and avoided, and/or minimized. Compensatory mitigation will need to be performed as necessary to comply with this ARAR, to the extent practicable through appropriate avoidance, minimization and/or restoration.
Massachusetts Hazardous Waste Regulations, Location Standards for Land Subject to Flooding	310 CMR 30.701	Applicable	This regulation sets forth criteria for siting hazardous facilities within land subject to flooding (as defined under the Massachusetts Wetland Protection Act standards). Any new or expanded hazardous waste storage or treatment facility (which only receives hazardous waste from on-site sources), the active portion of which is located within the boundary of land subject to flooding from the statistical 100-year frequency storm, shall be flood-proofed. Flood-proofing shall be designed, constructed, operated, and maintained to prevent floodwaters from coming into contact with hazardous waste.	To the extent any hazardous waste is generated during the removal activities, the waste will be managed so that it will not impact floodplain resources. The removal action does not include disposal of hazardous waste on-site. These provisions will be potentially applicable for the temporary management of dredged materials before such materials are taken for off-site disposal.

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Applicable and Relevant and Appropriate Requirements (ARARs) and To Be Considered (TBC) Criteria
Non-Time-Critical Removal Action – Lower Neponset River Superfund Site, Phase 1 Reach
Table 2 – Location-Specific ARARs

Requirement	Citation	Status	Synopsis of Requirement	Action to be Taken to Attain ARAR
Massachusetts Hazardous Waste Regulations, Facility Location Standards – Other location considerations	310 CMR 30.705(6)	Applicable	This regulation prohibits any active portion of a landfill, land treatment unit, surface impoundment or waste pile to be constructed or expanded into wetlands.	If waste piles are used during the removal action, this regulation will be complied with to the extent practicable.
Massachusetts Endangered Species Regulations	321 CMR 10.00 (including but not limited to 10.03, 10.04, 10.05, and 10.06)	Potentially Applicable	Requires action to regulate the impact to state listed endangered or threatened species or their habitats. Actions must be conducted in a manner that minimizes the impact to Massachusetts-listed rare, threatened, or endangered species, and species listed by the Massachusetts Natural Heritage Program. Regulations include provisions for the protection of habitat areas (Significant Habitat) where a Project or Activity would result in the Take of any Threatened or Endangered species. Also included are environmental review provisions for habitat areas (Priority Habitat), identified as areas where there is the potential that a Take of any Endangered, Threatened, or Special Concern species may occur as a result of any Project or Activity.	If endangered species or habitats in the removal areas are identified, removal activities would be designed and implemented to avoid affects endangered or threatened species or their habitats to the extent practicable.
Massachusetts Antiquities Act; Massachusetts Historical Commission Regulations; Protection of Properties Included in the State Register of Historic Places	MGL c. 9, §§ 26-27C 950 CMR 70.00 and 71.00	Potentially Applicable	Projects must eliminate, limit, or mitigate adverse effects to properties listed in the State Register of Historic Places (historic and archaeological properties). Establishes coordination with the National Historic Preservation Act.	If during removal action activities, historic buildings and or structures are encountered, the substantive requirements in the statute and regulations will be complied with to the extent practicable.

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Applicable and Relevant and Appropriate Requirements (ARARs) and To Be Considered (TBC) Criteria
Non-Time-Critical Removal Action – Lower Neponset River Superfund Site, Phase 1 Reach
Table 3 – Action-Specific ARARs

Requirement	Citation	Status	Synopsis of Requirement	Action to be Taken to Attain ARAR
Action-Specific				
Federal				
Resource Conservation and Recovery Act (RCRA) Subtitle C; Hazardous Waste Identification and Listing Regulations; Generator and Handler Requirements	42 USC § 6904 <i>et seq.</i> 40 CFR Parts 260 to 262	Applicable	Federal standards used to identify, manage, and dispose of hazardous waste. Massachusetts has been delegated the authority to administer these RCRA standards through its state hazardous waste management regulations. These provisions have been adopted by the State. Dredged material may be subject to RCRA regulations if it contains a listed waste, or if it displays a hazardous waste characteristic, for example Toxicity Characteristic Leaching Procedure limits.	Any wastes generated by the removal action will be analyzed under these standards to determine whether they are characteristic hazardous waste. Non-hazardous materials will be disposed appropriately. All contaminated material meeting characteristic hazardous waste standards will be managed and disposed of consistent with these requirements to the extent practicable.
Clean Water Act and National Pollution Discharge Elimination System (NPDES) Regulations	33 USC § 1342 40 CFR Part 122 (including but not limited to §§ 122.3(d), 122.44(a) and (e)) 40 CFR §§ 125.1-125.3	Applicable	These standards include that point source discharge must meet technology-based effluent limitations (including those based on best available technology for toxic and non-conventional pollutants and those based on best conventional technology for conventional pollutants) and effluent limitations and conditions necessary to meet state water quality standards.	Any water generated during removal activities, including during dewatering of dredged sediment and riverbank soils, will be treated to meet these standards before discharge to surface waters.
Toxic Substances Control Act (TSCA) Regulations on cleanup of PCB Remediation Wastes	40 CFR § 761.61(c)	Applicable	This section of the TSCA regulations provides risk-based cleanup and disposal options for PCB remediation waste based on the risks posed by the concentrations at which the PCBs are found through a TSCA determination. Requires demonstration that cleanup method will not pose an unreasonable risk of injury to human health or the environment.	The management and disposal of PCB remediation waste as part of the removal action will be in accordance with a TSCA risk-based determination, which finds that the removal will not pose an unreasonable risk of injury to human health or the environment provided certain conditions are met.
TSCA Regulations on Discharge of PCB-Containing Water	40 CFR § 761.50 (a)(3)	Applicable	Prohibits discharge of water containing PCBs to navigable waters unless PCB concentration is < 3 mg/L or discharge is in accordance with NPDES discharge limits.	Any discharge to navigable waters will comply with this provision to the extent practicable.

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Applicable and Relevant and Appropriate Requirements (ARARs) and To Be Considered (TBC) Criteria
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Table 3 – Action-Specific ARARs

Requirement	Citation	Status	Synopsis of Requirement	Action to be Taken to Attain ARAR
TSCA Regulations on Decontamination	40 CFR § 761.79	Applicable	Establishes decontamination standards and procedures for removing PCBs from water, organic liquids, and other types of surfaces.	To the extent the removal action involves decontamination activities, including of equipment and materials contaminated with PCBs during the removal action, these requirements will be complied with to the extent practicable.
Clean Air Act, Section 112(b)(1), National Emissions Standards for Hazardous Air Pollutants (NESHAPs)	42 USC § 7412(b)(1) 40 CFR Part 61	Applicable	Establish emissions standards for 189 hazardous air pollutants. Standards set for dust and other release sources.	Monitoring of air emissions during removal activities, including dredging, dewatering, and transportation will be performed to assess compliance with the substantive requirements of these standards to the extent practicable.
Clean Water Act Section 304(a) National Recommended Water Quality Criteria	National Recommended Water Quality Criteria (NRWQC): 002, EPA-822-R-02-047, USEPA, Office of Water, Office of Science and Technology (Nov. 2002)	To Be Considered	NRWQC are health-based criteria developed for chemical constituents in surface water. They have been developed to protect aquatic life and human health from harmful effects due to exposure to chemically impacted surface water. Performance standards to be used for monitoring surface water and sediment during removal activities.	This guidance will be considered in developing monitoring standards for removal activities that may impact surface water quality.
EPA Contaminated Sediment Remediation Guidance	EPA-540-R-05-012 OSWER 9355.0-85 (Dec. 2005)	To Be Considered	Guidance for making remedy decisions for contaminated sediment sites.	This guidance was considered in selecting the removal action and will be considered in addressing contaminated sediment during performance of the removal action, including during mechanical dredging, dewatering, and placement of contaminated sediments.
Guide to Management of Investigation-Derived Waste	EPA OSWER Publication 9345.3-03 FS (Jan. 1992)	To Be Considered	Management of Investigation-Derived Waste (IDW) must ensure protection of human health and the environment.	This guidance will be considered to ensure IDW will be managed in a manner to protect human health and the environment.

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Non-Time-Critical Removal Action – Lower Neponset River Superfund Site, Phase 1 Reach
Table 3 – Action-Specific ARARs

Requirement	Citation	Status	Synopsis of Requirement	Action to be Taken to Attain ARAR
State				
Massachusetts Surface Water Quality Standards	MGL c. 21, §§ 26-53 314 CMR 4.00 (including but not limited to 4.03, 4.04, 4.05, and 4.06)	Applicable	These standards designate the most sensitive uses for which the various waters of the Commonwealth shall be enhanced, maintained and protected. Minimum water quality criteria required to sustain the designated uses of Massachusetts surface waters are established.	Any water discharged to surface waters from the removal action will be treated to meet the substantive discharge standards to the extent practicable.
Solid Waste Management Regulations	310 CMR 19.000	Applicable	Regulations for storage, transfer, processing, treatment, disposal, use and reuse of solid waste.	Any wastes generated by removal action activities that are determined to not be hazardous wastes will be managed in accordance with these regulations.
Massachusetts Hazardous Waste Rules for Identification and Listing of Hazardous Waste	310 CMR 30.100	Applicable	Massachusetts is delegated to administer RCRA through its State regulations. These standards establish requirements for determining whether waste is hazardous in the state of Massachusetts. Section 30.105 provides that PCB waste, as defined in 40 CFR § 761.3, that would be subject to hazardous waste regulation due to the presence of PCBs are exempt from the hazardous waste regulations provided certain conditions are met.	Any hazardous waste generated during the removal action will be analyzed under these standards to determine whether they are characteristic hazardous waste and managed in accordance with the substantive requirements of these regulations to the extent practicable. PCB Waste will be handled in accordance with the conditions set out in the TSCA Determination unless otherwise noted in this Table.
Massachusetts Hazardous Waste Rules – Requirements for Generators	310 CMR 30.300	Applicable	These regulations contain requirements for hazardous waste generators. The regulations apply to generators of sampling waste and also apply to the accumulation of waste prior to off-site disposal.	Any hazardous waste generated during the removal action will be managed in accordance with the substantive requirements of these regulations to the extent practicable.
Massachusetts Hazardous Waste Rules – General Standards for Hazardous Waste Facilities	310 CMR 30.500	Relevant and Appropriate	These regulations establish standards for the treatment, storage, and disposal of hazardous waste. Section 30.501(3)(a) excepts facilities that treat, dispose, or store hazardous waste containing 50 ppm or more of PCBs if they are adequately regulated under 40 CFR § 761.	Any hazardous waste generated during the removal action will be managed in accordance with the substantive requirements of these regulations to the extent practicable.

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Table 3 – Action-Specific ARARs

Requirement	Citation	Status	Synopsis of Requirement	Action to be Taken to Attain ARAR
Massachusetts Hazardous Waste Rules – Waste Piles	310 CMR 30.641 – 30.649	Applicable	These regulations prescribe requirements for storage and treatment of hazardous waste in waste piles. Provides specifications for, inter alia, design and operations (310 CMR 30.641), monitoring and inspection (310 CMR 30.644), and closure and post-closure care (310 CMR 30.649).	Any hazardous waste generated during the removal action will be managed in accordance with the substantive requirements of these regulations to the extent practicable.
Massachusetts Hazardous Waste Rules - Groundwater Protection	310 CMR 30.660	Relevant and Appropriate	310 CMR 30.661 through 30.673 prescribe requirements for regulated units that receive hazardous waste, except for certain waste piles, to protect groundwater.	Any hazardous waste generated during the removal action will be managed in accordance with the substantive requirements of these regulations to the extent practicable.
Massachusetts Hazardous Waste Rules - Use and Management of Containers	310 CMR 30.680	Applicable	Regulations applicable to owners and operators of facilities that use containers to store hazardous waste. 310 CMR 30.681 through 30.689 prescribe requirements for the use of containers, such as drums, to store hazardous waste. Provides specifications for, among other things, labelling and marking, management of containers, inspections and closure.	Any hazardous waste generated during the removal action will be managed in accordance with the substantive requirements of these regulations to the extent practicable.
Massachusetts Hazardous Waste Rules - Storage and Treatment in Tanks	310 CMR 30.690	Applicable	310 CMR 30.691 through 30.699 prescribe requirements for the use of tanks to store and treat hazardous waste. Provides specifications for, among other things, design and installation, containment and detection of leaks, general operating requirements, inspections, and closure and post-closure care.	Any hazardous waste generated during the removal action will be managed in accordance with the substantive requirements of these regulations to the extent practicable.
Massachusetts Ambient Air Quality Standards	310 CMR 6.00 (including but not limited to 6.04)	Applicable	These regulations establish primary and secondary standards for emissions of sulfur dioxide, particulate matter, carbon monoxide, ozone, nitrogen dioxide, and lead. The purpose of the regulation is to prevent the occurrence of conditions of air pollution where such do not exist and to	Monitoring of air emissions during removal activities, including dredging, dewatering, transportation, and placement of contaminated sediment, will be performed to assess compliance with these standards and removal

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Requirement	Citation	Status	Synopsis of Requirement	Action to be Taken to Attain ARAR
			facilitate the abatement of conditions of air pollution where and when such occur.	activities will be implemented to comply with the substantive requirements of these regulations to the extent practicable.
Air Pollution Control Regulations	310 CMR 7.00 (including but not limited to 7.06, 7.09, and 7.10)	Applicable	Sets primary and secondary standards for fugitive emissions, dusts and particulates. The regulations also set emission limits necessary to attain ambient air quality standards. The purpose of the regulations are to prevent the occurrence of conditions of air pollution where such do not exist and to facilitate the abatement of conditions of air pollution where and when such occur.	Removal activities will be implemented in accordance with the substantive requirements of these regulations to the extent practicable. Emission standards, including for dust, will be complied with during removal activities to the extent practicable.
Massachusetts Dam Safety regulations	302 CMR 10.09	Applicable	Provides regulatory guidelines for the safety of dams. Section 10.09 includes requirements regarding removal of a dam, including development of design criteria and analyses.	Removal of the T&H Dam, including removal design, will comply with the substantive provisions of these regulations to the extent practicable.
MassDEP Guidance	Dam Removal and the Wetland Regulations, 2007	TBC	Provides guidance on permitting issues and review considerations associated with dam removal projects, especially as it relates to the Massachusetts Wetlands Protection Act.	To the extent the removal action includes the removal of the Tileston & Hollingsworth Dam, this guidance will be considered.
Massachusetts Executive Office of Energy and Environmental Affairs Guidance	Dam Removal in Massachusetts: A Basic Guide for Project Proponents, 2007	TBC	Provides guidance through the initial conceptualization of a project, the feasibility studies, and the permitting process, and includes a review of other regulatory requirements associated with dam removal.	To the extent the removal action includes the removal of the Tileston & Hollingsworth Dam, this guidance will be considered.
Massachusetts Fish Consumption Advisory	Massachusetts Department of Public Health, Freshwater Fish Consumption Advisory List (2024)	TBC	Advises the public on the following: “children under 12, pregnant women, nursing mothers, and women of childbearing age who may become pregnant: do not eat any fish; catch and release. All other people: do not eat American eel or white sucker; catch and release. Limit consumption of all other fish to two meals per month.”	This advisory will be considered in reference to biota consumption and actions to reduce fish consumption risks including institutional controls.

Attachment 5

Updated Removal Action Cost Estimate

Estimated Costs for Non Time-Critical Removal Action
Phase 1 Reach - Lower Neponset River Superfund Site

	Item	Quantity	Unit	Unit Price	Cost	Subtotals	Present Value
1	Capital Cost						
1.1	Engineering, Site Prep, Permitting, Project Management						
	Pre-design investigations (sediment thickness profiling)	1	LS	\$50,000	\$50,000		
	Pre-design investigations (sampling and reporting)	1	LS	\$50,000	\$50,000		
	Pre-design investigations (archaeological survey)	1	LS	\$20,000	\$20,000		
	Pre-design investigations (dredge technology screening)	1	LS	\$15,000	\$15,000		
	Engineering, Design, and Permitting	2,730	HRS	\$171	\$467,053		
	Pilot Testing of Geotextile Tubes	1	LS	\$15,000	\$15,000		
	Surveying DCR land and other land to be used for staging, dewatering, water treatment, etc. including preparation of baseline plans.	48	HRS	\$275	\$13,200		
	Clearing of land to use for laydown/dewatering/material handling	8.5	Acre	\$43,560	\$370,260		
	Dense grade fill placed on access road and lay down area for leveling	120	tons	\$55	\$6,600		
	Office Trailer/Support Area Equipment (porta-john, hand wash, storage) Rental	38	Month	\$1,500	\$57,000		
	Temporary power install and removal to support area	1	LS	\$25,000	\$25,000		
	Legal and Administrative fees for site access	100	Hours	\$500	\$50,000		
	E&S controls (silt fencing, turbidity curtain, etc.) and security fencing	1	LS	\$150,000	\$150,000		
	Contractor project management and coordination	46	Month	\$84,280	\$3,887,290		
	Community air & noise monitoring during dredging and loadout of dewatered sediment	1,053	Day	\$1,200	\$1,263,600		
	Contingency (20%)				\$1,288,001		
	Site Prep Total Capital Cost					\$7,728,004	\$7,728,004
1.2	Hydraulic Dredging						
	Mobilization of Dredging Equipment and Materials	3	LS	\$75,100	\$225,300		
	Rental of 8" HDPE pipeline Yr 1	6	Mnth	\$36,750	\$220,500		
	Rental of 8" HDPE pipeline Yr 2	5	Mnth	\$25,725	\$128,625		
	Rental of 8" HDPE pipeline Yr 3	3	Mnth	\$14,700	\$44,100		
	Purchase of pipeline floats	530	EA	\$396	\$209,880		
	Rental of barge-mounted self-priming dredge pump with powered cutter head suspended from excavator.	14	Mnth	\$23,200	\$324,800		
	Rental of excavators and other heavy equipment	14	Mnth	\$34,000	\$476,000		
	Barge Rental (shallow draft lift barge)	14	Mnth	\$12,000	\$168,000		
	Purchase of suction and discharge dredging hose	7	EA	\$4,158	\$29,106		
	Self-priming cutter head and bucket attachment for dense riverbed soil behind dam	2	Mnth	\$6,000	\$12,000		
	Consumables (fuel, oil grease, stockpile covers, etc.)	14	Mnth	\$27,950	\$391,300		
	Setup and removal of slurry sediment conveyance pipeline	8,223	LF	\$7	\$57,558		
	Dredging operation labor including filling of geotextile tubes	13	Mnth	\$175,225	\$2,277,925		
	Per Diem During Active Dredging (lodging, transportation, and meals)	13	Mnth	\$55,440	\$720,720		
	Oversight	13	Mnth	\$92,719	\$1,205,344		

Estimated Costs for Non Time-Critical Removal Action
Phase 1 Reach - Lower Neponset River Superfund Site

	Item	Quantity	Unit	Unit Price	Cost	Subtotals	Present Value
	Post dredging sampling and reporting	1	LS	\$50,000	\$50,000		
	Bathymetric Surveys	3	LS	\$20,000	\$60,000		
	Restoration of staging area	8.5	Acre	\$15,000	\$127,500		
	Contingency (20% of construction cost)	1	LS		\$1,345,732		
	<i>Hydraulic Dredging Total Capital Cost</i>					\$8,074,000	\$8,074,000

Estimated Costs for Non Time-Critical Removal Action
Phase 1 Reach - Lower Neponset River Superfund Site

	Item	Quantity	Unit	Unit Price	Cost	Subtotals	Present Value
1.3	Riverbank Soil Removal & Restoration						
	Equipment rental (barges, excavators, push boats, trucks, etc.) for soil removal	4	Mnth	\$45,500	\$182,000		
	Consumables (fuel, oil grease, stockpile covers, etc.)	16	Wk	\$6,700	\$107,200		
	Labor for soil removal	16	Wk	\$83,300	\$1,332,800		
	Material loading area at Lewis Chemical area	1	LS	\$21,950	\$21,950		
	Equipment rental (barges, excavators, push boats, trucks, etc.) for riverbank restoration	4	Mnth	\$50,000	\$200,000		
	Construction materials for restoration (geotextile, stone, topsoil, plantings, etc.)	1	LS	\$447,422	\$447,422		
	Consumables (fuel, oil grease, etc.)	15	WK	\$1,900	\$28,500		
	Labor for riverbank restoration	15	WK	\$83,300	\$1,249,500		
	Contingency (20%)	1	LS		\$713,874		
	Riverbank Soil Removal Total Capital Cost					\$4,283,000	\$4,283,000
1.4	Dewatering and Water Treatment						
	Dewatering Containment Basin Construction (Including labor)	1	LS	\$779,043	\$779,043		
	Feed Manifold for Geotextile Tubes	1	LS	\$77,750	\$77,750		
	Geotextile Tubes	1	LS	\$339,060	\$339,060		
	Waterproof tarp cover over geotextile tubes	1	LS	\$9,000	\$9,000		
	Sediment thickener, polymer feed system and pumps to fill geotubes	13	Mnth	\$4,320	\$56,160		
	Polymer for thickening	305,600	lbs	\$3.11	\$950,416		
	Loadout of dewatered sediment	1	LS	\$2,118,387	\$2,118,387		
	Containment Area for Water Treatment	1	LS	\$118,820	\$118,820		
	Filtrate Treatment Equipment (filters, carbon vessels, carbon)	34	Mo	\$36,208	\$1,240,747		
	Water Treatment Pumps, Tanks, Piping	34	Mo	\$9,075	\$310,988		
	Water Treatment Electrical, Instrumentation, Controls	1	LS	\$250,000	\$250,000		
	Treatment Media Changeout & Disposal	90	tons	\$260	\$23,400		
	Setup of Equipment	800	Hr	\$150	\$120,000		
	Operations - During Active Dredging	13	Mnth	\$210,700	\$2,739,100		
	Operations - Post-Dredging Dewatering	21	Mnth	\$116,100	\$2,438,100		
	Per Diem During Active Dredging (lodging, transportation, and meals)	13	Mnth	\$55,440	\$720,720		
	Per Diem During Post-Dredging Dewatering (lodging, transportation, and meals)	20	Mnth	\$36,960	\$739,200		
	Winterization	1	LS	\$78,817	\$78,817		
	Contingency (20%)	1	LS		\$2,621,941		
	Dewatering and Water Treatment Total Capital Cost					\$15,732,000	\$15,732,000
1.5	Transportation and disposal of dewatered sediment as a TSCA Waste	76,400	tons	\$260	\$19,864,000		
	Contingency (20%)				\$3,972,800		
	Total T&D of TSCA Waste					\$23,837,000	\$23,837,000
1.6	Transportation and disposal of dewatered riverbed soils	3,000	tons	\$90	\$270,000		
	Contingency (20%)				\$54,000		
	Total T&D of dewatered riverbed soil					\$324,000	\$324,000

Estimated Costs for Non Time-Critical Removal Action
Phase 1 Reach - Lower Neponset River Superfund Site

	Item	Quantity	Unit	Unit Price	Cost	Subtotals	Present Value
1.7	Transportation and disposal of riverbank soils	7,100	Tons	\$260	\$1,846,000		
	Contingency (20%)				\$369,200		
	Total T&D of dewatered riverbed soil					\$2,215,200	\$2,215,200
1.8	Backfilling/Capping of Riverbed (3 Mobilizations)						
	Mobilization/Demobilization	3	EA	\$46,000	\$138,000		
	Equipment Cost for placement via Telebelt	3	Mnth	\$170,640	\$511,920		
	Equipment Cost for placement via Excavator/Slurry	6	Mnth	\$163,040	\$978,240		
	Import fill sampling	1	LS	\$120,959	\$120,959		
	Cap material - Sand	31,607	Tons	\$32	\$1,011,436		
	Cap material - GAC (average 2% mixture with sand)	244	Tons	\$4,500	\$1,099,725		
	Cap material - Armor stone - riprap	28,803	Tons	\$34	\$992,271		
	Cap Installation - Labor for Telebelt Placement	3	Mnth	\$378,400	\$1,135,200		
	Cap Installation - Labor for Slurry Placement	6	Mnth	\$452,360	\$2,714,160		
	Bathymetric Surveys	2	LS	\$20,000	\$40,000		
	Contingency (20%)				\$1,748,382		
1.9	Backfilling and Capping System Total Capital Cost					\$10,490,000	\$10,490,000
1.10	Dam Removal - Cost for Alternative 4 in 2021 GEI Report, adjusted for inflation to 2024. Includes 25% contingency in GEI Cost Analysis	1	LS	\$4,807,000	\$4,807,000		
	T&D of TSCA dam removal waste	800	Tons	\$260	\$208,000		
	Total dam removal and T&D					\$5,015,000	\$5,015,000
2	Operation & Maintenance After Removal Action Cost						
2.1	Annual inspection to verify integrity of cap including sampling of habitat restoration layer for PCBs.	30	Years	\$47,544			\$931,883
3	Summary						
3.1	Capital Cost (Site work, Dredging & Dewatering, Water Treatment, Dam Removal, Backfilling)					\$77,698,000	\$77,698,000
3.2	30-Year Net Present Value of O&M Cost @ 3% Discount Rate (Rounded)						\$932,000
4	30 Year NPV Total Cost of Removal Action (rounded)						\$78,600,000

Attachment 6

Updated Engineering Evaluation/Cost Analysis Report Figures 3, 7, 9, and 11



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 1

5 Post Office Square, Suite 100

Boston, MA 02109-3912

MEMORANDUM

Date: October 14, 2025
From: Alexander "Tristan" Pluta, Remedial Project Manager
To: Lower Neponset River Superfund Site File
Re: Updated Engineering Evaluation/Cost Analysis Report Figures
Lower Neponset River Superfund Site, Phase 1 Reach

During the public comment period for the Engineering Evaluation/Cost Analysis (EE/CA) for Phase 1 Reach of the Lower Neponset River Superfund Site, a commenter identified discrepancies in Figure 11 presented in the EE/CA Report. Following EPA's receipt of the comment, EPA and its contractor AECOM, which had generated the figures for the EE/CA Report, performed a thorough review of EE/CA Report figures to identify discrepancies, determine the cause of the discrepancies, and verify that any discrepancies did not impact the removal action alternatives (including the extent of the areas proposed for sediment and floodplain soil removal, volumes, and costs) or the evaluation of alternatives in the EE/CA. This memorandum details the results of the review, attaches updated EE/CA Report Figures, and confirms that the errors were limited to some of the EE/CA Report Figures and had no impact whatsoever on the data, the analyses presented in the EE/CA Report, or evaluation of the alternatives. This memorandum, with attachments, are included as Attachment 6 of the Action Memorandum for the Non-Time-Critical Removal Action.

EPA requested that its AECOM determine the source of discrepancies identified in Figure 11 of the EE/CA Report and any additional discrepancies throughout EE/CA Report figures. AECOM provided the following response:

AECOM looked into the source of the discrepancy between the representation of the PCB concentration in the surface sediment sample in Figure 11 of the EE/CA compared to similar surficial sediment concentrations represented in Figure 10 of the Data Summary Evaluation Memorandum. In short, ArcGIS Pro includes a data query toggle for each reported data interval at each location sampled. When a toggle is not activated, the logic in the program is to report the highest concentration interval in its place. There were locations reported on Figure 11, as well as Figures 3, 7, and 9, where the surface

sediment sample, representing the uppermost 0-0.5 ft of sediment, did not have the query toggle activated. Consequently, the concentration symbology displayed in the submitted ArcGIS Pro figures did not represent the correct concentrations at some depth intervals. Specifically, the query intended to isolate and display only the top sediment sample depth interval and as a result, the symbology reflected the maximum concentration value across all depth intervals at each sample location, rather than the value from the top interval alone. This affected the display of contaminant concentration in the top sediment layer only. The issue has been addressed by reactivating the appropriate definition query to ensure that only the top depth interval is used in the mapping.

EPA requested that AECOM confirm that the inaccuracies were only in the figures and unrelated to the data, and that inaccuracies did not affect the alternatives (including the extent of the area for sediment or floodplain soil removal, volumes, and costs) and the evaluation of alternatives. AECOM provided the following response:

AECOM confirms that the discrepancy in representation of the PCB concentration in the surface sediment sample at subset of locations is unrelated to the data and did not affect the alternatives including the extent of the area for sediment or floodplain soil removal, volumes, and costs. Also, it did not impact the evaluation of alternatives.

At EPA's request, AECOM also completed an analysis of all EE/CA Report figures and Phase 1 Reach data to identify all errors across EE/CA Report Figures. AECOM reviewed all PCB data to ensure that the query toggle was activated and that all sample concentration representations on all figures are shown correctly. AECOM provided the results of its analysis in the attached Table. Further, EPA requested that AECOM provide updated figures of all EE/CA Report figures that contained errors. AECOM corrected errors to affected EE/CA Report Figures. Updated EE/CA Report Figures 3, 7, 9, and 11 are attached.

Attachments: Table: Tracking of Sample Locations with Color Changes on EE/CA Figures
Updated EE/CA Report Figure 3
Updated EE/CA Report Figure 7
Updated EE/CA Report Figure 9
Updated EE/CA Report Figure 11

TRACKING OF SAMPLE LOCATIONS WITH COLOR CHANGES ON EE/CA FIGURES
LOWER NEPONSET RIVER SUPERFUND SITE
8 OCTOBER 2025

Sample Location ID (Approx. Down-stream to Upstream)		Removal Action Alternatives					Vibracore Refusal Depth (ft bml)	Figures 3, 7, & 11 (RAA's 2 and 4)		Figure 9 (RAA-3)			Impact to Removal Action Alternative of Color Change on Figure				
		2&4	3	2&4	3	2&4		3	Color Change for 0 to 0.5 ft Sediment Depth Interval?	Color for 0 to 0.5 ft Depth Interval		Color Change for 0 to 0.5 ft Sediment Depth Interval?	Color for 0 to 0.5 ft Depth Interval		RAA-2 (Figure 7)	RAA-3 (Figure 9)	RAA-4 (Figure 11)
		Sample Data (mg/kg total PCBs)						Previous		Revised	Previous		Revised	Sediment Cleanup Level for Total PCBs			
														100 mg/kg	14 mg/kg	1 mg/kg	
40	Depth	0 - 0.5 ft		0.5 - 1.4 ft		1.4 - 5.6 ft	5.6	No	Yellow	Yellow	No	Orange	Orange	Not Applicable - No Color Change			
	Conc.	16.1		12.2		0.00572											
66	Depth	0 - 0.5 ft		0.5 - 1.7 ft			1.7	No	Red	Red	No	Red	Red				
	Conc.	187		0.901													
68	Depth	0 - 0.5 ft		0.5 - 0.9 ft			0.9	No	Yellow	Yellow	No	Yellow	Yellow				
	Conc.	1.22		0.506													
19	Depth	0 - 0.5 ft		0.5 - 3.1 ft		3.1 - 4.3 ft	4.3	Yes	Red	Yellow	Yes	Red	Orange	<u>None:</u> >100 mg/kg PCBs detected at 0.5-3.1 ft	<u>None:</u> >14 mg/kg PCBs detected at all sample depths	<u>None:</u> >1 mg/kg PCBs detected at all sample depths	
	Conc.	15.2		317		1.34											
20	Depth	0 - 0.5 ft		0.5 - 2.3 ft		2.3 - 4 ft	4.0	Yes	Red	Orange	Yes	Red	Orange	<u>None:</u> >100 mg/kg PCBs detected at 0.5-4 ft	<u>None:</u> >14 mg/kg PCBs detected at all sample depths	<u>None:</u> >1 mg/kg PCBs detected at all sample depths	
	Conc.	28.7		631		580											
60	Depth	0 - 0.5 ft		0.5 - 2 ft		2 - 3.6 ft	3.6	Yes	Red	Yellow	Yes	Red	Yellow	<u>None:</u> >100 mg/kg PCBs detected at 0.5-4 ft	<u>None:</u> >14 mg/kg PCBs detected at 0.5-3.6 ft	<u>None:</u> >1 mg/kg PCBs detected at all sample depths	
	Conc.	2.87		38.6		406											
67	Depth	0 - 0.5 ft		0.5 - 2.3 ft		2.3 - 2.9 ft	2.9	Yes	Red	Yellow	Yes	Red	Yellow	<u>None:</u> >100 mg/kg PCBs detected at 0.5-2.3 ft	<u>None:</u> >14 mg/kg PCBs detected at 0.5-2.3 ft	<u>None:</u> >1 mg/kg PCBs detected at all sample depths	
	Conc.	4.79		451		1.22											
69	Depth	0 - 0.5 ft		0.5 - 3.4 ft		3.4 - 6 ft	6.0	No	Green	Green	No	Green	Green	Not Applicable - No Color Change			
	Conc.	0.51		0.259		0.0123											
70	Depth	0 - 0.5 ft		0.5 - 2.3 ft		2.3 - 4.2 ft	4.2	Yes	Red	Yellow	Yes	Red	Yellow	<u>None:</u> >100 mg/kg PCBs detected at 0.5-4 ft	<u>None:</u> >14 mg/kg PCBs detected at 0.5-4.2 ft	<u>None:</u> >1 mg/kg PCBs detected at all sample depths	
	Conc.	10.1		192		853											
59	Depth	0 - 0.5 ft		0.5 - 1.2 ft			1.2	No	Orange	Orange	No	Orange	Orange	Not Applicable - No Color Change			
	Conc.	47.3		0.742													
39	Depth	0 - 0.5 ft		0.5 - 2 ft		2 - 3 ft	3.0	No	Yellow	Yellow	No	Yellow	Yellow				
	Conc.	2.01		2.86		0.105											
18	Depth	0 - 0.5 ft		0.5 - 4.4 ft		4.4 - 5.5 ft	5.5	Yes	Red	Yellow	Yes	Red	Yellow	<u>None:</u> >100 mg/kg PCBs detected at 0.5-4.4 ft	<u>None:</u> >14 mg/kg PCBs detected at 0.5-4.4 ft	<u>None:</u> >1 mg/kg PCBs detected at all sample depths	
		Conc.	13.0		231												12.3
58	Depth	0 - 0.5 ft		0.5 - 2 ft			2.0	No	Yellow	Yellow	No	Yellow	Yellow	Not Applicable - No Color Change			
		3.49		0.498													
57	Depth	0 - 0.5 ft		0.5 - 1.5 ft		1.5 - 2.5 ft	2.5	Yes	Orange	Yellow	Yes	Orange	Yellow	<u>None:</u> Sediment removal and capping not included for this area	<u>None:</u> >14 mg/kg PCBs detected at 0.5-2.5 ft	<u>None:</u> >1 mg/kg PCBs detected at all sample depths	
		4.61		2.80		80.3											

TRACKING OF SAMPLE LOCATIONS WITH COLOR CHANGES ON EE/CA FIGURES
LOWER NEPONSET RIVER SUPERFUND SITE
8 OCTOBER 2025

Sample Location ID (Approx. Down-stream to Upstream)		Removal Action Alternatives					Vibracore Refusal Depth (ft bml)	Figures 3, 7, & 11 (RAA's 2 and 4)			Figure 9 (RAA-3)			Impact to Removal Action Alternative of Color Change on Figure			
		2&4	3	2&4	3	2&4		3	Color Change for 0 to 0.5 ft Sediment Depth Interval?	Color for 0 to 0.5 ft Depth Interval		Color Change for 0 to 0.5 ft Sediment Depth Interval?	Color for 0 to 0.5 ft Depth Interval		RAA-2 (Figure 7)	RAA-3 (Figure 9)	RAA-4 (Figure 11)
										Sample Data (mg/kg total PCBs)					Previous	Revised	Previous
														100 mg/kg	14 mg/kg	1 mg/kg	
37	Depth	0 - 0.5 ft					0.5	No	Yellow	Yellow	No	Yellow	Yellow	Not Applicable - No Color Change			
	Conc.	1.58															
56	Depth	0 - 0.5 ft		0.5 - 2 ft			2.0	Yes	Yellow	Green	Yes	Yellow	Green	None: Sediment removal and capping not included for this area		None: >1 mg/kg PCBs detected at 0.5-2 ft	
	Conc.	0.173		3.91													
36	Depth	0 - 0.5 ft					0.5	No	Yellow	Yellow	No	Yellow	Yellow	Not Applicable - No Color Change			
	Conc.	3.94															
15	Depth	0 - 0.5 ft		0.5 - 1.5 ft		1.5 - 2.9 ft	2.9	No	Yellow	Yellow	No	Yellow	Yellow				
	Conc.	6.02		13.9		5.18											
55	Depth	0 - 0.5 ft		0.5 - 2.1 ft		2.1 - 3.4 ft	3.4	No	Yellow	Yellow	No	Yellow	Yellow				
	Conc.	1.63		0.0152		0.00854											
14	Depth	0 - 0.5 ft					0.5	No	Yellow	Yellow	No	Yellow	Yellow				
	Conc.	1.85															
54	Depth	0 - 0.5 ft		0.5 - 1.5 ft		1.5 - 3 ft	3.0	Yes	Red	Orange	Yes	Red	Orange	None: >100 mg/kg PCBs detected at 0.5-1.5 ft	None: >14 mg/kg PCBs detected at 0-1.5 ft	None: >1 mg/kg PCBs detected at all sample depths	
	Conc.	44.7		321		1.53											
34	Depth	0 - 0.5 ft		0.5 - 1.4 ft		1.4 - 2.4 ft	2.4	No	Yellow	Yellow	No	Yellow	Orange	None: Sediment removal and capping not included for this area	None: >14 mg/kg PCBs detected at 0-0.5 ft	None: >1 mg/kg PCBs detected at 0-1.4 ft	
	Conc.	14.3		4.60		0.266											
53	Depth	0 - 0.5 ft		0.5 - 3.2 ft		3.2 - 5.7 ft	5.7	No	Yellow	Yellow	No	Yellow	Yellow	Not Applicable - No Color Change			
	Conc.	5.55		8.93		0.0475											
33	Depth	0 - 0.5 ft		0.5 - 1.7 ft		1.7 - 2.7 ft	2.7	No	Yellow	Yellow	No	Yellow	Yellow				
	Conc.	11.5		3.50		0.0539											
12	Depth	0 - 0.5 ft		0.5 - 1.7 ft		1.7 - 3 ft	3.0	No	Yellow	Yellow	No	Yellow	Yellow				
	Conc.	5.71		1.55		0.201											
52	Depth	0 - 0.5 ft		0.5 - 1.9 ft			1.9	No	Green	Green	No	Green	Green				
	Conc.	0.110		0.0489													
32	Depth	0 - 0.5 ft		0.5 - 1.7 ft		1.7 - 3 ft	3.0	No	Green	Green	No	Green	Green				
	Conc.	0.361		0.0438		0.395											
11	Depth	0 - 0.5 ft		2.9 - 3.6 ft			3.6	No	Yellow	Yellow	No	Yellow	Yellow				
	Conc.	6.43		2.23													
51	Depth	0 - 0.5 ft		0.5 - 2.2 ft		2.2 - 3.4 ft	3.4	No	Orange	Orange	No	Orange	Orange				
	Conc.	45.8		66.90		0.646											
31	Depth	0 - 0.5 ft		0.5 - 1.5 ft		1.5 - 3.4 ft	3.4	No	Red	Red	No	Red	Red				
	Conc.	143		439		0.624											
10	Depth	0 - 0.5 ft		0.5 - 1.5 ft		1.5 - 3.4 ft	3.4	Yes	Red	Yellow	Yes	Red	Orange	None: >100 mg/kg PCBs detected at 0.5-1.5 ft	None: >14 mg/kg PCBs detected at 0-1.5 ft	None: >1 mg/kg PCBs detected at all sample depths	
	Conc.	21.9		376		1.24											
50	Depth	0 - 0.5 ft		0.5 - 2.7 ft		2.7 - 3.2 ft	3.2	No	Orange	Orange	No	Orange	Orange	Not Applicable - No Color Change			
	Conc.	28.0		33.30		0.215											

TRACKING OF SAMPLE LOCATIONS WITH COLOR CHANGES ON EE/CA FIGURES
LOWER NEPONSET RIVER SUPERFUND SITE
8 OCTOBER 2025

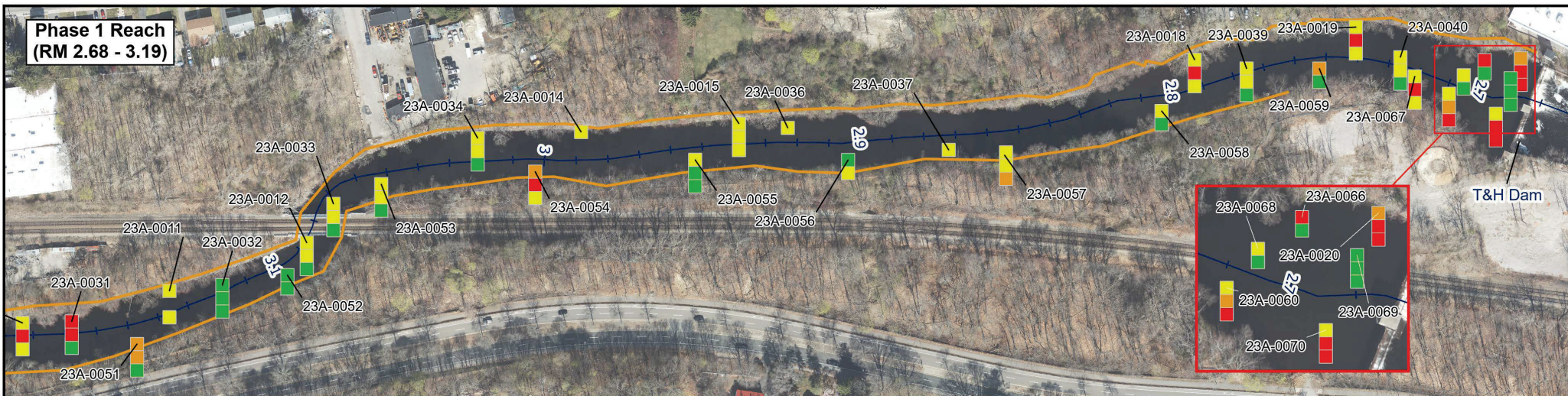
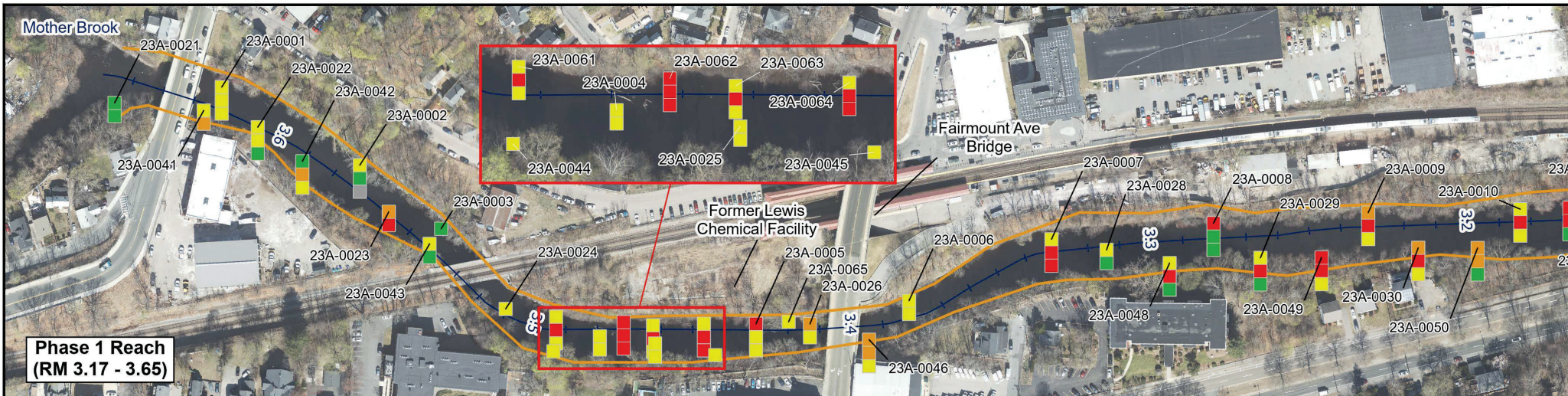
Sample Location ID (Approx. Down-stream to Upstream)		Removal Action Alternatives					Vibracore Refusal Depth (ft bml)	Figures 3, 7, & 11 (RAA's 2 and 4)			Figure 9 (RAA-3)			Impact to Removal Action Alternative of Color Change on Figure											
								Color Change for 0 to 0.5 ft Sediment Depth Interval?		Color for 0 to 0.5 ft Depth Interval		Color Change for 0 to 0.5 ft Sediment Depth Interval?		Color for 0 to 0.5 ft Depth Interval		RAA-2 (Figure 7)	RAA-3 (Figure 9)	RAA-4 (Figure 11)							
		Sediment Cleanup Level for Total PCBs																							
		Sample Data (mg/kg total PCBs)								Previous	Revised	Previous	Revised	100 mg/kg	14 mg/kg	1 mg/kg									
30	Depth	0 - 0.5 ft		0.5 - 1.8 ft		1.8 - 2.8 ft	2.4	Yes	Red	Orange	Yes	Red	Orange	<u>None:</u> >100 mg/kg PCBs detected at 0.5-1.8 ft	<u>None:</u> >14 mg/kg PCBs detected at all sample depths	<u>None:</u> >1 mg/kg PCBs detected at all sample depths									
	Conc.	37.4		490		14.7																			
9	Depth	0 - 0.5 ft		0.5 - 3 ft		3 - 5.7 ft	5.7	Yes	Red	Orange	Yes	Red	Orange	<u>None:</u> >100 mg/kg PCBs detected at 0.5-3 ft	<u>None:</u> >14 mg/kg PCBs detected at 0-3 ft	<u>None:</u> >1 mg/kg PCBs detected at all sample depths									
	Conc.	44.6		235		1.44																			
49	Depth	0 - 0.5 ft		0.5 - 2.2 ft		2.2 - 3.2 ft	3.2	No	Red	Red	No	Red	Red	Not Applicable - No Color Change											
	Conc.	176		381		1.33																			
29	Depth	0 - 0.5 ft		0.5 - 3.3 ft		3.3 - 5.8 ft	5.8	Yes	Red	Yellow	Yes	Red	Yellow	<u>None:</u> >100 mg/kg PCBs detected at 0.5-3.3 ft	<u>None:</u> >14 mg/kg PCBs detected at 0-3.3 ft	<u>None:</u> >1 mg/kg PCBs detected at 0-3.3 ft									
	Conc.	5.16		213		0.437																			
8	Depth	0 - 0.5 ft		0.5 - 3 ft		3 - 6.2 ft	6.2	No	Red	Red	No	Red	Red	Not Applicable - No Color Change											
	Conc.	275		0.133		0.169																			
48	Depth	0 - 0.5 ft		0.5 - 3.2 ft		3.2 - 5 ft	5.0	Yes	Red	Yellow	Yes	Red	Yellow	<u>None:</u> >100 mg/kg PCBs detected at 0.5-3.2 ft	<u>None:</u> >14 mg/kg PCBs detected at 0-3.2 ft	<u>None:</u> >1 mg/kg PCBs detected at 0-3.2 ft									
	Conc.	1.68		219		0.191																			
28	Depth	0 - 0.5 ft		0.5 - 1.7 ft			1.7	No	Yellow	Yellow	No	Yellow	Yellow	Not Applicable - No Color Change											
	Conc.	1.04		0.105																					
7	Depth	0 - 0.5 ft		0.5 - 1.7 ft		1.7 - 5.1 ft	5.1	Yes	Red	Yellow	Yes	Red	Yellow	<u>None:</u> >100 mg/kg PCBs detected at 0.5-3.2 ft	<u>None:</u> >14 mg/kg PCBs detected at 0-3.2 ft	<u>None:</u> >1 mg/kg PCBs detected at 0-3.2 ft									
	Conc.	10.9		699		724																			
6	Depth	0 - 0.5 ft		0.5 - 1.8 ft			1.8	No	Yellow	Yellow	Yes	Orange	Yellow	<u>None:</u> Sediment removal and capping not included for this area	<u>None:</u> >14 mg/kg PCBs detected at 0.5-1.8 ft	<u>None:</u> >1 mg/kg PCBs detected at all sample depths									
	Conc.	4.48		16.9																					
46	Depth	0 - 0.5 ft		0.5 - 1.4 ft		1.4 - 2.4 ft	2.4	No	Orange	Orange	No	Orange	Orange	Not Applicable - No Color Change											
	Conc.	34.3		34.1		11.3																			
26	Depth	0 - 0.5 ft		0.5 - 1.6 ft			1.6	No	Orange	Orange	No	Orange	Orange				Not Applicable - No Color Change								
	Conc.	99.9		9.48																					
65	Depth	0 - 0.5 ft					0.5	No	Yellow	Yellow	No	Yellow	Yellow							Not Applicable - No Color Change					
	Conc.	3.85																							
5	Depth	0 - 0.5 ft		0.5 - 1.5 ft		1.5 - 2 ft	2.0	No	Red	Red	No	Red	Red										Not Applicable - No Color Change		
	Conc.	411		12.4		4.04																			
64	Depth	0 - 0.5 ft		0.5 - 3.7 ft		3.7 - 5.7 ft	5.7	Yes	Red	Yellow	Yes	Red	Yellow	<u>None:</u> >100 mg/kg PCBs detected at 0.5-5.7 ft	<u>None:</u> >14 mg/kg PCBs detected at 0.5-5.7 ft	<u>None:</u> >1 mg/kg PCBs detected at all sample depths									
	Conc.	13.0		739		2050																			
63	Depth	0 - 0.5 ft		0.5 - 3.7 ft		3.7 - 4.9 ft	4.9	Yes	Red	Yellow	Yes	Red	Yellow	<u>None:</u> >100 mg/kg PCBs detected at 0.5-3.7 ft	<u>None:</u> >14 mg/kg PCBs detected at 0.5-3.7 ft	<u>None:</u> >1 mg/kg PCBs detected at all sample depths									
	Conc.	8.45		2670		11.8																			
62	Depth	0 - 0.5 ft		0.5 - 3 ft		3 - 4.7 ft	4.7	No	Red	Red	No	Red	Red	Not Applicable - No Color Change											
	Conc.	437		915		934																			
45	Depth	0 - 0.5 ft					0.5	No	Yellow	Yellow	No	Orange	Orange				Not Applicable - No Color Change								
	Conc.	16.6																							
25	Depth	0 - 0.5 ft		0.5 - 1.3 ft			1.3	No	Yellow	Yellow	Yes	Orange	Yellow	<u>None:</u> Within Lewis Chemical PTW Area	<u>None:</u> >14 mg/kg PCBs detected at 0.5-3.7 ft	<u>None:</u> >1 mg/kg PCBs detected at all sample depths									
	Conc.	8.82		20.8																					

TRACKING OF SAMPLE LOCATIONS WITH COLOR CHANGES ON EE/CA FIGURES

LOWER NEPONSET RIVER SUPERFUND SITE

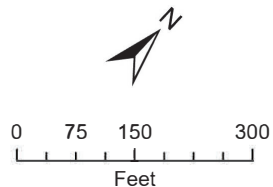
8 OCTOBER 2025

Sample Location ID (Approx. Downstream to Upstream)		Removal Action Alternatives					Vibracore Refusal Depth (ft bml)	Figures 3, 7, & 11 (RAA's 2 and 4)			Figure 9 (RAA-3)			Impact to Removal Action Alternative of Color Change on Figure									
		2&4	3	2&4	3	2&4		3	Color Change for 0 to 0.5 ft Sediment Depth Interval?	Color for 0 to 0.5 ft Depth Interval		Color Change for 0 to 0.5 ft Sediment Depth Interval?	Color for 0 to 0.5 ft Depth Interval		RAA-2 (Figure 7)	RAA-3 (Figure 9)	RAA-4 (Figure 11)						
										Sediment Cleanup Level for Total PCBs													
										Sample Data (mg/kg total PCBs)					Previous	Revised	Previous	Revised	100 mg/kg	14 mg/kg	1 mg/kg		
4	Depth	0 - 0.5 ft		0.5 - 1.4 ft			1.4	No	Yellow	Yellow	Yes	Orange	Yellow	<u>None:</u> Within Lewis Chemical PTW Area <u>None:</u> >14 mg/kg PCBs detected at 0.5-1.4 ft <u>None:</u> >1 mg/kg PCBs detected at all sample depths									
	Conc.	3.63		19.4																			
44	Depth	0 - 0.5 ft					0.5	No	Yellow	Yellow	No	Yellow	Yellow	Not Applicable - No Color Change									
	Conc.	1.30																					
61	Depth	0 - 0.5 ft		0.5 - 1.7 ft		1.7 - 2.7 ft	2.7	Yes	Red	Yellow	Yes	Red	Yellow	<u>None:</u> Within Lewis Chemical PTW Area <u>None:</u> >14 mg/kg PCBs detected at 0.5-2.7 ft <u>None:</u> >1 mg/kg PCBs detected at all sample depths									
	Conc.	8.24		221		16.3																	
24	Depth	0 - 0.5 ft					0.5	No	Yellow	Yellow	No	Yellow	Yellow	Not Applicable - No Color Change									
	Conc.	2.93																					
43	Depth	0 - 0.5 ft		0.5 - 1.6 ft			1.6	No	Yellow	Yellow	No	Yellow	Yellow										
	Conc.	8.97		0.371																			
3	Depth	0 - 0.5 ft					0.5	No	Green	Green	No	Green	Green										
	Conc.	0.169																					
23	Depth	0 - 0.5 ft		0.5 - 1.7 ft			1.7	Yes	Red	Orange	Yes	Red	Orange	<u>None:</u> >100 mg/kg PCBs detected at 0.5-1.7 ft <u>None:</u> >14 mg/kg PCBs detected at all sample depths <u>None:</u> >1 mg/kg PCBs detected at all sample depths									
	Conc.	74.9		151																			
2	Depth	0 - 0.5 ft		0.5 - 3.1 ft		3.1 - 6 ft	6.0	No	Yellow	Yellow	No	Yellow	Yellow	Not Applicable - No Color Change									
	Conc.	2.51		0.033		< 0.000154																	
42	Depth	0 - 0.5 ft		0.5 - 1.9 ft		1.9 - 2.7 ft	2.7	Yes	Orange	Green	Yes	Orange	Green	<u>None:</u> Sediment removal and capping not included for this area <u>None:</u> >14 mg/kg PCBs detected at 0.5-1.9 ft <u>None:</u> >1 mg/kg PCBs detected at all sample depths									
	Conc.	0.523		39.2		7.08																	
22	Depth	0 - 0.5 ft		0.5 - 2.8 ft		2.8 - 4 ft	4.0	No	Yellow	Yellow	No	Yellow	Yellow	Not Applicable - No Color Change									
	Conc.	4.18		2.37		0.260																	
1	Depth	0 - 0.5 ft		0.5 - 1.7 ft		1.7 - 2.3 ft	2.3	No	Yellow	Yellow	Yes	Orange	Yellow	<u>None:</u> Sediment removal and capping not included for this area <u>None:</u> >14 mg/kg PCBs detected at 1.7-2.3 ft <u>None:</u> >1 mg/kg PCBs detected at all sample depths									
	Conc.	4.07		13.6		15.2																	
41	Depth	0 - 0.5 ft		0.5 - 1 ft			1.0	Yes	Orange	Yellow	No	Orange	Orange	Not Applicable - No Color Change									
	Conc.	15.5		68.6																			
21	Depth	0 - 0.5 ft		0.5 - 1.5 ft			1.5	No	Green	Green	No	Green	Green										
	Conc.	0.228		0.051																			
Total No. of Changes								21			24												



Updated Figure 3
Total PCBs in Phase
1 Reach Sediment

AECOM



Legend

- LNR River Miles
- Ordinary High Water
- Mark (2023 Wetland Survey)

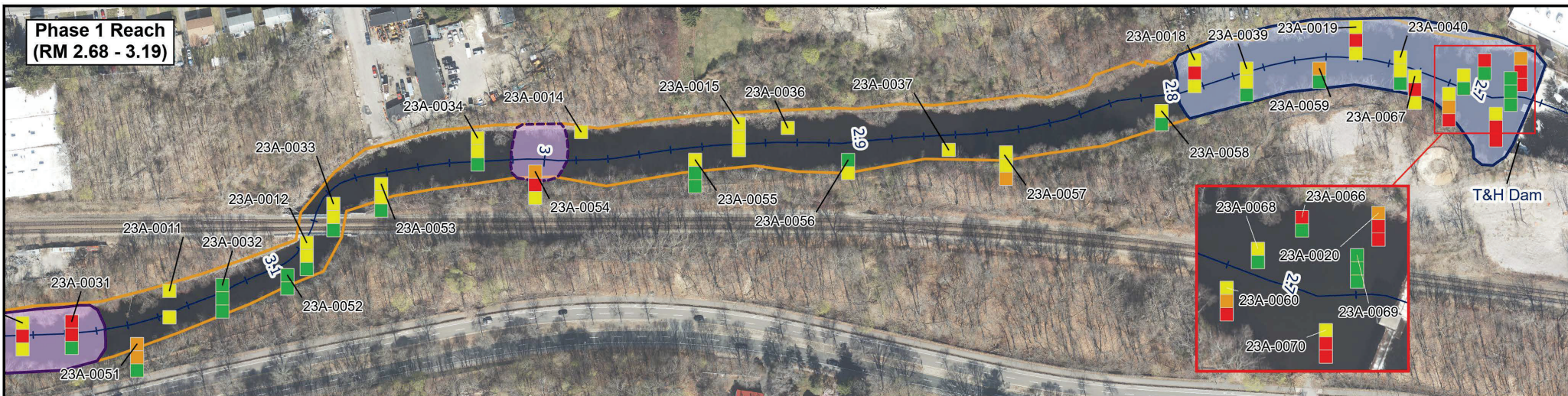
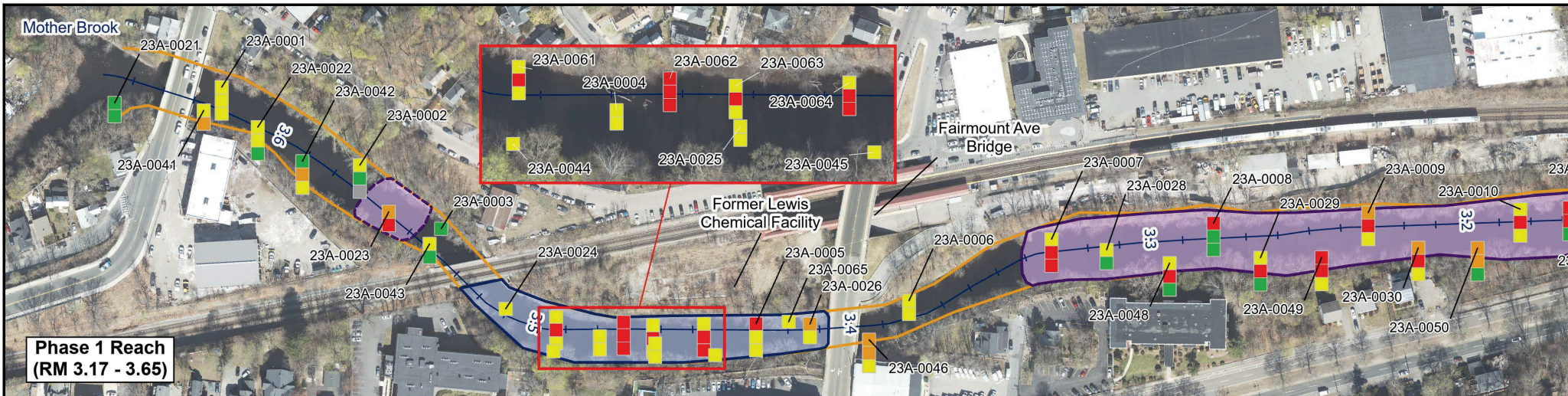
Total PCBs Concentration (mg/kg)

- Not Detected
- < 1.00 mg/kg
- < 25.0 mg/kg
- < 100.0 mg/kg
- ≥ 100.0 mg/kg

Nominal Depth Interval*

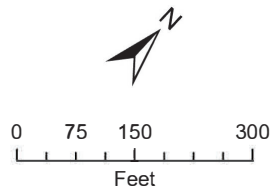
- 0 ft - 0.5 ft below surface
- 0.5 ft - 3.0 ft. below surface
- 3.0 ft - 6.0 ft below surface

*Actual sample depth intervals vary at each sample location. If fewer than 3 depths are shown, deeper samples were not obtained.



Updated Figure 7
RAA-2 Sediment Removal Areas

AECOM



Removal Areas

- Remove PTW sediment (> 100 mg/kg PCBs) bank to bank
- Remove PTW sediment based on pre-design investigations
- Remove sediment bank to bank in Contaminated Source Areas
- LNR River Miles
- Ordinary High Water Mark (2023 Wetland Survey)

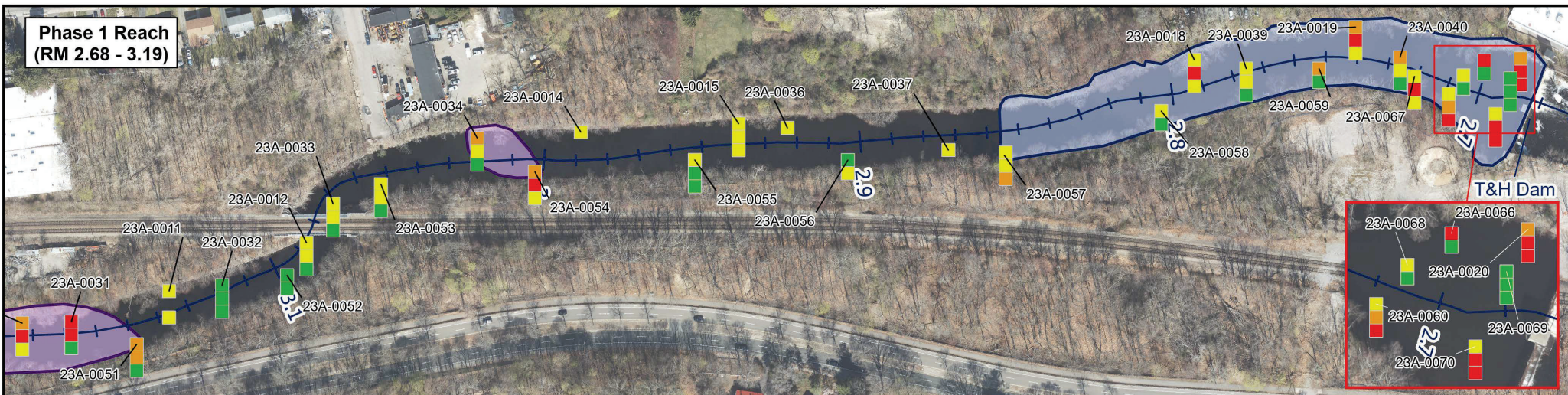
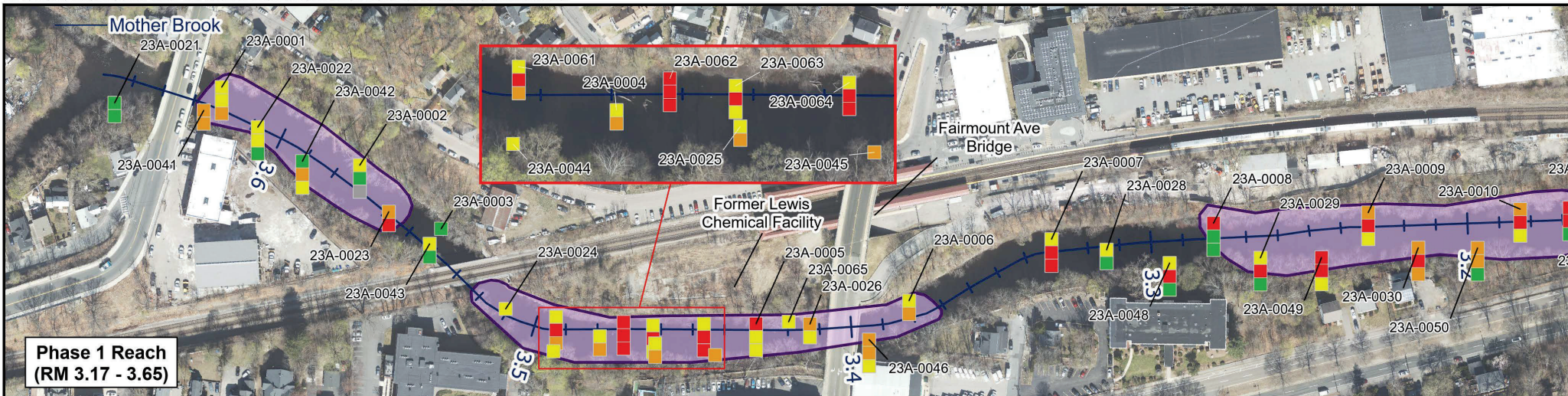
Total PCBs Conc. (mg/kg)

- Not Detected
- < 1.00 mg/kg
- < 25.0 mg/kg
- < 100.0 mg/kg
- ≥ 100.0 mg/kg

Nominal Depth Interval*

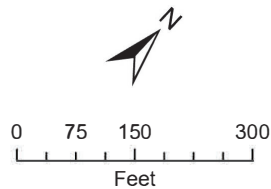
- 0 ft - 0.5 ft below surface
- 0.5 ft - 3.0 ft. below surface
- 3.0 ft - 6.0 ft below surface

*Actual sample depth intervals vary at each sample location. If fewer than 3 depths are shown, deeper samples were not obtained.



Updated Figure 9
RAA-3 Sediment Removal Areas

AECOM



Legend

Removal Action

- Remove all sediment that exceeds 14 mg/kg PCBs.
- Remove all sediment that exceeds 14 mg/kg PCBs plus additional sediment and riverbed soil as required to remove T&H Dam.
- LNR River Miles

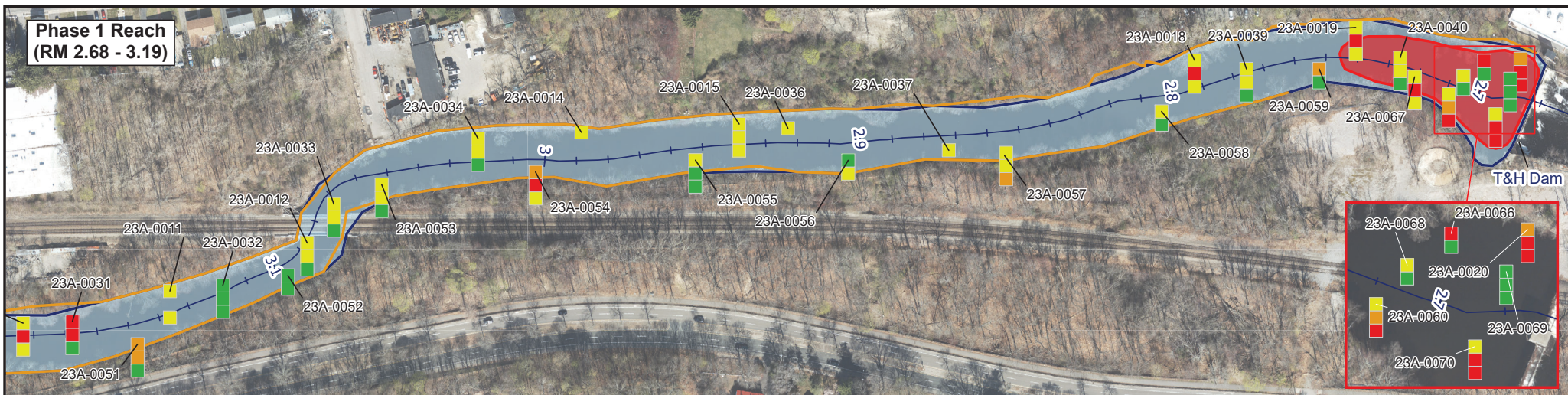
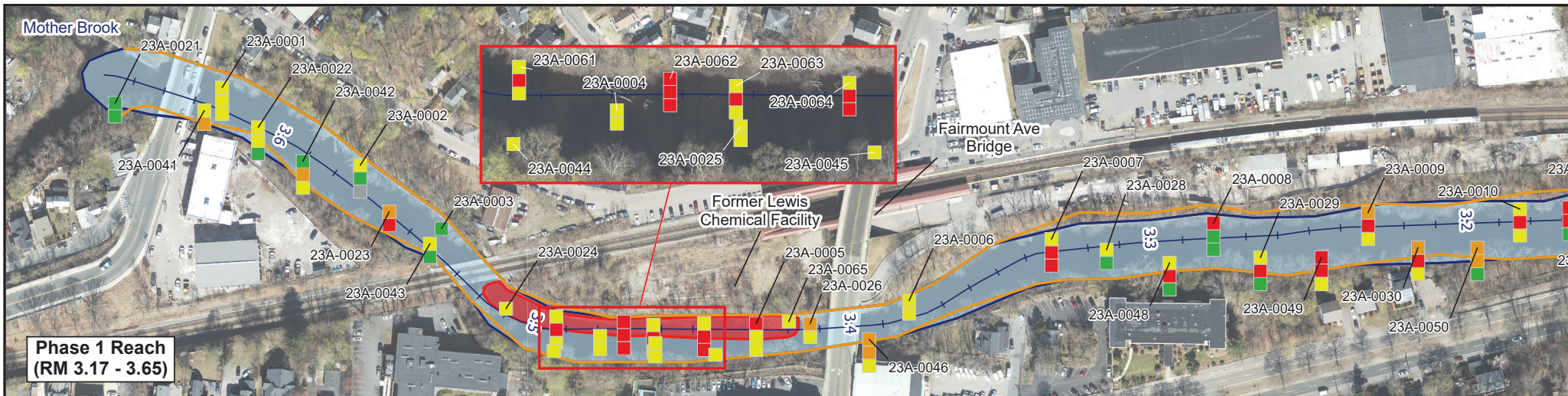
Total PCBs Conc. (mg/kg)

- Not Detected
- < 1.00 mg/kg
- < 14.0 mg/kg
- < 100.0 mg/kg
- ≥ 100.0 mg/kg

Nominal Depth Interval*

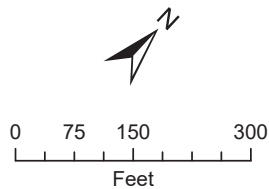
- 0 ft - 0.5 ft below surface
- 0.5 ft - 3.0 ft. below surface
- 3.0 ft - 6.0 ft below surface

*Actual sample depth intervals vary at each sample location. If fewer than 3 depths are shown, deeper samples were not obtained.



Updated Figure 11
RAA-4 Sediment Removal Areas

AECOM



Legend

Removal Areas

- Remove all sediment bank to bank to a depth of 3 ft.
- Dredging to deeper than 3 ft.
- LNR River Miles
- Ordinary High Water Mark (2023 Wetland Survey)

Total PCBs Conc. (mg/kg)

- Not Detected
- < 1.00 mg/kg
- < 25.0 mg/kg
- < 100.0 mg/kg
- ≥ 100.0 mg/kg

Nominal Depth Interval*

- 0 ft - 0.5 ft below surface
- 0.5 ft - 3.0 ft. below surface
- 3.0 ft - 6.0 ft below surface

*Actual sample depth intervals vary at each sample location. If fewer than 3 depths are shown, deeper samples were not obtained.

Attachment 7

Administrative Record Index

(Note: the final Administrative Record Index will include the signed Action Memorandum)

Document ID	Title	Document Date	Page Count	Resource Type	Program Information	Author	Addressee	Access Control	Region	URL
100036603	LETTER OF SUPPORT FOR NON-TIME CRITICAL REMOVAL ACTION (NTRCA)	09/19/2025	5	LTR / Letter	054-REMOVAL/0541-Removal Response/02.02-REMOVAL RESPONSE REPORTS	R01: Garcia-aerrano, Milie (MA DEPT OF ENVIRONMENTAL PROTECTION)	R01: Olson, Bryan (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100036603
100036571	MEMO REGARDING INFORMATION FOR PLANNING AND CONSULTATION (IPAC) ASSESSMENT	09/16/2025	24	MEMO / Memorandum	056-SITE SUPPORT/0561-Administrative Support/17.08-FEDERAL AND LOCAL TECHNICAL AND HISTORICAL RECORDS	R01: Lefauve, Matthew (US EPA REGION 1)	R01: Minker, Emma (US EPA REGION 1), R01: Pluta, Tristan (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100036571
694740	DAM INCIDENT DATABASE SEARCH WEBPAGE	08/28/2025	4	PUB / Publication	056-SITE SUPPORT/0563-State/Tribal Involvement/09.10-STATE TECHNICAL AND HISTORICAL RECORDS	R01: (ASSOCIATION OF STATE DAM SAFETY OFFICIALS)		UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/694740
694741	DAM INCIDENT DATABASE	08/28/2025	1	CHT / Chrt / Table	056-SITE SUPPORT/0563-State/Tribal Involvement/09.10-STATE TECHNICAL AND HISTORICAL RECORDS	R01: (ASSOCIATION OF STATE DAM SAFETY OFFICIALS)		UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/694741
100036621	CLIMATE CHANGE INDICATORS: RIVER FLOODING WEBSITE	08/21/2025	9	PUB / Publication	051-COMMUNITY INVOLVEMENT/0511-Community Involvement Activities/13.05-FACT SHEETS/INFORMATION UPDATES	R01: (US ENVIRONMENTAL PROTECTION AGENCY)		UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100036621
100036339	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	08/05/2025	9	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.02-REMOVAL RESPONSE REPORTS	R01: (ABB INSTALLATION PRODUCTS INC)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100036339
100036341	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	08/05/2025	1	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.02-REMOVAL RESPONSE REPORTS	R01: Pierpont, Alex (BROOKLINE (MA) - RESIDENT OF)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100036341
100036562	REDACTED COMBINED PUBLIC COMMENTS ON ENGINEERING EVALUATION / COST ANALYSIS (EE/CA) RECEIVED VIA EMAIL, 07/01/2025 - 08/02/2025	08/02/2025	89	DCPKT / Document Packet	054-REMOVAL/0541-Removal Response/02.02-REMOVAL RESPONSE REPORTS	R01: Valencius, Conerey Borton (BOSTON COLLEGE), R01: Valencius, Matthew (QUINCY (MA) RESIDENT), R01: Kealty, Taber (MILTON (MA) RESIDENT), R01: Lyons, Maria (DORCHESTER (MA) RESIDENT), R01: Pierre, Louis (MILTON (MA) RESIDENT), R01: Azerrad, Deborah (MILTON (MA) RESIDENT), R01: Pepen, Enrique J (BOSTON (MA) CITY OF), R01: Mckinnon, Robert (APPALACHIAN MOUNTAIN CLUB), R01: Ryan, Jen (MA DEPT OF FISH & GAME), R01: Oshea, Thomas R (MA DEPT OF FISH & GAME), R01: Wolongevicz, Patricia (QUINCY (MA) RESIDENT), R01: Kearns, Robert (QUINCY (MA) RESIDENT), R01: Philip, Beverly (BROOKLINE (MA) - RESIDENT OF), R01: Seaman, Natasha (JAMAICA PLAIN (MA) RESIDENT), R01: Robinson Will, Leslie (MILTON (MA) RESIDENT), R01: Walker, Suzanne (SHARON (MA) RESIDENT), R01: Hamilton, Jess, R01: Fassett, Andrew, R01: Brayton, Stephen K (DEDHAM (MA) RESIDENT), R01: Atwood, Bill (MILTON (MA) RESIDENT), R01: Atwood, Elizabeth (MILTON (MA) RESIDENT), R01: Karoff, Fran (MILTON (MA) RESIDENT), R01: Obrien, Emma (HYDE PARK (MA) RESIDENT OF), R01: Fisher, Ellie (MILTON (MA) RESIDENT), R01: Miles, Diane (NEWTON (MA) RESIDENT), R01: Miles, morrill, Alma (NEWTON (MA) RESIDENT), R01: Deriel, Stephen (NEWTON (MA) RESIDENT), R01: Schoenfeld-breks, Ellen (SHARON (MA) RESIDENT), R01: Denoyer, Ellen (MILTON (MA) RESIDENT), R01: Morrill, Yvette (WALPOLE (MA) RESIDENT), R01: Cormack, Robert (MILTON (MA) RESIDENT)	R01: Pluta, Alexander (US EPA REGION 1), R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100036562
100036342	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	08/01/2025	1	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.02-REMOVAL RESPONSE REPORTS	R01: Anonymous	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100036342
100036344	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	08/01/2025	1	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.02-REMOVAL RESPONSE REPORTS	R01: Anonymous	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100036344
100036345	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	08/01/2025	1	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.02-REMOVAL RESPONSE REPORTS	R01: Czerny, Bethany (HYDE PARK (MA RESIDENT OF)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100036345
100036346	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	08/01/2025	2	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.02-REMOVAL RESPONSE REPORTS	R01: Czerny, Bethany (HYDE PARK (MA RESIDENT OF)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100036346
100036347	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	08/01/2025	1	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.02-REMOVAL RESPONSE REPORTS	R01: Czerny, Bethany (HYDE PARK (MA RESIDENT OF)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100036347
100036348	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	08/01/2025	2	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.02-REMOVAL RESPONSE REPORTS	R01: Czerny, Bethany (HYDE PARK (MA RESIDENT OF)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100036348
100036349	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	08/01/2025	2	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.02-REMOVAL RESPONSE REPORTS	R01: Horn, Cathy (KEEP HYDE PARK BEAUTIFUL)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100036349
100036351	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	08/01/2025	1	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.02-REMOVAL RESPONSE REPORTS	R01: (COURAGEOUS CONVERSATIONS TOWARD RACIAL JUSTICE)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	

100036365	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	08/01/2025	1	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.02-REMOVAL RESPONSE REPORTS	R01: Michael, James (HYDE PARK (MA) RESIDENT OF)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100036365
100036367	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	08/01/2025	1	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.02-REMOVAL RESPONSE REPORTS	R01: Smith, Janet (HYDE PARK (MA) RESIDENT OF)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100036367
100036371	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	08/01/2025	3	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.02-REMOVAL RESPONSE REPORTS	R01: Borofsky, Lauren (SUSTAINABLE MILTON)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100036371
100036373	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	08/01/2025	1	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.02-REMOVAL RESPONSE REPORTS	R01:(LOWER NEPONSET RIVER COMMUNITY ADVISORY GROUP)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100036373
100036374	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	08/01/2025	1	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.02-REMOVAL RESPONSE REPORTS	R01:(LOWER NEPONSET RIVER COMMUNITY ADVISORY GROUP)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100036374
100036375	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	08/01/2025	1	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.02-REMOVAL RESPONSE REPORTS	R01:(LOWER NEPONSET RIVER COMMUNITY ADVISORY GROUP)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100036375
100036376	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	08/01/2025	1	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.02-REMOVAL RESPONSE REPORTS	R01:(LOWER NEPONSET RIVER COMMUNITY ADVISORY GROUP)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100036376
100036377	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	08/01/2025	1	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.02-REMOVAL RESPONSE REPORTS	R01:(LOWER NEPONSET RIVER COMMUNITY ADVISORY GROUP)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100036377
100036378	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	08/01/2025	1	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.02-REMOVAL RESPONSE REPORTS	R01:(LOWER NEPONSET RIVER COMMUNITY ADVISORY GROUP)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100036378
100036379	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	08/01/2025	1	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.02-REMOVAL RESPONSE REPORTS	R01:(LOWER NEPONSET RIVER COMMUNITY ADVISORY GROUP)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100036379
100036380	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	08/01/2025	1	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.02-REMOVAL RESPONSE REPORTS	R01:(LOWER NEPONSET RIVER COMMUNITY ADVISORY GROUP)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100036380
100036381	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	08/01/2025	1	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.02-REMOVAL RESPONSE REPORTS	R01:(LOWER NEPONSET RIVER COMMUNITY ADVISORY GROUP)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100036381
100036382	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	08/01/2025	1	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.02-REMOVAL RESPONSE REPORTS	R01:(LOWER NEPONSET RIVER COMMUNITY ADVISORY GROUP)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100036382
100036385	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	08/01/2025	2	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.02-REMOVAL RESPONSE REPORTS	R01: Quarcoo, Marlynn Smith (BOSTON (MA) RESIDENT)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100036385
100036391	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	08/01/2025	2	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.02-REMOVAL RESPONSE REPORTS	R01: (NEPONSET RIVER GREENWAY COUNCIL)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100036391
100036392	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	08/01/2025	14	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.02-REMOVAL RESPONSE REPORTS	R01: Cooke, Ian (NEPONSET RIVER WATERSHED ASSOCIATION), R01: 9TETRA TECH)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100036392
100036393	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	08/01/2025	8	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.02-REMOVAL RESPONSE REPORTS	R01: Cooke, Ian (NEPONSET RIVER WATERSHED ASSOCIATION)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100036393
100036394	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	08/01/2025	1	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.02-REMOVAL RESPONSE REPORTS	R01: Valencius, Paul	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100036394
100036395	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	08/01/2025	3	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.02-REMOVAL RESPONSE REPORTS	R01: Rush, Mike (MA STATE SENATE), R01: Miranda, Liz (MA STATE SENATE), R01: Consalvo, Rob (MA STATE LEGISLATURE)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100036395
100036396	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	08/01/2025	23	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.02-REMOVAL RESPONSE REPORTS	R01: Campinelli, Michael S (BEVERIDGE & DIAMOND), R01: (ARCHER WELL CO INC), R01: (ROUX ASSOCIATES INC), R01: (SIEMENS INDUSTRY INC)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100036396
100036397	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	08/01/2025	4	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.02-REMOVAL RESPONSE REPORTS	R01: Brown, Mary Celeste (SOUTHWEST BOSTON COMMUNITY DEVELOPMENT CORPORATION)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100036397
100036398	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	08/01/2025	1	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.02-REMOVAL RESPONSE REPORTS	R01: Geyser, Steven (MILTON (MA) RESIDENT)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100036398
100036399	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	08/01/2025	3	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.02-REMOVAL RESPONSE REPORTS	R01: Milano, Nicholas (MILTON (MA) TOWN OF)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100036399
100036354	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	07/31/2025	1	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.02-REMOVAL RESPONSE REPORTS	R01: Clarendon, Henry (HYDE PARK (MA) RESIDENT OF)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100036354
100036355	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	07/31/2025	2	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.02-REMOVAL RESPONSE REPORTS	R01: Turchinets, Mimi (HYDE PARK HISTORICAL SOCIETY)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100036355
100036356	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	07/31/2025	2	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.02-REMOVAL RESPONSE REPORTS	R01: Turchinets, Eve M (HYDE PARK NEIGHBORHOOD ASSOCIATION)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100036356
100036372	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	07/31/2025	2	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.02-REMOVAL RESPONSE REPORTS	R01: Pearson, Lisa (JAMAICA PLAIN (MA) RESIDENT)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100036372

100036386	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	07/31/2025	1	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.02-REMOVAL RESPONSE REPORTS	R01: Beckman, Mary A (MILTON (MA) RESIDENT)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100036386
100036389	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	07/31/2025	1	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.02-REMOVAL RESPONSE REPORTS	R01: Garvin, Michele (MILTON (MA) RESIDENT)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100036389
100036350	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	07/30/2025	1	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.02-REMOVAL RESPONSE REPORTS	R01: Nuthman, Conrad	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100036350
100036369	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	07/30/2025	2	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.02-REMOVAL RESPONSE REPORTS	R01: Brink, Joshua (MILTON (MA) RESIDENT)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100036369
100036370	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	07/30/2025	5	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.02-REMOVAL RESPONSE REPORTS	R01: Fields, Kenneth P (HYDE PARK (MA) RESIDENT OF)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100036370
100036390	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	07/30/2025	1	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.02-REMOVAL RESPONSE REPORTS	R01: Leonard, Muriel (MATTAPAN (MA) RESIDENT)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100036390
100036352	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	07/29/2025	1	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.02-REMOVAL RESPONSE REPORTS	R01: Kaiser, Donna (NORTH READING (MA) - RESIDENT)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100036352
100036387	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	07/29/2025	2	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.02-REMOVAL RESPONSE REPORTS	R01: Oshea, Matthew (DORCHASTER (MA) RESIDENT)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100036387
100036343	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	07/28/2025	1	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.02-REMOVAL RESPONSE REPORTS	R01: Anonymous	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100036343
100036366	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	07/28/2025	1	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.02-REMOVAL RESPONSE REPORTS	R01: Nagy Hanley, Janet (MILTON (MA) RESIDENT)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100036366
100036388	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	07/25/2025	2	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.02-REMOVAL RESPONSE REPORTS	R01: Daye, Melanie (HYDE PARK (MA) RESIDENT OF)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100036388
100036384	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	07/24/2025	2	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.02-REMOVAL RESPONSE REPORTS	R01: Farrell, Maria (HYDE PARK (MA) RESIDENT OF)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100036384
100036368	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER (PAINTINGS ATTACHED)	07/21/2025	4	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.02-REMOVAL RESPONSE REPORTS	R01: Paget, Jay (LOWER NEPONSET COMMUNITY ADVISORY GROUP)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100036368
100036383	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	07/20/2025	1	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.02-REMOVAL RESPONSE REPORTS	R01: Sheridan, Lynda Lee (MILTON (MA) RESIDENT)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100036383
693656	NEWS RELEASE: LOWER NEPONSET RIVER SUPERFUND SITE PRESENTATION SCHEDULED FOR 07/22/2025	07/18/2025	2	PUB / Publication	051-COMMUNITY INVOLVEMENT/0511-Community Involvement Activities/13.03-NEWS CLIPPINGS/PRESS RELEASES	R01: (US EPA REGION 1)		UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/693656
100035515	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	07/15/2025	1	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.01-CORRESPONDENCE (REMOVAL RESPONSE)	R01: Mceachern, James (CARVER (MA) RESIDENT)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100035515
100035516	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	07/15/2025	1	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.01-CORRESPONDENCE (REMOVAL RESPONSE)	R01: Berg, John (DORCHESTER (MA) RESIDENT)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100035516
100035453	AGENDA: 07/15/2025 COMMUNITY ADVISORY GROUP (CAG) VIRTUAL MEETING	07/14/2025	2	MTG / Meeting Document	051-COMMUNITY INVOLVEMENT/0511-Community Involvement Activities/13.04-PUBLIC MEETINGS/HEARINGS	R01: (US EPA REGION 1)		UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100035453
100035454	PRESENTATION FLYER FOR 07/22/2025 COMMUNITY MEETING - ENGINEERING EVALUATION / COST ANALYSIS (EE/CA) PRESENTATION	07/14/2025	1	PUB / Publication	051-COMMUNITY INVOLVEMENT/0511-Community Involvement Activities/13.04-PUBLIC MEETINGS/HEARINGS	R01: (LOWER NEPONSET RIVER SUPERFUND COMMUNITY ADVISORY GROUP (CAG))		UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100035454
100035400	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	07/09/2025	2	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.01-CORRESPONDENCE (REMOVAL RESPONSE)	R01: Castro, Joe (HYDE PARK (MA) RESIDENT OF)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100035400
100035401	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	07/09/2025	1	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.01-CORRESPONDENCE (REMOVAL RESPONSE)	R01: Lowenberg, Carl (BOSTON (MA) RESIDENT)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100035401
100035517	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	07/09/2025	1	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.01-CORRESPONDENCE (REMOVAL RESPONSE)	R01: Carter, Damon (DEDHAM (MA) RESIDENT)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100035517
695964	VIDEO OF PUBLIC HEARING	07/09/2025	1	MTG / Meeting Document	051-COMMUNITY INVOLVEMENT/0511-Community Involvement Activities/13.04-PUBLIC MEETINGS/HEARINGS	R01: (US EPA REGION 1)		UCTL(Uncontrolled)	01	https://www.youtube.com/watch?v=N9AdlicNH4
693670	TRANSCRIPT OF PUBLIC HEARING	07/09/2025	52	MTG / Meeting Document	051-COMMUNITY INVOLVEMENT/0511-Community Involvement Activities/13.04-PUBLIC MEETINGS/HEARINGS	R01: Mcavoy, Elizabeth C (BOSTON COURT REPORTERS)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/693670
100035399	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	07/07/2025	1	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.01-CORRESPONDENCE (REMOVAL RESPONSE)	R01: (BOSTON AREA BEEKEEPERS ASSOCIATION)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100035399
100035398	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	07/05/2025	1	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.01-CORRESPONDENCE (REMOVAL RESPONSE)	R01: Reithner, Richard (MILTON (MA) RESIDENT)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100035398

691942	NEWS RELEASE: EPA EXTENDS PUBLIC COMMENT PERIOD FOR THE LOWER NEPONSET RIVER SUPERFUND SITE'S ENGINEERING EVALUATION / COST ANALYSIS (NTCRA)	07/02/2025	1	PUB / Publication	051-COMMUNITY INVOLVEMENT/0511-Community Involvement Activities/13.03-NEWS CLIPPINGS/PRESS RELEASES	R01: (US EPA REGION 1)		UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/691942
691944	EMAIL REGARDING 07/09/2025 VIRTUAL PUBLIC HEARING, LINKS TO INFORMATIONAL VIDEO PRESENTATION AND FACT SHEET, AND EXTENSION OF PUBLIC COMMENT PERIOD (FACT SHEET ATTACHED)	07/02/2025	11	EML / Email	051-COMMUNITY INVOLVEMENT/0511-Community Involvement Activities/13.01-CORRESPONDENCE (COMMUNITY RELATIONS)	R01: Purnell, Zanetta (US EPA REGION 1)		UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/691944
100035282	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	07/01/2025	1	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.01-CORRESPONDENCE (REMOVAL RESPONSE)	R01: Keally, Taber (MILTON (MA) RESIDENT)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100035282
100035283	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	07/01/2025	1	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.01-CORRESPONDENCE (REMOVAL RESPONSE)	R01: Willcoxon, Kaitlyn (BOSTON (MA) RESIDENT)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100035283
100035284	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	07/01/2025	1	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.01-CORRESPONDENCE (REMOVAL RESPONSE)	R01: Herbst, Anne (ROSLINDALE (MA) - RESIDENT)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100035284
100035285	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	07/01/2025	1	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.01-CORRESPONDENCE (REMOVAL RESPONSE)	R01: Goode, Dianne	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100035285
100035286	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	07/01/2025	2	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.01-CORRESPONDENCE (REMOVAL RESPONSE)	R01: Campagna, Anna (MILTON (MA) RESIDENT)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100035286
693629	FACT SHEET: SITE UPDATE - ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) SUMMARIZED PHASE 1 REACH REPORT AND REQUEST FOR PUBLIC COMMENT, UPDATED WITH EXTENDED COMMENT PERIOD	07/01/2025	9	PUB / Publication	051-COMMUNITY INVOLVEMENT/0511-Community Involvement Activities/13.05-FACT SHEETS/INFORMATION UPDATES	R01: (US EPA REGION 1)		UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/693629
693639	FACT SHEET: SITE UPDATE - ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) SUMMARIZED PHASE 1 REACH REPORT AND REQUEST FOR PUBLIC COMMENT, UPDATED WITH EXTENDED COMMENT PERIOD (SPANISH VERSION)	07/01/2025	9	PUB / Publication	051-COMMUNITY INVOLVEMENT/0511-Community Involvement Activities/13.05-FACT SHEETS/INFORMATION UPDATES	R01: (US EPA REGION 1)		UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/693639
693640	FACT SHEET: SITE UPDATE - ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) SUMMARIZED PHASE 1 REACH REPORT AND REQUEST FOR PUBLIC COMMENT, UPDATED WITH EXTENDED COMMENT PERIOD (HAITIAN CREOLE VERSION)	07/01/2025	9	PUB / Publication	051-COMMUNITY INVOLVEMENT/0511-Community Involvement Activities/13.05-FACT SHEETS/INFORMATION UPDATES	R01: (US EPA REGION 1)		UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/693640
100035250	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	06/30/2025	2	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.01-CORRESPONDENCE (REMOVAL RESPONSE)	R0: Alvarez, Patricia (HYDE PARK (MA) RESIDENT OF)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100035250
100035249	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	06/30/2025	1	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.01-CORRESPONDENCE (REMOVAL RESPONSE)	R01: Nelson, Dan (HYDE PARK (MA) RESIDENT OF)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100035249
691936	EMAIL REQUESTING 30 DAY EXTENSION TO PUBLIC COMMENT PERIOD ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA)	06/30/2025	1	EML / Email	054-REMOVAL/0541-Removal Response/02.01-CORRESPONDENCE (REMOVAL RESPONSE)	R01: Ripley, Andres (NEPONSET RIVER WATERSHED ASSOCIATION)		UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/691936
100035246	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	06/26/2025	2	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.01-CORRESPONDENCE (REMOVAL RESPONSE)	R01: Simpson, Thien (HYDE PARK (MA) RESIDENT OF)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100035246
100035248	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	06/26/2025	2	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.01-CORRESPONDENCE (REMOVAL RESPONSE)	R01: Paget, Jay (LOWER NEPONSET COMMUNITY ADVISORY GROUP)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100035248
691934	NEWS ARTICLE: EPA ANNOUNCES CONTAMINATION REMOVAL OPTIONS FOR NEPONSET RIVER SUPERFUND SITE	06/26/2025	6	PUB / Publication	051-COMMUNITY INVOLVEMENT/0511-Community Involvement Activities/13.03-NEWS CLIPPINGS/PRESS RELEASES	R01: Bleichfeld, Avery (BAY STATE BANNER)		COPY (Controlled/Copyright)	01	https://baystatebanner.com/2025/06/26/epa-announces-contamination-removal-options-for-neponset-river-superfund-site/
100035245	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	06/17/2025	1	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.01-CORRESPONDENCE (REMOVAL RESPONSE)	R01: Sweet, Charles (NEWTON (MA) RESIDENT)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100035245
100035247	PUBLIC COMMENT ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR LOWER NEPONSET RIVER	06/13/2025	1	ROC / Record of Communication	054-REMOVAL/0541-Removal Response/02.01-CORRESPONDENCE (REMOVAL RESPONSE)	R01: Kenney, John (HYDE PARK (MA) RESIDENT OF)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100035247
691488	PUBLIC NOTICE AS APPEARING IN BOSTON GLOBE- LOWER NEPONSET RIVER SUPERFUND SITE ADMINISTRATIVE RECORD FILE FOR PUBLIC COMMENT, ENGINEERING EVALUATION / COST ANALYSIS PUBLIC NOTICE	06/13/2025	1	PUB / Publication	051-COMMUNITY INVOLVEMENT/0511-Community Involvement Activities/13.03-NEWS CLIPPINGS/PRESS RELEASES	R01: (US EPA REGION 1)		UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/691488
691489	NEWS RELEASE: IMPORTANT PUBLIC COMMENT PERIOD FOR THE LOWER NEPONSET RIVER SUPERFUND SITE BEGINS 06/13/2025	06/13/2025	2	PUB / Publication	051-COMMUNITY INVOLVEMENT/0511-Community Involvement Activities/13.03-NEWS CLIPPINGS/PRESS RELEASES	R01: (US EPA REGION 1)		UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/691489
100035211	FACT SHEET: SITE UPDATE - ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) SUMMARIZED PHASE 1 REACH REPORT AND REQUEST FOR PUBLIC COMMENT	06/01/2025	9	PUB / Publication	051-COMMUNITY INVOLVEMENT/0511-Community Involvement Activities/13.05-FACT SHEETS/INFORMATION UPDATES	R01: (US EPA REGION 1)		UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100035211
688540	PRESENTATION SCRIPT: PHASE 1 REACH ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) INFORMATIONAL VIDEO	06/01/2025	7	MTG / Meeting Document	051-COMMUNITY INVOLVEMENT/0511-Community Involvement Activities/13.04-PUBLIC MEETINGS/HEARINGS	R01: (US EPA REGION 1)		UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/688540
691456	FINAL ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) REPORT, PHASE 1 REACH	06/01/2025	443	RPT / Report	054-REMOVAL/0541-Removal Responses/02.02-REMOVAL RESPONSE REPORTS	R01: (US EPA REGION 1), R01: (AECOM), R01: (WESTON SOLUTIONS INC)		UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/691456

691931	PRESENTATION SCRIPT: PHASE 1 REACH ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) INFORMATIONAL VIDEO [SPANISH VERSION]	06/01/2025	7	MTG / Meeting Document	051-COMMUNITY INVOLVEMENT/0511-Community Involvement Activities/13.04-PUBLIC MEETINGS/HEARINGS	R01: (US EPA REGION 1)		UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/691931
691932	PRESENTATION SCRIPT: PHASE 1 REACH ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) INFORMATIONAL VIDEO [HAIKIAN CREOLE VERSION]	06/01/2025	7	MTG / Meeting Document	051-COMMUNITY INVOLVEMENT/0511-Community Involvement Activities/13.04-PUBLIC MEETINGS/HEARINGS	R01: (US EPA REGION 1)		UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/691932
693607	FACT SHEET: SITE UPDATE - ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) SUMMARIZED PHASE 1 REACH REPORT AND REQUEST FOR PUBLIC COMMENT [SPANISH VERSION]	06/01/2025	9	PUB / Publication	051-COMMUNITY INVOLVEMENT/0511-Community Involvement Activities/13.05-FACT SHEETS/INFORMATION UPDATES	R01: (US EPA REGION 1)		UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/693607
693608	FACT SHEET: SITE UPDATE - ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) SUMMARIZED PHASE 1 REACH REPORT AND REQUEST FOR PUBLIC COMMENT [HAITIAN CREOLE VERSION]	06/01/2025	9	PUB / Publication	051-COMMUNITY INVOLVEMENT/0511-Community Involvement Activities/13.05-FACT SHEETS/INFORMATION UPDATES	R01: (US EPA REGION 1)		UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/693608
688474	NEWS RELEASE: LOWER NEPONSET RIVER SUPRFUND SITE PUBLIC MEETING SCHEDULED FOR 03/25/2025	03/18/2025	1	PUB / Publication	051-COMMUNITY INVOLVEMENT/0511-Community Involvement Activities/13.03-NEWS CLIPPINGS/PRESS RELEASES	R01: (US EPA REGION 1)		UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/688474
100033589	AFTER ACTION REPORT	03/01/2025	109	RPT / Report	054-REMOVAL/0541-Removal Responses/02.05-ON-SCENE COORDINATOR REPORTS	R01: (WESTON SOLUTIONS INC)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100033589
691455	CONCEPTUAL SITE MODEL, REVISION 2	03/01/2025	672	RPT / Report	054-REMOVAL/0541-Removal Responses/02.02-REMOVAL RESPONSE REPORTS	R01: (AECOM)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/691455
695961	WEBPAGE: FLOW ALTERATION	02/07/2025	23	PUB / Publication	056-SITE SUPPORT/0563-State/Tribal Involvement/09.10-STATE TECHNICAL AND HISTORICAL RECORDS	R01: (US EPA)		UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/695961
689753	FRESHWATER FISH CONSUMPTION ADVISORY LIST	01/01/2025	17	PUB / Publication	056-SITE SUPPORT/0563-State/Tribal Involvement/09.10-STATE TECHNICAL AND HISTORICAL RECORDS	R01: (MA DEPT OF PUBLIC HEALTH)		UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/689753
100032178	DATA EVALUATION SUMMARY MEMORANDUM - PHASE 1	11/01/2024	615	ADD / Analytical Data Document	053-REMEDIAL/0531-Remedy Characterization/03.02-SAMPLING & ANALYSIS DATA (RI)	R01: (AECOM)	R01: Burgo, Natalie (US EPA REGION 1), R01: Pluta, Alexander (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100032178
100032179	DATA EVALUATION SUMMARY MEMORANDUM - PHASE 1, ATTACHMENTS	11/01/2024	2183	ADD / Analytical Data Document	053-REMEDIAL/0531-Remedy Characterization/03.02-SAMPLING & ANALYSIS DATA (RI)	R01: (AECOM)	R01: Burgo, Natalie (US EPA REGION 1), R01: Pluta, Alexander (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100032179
100033464	FINAL STREAMLINED RISK EVALUATION	09/01/2024	117	ADD / Analytical Data Document	054-REMOVAL/0541-Removal Responses/02.02-REMOVAL RESPONSE REPORTS	R01: (AECOM)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100033464
678308	SITE RECONNAISSANCE SUMMARY	12/06/2023	201	RPT / Report	053-REMEDIAL/0531-Remedy Characterization/03.04-INTERIM DELIVERABLES (RI)	R01: Kirkwood, Gemma (AECOM)	R01: Burgo, Natalie (US EPA REGION 1), R01: Pluta, Tristan (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/678308
675764	FINAL REUSE ASSESSMENT REPORT	12/01/2023	35	RPT / Report	053-REMEDIAL/0531-Remedy Characterization/03.04-INTERIM DELIVERABLES (RI)	R01: (US EPA REGION 1)		UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/675764
675767	PLAN DE PARTICIPACION COMUNITARIA (COMMUNITY INVOLVEMENT PLAN (CIP)) - NOVEMBER 2023 (SPANISH VERSION)	11/01/2023	30	WP / Work Plan	051-COMMUNITY INVOLVEMENT/0511-Community Involvement Activities/13.02-COMMUNITY RELATIONS PLANS	R01: (US EPA REGION 1)		UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/675767
675768	PLAN PATISIPASYON KOMINOTE (COMMUNITY INVOLVEMENT PLAN (CIP)) - NOVEMBER 2023 (HAITIAN CREOLE VERSION)	11/01/2023	30	WP / Work Plan	051-COMMUNITY INVOLVEMENT/0511-Community Involvement Activities/13.02-COMMUNITY RELATIONS PLANS	R01: (US EPA REGION 1)		UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/675768
677693	COMMUNITY INVOLVEMENT PLAN (CIP)	11/01/2023	30	WP / Work Plan	051-COMMUNITY INVOLVEMENT/0511-Community Involvement Activities/13.02-COMMUNITY RELATIONS PLANS	R01: (US EPA REGION 1)		UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/677693
100033633	TILESTON AND HOLLINGSWORTH DAM - DRAFT PHASE 2 - INSPECTION AND INVESTIGATION REPORT	12/01/2021	257	RPT / Report	054-REMOVAL/0541-Removal Responses/02.02-REMOVAL RESPONSE REPORTS	R01: (GEI CONSULTANTS, INC.)		UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100033633
694742	TILESTON AND HOLLINGSWORTH DAM - PHASE 2 - INSPECTION AND INVESTIGATION REPORT	12/01/2021	257	RPT / Report	054-REMOVAL/0541-Removal Responses/02.02-REMOVAL RESPONSE REPORTS	R01: (GEI CONSULTANTS, INC.)		UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/694742
695962	JOURNAL ARTICLE PUBLISHED IN WIRES WATER: FLOOD DIVERSIONS AND BYPASSES: BENEFITS AND CHALLENGES	09/28/2021	25	PUB / Publication	056-SITE SUPPORT/0561-Administrative Support/17.07-REFERENCE DOCUMENTS	R01: Kondolf, George Mathias (UNIVERSITY OF CALIFORNIA BERKELEY), R01: Kondolf, George Mathias (UNIVERSITY OF CALIFORNIA BERKELEY), R01: Serra-Ilobet, Anna (UNIVERSITY OF CALIFORNIA, BERKELEY), R01: Magdalen, Fernando (ECOLOGICAL TRANSITION MINISTRY - SPAIN), R01: Keenan-jones, Duncan (UNIVERSITY OF QUEENSLAND)		COPY (Controlled/Copyright)	01	https://doi.org/10.1002/wat2.1562
100002212	Use of Early Actions at Superfund National Priorities List Sites and Sites with Superfund Alternative Approach Agreements 8-23-2019	08/23/2019	5	MEMO / Memorandum	055-SITE EVALUATION/0551-Pre-Remedial Site Evaluation/A1.3-Site Screening, 056-SITE SUPPORT/0567-Forward Planning/Redevelopment/Reuse/A4.9-Reuse & Revitalization, 058-PROGRAM SUPPORT/0588-Planning and Resource Allocation/B6.1-Program Development	R11: Woolford, James, E (Environmental Protection Agency), R11: (OSRTI-IO), R11: (OSRTI-SARDB), R11: (OSRTI-TAB)	R11: (Regional Superfund Program Management Branch Chiefs (Regions I-X)), R11: (Regional Superfund Policy Managers (Regions I-X)), R11: (Office of Regional Counsels (Regions I-X))	UCTL(Uncontrolled)	11	https://semspub.epa.gov/src/document/01/100002212
100011301	FINAL SITE INSPECTION (SI) REPORT	04/19/2019	227	RPT / Report	055-SITE EVALUATION/0551-Pre-Remedial Site Evaluation/01.03-SITE INSPECTION/INVESTIGATION	R01: (WESTON SOLUTIONS INC START IV)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100011301
100010221	FINAL PRELIMINARY ASSESSMENT (PA) REPORT, SIGNED 08/31/2018	08/01/2018	74	RPT / Report	055-SITE EVALUATION/0551-Pre-Remedial Site Evaluation/01.02-PRELIMINARY ASSESSMENT	R01: (WESTON SOLUTIONS INC)	R01: (US EPA REGION 1)	UCTL(Uncontrolled)	01	https://semspub.epa.gov/src/document/01/100010221

190041	SUPERFUND REMOVAL GUIDANCE FOR PREPARING ACTION MEMORANDA	09/01/2009	75	RPT / Report	058-PROGRAM SUPPORT/0583-Regulatory Development/B8.1-Regulations, Standards & Guidelines			UCTL(Uncontrolled)	11	https://semsub.epa.gov/src/document/11/190041
689751	DAM REMOVAL AND THE WETLAND REGULATIONS	12/01/2007	16	PUB / Publication	056-SITE SUPPORT/0563-State/Tribal Involvement/09.10-STATE TECHNICAL AND HISTORICAL RECORDS	R01: (MA DEPT OF ENVIRONMENTAL PROTECTION)		UCTL(Uncontrolled)	01	https://semsub.epa.gov/src/document/01/689751
689752	DAM REMOVAL IN MASSACHUSETTS, A GUIDE FOR PROJECT PROPONENTS	12/01/2007	32	PUB / Publication	056-SITE SUPPORT/0563-State/Tribal Involvement/09.10-STATE TECHNICAL AND HISTORICAL RECORDS	R01: (MA EXECUTIVE OFFICE OF ENERGY AND ENVIRONMENTAL AFFAIRS)		UCTL(Uncontrolled)	01	https://semsub.epa.gov/src/document/01/689752
695932	JOURNAL ARTICLE AS APPEARING IN PROCEEDINGS 27 WORLD DREDGING CONGRESS: DEFINING AND ASSESSING BENTHIC RECOVERY FOLLOWING DREDGING AND DREDGED MATERIAL DISPOSAL	05/01/2007	16	PUB / Publication	056-SITE SUPPORT/0561-Administrative Support/17.08-FEDERAL AND LOCAL TECHNICAL AND HISTORICAL RECORDS	R01: Clarke, Douglas G (US ARMY ENGINEER RESEARCH AND DEVELOPMENT CENTER), R01: Wilber, Dara H (BOWHEAD INFORMATION TECHNOLOGY SERVICES)		COPY (Controlled/Copyright)	01	https://downloads.regulations.gov/NOAA-HQ-2021-0059-0025/attachment_57.pdf
100022824	ENVIRONMENTAL RESTORATION REPORT, ENVIRONMENTAL ASSESSMENT AND SUPPLEMENTAL REPORT	11/01/2006	634	RPT / Report	053-REMEDIAL/0531-Remedy Characterization/03.04-INTERIM DELIVERABLES (RI)	R01: (MILONE & MACBROOM, INC.)	R01: (COMMONWEALTH OF MASSACHUSETTS RIVERWAYS PROGRAM)	UCTL(Uncontrolled)	01	https://semsub.epa.gov/src/document/01/100022824
174471	CONTAMINATED SEDIMENT REMEDIATION GUIDANCE FOR HAZARDOUS WASTE SITES, EPA-540-R-05-012, OSWER 9355.0-85	12/01/2005	236	RPT / Report	058-PROGRAM SUPPORT/0583-Regulatory Development/B8.1-Regulations, Standards & Guidelines			UCTL(Uncontrolled)	11	https://semsub.epa.gov/src/document/11/174471
100002728	Supplemental Guidance for Assessing Susceptibility from Early-Life Exposure to Carcinogens - EPA/630/R-03-003F	03/01/2005	126	LAWS / Laws/Regulations/Guidance	058-PROGRAM SUPPORT/0583-Regulatory Development/B8.4-Directives and Policy Guidance Documents	R11: (U.S. EPA)		UCTL(Uncontrolled)	11	https://semsub.epa.gov/src/document/11/100002728
190690	GUIDELINES FOR CARCINOGEN RISK ASSESSMENT	03/01/2005	106	LAWS / Laws/Regulations/Guidance	058-PROGRAM SUPPORT/0583-Regulatory Development/B8.1-Regulations, Standards & Guidelines			UCTL(Uncontrolled)	11	https://semsub.epa.gov/src/document/11/190690
661242	DATA ON SEDIMENT QUALITY AND CONCENTRATIONS OF POLYCHLORINATED BIPHENYLS FROM THE LOWER NEPONSET RIVER, MA, 2002-03	01/01/2004	60	RPT / Report	055-SITE EVALUATION/0551-Pre-Remedial Site Evaluation/01.01-SITE DISCOVERY	R01: (US DEPT OF FISH AND WILDLIFE), R01: (US EPA REGION 1), R01: Breault, Robert F (US GEOLOGICAL SURVEY), R01: Cooke, Matthew G (US GEOLOGICAL SURVEY), R01: Merrill, Michael (US GEOLOGICAL SURVEY)		UCTL(Uncontrolled)	01	https://semsub.epa.gov/src/document/01/661242
661239	SEDIMENT QUALITY AND POLYCHLORINATED BIPHENYLS IN THE LOWER NEPONSET RIVER, MA, AND IMPLICATIONS FOR URBAN RIVER RESTORATION	01/01/2004	54	RPT / Report	055-SITE EVALUATION/0551-Pre-Remedial Site Evaluation/01.01-SITE DISCOVERY	R01: (MA EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS), R01: (US DEPT OF FISH AND WILDLIFE), R01: (US EPA REGION 1), R01: Breault, Robert F (US GEOLOGICAL SURVEY), R01: Cooke, Matthew G (US GEOLOGICAL SURVEY), R01: Merrill, Michael (US GEOLOGICAL SURVEY)		UCTL(Uncontrolled)	01	https://semsub.epa.gov/src/document/01/661239
100003667	EPA Integrated Risk Information System (References Foses RIDs), EPA/630/P-02/002F	12/01/2002	192	PUB / Publication	058-PROGRAM SUPPORT/0583-Regulatory Development/B8.4-Directives and Policy Guidance Documents	R11: (U.S. EPA)		UCTL(Uncontrolled)	11	https://semsub.epa.gov/src/document/11/100003667
100003669	National Recommended Water Quality Criteria: 002, EPA-822-R-02-047, USEPA, Office of Water, Office of Science and Technology (Nov. 2002)	11/01/2002	36	PUB / Publication	058-PROGRAM SUPPORT/0583-Regulatory Development/B8.4-Directives and Policy Guidance Documents			UCTL(Uncontrolled)	11	https://semsub.epa.gov/src/document/11/100003669
100003668	EPA/600/P-96/001F (National Center for Environmental Assessment, Office of Research and Development, September 1996) PCBs: Cancer Dose Response Assessment and Application in Environmental Mixtures (EPA 1996)	09/01/1996	84	PUB / Publication	058-PROGRAM SUPPORT/0583-Regulatory Development/B8.4-Directives and Policy Guidance Documents			UCTL(Uncontrolled)	11	https://semsub.epa.gov/src/document/11/100003668
122068	Guidance on Conducting Non-Time-Critical Removal Actions Under CERCLA, 9360.0-32	08/01/1993	69	LAWS / Laws/Regulations/Guidance	058-PROGRAM SUPPORT/0583-Regulatory Development/B8.1-Regulations, Standards & Guidelines, 058-PROGRAM SUPPORT/5810-Financial Management/C2.3-Budget Records			UCTL(Uncontrolled)	11	https://semsub.epa.gov/src/document/11/122068
130754	GUIDE TO MANAGEMENT OF INVESTIGATION- DERIVED WASTES	04/01/1992	8	LAWS / Laws/Regulations/Guidance	058-PROGRAM SUPPORT/0583-Regulatory Development/B8.4-Directives and Policy Guidance Documents			UCTL(Uncontrolled)	11	https://semsub.epa.gov/src/document/11/130754
101057	OSWER Directive 9360.0-03B: Superfund Removal Procedures Revision Number Three; Compendium 1006	02/01/1988	316	RPT / Report	058-PROGRAM SUPPORT/0583-Regulatory Development/B8.4-Directives and Policy Guidance Documents			UCTL(Uncontrolled)	11	https://semsub.epa.gov/src/document/11/101057
695960	NEPONSET RIVER BASIN MASSACHUSETTS, FLOOD PLAIN MANAGEMENT STUDY	03/01/1982	167	RPT / Report	056-SITE SUPPORT/0561-Administrative Support/17.08-FEDERAL AND LOCAL TECHNICAL AND HISTORICAL RECORDS			UCTL(Uncontrolled)	01	https://semsub.epa.gov/src/document/01/695960
100003666	EPA Integrated Risk Information System (Cancer Slope Factors CSFs)	Undated	22	RPT / Report	058-PROGRAM SUPPORT/0583-Regulatory Development/B8.4-Directives and Policy Guidance Documents	R11: (U.S. EPA)		UCTL(Uncontrolled)	11	https://semsub.epa.gov/src/document/11/100003666