FINAL
JULY 2026

PROPOSED PLAN

OPERABLE UNIT 2

WASHINGTON NAVY YARD
WASHINGTON, D.C.

1 Introduction

The purpose of this **Proposed Plan**[1] is to present the **Preferred Alternative** for remedial action to address Operable Unit 2 (OU2) at the Washington Navy Yard (WNY) in Washington, D.C. OU2 is defined as the near-shore sediments in the Anacostia River along the WNY. This Proposed Plan summarizes historical investigations, risk assessments, and the **remedial alternatives** evaluated for OU2. It also provides the rationale for proposing enhanced natural recovery with activated-carbon-amended thin-layer capping and **performance monitoring** within an **adaptive management** decision framework to address OU2 under the **Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA)**.

The Department of the Navy (Navy), the CERCLA lead agency for site response activities, issues this document as part of its public participation requirements under Section 117(a) of CERCLA and Section 300.430(f)(2) of Title 40 of the Code of Federal Regulations (CFR) known as the **National Oil and Hazardous Substances Pollution Contingency Plan (NCP)**.

The United States Environmental Protection Agency (EPA) Region III (the federal regulatory agency responsible for overseeing compliance with CERCLA) and the **District of Columbia (D.C.) Department of Energy and Environment (DOEE)** (the support agency under CERCLA) have reviewed, and are in agreement with, this Proposed Plan. The approach to adaptive management for OU2 is described in an Adaptive Management Plan that was approved by EPA and DOEE in November 2025.

The Navy and EPA, in consultation with DOEE, will make a final decision on the **response action** for OU2 after reviewing and considering all information submitted during the 30-day public comment period. The Navy and EPA may modify the response action or select another action based on public comments and/or new information. Community involvement is critical, and the public is encouraged to review and comment on this Proposed Plan. After the public comment period has ended and the information submitted has been reviewed and considered, the Navy and EPA, in consultation with DOEE, will document the action selected for OU2 in a **Record of Decision (ROD)**.

Community Involvement Opportunities — 30-Day Public Comment Period: July 13–August 13, 2026

Submit Your Comments

July 13–August 13, 2026

The Navy, EPA, and DOEE will accept written comments on the Proposed Plan during the 30-day public comment period. Comments must be postmarked or sent via email no later than August 13, 2026. For contact information, please refer to the text box on page 22.

Attend the Public Meeting

July 23 at 6:00 p.m.

The Monique Johnson Anacostia River Center at Diamond Teague Park
1520 First Street, SE
Washington, D.C. 20003

The public comment period will include a public meeting during which the Navy, EPA, and DOEE will provide an overview of the site, investigation, remedial alternatives evaluated, and the Preferred Alternative; answer questions; and accept verbal and written public comments.

Information Repository Location

This Proposed Plan is based on site-related documents contained in the **Administrative Record**, which can provide you with important background and site investigation information.

The WNY Environmental Restoration public website and the Administrative Record can be accessed online using the links provided in Section 11 of this Proposed Plan.

Documents specific to this Proposed Plan can also be found at the following **Information Repository** locations:

District of Columbia Public Library
Southwest Library
900 Wesley Place, SW
Washington, D.C. 20024
Phone: (202) 724-4298

Washington Navy Yard Library
805 Kidder Breese, SE
Washington Navy Yard, D.C. 20374

1 *Terms and acronyms in* **bold blue** *are defined in the Glossary on page 24.*

2 Washington Navy Yard Background and Current Use

WNY is located on 69.7 acres of land (as of November 2025) bordering the Anacostia River in southeastern Washington, D.C. (**Figure 1**). The facility is bordered by commercial properties along M Street to the north, by an office building complex along 11th Street and I-295 to the east, and on the west by recently redeveloped government, commercial, and high-rise residential buildings of Yards Park and the Southeast Federal Center (SEFC). The southern boundary of the facility is approximately 2,400 feet along the Anacostia River shoreline.

WNY is partially constructed on reclaimed land along the Anacostia River shoreline; approximately two-thirds of the current WNY property were former mudflats, tributaries, or part of the main channel of the Anacostia River. At its largest, WNY occupied nearly 127 acres; approximately half of the area was sold in 1960 to U.S. General Services Administration (GSA) for the SEFC, which was used for a variety of non-Department of Defense (DoD)-related federal government purposes. Since 2000, the SEFC has been gradually subdivided and redeveloped for mixed use that includes federal offices, private commercial offices and retail stores, multistory residential buildings, and open spaces. The 1,500-foot bulkhead along the SEFC waterfront was reconstructed between 1999 and 2001, and the waterfront now includes a public park and a recreational boat marina with a series of floating docks.

WNY began operations in 1799 as a shipyard and its primary role evolved from shipbuilding in the early 1800s, to ordnance (naval gun) research and construction in the mid-1800s, to ordnance production until the end of World War II, and administrative activities since 1945. Industrial operations at WNY ended in the 1960s. Currently, WNY consists of administrative, supply, and storage buildings; officer residences; training facilities; and museums. A detailed description of facility-wide operations at WNY is provided in the Federal Facility Agreement (FFA) *Site Management Plan* (CH2M, 2023).

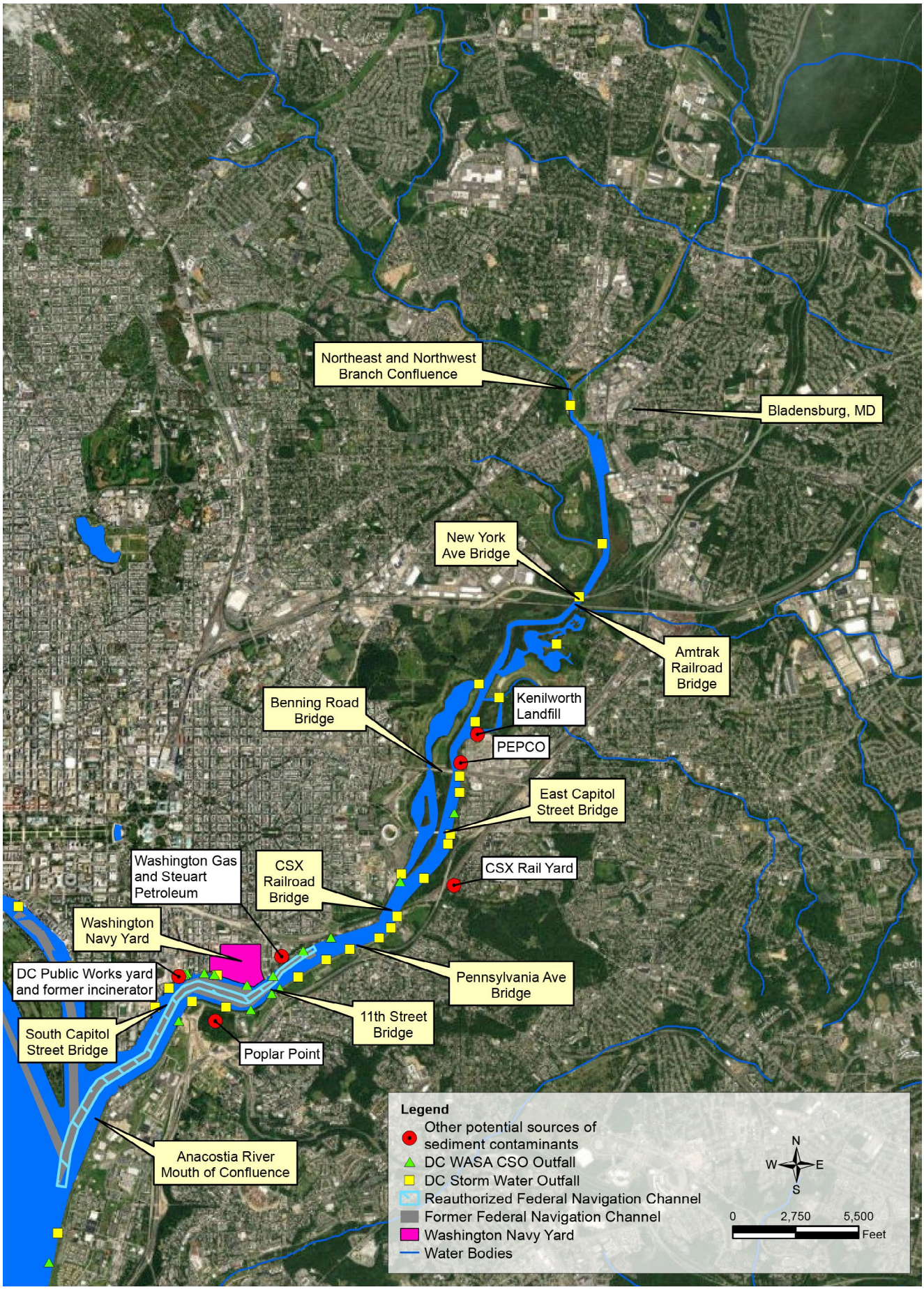
Historical records and sampling data indicate that **polychlorinated biphenyls (PCBs)**, polycyclic aromatic hydrocarbons (PAHs), and metals were released to the Anacostia River primarily through several WNY storm sewer outfalls, two of which in the past also reportedly served as industrial sewers.

The Environmental Restoration (ER) Program is a Navy initiative established by the DoD in 1985 to identify, investigate, and clean up former waste disposal sites on active or former military facilities in accordance with the Resource Conservation and Recovery Act (RCRA) and/or CERCLA, as appropriate.

In April 1998, the Navy, the Department of Justice, and Earth Justice (formerly the Sierra Club Legal Defense Fund) negotiated a Consent Decree to settle a civil suit filed by Earth Justice. This suit sought to address environmental contamination at WNY, including contamination in storm sewers at WNY and the SEFC, once part of WNY, that could contribute to pollution in the Anacostia River. Under the Consent Decree, the parties agreed to accelerated timetables for specific cleanup actions. The Navy took the immediate steps between 1998 and 2001 to investigate, clean out and repair/replace all the storm sewers on WNY and eliminate non-stormwater connections to the river to prevent future contaminated discharges to the river. GSA performed similar actions for the storm sewers on the adjacent SEFC property.

In July 1998, EPA placed WNY on the **National Priorities List (NPL)** or "**Superfund**" List. The NPL, established by CERCLA, is EPA's list of the highest priority hazardous waste sites. The requirements of the Consent Decree and the NPL listing were consolidated into an FFA, which was signed in 1999 by the Navy, EPA, and DOEE. The near-shore sediments in the Anacostia River that were potentially affected by historical releases from WNY were defined as OU2 by the WNY ER Team per the 1999 FFA. The ER Team is a group of representatives from the Navy, EPA, and DOEE tasked with guiding the environmental investigation and cleanup at WNY required by the FFA. The initial boundary of OU2 was established by the ER Team in 2004 as the starting point of the Navy's investigation into the nature and extent of sediment contamination caused by past releases from WNY. The OU2 boundary for the development of remedial alternatives was refined during **remedial investigation (RI)** (CH2M, 2014) and **feasibility study (FS)** (CH2M, 2021) activities to the extent presented in the FS and in this Proposed Plan. The OU2 RI and FS were conducted in accordance with CERCLA, as amended.

Figure 1 – Sewer Outfalls and Other Potential Sources of Contamination on the Anacostia River



3 Coordination of OU2 Remediation with DOEE's Anacostia River Sediment Project

A river-wide RI/FS for the Anacostia River was completed by DOEE with participation from the National Park Service as part of the Anacostia River Sediment Project (ARSP) (DOEE, 2019a, 2019b). The Interim ROD for the ARSP (DOEE, 2020) identifies WNY as a Potential Environmental Cleanup Site within the ARSP (DOEE, 2020); however, remedial action at OU2 is governed by the 1999 FFA and will be documented in a separate ROD prepared by the Navy. DOEE is implementing an adaptive management strategy for the ARSP. The interim remedy presented in the Interim ROD for the ARSP includes early actions at 11 areas of the river with elevated sediment PCB concentrations referred to as Early Action Areas (EAAs) (DOEE, 2020). The tidal Anacostia River will be monitored after the implementation of these early actions to assess progress towards achieving the ARSP **remedial action objectives (RAOs)** and to determine if further action is necessary. The remediation approach for OU2 follows the same general approach developed for the ARSP by initially targeting sediment with elevated concentrations of **constituents of concern (COCs)** and then conducting performance monitoring within an adaptive management decision framework to determine if further action within OU2 is necessary. This approach is documented in an Adaptive Management Plan developed for OU2 (CH2M, 2025). Although the decision-making for OU2 and the ARSP will be conducted under separate regulatory frameworks, the programs will share information and data and work towards achieving the RAOs and remediation goals for both programs. Remediation of OU2 in combination with the EAAs and other site cleanups is expected to contribute to attainment of the ARSP RAOs.

The Interim ROD for the ARSP documents the following river-wide RAOs:

- Human Health Risk RAOs:
  - RAO 1. Reduce risks associated with the consumption of COCs in fish from the tidal Anacostia River by people with the highest potential exposure.
  - RAO 2. Reduce risks associated with direct exposure of people to surface sediment in shallow water (fringe sediment) in the tidal Anacostia River.
- Ecological Risk RAOs:
  - RAO 3. Reduce risks associated with COCs in sediment to levels protective of benthic and aquatic invertebrates based on direct chronic exposure to surface sediment and surface water.
  - RAO 4. Reduce risks associated with COCs in surface sediment to levels protective of fish based on direct contact with and ingestion of surface water, sediment, and prey.

4 Site Characteristics

OU2 has been delineated as the sediment in a roughly 15.6-acre area of the Anacostia River adjacent to, and extending somewhat downstream of, WNY. This section presents a **conceptual site model (CSM)** for OU2 that summarizes and integrates information from previous investigations (**Table 1**) about physical site characteristics, sources of contamination, nature and extent of contamination, and contaminant fate and transport. A summary of human health and ecological risks is presented in Section 7.

Table 1 – Previous Studies and Investigations Summary

Previous Study/ Investigation[a]	Investigation Activities
EPA Sampling of Sediments Accumulated in WNY and SEFC Storm Sewers (Clark and Gower, 1995)	Elevated concentrations of PCBs and other constituents were found in some of the outfalls. The Navy-owned storm drain system was rehabilitated in 1999 and 2000, to remove sediments and upgrade or replace the lines to minimize infiltration and leakage. More than 99 percent of the 21,206 linear feet of storm sewer were cleaned, inspected, and assessed. Most of the sewer (20,500 feet) was either relined or replaced, and the remainder were found to be in conformance with project requirements for integrity and flow capacity. The 1 percent of the sewer lines that could not be evaluated were removed from the system. Outfall 10 was disconnected from the WNY power plant area, and the remainder of the sewer line was replaced so that it received only runoff from SEFC and was rerouted to a new discharge point on the river (referred to as WNY/SEFC Outfall 10).
Determination of the Volume of Contaminated Sediments in the Anacostia River (Velinsky et al., 1996)	The Interstate Commission on the Potomac River Basin collected six sediment cores in 1995 to depths of up to 10 feet below the sediment surface at locations in the lower Anacostia River. The cores collected between the CSX and S. Capitol Street Bridges were used by the Navy to help characterize subsurface sediment conditions and delineate the OU2 footprint. The data are included in the FS data set.
A Toxic Chemical Management Strategy for the Anacostia River (AWTA, 2002)	The investigation was conducted by the Academy of Natural Sciences (ANS) for the Anacostia Watershed Toxics Alliance (AWTA) in 2000 and published as an appendix to the document *Charting a Course Toward Restoration.* The ANS data for samples collected between the 11th Street and S. Capitol Street bridges are included in the RI and FS to provide more complete spatial coverage adjacent to the Navy's area of investigation (2000 ANS sampling locations in the lower Anacostia River). The ANS data were used in the OU2 RI Report to help evaluate river-wide sediment conditions.
Initial Near-shore Sediment (OU2) Investigation and RCRA RFI Report (CH2M, 2003)	The Navy conducted an initial sediment investigation in 1999 to identify the types and concentrations of contaminants present in the surface sediments near the WNY pier area. Twenty-nine (29) surface sediment samples were collected and analyzed for PCB Aroclors and congeners, dioxins/furans, metals, and PAHs. Results were presented in a Near-shore Sediment RCRA Facility Investigation (RFI) Report.
Active Capping Demonstration Project (Horne, 2003)	Shallow subsurface samples (1 foot and 1.5 feet below the sediment surface) were collected from eight core locations near the O Street outfall area downstream of the WNY in 2003 during the site characterization effort completed as part of the Active Capping Demonstration Project funded through EPA. The data were used by the Navy to help characterize surface and subsurface sediment conditions downstream of the WNY and delineate the OU2 footprint. The subsequent capping pilot study was performed under EPA's Superfund Innovative Technology Evaluation Program.
Final Report, River Sediment Investigation near Poplar Point in the Tidal Anacostia River, Washington, D.C. (Velinsky et al., 2004)	ANS collected six sediment cores in 2003 to depths of up to 16 feet below the sediment surface at locations between the 11th Street Bridge and the S. Capitol Street Bridge. The data were used by the Navy to help characterize subsurface sediment conditions and delineate the OU2 footprint.
OU2 Remedial Investigation (CH2M, 2014)	The OU2 RI sampling effort was conducted in two major field events in 2006 and 2009 and included collecting approximately 60 surface sediment samples and 34 sediment cores; collecting and analyzing fish tissue samples; and performing sediment toxicity tests, benthic enumeration studies, and sediment stability tests. Sediment samples were analyzed for volatile organic compounds, PAHs, pesticides, PCBs (Aroclors and congeners), dioxins/furans, metals, butyl tins, and explosives constituents. These data were the primary basis for the OU2 ecological and human health risk assessments presented in the RI.

[a] The documents listed are available for public review in electronic format in the public repositories listed on page 1 of this Proposed Plan.

Table 1 – Previous Studies and Investigations Summary

Previous Study/ Investigation[a]	Investigation Activities
Feasibility Study Data Gaps Investigation (appendix to OU2 FS) (CH2M, 2021)	An FS Data Gaps Investigation was conducted in 2016 to refine the area to be included in the OU2 FS and better define the vertical extent of contamination. The investigation focused on the COCs identified in the RI (PCB congeners, PAHs, lead, and chlordane) and included PCB and PAH forensic evaluations. Surface sediment samples were collected from 56 locations, and approximately 220 subsurface samples were collected from 12 cores. The draft data gaps report was prepared in 2018. The final report is included as an appendix to the OU2 FS Report.
River-Wide Sediment RI (DOEE, 2019a)	The DOEE conducted the RI from 2014 to 2016, as part of the ARSP. The spatial extent of the DOEE RI included the tidal Anacostia River from the confluence with the Potomac River to the upstream limit of tidal influence in the lower portions of the Northeast and Northwest Branches. The RI included collection of surface sediment, subsurface sediment, pore water, surface water, and tissue samples. The sediment data set included approximately 270 surface sediment grab samples collected from a depth of 0 to 0.5 foot below the mudline, and nearly 250 sediment cores collected to depths up to 18.5 feet below the mudline. Data from subsurface sampling locations in the vicinity of the WNY were used to better understand the distribution of buried contamination. A number of supporting studies were performed for various purposes including source characterization, evaluation of background conditions, contaminant fate and transport assessment, and collection of baseline monitoring data for fish tissue. The data generated by these studies were used by the Navy in developing the OU2 FS.
River-Wide Feasibility Study (DOEE, 2019b)	The river-wide FS was conducted for the tidal portion of the Anacostia River as a part of the ARSP to evaluate remedial alternatives. DOEE determined that there are multiple sources of hazardous substances that have contributed, or are currently contributing, to sediment contamination. Because of the complexity of remediating contaminated sediments and the need to identify and address active sources, DOEE has adopted an Interim ROD approach for the ARSP, which includes early sediment remediation actions, source control activities, and monitoring to assess the progress achieved from these efforts.
OU2 Feasibility Study (CH2M, 2021)	The FS presented the preliminary remedial footprint for OU2 and included development and analysis of six potential remedial alternatives to address contaminated sediment within OU2. The Preferred Alternative is presented in this Proposed Plan.
Adaptive Management Plan (CH2M, 2025)	The Adaptive Management Plan provides a framework that uses adaptive management principles to guide decision-making and remediation work, aligning with the approach that DOEE is taking for the ARSP. The framework includes performance monitoring, which outlines the potential indicators, sampling activities, data interpretation approach, trigger criteria, and actions for OU2. It emphasizes rigorous planning, understanding of site conditions, and continuous re-evaluation of activities in light of new information. By integrating the OU2 strategy with the river-wide adaptive management approach of the ARSP, the plan aims to ensure a coordinated and flexible remediation strategy.

[a] The documents listed are available for public review in electronic format in the public repositories listed on page 1 of this Proposed Plan.

4.1 Anacostia River and OU2 Physical Characteristics

The Anacostia River is a freshwater tributary of the Potomac River. The Anacostia River watershed encompasses approximately 176 square miles and flows through heavily urbanized areas. The river receives runoff from smaller tributaries, storm sewers, and **combined sewer overflows (CSOs)**. The Anacostia is tidally influenced throughout its 8.4-mile length, from the Potomac River upstream to the confluence of the Northwest and Northeast Branches. OU2 is located in what is referred to as the lower Anacostia River about 2 miles upstream of the confluence with the Potomac River. OU2 is situated immediately downstream of the point where the Anacostia River becomes both wider and deeper (**Figure 1**), increasing the flow volume. Correspondingly, the flow velocity in the river decreases at this point, resulting in increased sediment deposition.

A federally authorized navigation channel extends approximately 2.8 miles in length from the mouth of the Anacostia River to the foot of 15th Street SE. Until December 2020, the navigation channel was authorized to a depth of -24 feet mean lower low water (MLLW) and to a width of 400 feet downstream of the 11th Street Bridge and 200 feet upstream of the bridge (**Figures 1** and **2**). Turning basins were authorized opposite WNY (800-foot width) and at the head of the authorized channel (400-foot width). The navigation channel was reportedly last dredged in 1985 and the United States Army Corps of Engineers (USACE) no longer intends to actively dredge the channel (DOEE, 2020). The Water Resources Development Act of 2020 included modifications to the authorized channel dimensions. The federal navigation channel adjacent to WNY now has an authorized depth of -15 feet MLLW and a width of 200 feet (**Figure 2**).

The waterfront facilities for servicing ships at WNY historically consisted of a series of slips and dry docks that have since been filled (with the exception of Slip 1). The current quay wall and piers extending out into the river were constructed in the 1940s (**Figure 2**). As of 2022, only two of the five 210-foot-long piers remain (Piers 1 and 2). Demolition of Piers 3, 4, and 5 consisted of cutting the wooden pilings off at the sediment line and removing all structural material above the sediment surface; hundreds of vertical timber pilings are still present below the current sediment surface in the former pier areas.

The OU2 area was periodically dredged to an elevation of typically -22 to -24 feet MLLW between 1872 and the 1960s. The OU2 area was reportedly last dredged in the 1960s and dredging likely focused on the area of the five piers. Sedimentation has filled in OU2 and the navigation channel to a significant degree since they were last dredged. Sediment elevations within WNY's pier area in 2006 ranged from about -5 to -15 feet MLLW. Sediment elevations in 2013 ranged from about -6 to -9 feet MLLW upstream of the piers, -15 to -16 feet MLLW downstream of the piers, and -9 to -17 feet MLLW in the navigation channel and turning basin adjacent to WNY.

Stormwater runoff from WNY is collected in catch basins and is currently routed to eleven stormwater outfalls that either discharge directly to the Anacostia River (WNY Outfalls 1, 5, 6, 7, 8, 9, 13, and 14), or discharge to city-owned combined sewer (WNY Outfalls 15G and 15H) or separate storm sewer (MS001E) systems that traverse WNY. The eleven stormwater outfalls are currently permitted under the **National Pollutant Discharge Elimination System (NPDES)** and monitored on a regular basis.

Four additional sewer outfalls that are not monitored discharge into the Anacostia River within OU2: D.C. Water and Sewer Authority (WASA)-owned CSO Outfalls 14 (CSO 14) and 15 (CSO 15), D.C.-owned **municipal separate storm sewer system (MS4)** Outfall 01 (DC MS4-01), and WNY/SEFC Outfall 10. CSO 14, CSO 15 and DC MS4-01 traverse WNY and capture a portion of WNY's stormwater drainage as well as stormwater from up-pipe areas and discharge to the Anacostia River at WNY's shoreline. WNY/SEFC Outfall 10 is situated near the property line between WNY and SEFC and currently receives runoff from a 1/3-acre area on the western edge of the WNY. Prior to 1997, former Outfall 10 had a slightly larger drainage area and was found to be a source of PCB-contaminated sediments to the river. Outfall 10 is discussed further in Section 4.2.

The approximate annual volume of stormwater discharging to the Anacostia River from WNY outfalls is approximately 0.1 percent of the mean annual discharge of the Anacostia River. The historical annual discharge volume from WNY outfalls is not known. Sediment mounds were identified adjacent to some of the larger outfalls within and downstream of OU2 during bathymetry surveys: WNY Outfall 9, DC MS4-01, CSO 14, and near the O Street outfall area, which is immediately downstream of the SEFC and about 1,500 feet downstream of WNY.

Surface sediments within OU2 are typically composed of greater than 90 percent fines (clay and silt particles). Coarser-grained sandier sediments were documented

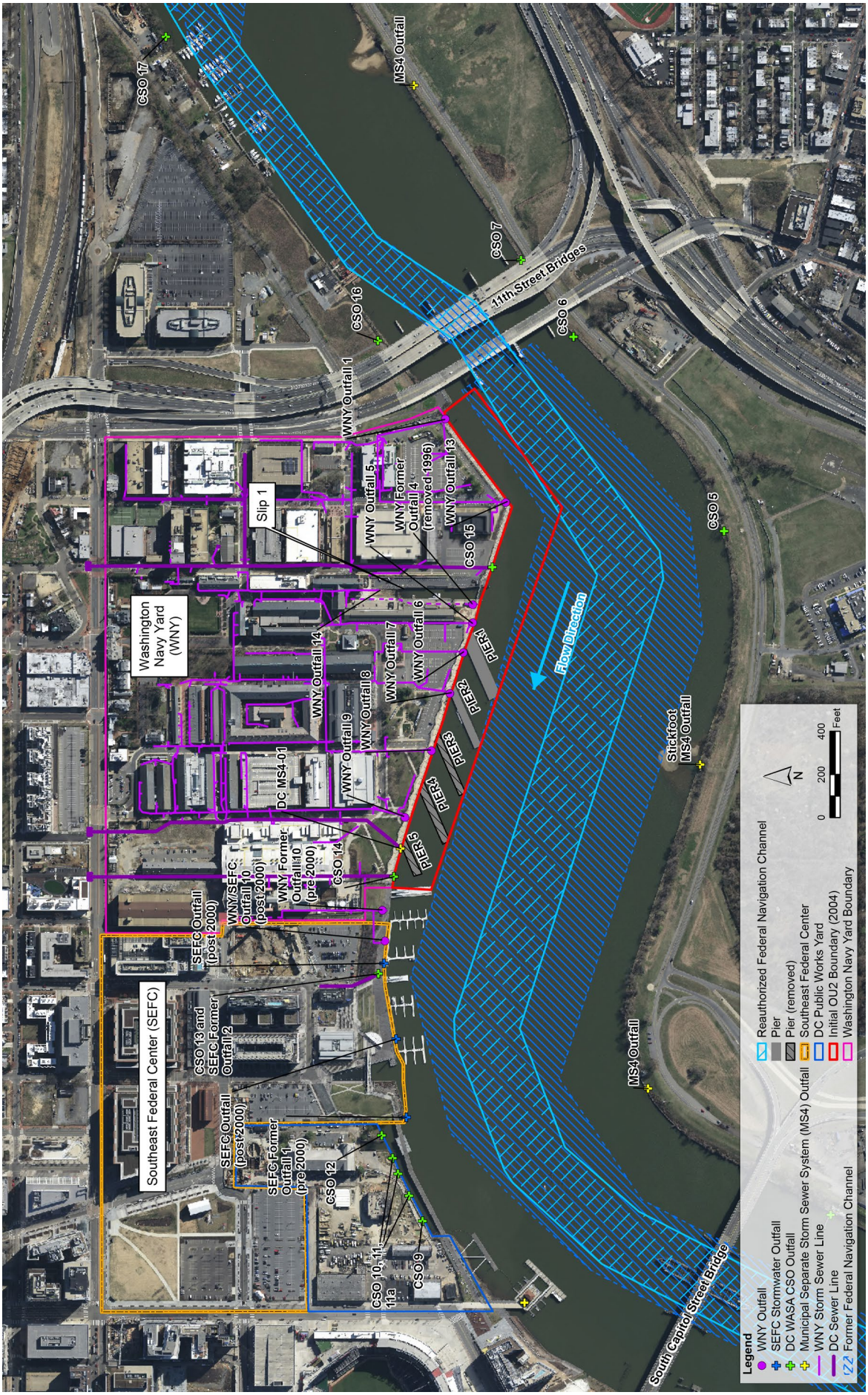


Figure 2 – Operable Unit 2 Features

near some outfalls and in deeper sediment in some areas. The historical dredge depth is demarcated by a significant increase in sediment grain size and density (that is, bed sediments beneath the historical dredge depth are denser and sandier).

4.2 Contaminant Sources

Sediments within OU2 are impacted by contaminants from multiple Navy- and non-Navy-related sources. The primary Navy-related sources of contamination to the Anacostia River are associated with historical industrial activities at WNY. Discharges from the Navy storm sewer system are believed to have been the most significant contaminant transport pathway from WNY to the river. These sewers captured historical spills, wastewater, grit, and other by-products of industrial processes, in addition to stormwater runoff containing potentially contaminated eroded soils and grit from parking areas. WNY former Outfall 4 and former Outfall 10 were specifically identified and documented in 1995 as likely to have discharged contaminants such as PCBs to the Anacostia River based on analysis of sediment samples collected from the sewer manholes. The Outfall 4 storm sewer system, which collected runoff from less than 0.25 acres, was excavated in 1996; there are no suspected continuing sources of contamination in this drainage area. The storm sewers leading to former Outfall 10, which serviced both WNY and SEFC property, were investigated and cleaned out in 1996. The northernmost portion of the line was plugged and abandoned in place because it was in poor condition and extended under Building 118, the former power plant, which was known to have PCB contamination in the soil under the building. The rest of the sewer was relined or replaced. Around 2005, the portion of the sewer line that served SEFC was removed when the property was redeveloped. This area is now serviced with a new storm drain system that is not connected to former Outfall 10. WNY/SEFC Outfall 10 now serves an area of approximately 1/3 of an acre consisting primarily of roof drains and a paved alley.

All of the other storm sewers on the WNY were inspected, cleaned out, and either relined, replaced, or abandoned in 2000.

The magnitude of contaminant releases from WNY (and other non-Navy sources) to the river has decreased over time, with the most substantial releases likely occurring before 1970. As a result, the highest levels of contamination are found in buried sediments. The Navy-related contaminant sources and transport pathways have been largely addressed by the remedial actions and mitigation measures (i.e., stormwater system cleaning, replacement, or sealing and abandonment in-place) taken at WNY.

However, surface sediment sample data collected during the RI in 2016 indicated that continuing sources of contamination may be impacting the sediment in the downstream (western portion) of OU2. This area coincides with three of the four unmonitored outfalls discussed in Section 4.1 (CSO 14, DC MS4-01, and WNY/SEFC Outfall 10, as well as CSO 13 located immediately downstream of WNY on the SEFC waterfront). None of these outfalls are controlled by the Navy. However, there are instances where Navy-controlled property contributes runoff to the non-Navy-owned sewers. The Navy is investigating whether any of these outfalls or other previously unidentified conduits are acting as a continuing source of PCBs to the river. The Navy intends to address any continuing sources of contamination originating from WNY property that could lead to recontamination prior to implementing the proposed OU2 remedy. Any potential sources of recontamination to OU2 from non-Navy properties would be investigated and mitigated by the responsible party.

The Navy also continues to monitor its other 11 outfalls for PCBs (among other constituents) under its NPDES permit and will take steps to address any indications of ongoing discharges that could lead to recontamination of the proposed OU2 remedy. The Anacostia River watershed is significantly affected by widespread low-level urban and industrial pollution (AWTA, 2002; DOEE, 2019a). Sediment-bound contaminants transported from upstream non-Navy sources and deposited in the lower Anacostia River are another currently ongoing source contributing to the conditions in and around OU2. Potential non-Navy sources of contamination include upstream tributaries, storm drains, CSOs, direct runoff, and direct discharges from industrial facilities. Several industrial properties (**Figure 1**) and disposal sites are located upstream and downstream of WNY, including PEPCO, Washington Gas, Kenilworth Landfill, and the CSX rail yard (upstream from WNY); Poplar Point (across the river); and SEFC, D.C. WASA O Street Pump Station, and D.C. Public Works Maintenance Yard and former incinerator (downstream of WNY). Uncontrolled non-Navy sources of contamination upstream of WNY could limit the long-term effectiveness of the OU2 remedy until these sources themselves are reduced or eliminated. COC concentrations in sediments upstream of OU2 that originate from non-Navy sources are referred to as "upstream background" in the OU2 FS. Conditions in the river upstream of WNY will be considered in the Navy's assessment of remedy effectiveness and protectiveness.

4.3 Nature and Extent of Contamination

Evaluations performed during the OU2 RI/FS identified PCBs,[2] PAHs,[3] and lead as site-related COCs that pose unacceptable human health or ecological risk. PCB, PAH, and lead concentrations in surface sediment are lower than concentrations in subsurface sediment. The highest PCB concentrations in OU2 surface sediment are found along the shoreline near the stormwater and CSO outfalls at the west end of WNY (**Figure 3**). PAHs exhibit a similar distribution as PCBs in surface sediment within OU2, with the highest concentrations found near CSO and stormwater outfalls at the west end of OU2. Lead concentrations in surface sediment were elevated at a few locations within OU2 but are not always co-located with elevated concentrations of PCBs and PAHs.

The highest PCB concentrations in subsurface sediment within OU2 also are found at the west end, near the WNY/SEFC property line. Maximum PCB concentrations are typically found between 5 and 10 feet below the sediment surface. The highest PAH and lead concentrations are typically, but not always, co-located with high PCB concentrations. In the lower Anacostia River (including within OU2), buried sediments contain elevated COC concentrations to depths of 12 to 14 feet below the current sediment surface, to the depth of the historical dredge boundary. RI/FS sampling data indicate that the original river channel sediments below the historical dredge depth are uncontaminated.

4.4 Contaminant Fate and Transport

The OU2 COCs (PCBs, PAHs, and lead) are hydrophobic and have an affinity for fine-grained sediment particles and organic material. Therefore, the fate and transport of these COCs is closely related to the fate and transport of sediments.

Sediment particles and adsorbed COCs in outfall discharges and other releases from WNY entered the water column, settled out, and were deposited on the river bottom. The heaviest particles settled out first and were deposited closest to the source (for example, the outfall). Finer-grained sediment particles that remained suspended in the water column were transported by advection and dispersion before deposition, but likely were not transported substantial distances before deposition because river current velocities are low. These processes led to the formation of relatively coarser-grained sediment mounds near the larger outfalls within OU2; similar mounds are observed near other outfalls in the Lower Anacostia River.

Once in the river, releases associated with WNY mixed with suspended sediments and COCs from other non-Navy upstream sources such as tributaries and outfalls. The amount of mixing increased with distance from WNY. These processes resulted in the development of contaminant "**hot spots**" near some of the outfalls along WNY's waterfront.

The lower Anacostia River is a net depositional environment, and contamination from WNY that was deposited on the river bottom was gradually mixed with and buried by sediments transported from upstream and deposited in the lower portion of the river. The sediment bed within OU2 was evaluated and determined to be stable based on extreme event (e.g.: flooding) modeling conducted as part of the OU2 RI (CH2M, 2014). The extreme event analysis is based on Hurricane Agnes (1972), which was the highest flow event on record for the Potomac and Anacostia Rivers at the time the RI was prepared. As such, significant erosion is not expected even under extreme flow conditions.

5 Principal Threat Wastes

"Principal threat wastes," defined by the NCP in 40 CFR Section 300.430(a)(1)(iii)(A), are source materials that are considered to be highly toxic, or highly mobile, and that generally cannot be reliably contained or would present a significant risk to human health or the environment should they be exposed.

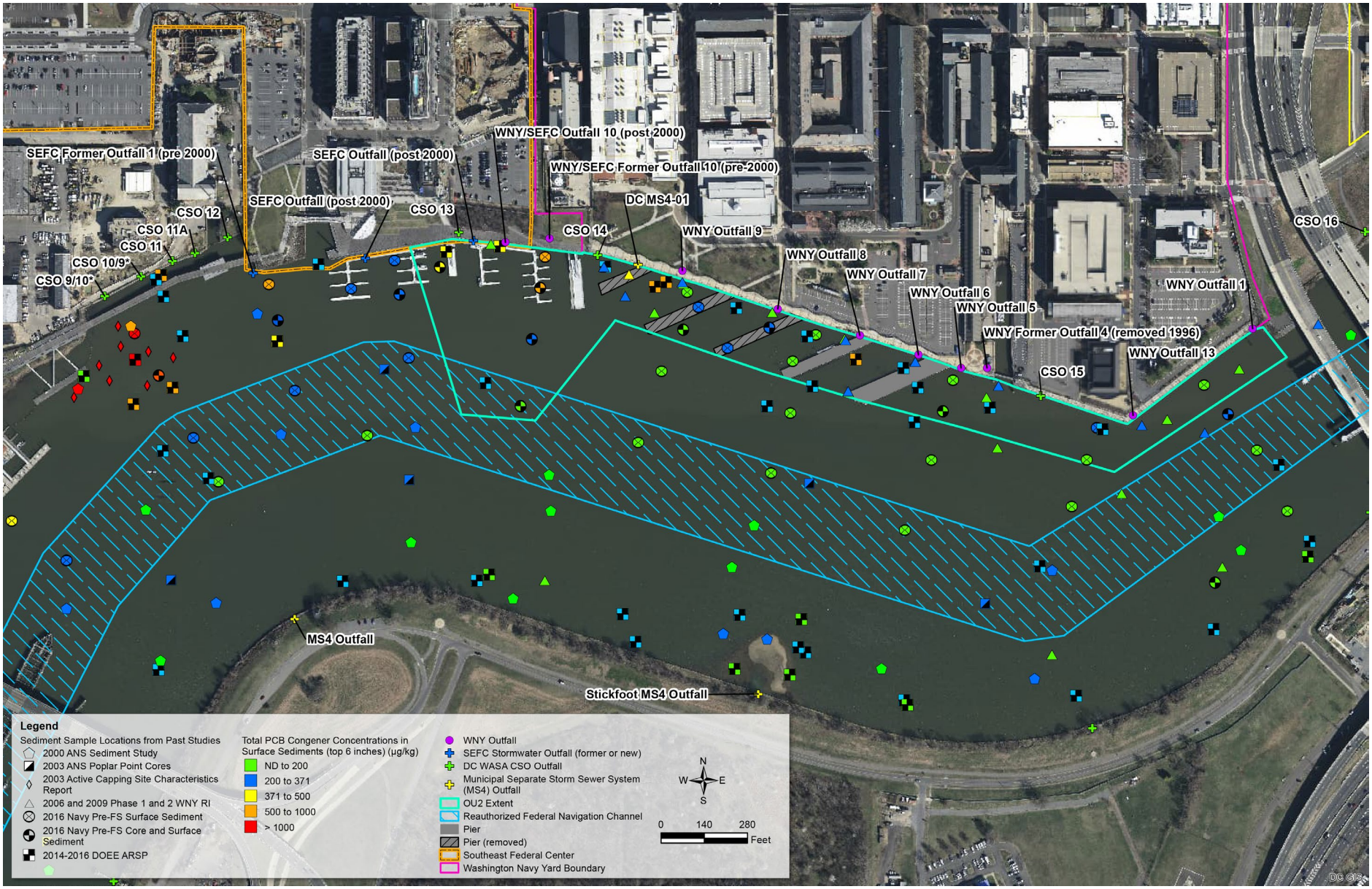
There are no principal threat wastes present in OU2 sediments.

6 Scope and Role of Response Action

This Proposed Plan addresses the preferred remediation alternative for the sediment in OU2 that was developed by the Navy in accordance with the FFA. The Preferred Alternative presented in this Proposed Plan is intended to address potential human health and ecological risks resulting from sediment contamination within OU2. The Preferred Alternative follows the same general approach developed for the ARSP, as described in the OU2 Adaptive Management Plan (CH2M, 2025). OU2 is one of several CERCLA sites on WNY identified under the FFA and the Navy's ER Program. The proposed remedial action at OU2 does not affect any other CERCLA sites at the Base.

2 PCBs are measured as the sum of 209 PCB congeners.
3 PAHs are measured as the sum of 17 individual PAHs.

Figure 3 – Sediment Sample Locations and OU2 Extent



What is Human Health Risk and How is it Calculated?

An HHRA estimates the likelihood of health problems occurring if no cleanup action were taken at a site. This is also referred to as "baseline risk." HHRAs are conducted using a stepped process (as outlined in Navy and EPA HHRA policy and guidance). To estimate baseline risk at a site, the Navy performs the following four-step process:

Step 1: Data Collection and Evaluation
Step 2: Exposure Assessment
Step 3: Toxicity Assessment
Step 4: Risk Characterization

During Data Collection and Evaluation (**Step 1**), the concentrations of chemicals detected at a site are evaluated, including:

- Identifying and evaluating area(s) where site-related chemicals may be found (source areas) and at what concentrations.
- Evaluating potential movement (transport) of chemicals in the environment.
- Comparing site concentrations to risk-based screening levels to determine which chemicals may pose the greatest threat to human health (called **"constituents of potential concern" [COPCs]**). Constituents are not excluded from the risk assessment process if they are within the range of background.

In **Step 2**, the Exposure Assessment, potential exposures to the COPCs identified in Step 1 are evaluated. This step includes:

- Identifying possible exposure **media** (for example, soil, air, groundwater, surface water, and/or sediment).
- Evaluating if/how people may be exposed (**exposure pathways**).
- Evaluating routes of exposure (for example, ingestion).
- Identifying the concentrations of COPCs to which people might be exposed.
- Identifying the potential frequency and length of exposure.
- Calculating a **"reasonable maximum exposure" (RME)** dose that portrays the highest level of human exposure that could reasonably be expected to occur.

In the Toxicity Assessment (**Step 3**), both cancer and non-cancer toxicity values are identified for oral, dermal, and inhalation exposures to the COPCs. The toxicity values are identified using the hierarchy of toxicity value sources approved by EPA.

Step 4 is Risk Characterization, where the information developed in Steps 1 through 3 is used to estimate potential risk to people. The following approach is used:

- Two types of risk are considered: **cancer risk** and non-cancer hazard.
- The likelihood of developing cancer as a result of site exposure is expressed as an upper-bound probability; for example, a "1 in 10,000 chance." In other words, for every 10,000 people that might be exposed under the conditions identified in Step 2, one additional case of cancer may occur as a result of site exposure. Unacceptable risk exists when the **excess lifetime cancer risk (ELCR)** of 1×10^{-4} is exceeded.
- For non-cancer health effects, a **"hazard index" (HI)** is calculated. The HI represents the ratio between the "reference dose," which is the dose at which no adverse health effects are expected to occur, and the RME dose for a person contacting COPCs at the site. The key concept here is that a "threshold level" (measured as an HI of 1) exists below which no non-cancer health effects are expected to occur. The potential risks from the individual COPCs and exposure pathways are summed, and a total site risk is calculated for each receptor. The uncertainties associated with the risk estimates are presented and their effects on the conclusions of the HHRA are discussed.

7 Summary of Site Risks

This section presents a summary of the risks to people and the environment associated with exposure to sediment under current and anticipated future uses at OU2 and includes an overview of how those risks were evaluated.

7.1 Human Health Risk

A quantitative **human health risk assessment (HHRA)** was conducted as part of the OU2 RI (CH2M, 2014). Chemicals detected in OU2 sediment were evaluated following the process outlined in the text box titled *"What is Human Health Risk and How is it Calculated?"* Carcinogenic (cancer) risks and noncarcinogenic hazards from exposure to sediment and fish were evaluated for adults and children (**receptors**) who may potentially come in contact with these media at the site. The HHRA evaluated potential human health risks associated with ingestion of fish and direct contact with sediment adjacent to WNY OU2. **Reasonable maximum exposure (RME)** risks were calculated for children and adults. The resulting RME risks are presented in **Table 2**.

The HHRA indicated potentially **unacceptable risks** associated with ingestion of fish caught within OU2, as well as fish caught in the Anacostia River at upstream and cross-river reference locations. These risks are associated with PCBs in the fish tissue. The ARSP RI also concluded that the fish consumption pathway presents unacceptable risks and hazards to human receptors due to PCBs (DOEE, 2019a). Because fish move around in the river, it is not possible to distinguish between risks associated with PCBs from Navy sources and PCBs from non-Navy sources.

Direct exposure of recreational users to sediment at OU2 was determined to be an incomplete pathway because the shoreline along OU2 consists of a bulkhead with minimum water depths of 7 feet or more. Therefore, typical activities that might result in recreational sediment exposure (wading or playing at the shoreline) are not possible now

Table 2 – Summary of Human Health RME Carcinogenic Risks and Noncarcinogenic Hazards

Receptor	Exposure Route	Site (OU2) Carcinogenic Risk	Site (OU2) Hazard Index	Reference Area Carcinogenic Risk	Reference Area Hazard Index	Conclusion
Recreational Adult						
Top-Level Fish	Ingestion (eating fish)	2×10^{-4} (1 chance in 5,000)	3	1×10^{-4} (1 chance in 10,000)	2	Unacceptable site risk but comparable to reference area[a]
Mid-Level Fish	Ingestion (eating fish)	2×10^{-4} (1 chance in 5,000)	4	1×10^{-4} (1 chance in 10,000)	3	Unacceptable site risk but comparable to reference area
Recreational Child						
Top-Level Fish	Ingestion (eating fish)	9×10^{-5} (1 chance in 11,000)	6	6×10^{-5} (1 chance in 17,000)	3	Site risk at lower end of **acceptable risk range** but comparable to reference area
Mid-Level Fish	Ingestion (eating fish)	9×10^{-5} (1 chance in 11,000)	7	1×10^{-4} (1 chance in 10,000)	6	Site risk at lower end of acceptable risk range but comparable to reference area
Recreational Child/Adult Lifetime						
Top-Level Fish	Ingestion (eating fish)	3×10^{-4} (1 chance in 3,333)	NA	2×10^{-4} (1 chance in 5,000)	NA	Unacceptable site risk but comparable to reference area
Mid-Level Fish	Ingestion (eating fish)	3×10^{-4} (1 chance in 3,333)	NA	3×10^{-4} (1 chance in 3,300)	NA	Unacceptable site risk but comparable to reference area

[a] Reference areas were located upstream and across the river from WNY to represent typical urban conditions in areas unlikely be affected by releases from WNY. The reference areas were agreed upon by the WNY ER Team as meeting the requirements of a reference area for OU2 to the greatest degree possible. The requirements included similar depositional environment to OU2, similar percent fines (>95%), similar water depth (8–18 feet), a location outside of one of the contaminant areas of concern identified by the Anacostia Watershed Toxics Alliance, and areas away from any known point source of contamination (CH2M, 2009).

NA = not applicable (**hazard indices** are indicative of short-term response and are not calculated over a lifetime.)

or in the future. A screening-level assessment of risks associated with direct exposure of construction workers to surface sediment at OU2 indicated that there are no unacceptable risks.

7.2 Ecological Risk

A **baseline ecological risk assessment (BERA)** also was conducted as part of the OU2 RI (CH2M, 2014). The BERA evaluated chemicals detected in OU2 sediment and followed the process outlined in the text box, *"What is Ecological Risk and How is it Calculated?"* The assessment evaluated the following: the survival and growth of the benthic invertebrate community, the survival and growth of benthic fish, and the growth, survival, and reproduction of piscivorous (fish-eating) birds. Potential risk to the benthic invertebrate community was assessed using a sediment quality triad (SQT) approach that considered sediment COC concentrations, bulk sediment toxicity, and benthic community structure from each sample location selected for the SQT assessment. The BERA concluded that there is an unacceptable risk to benthic invertebrates from exposure to sediments in portions of OU2. The site-related risks appear to be driven primarily by PAHs, PCBs, and lead. In addition, PAHs in OU2 sediment and throughout the river pose a cancer risk to benthic fishes. OU2 sediments do not pose an unacceptable risk to piscivorous birds. Surface sediments associated with the unacceptable ecological risk to benthic invertebrates are near former Pier 5, adjacent to CSO 14, DC MS4-01, and WNY Outfalls 8 and 9 and WNY former Outfall 10.

What is Ecological Risk and How is it Calculated?

An ecological risk assessment (ERA) is conceptually similar to a human health risk assessment except that it evaluates the potential risks and impacts to ecological receptors (plants, animals other than humans and domesticated species, habitats [such as wetlands], and communities [groups of interacting plant and animal species]). ERAs are conducted using a tiered, step-wise process (as outlined in Navy and EPA ERA policy and/or guidance) and are punctuated with Scientific Management Decision Points (SMDPs). SMDPs represent points in the ERA process where agreement among stakeholders on conclusions, actions, or methodologies is needed so that the ERA process can continue (or terminate) in a technically defensible manner. The results of the ERA at a particular SMDP are used to determine how the ERA process should proceed, for example, to the next step in the process or directly to a later step. The process continues until a final decision has been reached (that is, remedial action if unacceptable risks are identified, or **no action** if risks are acceptable). The process can also be iterative if data needs are identified at any step; the needed data are collected, and the process starts again at the point appropriate to the type of data collected.

An ERA has three principal components:

1. **Problem Formulation establishes the goals, scope, and focus of the ERA and includes:**

- Compiling and reviewing existing information on the habitats, plants, and animals that are present on or near the site
- Identifying and evaluating area(s) where site-related chemicals may be found (source areas) and at what concentrations
- Evaluating potential movement (transport) of chemicals in the environment
- Identifying possible exposure media (soil, air, water, sediment)
- Evaluating if/how the plants and animals may be exposed (exposure pathways)
- Evaluating routes of exposure (for example, ingestion)
- Identifying specific receptors (plants and animals) that could be exposed
- Specifying how the risk will be measured (assessment and measurement endpoints) for all complete exposure pathways

2. **Risk Analysis which includes:**

- Exposure Estimate – An estimate of potential exposures (concentrations of chemicals in applicable media) to plants and animals (receptors). This includes direct exposures of chemicals in site media (such as soil) to lower trophic level receptors (organisms low on the food chain such as plants and insects) and upper trophic level receptors (organisms higher on the food chain such as birds and mammals. This also includes the estimated chemicals dose to upper trophic level receptors via consumption of chemicals accumulated in lower food chain organisms.
- Effects Assessment – The concentrations of chemicals at which an adverse effect may occur are determined.

3. **Risk Calculation or Characterization:**

- The information developed in the first two steps is used to estimate the potential risk to plants and/or animals by comparing the exposure estimates with the effects threshold.
- Also included is an evaluation of the uncertainties (that is, potential degree of error) associated with the predicted risk estimate and their effects on ERA conclusions.

8 Remedial Action Objectives

The Navy, with the support of EPA and DOEE, has concluded that remedial action is necessary to protect human health and the environment from actual or threatened contact with COCs in sediment at OU2. Because the fish typically consumed by humans move over larger areas than OU2, and PCBs from multiple sources are widespread in the Anacostia River, it is unlikely that remediation of OU2 sediments alone would directly lead to reductions in fish tissue PCB concentrations and associated fish consumption risks.

Therefore, the following human health RAO was developed for OU2:

- Reduce the contribution of PCBs from OU2 surface sediments to fish tissue by reducing the PCB concentrations to levels that are similar to upstream background concentrations and/or by reducing PCB **bioavailability**; this remedial action in conjunction with actions to be performed by others is expected to reduce human health risks associated with the consumption of fish.

In addition, the following ecological RAO was developed:

- Reduce the risks to benthic invertebrates and fish associated with direct contact with contaminants of ecological concern by reducing contaminant concentrations in surface sediments to protective levels and/or by reducing contaminant bioavailability.

The OU2 RAOs are not developed to achieve unlimited use and unrestricted exposure conditions for the OU2 area. The RAOs address exposure and risk and can be met without remediating or removing the contaminated subsurface sediments, but this will require land-use

restrictions to be put in place to prevent future disturbance and exposure of these sediments. This is consistent with the RAOs for the ARSP.

Two types of **proposed remediation goals (proposed RGs)** for PCBs apply to the OU2 remedial action: a long-term risk-based goal and a short-term goal based on upstream background conditions at the time of the OU2 remedial action. The long-term proposed RG for OU2 is the PCB preliminary remediation goal of 65 micrograms per kilogram (µg/kg) for surface sediment provided in the Interim ROD for the ARSP. The ARSP preliminary remediation goal was developed to reduce risks associated with the consumption of PCBs in fish from the tidal Anacostia River by people with the highest potential exposure. This goal is expected to be achieved river-wide over time through a combination of source control, remedial actions performed by multiple entities, and natural recovery of the river system.

It is not certain that the long-term proposed RG for PCBs is currently achievable in OU2 based on the upstream background data presented in the OU2 FS (CH2M, 2021). The average upstream background PCB concentration at the time that the OU2 FS was prepared was 200 µg/kg, and this value was used in the FS as the preliminary remediation goal. A not-to-exceed (NTE) value of 371 µg/kg was also calculated based on the upper end of the upstream background range of sediment PCB concentrations. However, river-wide conditions are expected to improve over time as source control measures, ARSP early actions, and other site cleanups are implemented. Therefore, an updated, short-term proposed RG and NTE value for PCBs will be developed for OU2 during remedial design to account for improving river conditions while minimizing the risk of recontaminating the OU2 remedy by uncontrolled, non-Navy upstream sources of PCBs. The Adaptive Management Plan describes how the OU2 remedial action will be designed to meet the short-term proposed RG and how performance monitoring will then be conducted to assess progress towards meeting the long-term proposed RG (65 µg/kg) through ongoing deposition and accumulation of cleaner sediment from upstream within OU2 over time. Performance monitoring is discussed further in Section 9.

For the contaminants of ecological concern (lead and total PAHs), consensus-based **probable effects concentrations** (MacDonald et al., 2000) are used as proposed RGs. A detailed explanation of how the proposed RGs were developed is provided in the FS Report (CH2M, 2021). Proposed RGs apply to the top 6 inches of sediment within OU2.

- Total PCBs
  - Short-term: the average upstream background concentration determined during remedial design (to be compared to the average concentration in OU2), and the upper end of the upstream background concentration range determined during remedial design (NTE value to be compared to each sample location in OU2)
  - Long-term: 65 µg/kg (to be compared to the average concentration in OU2), if achievable based on upstream background and river-wide conditions
- Lead – 128 milligrams per kilogram (mg/kg) (NTE concentration)
- Total PAHs – 22.8 mg/kg (NTE concentration)

The short-term proposed RG for PCBs will be applied on a **surface-weighted average concentration (SWAC)** basis (that is, the PCB SWAC within OU2 after remediation must be below the proposed RG to meet the RAO). SWACs are often used to target bioaccumulative contaminants to account for exposures to organisms (for example, fish) that move within and sometimes beyond the area of interest (Pelletier et al., 2019). The PCB NTE value[4] provides an upper limit on the level of contamination that will be allowed to remain in place. The average and NTE values for PCBs at the time of the OU2 FS (200 µg/kg and 371 µg/kg, respectively) were used in conjunction with the proposed RGs for lead and total PAHs to develop the proposed OU2 remediation footprint, shown on **Figure 4**.

The proposed remediation footprint is approximately 15.6 acres. It extends out into the river a distance approximate to the WNY's (former) pier line. The upstream boundary of the area aligns with the WNY eastern property line. The downstream limit of OU2 is defined as the point downstream of the WNY's western property line where COC concentrations (primarily PCBs) decrease to below upstream background levels (based on OU2 RI/FS data).

At the western end of OU2, the proposed remediation area extends further out into the river (south), beyond the pier line, where institutional controls will be implemented to prevent potential future exposure of subsurface contamination.

4 The PCB NTE value is calculated as the 95 percent upper confidence bound on the 95th percentile of the upstream background concentrations.

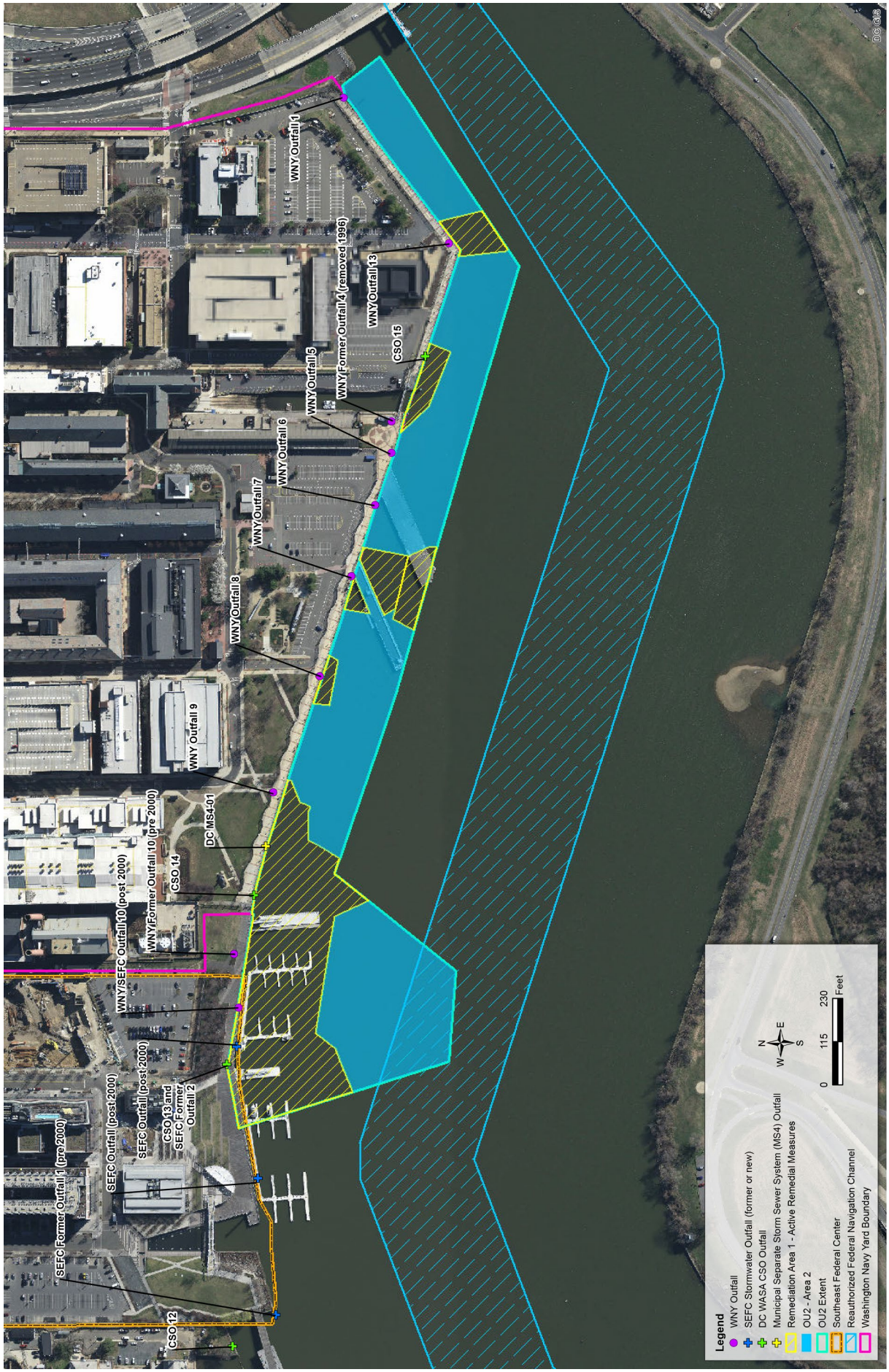


Figure 4 – OU2 Remediation Areas 1 and 2

Thiessen polygons were constructed throughout the proposed remediation area to determine the proportional area represented by each surface sediment sample location within OU2.

The portion of the OU2 remediation footprint referred to as Area 1 will be the focus of remediation to reduce surface sediment COC concentrations to levels below short-term proposed RGs and/or to reduce COC bioavailability. Area 1 includes polygons where the PCB concentration exceeded the preliminary NTE concentration of 371 µg/kg or where the lead or total PAH concentration exceeded the applicable proposed RG at the time of the FS. Three additional polygons with PCB concentrations less than 371 µg/kg are also included in Area 1 to further reduce the post-remedy PCB SWAC in OU2. The WNY ER Team determined that remediating these polygons will substantially reduce the post-remedy SWAC with minimal cost increase.

As part of a **pre-design investigation**, the upstream background and OU2 sediment PCB concentrations will be recharacterized. Based on the updated background concentrations, the short-term RG and NTE value will be revised. Subsequently, the extent of Area 1 within the OU2 footprint may be adjusted to reflect these updated values. The portion of the OU2 remediation footprint outside of Area 1 is referred to as Area 2. The COC concentrations in the surface sediment in the polygons that make up Area 2 would not exceed the proposed NTE RGs and therefore active remedial measures would not be implemented. However, institutional controls are proposed to prevent the possible future exposure of the more contaminated subsurface sediments in these polygons.

The proposed remediation footprint for OU2 is shown on **Figure 4**.

9 Evaluation of Remedial Alternatives

Seven remedial alternatives were evaluated for OU2. The NCP identifies the nine evaluation criteria for use in a comparative analysis of alternatives (**Table 3**). All seven alternatives were evaluated against seven of the nine remedy selection criteria defined in the NCP (Title 40 CFR Part 300). The other two criteria (state and community acceptance) will be evaluated after the close of the public comment period for this Proposed Plan. The evaluation is summarized in **Table 3** and shown graphically in **Table 4**.

Table 3 – Evaluation Criteria for Comparative Analysis

CERCLA Criteria	Definition
Threshold Criteria	
Overall protection of human health and the environment	Addresses whether a remedy provides adequate protection and describes how risks posed through each pathway are eliminated, reduced, or controlled through mitigation, engineering controls, or institutional controls.
Compliance with **Applicable or Relevant and Appropriate Requirements (ARARs)**	Addresses whether a remedy will meet the ARARs of other federal and state environmental laws and/or justifies a waiver of the requirements.
Primary Balancing Criteria	
Long-term effectiveness and permanence	Addresses the expected residual risk and the ability of a remedy to maintain reliable protection of human health and the environment over time, once cleanup goals have been met.
Reduction in toxicity, mobility, or volume through treatment	Discusses the anticipated performance of the treatment technologies a remedy may employ.
Short-term effectiveness	Considers the time needed to achieve protection and any adverse impacts on human health and the environment that may be posed during the construction and implementation period, until cleanup goals are achieved.
Implementability	Evaluates the technical and administrative feasibility of a remedy, including the availability of materials and services needed to implement an option.
Present-worth cost	Compares the estimated initial, operations and maintenance (O&M), and present-worth costs.
Modifying Criteria	
State acceptance	Considers the state support agency comments on the Proposed Plan.
Community acceptance	Considers the public's general response to the alternatives described in the Proposed Plan. The specific responses to the public comments are addressed in the **Responsiveness Summary** section of the ROD.

Table 4 – Summary of Comparative Analysis

Criteria	Alt 1	Alt 2	Alt 3A	Alt 3B	Alt 4	Alt 5	Alt 6
Threshold Criteria							
Protection of Human Health and the Environment	○	●	●	●	●	●	●
Compliance with ARARs	NA	●	●	●	●	●	●
Balancing Criteria							
Long-term Effectiveness and Permanence	NA	◒	◔	◔	◔	●	◔
Reduction of Toxicity, Mobility, and Volume Through Treatment	NA	◒	◒	●	●	◒	●
Short-term Effectiveness	NA	●	◔	◔	◔	◒	◔
Implementability	NA	●	◔	◔	◔	◕	◔
Present-worth Cost ($million)	$0	$3.6	$4.4	$7.4	$7.7	$12.9	$6.9

Notes:
Alt 1 = Alternative 1 – No Action
Alt 2 = Alternative 2 – Monitored Natural Recovery
Alt 3A = Alternative 3A – Enhanced Natural Recovery – Thin Layer Capping
Alt 3B = Alternative 3B – Enhanced Natural Recovery – Activated Carbon Amended Thin Layer Capping
Alt 4 = Alternative 4 – In Situ Treatment with Activated Carbon
Alt 5 = Alternative 5 – Partial Excavation and Backfill to Grade
Alt 6 = Alternative 6 – Hybrid Alternative
NA = not applicable

Threshold Criteria Rating:
○ Does not satisfy criterion ● Satisfies criterion

Balancing Criteria Rating:
○ Low ◕ Low to moderate ◒ Moderate ◔ Moderate to high ● High

All of the alternatives except Alternative 1 (No Action) include **land use or institutional controls** and performance monitoring. Institutional controls will be required to limit any in-water activities that could expose the more contaminated subsurface sediments. Performance monitoring will evaluate remedy performance, compare post-remedy conditions in OU2 to long-term river-wide trends, and provide data for OU2 SWAC calculations. A performance monitoring plan that follows the same adaptive management monitoring approach developed for the ARSP will be developed for OU2 during remedial design, and the OU2 performance monitoring program will be coordinated with the ARSP monitoring program. The ARSP framework (DOEE, 2024), which is based on EPA's adaptive site management framework (EPA, 2022), includes the elements below:

1. **Establish remediation goals.** For OU2, the remediation goal for performance monitoring is the long-term proposed PCB RG of 65 µg/kg.
2. **Determine the action.** For OU2, the remedial action will be selected in the ROD.
3. **State the expectations.** For OU2, data quality objectives will be developed and presented in a performance monitoring plan to be developed during remedial design.
4. **Monitor progress.** For OU2, it is expected that one **baseline monitoring** event will be conducted pre-remedy and four performance monitoring events will be conducted within the first ten years post-remedy, followed by continued monitoring to support the Five-Year Reviews that will be required under CERCLA.
5. **Evaluate and adapt.** In the Five-Year Reviews, EPA and the Navy, in consultation with DOEE, will evaluate the need for additional remedial action at OU2 based on the evaluation of OU2 performance monitoring data. ARSP river-wide performance monitoring data will also be considered.

The seven alternatives evaluated for OU2 are as follows:

- **Alternative 1 – No Action.** The No Action alternative is required by the NCP to be carried through the entire FS process as the baseline condition against which the performance of the remaining alternatives is evaluated. This alternative does not include land use controls or monitoring and has no associated cost.
- **Alternative 2 – Monitored Natural Recovery (MNR).** No removal or cap/cover placement would be performed as part of Alternative 2. MNR would rely primarily upon the ongoing deposition of comparatively less contaminated sediments from upstream to gradually bury and isolate the existing surface sediments.
- **Alternative 3A – Enhanced Natural Recovery (ENR) – Thin Layer Capping.** Alternative 3A consists of placing a thin-layer (6 inches) cap of sand over the sediments to reduce exposure of receptors to the sediments in the near term and accelerate the ongoing natural recovery process.
- **Alternative 3B – ENR – Activated Carbon Amended Thin Layer Capping.** This alternative is a variation of Alternative 3A. The thin-layer cap material would be amended with a commercially available granular activated carbon to reduce the bioavailability of PCBs and PAHs to native biological species (e.g., fish).
- **Alternative 4 – In Situ Treatment with Activated Carbon.** Alternative 4 includes in situ treatment through the addition of activated carbon to existing sediment to reduce the bioavailability of PCBs and PAHs.
- **Alternative 5 – Partial Excavation and Backfill to Grade.** Alternative 5 includes partial excavation of approximately 2 feet of sediment and backfilling or capping to the existing grade. Sediment deeper than 2 feet would remain in place. This alternative would isolate contaminated sediment from the overlying water column and prevent exposure of receptors to the sediment.
- **Alternative 6 – Hybrid Alternative.** The hybrid alternative includes a combination of ENR and in situ treatment (Alternatives 3A and 4) to address different areas of the remediation footprint. Multiple combinations and footprints could be used for a hybrid approach.

Complete removal of contaminated sediments within OU2 was considered but was not retained for detailed evaluation in the FS. The most contaminated sediments are buried below the surface, and the contaminated layer extends to depths of more than 10 feet below the sediment surface. Dredging to a clean sediment layer would result in very high costs and poses construction challenges related to the stability of the quay wall and other WNY structures, the presence of subsurface pilings in areas where piers were removed and covering the exposed cut surfaces. Land use or institutional controls will be required in perpetuity to prevent exposure of the more contaminated subsurface sediments; therefore, none of the alternatives will allow for unlimited use and unrestricted exposure.

9.1 Overall Protection of Human Health and the Environment

While Alternative 1, No Action, may provide some overall protection of human health and the environment due to natural deposition of relatively cleaner sediment, it does not provide for any method to determine if the protection is occurring or if RAOs are met, and does not prevent future activities that may result in the exposure to contaminated subsurface sediments; therefore, it does not meet this threshold criterion. Alternatives 2 through 6 meet this criterion and would achieve the RAOs for OU2. Alternative 4 and 6 would provide protection by reducing the bioavailability of PCBs and PAHs from the sediments. Alternatives 2, 3A, 3B, 5, and 6 would provide protection because they interrupt the exposure pathway from the sediments to the fish and other ecological receptors by natural deposition of cleaner sediment, thin-layer capping, or removing and capping the sediment. Alternatives 3B and 6 include an additional treatment component that would reduce movement of PCBs and PAHs from the sediment to the water column through the thin-layer cap and further reduce bioavailability.

9.2 Compliance with Applicable or Relevant and Appropriate Requirements

Because no remedial action is taken under Alternative 1, it would not have any **ARARs**. Alternatives 2, 3A, 3B, 4, 5, and 6 would be designed to comply with ARARs.

9.3 Long-term Effectiveness and Permanence

Alternative 1 would not achieve the RAOs because site conditions would not be monitored. Alternative 2 would provide a moderate level of effectiveness. Existing contamination would be left in place. The time to achieve the RAOs would depend on the future natural

sedimentation rates in OU2 and the deposition of cleaner sediments. Alternatives 3A, 3B, 4, and 6 would provide a moderate to high level of effectiveness; these alternatives would leave contamination in place and RAOs would be met at the conclusion of remedial activities. The remedies are expected to be physically stable once placed. Alternative 5 would provide a high level of effectiveness as some of the sediment contamination would be removed and the cap would be thicker (2 feet).

9.4 Reduction in Toxicity, Mobility and Volume through Treatment

Alternative 1 does not include any remedial actions and this criterion is not applicable. Alternatives 2, 3A, and 5 were ranked moderate for this criterion because treatment to reduce bioavailability is not a primary remedy component. Alternatives 3B, 4, and 6 were ranked high for this criterion because treatment is a primary component of the remedy. For Alternative 5, solidification and stabilization of the dredged material could reduce the leachability and mobility of the COCs; however, the treatment only applies to the sediment removed and disposed of at an offsite landfill.

9.5 Short-term Effectiveness

No remedial action would be taken under Alternative 1; therefore, this criterion is not applicable. No construction is performed under Alternative 2 and there are no short-term risks to workers, the community, and environment during implementation; Alternative 2 is ranked high for this criterion. Alternatives 3A, 3B, 4, and 6 would present comparable short-term risks to workers, the community, and the environment during implementation of the remedy, estimated at approximately 1 month. These alternatives were ranked as moderate to high for short-term effectiveness.

Alternative 5 has a moderate ranking for short-term effectiveness. The construction duration of this alternative is estimated at approximately 4 months. Because sediment would be removed, there are greater potential exposures for workers to contact the sediment. The potential risks to workers can generally be mitigated and controlled through the use of industry-standard best management practices. The removal would also result in greater short-term impact to the habitat on the sediment bed and exposure of aquatic organisms to sediments and contaminants resuspended by dredging.

The potential environmental impacts (greenhouse gas or air pollutant emissions from running equipment or vehicle emissions) and resource use (water or energy) were evaluated for each alternative. Based on the sustainability assessment, Alternative 5 had higher impacts for all of the sustainability metrics, primarily because of the material production and equipment use.

9.6 Implementability

No remedial action would be taken under Alternative 1; therefore, this criterion is not applicable. Alternative 2 is considered to have high implementability because no construction would be performed, and the services required for the monitoring component are available. Alternative 3A, 3B, 4, and 6 are considered to have moderate to high implementability. Placement of activated carbon or sand can be accomplished using established methods and these alternatives require a smaller staging area than Alternative 5. Alternatives 3A, 3B, and 4 could be implemented using standard marine construction equipment. Procurement of the carbon amendments for Alternatives 3B, 4, and 6 may require some advance lead time to allow for production.

The dredging and capping elements of Alternative 5 are field-proven technologies; however, the equipment and barges would need to be scaled to access and work within the remediation footprint near the marinas at the west end of OU2, resulting in lower production rates. This alternative would require a larger staging area than the other alternatives. Additionally, the pilings for former Piers 3, 4, and 5 were cut off at the sediment surface and the lower portion of the pier support structure remains in place, posing a significant obstacle to dredging. The implementability of Alternative 5 is considered low to moderate.

9.7 Cost

A summary of the estimated present worth cost for each alternative is provided in **Table 4**. The total estimated costs for each alternative are as follows:

- Alternative 2: $3.6 million
- Alternative 3A: $4.4 million
- Alternative 3B: $7.4 million
- Alternative 4: $7.7 million
- Alternative 5: $12.9 million
- Alternative 6: $6.9 million

9.8 State Acceptance

The District of Columbia, through DOEE, has been involved throughout the CERCLA process and proposed remedy selection. Final concurrence on the selected remedy will be solicited from the District of Columbia following the review of comments received through the public comment period.

9.9 Community Acceptance

Community acceptance will be evaluated after the close of the public comment period for the Proposed Plan.

10 Preferred Alternative

The Navy and EPA, with the support of DOEE, propose to implement ***Alternative 3B – Enhanced Natural Recovery – Activated Carbon-Amended Thin Layer Capping*** to mitigate unacceptable human health risks from exposure to PCBs through fish consumption and unacceptable ecological risks to benthic invertebrates and fish from exposure to PCBs, PAHs, and lead though direct contact with sediment. Under this alternative, a carbon-amended thin-layer sand cap will be applied to the Area 1 remediation footprint. The sand layer will reduce direct contact of aquatic organisms with COCs in sediment and serve as a marker layer separating the pre-remedy sediment bed from new sediments deposited after remedy construction. The activated carbon will adsorb PAHs and PCBs, reducing their bioavailability and movement into the water column. Contaminated sediment would not be removed from the site. Institutional controls limiting certain types of future activities, such as construction and dredging, will be implemented to minimize disruption of the carbon-amended thin-layer cap and prevent disturbance of buried contamination throughout OU2.

Alternative 3B was selected over the other alternatives because it achieves the RAOs while providing the most balanced and reliable performance across the CERCLA evaluation criteria. Unlike monitored natural recovery or thin-layer capping alone, Alternative 3B incorporates activated carbon treatment that directly reduces the bioavailability and mobility of PCBs and PAHs, offering greater long-term effectiveness and permanence. Compared to excavation, it avoids higher short-term risks, constructability challenges, and habitat disturbance. It provides active treatment at a lower cost than in situ treatment or excavation. Alternative 3B represents the best balance of effectiveness, implementability, and cost among the evaluated alternatives.

A pre-design investigation will be conducted to update the short-term proposed RG, refine the remedial footprint, and provide data needed to design the remedial action. A baseline and performance monitoring plan will be developed in accordance with the OU2 Adaptive Management Plan (CH2M, 2025). Baseline monitoring will be conducted during the pre-design investigation. Performance monitoring will be conducted after the carbon-amended thin-layer sand cap has been constructed, and monitoring data will be evaluated within an adaptive management framework to assess progress towards achieving the long-term proposed RG and conduct adaptive management decision making.

The Navy may modify the Preferred Alternative if public comments or additional data collected during pre design sampling indicate changes would yield beneficial results. The remedy will be evaluated as part of Five-Year Reviews required by CERCLA to verify that it remains protective of human health and the environment and to assess whether any additional actions are needed to achieve the RAOs and the long-term proposed RG for PCBs. The Five-Year Reviews will serve as the decision points for adaptive management decision making.

Based on information currently available, the Navy believes the Preferred Alternative meets the threshold criteria and provides the best balance of tradeoffs among the other alternatives with respect to balancing criteria. The Navy expects the Preferred Alternative to satisfy the following statutory requirements of CERCLA §121(b): 1) be protective of human health and the environment; 2) comply with ARARs (or justify a waiver); 3) be cost-effective; 4) utilize permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable; and 5) satisfy the preference for treatment as a principal element (or justify not meeting the preference).

11 Community Involvement

The Navy and EPA provide information regarding WNY cleanup to the public through public meetings, site documents made available in the public Information Repositories, WNY's Administrative Record File, and announcements published in *The Washington Post* Thursday supplement on July 9, 2026.

The 30-day public comment period for this Proposed Plan is July 13 through August 13, 2026. The public meeting will be held July 23, 2026, at 6:00 p.m. at:

The Monique Johnson Anacostia River Center at Diamond Teague Park
1520 First Street, SE
Washington, D.C. 20003

The locations of the public Information Repositories are provided on page 1 of this Proposed Plan.

The WNY Environmental Restoration public website and the Administrative Record File is found at: https://www.navfac.navy.mil/Divisions/Environmental/Products-and-Services/Environmental-Restoration/Washington/Washington-Navy-Yard/

The website can also be accessed using this QR code:

A transcript of the public meeting minutes will be included in the ROD and the Administrative Record File. All comments received during the public meeting and comment period will be summarized, and responses will be provided in the Responsiveness Summary section of the ROD, which is the document that will present the selected remedy and be included in the Administrative Record File.

Written comments can be submitted via mail or email and should be sent to the address listed in the adjacent text box.

Submit Your Comments

During the comment period, interested parties may submit written comments to the following address:

Ms. Caitlyn Dugan
NAVFAC Washington
1314 Harwood Street, Building 212
Washington, DC 20374-5018
Email: caitlyn.m.dugan.civ@us.navy.mil

For further information, you may also contact:

Mr. Robert W. Stroud
EPA Region III
Environmental Science Center
701 Mapes Road
Fort Meade, MD 20755
Email: stroud.robert@epa.gov

Mr. Nazmul Haque
District Department of Energy and Environment
1200 First Street NE, 5th Floor
Washington, D.C. 20002
Email: nazmul.haque@dc.gov

12 References

Reference documents that are available in the WNY AR File are identified by "(**AR#**)" at the end of the reference and can be searched in the AR File using that document number.

Anacostia Watershed Toxics Alliance (AWTA). 2002. *Chartering a Course Toward Restoration: A Toxic Chemical Management Strategy for the Anacostia River.* Prepared by AWTA and the Anacostia Watershed Restoration Commission (AWRC). Draft dated Oct. 7, 2002.

CH2M HILL, Inc. (CH2M). 2003. *FFA Final Near-Shore Sediment RFI Report, Washington Navy Yard, Washington, D.C.* Prepared for the Department of the Navy, Atlantic Division, Naval Facilities Engineering Command. April. (**AR# 503**)

CH2M. 2014. *FFA Final OU2 Remedial Investigation Report, Washington Navy Yard, Washington, D.C.* February. (**AR# 1648**)

CH2M. 2021. *Feasibility Study Operable Unit 2, Washington Navy Yard, Washington, D.C.* November. (**AR# 1983**)

CH2M. 2024. *FFA Final Site Management Plan Fiscal Year 2025, Washington Navy Yard, Washington, D.C.* December. (**AR# 1930**)

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Clark, Leo J., and Marilyn Gower, 1995. A Brief Review and Analysis of Heavy Metals and PCB Data, Lower Anacostia River. EPA Region III, Environmental Programs Branch. October. (**AR# 26**)

DOEE. 2019a. *Remedial Investigation Report Anacostia River Sediment Project, Washington, D.C.* Prepared by TetraTech (Sterling, VA). December.

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DOEE. 2020. *Interim Record of Decision, Early Action Areas in the Main Stem, Kingman Lake, and Washington Channel, Anacostia River Sediment Project.* September 30.

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DON. 2002. *Policy on Sediment Site Investigation and Response Action.* February 8.

Horne Engineering Services Inc. (Horne). 2003. Revised Draft Site Characterization Report for Comparative Validation of Innovative "Active Capping" Technologies, Anacostia River, Washington D.C. April.

MacDonald, D.D., C.G. Ingersoll, and T.A. Berger. 2000. "Development and Evaluation of Consensus-Based Sediment Quality Guidelines for Freshwater Ecosystems." Arch. Environ. Contam. Toxicol. Vol. 39. pp. 20–31.

Pelletier, D., V.P. Sacks, M. Sorenson, and V. Magar. 2019. Review of Remediation Goals at Contaminated Sediment Sites in the United States. Integrated Environmental Assessment and Management, Vol 15(5), pp. 772-782.

U.S. Environmental Protection Agency (EPA). 2022. *Adaptive Site Management – A Framework for Implementing Adaptive Management at Contaminated Sediment Superfund Sites.* OLEM Directive Number 9200.1-166. June.

Velinsky, D.J., B. Gruessner, C. Haywood, J. Cornwell, R. Gammisch, and T.L. Wade. 1996. Determination of the Volume of Contaminated Sediments in the Anacostia River. ICPRB Report #97-2. Interstate Commission on the Potomac River Basin, Rockville, MD.

Velinsky, D.J., J. Ashley, F. Riedel, J. Cornwall, and T.L. Wade. 2004. Final Report, River Sediment Investigation near Poplar Point in the Tidal Anacostia River, Washington, D.C. The Academy of Natural Sciences, Philadelphia, PA. August 6.

13 Glossary of Terms

Acceptable risk range: EPA's acceptable risk range for Superfund hazardous waste sites is 1×10^{-4} to 1×10^{-6}, meaning there is 1 additional chance in 10,000 (1×10^{-4}) to 1 additional chance in 1 million (1×10^{-6}) that a person will develop cancer if exposed to contaminants at a site that is not remediated.

Adaptive management: Adaptive management is a formal and systematic site or project management strategy approach centered on rigorous site planning and a firm understanding of site conditions and uncertainties. This technique, rooted in the sound use of science and technology, encourages continuous re-evaluation and management prioritization of site activities to account for new information and changing site conditions. (EPA Office of Land and Emergency Management [OLEM]. 2018. Superfund Task Force Recommendation #3: Broaden the use of Adaptive Management. Memorandum OLEM 9200.3-120. July 3).

Administrative Record File: A compilation of documents and information for CERCLA sites that is made available to the public for review.

Applicable or Relevant and Appropriate Requirements (ARARs): CERCLA Section 121 (d)(2)(A) requires that remedial actions meet any federal and state standards, requirements, criteria, or limitations that are determined to be legally applicable or relevant and appropriate.

Baseline ecological risk assessment (BERA): An evaluation of the risk posed to ecological receptors (that is, plants and animals) if remedial activities are not performed at the site.

Baseline monitoring: The process of collecting and analyzing data to characterize site conditions prior to implementing initial remedial actions.

Bioavailability: The degree and rate which a substance, such as an environmental contaminant, can be absorbed into an organism. Alternatively, the amount of a contaminant in soil or sediment that is accessible to an organism for uptake. The bioavailability of a substance is determined by its chemical properties.

Cancer risk: Cancer risks are expressed as a number reflecting the increased chance that a person will develop cancer if exposed to chemicals or substances, as described in the Human Health Risk Assessment.

Combined sewer overflow (CSO): A sewage outfall to the river that discharges a combination of stormwater and sanitary sewage during storm events, when the flows are too large for the capacity of the sewage treatment plant to handle. CSOs are often found in older urban areas where older sewer systems were designed to collect both stormwater and sanitary sewage.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA): A Federal law passed in 1980 (United States Code Title 42, Chapter 103), commonly referred to as the "Superfund" Program, that provides for cleanup and emergency response in connection with numerous existing, inactive hazardous substance disposal sites that endanger public health and safety or the environment. CERCLA was amended by the Superfund Amendments and Reauthorization Act (SARA) in 1986.

Conceptual site model (CSM): A written or graphic description of the understanding of the physical characteristics and environmental setting of a site, including the contaminated media, fate and transport mechanisms of contaminant movement, and potential risk receptors.

Constituent of concern (COC): A contaminant that contributes risk or hazard above acceptable levels to a receptor.

Constituent of potential concern (COPC): A contaminant that potentially contributes risk to a receptor.

District of Columbia (D.C.) Department of Energy and Environment (DOEE): The District of Columbia department responsible for administration and enforcement of local environmental statutes and regulations, among other responsibilities.

Excess lifetime cancer risk (ELCR): Potential carcinogenic effects that are characterized by estimating the probability of cancer incidence in a population of individuals for a specific lifetime from projected intakes (and exposures) and chemical-specific dose-response data.

Exposure pathway(s): The route(s) a substance takes from its source (where it began) to its end point (where it ends), and how people can come into contact with (or get exposed to) it. An exposure pathway has five parts: a source of contamination (such as an abandoned business); an environmental media and transport mechanism (such as movement through groundwater); a point of exposure (such as a private well); a route of exposure (eating, drinking, breathing, or touching), and a receptor population (people potentially or actually exposed). When all five parts are present, the exposure pathway is termed, a completed exposure pathway.

Feasibility study (FS): A document that evaluates the proposed approaches for remediating a site against specific criteria.

Hazard index (HI): The sum of the hazard quotients (the ratio of the potential exposure to a substance and the level at which no adverse effects are expected) for substances that affect the same target organ or organ system. Because different pollutants may cause similar adverse health effects, it is often appropriate to combine hazard quotients associated with different substances. An HI above 1 does not necessarily mean that adverse effects will occur, only that they can no longer be ruled out.

Hot spots: Areas of sediment contamination with concentrations significantly greater than surrounding areas.

Human health risk assessment (HHRA): A qualitative and quantitative evaluation of the risk posed to human health by the presence of specific pollutants. Elements include: identification of the hazardous substances present in the environmental media, assessment of exposure and exposure pathways, assessment of the toxicity of the site's hazardous substances, and characterization of human health risks.

Information Repository: A location where electronic versions of the site-related documents (the Navy documents listed in the reference section) can be accessed and reviewed by the public. Paper copies of the Proposed Plan are also available for review.

In Situ treatment with activated carbon: A remediation technique that involves the introduction of activated carbon to the sediment for the purpose of preventing contaminants from entering the food chain (that is, reducing bioavailability). In the case of PCBs and PAHs, these components will strongly adsorb, or chemically attach to, carbon resulting in organisms being unable to uptake the chemical.

Land use or institutional controls: A response action that restricts land use through administrative and/or legal controls and/or engineering controls such as signs or fences.

Media (singular, Medium): Soil, groundwater, surface water, or sediment at a site.

Municipal separate storm sewer system (MS4): A District of Columbia-owned sewer system and outfall that receives only stormwater runoff (as compared to a Combined Sewer that receives both stormwater and sanitary sewage).

National Oil and Hazardous Substances Pollution Contingency Plan (NCP): The Federal regulations (Code of Federal Regulations [CFR], Volume 40, Page 300 [40 CFR 300]) that guide determination of the sites to be corrected under both the Superfund (CERCLA) program and the program to prevent or control spills into surface waters or elsewhere.

National Priorities List (NPL): A list developed by EPA of uncontrolled hazardous substance release sites in the United States that are considered priorities for long-term remedial evaluation and response.

National Pollutant Discharge Elimination System (NPDES): The National Pollutant Discharge Elimination System (NPDES) permit program addresses water pollution by regulating point sources that discharge pollutants to waters of the United States.

No Action: The situation in which no cleanup action would be taken.

Performance monitoring: The process of collecting and analyzing data to assess progress towards achieving long-term goals.

Polychlorinated biphenyls (PCBs): A family of man-made chemicals that were produced from 1929 until they were banned in 1979. They were used in electrical, heat transfer, and hydraulic equipment; as plasticizers in paints, plastics and rubber products; in pigments, dyes, and carbonless copy paper; and many other industrial applications.

Polycyclic aromatic hydrocarbons (PAHs): A group of organic compounds occurring naturally in coal, crude oil, and gasoline. They are produced as byproducts of fossil fuel burning, forest fires, and various industrial processes. PAHs are found in products such as creosote, coal tar, and asphalt, and are used in the manufacture of dyes, plastics, and pesticides.

Probable effects concentration: The concentration above which adverse effects are expected to occur more often than not.

Proposed Plan: A document that presents the preferred remedial alternative and requests public input regarding its proposed selection.

Proposed remediation goals (proposed RGs): Concentrations of COCs used to determine the need for remedial action. Proposed RGs can be based on site-related background conditions or unacceptable human health and ecological risks.

Pre-design investigation: Field or laboratory investigations performed before or during the early stages of remedial design to collect data required to complete the design.

Preferred Alternative: With respect to the nine criteria specified in the NCP for evaluating remedial alternatives, the Preferred Alternative is the proposed remedy that meets the threshold criteria and is deemed to provide the best balance of tradeoffs among the other alternatives with respect to the balancing and modifying criteria.

Public comment period: A time for the public to review and comment on various documents and actions taken by the Navy, EPA, or DOEE. A minimum 30-day comment period is held to allow community members an opportunity to review the documents related to the site, which are provided in the Information Repositories, and review and comment on the Proposed Plan.

Reasonable maximum exposure (RME): The highest exposure to risk/hazard that is reasonably expected to occur at a site. RME is developed using an EPA calculation that combines upper-bound and mid-range exposure factors so that the result represents an exposure scenario that is both protective and reasonable, not the worst possible case.

Receptors: Humans, animals, or plants that may be exposed to contaminants from a given site.

Record of Decision (ROD): A legal document that describes the cleanup action or remedy selected for a site, the basis for choosing that remedy, and reflects the public comments that were considered regarding the selected remedy.

Remedial action objective (RAO): General descriptions of what the cleanup is expected to accomplish. The RAOs provide the basis for the development of numerical remediation goals, which are used to identify the extent of the cleanup needed to achieve the RAOs.

Remedial Alternative: A combination of tools and approaches that can be used to address contamination at a site to meet the remedial action objectives.

Remedial investigation (RI): A study in support of the selection of a remedy at a site where hazardous substances have been released. The RI identifies the nature and extent of contamination and assesses human health and ecological risk associated with the contamination.

Response action: As defined by CERCLA, a removal or remedial action, including related enforcement activities.

Responsiveness Summary: A document that summarizes and responds to significant public comments, and new information submitted during the public comment period on the Proposed Plan.

Superfund: The program operated under CERCLA legislative authority that carries out solid waste, emergency, and long-term removal and remedial activities. These activities include investigating sites for inclusion on the NPL, determining site priority, and conducting and/or supervising the cleanup and other remedial actions.

Surface-weighted average concentration (SWAC): A weighted average of sample results used to estimate the average concentration over a specified area.

Thiessen polygons: Polygons whose boundaries define the area that is closest to each point relative to all other points. The boundaries are mathematically defined by the perpendicular bisectors of the lines between all points. A value for that point (for example, chemical concentration) can be spatially weighted based on the area it represents.

Unacceptable risk: As related to human health, it refers to risk that exceeds EPA's acceptable range for Superfund hazardous waste sites of 1×10^{-4} to 1×10^{-6} for cancer risk. For effects other than cancer, an unacceptable hazard is typically a Hazard Index above 1.

Notes

Please print your comments here and/or return via one of the methods listed below

Name: _____

Affiliation (group/agency): _____

Address: _____

_____

_____

Submit comments or questions by mail or email to:

NAVFAC Washington
Attention: Code EV3/Navy Yard RPM
1314 Harwood Street, Building 212
Washington, D.C. 20374-5018
caitlyn.m.dugan.civ@us.navy.mil

NAVFAC Washington
Attention: Code EV3/Navy Yard RPM
1314 Harwood Street, Building 212
Washington, D.C. 20374-5018

Public Comment Period: **July 13–August 13, 2026**

Public Meeting: **July 23, 2026, at 6:00 p.m.**