USCG PROPOSED DREDGE ACTIVITIES AT USCG YARD IN BALTIMORE, MARYLAND, DRAFT ENVIRONMENTAL ASSESSMENT

The Draft Environmental Assessment (EA) for the United States Coast Guard (USCG) Proposed Dredge Activities at USCG Yard (CG Yard) in Baltimore has been prepared in accordance with the requirements of the National Environmental Policy Act (NEPA) (42 U.S. Code [USC]); Council on Environmental Quality (CEQ) *Regulations for Implementing NEPA* (40 Code of Federal Regulations [CFR] Parts 1500-1508); Department of Homeland Security Management Directive 023-01; and Coast Guard Commandant Instruction (COMDTINST) M16475.1D, *National Environmental Policy Act Implementing Procedures and Policy for Considering Environmental Impacts.*

This Draft EA serves as a concise public document to briefly provide sufficient evidence and analysis for determining the need to prepare an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI). This Final EA concisely describes the Proposed Action, the need for the Proposed Action, alternatives, and the environmental impacts of the Proposed Action and alternatives. This Draft EA also contains a comparative analysis of the action and alternatives, a statement of the environmental significance of the preferred alternative, and a list of the agencies and persons consulted during the Draft EA preparation.

	Environmental Engineer	Level I
Charles Maricic Document Reviewer	Title/Position	NEPA Warrant Program

I reviewed the Draft EA and submitted my comments to the Proponent.

	Chief of Environmental Compliance	Level II
Gregory Carpenter Environmental Reviewer & Senior Environmental Professional	Title/Position	NEPA Warrant Program

In reaching my decision/recommendation for the USCG's Proposed Action, I considered the information contained in this Draft EA and considered the written comments submitted to me from the Environmental Reviewer(s).

	Facility Engineer US Coast Guard Yard
CDR John M. Lisko, P.E. Proponent	Title/Position

United States Coast Guard Finding of No Significant Impact (FONSI) for Proposed Dredge Activities at USCG Yard

The U.S. Coast Guard (USCG) proposes to perform maintenance and improvement dredging at the USCG Yard (CG Yard) in Baltimore, Maryland. Proposed dredging would occur offshore in Curtis Creek, and would include the Shiplift area and turning basin in front of the CG Yard, the vessel berth areas between Piers 1, 2, and 3, and the navigation channel from the CG Yard to the Interstate 695 bridge (i.e., Bascule Bridge). The Preferred Action Alternative is described in the Final Environmental Assessment (EA). The overarching need for the Proposed Action is to provide the necessary water depths to operate the Syncrolift facility located in the Shiplift area, which is used for maintenance and repair at the CG Yard; and to address insufficient water depths within the navigation channel to accommodate the new Offshore Patrol Cutter and National Security Cutter. The USCG proposes to complete dredging in order maintain the viability of the Syncrolift facility, support the operation and service of the new cutters, and meet USCG mission requirements. As the only USCG shipyard, the CG Yard needs to be accessible and have the appropriate facilities to conduct maintenance of its own fleet.

Summary of the results of the environmental impact evaluation: The Draft EA prepared for this proposal presents the purpose and need for the action, the Proposed Action and its alternatives, adescription of the affected environment, and an analysis of direct and indirect environmental consequences. Based on the findings of the Draft EA, the USCG concluded no significant impacts would result from implementing the Proposed Action (Preferred Action Alternative) evaluated in the Draft EA. In addition, there is no practicable alternative to construction of the Proposed Action within a floodplain, per Executive Order 11988.

Mitigation commitments that will be implemented to reduce otherwise significant impacts: The USCG will comply with all regulatory requirements, conservation recommendations, and best managementpractices (BMPs) as described in the Draft EA to eliminate or reduce adverse impacts, ensuring that no significant adverse impacts will occur. The USCG would obtain an Individual Permit and Section 408 Permission form the US Army Corps of Engineers and a Water Quality Certification and Tidal Wetlands License from the Maryland Department of the Environment to address potential impacts from proposed dredge activities. In addition, the USCG is coordinating with the National Marine Fisheries Service regarding potential impacts to essential fish habitat, and will implement the provided conservation recommendations.

This FONSI is based on the attached contractor-prepared Draft EA that has been independently evaluated by the USCG and determined to adequately and accurately discuss the environmental issues and impacts of the Proposed Action and its alternatives, and provides sufficient evidence and analysis for determining that an Environmental Impact Statement is not required. USCG takes full responsibility for the accuracy, scope, and content of the attached contractor-prepared Draft EA.

I reviewed the Draft EA, which is the basis for this FONSI, and submitted my comments to the Proponent.

	Environmental Engineer	Level I
Charles Maricic Environmental Reviewer	Title/Position	NEPA Warrant Program

I reviewed the Draft EA, which is the basis for this FONSI, and submitted my comments to the Proponent.

	Chief of Environmental Compliance	Level II
Gregory Carpenter Environmental Reviewer & Senior Environmental Professional	Title/Position	NEPA Warrant Program

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In reaching my decision/recommendation for USCG's Proposed Action, I considered the information contained in this Draft EA/FONSI and considered the written comments submitted to me from the Environmental Reviewer(s). Based on the information in the Draft EA and this FONSI document, I agree that the Proposed Action as described above, and in the Draft EA, will have no significant impact on the environment.

	Facility Engineer US Coast Guard Yard
CDR John M. Lisko, P.E. Proponent	Title/Position

DRAFT

Environmental Assessment (EA)

Proposed Dredge Activities at the U.S. Coast Guard Yard, Baltimore, Maryland

A/E CONTRACT NUMBER: 70Z05018DAECOMT06

TASK ORDER NUMBER: 70Z08320RADM00400

US COAST GUARD
FACILITIES ENGINEERING COAST GUARD YARD
2401 HAWKINS POINT ROAD
BALTIMORE, MARYLAND 21226

AECOM
430 National Business Parkway
Annapolis Junction, MD 20701

November 2022

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Acronyms and Abbreviations

°F	degrees Fahrenheit
APE	Area of Potential Effects
BMP	Best Management Practice
CAA	Clean Air Act
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CG Yard	US Coast Guard Yard
COMAR	Code of Maryland Regulations
COMDTINST	Coast Guard Commandant Instruction
CO	carbon monoxide
CWA	Clean Water Act
CY	Cubic Yards
CZMA	Coastal Zone Management Act
CZMP	Coastal Zone Management Program
dB	decibel
dBA	A-weighted decibel scale
DHS	Department of Homeland Security
DMCF	Dredge Material Containment Facility
EA	Environmental Assessment
EFH	Essential Fish Habitat
EIS	Environmental Impact Statement
EO	Executive Order
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FONSI	Finding of No Significant Impact
FWCA	Fish and Wildlife Coordination Act
FY	Fiscal Year

GHG	greenhouse gas
HAP	hazardous air pollutant
HTMW	hazardous and toxic materials and wastes
I	Interstate
IDA	Intensely Developed Area
IPaC	Information for Planning and Consultation
MD	Maryland
MDE	Maryland Department of the Environment
MDNR	Maryland Department of Natural Resources
MDOT	Maryland Department of Transportation
mg/L	milligrams per liter
MHT	Maryland Historical Trust
MIHP	Maryland Inventory of Historic Places
MPA	Maryland Port Administration
MSA	Magnuson-Stevens Fishery Conservation and Management Act
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act
NEPA	National Environmental Policy Act
NESHAP	National Emission Standards for Hazardous Air Pollutants
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NOA	Notice of Availability
NOAA	National Oceanic Atmospheric Administration
NOI	Notice of Intent
NO_x	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places

NSC	National Security Cutter
NWI	National Wetland Inventory
O_3	ozone
OPC	Offshore Patrol Cutter
OSHA	Occupational Safety and Health Administration
PAH	Polycyclic Aromatic Hydrocarbon
Pb	lead
PCB	polychlorinated biphenyl
PFAS	Per- and Polyfluoroalkyl Substances
PM	particulate matter
POS	Period of Significance
RCI	residential, commercial, and industrial
RCRA	Resource Conservation and Recovery Act
SHPO	State Historic Preservation Officer
SO_2	sulfur dioxide
T&E	threatened and endangered
TMDL	Total Maximum Daily Load
tpy	tons per year
TSS	Total Suspended Solids
US	United States
USACE	US Army Corps of Engineers
USC	US Code
USCG	US Coast Guard
USDA	US Department of Agriculture
USDOT	US Department of Transportation
USEPA	US Environmental Protection Agency
USFWS	US Fish and Wildlife Service
VOC	volatile organic compound

WOUS	Waters of the US
WQC	Water Quality Certification

1.0 Purpose of and Need for the Proposed Action

1.1 Introduction

This Environmental Assessment (EA) evaluates the proposal by the United States (US) Coast Guard (USCG) to conduct dredging activities at the USCG Yard (herein referred to as CG Yard) in Baltimore, Maryland (MD). The EA analyzes the potential environmental, socioeconomic, cultural, and physical impacts associated with the Proposed Action in accordance with the National Environmental Policy Act of 1969 (NEPA; 42 United States Code [USC] §§ 4321 et seq.), the President's Council on Environmental Quality (CEQ) *Regulations Implementing the Procedural Provisions of NEPA* (40 Code of Federal Regulations [CFR] Parts 1500 – 1508), Department of Homeland Security (DHS) Management Directive 023-01 (*Implementation of NEPA*), and the Coast Guard Commandant Instruction (COMDTINST) M16475.1D (*National Environmental Policy Act Implementing Procedures and Policy for Considering Environmental Impacts*).

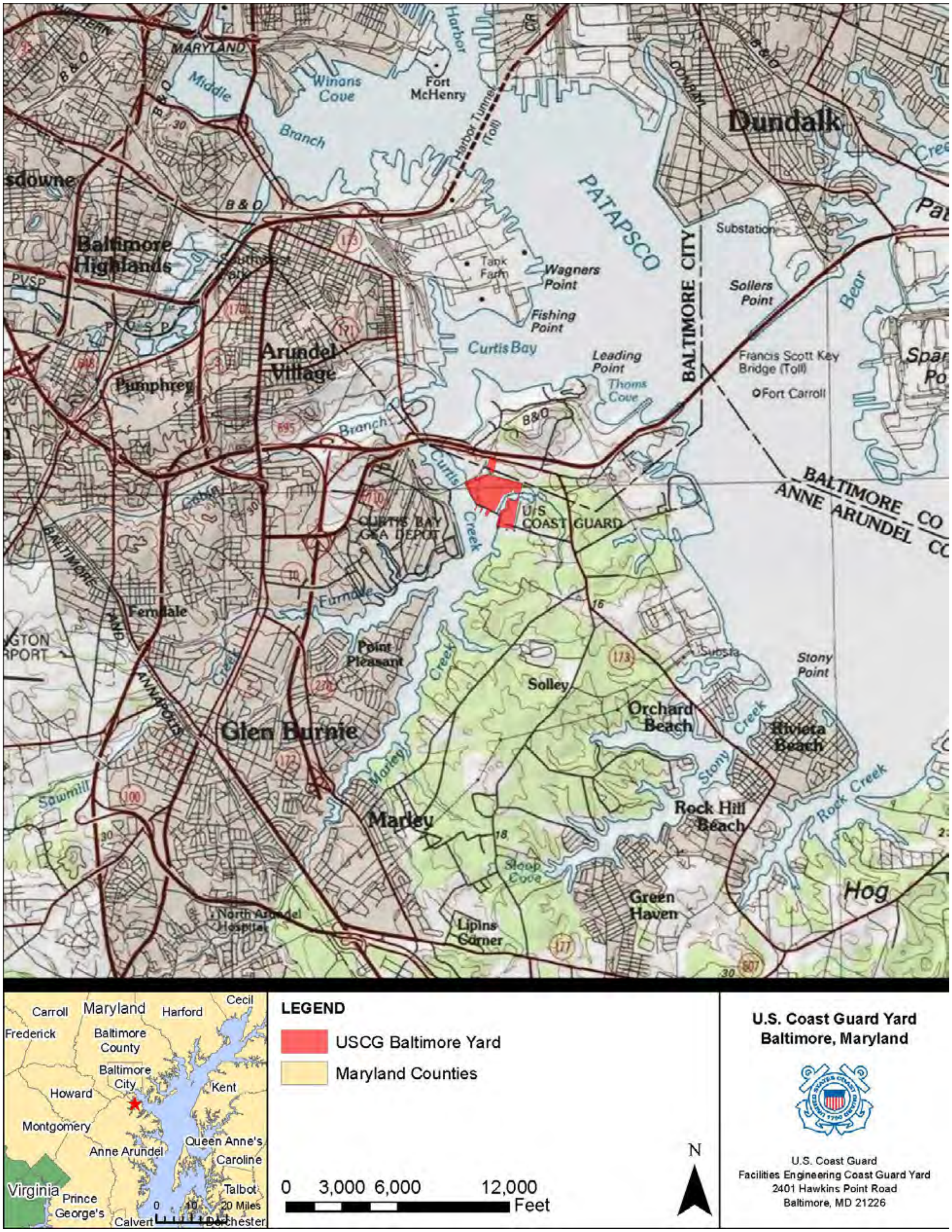
1.2 Background

The USCG is proposing to perform maintenance dredging in the CG Yard Shiplift area and improvement dredging in an area extending from the Interstate (I)-695 bridge (i.e., the Bascule Bridge) to the CG Yard's Pier 3. The CG Yard, located predominantly in Anne Arundel County, is a 113-acre campus situated approximately 10 miles south of downtown Baltimore, MD (**Figure 1-1**). The Proposed Action area would occur offshore in Curtis Creek, and would include the Shiplift area and turning basin in front of the CG Yard, the vessel berth areas between Piers 1, 2, and 3, and the navigation channel from the CG Yard's Pier 3 to Bascule Bridge. Curtis Creek is a tributary of the Patapsco River, and the Chesapeake Bay is approximately 6 miles east of the CG Yard. The surrounding land in the vicinity of the Proposed Action area is generally heavily developed and industrialized.

The CG Yard has operated continuously since 1899 and is the sole USCG-operated shipyard in the US. The primary mission of the CG Yard is to maintain and repair USCG vessels. The CG Yard's capabilities include:

- Repair, retrofit, and renovation of cutters and boats, as well as various navigational aids;
- Production of unique Coast Guard items;
- Essential engineering, logistics, and technical information support;
- Industrial planning and estimating support;
- Industrial experience to the naval engineering community;
- Casualty response support to the fleet;
- Design and production engineering;
- Electronic overhauls;
- Establishing and maintaining component repairable production lives; and
- Prototype development (USCG Yard, 2007).

Figure 1-1: Project Location



1.2.1 Historic Dredging Activities

Baltimore Harbor, and more specifically Curtis Creek, consists of previously disturbed marine porting areas used heavily for industrial and docking activities. In support of such activities, these waters have been routinely dredged since at least 1917, resulting in additional disturbances (USACE, 1989). More recently, a 20-year dredging plan for Baltimore Harbor was completed in 2005, which proposed maintenance dredging by the US Army Corps of Engineers (USACE) of approximately 51,000 cubic yards (CY) in Curtis Creek every five years until 2025 (USACE, 2005). In addition to dredging performed by USACE, the CG Yard has also completed its own dredge projects, with the most recent occurring in 2012, and which permitted excavation of 7,500 CY of material (MPA, 2012). Historically, the navigation channel has been dredged to depths up to 37 feet during these projects, with the majority of the channel having a historic depth of 22 feet (USACE, 1989).

1.2.2 Syncrolift Facility

The Syncrolift Facility, located within the CG Yard's Shiplift area next to Pier 3, provides dry-dock capabilities to support maintenance and renovations on USCG cutters. The Syncrolift was constructed in 1996 at a water depth of 34.5 feet; it is one of the main components of the CG Yard's shiplift system, which also contains finger piers and a land transfer area (USCG, 2015). The Syncrolift is a vertical lift used to raise ships out of the water and transfer them to the land-based transfer area for dry-dock maintenance. It includes 24 electrical winches mounted on two 340-foot-long finger piers, which raise and lower a 325-foot long by 54-foot wide steel platform with rail "docking carts." When the platform is lowered in the water, the ship floats over top and is lifted out of the water positioned on the docking carts, which then transfer the ship from the Syncrolift to the land-based area (USCG, 2015).

The Syncrolift can accommodate a maximum ship length of 400 feet, and is generally used for vessels longer than 110 feet, as smaller vessels can be easily dry-docked elsewhere at the CG Yard. While the Syncrolift can only raise one vessel at a time, its configuration with the rest of the shiplift system allows four vessels to be dry-docked at any given time. It is estimated that the shiplift system, including the Syncrolift, has 15 years of service life remaining (USCG, 2015). Currently, the average water depth surrounding the Shiplift area is approximately 23 feet. Maintenance dredging is needed to return the Shiplift area to its historic depth of 34.5 feet, and to support the continued operation of the Syncrolift facility.

1.2.3 Offshore Patrol Cutter and National Security Cutter

The USCG is currently working to recapitalize its existing fleet, including replacing smaller vessels with newer, larger, more complex ships. The proposed acquisition of a new cutter, the Offshore Patrol Cutter (OPC), over the next decade would replace the current fleet of 210-foot and 270-foot Medium Endurance Cutters (USCG, 2019b). The National Security Cutters (NSC) are another new class of cutter recently introduced by the USCG. The CG Yard needs to update its infrastructure to be capable of supporting and dry-docking these cutters (USCG, 2019b).

Improvement dredging from Bascule Bridge to the CG Yard's Pier 3 would create navigable channels for the OPC and NSC, and would support the future on-site maintenance and repair of the vessels. **Table 1-1** lists the size characteristics of both the OPC and NSC.

Table 1-1: OPC and NSC Characteristics

OPC		NSC	
Category	**Detailed Characteristics**	**Category**	**Detailed Characteristics**
Length	360 feet overall, 340 feet at waterline	Length	418 feet
Beam	54 feet	Beam	54 feet
Draft	17 feet	Draft	22 feet, 6 inches

1.3 Purpose and Need

The purpose of the Proposed Action is to 1) maintain the viability of the Syncrolift Facility, 2) support the long-term operation and service of new OPCs and NSCs, and 3) meet USCG mission requirements at the CG Yard.

The Proposed Action is needed to provide the necessary in-water improvements in support of the Syncrolift. Currently, accumulated sediment in the vicinity of the Syncrolift facility inhibits successful operation of the mechanism. Water depths need to be dredged to levels consistent with its historic depth (34.5 feet) and original construction in 1996. The current average water depth surrounding the Shiplift area is 23 feet. The Syncrolift facility, which connects to the CG Yard's upland rail system, is used currently for the majority of dry dock repair and maintenance work performed at the CG Yard. As the only USCG shipyard, the CG Yard needs to be accessible by USCG vessels and have the appropriate facilities to conduct maintenance of these vessels to meet USCG mission requirements.

The Proposed Action is also needed to address insufficient water depths within the navigation channel to accommodate the new OPCs and NSCs. Water depths in the channel from the I-695 Bridge, the turning basin in front of the CG Yard within Curtis Creek, and the vessel berth area between Piers 1, 2, and 3 do not currently allow for effective navigation of the new USCG cutters and their associated draft (up to approximately 27.5 feet). Current average water depths in the channel, turning basin, and vessel berth area are 23 feet, 22 feet, and 26.5 feet, respectively. If the Proposed Action is not implemented, the OPCs and NSCs would not be able to access the CG Yard for maintenance and repair work. The CG Yard not having sufficient capacity or infrastructure to service its own fleet would jeopardize the ability of the USCG to meet mission requirements.

1.4 Scope of the EA

This EA evaluates the potential environmental, cultural, socioeconomic, and physical effects of implementing the Proposed Action and reasonable alternatives. A detailed description of the

Proposed Action is provided in **Section 2.2**. In accordance with NEPA and CEQ Regulations, this EA considers one Dredge Alternative for implementing the Proposed Action: the Preferred Action Alternative. The Preferred Action Alternative was developed based on the USCG's three planning factors (described in **Section 2.3.1**). The No Action Alternative is also evaluated, as required by CEQ Regulations and COMDTINST M16475.1D. A full description of the Preferred Action Alternative and the No Action Alternative is provided in **Section 2.3**.

In accordance with CEQ Regulations, the USCG conducted internal and external scoping, including coordination with pertinent regulatory agencies, to "identify and eliminate from detailed study the issues which are not significant or which have been covered by prior environmental review (40 CFR Part 1506.3), narrowing the discussion of these issues in the statement [EA] to a brief presentation of why they will not have a significant effect on the human environment or providing a reference to their coverage elsewhere" (40 CFR Part 1501.7(a)(3)). This approach is consistent with NEPA and CEQ Regulations.

Through this process, the USCG determined that the Technical Resource Areas requiring in-depth evaluation within this EA are: *Soils, Air Quality and Climate, Noise, Hazardous and Toxic Materials and Wastes (HTMW), Coastal Resources, Water Resources, Biological Resources, Cultural Resources*, and *Vessel Traffic and Navigation*. These Technical Resource Areas are described in **Section 3.0** and evaluated in **Section 4.0**. Technical Resource Areas not expected to experience meaningful effects and, therefore, not evaluated in this EA include: *Land Use and Zoning, Socioeconomics, Environmental Justice, Utilities, Geology and Topography, Terrestrial Environment, Floodplains*, and *Traffic and Transportation*. A brief discussion of these resources is provided in **Section 3.1**.

1.5 Regulatory Framework

The EA has been prepared in accordance with NEPA, CEQ Regulations, DHS Management Directive 023-01, and COMDTINST M16475.1D. The information and analysis contained in this EA will serve as the basis for the USCG's decision-making process for the Proposed Action.

The primary legislation affecting the decision-making process associated with this Proposed Action is NEPA. NEPA requires that Federal agencies consider potential environmental consequences of their proposed actions. The law's intent is to protect, restore, or enhance the environment through well-informed Federal decisions with public input. The CEQ was established under NEPA for the purpose of implementing and overseeing Federal policies as they relate to this process. In 1978, the CEQ issued *Regulations for Implementing the Procedural Provisions of the NEPA* (40 CFR Parts 1500-1508). These regulations specify that an EA be prepared to:

- Briefly provide sufficient analysis and evidence for determining whether to prepare an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI), the latter of which is the "decision document" that closes the EA process when no unavoidable significant impacts are identified;

- Aid in an agency's compliance with NEPA when no EIS is necessary; and
- Facilitate preparation of an EIS when one is necessary.

Further, to comply with other relevant environmental requirements (e.g., Endangered Species Act [ESA], National Historic Preservation Act [NHPA], Clean Water Act [CWA], etc.) in addition to NEPA, and to assess potential environmental impacts, the decision-making process for the Proposed Action involves a thorough examination of all environmental issues pertinent to the Proposed Action. Federal, State, and local regulations and requirements, as well as Executive Orders (EOs) and USCG- and DHS-specific regulations, relevant to the Technical Resource Areas of concern for this Proposed Action are presented in **Sections 3.0 and 4.0**, as appropriate. Please refer to those sections for further information.

1.6 Agency and Public Involvement Process

Pursuant to the requirements of NEPA (40 CFR 1506.6), the EA will be subject to public involvement. Consideration of the views of and information provided by all interested persons promotes open communication and enables better decision-making. Agencies, organizations, and members of the public with a potential interest in the Proposed Action, including minority, low-income, and disadvantaged groups, are encouraged to participate. A record of public involvement, agency coordination, and Native American consultation associated with this EA is provided in **Appendices A** and **B**. Refer to **Section 9.0** for a complete list of agencies and individuals consulted in support of analyses conducted during preparation of this EA.

1.6.1 Public Review

The USCG, as the proponent of the Proposed Action, published a Notice of Availability (NOA) in the *Baltimore Sun* on November 12, 2022, announcing the availability of the Draft EA for a 30-day public review and comment period beginning November 12, 2022. Review copies are also available for public review at the Anne Arundel County Public Library – Brooklyn Park Community Branch. An additional public review period will be held following the publication of the Final EA and Draft FONSI. If it is determined that implementation of the Proposed Action would result in significant impacts, the USCG will either not implement this action as proposed, or will publish in the Federal Register a Notice of Intent (NOI) to prepare an EIS.

1.6.2 Agency Coordination/Consultation

Interagency and intergovernmental coordination is a federally mandated process for informing and coordinating with other governmental agencies regarding Federal Proposed Actions. CEQ Regulations require intergovernmental notifications prior to making any detailed statement of environmental impacts. This coordination also fulfills requirements under EO 12372 (*Intergovernmental Review of Federal Programs*; superseded by EO 12416, and subsequently supplemented by EO 13132), which requires Federal agencies to cooperate with and consider state and local views in implementing a Federal proposal.

Agencies and local entities consulted for this EA include the USACE, US Fish and Wildlife Service (USFWS), US Environmental Protection Agency (USEPA), National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service (NMFS), Federal Emergency Management Agency (FEMA), US Department of Transportation (USDOT), Maryland Historical Trust (MHT), Maryland Department of Natural Resources (MDNR), Maryland Department of the Environment (MDE), Maryland Department of Planning, Maryland Port Administration (MPA), Anne Arundel County Department of Planning and Zoning, City of Baltimore, and Preservation Maryland. Agency information and comments have been incorporated into this EA as appropriate. A copy of relevant correspondence and agency responses can be found in **Appendix A** and **B**.

1.6.3 Native American Tribe Consultation

Native American tribes were invited to participate in the EA and NHPA Section 106 processes as Sovereign Nations in accordance with EO 13175, *Consultation and Coordination with Indian Tribal Governments* (2000). The USCG determined that the Delaware Tribe of Indians and the Delaware Nation, Oklahoma are the only federally recognized tribes with possible ancestral ties to the Project Area. Both tribes were invited to consult on 9 December 2021. A copy of relevant correspondence and the tribe's response can be found in **Appendix B**.

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2.0 Description of the Proposed Action and Alternatives

2.1 Introduction

NEPA, CEQ Regulations, and COMDTINST M16475.1D require all reasonable alternatives to be explored and objectively evaluated. This EA presents an in-depth examination of two alternatives: the Preferred Action Alternative and the No Action Alternative, which are described in detail in **Section 2.3.2**. The development of alternatives and the screening criteria established are presented in **Section 2.3.1**. Alternatives were eliminated from further consideration when they did not meet one or more of the screening criteria identified (see **Section 2.3.3**).

2.2 Proposed Action

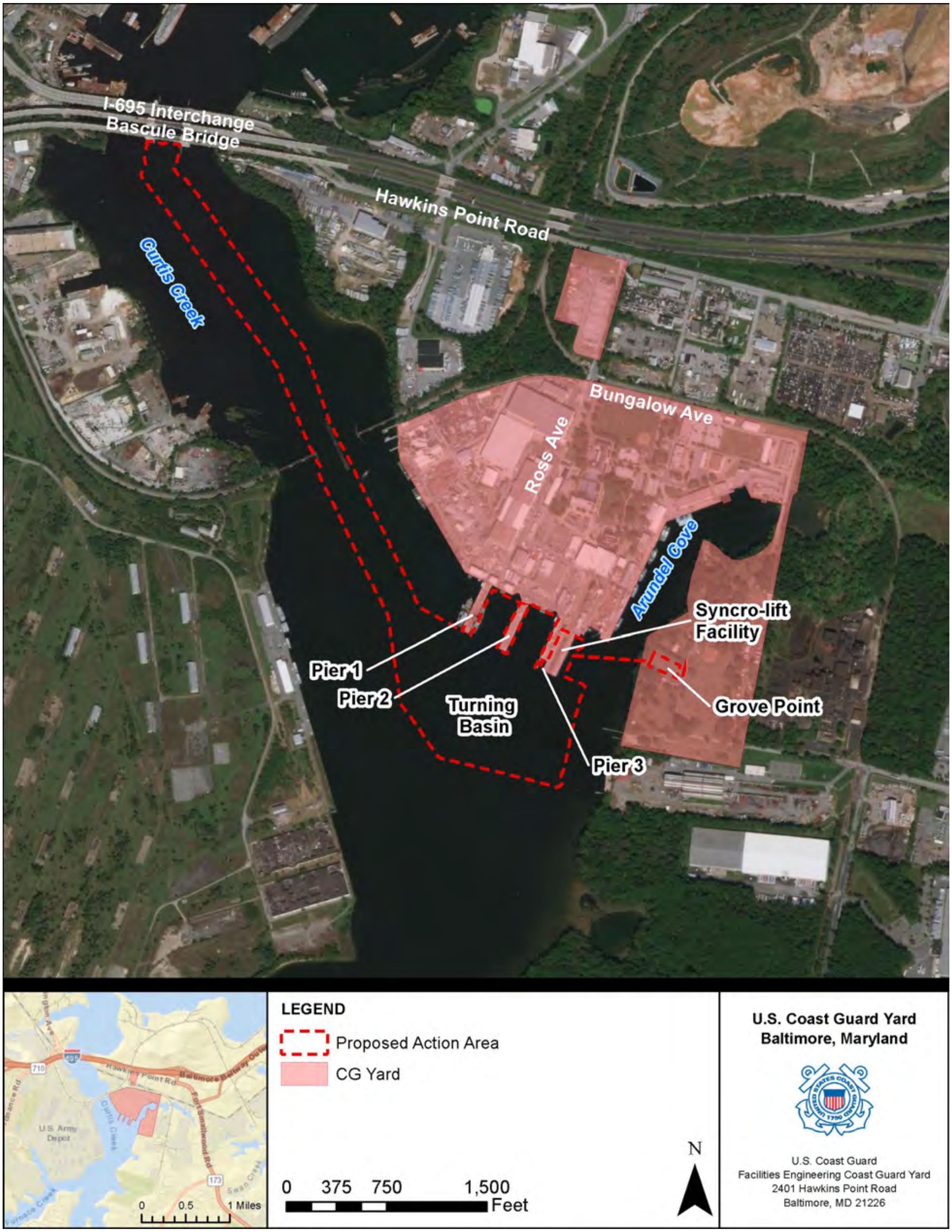
The Proposed Action consists of two types of dredging activities: (1) maintenance dredging via hydraulic dredging in support of the Syncrolift facility; and (2) improvement dredging via mechanical dredging in navigational channels that would be used by the OPC and NSC. Dredging activities would span a total of 8 months over the course of three years given capacity restrictions of the dredge material containment facility (DMCF) used for disposal, and would begin in fiscal year (FY) 2023. Components of the Proposed Action are described in further detail in the sections below. **Appendix E** contains the proposed dredge plan figures.

2.2.1 Maintenance Dredging

Proposed maintenance dredging would occur in the CG Yard’s Shiplift area next to Pier 3 to dredge the area to its historic depth of 34.5 feet (**Figure 2-1**). This depth would ensure that the Syncrolift facility could continue to operate as intended, and would provide sufficient depth to use the lift. Maintenance dredging would be performed via hydraulic dredging, which uses a suction pipe and dredge drag head along the bottom of the channel to collect sediments and bring them into a conveyance pipeline for transport. The dredged slurry would then either be transported to an upland site for dewatering, or would be immediately transferred to a barge for transport and disposal.

The upland sediment dewatering site would be at Grove Point within the CG Yard, an available green space located to the east of Arundel Cove. The conveyance pipeline used to transport the dredged slurry to Grove Point would be located adjacent to the dredge barge, and would be submerged and anchored to the bottom where it crosses Arundel Cove, for a distance of approximately 550 linear feet, to accommodate vessel activity. Upon exiting Arundel Cove, it would be placed upon 30 linear feet of wetland until reaching the upland dewatering site.

Figure 2-1: Proposed Action and Preferred Action Alternative



The slurry material would be dewatered through use of a geo-synthetic tube, which allows water to drain while the remaining sediment solidifies (TenCate, 2013). Berms and impermeable liners would be installed to contain water collected during dewatering, which would likely need to be treated prior to discharge into Curtis Creek. This process can take several months; once the dredge material is dry and consolidated, the solid dredge spoils would be tested for contaminants and transported from the CG Yard via truck to the Masonville DMCF, operated by the Maryland Environmental Service, for proper storage and disposal. Off-site disposal would occur in compliance with all required permits and approvals, including the Maryland Department of Transportation (MDOT) MPA Right of Entry permit.

The Masonville DMCF is located approximately 3.5 miles northwest of the CG Yard, adjacent to Masonville Cove. Approximately 700 truck trips with about 20 trucks would be required to transport the entirety of the dredged material. Each truck would be able to complete about four full trips per day, resulting in approximately 80 trips from the CG Yard to Masonville DMCF per day. It is estimated to take between two to four weeks to transport the entirety of the solid dredge spoils to the DMCF. Following dewatering and the disposal of the dredge spoils, the used geo-synthetic tubes and liners would be transported to a landfill for disposal.

Dredge spoils may also be immediately transported to Masonville DMCF via barge following removal from the Shiplift area. The dredge material would be hydraulically pumped through a conveyance pipeline directly onto a nearby barge for disposal. The disposal method would be determined prior to the start of the dredging activities.

Approximately 7,449 CY of material would be dredged from the Shiplift area. Maintenance dredging activities would be able to remove up to 2,000 CY of dredge material per day. This component of the Proposed Action would begin in FY 2023.

2.2.2 Improvement Dredging

Proposed improvement dredging would occur in an area extending from the Bascule Bridge to the CG Yard’s Pier 3, including the ship berth areas between Piers 1, 2, and 3, and the turning basin in front of the shipyard within Curtis Creek (**Figure 2-1**). No dredging would occur beneath the Bascule Bridge. The proposed dredge area would be dredged up to a depth of 27.5 feet to provide a navigational channel of sufficient depth to support the new OPCs and NSCs the USCG is planning to acquire. The depth of the majority of the navigation channel historically has been approximately 22 feet; the additional depth under the Proposed Action would ensure safe passage of the new cutter classes. Proposed improvement dredging would be completed via mechanical dredging; dredging equipment would include a floating crane barge and a scow/barge, which would remain in the proposed dredge area until dredge activities are complete. A clamshell bucket attached to a crane would be used to excavate material from the bay floor (IADC, 2021). The clamshell dredger would be placed on the crane barge used to transport it throughout the proposed improvement dredging area. The excavated dredge material would be transferred from the clamshell bucket to a scour barge located next to the crane barge, allowing water to drain out and leaving behind only solid dredge material. The remaining solids would then be transported to the Masonville DMCF for disposal. A minimum of two scour barges would be required to complete improvement dredging; at any given time, one barge would collect the excavated sediment, while the second would transport the dredge spoils to Masonville DMCF. USCG would coordinate with the Maryland Waste Diversion and Utilization Program to ensure proper treatment and disposal of wastes generated.

A total of approximately 389,973 CY of material would be dredged during proposed improvement dredging; approximately 146,164 CY would be dredged from the Curtis Creek channel, and approximately 243,809 CY would be dredged from the turning basin. Proposed improvement dredging activities would be able to remove up to 2,000 CY of dredge material per day. This component of the Proposed Action is anticipated to occur sometime between FY 2023 and 2025.

2.3 Alternatives Considered

NEPA, CEQ Regulations, and COMDTINST M16475.1D require all reasonable alternatives to be explored and objectively evaluated. Alternatives that are eliminated from detailed study must be identified along with a brief summary of the reasons for their dismissal. For purposes of analysis, an alternative was considered “reasonable” only if it would meet the Proposed Action’s purpose and need. “Unreasonable” alternatives would not enable the USCG to meet the purpose of and need for the Proposed Action.

2.3.1 Alternatives Development (Screening Criteria)

No screening criteria were developed to identify and evaluate potential alternative sites, due to the inability of the Proposed Action to occur at a different location. The CG Yard is the only USCG-operated shipyard in the US, and facilities that would be addressed under the Proposed Action (e.g., the Syncrolift facility) are exclusive to the CG Yard; therefore, the purpose of and need for the Proposed Action cannot be met with implementation at an alternate location.

Given that the identification of a potential alternate location is not feasible, and that the Proposed Action must occur at the CG Yard, the USCG developed some screening criteria to evaluate potential action alternatives for implementing the Proposed Action at the CG Yard:

1. Allow new larger, more complex USCG vessels (e.g., OPC or NSC) to access the CG Yard for necessary maintenance and repair.
2. Support continued dry-dock capabilities at the CG Yard for necessary maintenance and repair.
3. Be consistent with other existing uses at the CG Yard, while minimizing construction and lifetime operating costs to the extent possible.
4. Avoid or minimize potential impacts on the natural environment, such as threatened and endangered species, floodplains, and coastal resources, to the extent practical.
5. Avoid or minimize potential impacts on historic properties at or near the CG Yard to the

extent practicable.

6. Avoid or minimize potential impacts on the physical environment, such as traffic/parking, hazardous materials, and existing utility connections, to the extent practical.

Of the three alternatives evaluated during this process, only the Preferred Action Alternative was determined to be viable and is carried forward for further analysis (see **Section 2.3.2**). The No Action Alternative is also evaluated, as required by CEQ regulations. **Figure 2-1** depicts the location of the Preferred Action Alternative. For more detailed information on alternatives eliminated during this process, refer to **Section 2.3.3**.

2.3.2 Evaluated Alternatives

The two Alternatives carried forward for analysis are described below (**Figure 2-1**).

2.3.2.1 No Action Alternative

Under the No Action Alternative, the proposed maintenance and improvement dredging activities would not occur, and the water depths at the CG Yard and navigation channels between the Bascule Bridge and the CG Yard’s Pier 3 would remain at their current depths. While the No Action Alternative would not satisfy the purpose of or need for the Proposed Action, this alternative was retained to provide a comparative baseline against the Proposed Action, as required in the CEQ Regulations (40 CFR Part 1502.14). The No Action Alternative reflects the status quo and serves as a benchmark against which the effects of the Proposed Action can be evaluated.

The No Action Alternative would impair the ability of the CG Yard to successfully operate the Syncrolift facility and perform dry-docking and maintenance activities. Under this alternative, the requirements necessary to support the continued viability of the Syncrolift would not be met, and the overall accessibility of the CG Yard to the OPC and NSC would be limited. The CG Yard is the only USCG shipyard, and supports maintenance and repair of USCG vessels. Without the presence of navigable channels to support the presence of the OPCs and NSCs, and without adequate water depths to allow operation of the Syncrolift, the ability of the USCG to carry out its mission and service its fleet of vessels would continue to diminish under the No Action Alternative. The USCG would be unable to perform necessary dry-docking activities for all vessels, nor would be able to perform repairs and maintenance of the OPCs and NSCs.

2.3.2.2 Preferred Action Alternative

Under the Preferred Action Alternative, maintenance dredging and improvement dredging would be performed as described in **Section 2.2**. The Shiplift area would be dredged to its historic depth of 34.5 feet, and the area extending from Bascule Bridge to Pier 3 would be dredged up to a depth of 27.5 feet to accommodate new classes of cutters.

Maintenance dredging at the Shiplift area would require the use of hydraulic dredging equipment to pump sediments to the surface and to a nearby treatment location. Improvement dredging would use mechanical dredging equipment, including a clamshell dredger and various barges to support a crane, collect dredge material, and transport dredge solids. An estimated total of 397,422 CY would be dredged under both components of the Proposed Action; all dredge solids would be transported to Masonville DMCF for treatment and disposal. All other operations along the waterfront would be able to continue without disruption.

2.3.3 Alternatives Eliminated from Further Consideration

Alternatives that are eliminated from detailed study must be identified along with a brief discussion of the reasons for eliminating them. For purposes of analysis, an alternative was considered "unreasonable" if it would not enable the USCG to meet the purpose of and need for the Proposed Action. The USCG eliminated the following alternatives:

- **Historical Dredge Alternative:** This alternative would involve dredging to historic depths within the area extending from Bascule Bridge to Pier 3 and the Shiplift area. Dredging would occur up to a depth of 34.5 feet, the historic depth, surrounding the Syncrolift facility to support its continued operation and dry-dock capabilities for vessels able to access the CG Yard. No dredging would occur within the navigation channel between Bascule Bridge and Pier 3, as current water depths are already at or exceed the historical depth of 22 feet. By not dredging deeper access routes to the CG Yard, however, the NSCs would be unable to reach the CG Yard for dry-docking and maintenance due to shallow channel depths. The OPC has a draft of 17 feet and would still be able to reach the CG Yard; however, the NSC has a draft of 22.5 feet, and would not have clearance to access the CG Yard under this alternative. Therefore, the Historical Dredge Alternative was eliminated from further consideration because it would not meet Screening Criteria #1, as described in **Section 2.3.1**.

- **Over-dredge Alternative:** This alternative would involve an additional 2 feet of improvement dredging within the Proposed Action Area to provide added future flexibility for larger vessels and/or the need for less maintenance dredging. Over-dredging would result in depths of 36.5 feet near the Syncrolift (i.e., 2 feet of improvement dredging beyond historic depth of 34.5 feet), and improvement dredging up to 29.5 feet in the channel. This alternative would meet the purpose of and need for the Proposed Action, as it would allow dredging activities in the desired areas, and to the desired depths; however, dredging more than the required amount could result in additional adverse environmental impacts, and would also be more costly to undertake. Under this alternative, an additional approximately 167,200 CY would be dredged. Therefore, the Over-dredge Alternative was eliminated from further consideration because it would have the potential to incur unnecessary environmental impacts and would not meet Screening Criteria #3, #4, and #5, as described in **Section 2.3.1**.

3.0 Affected Environment

3.1 Introduction

This section describes the current baseline conditions for resources potentially affected by the Proposed Action within and in the vicinity of the CG Yard. In compliance with NEPA, CEQ Regulations, and COMDTINST M16475.1D, this section focuses only on resources that would be potentially affected by the implementation of the Proposed Action. **Section 4.0**, *Environmental Consequences*, identifies potential effects of the identified project alternatives on each of the issue areas presented in this section.

3.2 Resources Eliminated from Further Analysis

The CEQ recommends agencies "identify and eliminate from detailed study the issues which are not significant or which have been covered by prior environmental review (40 CFR § 1506.3), narrowing the discussion of these issues in the [EA] to a brief presentation of why they will not have a significant effect on the human environment or providing a reference to their coverage elsewhere" (40 CFR § 1501.7(a)(3)). **Table 3-1** lists the Technical Resource Areas considered for evaluation in this EA, and the rationale for eliminating certain Technical Resource Areas.

Table 3-1: Technical Resource Areas Evaluated in this EA

Technical Resource Area	Analyzed in the Detail in this EA?	If *Yes*, EA Section If *No*, Rationale for Elimination
Socioeconomic Environment		
Land Use and Zoning	No	Implementation of the Proposed Action would not change existing land use within or surrounding the CG Yard. The Proposed Action would take place largely within a heavily trafficked and utilized stretch of Curtis Creek, directly adjacent to the industrialized CG Yard. This area is zoned for Heavy Industrial use (Anne Arundel County, 2022). The proposed dredging would be a temporary action and would not affect the land use or designation of the surrounding area. Therefore, no effect to land use and zoning would result from the Proposed Action.
Local Economy, Housing, Community Service and Medical Facilities, Recreational Facilities, Fire, Rescue, and Police Services, and Schools	No	Although the Proposed Action may result in beneficial impacts from local spending during dredging activities, the amount would be temporary and negligible in the context of the local and regional economy. Further, there would be no long-term changes in population, and dredging activities would only occur in the vicinity of the CG Yard. Therefore, local housing availability, community services, emergency response services, schools, and the local economy would overall remain the same.

Technical Resource Area	Analyzed in the Detail in this EA?	If *Yes*, EA Section If *No*, Rationale for Elimination
Environmental Justice	No	In accordance with EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, no minority populations or low-income populations would be disproportionately affected by implementation of the Proposed Action. The CG Yard is not located in an area of concern for Environmental Justice. Effects from the Proposed Action would be contained entirely within the CG Yard and adjacent areas of Curtis Creek.
Utilities	No	No existing utilities would be impacted by dredging Curtis Creek. Further, the Proposed Action would not require any utility extensions or connections beyond what is required for temporary dredging activities. There would be no increase in long-term utility usage as no permanent structures would be developed, and day-to-day operations at the CG Yard would remain the same. Therefore, the Proposed Action would not change the supply or demand of utilities in the Proposed Action area.
Physical Environment		
Geology and Topography	No	No noteworthy or unique geologic strata or features underlying the CG Yard or surrounding area have been documented. The Proposed Action would not install permanent structures or require any disturbance within the underlying bedrock. Geologic conditions would not change as a result of dredging activities. In addition, topography of the CG Yard is relatively flat, with a maximum elevation of approximately 25 feet above sea level at the northern and eastern boundaries and sloping to sea level toward Curtis Creek and Arundel Cove. Implementation of the Proposed Action would not change the topographic nature of the CG Yard or surrounding area.
Soils	Yes	See **Sections 3.3.1** and **4.2.1**.
Air Quality and Climate	Yes	See **Sections 3.3.2** and **4.2.2**.
Noise	Yes	See **Sections 3.3.3** and **4.2.3**.
Hazardous and Toxic Materials and Waste	Yes	See **Sections 3.3.4** and **4.2.4**.
Natural Environment		
Terrestrial Environment	No	Much of the land at the CG Yard is developed, leaving little existing vegetation. Existing vegetation within the CG Yard is located on the parcel of land east of Arundel Cove, known as the Grove, which is separated from the main Yard complex by the Arundel Cove inlet. The Proposed Action would largely take place within Curtis Creek, with the exception of a small area at Grove Point which contains minimal, landscaped habitat; thus, the Proposed Action would have no effect on the terrestrial environment, including vegetation, wildlife habitats, and wildlife species.

Technical Resource Area	Analyzed in the Detail in this EA?	If *Yes*, EA Section If *No*, Rationale for Elimination
Floodplains	No	In accordance with EO 11988, *Floodplain Management*, Federal actions should avoid adverse effects and incompatible development within a floodplain. The entire in-water portion of the Proposed Action is located within the 100-year floodplain of Curtis Creek and Arundel Cove, and proposed dredging activities may increase the flood carrying capacity of Curtis Creek. As dredging is a water-dependent activity, there is no practicable alternative to conducting work within the floodplain. A Finding of No Practicable Alternative (FONPA) has been prepared and included within the Draft FONSI for this EA. The dewatering site at Grove Point is not located within the floodplain. No activities would occur within the portion of the floodplain that extends into the CG Yard's terrestrial property, and no development would occur within the floodplain. Therefore, no activities under the Proposed Action would occur in the floodplain that would adversely affect its flow or function.
Coastal Resources	Yes	See **Sections 3.4.1** and **4.3.1**.
Water Resources	Yes	See **Sections 3.4.2** and **4.3.2**.
Biological Resources	Yes	See **Sections 3.4.3** and **4.3.3**.
Cultural Resources		
Cultural Resources	Yes	See **Sections 3.5** and **4.4**.
Transportation		
Traffic and Transportation	No	The CG Yard is situated off of Hawkins Point Road in Baltimore City and is bordered to the east by Fort Smallwood Road (MD Route 173). Traffic is generally moderately heavy on both roads, particularly during rush hour. General condition of the roadways within the CG Yard is adequate, and routine maintenance is conducted on roadways with significant heavy-vehicle traffic. Implementation of the Proposed Action would occur within Curtis Creek; therefore, roadway traffic and transportation would only be temporarily affected by contractor vehicles during dredging activities and during transport of solid dredge material to Masonville DMCF. This temporary increase in vehicles (i.e., approximately 700 truck trips over two to four weeks) would not be significant enough to cause any noticeable congestion in the surrounding vicinity. No impacts to traffic would occur in conjunction with the I-695 drawbridge, as there would be sufficient clearance to allow dredge barges and equipment to pass underneath without raising it. Any interruptions to transportation at or surrounding the CG Yard would cease once dredging activities are completed. There would be no impacts to bicycle and pedestrian services, public transportation, or parking.
Vessel Traffic and Navigation	Yes	See **Sections 3.6** and **4.5**.

3.3 Physical Environment

This section describes the existing physical environment of the CG Yard and surrounding vicinity, including soils, climate and air quality, noise conditions, and hazardous and toxic materials and waste.

3.3.1 Soils

Soils are unconsolidated materials overlying bedrock or other parent material. Soil structure, elasticity, strength, shrink-swell potential, and erodibility all determine the ability for the ground to support man-made structures. Soils are typically described in terms of their complex type, slope, physical characteristics, and relative compatibility or constraining properties with regard to particular construction activities and types of land use.

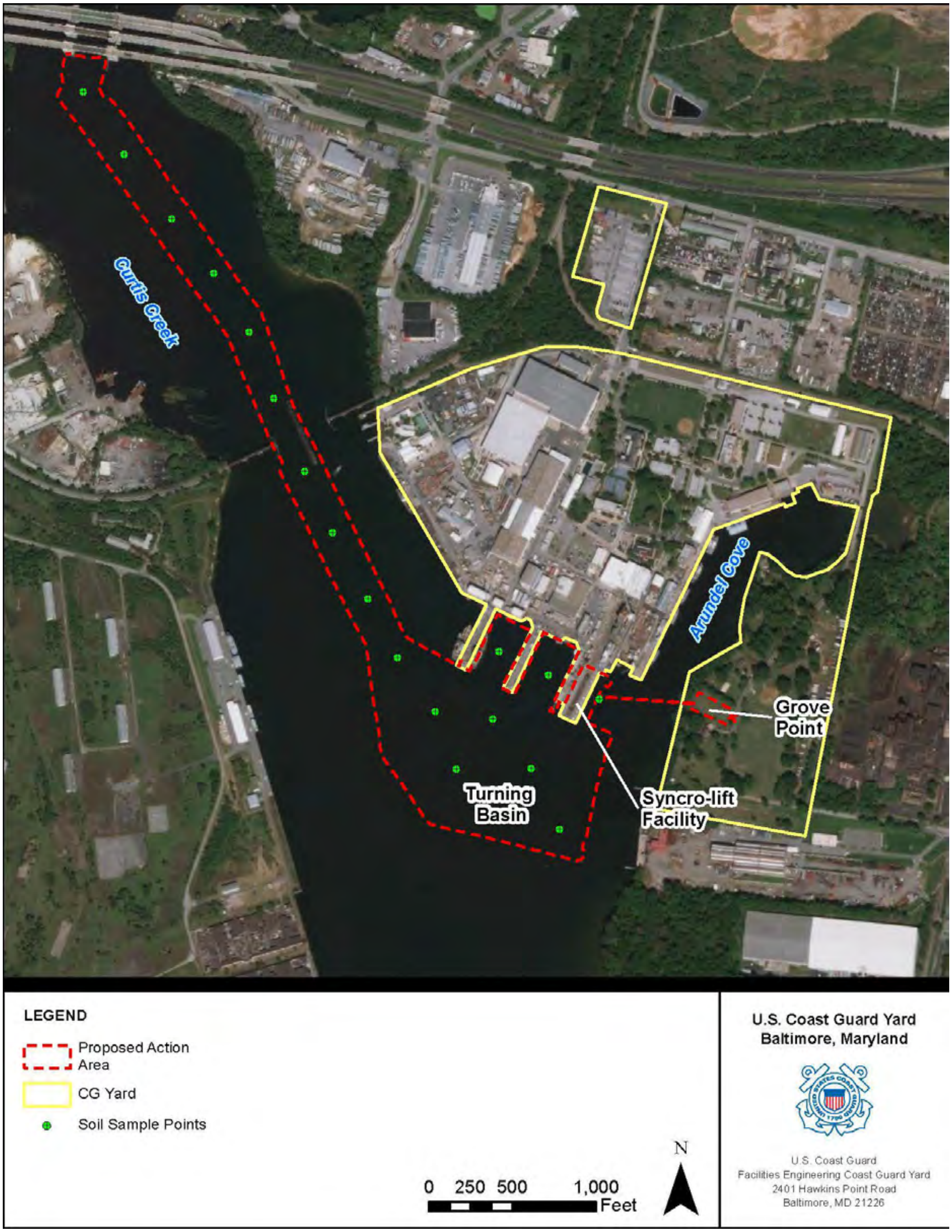
3.3.1.1 Soil Types

The US Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS) does not map soils within the Proposed Action area as the area is primarily in water, with the exception of the small Grove Point dewatering area. The CG Yard itself primarily contains Urban Land soils and Grove Point contains an Urban Land complex. Urban soils are generally those that have been altered or disturbed by excavation, deposition, compaction, and other human activities to such a degree that identification of individual soil layers or parent material is not possible (USDA NRCS, 2021b). These soils underlie areas of asphalt, concrete, buildings, or other impervious surfaces (pavement) which cover more than 85 percent of the surface. No soils classified as prime or unique farmland are present.

3.3.1.2 Soil Sampling

The USCG conducted soil sampling in the Proposed Action area in March 2022 to identify the chemical and physical characteristics of the sediment within Curtis Creek, and to determine if any contaminants are present that may prevent the disposal of dredge spoils at MDOT MPA facilities. Eighteen soil cores were taken to obtain sediment samples from within the Proposed Action area (**Figure 3-1**). Sampling was conducted in accordance with the necessary approvals and permits from MDOT MPA and USACE. MDE determined that Navigational Servitude would apply for the soil sampling effort; therefore, no State approvals or permits were required.

Figure 3-1: Soil Sampling Locations



Chemical and geotechnical analyses of the sediment samples were performed in accordance with MDOT MPA permit requirements, and the results were sent to MDOT MPA in June 2022 to determine if the soils met the disposal requirements for Masonville DMCF. Several metals were detected in the sediment samples, with higher levels typically present in the channel compared to the waters surrounding the CG Yard. Similar trends were also observed for the presence of ammonia, phosphorous, total organic carbon, sulfide, and polychlorinated biphenyls (PCBs). Polycyclic aromatic hydrocarbons (PAHs) were detected at low concentrations at all sampled locations, with higher concentrations present in the channel. Sampling results for volatile organic compounds (VOCs), pesticides, herbicides, and metals, including mercury, were either non-detectable, below reporting limits, or below maximum concentration thresholds established by the USEPA (**Appendix C**). Therefore, although some contaminants were detected in the soil samples at low concentrations, the dredge spoils would not be classified as hazardous waste. Moreover, the soil composition within the Proposed Action area appears to be consistent with soils and other dredged material in the surrounding area. **Appendix C** includes results from the soil sampling survey.

In a letter dated 19 July 2022, MDOT MPA concurred that the dredge material has similar characteristics to other dredge material previously placed at MDOT MPA disposal facilities (**Appendix C**). MDOT MPA concluded that the dredge material would be acceptable to place at Masonville DMCF.

3.3.2 Air Quality and Climate

3.3.2.1 Ambient Air Quality

The ambient air quality in an area can be characterized in terms of whether it complies with the primary and secondary National Ambient Air Quality Standards (NAAQS). The Clean Air Act (CAA), as amended, requires the USEPA to set NAAQS for pollutants considered harmful to public health and the environment. NAAQS are provided for six principal pollutants called “criteria pollutants” (as listed under Section 108 of the CAA): carbon monoxide (CO); lead (Pb); nitrogen oxides (NO_x); ozone (O_3); particulate matter (PM), divided into two size classes of 1) aerodynamic size less than or equal to 10 micrometers (PM_{10}), and 2) aerodynamic size less than or equal to 2.5 micrometers ($PM_{2.5}$); and sulfur dioxide (SO_2). The General Conformity Rule (40 CFR Part 51, Subpart W) requires federal agencies to prepare written Conformity Determinations for Federal actions in or affecting NAAQS in nonattainment areas, except when the action is covered under the Transportation Conformity Rule or when the action is exempt because the total increase in emissions is insignificant, or *de minimis*.

The primary regulatory authority for air quality in Maryland is the MDE Air and Radiation Management Administration. Anne Arundel County is a non-attainment area for 8-hour ozone under 2008 (moderate) and 2015 (marginal) federal standards, and SO_2; and in attainment for the other criteria pollutants (USEPA, 2021). The USCG must evaluate the emissions of O_3 and SO_2

to determine the applicability of the general conformity regulations. As O_3 is not emitted directly and is a product of the reaction of two precursors, NO_x and VOCs, the *de minimis* levels are based on those precursors. The *de minimis* level for NO_x or VOC is 25 tons per year (tpy) and SO_2 is 100 tpy (40 CFR § 93.153(b)(1)).

Under CAA, USEPA established New Source Performance Standards and National Emission Standards for Hazardous Air Pollutants (NESHAPs) to minimize emissions of criteria pollutants and hazardous air pollutants (HAPs) from man-made emission sources. Although typically present in minimal quantities in the ambient air, HAPs have high toxicity which may pose a threat even at low concentrations. NESHAPs primarily apply to "stationary sources," which are emission sources that have a fixed location (e.g., fuel-burning boilers and generators, entire facilities/plants, etc.), as opposed to "mobile sources," which are emission sources that have the ability to move from one location to another (e.g., motor vehicles, trains, airplanes, etc.).

Major source facilities are required to obtain a Title V operating permit. The USEPA defines a "major source" as stationary sources, or groups of stationary sources, with a potential to emit more than 100 tons per year of any criteria pollutant, 10 tons per year of any HAP, or 25 tons per year of any combination of HAPs. The USCG currently operates the CG Yard under Permit No. 24-003-0316. Current emissions on or in the vicinity of the Proposed Action area consists of ongoing site maintenance (e.g., mowing); fuel-fired and natural gas-fired boilers; internal combustion engines; painting, surface coating, and fiberglass fabrication operations; and nearby vehicle emissions along adjacent roadways and within nearby properties.

Sensitive receptors include, but are not limited to, asthmatics, children, and the elderly, as well as specific facilities, such as long-term health care facilities, rehabilitation centers, convalescent centers, retirement homes, residences, schools, playgrounds, and childcare centers. No sensitive receptors occur within 1 mile of the Proposed Action area.

3.3.2.2 Climate

The CG Yard is located in northern Anne Arundel County where the climate is characteristic of the Mid-Atlantic region. Average annual precipitation is 43.9 inches while the average annual temperature is approximately 55.9 degrees Fahrenheit (°F). The average annual low and high temperatures are 46.0 °F and 65.7 °F, respectively. The first freeze usually occurs at the beginning of November while the last freeze is typically around late March. The area sees an average of approximately 18.6 inches of snowfall per year (USDA NRCS, 2021a).

Greenhouse gases (GHGs) include water vapor, carbon dioxide, nitrous oxide, methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. GHGs are regulated under Section 202 of the CAA. The USEPA regulates GHGs through mobile source emission standards and permitting requirements under the Title V Operating Permits program. These regulations include fuel efficiency and renewable fuel standards on light-duty, medium-duty, and heavy-duty vehicles.

The Maryland Commission on Climate Change has developed comprehensive State-level GHG emissions mitigation goals under a Climate Action Plan. The State is required to reduce GHG emissions to 40 percent of 2006 levels by 2030 (Maryland Commission on Climate Change, 2018). Maryland has three principal sources of GHG emissions: electricity consumption; transportation; and residential, commercial, and industrial (RCI) fossil fuel use. In 2017, transportation and electricity consumption accounted for 31 percent and 36 percent, respectively, of the State's gross GHG emissions, while RCI fuel use accounted for 17 percent (MDE, 2019).

3.3.3 Noise

Noise is defined as unwanted sound and is typically any sound that is undesirable due to its interference with communications or other human activities and its ability to affect hearing. Noise may be intermittent or continuous, steady, or impulsive. Human response to noise varies depending on the sound pressure level, type of noise, distance from the noise source, sensitivity, and time of day.

Sound is made up of tiny fluctuations in air pressure. Sound, within the range of human hearing, can vary in intensity by over 1 million units. Therefore, a logarithmic scale, known as the decibel (dB) scale, is used to quantify sound intensity and to compress the scale to a more manageable range. Sound is characterized by its amplitude (how loud it is), frequency (pitch), and duration. The human ear does not hear all frequencies equally. The A-weighted decibel scale (dBA) is used to reflect this selective sensitivity of human hearing. The human range of hearing amplitude extends from 0 dBA to 120 dBA, 0 dBA being the threshold of hearing for someone with a normal hearing mechanism and 120 dBA being the threshold of pain.

The USEPA recommends a 70 dBA over 24-hour (or 75 dBA over 8-hour) average exposure limit for environmental noise (USEPA, 1974). Per Code of Maryland Regulations (COMAR) 26.02.03, the maximum allowable noise level for areas zoned for Industrial use is 75 dBA during both daytime and nighttime hours. In the state of Maryland, the MDNR recommends that a person may not operate or give permission to operate a vessel on Maryland waters that exceeds a maximum noise level of 90 dBA (MDNR, 2019a). The USCG *Safety and Environmental Health Manual* (COMDTINST M5100.47) recommends 86 dBA as the maximum noise level that watercraft may generate while operating at full speed at a distance of 50 feet from a receiver (PWIA, 2006). Operation of a hydraulic dredge may produce a noise level of up to 80 dB, which would diminish to 70 dB within 50 feet from a receiver (Columbia Association, 2016).

In the water, hydraulic dredges may result in peak noise levels between 100-110 dB, which would become inaudible at approximately 1,600 feet from the source. Underwater noise from clamshell dredgers would spike as the bucket impacts the bottom, although the level varies depending on the consistency and hardness of the substrate (USACE, 2015). NMFS' thresholds for underwater noise impacts to aquatic mammals are set at 160 dB for harassment from an impulse noise source and

120 dB for a continuous noise source. The NMFS threshold for physical injury to fish is 206 dB (USACE, 2015).

Noise near the Proposed Action area is typical of an urban waterfront environment. Sources of noise include vehicles, boats, voices, heating, and ventilation from industrial facilities. While no recent noise measurements are available, it can be expected that noise levels at and near the CG Yard are consistent with the surrounding environment and land use.

Some persons or land uses are more sensitive to noise than others. Such sensitive noise receptors include hospitals, schools, churches, daycare facilities, and nursing facilities as well as residential areas. There are no sensitive receptors on or within 1 mile of the Proposed Action area as the surrounding vicinity is predominantly occupied by industrial facilities and warehouses. The nearest sensitive receptor is Solley United Methodist Church, approximately 1.8 miles southeast of the Proposed Action area.

3.3.4 Hazardous and Toxic Materials and Wastes

HTMW are generally defined as materials or substances that pose a risk (through either physical or chemical reactions) to human health or the environment. Regulated hazardous substances are identified by the Occupational Safety and Health Administration (OSHA) through a number of Federal laws and regulations. The most comprehensive list is contained in 40 CFR Part 302, and identifies quantities of these substances that, when released to the environment, require notification to a Federal government agency. Hazardous wastes, defined in 40 CFR Part 261.3, are generally discarded materials (solids or liquids) not otherwise excluded by 40 CFR Part 261.4 that exhibit a hazardous characteristic (i.e., ignitable, corrosive, reactive, or toxic), or are specifically identified within 40 CFR Part 261. Petroleum products are specifically exempted from 40 CFR Part 302, but some are also generally considered hazardous substances due to their physical characteristics (especially fuel products), and their ability to impair natural resources.

The Resource Conservation and Recovery Act (RCRA) and state regulatory agencies identify which waste is considered hazardous, and regulates the generation, storage, treatment, and disposal of such waste. USCG activities must comply with Federal, state, and local hazardous material and waste regulations and laws. COMDTINST M16478.1 outlines requirements for the management of hazardous waste at USCG facilities. Such practices include record keeping, sampling and analysis practices, training, and specific procedures for preparing for and responding to an inadvertent release. For vessel operations, the USCG complies with OSHA Publication 3172, *Training Marine Oil Spill Response Workers under OSHA’s Hazardous Waste Operations and Emergency Response Standard*, which requires booms to be placed around vessels to help contain any spills. Following maintenance activities, a marine chemist certifies that a vessel is safe for entry and work.

Historical activities at the CG Yard have resulted in soil and groundwater contamination. In 2000, as part of a site inspection by the USEPA, six areas of concern were identified as contaminated with semi-volatile organic compounds, VOCs, metals, PCBs, pesticides, and dioxins. The sources of the chemical pollutants were not contained; therefore, the hazardous substances have the potential to migrate into adjacent surface water, contaminating nearby fisheries. In 2002, the CG Yard was placed on the National Priorities List as a known site of toxic contamination (USCG Yard, 2007). USEPA conducted a Five-Year Review of the USCG's remediation efforts at the CG Yard in June 2019 and recommended further investigations to assess the potential presence of per- and polyfluoroalkyl substances (PFAS) (USEPA, 2019). Soils within Curtis Creek do not exceed contaminant levels that would classify them as hazardous materials (see **Section 3.3.1**).

Groundwater contamination at the CG Yard has not been observed to affect Curtis Creek. Metal concentrations in downgradient wells at the CG Yard are lower than regulatory standards for groundwater, indicating that Curtis Creek is unlikely to be impacted by elevated concentrations via groundwater seepage (USCG, 2019a). Curtis Creek is listed as an impaired waterbody; however, due to traces of PCBs in sediment and fish tissue, and zinc in sediment (USEPA, 2012). Additional discussion of Curtis Creek's impairment status is presented in **Section 3.4.3.1**.

3.4 Natural Environment

This section describes the existing natural environment within and surrounding the CG Yard, including coastal resources, water resources, and threatened and endangered (T&E) species.

3.4.1 Coastal Resources

The Coastal Zone Management Act (CZMA) enables states to implement federally approved coastal programs to protect coastal areas in conjunction with environmental, economic, and human health. The Maryland Coastal Zone Management Program (CZMP) is administered by MDE. The CG Yard is located within Maryland's coastal zone. As a Federal action under the CZMA (15 CFR Part 930, Subpart F), the Proposed Action requires a Federal Consistency Determination to determine consistency to the extent practicable with the State's coastal policies. The USCG requested project review from MDE in a letter dated 26 October 2022. No response from MDE has been received to date (**Appendix D)**.

The Maryland CZMP requires compliance with the Chesapeake Bay Critical Area Protection Program. In 1984, the Maryland General Assembly enacted the Chesapeake Bay Critical Area Protection Program to safeguard the Bay from the negative impacts of intense development and to control future land use development in the Chesapeake Bay's watershed. All tidal waters of the Chesapeake and Atlantic Coastal Bays, and the area of land within 1,000 feet of tidal waters and wetlands, comprise the "critical area" as development in this area has direct and immediate effects on water quality and the health of tidal waters. Development in the Critical Area must adhere to a certain set of criteria to ensure that land within the Critical Area is managed, used, and developed in a manner that will achieve the goals of the Critical Area Program (Critical Area Commission, 2019).

The Critical Area is divided into three land classifications based on the level of existing development; the entire CG Yard is located within an Intensely Developed Area (IDA), except for Grove Point. These classifications, however, do not extend to aquatic areas. Curtis Creek and the waters surrounding the CG Yard are not classified and are not considered part of the IDA, although they are still part of the Critical Area. No special requirements or regulations exist for in-water activities, such as the Proposed Action, occurring within the Critical Area.

3.4.2 Water Resources

Water resources in this analysis include surface water and wetlands. Surface water resources include lakes, rivers, and streams. Wetlands are defined by the USACE and the USEPA as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. As defined in 1984, wetlands generally include swamps, marshes, bogs, and similar areas" (33 CFR Part 328.3 [b]).

3.4.2.1 Surface Water

Surface water in the Proposed Action area is associated with two main waterbodies: (1) Curtis Creek, which borders the CG Yard to the south and west; and (2) Arundel Cove, which is a small arm of Curtis Creek that borders the Yard to the east (**Figure 2-1**). Curtis Creek connects to Curtis Bay approximately 2 miles to the north, and then empties into the Patapsco River less than one 1 mile to the east. These waterbodies are located within the Gunpowder-Patapsco watershed (HUC0206003). The Patapsco River flows into the Chesapeake Bay approximately 10 miles southeast of the CG Yard.

Surface water runoff at the CG Yard tends to flow south toward Curtis Creek and Arundel Cove due to the slope of the land. All streets within the CG Yard that run in a north-south direction carry large quantities of runoff during and after rainstorms. A system of inlets throughout the CG Yard picks up this runoff and diverts it to outfalls nearby. A series of below-ground tanks are used to manage release of stormwater. The primary method of stormwater disposal at the CG Yard is by overland flow into either Curtis Creek or Arundel Cove. Several areas also have underground collection systems that empty through the bulkheads into Arundel Cove.

The CG Yard is covered under *Maryland's General Permit (12-SW) for Discharges of Stormwater Associated with Industrial Activity* in accordance with the National Pollution Discharge Elimination System (NPDES) requirements. The 12-SW General Permit issued by MDE requires industrial activities to install stormwater control measures to reduce nutrients from reaching the waters of the Chesapeake Bay Watershed. These areas must also meet the Chesapeake Total Maximum Daily Load (TMDL) for total suspended solids and nutrients.

Section 303(d) of the CWA directs each State to identify and list waters in which current required controls of a specified substance are inadequate to achieve water quality standards. The overall status of Curtis Creek is impaired. The leading pollutants or impairments within Curtis Creek include PCBs in fish tissue and sediment, and zinc in sediment (USEPA, 2012). A TMDL for PCBs was established for Baltimore Harbor, including Curtis Creek in 2012, and a restoration plan to implement this TMDL was drafted in 2016 (Anne Arundel County, 2016).

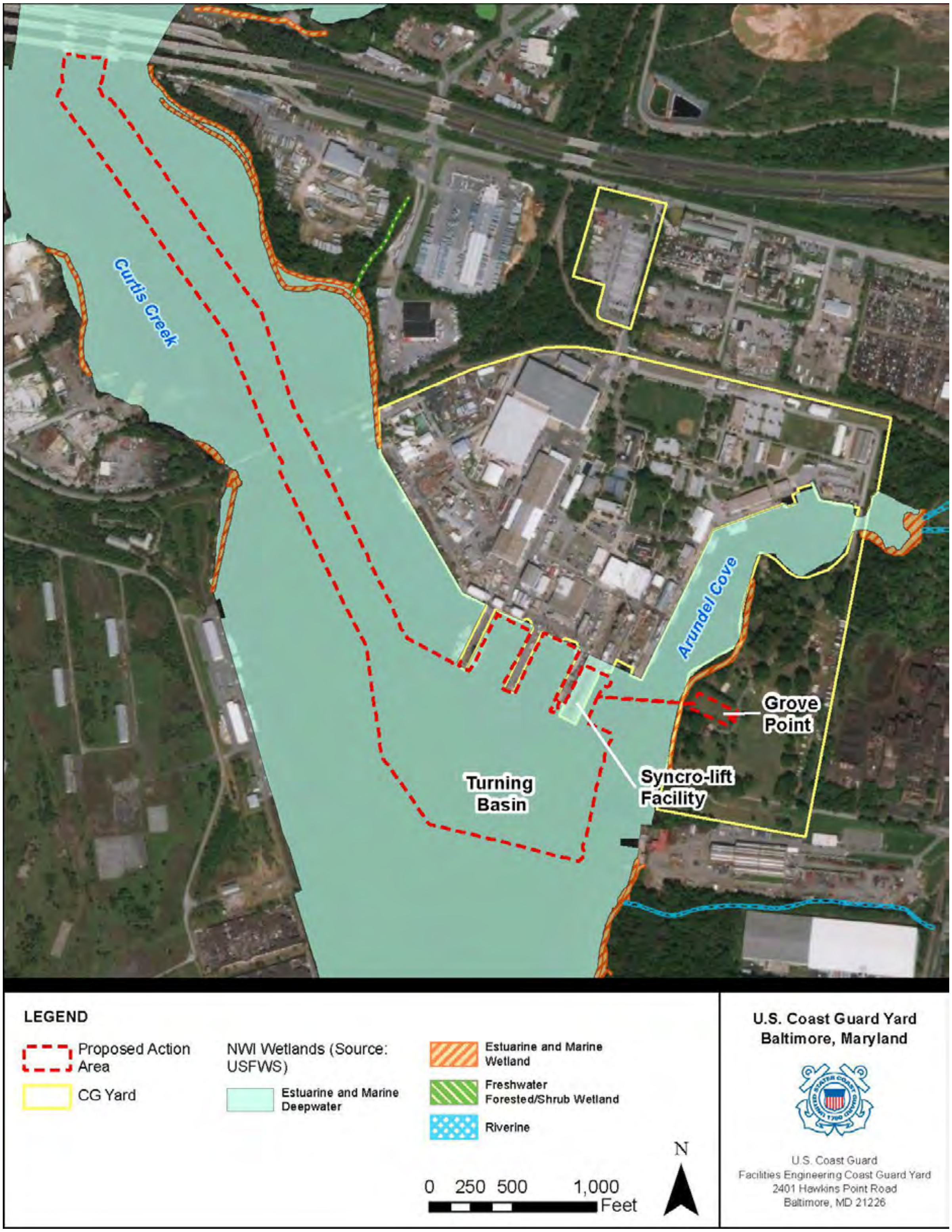
3.4.2.2 Wetlands and Waters of the US

EO 11990, *Protection of Wetlands*, requires Federal agencies to take action to minimize the destruction, loss or degradation of wetlands, and to preserve and enhance the beneficial values of wetlands. Wetlands are an important natural system because of the diverse biological and hydrologic functions they perform.

Wetlands are protected as a subset of the "waters of the United States (WOUS)" under Section 404 of the CWA. The term "WOUS" has broad meaning under the CWA and incorporates deep water aquatic habitats and special aquatic habitats (including wetlands). WOUS also include navigable waters. Section 10 of the Rivers and Harbors Act of 1899 requires authorization from the USACE to ensure activities do not adversely affect the navigability or other uses of navigable waters. Section 404 of the CWA authorizes the USACE to issue permits for the discharge of dredged or fill material into WOUS, including wetlands. Section 401 of the CWA gives the State of Maryland the authority to regulate, through the state water quality certification program, proposed federally permitted activities that may result in a discharge to water bodies, including wetlands.

USFWS National Wetland Inventory (NWI) mapping shows regulated wetlands and WOUS that occur in the Proposed Action area (USFWS, 2021b). Curtis Creek and Arundel Cove are classified as estuarine and marine deepwater. The shoreline of the CG Yard is primarily hardened; however, NWI identifies approximately 1.6 acres of estuarine and marine (i.e., tidal) wetlands along the eastern shoreline of Arundel Cove, and approximately 0.2 acres of tidal wetlands along the shoreline of Curtis Creek (**Figure 3-2**). The State of Maryland requires that a 100-foot buffer be maintained around all areas of tidal wetlands, regardless of size. Dominant vegetation in tidal marshes include phragmites (*Phragmites australis*), an invasive wetland species, threesquare (*Schoenoplectus pungens*), bulrush (*Scirpus americanusy*), and smooth cordgrass (*Spartina alterniflora*).

Figure 3-2: Wetlands and Waters



3.4.3 Biological Resources

This section describes the biological resources potentially present at or near the Proposed Action area, including T&E species and aquatic wildlife and habitat.

3.4.3.1 Threatened and Endangered Species

The USFWS and NMFS administer the Federal ESA of 1973, which protects listed species against killing, harming, harassing, or any action that may damage their habitat. The USFWS has primary responsibility for terrestrial and freshwater organisms, while the responsibilities of NMFS are mainly marine wildlife, such as whales, and anadromous fish, such as salmon. The MDNR administers the Nongame and Endangered Species Conservation Act (Annotated Code of Maryland 10-2A-01), which is the primary Maryland law that governs the legal state listing of T&E species. Consultation with the USFWS, NOAA, NFMS, and MDNR was initiated on 9 December 2021. Agency correspondence is provided in **Appendix A.**

An official species list was obtained from the USFWS Information for Planning and Consultation (IPaC) project planning tool on 19 October 2021 to identify potential T&E species that may occur in the proposed project location, and/or may be affected by the Proposed Action. The IPaC query returned a list of two species with the potential to occur in the Proposed Action area: northern long-eared bat (*Myotis septentrionalis*), and monarch butterfly (*Danaus plexippus*) (USFWS, 2021a). Potential impacts to the northern long-eared bat only need to be considered if 15 or more acres of trees would be cleared; as the Proposed Action would occur primarily in-water and would not result in any tree clearing at Grove Point, no consultation with the USFWS regarding this species is required. In addition, the monarch butterfly is a candidate species for listing under the ESA, and there are no regulatory or consultation requirements for candidate species. Moreover, the monarch butterfly lives in open fields and meadows where milkweed plants are found (NPS, 2017). Since Grove Point consists of maintained lawn, the potential for this species to be present is not likely due to the lack of suitable habitat.

The NOAA NMFS Section 7 database indicates potential presence of the federally endangered Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus*) and shortnose sturgeon (*Acipenser brevirostrum*) near the Proposed Action area (NOAA, 2019). **Table 3-2** provides an overview of these species' habitat and their potential presence near the Proposed Action area. No critical habitat has been designated at or surrounding the CG Yard for these species.

Table 3-2: Federally Listed Species with the Potential to Occur

Category	Species Common Name	Species Scientific Name	Federal Status	Habitat Description	Potential Occurrence
Fish	Atlantic sturgeon	*Acipenser oxyrinchus oxyrinchus*	E	This species lives in coastal and riverine waters along the Atlantic coast, from Florida to Maine. They hatch in freshwater rivers before migrating to marine waters during their juvenile life stage, and eventually return to freshwater rivers to spawn. Atlantic sturgeon eggs are highly adhesive and require hard substrate for attachment. This species typically prefers deep waterways, but has been observed in shallow substrates for foraging (NOAA Fisheries, 2021c). Juvenile, subadult, and adult life stages of Atlantic sturgeon are known to occur in the Chesapeake Bay and its tributaries in the spring through the fall; however, eggs and larvae are not expected to be present due to high salinity levels (NOAA Fisheries, 2021a).	Yes
Fish	Shortnose sturgeon	*Acipenser brevirostrum*	E	This species lives in coastal and riverine waters along the Atlantic coast from Florida to Canada. They hatch in freshwater rivers and primarily live in the estuaries of those rivers, rarely traveling to or spending time in marine waters. Adults travel upstream to spawn, and immediately move back downstream to feed and rest (NOAA Fisheries, 2021d). Adult shortnose sturgeon have been documented in the Chesapeake Bay and two tributaries, the James River and the Potomac River (NOAA Fisheries, 2021b). This species has not been observed in other tributaries of the Chesapeake Bay, including in the Patapsco River and its tributaries.	No

Federal Status Key: T = Threatened, E = Endangered

A total of 67 state-listed T&E species have the potential to occur in Anne Arundel County. Of these 67 species, one is also federally listed as a threatened plant species: swamp pink (*Helonias bullata*) (MDNR, 2019b). There is no suitable habitat at or near the CG Yard for swamp pink as the species prefers palustrine forested wetlands, including swampy forested wetlands bordering meandering streams, headwater wetlands, and spring seepage areas (USFWS, 2016). Due to the extensively developed nature at and surrounding the CG Yard, it is unlikely that suitable habitat for terrestrial T&E species would be present; moreover, frequent disturbances of the waters surrounding the CG Yard due to vessel and other industrial activities, it is unlikely that aquatic T&E species would be present, as they are mobile and would seek more suitable habitat elsewhere.

In a letter dated 27 January 2022, MDNR Wildlife and Heritage Service provided a response to USCG's early consultation request, indicating that no state-listed species have been documented within the Proposed Action area. A copy of the MDNR consultation and response is included in **Appendix A**.

3.4.3.2 Aquatic Wildlife and Habitat

The CG Yard is characterized by estuarine and marine deepwater habitats; the wildlife species found in these habitats are primarily aquatic. The estuarine deepwater community near the CG Yard comprises tidal habitats and tidal wetlands. Tidal habitats at the CG Yard are continually flooded and consist of an unconsolidated bottom, indicating at least 25 percent cover of particles smaller than stones (less than 6-7 cm), and a vegetative cover less than 30 percent (USFWS, 2021b). Curtis Creek primarily contains sand substrate with clay or clay minerals. Unconsolidated bottom habitats are characterized by the lack of large stable surfaces for plant and animal attachment, and are also unsuitable for egg attachment.

Typical estuarine plants include red mangroves (*Rhizophora mangle*), while tidal wetlands near the CG Yard are comprised of phragmites, threesquare, and smooth cordgrass (see **Section 3.4.2.2** for more information on wetlands). Common fish species in the Patapsco River include the brown bullhead catfish (*Ameiurus nebulosus*), yellow perch (*Perca flavescens*), largemouth bass (*Micropterus salmoides*) and striped bass (rockfish; *Morone saxatilis*) (MDNR, 2021b). Benthic invertebrates such as mussels, oysters, and crabs may be present in the surrounding area as well. No submerged aquatic vegetation or shellfish beds are known to be present in Curtis Creek surrounding the CG Yard due to the unconsolidated bottom and frequent disturbances. Since Baltimore Harbor is tidally influenced, it has a salinity level that ranges between 5 to 18 parts per thousand (MDNR, 2021a).

<u>Essential Fish Habitat</u>

The NMFS regulates Essential Fish Habitat (EFH) under the Magnuson-Stevens Fishery Conservation and Management Act (MSA), which is defined as "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." Based on a query of the NOAA EFH Mapper (NOAA Fisheries, 2020) and coordination with NMFS, EFH has been identified for six species within Curtis Creek (**Table 3-3**). In addition, Curtis Creek supports various prey species for EFH species, including bay anchovy (*Anchoa mitchilli*), spot (*Leiostomus xanthurus*), and menhaden (*Brevoortia tyrannus*), which support the presence of listed EFH species. No EFH Areas Protected from Fishing or Habitat Areas of Particular Concern were identified in the vicinity of the Proposed Action area.

Juvenile and adult individuals of EFH species have the potential to be present in Curtis Creek. Waters surrounding the CG Yard would likely provide low quality habitat due to high levels of existing disturbance, and it is anticipated that adult and juvenile EFH species if present would occur in low densities. Curtis Creek has a relatively low salinity in comparison to the levels preferred by most of the EFH species potentially present, and the unconsolidated bottom does not provide structured benthic habitat, attachment areas of submerged aquatic vegetation, or shellfish beds that could contain additional prey species. Further, any individuals present would be highly mobile and capable of moving out of affected areas, occupying more favorable habitats nearby. EFH for Atlantic butterfish eggs and larvae include pelagic habitats in inshore estuaries and embayments (NOAA Fisheries, 2011). Therefore, while EFH has been designated in Curtis Creek for these life stages, eggs or larvae for this species are not anticipated to be present within the Proposed Action area.

Table 3-3: EFH Species and Life Stages Potentially Found in the Project Area

Species	Egg	Larvae	Juvenile	Adult
Atlantic Butterfish (*Peprilus triacanthus*)	✓	✓	✓	✓
Black Sea Bass (*Centropristis striata*)	--	--	✓	✓
Bluefish (*Pomatomus saltatrix*)	--	--	✓	✓
Clearnose Skate (*Raja eglanteria*)	--	--	✓	✓
Summer Flounder (*Paralichthys dentatus*)	--	✓	✓	✓
Windowpane Flounder (*Scophthalmus aquosus*)	--	--	✓	✓

In addition to supporting EFH for the species identified in **Table 3-3**, Curtis Creek also supports habitat for other fish species managed under the Fish and Wildlife Coordination Act (FWCA), including blue crab (*Callinectes sapidus*), white perch (*Morone americana*), striped bass (*Morone saxatilis*), alewife (*Alosa pseudoharengus*), and blueback herring (*Alosa aestivalis*). While these species managed under FWCA are not federally listed as threatened or endangered, nor have designated EFH, NMFS still maintains a responsibility to protect these species. Spawning and juvenile habitat is potentially present for white perch, striped bass, alewife, and blueback herring; however, due to the degraded condition of potential habitat in Curtis Creek, such activities are likely limited.

The USCG initiated early consultation with NMFS on 9 December 2021, and received comments on 11 January 2022. A revised letter was sent to NMFS on 28 March 2022, and NMFS responded with additional comments and conservation recommendations on 28 April 2022 (see **Section 4.3.3**). A copy of NMFS MSA EFH consultation correspondence is included in **Appendix A**.

3.5 Cultural Resources

Cultural resources are historic properties as defined by the NHPA, cultural items as defined by the Native American Graves Protection and Repatriation Act (NAGPRA), archaeological resources as defined by the Archaeological Resources Protection Act, sacred sites as defined by EO 13007 to which access is afforded under the American Indian Religious Freedom Act, and collections and associated records as defined by 36 CFR Part 79. NEPA requires consideration of “important historic, cultural, and natural aspects of our natural heritage.” Consideration of cultural resources under NEPA includes the necessity to independently comply with the applicable procedures and requirements of other federal and state laws, regulations, EOs, presidential memoranda, and USCG guidance.

Section 106 of the NHPA (54 USC §306108) requires Federal agencies to consider the effect an undertaking may have on historic properties. Its implementing regulations, 36 CFR Part 800, describe the procedures for identifying and evaluating historic properties; assessing the effects of federal actions on historic properties; and consulting to avoid, reduce, or minimize adverse effects. As part of the Section 106 process, agencies are required to consult with the State Historic Preservation Officer (SHPO) and other consulting parties, as appropriate, including federally recognized Native American tribes. Therefore, in parallel with NEPA, USCG initiated consultation with the MHT, which is the SHPO for the state of Maryland. A copy of the Section 106 consultation with MHT and Native American consultation, as well as agency and tribe responses, are included in **Appendix B**.

3.5.1 Area of Potential Effect

The Section 106 process requires each undertaking to define an Area of Potential Effect (APE). An APE is “the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if any properties exist… [and the APE] is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking” (36 CFR Part 800.16[d]). The APE for archaeological resources includes the limits of proposed dredging. As the dredging will be temporary and there would be no temporary or permanent above-ground structures or buildings built as a result of the Proposed Action, the APE for above-ground resources corresponds to the APE for archaeological resources (see **Figure 3-3**). Additionally, the APE generally corresponds with the Proposed Action area, with the exception of Grove Point, as no ground disturbance would occur at this location.

3.5.2 Historic Properties

To identify historic properties in the APE, USCG's Secretary of the Interior-qualified consultants conducted a review of available information, including data provided by USCG; National Register of Historic Places (NRHP) listings; the Medusa Cultural Resource Information System; historic maps and images (e.g., historic aerials and topographic maps), and information derived from online research at various agencies, historical societies and other sources.

3.5.2.1 Above-ground Resources

The APE intersects with the USCG Yard Curtis Bay Historic District (Maryland Inventory of Historic Places [MIHP] AA-783), the USS Oak Ridge Floating Dry Dock (MIHP AA-2526), and the USCG Cutter Matinicus, which was determined not eligible for the NRHP on 30 August 2017. Descriptions of the USCG Yard Curtis Bay Historic District and the USS Oak Ridge Floating Dry Dock are provided below.

USCG Yard Curtis Bay Historic District (AA-783)

On 5 August 1983, an area of the CG Yard was listed as a historic district in the NRHP (AA-783). The USCG Yard Curtis Bay Historic District includes the northeast quadrant of the CG Yard, a southeastern section along the western shore of Arundel Cove, and a large square center portion (Moore, 1981). The historic district is an industrial complex that occupies 115 acres surrounding Arundel Cove on the southeast shore of Curtis Creek. The USCG Yard Curtis Bay Historic District is composed of 28 contributing resources and 13 non-contributing resources, and is primarily a collection of utilitarian structures, metal and/or brick, that have been modified, expanded, or otherwise altered to meet changing demands of production and technology (MHT, 2018). The USCG Yard Curtis Bay Historic District is significant at the local, state, and national levels under Criterion A for its association with trends in naval preparedness, and changes and developments in the military shipbuilding industry. The historic district is also significant at the national level under Criterion C for its design and construction in that the contributing historic resources embody the distinctive characteristic of industrial and military/government buildings of the World War II period. Although the period of significance (POS) for the USCG Yard Curtis Bay Historic District was not defined in the 1981 NRHP evaluation, the POS is interpreted to begin at 1899, the initial year the CG Yard began building and servicing the vessels for the USCG, and 1945, by which time the majority of the historic buildings at the CG Yard were constructed (Moore, 1981). The boundaries of the USCG Yard Curtis Bay Historic District are shown on **Figure 3-3**.

USS Oak Ridge Floating Dry Dock (MIHP AA-2526)

The USS Oak Ridge Floating Dry Dock (MIHP AA-2526) was determined eligible for listing in the NRHP on 14 March 2018. It is a closed basin floating dry dock located along Pier 3. It was originally commissioned in 1944 and was recommissioned in 1963 as the USS Oak Ridge; it was renovated between 2011 and 2013. Built of welded steel, the floating dry dock measures 536 feet in length with a breadth of 81 feet and a displacement of 9,700 tons. It is eligible for the NRHP under Criterion A for its association with events relating to World War II and the Cold War, and Criterion C for exemplifying engineering design, construction methods, and materials characteristic of middle to late twentieth century naval floating docks for overseas deployment. Its period of historical significance spans 1944 through 1968. The location of the USS Oak Ridge Floating Dry Dock is shown on **Figure 3-3.**

3.5.2.1 Archaeological Resources

Based on desktop research, no previously recorded archaeological sites or marine archaeological remote sensing surveys occur within the APE, thought the APE does intersect with the polygon for a Phase I terrestrial archaeological survey of the CG Yard conducted in 1981 (Moore, 1981).

A review of historic and modern navigational charts produced by NOAA reveal that the bulk of the APE was previously dredged to a depth of 22 feet during two dredging campaigns starting in 1940 and again in 1945; smaller portions of the APE were dredged to a depth of 35 to 37 feet (**Appendix B**). In addition, dredged navigation channels were established from the 1930s through the 1960s along with development of the USCG facility and subsequent land development along Curtis Creek Channel and Arundel Cove. Based on the development of navigation channels, shoreline alterations, and previous dredging, there is a low potential for the APE to contain intact, significant submerged cultural resources.

Figure 3-3: Area of Potential Effect

3.6 Vessel Traffic and Navigation

Curtis Creek is located in an industrialized section of the Baltimore Harbor and is situated approximately 5 miles from the Port of Baltimore, one of the busiest ports on the East Coast. The Port of Baltimore handled 43.6 million tons of international cargo valued at $58.4 billion in 2019 (Maryland State Archives, 2021). Navigable access to the Port is provided by numerous channels, anchorages, turning basins, and berthing areas that are maintained at federal, state, and private levels. The Federal navigation channels that serve the Port are an important part of the regional transportation infrastructure.

Curtis Creek is part of the Patapsco River Watershed, which feeds into the Chesapeake Bay. Many Federal, state, and privately maintained navigation channels occur throughout the Chesapeake Bay and its tributaries. These channels provide safe passage for commercial shipping and fishing vessels and recreational boaters.

Navigation and vessel traffic in the Proposed Action area (Curtis Creek) is industrial in nature, and is generally limited to USCG vessels, other government military vessels, recreational vessels, tug and barge traffic, and small commercial vessels. Barges are the most common vessels within Curtis Creek, accessing multiple industrial facilities for shipping and receiving. Marine construction vessels are also present, although these are primarily moored. Fuel tankers may also access Curtis Creek to service industries along the waterfront (USACE, 1997). The entrance to Curtis Creek has heavy vessel traffic, with over 2,000 vessels transiting the area in 2017; the number of vessels in Curtis Creek drops substantially further along the channel, with a count of approximately 200 vessels surrounding the CG Yard in 2017 (NOAA, 2020).

4.0 Environmental Consequences

4.1 Introduction

This section identifies potential effects of the Preferred Action Alternative and No Action Alternative, as well as Best Management Practices (BMPs) that would reduce the level of identified impacts. The USCG considers BMPs integral to implementation, and they are not considered separate from the Proposed Action. For more information on BMPs, refer to **Section 4.6**.

4.2 Physical Environment

4.2.1 Soils

The following criteria were used to address impacts to soils:

- The alternative would have an adverse impact if it would disturb or remove natural soils. The adverse impact would be *significant* if it would result in increased erosion or soil contamination, or if the affected soils were rare or valuable. The adverse impact would be *less-than-significant* if disturbance of soils and potential for erosion could be controlled through BMPs.
- The alternative would have a *beneficial* impact if it would decrease or minimize soil erosion or result in the stabilization or protection of soil conditions.

4.2.1.1 Effects of the Proposed Alternatives

No Action Alternative

Implementation of the No Action Alternative would have *no effect* on soils. No dredging activities would occur that could disturb bottom sediment and potential contaminants within Curtis Creek.

Preferred Action Alternative

Proposed dredging activities and removal of approximately 397,422 CY of soil from the Proposed Action area would result in *long-term, less-than-significant adverse impacts* to soils due to the removal of bottom substrate from Curtis Creek and the potential disturbance of settled contaminants. As described in **Section 3.3.1**, soil sampling conducted within Curtis Creek identified the presence of some contaminants, including metals, nutrients, PCBs, and PAHs, among others. While many contaminants that were analyzed were non-detectable, several were still observed, although at low concentrations, and would not exceed established thresholds. Waste characterization testing indicated that dredged soils would not be considered hazardous waste (**Appendix C**). The disturbance of the bottom soils in Curtis Creek may result in the dispersal of contaminants within Curtis Creek, although these contaminants are likely consistent with surrounding bottom sediment, and would not be likely to substantially increase the contaminant concentrations in the surrounding waters.

The MDOT MPA reviewed the soil sampling results and in a letter dated 19 July 2022, indicated that the dredged material would be acceptable to dispose of at Masonville DMCF, provided that the USCG adhere to the MDOT MPA Site Standards and Procedures for the Placement of Dredged Material, as specified in the MDOT MPA Dredged Material Placement Permit. Additionally, the USCG would be required to obtain and execute a Right of Entry Agreement with MDOT MPA to ensure access to Masonville DMCF (**Appendix C**). Dredged material generated would either immediately be transported via barge to Masonville DMCF or would first be dewatered and then transported by truck for disposal; adherence to the disposal procedures established by MDOT MPA would ensure these dredged spoils are appropriately handled and disposed of once dredging is complete. Following the placement of dredged spoils at Masonville DMCF, the USCG would no longer be responsible for managing these soils, including potential runoff and sedimentation.

Should soils dredged during maintenance dredging be dewatered at Grove Point, there would be no potential for runoff or sedimentation into the surrounding waters. The dredged material would be contained within the geo-synthetic tubes used for dewatering, and would not be loose or exposed. There would be *no impact* to surrounding waters from sedimentation.

4.2.2 Air Quality and Climate

The following criteria were used to address impacts to air quality:

- The alternative would have an adverse impact if it would result in emissions of regulated air pollutants that would not otherwise occur. The adverse impact would be *significant* if it would result in the exceedance of emission thresholds or change the attainment status of the surrounding area. This impact would be *less-than-significant* if the emissions remained below regulatory thresholds (for criteria pollutants and HAPs) or would be sufficiently small relative to existing emissions.
- The alternative would have a *beneficial* impact if it would result in a permanent reduction in regulated air pollutant emissions.

4.2.2.1 Effects of the Proposed Alternatives

No Action Alternative

Implementation of the No Action Alternative would have *no effect* on air quality. The ambient air quality environment would remain the same as current conditions.

Preferred Action Alternative

Air emissions generated from proposed dredging activities would have *short-term, less-than-significant* adverse impacts to the existing air quality environment in the vicinity of the CG Yard. Emissions would be generated during operation of dredge and disposal equipment (e.g., tugboats, cranes, pumps, backhoes, dump trucks). NO_x is the pollutant of greatest concern with respect to these activities, although CO, PM, SO_2, and VOCs may also be emitted by dredge equipment. NO_x

emissions are generated by equipment engines and would contribute to regional ozone concentrations. Emissions would be highly localized and temporary, and would not have a significant impact on climate change vulnerability. Following completion of the Proposed Action, all associated emissions would cease.

Dredge emissions from the Proposed Action calculated in accordance with general conformity regulations were found to be below applicable *de minimis* thresholds for NO_x, VOC, and SO_2 pollutants (**Table 4-1**). These non-attainment pollutant emissions would not exceed the NAAQS thresholds, and therefore, a General Conformity Determination is not required. HAP analysis was not performed as most of the emissions would result from fuel-burning equipment.

Table 4-1: Estimated Annual Criteria Pollutant Emissions from Proposed Dredge Activities

Emission Source	**Projected Emissions (tpy)**						***De minimis* Threshold**
	CO	**NO_x**	**VOCs**	**PM_{10}**	**$PM_{2.5}$**	**SO_2**	**100 tpy for SO_2 and 25 tpy for NO_x and VOCs**
Dredging – 2023	2.65	10.54	0.43	0.41	0.41	0.34	
Dredging – 2024	3.93	11.40	0.78	0.62	0.62	0.39	
Dredging – 2025	0.00	0.00	0.00	0.00	0.00	0.00	

In addition to criteria pollutants, GHGs would be emitted during proposed dredge operations from the same sources. GHG emissions under the Proposed Action would be minor relative to the estimated total amount of GHG emissions in the state of Maryland in 2017 (850 metric tons and 89,156,235 metric tons, respectively). Therefore, GHG emissions from proposed dredging operations (approximately 0.0009% of total emissions in Maryland in 2017) *would not be perceptible* on a regional level, and the Proposed Action *would not have any noticeable regional or global impact* on GHGs or climate change.

The USCG would minimize localized, temporary impacts to the greatest extent practicable through implementation of the following standard BMPs:

- Covering of stockpiled dredged soil;
- Covering of truck loads;
- Requiring a speed of less than 15 miles per hour for construction equipment on unpaved surfaces;
- Using new fossil fuel-fired equipment with stringent emission controls;
- Shutting down fossil fuel-fired equipment when not needed; and
- Cleaning excess soil from heavy equipment and trucks leaving the construction zone to prevent off-site transport.

4.2.3 Noise

The following criteria were used to assess noise impacts:

- The alternative would have an adverse impact on noise if it would create a new source of noise that would temporarily or permanently noticeably increase general noise levels in the area. The impact would be *less-than-significant* if it would not result in a violation of the permissible levels set by Federal, state, or local noise regulations. It would be *significant* if it would exceed those permissible levels.
- The alternative would have a *beneficial* impact if it leads or could lead to a permanent reduction of ambient noise levels.

4.2.3.1 Effects of the Proposed Alternatives

No Action Alternative

Implementation of the No Action Alternative would have *no impact* on current noise conditions at or surrounding the CG Yard, as dredging activities would not be carried forward.

Preferred Action Alternative

Dredging activities would generate noise from the operation of equipment, vehicles, and barges. Increased noise levels would directly affect the immediate area surrounding the dredge site. The resulting noise, however, would not be significant compared to existing noise conditions in the Proposed Action area that are typical of an urban waterfront environment. Increased noise levels from dredging would be intermittent and short-term. Equipment and machinery used at the dredge site are not anticipated to exceed 80 dB at the surface, and would meet all local, state, and Federal noise regulations. If exceedances are detected, further noise-reducing measures would be implemented. These may include, but would not necessarily be limited to, switching to quieter equipment if available; installing mufflers on motorized equipment; and reducing hours of operations. In addition, since distance attenuates noise, it is not anticipated for significant noise to be experienced outside of the Proposed Action area. At 0.25 miles, dredging activity noise levels would generally be quiet enough so as to be considered insignificant, and there are no sensitive noise receptors within a 1-mile radius of the Proposed Action area.

Dredging activity underwater may generate noise between 100 and 110 dB. Maintenance dredging would likely generate continuous noise at this level while improvement dredging would generate impulse noise associated with the clamshell dredge impacting the bottom surface. Generated underwater noise may temporarily alter fish behavior, but species in the area would be able to avoid the dredge sites and occupy other areas within Curtis Creek or Baltimore Harbor. Additionally, proposed dredge activities are not anticipated to exceed the limits set by NOAA for harassment of or injury to fish (120 dB for continuous noise and 160 dB for impulse noise), and would diminish away from the impacted dredge site. Once the proposed improvement and maintenance dredging activities are completed, noise conditions at the CG Yard and surrounding vicinity would return to baseline conditions. Therefore, the Proposed action would result in *short-term, less-than-significant adverse impacts* on noise.

4.2.4 Hazardous and Toxic Materials and Wastes

Impacts to HTMW were assessed using the following criteria:

- The alternative would have adverse impacts if it would cause an increase in the amount of hazardous substances used, stored, or requiring disposal. This adverse impact would be *less-than-significant* if the total amount of hazardous substances remained manageable under existing permits and procedures.
- The alternative would have a *significant* adverse impact if it increased the risk of soil or groundwater contamination by hazardous substances; if it interrupted or impeded any ongoing cleanup efforts; or if it would create new or substantial human or environmental health risks.
- The alternative would have a *beneficial* impact if it would cause a substantial decrease in the amount of hazardous substances used, stored, or requiring disposal by the site; or if it would require or facilitate cleaning up a contaminated site.

4.2.4.1 Effects of the Proposed Alternatives

No Action Alternative

Under the No Action Alternative, existing conditions regarding HTMW would continue. There would be no increase in the amount or volume of hazardous materials used, stored, generated, or disposed of at the CG Yard, and no hazardous materials potentially present in the sediment would be disturbed. Therefore, the No Action Alternative would result in *no impact* from HTMW.

Preferred Action Alternative

As discussed in **Section 4.2.1**, sediment in Curtis Creek contains non-detectable or low concentrations of various contaminants, and once dredged, would not be considered hazardous waste due to its toxicity characteristics. Dredge spoils from proposed improvement dredging would immediately be transported to Masonville DMCF for disposal, in accordance with the MDOT MPA Dredged Material Placement Permit and Right of Entry requirements, and no additional testing would be required.

Dewatered dredge spoils and remaining solid sediment from proposed maintenance dredging would be tested for potential contaminants and then transported from Grove Point at the CG Yard to Masonville DMCF for appropriate storage and disposal. The USCG would not be responsible for managing any potentially contaminated dredge sediments, other than ensuring they are disposed of at the appropriate facility based on the sampling results. In addition, USCG would coordinate with the Maryland Waste Diversion and Utilization Program to ensure proper treatment and disposal of wastes generated. With proper management and disposal of non-hazardous dredge sediment with potential low contaminant concentrations, there would be *short-term, negligible adverse impacts* to Curtis Creek and the CG Yard from HTMW.

During proposed dredge operations in Curtis Creek and in the water surrounding the CG Yard, the use of diesel-powered dredge equipment has the potential to result in an accidental fuel spill. Spills may also occur during the transport of dredged material via truck or barge to Masonville DMCF. Any such accidental releases have the potential to contaminate surface water and soils, and would require remediation. To minimize potential in-water spills from dredge equipment and ensure efficient clean-up should a spill inadvertently occur, the USCG would comply with the *USCG Marine Environmental Response and Preparedness Manual* (COMDTINST M16000.14A) and would implement applicable BMPs. Compliance with this manual and any other applicable clean-up and response procedures would result in *short-term, negligible adverse impacts* should a spill occur.

4.3 Natural Environment

4.3.1 Coastal Resources

The following criteria were used to assess impacts to coastal zone resources:

- The alternative would have an adverse impact on the coastal zone and coastal resources if it would substantially alter the coastal zone or induce activities that would be inconsistent with CZMA policies. The adverse impact would be *significant* if proposed activities would not conform with the CZMA policies. Impacts would be *less-than-significant* if effects could be rendered consistent with the state of Maryland's CZMP through BMPs and/or mitigation measures.
- The alternative would have a *beneficial* impact on the coastal zone if it would result in improvements to these resources (e.g., strengthens coastal resiliency).

4.3.1.1 Effects of the Proposed Alternatives

No Action Alternative

Implementation of the No Action Alternative would have *no impact* on the coastal zone or coastal resources. Existing coastal conditions would remain as described in **Section 3.4.1**.

Preferred Action Alternative

Proposed dredging activities may result in potential disturbances to coastal resources, as a result of increased turbidity, disposal of dredge spoils, physical disturbance, noise/vibration, and impacts to EFH. The Proposed Action would avoid impacts to the state's coastal zone to the maximum extent practicable through compliance with the enforceable policies of Maryland's CZMP, implementation of applicable BMPs, and appropriate agency coordination. Therefore, the Proposed Action would result in *short-term, less-than-significant adverse impacts* on the coastal zone and coastal resources.

The USCG provided MDE with a Federal Consistency Determination, stating that the Proposed Action is consistent to the maximum extent practicable with the enforceable policies of the Maryland CZMP on [DATE], and requested concurrence with the findings. No response has been received to date (**Appendix D**).

4.3.2 Water Resources

The following criteria were used to assess impacts to surface waters, and wetlands and other WOUS:

- The alternative would have an adverse impact if it would threaten or damage unique hydrologic characteristics, reduce water availability, or interfere with the water supply of existing users. The adverse impact would be *significant* if it results in permanent effects. Impacts would be *less-than-significant* if temporary.
- The alternative would have an adverse impact if it would result in the placement of fill, structures, or other discharge in a WOUS; alter a WOUS (e.g., dredging or excavating); or permanently reduce or diminish the quality, functions, and values of WOUS. The adverse impact would be *significant* if it results in permanent effects that substantially reduce the quality or quantity of WOUS that cannot be offset by compensatory mitigation. Adverse impacts would be *less-than-significant* if they are temporary and/or if permanent impacts can be offset through BMPs or compensatory mitigation.
- The alternative would have a *beneficial* impact on WOUS if it would increase or improve the quality or quantity of these resources.

4.3.2.1 Effects of the Proposed Alternatives

No Action Alternative

Under the No Action Alternative, existing conditions for water resources would remain. No disturbances to Curtis Creek, wetlands, or other WOUS would occur, and there would be no changes in water quality and existing hydrologic characteristics. There would be *no impact* to water resources.

Preferred Action Alternative

Proposed dredging activities would disturb underlying sediment located in Curtis Creek, resulting in *short-term, less-than-significant adverse impacts* on surface water quality. The removal of dredge material would temporarily result in local increases in turbidity and total suspended sediment (TSS) and lead to potential disturbance of contaminants located in the sediment (see **Section 4.2.1**). TSS concentrations associated with hydraulic maintenance dredging would range from 11.5 milligrams/liter (mg/L) up to 500 mg/L adjacent to the dredge barge, and would be expected to dissipate to background levels within 1,000 feet of the maintenance dredging site. TSS concentrations associated with mechanical improvement dredging would range from 105 mg/L up to 445 mg/L, and would be expected to dissipate within 600 feet of the improvement dredging sites in the upper water column, and 2,400 feet in the lower water column. Following the completion of the proposed dredging activities, disturbed sediments would settle back to the creek floor, and would not remain suspended in the water column. Turbidity or silt curtains would be installed in accordance with time-of-year restrictions for EFH (**Section 4.3.3.1**) around the dredge area to prevent the migration of sediments outside of the immediate work area. In addition, to minimize the potential for spills or discharges, the USCG would comply with its *Marine Environmental Response and Preparedness Manual* (COMDTINST M16000.14A).

Dewatering of dredge spoils removed during proposed maintenance dredging activities would also have the potential to impact surface water quality. Contaminants present in the dredge slurry would also be present in the drained water. Berms and impermeable liners would be installed surrounding the dewatering area at Grove Point to contain this water, which would be tested and treated to meet applicable water quality standards prior to discharge in Curtis Creek. Containment and treatment of this water would minimize the potential for contaminated water to re-enter Curtis Creek following dredging; therefore, dewatering of dredge spoils is anticipated to have *short-term, negligible adverse impacts* on surface water quality.

The Proposed Action would also result in *short-term, less-than-significant adverse impacts* to the existing characteristics of Curtis Creek. Proposed maintenance and improvement dredging would alter the substrate characteristics of approximately 55.3 acres of bottom substrate in the Curtis Creek channel, turning basin, and Shiplift area by removing approximately 397,422 CY of sediment to deepen those areas. Given the extensive dredge history of the Proposed Action area and ongoing disturbances, the proposed dredge activities would not impair the quality of Curtis Creek. In addition, proposed maintenance dredging would return the Shiplift area to its historic depth.

The laydown of the conveyance pipeline to transport maintenance dredge spoils would cross approximately 550 linear feet of bottom substrates at Arundel Cove, which may also result in temporary impacts to the bottom substrate. To address these impacts, the USCG has applied for and would obtain an Individual Permit from USACE under Section 404 of the CWA for mechanical and hydraulic dredging and discharge of dredge material into WOUS, and would comply with the requirements of that permit. In addition, under Section 401 of the CWA, a Water Quality Certification (WQC) would be obtained from the state of Maryland prior to issuance of the Individual Permit. USCG would coordinate with MDE to obtain this WQC and would comply with all requirements necessary for issuance. The USCG would also obtain a USACE Section 408 Permission for the placement of the conveyance pipeline within the Federal navigation channel. No compensatory mitigation would be required to address potential adverse impacts to Curtis Creek. Compliance with these permits would ensure that adverse impacts are minimized to the extent practicable.

No permanent wetland impacts would occur and no wetlands near the CG Yard would be dredged or filled under the Proposed Action. However, the laydown of the conveyance pipeline to transport maintenance dredge spoils from the Shiplift area would cross 30 linear feet of wetland at Arundel Cove to reach the upland dewatering site. No land disturbance or vegetation removal would occur within this wetland, as the pipeline would only temporarily be placed on top of the wetland, and no dredge material would be discharged into it. The USCG would obtain an MDE Tidal Wetland License for the laydown across the wetland. Furthermore, following completion of the Proposed Action, the conveyance pipeline would be removed and the impacted wetlands would be returned to their pre-construction conditions, resulting in *short-term, negligible adverse impacts* on wetlands.

No dewatered sediment would be discharged to Curtis Creek, and there would be no soil disturbances on land at the CG Yard that could result in stormwater runoff, erosion, or sedimentation. Any dewatered dredge spoils at Grove Point would be contained until they are ready for disposal. Once dredge spoils from the CG Yard are transported to Masonville DMCF, the MDOT MPA would be responsible for ensuring the dredge materials are properly stored. There would be *no impact* to surface water quality from stormwater runoff or sedimentation at the CG Yard.

4.3.3 Biological Resources

The following criteria were used to assess impacts on biological resources:

- The alternative would have an adverse impact if it would adversely affect T&E species and aquatic wildlife, including their habitats. The adverse impact would be *less-than-significant* if it could be adequately avoided, minimized, or mitigated, in consultation with Federal and State agencies. The impact would be *significant* if the adverse effect would permanently displace or take T&E species, aquatic wildlife, and their habitats.
- The alternative would have a *beneficial* impact if it enhanced habitat or introduced protection for T&E.

4.3.3.1 Effects of the Proposed Alternatives

No Action Alternative

Under the No Action Alternative, the existing terrestrial and aquatic environment would remain undisturbed. Biological resources would be the same as described in **Section 3.4.3**. Therefore, there would be *no impact* to biological resources.

Preferred Action Alternative

No terrestrial work would occur as part of the Proposed Action; therefore, there is no potential to impact any terrestrial state-listed T&E species that may be present (**Table 3-1**). Proposed in-water maintenance and improvement dredging activities have the potential to impact the Atlantic sturgeon and shortnose sturgeon, both of which are federally listed T&E species, due to increased turbidity and the presence of dredge equipment. As described in **Section 4.3.2.1**, increased turbidity and TSS concentrations are anticipated to remain below 1,000 mg/L for both maintenance and improvement dredging, and would therefore not be anticipated to result in an adverse effect to federally listed fish species.

Both sturgeon species have a limited potential to be present at or in the vicinity of the Proposed Action area due to existing routine disturbances and lack of suitable habitat. As described in **Section 3.4.3.1**, both of these species would be anticipated to occur in Curtis Creek in their juvenile to adult life stages, and would therefore be highly mobile and likely to leave the Proposed Action area during dredging activities or avoid sediment plumes. Additionally, the presence of hydraulic and mechanical dredge equipment is not likely to result in entrapment of these species, as the Proposed Action area is not known to support high densities of these species, and individuals would be able to avoid the equipment. As Curtis Creek is classified as an estuarine water with an unconsolidated bottom, neither species would be likely to spawn surrounding the Proposed Action area, and no eggs or larvae of either species would be anticipated to be present due to the high salinity level and lack of hard substrate. As a result, the Preferred Action Alternative *may affect, but is not likely to adversely affect* the Atlantic sturgeon and shortnose sturgeon.

Due to the presence of designated EFH within Curtis Creek, there is a potential for EFH species to be present in the Proposed Action area although their densities are anticipated to be low. Further, only highly mobile juvenile/adult fish are anticipated to occur in the area (see **Section 3.4.3.1**). While proposed dredging activities would temporarily disturb aquatic habitat as a result of increased turbidity and noise/vibration, this would not present any significant impacts when taken into consideration with the industrialized nature of the CG Yard and heavy use of the surrounding waters. However, increased turbidity could affect the behavior of EFH species, resulting in increased susceptibility to predation, stress, and exposure to potentially contaminated sediments. The removal of dredge spoils would permanently alter benthic habitat through the removal of approximately 397,422 CY of sediment from the Proposed Action area and could result in the loss of benthic organisms used for forage; however, benthic species are not anticipated to be present in large densities due to existing disturbances, and benthic communities outside the Proposed Action area would still provide forage for EFH species. Therefore, the Preferred Action Alternative *may adversely affect* EFH due to the physical changes to the surrounding waters and bottom substrates, including temporary degradation of water quality, and the potential loss of benthic organisms used for forage.

To minimize potential impacts to aquatic wildlife and habitat, including EFH, the USCG would adhere to applicable permit conditions and implement appropriate BMPs and conservation recommendations provided by NMFS to manage turbidity, such as the use of an environmental dredge bucket and turbidity curtains during certain months. Ensuring that the hydraulic drag head is properly situated on the bottom sediment before beginning dredge suction would minimize potential entrapment of both T&E and EFH species. Additionally, the USCG would comply with time-of-year restrictions and would restrict dredging from March 1 through June 15, and would either avoid dredging or conduct dredging behind turbidity curtains between June 15 through October 15 to avoid adverse impacts to EFH and FWCA species that may be potentially present. The complete list of conservation recommendations provided by NMFS is included in **Section 4.6** and **Appendix A**. Therefore, the Preferred Action Alternative would result in both *short- and long-term, less-than-*

significant adverse impacts to aquatic wildlife and habitat, including EFH. In a letter dated 28 April 2022, the NMFS determined that implementation of the conservation recommendations would minimize adverse impacts of the Proposed Action on EFH; the USCG accepted these recommendations in a letter dated 26 May 2022. A copy of the NMFS T&E and EFH consultation correspondence is included in **Appendix A**.

4.4 Cultural Resources

The following criteria were used to assess impacts on cultural resources:

- The alternative would have an adverse impact if it had an adverse effect under Section 106. The adverse impact would be *less-than-significant* if it could be adequately avoided, minimized, or mitigated in consultation with the SHPO and other consulting parties in accordance with 36 CFR 800.6. The impact would be *significant* if the adverse effect was not or could not be resolved.

- The alternative would have a *beneficial* impact if it enhanced the historic integrity of a cultural resource, for instance by permanently removing a feature or condition that currently detracts from it.

4.4.1 Effects of the Proposed Alternatives

No Action Alternative

Implementation of the No Action Alternative would have *no impact* on cultural resources, including above-ground historic and archaeological resources.

Preferred Action Alternative

The APE for the Proposed Action intersects the NRHP-listed USCG Yard Curtis Bay Historic District (NRHP AA-783) next to Pier 3, and the NRHP-eligible USS Oak Ridge Floating Dry Dock (MIHP AA-2526) located next to Pier 3 is also located in the Proposed Action area (see **Section 3.5**). No inland impacts would occur to these above-ground resources, and no structures within the listed historic district would be physically impacted, although there is the potential for visual impacts due to the presence of industrial dredging equipment. Any such visual impacts would be temporary, and would not alter the integrity of the historic properties. Therefore, the Preferred Action Alternative would have *no adverse effects* on above-ground resources.

There is a low potential for previously undiscovered submerged archaeological resources. The waters surrounding the CG Yard, including Curtis Creek, have an extensive and consistent history of dredging to maintain the navigable channels. In the event that an archaeological artifact is inadvertently discovered in sediment during dredging, however, the USCG would cease work immediately and notify the MHT. Therefore, there would be *no adverse effect* on archaeological resources.

In a response dated 15 December 2021, the MHT concurred with the USCG's determination of *no adverse effect* on historic properties (**Appendix B**).

4.5 Vessel Traffic and Navigation

The following criteria were used to assess impacts on vessel traffic and navigation:

- The alternative would have an adverse impact if it would interfere with current vessel transit through Curtis Creek, and impede navigation of other vessels. Impacts would be *significant* if they would result in permanent changes to vessel navigation. Impacts would be *less-than-significant* if they would result in temporary changes.
- The alternative would have *beneficial* impacts if it would improve vessel transit and navigation, such as by increasing the amount of available space for navigation.

4.5.1 Effects of the Proposed Alternatives

No Action Alternative

Implementation of the No Action Alternative would have *no impact* on general vessel traffic and navigation. No additional vessels would be present within or would transit Curtis Creek or the surrounding area, and there would be no impediment to existing vessel traffic. However, the No Action Alternative would result in *long-term, significant adverse impacts* to vessel traffic exclusive to the CG Yard. New vessels acquired by the USCG would be unable to enter Curtis Creek and access the CG Yard for maintenance and repair due to limitations caused by the existing, insufficient water depth. The reduced functionality of the Syncrolift facility due to insufficient water depths and subsequent reduced ability to dry-dock vessels would further hinder the CG Yard in fulfilling its mission.

Preferred Action Alternative

Proposed dredging activities would require the placement of a conveyance pipeline and use of barges for transporting dredge material. The conveyance pipeline would only be used during the proposed maintenance dredging near the Shiplift area, and would float adjacent to the dredge barge in that area. It would be submerged and anchored to the bottom where it crosses Arundel Cove, for approximately 550 linear feet, so as not to impede vessel traffic. Upon exiting Arundel Cove, the pipeline would be placed along 30 linear feet of wetland present along the eastern shoreline of Arundel Cove. As the dredge barge would be located adjacent to the CG Yard and removed from the main thoroughfare of Curtis Creek, and since the conveyance pipeline would not be placed along the surface, proposed maintenance dredging would result in *short-term, negligible adverse impacts* to vessel traffic and navigation.

During improvement dredging, a minimum of three barges would be required: one crane barge, and two scour barges to collect and transport excavated sediment. These barges would only remain in

Curtis Creek and the turning basin while dredging is actively occurring, and would be moored at the end of daily activities and removed following the conclusion of proposed dredging. One scour barge would continually be in transit from the proposed dredge site to Masonville DMCF, and would represent an additional vessel in Curtis Creek and the Baltimore Harbor. This barge may also be used to transport dredged material from the Shiplift area should it be disposed of at Masonville DMCF rather than be dewatered. As proposed maintenance and improvement dredge activities would not occur concurrently, multiple barges would not be required to transport the dredge material. Given the high volume of vessels in Baltimore Harbor, this additional barge would not represent a substantial increase in vessel traffic.

The barges remaining in Curtis Creek to conduct dredging activities may interfere with ordinary vessel traffic, but owing to the width of Curtis Creek and the low number of vessels that transit the channel annually, these dredges are not anticipated to pose a substantial impediment. Moreover, due to the industrial environment and the relatively routine nature of dredging in the surrounding area, vessels would be accustomed to this activity. Therefore, proposed improvement, and possibly maintenance, dredging would result in *short-term, less-than-significant adverse impacts* to vessel traffic and navigation.

4.6 Best Management Practices

Per established protocols, procedures, and requirements, the USCG would implement BMPs and satisfy all applicable regulatory requirements in association with the Proposed Action. BMPs are included as components of the Preferred Action Alternative and described below. BMPs are regulatory compliance measures that the USCG regularly implements as part of their activities, as appropriate. These are different from "mitigation measures," which are defined as project-specific requirements, not routinely implemented by the USCG, necessary to reduce identified potentially significant adverse environmental impacts to less-than-significant levels. As no adverse environmental impacts are potentially significant, no mitigation measures would be required for the Proposed Action.

Soils. Dredged sediment from maintenance dredging would be tested for potential contaminants prior to disposal at Masonville DMCF to ensure it is disposed of properly. Prior to disposal of dredge spoils from maintenance and improvement dredging, USCG would adhere to the MDOT MPA Site Standards and Procedures for the Placement of Dredged Material and would obtain an MDOT MPA Right of Entry permit to allow for disposal at the DMCF. The USCG would comply with specified capacity limits and restrictions.

Air Quality and Climate. The USCG would ensure that dredge activities are performed in accordance with applicable State and Federal regulations, to ensure that no exceedance of *de minimis* thresholds occurs. Reasonable precaution would be taken to prevent particulate matter, such as fugitive dust, from becoming airborne. Available methods to reduce the potential impact of particulate matter or release of other emissions may include covering stockpiled dredged soil when being transported via barge, truck, or while dewatering is occurring; and requiring low transit speeds for equipment on unpaved surfaces. In addition, more fossil fuel-efficient dredge equipment with emission controls would be used, and would be shut down when not in use. Excess dredged soil would be cleaned from heavy equipment and trucks to prevent off-site transport. The USCG would regularly monitor dredge activities.

Noise. The USCG would implement BMPs as appropriate to limit noise impacts during dredging, including complying with local noise ordinances. If noise levels exceed local ordinances, noise reduction measures such as switching to quieter equipment, installing mufflers on motorized equipment, and reducing hours of operations, would be implemented. Dredge equipment would be operated per manufacturer's recommendations, and would be shut down when not needed.

HTMW. Solid waste generated during the Proposed Action, including dewatered dredge spoils, would be properly disposed of at permitted waste facilities. All dredged materials would be transported to Masonville DMCF for storage and disposal. Proper work procedures, including coordination with the Maryland Waste Diversion and Utilization Program, would be outlined in an appropriate specification plan. The USCG would take precautions in accordance with the USCG *Marine Environmental Response and Preparedness Manual* (COMDTINST M16000.14A) to minimize the risk of spills and address spills that may occur during dredge activities. In addition, the USCG would implement applicable BMPs identified under *Soils* to address sediment contamination.

Coastal Resources. The USCG would comply with the enforceable policies of Maryland's CZMP to the maximum extent practicable, and would implement the dredging BMPs identified under *Soils, HTMW, Water Resources, and Biological Resources* to minimize impacts to the coastal resources.

Water Resources. In addition to obtaining a WQC and an Individual Permit for dredging in a navigable waterway, the USCG would implement regulatory conservation recommendations to protect water quality, such as the use of turbidity curtains during dredging activities between June 15 and October 15, and installation of berms and impermeable liners at the dewatering site. Water from the dewatered dredge spoils would be tested and treated to meet applicable water quality standards before being discharged into Curtis Creek. A USACE Section 408 Permission and MDE Tidal Wetlands License would be obtained for placement of the conveyance pipeline within Arundel Cove and wetlands. Disturbed wetlands from placement of the conveyance pipeline would be restored to pre-construction conditions. In addition, the USCG would implement applicable BMPs identified under *Soils* and *HTMW* to minimize the risk of contamination and spills.

Biological Resources. The USCG would implement the dredging BMPs identified under *Water Resources* to protect aquatic wildlife and habitat and minimize impacts. In addition, the USCG would implement the following conservation recommendations, as outlined by NMFS, to minimize adverse impacts to EFH species:

- Restrict dredging throughout the entirety of the anadromous fish spawning period (March 1 through June 15) to avoid impacts to migratory fish associated with dredging.

- To the extent practicable, avoid dredging during periods of peak biological productivity in the Chesapeake Bay (i.e., generally June 15 through October 15) to minimize transfer of suspended contaminant-laden sediments into aquatic food web. Dredging within this time frame will be conducted behind a turbidity curtain to minimize the spread of contaminated sediments.
- For mechanical enhancement dredging of the Curtis Creek Channel:
    - Use an environmental bucket and require slow bucket retrieval speed near the water surface to the maximum extent practicable to minimize the suspension of contaminated sediments.
    - Employ a water-tight scow to receive and transport dredged sediments and prohibit any overflow of waters from the scow during operations.
    - Limit over-depth dredging to one (1) foot.
- For hydraulic maintenance dredging of the Syncrolift facility:
    - The dredge intake (cutterhead) on the hydraulic dredge should not be turned on/activated until it is buried in the sediment, or within 1 foot of the bottom, to minimize entrainment of aquatic organisms.
    - The dredge intake (cutterhead) on the hydraulic dredge should be turned off/deactivated before it is lifted out of the sediment and through the water column to minimize entrainment of organisms.
    - Ensure that all discharges from the proposed Grove Point upland containment site are monitored per Maryland State guidelines and meet the criteria specified for upland containment sites operated by the MPA. Provide notification of any non-compliance event to the MDE.

Cultural Resources. In the event that a submerged archaeological site or artifact is inadvertently uncovered during implementation of the Proposed Action, all dredging activities would be immediately halted until a proper archaeological assessment can be made. The USCG would notify MHT within 24 hours.

Vessel Traffic and Navigation. The USCG would place and anchor the conveyance pipeline needed for maintenance dredging underwater to cross Arundel Cove, in order to prevent impeding vessel traffic. Barges and associated equipment required for improvement dredging in Curtis Creek would be moored near the CG Yard following daily dredge activities, and would be entirely removed from Curtis Creek following the conclusion of the Proposed Action.

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5.0 Comparison of Alternatives and Conclusions

5.1 Comparison of the Environmental Consequences of the Alternatives

This EA has evaluated the potential physical, natural, cultural, and transportation effects of the USCG's proposed maintenance and improvement dredging activities in Curtis Creek in support of the Syncrolift facility and new classes of cutters, as detailed in **Section 2.2**. The Preferred Action Alternative was evaluated in addition to the No Action Alternative. A comparison of the environmental consequences of these alternatives is provided in **Table 5-1**. All impacts would be reduced with implementation of BMPs (**Section 4.6**).

5.2 Conclusion

This EA concludes that there would be no significant adverse impact, either individually or cumulatively, to the local physical and natural environment as a result of implementing the Proposed Action, with the adherence to BMPs specified in this EA. Therefore, an EIS is unnecessary for implementing the Proposed Action and a FONSI is appropriate. The Preferred Action Alternative was determined by the USCG to be the single viable option for completing needed dredge activities within Curtis Creek to support USCG missions and sustain and improve the CG Yard's viability as the only USCG shipyard. The No Action Alternative was found to not satisfy the purpose of and need for the Proposed Action. As such, this EA recommends implementation of the Proposed Action.

Table 5-1: Alternative Comparison Matrix

Technical Resource Area	No Action Alternative	Preferred Action Alternative
Soils	No impact	*Long-term, less-than-significant adverse impacts* to soils due to the removal of bottom substrate from Curtis Creek and the disturbance of settled contaminants. *No impact* from soil runoff and sedimentation.
Air Quality and Climate	No impact	*Short-term, less-than-significant adverse impacts* to the existing air quality environment from operation of dredge and disposal equipment. Criteria pollutant emissions would *not exceed de minimis levels.* *No noticeable regional or global impact* on GHGs or climate change.
Noise	No impact	*Short-term, less-than-significant adverse impacts* on surface and underwater noise levels from the operation of dredge equipment.
Hazardous and Toxic Materials and Wastes	No impact	*Short-term, negligible adverse impacts* to Curtis Creek and the CG Yard from low concentrations of contaminants present within dewatered dredge spoils and sediment. *Short-term, negligible adverse impacts* should an in-water spill occur, due to compliance with applicable spill response and preparedness procedures.
Coastal Zone	No impact	*Short-term, less-than-significant adverse impacts* to coastal zone resources from increased turbidity, displacement of subsurface materials, disposal of dredge spoils, physical disturbances, in-water noise/vibration, and potential impacts to aquatic T&E species.

Technical Resource Area	No Action Alternative	Preferred Action Alternative
Water Resources	No impact	*Short-term, less-than-significant adverse impacts* to surrounding water quality from increased turbidity. *Short-term, negligible adverse impacts* to water quality from dewatering dredge spoils. *Short-term, less-than-significant adverse impacts* to Curtis Creek from the alteration of its physical characteristics due to sediment removal and laydown of the conveyance pipeline. *Short-term, negligible adverse impacts* on wetlands from placement of the conveyance pipeline on an estuarine wetland at Arundel Cove. *No impact* to surface waters from stormwater runoff or sedimentation.
Biological Resources	No impact	*No impact* to terrestrial T&E species. Dredging activities *may affect but is not likely to adversely affect* potentially present aquatic T&E species, including the Atlantic sturgeon and shortnose sturgeon. Dredging activities *may adversely affect* EFH species due to physical changes to Curtis Creek. *Short- and long-term less-than-significant adverse impacts* to aquatic wildlife and habitat, including EFH, due to in-water disturbances.
Cultural Resources	No impact	*No adverse effects* to historic properties, including above-ground and submerged archaeological resources.
Vessel Traffic and Navigation	No impact to general vessel traffic. **Significant adverse impact** to USCG vessel traffic from inability to access the CG Yard for repair and maintenance.	*Short-term, negligible adverse impacts* during maintenance dredging from the presence of a dredge barge in the Shiplift area. *Short-term, less-than-significant adverse impacts* to vessel navigation during improvement and possibly maintenance dredging from the continuous transit of a scour barge from the dredge site to Masonville DMCF, and from the presence of additional barges in Curtis Creek while dredging is occurring.

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6.0 References

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7.0 Glossary

Ambient – The environment as it exists around people, plants, and structures.

Archaeological Resource – Any material of human life or activities that is at least 100 years of age and is of archaeological interest (32 CFR Part 229.3(a)).

Area of Potential Effect (APE) – The geographical area within which the undertaking may cause changes in the character of or use of historic properties, if any such properties exist. The APE may change according to the regulation under which it is being applied and should be established in coordination with consulting parties.

Attainment Area – Region that meets the National Ambient Air Quality Standard (NAAQS) for a criteria pollutant under the CAA.

Best Management Practices (BMPs) – Regulatory compliance methods, measures, or practices to minimize adverse effects.

Contaminants – Any physical, chemical, biological or radiological substances that have an adverse effect on air, water or soil.

Council on Environmental Quality (CEQ) – An Executive Office of the President composed of three members appointed by the President, subject to approval by the Senate. Each member shall be exceptionally qualified to analyze and interpret environmental trends; to appraise programs and activities of the Federal government. Members are to be conscious of and responsive to the scientific, economic, social, aesthetic, and cultural needs of the Nation; and to formulate and recommend national policies to promote the improvement of the quality of the environment.

Criteria Pollutants – The CAA of 1970 required the EPA to set air quality standards for common and widespread pollutants in order to protect human health and welfare. There are six "criteria pollutants": ozone (O_3), carbon monoxide (CO), sulfur dioxide (SO_2), lead (Pb), nitrogen dioxide (NO_2), and particulate matter.

Cultural Resources – Historic properties as defined by the NHPA; cultural items as defined by NAGPRA; archaeological resources as defined by ARPA; sites and sacred objects to which access is afforded under AIRFA; and collections and associated records as defined in 36 CFR Part 79. Included are: traditional cultural properties and objects; archaeological sites; historic buildings, structures, and districts; and localities with social significance to the human community.

dBA – "A-weighted" non-impulse noise measurement in decibels, weighted to match human hearing frequency response.

Decibel (dB) – A unit of measurement of sound pressure level.

Emission – A release of a pollutant.

Endangered Species – Any species which is in danger of extinction throughout all or a significant portion of its range.

Environmental Assessment (EA) – An EA is a publication that provides sufficient evidence and analysis to show whether a proposed system would adversely affect the environment or be environmentally controversial.

Erosion – The wearing away of the land surface by detachment and movement of soil and rock fragments through the action of moving water and other geological agents.

FONSI – Finding of No Significant Impact, a NEPA document.

Fugitive Dust – Particles light enough to be suspended in air, which are not caught in a capture or filtering system. For this document, this refers to particles put in the air by moving vehicles and air movement over disturbed soils at construction sites.

Hazardous Substance – Hazardous materials are defined within several laws and regulations to have certain meanings. For this document, a hazardous material is any one of the following:

- Any substance designated pursuant to section 311 (b)(2) (A) of the Clean Water Act.
- Any element, compound, mixture, solution or substance designated pursuant to Section 102 of Comprehensive Environmental Response, Compensation and Liability Act (CERCLA).
- Any hazardous as defined under the Resource Conservation and Recovery Act (RCRA).
- Any toxic pollutant listed under Toxic Substances Control Act.
- Any hazardous air pollutant listed under Section 112 of CAA.
- Any imminently hazardous chemical substance or mixture with respect to which the EPA Administrator has taken action pursuant to Subsection 7 of Toxic Substances Control Act.

The term does not include: 1) Petroleum, including crude oil or any thereof, which is not otherwise specifically listed or designated as a hazardous substance in a above. 2) Natural gas, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas). c. A list of hazardous substances is found in 40 CFR Part 302.4.

Hazardous Waste – A solid waste, which when improperly treated, stored, transported or disposed of poses a substantial hazard to human health or the environment. Hazardous wastes are identified in 40 CFR Part 261.3 or applicable foreign law, rule, or regulation (see also solid waste).

Hazardous Waste Storage – As defined in 40 CFR Part 260.10, ". . . the holding of hazardous waste for a temporary period, at the end of which the hazardous waste is treated, disposed of, or stored elsewhere."

Historic Property – Any material or human life or activities that is at least 50 years of age and is of cultural interest.

Historic resources – Any real or personal property, record, or lifeway. Includes: historic real property such as archaeological and architectural places, monuments, designed landscapes, works of engineering or other property that may meet the criteria for inclusion in the NRHP; historic personal property such as any artifact or relic; historic records to include any historical, oral-historical, ethnographic, architectural, or other document that provides a record of the past; and community resources/lifeways to include any resource that a community or interested group ascribes cultural value (references to historic real or personal property such as natural landscapes and cemeteries; references to real property such as vistas or viewsheds; or, references to the nonmaterial such as certain aspects of folk life, cultural or religious practices, languages, or traditions).

Jurisdictional wetland – Areas that meet the wetland hydrology, vegetation, and hydric soil characteristics, and have a direct connection to the Waters of the United States. These wetlands are regulated by the USACE.

Listed Species – Any plant or animal designated as a State or Federal threatened, endangered, special concern, or candidate species.

Mitigation – Measures taken to reduce adverse impacts on the environment.

Mobile Sources – Vehicles, aircraft, watercraft, construction equipment, and other equipment that use internal combustion engines for energy sources.

Monitoring – A process of inspecting and recording the progress of mitigation measures implemented.

National Ambient Air Quality Standards (NAAQS) – Nationwide standards set up by the EPA for widespread air pollutants, as required by Section 109 of the Clean Air Act (CAA). Currently, six pollutants are regulated by primary and secondary NAAQS: carbon monoxide (CO), lead, (Pb), nitrogen dioxide (NO_2), ozone (O_3), particulate matter, and sulfur dioxide (SO_2).

National Environmental Policy Act (NEPA) – United States statute that requires all Federal agencies to consider the potential effects of Proposed Actions on the human and natural environment.

Nonattainment Area – An area that has been designated by the EPA or the appropriate State air quality agency as exceeding one or more national or State ambient air quality standards.

Particulates or Particulate Matter – Fine liquid or solid particles such as dust, smoke, mist, fumes or smog found in air.

Pollutant – A substance introduced into the environment that adversely affects the usefulness of a resource.

Sensitive Receptors – Include, but are not limited to, asthmatics, children, and the elderly, as well as specific facilities, such as long-term health care facilities, rehabilitation centers, convalescent centers, retirement homes, residences, schools, playgrounds, and childcare centers.

Soil – The mixture of altered mineral and organic material at the earth's surface that supports plant life.

Threatened species – Any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

Toxic Substance – A harmful substance which includes elements, compounds, mixtures, and materials of complex composition.

Undertaking – “An undertaking is a project, activity, or program funded in whole or in part under the direct or indirect jurisdiction of a Federal agency, including those carried out by or on behalf of a Federal agency; those carried out with Federal financial assistance; those requiring a Federal permit, license, or approval; and those subject to State or local regulation administered pursuant to a delegation or approval by a Federal agency” (36 CFR Part 800.16{y]).

Waters of the United States include the following: (1) All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide. (2) All interstate waters including interstate wetlands. (3) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce.

Wetlands – Areas that are regularly saturated by surface or groundwater and, thus, are characterized by a prevalence of vegetation that is adapted for life in saturated soil conditions. Examples include swamps, bogs, fens, marshes and estuaries.

Wildlife Habitat – Set of living communities in which a wildlife population lives.

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8.0 List of Preparers

US COAST GUARD COMMANDING OFFICER
Facilities Engineering Coast Guard Yard
2401 Hawkins Point Road
Baltimore, MD 21226

Name	Role
CDR John Lisko, P.E.	Project Manager
LT Holly Moore	Facilities Engineer

AECOM
430 National Business Parkway
Annapolis Junction, MD 20701

Name	Role	Degree	Years of Experience
Ravi Damera	Project Manager	M.S. in Environmental Engineering B.Tech in Civil Engineering	34
Jennifer Warf	EA Technical Lead, Quality Assurance/Quality Control (QA/QC) of the EA	M.S. in Environmental Studies B.A in Zoology	20
Natalie Kisak	Preparation of EA sections	B.A. in Environmental Studies and Public Policy	3
Charlene Wu	Preparation of EA sections	Master of Environmental Management B.S. in Environmental Science & Policy	8
Vijay Apte	Preparation of Air Quality section	M.S. in Environmental Engineering B.E. in Civil Engineering	40+
Allison Carr	Map Preparation, GIS	Master of City Planning B.A. in Geography	3

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9.0 Agencies and Individuals Consulted

Copies of all correspondence, including a sample of data request letters sent and responses received to date are included in **Appendix A**.

Federal Agencies

US Environmental Protection Agency
Region 3
Office of Environmental Programs (3EA30)
1650 Arch Street
Philadelphia, PA 19103-2029
POC: Barbara Rudnick, NEPA Team Leader

US Army Corps of Engineers
Baltimore District
2 Hopkins Plaza
Baltimore, MD 21201
POC: Dan Swenson, Regulatory Branch Chief

Federal Emergency Management Agency
Region III
615 Chestnut Street
One Independence Mall, 6th Floor
Philadelphia, PA 19106-4404
POC: Stephanie Everfield, Regional Environmental Officer

US Fish and Wildlife Service
Chesapeake Bay Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401

NOAA National Marine Fisheries Service
Greater Atlantic Regional Office
Protected Resources Division
55 Great Republic Drive
Gloucester, MA 01930
POC: Jennifer Anderson

NOAA National Marine Fisheries Service
Greater Atlantic Regional Office
55 Great Republic Drive
Gloucester, MA 01930
POC: Jonathan Watson, Marine Habitat Resource Specialist

US Department of Transportation
Maritime Administration, Mid-Atlantic Gateway Office
1200 New Jersey Avenue SE, Room W23-323
Washington, DC 20590
POC: Amanda Rutherford, Director

State and Local Agencies

Maryland Historical Trust
100 Community Place, 3rd Floor
Crownsville, MD 21032-2023
POC: Elizabeth Hughes, State Historic Preservation Officer

Maryland Port Administration
401 East Pratt Street
Baltimore, MD 21202
POC: Dominic Scurti, Acting Director of Planning

Maryland Department of Planning
301 W. Preston Street, Suite 1101
Baltimore, MD 21201
POC: State Clearinghouse

Maryland Department of the Environment
Water and Science Administration, Waterway Construction Division
1800 Washington Boulevard
Baltimore, MD 21230
POC: William Seiger, Chief

Maryland Department of Natural Resources
Chesapeake and Coastal Service
Tawes State Office Building, E-2
580 Taylor Avenue
Annapolis, MD 21401
POC: Matthew Fleming, Director

Maryland Department of Natural Resources
Wildlife and Natural Heritage Program
Tawes State Office Building
580 Taylor Avenue
Annapolis, MD 21401
POC: Lori Byrne, Environmental Review Specialist

Anne Arundel County Department of Planning & Zoning
The Office of Planning and Zoning
2664 Riva Road
Annapolis, MD 21401
POC: Philip R. Hager, Planning and Zoning Officer

City of Baltimore
Department of Planning
417 E. Fayette Street, 8th Floor
Baltimore, MD 21202
POC: Chris Ryer, Director

Native American Tribes

Delaware Nation, Oklahoma
P.O. Box 825
Anadarko, OK 73005
POC: Nekole Alligood, Director of Cultural Resources & Section 106

Delaware Tribe of Indians
P.O. Box 64
Pocono Lake, PA 18347
POC: Susan Bachor, Preservation Representative

Non-governmental Organizations

Preservation Maryland
3600 Clipper Mill road, Suite 248
Baltimore, MD 21211
POC: Nicholas A. Redding, Executive Director

Appendix A – Agency Consultation and Coordination

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U.S. Department of Homeland Security

United States Coast Guard

Commanding Officer
United States Coast Guard
Facilities Engineering Coast
Guard Yard

2401 Hawkins Point Road
Baltimore, MD 21226
Phone: (410) 636-4098
Email: Avery.L.Weston@uscg.mil

1 December 2021

Mr. Philip R. Hager
Planning and Zoning Officer
Anne Arundel County Department of Planning and Zoning
The Office of Planning and Zoning
2664 Riva Road
Annapolis, MD 21401
pz-comments@aacounty.org

Dear Mr. Hager,

The purpose of this letter is to solicit comments regarding the United States Coast Guard's (USCG) intent to conduct dredging activities at USCG Yard (herein referred to as CG Yard) in Baltimore, Anne Arundel County, Maryland (Proposed Action). The USCG is preparing an Environmental Assessment (EA) to evaluate the potential impacts associated with the Proposed Action pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 United States Code §4321 et seq.), the Council on Environmental Quality Regulations (40 Code of Federal Regulations [CFR] Parts 1500-1508), and USCG Commandment Instruction (COMDTINST) M16475.1D*, Implementing Procedures and Policy for Considering Environmental Impacts*.

The CG Yard is comprised of approximately 113 acres along the eastern shoreline of Curtis Creek, a tributary of the Patapsco River, and is approximately 6 miles south of downtown Baltimore (see **Figure 1**). The Chesapeake Bay is approximately 6 miles east of the CG Yard via the Patapsco River. The CG Yard is located in an extensively developed and industrialized area of Baltimore. The CG Yard has operated continuously since 1899 and is the sole USCG-operated shipyard in the U.S. All major vessel repairs, maintenance, and overhauls for the USCG fleet are conducted at the CG Yard.

The Proposed Action includes two main components: 1) maintenance dredging in and around the CG Yard's Syncrolift Facility, and 2) improvement dredging in an area extending from the Interstate-695 bridge (otherwise known as Bascule Bridge) to CG Yard's Pier 1 and Pier 3 (**Figure 2**). The Syncrolift is used to transport vessels for repair and maintenance work. Dredging would occur up to 34.5 feet, the historic depth, around the Syncrolift Facility. The area between Bascule Bridge and Pier 3 would be dredged up to 27.5 feet to support a new class of cutters (Offshore Patrol Cutter [OPC] and National Security Cutter [NSC]). The total dredging amount is estimated to be approximately 400,000 cubic yards (excluding any over-dredge volume).

The purpose of the Proposed Action is to provide the necessary in-water improvements to allow the new OPC and NSC access to the shipyard for maintenance and repair work, maintain the viability of the Syncrolift Facility, and meet USCG mission requirements at the CG Yard. The Proposed Action

is needed to address insufficient water depths within the navigation channel from the I-695 Bridge, the turning basin in front of the CG Yard within Curtis Creek, and the vessel berth area between Piers 1, 2, and 3 to accommodate the new USCG cutters and their associated draft (25 feet). The Proposed Action is also needed to remove accumulated sediment in the vicinity of the Syncrolift, so that water depths are consistent with its historic depth (34.5 feet) and original construction in 1997. This facility, which connects to the CG Yard's upland rail system, is used currently for the majority of dry dock repair and maintenance work performed at the CG Yard. As the only USCG shipyard, the Yard needs to be accessible by USCG vessels and have the appropriate facilities to conduct maintenance of these USCG vessels to meet USCG mission requirements.

The maintenance dredging of an estimated 10,000 cubic yards of material would likely be performed using hydraulic dredging. Slurry from hydraulic dredging would be transported to a dewatering area on Gove Point located on CG Yard property via a pipeline. Slurry would be dewatered so that consolidated material is dry and can be loaded onto trucks for off-site disposal in accordance with all required permits and approvals.

The improvement dredging which would generate an estimated 390,000 cubic yards of material would likely be performed using mechanical dredging methods. Dredging equipment would include a floating crane barge and a scow/barge. A clamshell bucket attached to a crane on the crane barge would be used to scoop sediment from the floor of Curtis Creek, and transfer the dredged material to the scow/barge until the desired depth is achieved. All dredged material would be transported and disposed of appropriately and in accordance with all required permits and approvals.

We are seeking input from your agency regarding any information or potential environmental concerns associated with the Proposed Action. Please provide any comments, concerns, information, studies, or other data you may have regarding the Proposed Action within **thirty (30) days** of receipt of this letter to enable us to complete this phase of the project within the scheduled timeframe. All responses will be considered for incorporation in the EA. We look forward to and welcome your participation in this analysis.

The USCG has contracted AECOM to facilitate the NEPA process. If you have comments or information relevant to the development of the EA, please direct your correspondence to Ms. Jennifer Warf at AECOM, 12420 Milestone Center Drive, Suite 150, Germantown, MD 20876 or via (202) 740-5948 or Jennifer.warf@aecom.com.

Sincerely,

WESTON.AVERY.LOUIS.1152330487
Digitally signed by WESTON.AVERY.LOUIS.1152330487
Date: 2021.12.02 20:59:19 -05'00'

LCDR Avery Weston, PE, PMP

Enclosures: Figure 1 - Site Location Map

Figure 2 - Proposed Action Area

Figure 1. Site Location Map

Figure 2. Proposed Action Area

U.S. Department of Homeland Security
United States Coast Guard

Commanding Officer
United States Coast Guard
Facilities Engineering Coast
Guard Yard

2401 Hawkins Point Road
Baltimore, MD 21226
Phone: (410) 636-4098
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1 December 2021

Mr. Chris Ryer
Director
City of Baltimore
Department of Planning
417 E. Fayette Street, 8th Floor
Baltimore, MD 21202
deptofplanning@baltimorecity.gov

Dear Mr. Ryer,

The purpose of this letter is to solicit comments regarding the United States Coast Guard's (USCG) intent to conduct dredging activities at USCG Yard (herein referred to as CG Yard) in Baltimore, Anne Arundel County, Maryland (Proposed Action). The USCG is preparing an Environmental Assessment (EA) to evaluate the potential impacts associated with the Proposed Action pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 United States Code §4321 et seq.), the Council on Environmental Quality Regulations (40 Code of Federal Regulations [CFR] Parts 1500-1508), and USCG Commandment Instruction (COMDTINST) M16475.1D*, Implementing Procedures and Policy for Considering Environmental Impacts*.

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WESTON.AVERY.LOUIS.1152330487
Digitally signed by WESTON.AVERY.LOUIS.1152330487
Date: 2021.12.02 20:59:34 -05'00'

LCDR Avery Weston, PE, PMP

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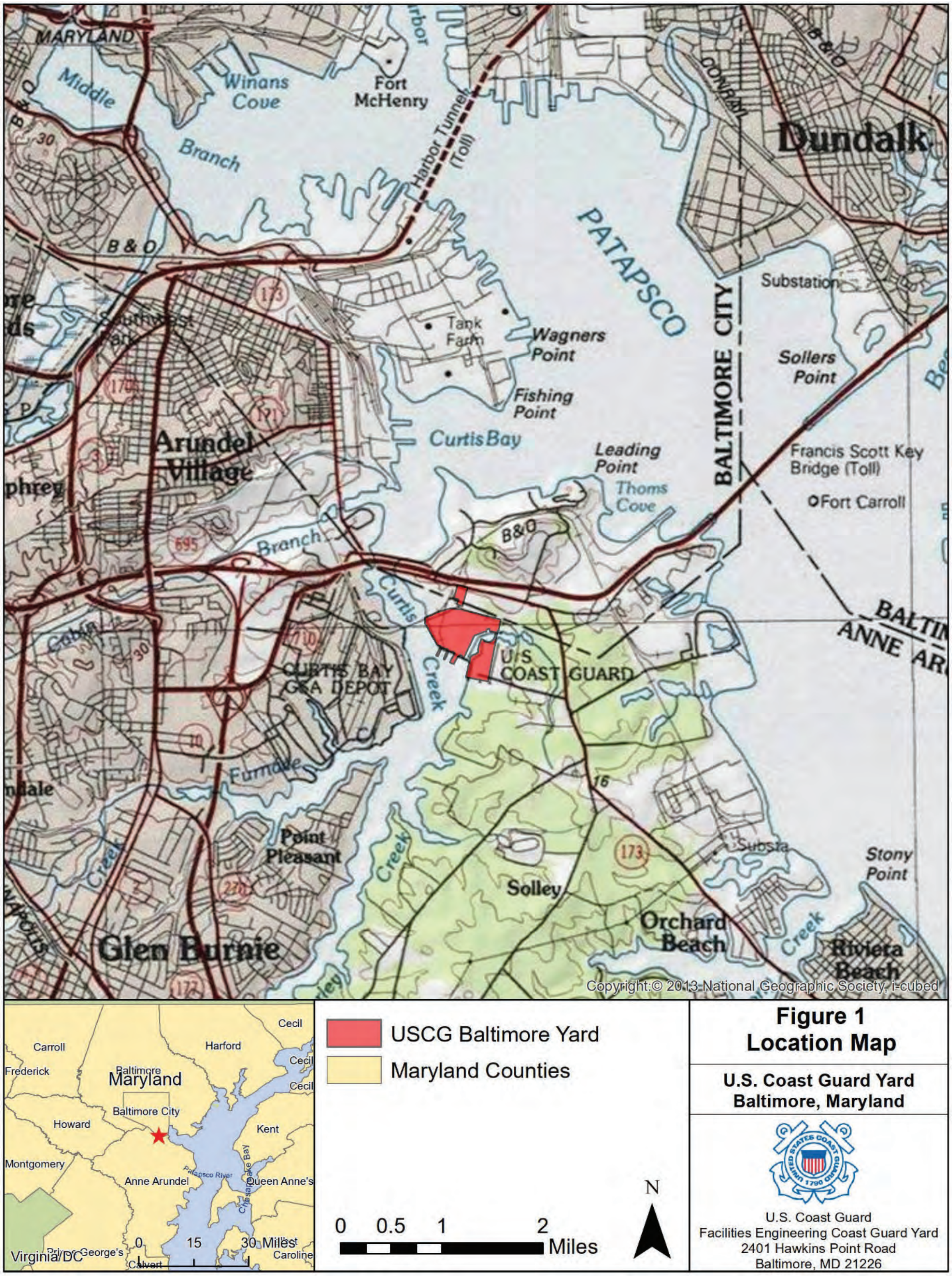

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U.S. Department of Homeland Security
United States Coast Guard

Commanding Officer
United States Coast Guard
Facilities Engineering Coast
Guard Yard

2401 Hawkins Point Road
Baltimore, MD 21226
Phone: (410) 636-4098
Email: Avery.L.Weston@uscg.mil

1 December 2021

Mr. Matthew Fleming
Director
Maryland Department of Natural Resources
Chesapeake and Coastal Service
Tawes State Office Building, E-2
580 Taylor Avenue
Annapolis, MD 21401
matthew.fleming@maryland.gov

Dear Mr. Fleming,

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WESTON.AVERY.LOUIS.1152330487
Digitally signed by WESTON.AVERY.LOUIS.1152330487
Date: 2021.12.02 20:57:46 -05'00'

LCDR Avery Weston, PE, PMP

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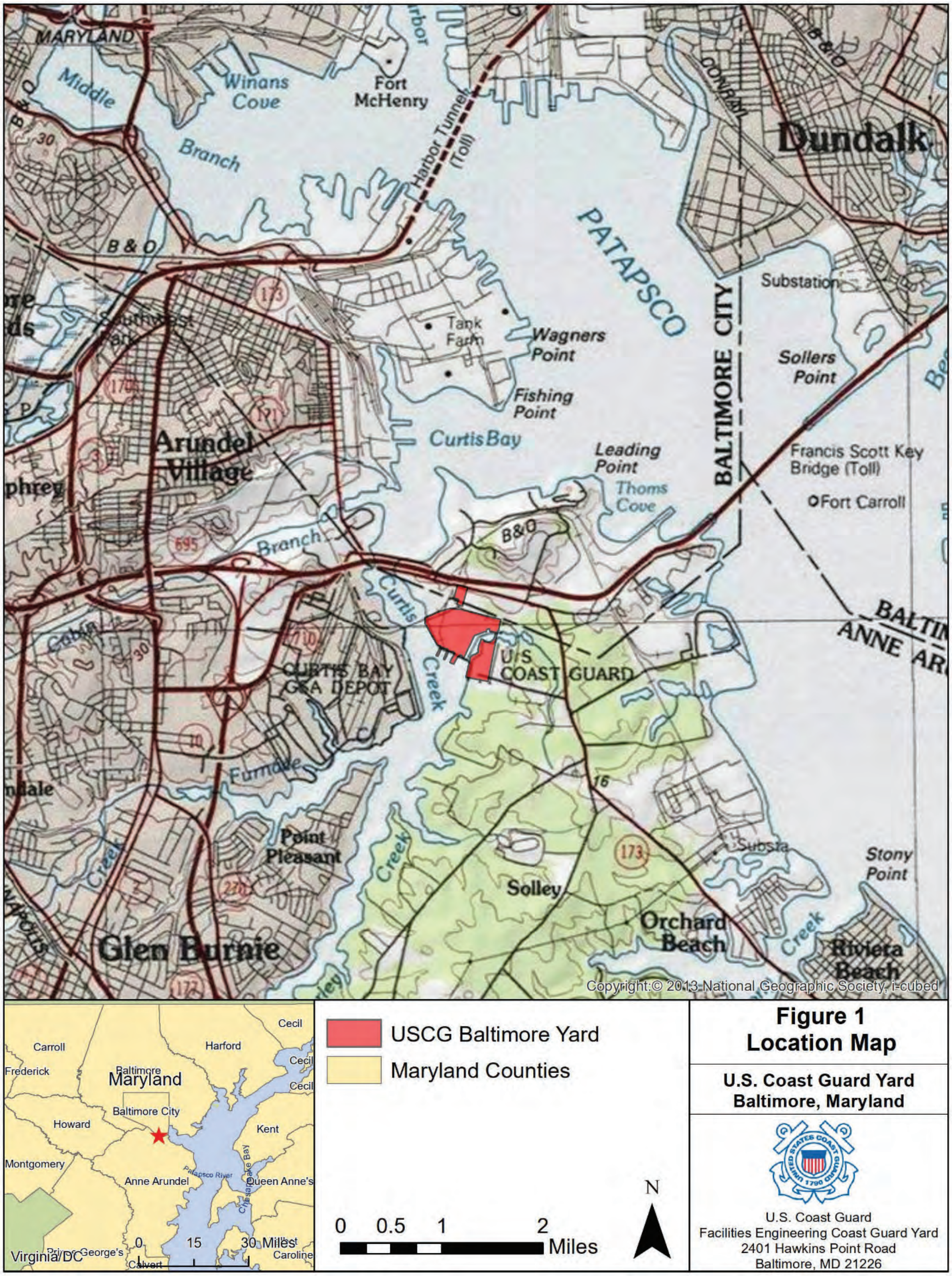

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U.S. Department of
Homeland Security

United States
Coast Guard

Commanding Officer
United States Coast Guard
Facilities Engineering Coast
Guard Yard

2401 Hawkins Point Road
Baltimore, MD 21226
Phone: (410) 636-4098
Email: Avery.L.Weston@uscg.mil

1 December 2021

Ms. Lori Byrne
Environmental Review Specialist
Maryland Department of Natural Resources
Wildlife and Natural Heritage Program
580 Taylor Avenue
Annapolis, MD 21401
lori.byrne@maryland.gov

Dear Ms. Byrne,

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LCDR Avery Weston, PE, PMP

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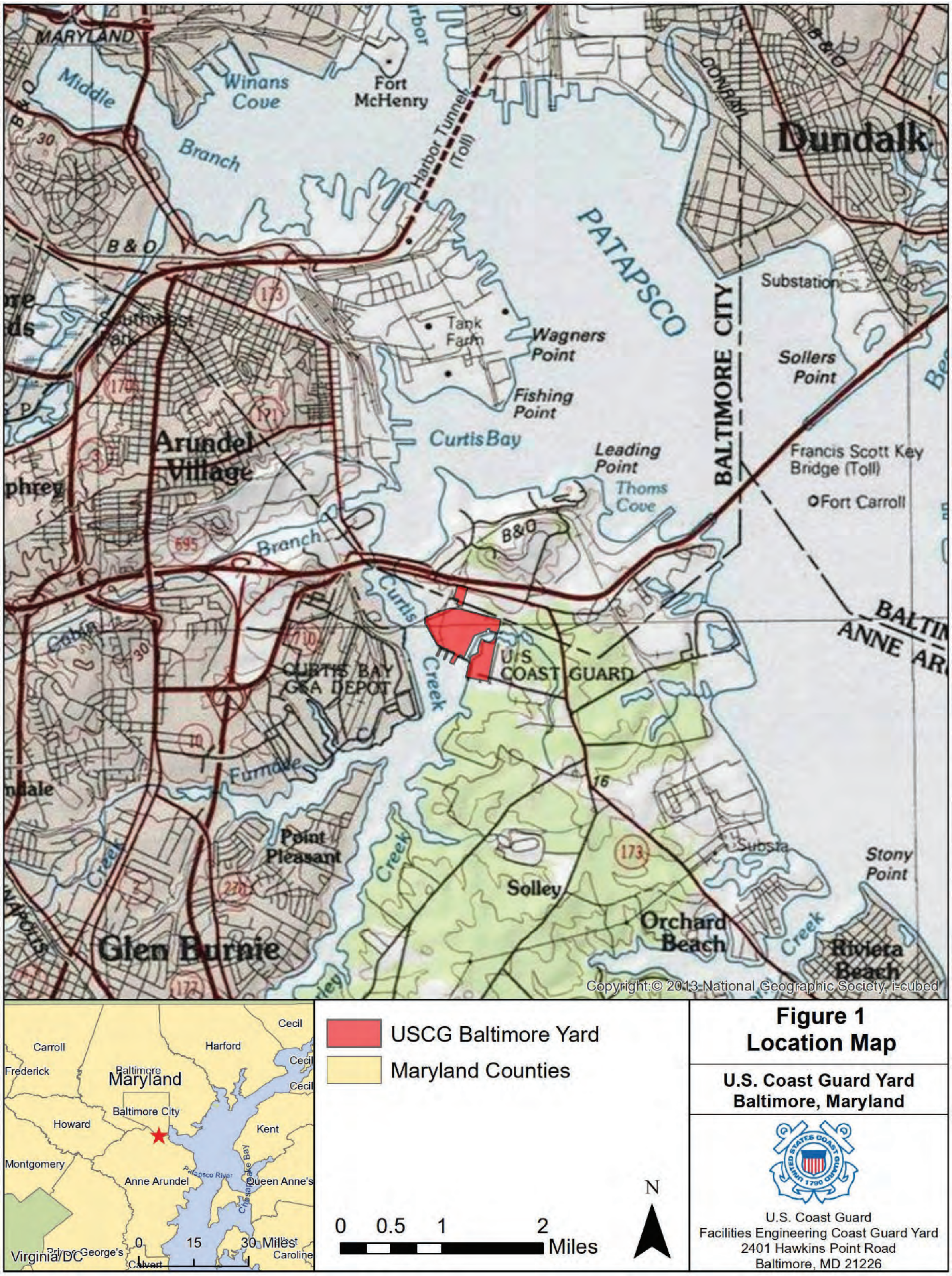

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MARYLAND
DEPARTMENT OF
NATURAL RESOURCES

Larry Hogan, Governor
Boyd Rutherford, Lt. Governor
Jeannie Haddaway-Riccio, Secretary
Allan Fisher, Deputy Secretary

January 27, 2022

Ms. Jennifer E. Warf
AECOM
12420 Milestone Center Drive
Suite 150
Germantown, MD 20876

RE: Environmental Review for US Coast Guard - Proposed Dredging at US Coast Guard Yard in Baltimore, Anne Arundel County, Maryland.

Dear Ms. Warf:

The Wildlife and Heritage Service has no official records for State or Federal listed, candidate, proposed, or rare plant or animal species within the project area shown on the map provided. As a result, we have no specific concerns regarding potential impacts to such species or recommendations for protection measures at this time. If the project changes in the future such that the limits of proposed disturbance or overall site boundaries are modified, please provide us with revised project maps and we will provide you with an updated evaluation.

Thank you for allowing us the opportunity to review this project. If you should have any further questions regarding this information, please contact me at lori.byrne@maryland.gov or at (410) 260-8573.

Sincerely,

Lori A. Byrne

Lori A. Byrne,
Environmental Review Coordinator
Wildlife and Heritage Service
MD Dept. of Natural Resources

ER# 2021.1875.aa
Cc: C. Jones, CAC

U.S. Department of Homeland Security
United States Coast Guard

Commanding Officer
United States Coast Guard
Facilities Engineering Coast Guard Yard

2401 Hawkins Point Road
Baltimore, MD 21226
Phone: (410) 636-4098
Email: Avery.L.Weston@uscg.mil

1 December 2021

Ms. Stephanie Everfield
Regional Environmental Officer
Federal Emergency Management Agency, Region 3
615 Chestnut Street
One Independence Mall, Sixth Floor
Philadelphia, PA 19106
FEMA-IGA@fema.dhs.gov

Dear Ms. Everfield,

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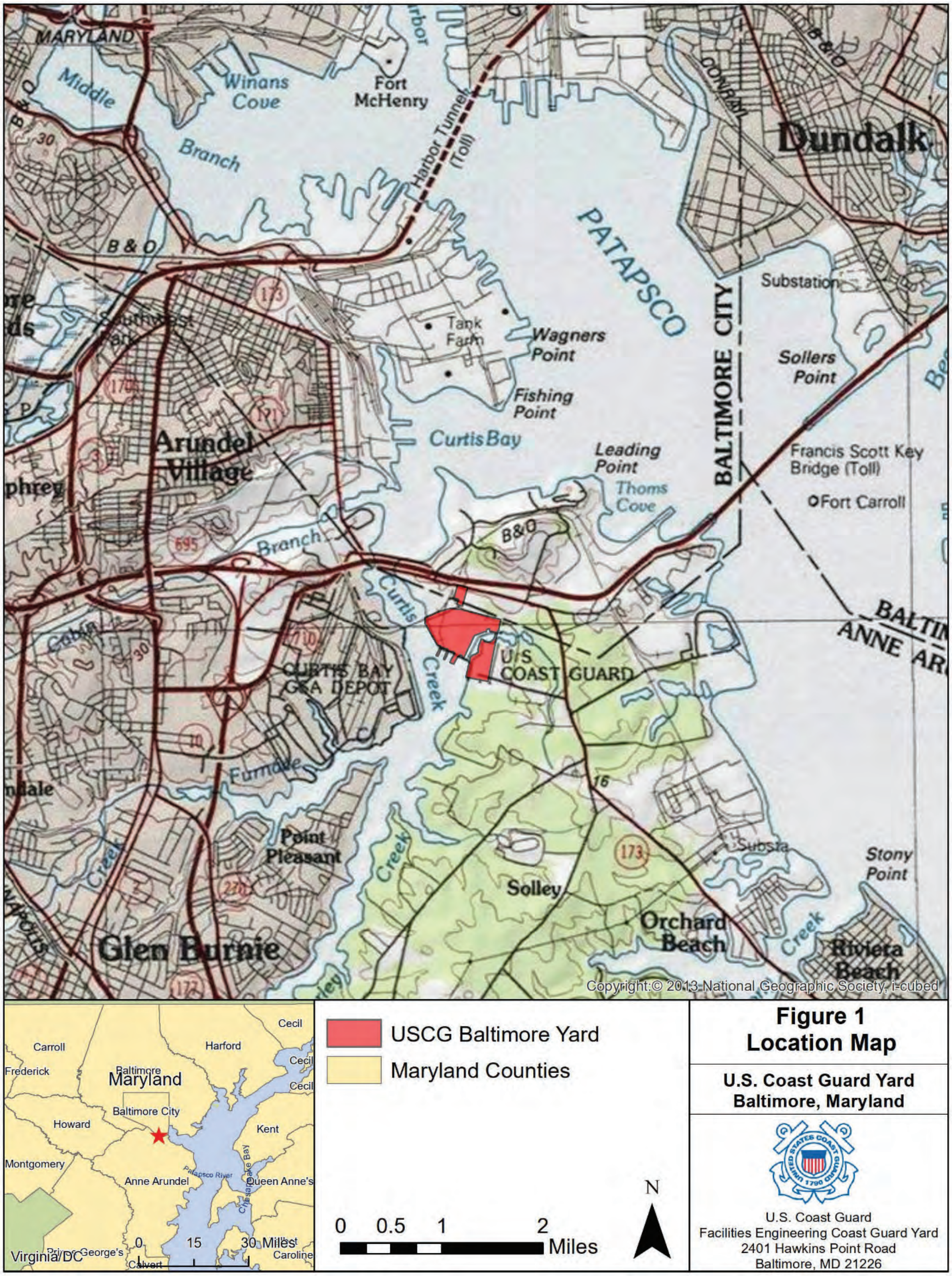

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United States
Coast Guard

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2401 Hawkins Point Road
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Phone: (410) 636-4098
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1 December 2021

Maryland Department of Planning
State Clearinghouse
301 W. Preston Street, Suite 1101
Baltimore, MD 21201
mdp.clearinghouse@maryland.gov

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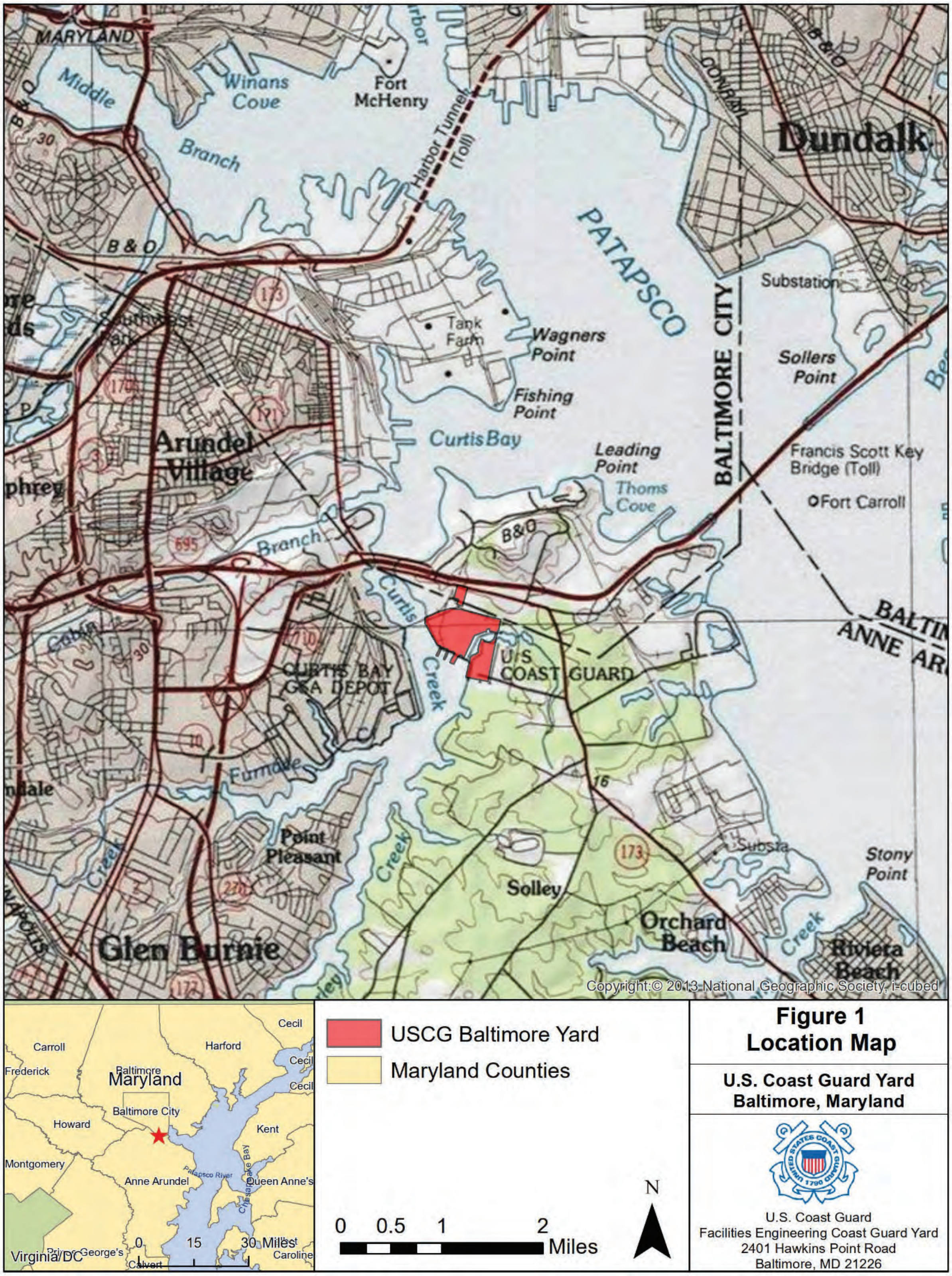

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Larry Hogan, Governor
Boyd Rutherford, Lt. Governor

Robert S. McCord, Secretary
Sandy Schrader, Deputy Secretary

Maryland
DEPARTMENT OF PLANNING

January 18, 2022

Ms. Natalie Kisak, Environmental Planner
AECOM Technical Services, Inc.
12420 Milestone Center Drive
Suite 150
Germantown, MD 20876

STATE CLEARINGHOUSE RECOMMENDATION

State Application Identifier: **MD20211209-0915**
Applicant: AECOM Technical Services, Inc.
Project Description: Pre-Environmental Assessment: United States Coast Guard's (USCG) Intent to Conduct Dredging Activities at USCG Yard Approximately 113 Acres Along the Eastern Shoreline of Curtis Creek—Proposed Action Includes Maintenance Dredging in and around the USCG Yard's Syncrolift Facility & Improvement Dredging to USCG Yard's Pier 1 and Pier 3
Project Address: United States Coast Guard, 2401 Hawkins Point Road, I-695 Bascule Bridge, Curtis Creek, Turning Basin, Baltimore, MD 21226
Project Location: Baltimore City and Anne Arundel County
Recommendation: **Consistent with Qualifying Comments**

Dear Ms. Kisak:

In accordance with Presidential Executive Order 12372 and Code of Maryland Regulation 34.02.02.04-.07, the State Clearinghouse has coordinated the intergovernmental review of the referenced project. This letter constitutes the State process review and recommendation based upon comments received.

Review comments were requested from the Maryland Departments of General Services, Natural Resources, Transportation, and the Environment; the Maryland Military Department; Anne Arundel County, Baltimore City; and the Maryland Department of Planning, including the Maryland Historical Trust. The Maryland Military Department and Baltimore City did not have comments.

The Maryland Departments of General Services, Natural Resources, and Transportation; Anne Arundel County; and the Maryland Department of Planning, including the Maryland Historical Trust found this project to be consistent with their plans, programs, and objectives.

The Maryland Department of Planning provided the following comments: "This project aligns with the goals in the Baltimore City small area plan for Brooklyn and Curtis Bay as well as the Anne Arundel 2040 General Development Plan. The project area is located within a PFA [Priority Funding Area]."

The Maryland Historical Trust has determined that the project will have "no effect" on historic properties and that the federal and/or State historic preservation requirements have been met.

Anne Arundel County provided the following comments: “AACO [Anne Arundel County] OPZ [Office of Planning and Zoning] Comments: ‘OPZ has no comments on the proposed work. Our understanding per the project description provided is that all dredging materials would be handled and processed on the USCG property, and the consolidated dry material would be disposed of offsite in accordance with required permits.’

DPW [Department of Public Works] Comments: ‘Our only concern is that we know the Coast Guard Yard is a known site of PCB [polychlorinated biphenyls] contaminants to Curtis Creek. Will the dredged materials be tested and then properly disposed of if contaminated? We just want to confirm that the permit agencies address any possible contamination related to the final site placement.’

Response from Dept. of Planning: ‘We are doing soil sampling to determine potential contamination concerns prior to initiating dredging activities. We are currently working to obtain the necessary USACE/state permits to conduct this sampling effort. Additional permits will be obtained from USACE and other agencies for implementing the dredge activities as well. All dredged soils would be tested and disposed of at the appropriate disposal facilities based on these testing results.’

Final response from DPW: No further issues. We are ok with it.’”

The Maryland Department of the Environment (MDE) found this project to be generally consistent with their plans, programs, and objectives, but included certain qualifying comments summarized below.

1. “Construction, renovation and/or demolition of buildings and roadways must be performed in conformance with State regulations pertaining to ‘Particulate Matter from Materials Handling and Construction’ (COMAR 26.11.06.03D), requiring that during any construction and/or demolition work, reasonable precaution must be taken to prevent particulate matter, such as fugitive dust, from becoming airborne.
2. During the duration of the project, soil excavation/grading/site work will be performed; there is a potential for encountering soil contamination. If soil contamination is present, a permit for soil remediation is required from MDE's Air and Radiation Management Administration. Please contact the New Source Permits Division, Air and Radiation Management Administration at (410) 537-3230 to learn about the State's requirements for these permits.
3. Any solid waste including construction, demolition and land clearing debris, generated from the subject project, must be properly disposed of at a permitted solid waste acceptance facility, or recycled if possible. Contact the Solid Waste Program at (410) 537-3315 for additional information regarding solid waste activities and contact the Resource Management Program at (410) 537-3314 for additional information regarding recycling activities.
4. The Solid Waste Program should be contacted directly at (410) 537-3315 by those facilities which generate or propose to generate or handle hazardous wastes to ensure these activities are being conducted in compliance with applicable State and federal laws and regulations. The Program should also be contacted prior to construction activities to ensure that the treatment, storage or disposal of hazardous wastes and low-level radioactive wastes at the facility will be conducted in compliance with applicable State and federal laws and regulations.”

The State Application Identifier Number must be placed on any correspondence pertaining to this project.

Please remember, you must comply with all applicable state and local laws and regulations. If you need assistance or have questions, contact the State Clearinghouse staff person noted above at 410-767-4490 or through e-mail at sylvia.mosser@maryland.gov.

Thank you for your cooperation with the MIRC process.

Sincerely,

Myra a. Barnes

Myra Barnes, Lead Clearinghouse Coordinator

MB:SM
cc:

Tyson Byrne - MDOT
Amanda Redmiles - MDE
Tony Redman - DNR
Tanja Rucci - DGS
Kirk Yaukey - MILT
Sara Paranilam - BCIT
Stephen Walker - ANAR
Joseph Griffiths - MDPL
Beth Cole - MHT

21-0915_CRR.CLS.docx

Kisak, Natalie

From: Kisak, Natalie
Sent: Thursday, January 6, 2022 1:22 PM
To: Sylvia Mosser -MDP-
Subject: Re: [EXTERNAL] Re: Acknowledgment of Clearinghouse Project: MD20211209-0915

Ms. Mosser,

Sure, I can respond to this question now:

We are doing soil sampling to determine potential contamination concerns prior to initiating dredging activities. We are currently working to obtain the necessary USACE/state permits to conduct this sampling effort. Additional permits will be obtained from USACE and other agencies for implementing the dredge activities as well. All dredged soils would be tested and disposed of at the appropriate disposal facilities based on these testing results.

Please let me know if any other questions arise.

Thank you!

Natalie

Natalie A. Kisak
Environmental Planner
D +1-301-944-1516
M +1-410-446-5545
natalie.kisak@aecom.com

AECOM
12420 Milestone Center Dr., Suite 150
Germantown, MD 20876
T +1-301-250-2934
aecom.com

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COMPANIES 2020

From: Sylvia Mosser -MDP- <sylvia.mosser@maryland.gov>
Sent: Thursday, January 6, 2022 12:09 PM
To: Kisak, Natalie <natalie.kisak@aecom.com>
Subject: [EXTERNAL] Re: Acknowledgment of Clearinghouse Project: MD20211209-0915

Hi Natalie.
We had the following question come in from one of the reviewers from Anne Arundel County for this project:

"***Our only concern is that we know the Coast Guard Yard is a known site of PCB contaminants to Curtis Creek. Will the dredged materials be tested and then properly disposed of if contaminated? We just want to confirm that the permit agencies address any possible contamination related to the final site placement.***"

Will you let me know if you have a response for this, or if not then I will advise the reviewer to include that item as a contingency within their comment to the project.

Thank you!

Sylvia

Sylvia A. Mosser, AICP

Resource Conservation Planner
Resource Conservation & Management

Maryland Department of Planning
301 West Preston Street, Suite 1101
Baltimore, MD 21201
(410) 767-4487

Please take our customer service survey.
Planning.Maryland.gov

On Thu, Dec 16, 2021 at 2:15 PM <sylvia.mosser@maryland.gov> wrote:

> Hello Ms. Natalie Kisak,
>
> The following link includes the State Clearinghouse Review Process Acknowledgment letter for your project, Pre-Environmental Assessment: USCG's Intent to Conduct Dredging Activities at USCG Yard Approx. 113 Acres Along the Eastern Shoreline of Curtis Creek--Proposed Action Includes Maintenance Dredging in and around the CG Yard's Syncrolift Facility & Improvement Dredging to CG Yard’s Pier 1 and Pier 3.
>
> Click this link to view the acknowledgment letter, **https://apps.planning.maryland.gov/EMIRC_Files/MD20211209-0915.zip** . This is a 14 MB file.
>
> Thank you.
>
> Sylvia Mosser, Planner
> sylvia.mosser@maryland.gov
> 410-767-4487
>
> Myra Barnes, Lead Clearinghouse Coordinator
> myra.barnes@maryland.gov
>
> Please take our customer service survey.

U.S. Department of Homeland Security
United States Coast Guard

Commanding Officer
United States Coast Guard
Facilities Engineering Coast
Guard Yard

2401 Hawkins Point Road
Baltimore, MD 21226
Phone: (410) 636-4098
Email: Avery.L.Weston@uscg.mil

1 December 2021

Mr. William Seiger
Chief
Maryland Department of the Environment
Water and Science Administration, Waterway Construction Division
1800 Washington Boulevard
Baltimore, MD 21230
william.seiger@maryland.gov

Dear Mr. Seiger,

The purpose of this letter is to solicit comments regarding the United States Coast Guard's (USCG) intent to conduct dredging activities at USCG Yard (herein referred to as CG Yard) in Baltimore, Anne Arundel County, Maryland (Proposed Action). The USCG is preparing an Environmental Assessment (EA) to evaluate the potential impacts associated with the Proposed Action pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 United States Code §4321 et seq.), the Council on Environmental Quality Regulations (40 Code of Federal Regulations [CFR] Parts 1500-1508), and USCG Commandment Instruction (COMDTINST) M16475.1D*, Implementing Procedures and Policy for Considering Environmental Impacts*.

The CG Yard is comprised of approximately 113 acres along the eastern shoreline of Curtis Creek, a tributary of the Patapsco River, and is approximately 6 miles south of downtown Baltimore (see **Figure 1**). The Chesapeake Bay is approximately 6 miles east of the CG Yard via the Patapsco River. The CG Yard is located in an extensively developed and industrialized area of Baltimore. The CG Yard has operated continuously since 1899 and is the sole USCG-operated shipyard in the U.S. All major vessel repairs, maintenance, and overhauls for the USCG fleet are conducted at the CG Yard.

The Proposed Action includes two main components: 1) maintenance dredging in and around the CG Yard's Syncrolift Facility, and 2) improvement dredging in an area extending from the Interstate-695 bridge (otherwise known as Bascule Bridge) to CG Yard's Pier 1 and Pier 3 (**Figure 2**). The Syncrolift is used to transport vessels for repair and maintenance work. Dredging would occur up to 34.5 feet, the historic depth, around the Syncrolift Facility. The area between Bascule Bridge and Pier 3 would be dredged up to 27.5 feet to support a new class of cutters (Offshore Patrol Cutter [OPC] and National Security Cutter [NSC]). The total dredging amount is estimated to be approximately 400,000 cubic yards (excluding any over-dredge volume).

The purpose of the Proposed Action is to provide the necessary in-water improvements to allow the new OPC and NSC access to the shipyard for maintenance and repair work, maintain the viability of the Syncrolift Facility, and meet USCG mission requirements at the CG Yard. The Proposed Action

is needed to address insufficient water depths within the navigation channel from the I-695 Bridge, the turning basin in front of the CG Yard within Curtis Creek, and the vessel berth area between Piers 1, 2, and 3 to accommodate the new USCG cutters and their associated draft (25 feet). The Proposed Action is also needed to remove accumulated sediment in the vicinity of the Syncrolift, so that water depths are consistent with its historic depth (34.5 feet) and original construction in 1997. This facility, which connects to the CG Yard's upland rail system, is used currently for the majority of dry dock repair and maintenance work performed at the CG Yard. As the only USCG shipyard, the Yard needs to be accessible by USCG vessels and have the appropriate facilities to conduct maintenance of these USCG vessels to meet USCG mission requirements.

The maintenance dredging of an estimated 10,000 cubic yards of material would likely be performed using hydraulic dredging. Slurry from hydraulic dredging would be transported to a dewatering area on Gove Point located on CG Yard property via a pipeline. Slurry would be dewatered so that consolidated material is dry and can be loaded onto trucks for off-site disposal in accordance with all required permits and approvals.

The improvement dredging which would generate an estimated 390,000 cubic yards of material would likely be performed using mechanical dredging methods. Dredging equipment would include a floating crane barge and a scow/barge. A clamshell bucket attached to a crane on the crane barge would be used to scoop sediment from the floor of Curtis Creek, and transfer the dredged material to the scow/barge until the desired depth is achieved. All dredged material would be transported and disposed of appropriately and in accordance with all required permits and approvals.

We are seeking input from your agency regarding any information or potential environmental concerns associated with the Proposed Action. Please provide any comments, concerns, information, studies, or other data you may have regarding the Proposed Action within **thirty (30) days** of receipt of this letter to enable us to complete this phase of the project within the scheduled timeframe. All responses will be considered for incorporation in the EA. We look forward to and welcome your participation in this analysis.

The USCG has contracted AECOM to facilitate the NEPA process. If you have comments or information relevant to the development of the EA, please direct your correspondence to Ms. Jennifer Warf at AECOM, 12420 Milestone Center Drive, Suite 150, Germantown, MD 20876 or via (202) 740-5948 or Jennifer.warf@aecom.com.

Sincerely,

WESTON.AVERY.LOUIS.1152330487
Digitally signed by WESTON.AVERY.LOUIS.1152330487
Date: 2021.12.02 20:58:30 -05'00'

LCDR Avery Weston, PE, PMP

Enclosures: Figure 1 - Site Location Map

Figure 2 - Proposed Action Area

Figure 1. Site Location Map

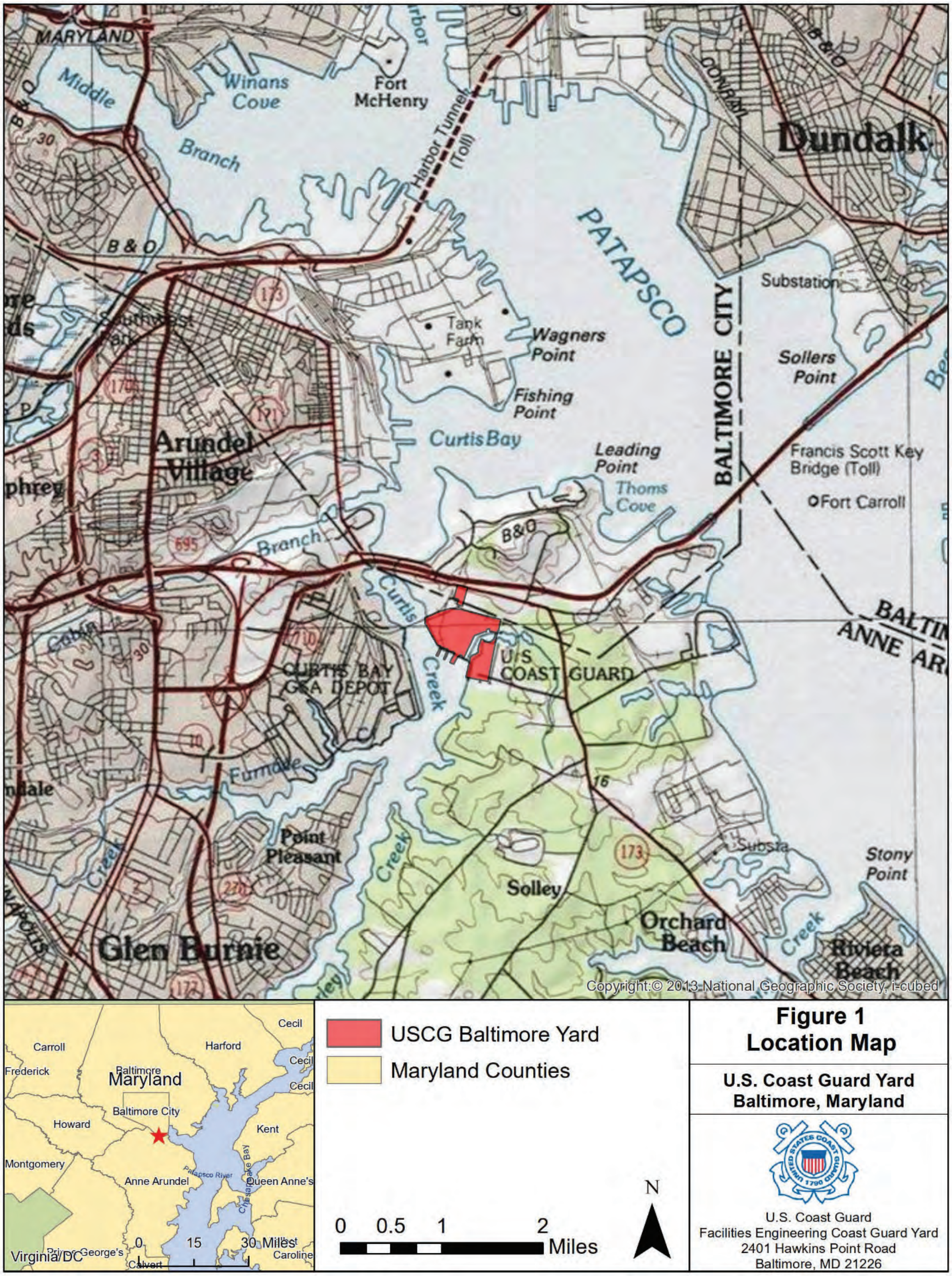

Figure 2. Proposed Action Area

Maryland
Department of
the Environment

Larry Hogan, Governor
Boyd K. Rutherford, Lt. Governor

Ben Grumbles, Secretary
Horacio Tablada, Deputy Secretary

January 10, 2022

United States Coast Guard
℅ Ms. Jennifer Warf
AECOM
12420 Milestone Center Drive, Suite 150
Germantown, MD 20876

Re: Proposed Dredging Project at the US Coast Guard Yard in Curtis Creek, Baltimore, Maryland

Dear Ms. Warf:

The Maryland Department of the Environment (MDE) has reviewed the information provided in the letter dated December 1, 2021 regarding the preparation of an Environmental Assessment (EA) for proposed maintenance dredging at the United States Coast Guard Yard ("CG Yard") in Baltimore, Anne Arundel County, Maryland. Specifically the United States Coast Guard (USCG) is proposing to (1) maintenance dredge in and around the CG Yard's Syncrolift Facility and (2) to conduct dredging of Curtis Creek from the I-695 Bascule Bridge to CG Yard's Pier 1 and Pier 3. These activities combined will generate an estimated 400,000 cubic yards of material. Maintenance dredging of the Syncrolift Facility to its historic depth of 34.5 feet would likely be conducted using hydraulic dredging and generate an estimated 10,000 cubic yards of material, which will be transported via pipeline to a dewatering area on CG Yard property. Improvement dredging of the navigation channel from the I-695 Bascule Bridge to the CG Yard would likely be conducted using mechanical dredging and would generate an estimated 390,000 cubic yards of material to be disposed of offsite.

This project includes mechanical dredging of the navigation channel and associated areas within Curtis Creek, hydraulic maintenance dredging within the CG Yard facility, and the placement of dredged material offsite, all of which will require an individual Water Quality Certification. Hydraulic dredging activities and pipeline placement requires authorization through the state Tidal Wetlands License process as well as the individual Water Quality Certification.

MDE requests the following detailed information be provided in the EA for this project, or any further documentation related to project authorization. Please include information regarding:

1. Detailed information on purpose and need for the proposed activities.

2. Historic and current depths and channel extents in all areas proposed for new or maintenance dredging.
3. Proposed dredge areas should depict both existing and proposed depths for the Curtis Creek navigation channel and CG Yard turning basin.
4. Location of the mean high and mean low water on all overviews, and cross sections with elevations referenced to mlw = 0'.
5. A plan sheet showing the exact pathway of the proposed pipeline, and any adjacent property owners along the pathway.
6. Quantify resource impacts for both new and maintenance activities, specifically open water, emergent, scrub-shrub, forested and tidal wetlands habitat for rare, threatened, or endangered species, or species in need of conservation.
7. Detailed information on disposal of the dredged material (disposal site location, any required permitting or testing, etc.). Innovative reuse or beneficial use of the dredged material should be investigated subject to all requirements outlined in the *Innovative Reuse and Beneficial Use of Dredged Material Guidance Document*.

Please note that a request for authorization under a State Tidal Wetlands License as well as issuance of a Water Quality Certification from the State of Maryland will require MDE to place the project on public notice and take public comments and/or requests for a hearing on the project. For additional information regarding MDE's Tidal Wetlands License or Water Quality Certification, please contact Matt Wallach by email at matthew.wallach@maryland.gov or telephone at (410) 537-3527. General information regarding the State's application procedures and Water Quality Certification requirements can be found at https://mde.maryland.gov/ programs/water/WetlandsandWaterways/ Pages/index.aspx.

MDE looks forward to continued coordination with USCG to review this project and ensure all regulatory requirements are met. Please do not hesitate to contact me at (410) 537-4023 or danielle.spendiff1@maryland.gov with any questions or concerns regarding this letter.

Sincerely,

Danielle A. Spendiff, Chief
Regulatory and Customer Service Division
Wetlands and Waterways Program

U.S. Department of Homeland Security

United States Coast Guard

Commanding Officer
United States Coast Guard
Facilities Engineering Coast
Guard Yard

2401 Hawkins Point Road
Baltimore, MD 21226
Phone: (410) 636-4098
Email: Avery.L.Weston@uscg.mil

1 December 2021

Mr. Dominic Scurti
Acting Director of Planning
Maryland Port Administration
401 East Pratt Street
Baltimore, MD 21202
dscurti@marylandports.com

Dear Mr. Scurti,

The purpose of this letter is to solicit comments regarding the United States Coast Guard's (USCG) intent to conduct dredging activities at USCG Yard (herein referred to as CG Yard) in Baltimore, Anne Arundel County, Maryland (Proposed Action). The USCG is preparing an Environmental Assessment (EA) to evaluate the potential impacts associated with the Proposed Action pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 United States Code §4321 et seq.), the Council on Environmental Quality Regulations (40 Code of Federal Regulations [CFR] Parts 1500-1508), and USCG Commandment Instruction (COMDTINST) M16475.1D*, Implementing Procedures and Policy for Considering Environmental Impacts*.

The CG Yard is comprised of approximately 113 acres along the eastern shoreline of Curtis Creek, a tributary of the Patapsco River, and is approximately 6 miles south of downtown Baltimore (see **Figure 1**). The Chesapeake Bay is approximately 6 miles east of the CG Yard via the Patapsco River. The CG Yard is located in an extensively developed and industrialized area of Baltimore. The CG Yard has operated continuously since 1899 and is the sole USCG-operated shipyard in the U.S. All major vessel repairs, maintenance, and overhauls for the USCG fleet are conducted at the CG Yard.

The Proposed Action includes two main components: 1) maintenance dredging in and around the CG Yard's Syncrolift Facility, and 2) improvement dredging in an area extending from the Interstate-695 bridge (otherwise known as Bascule Bridge) to CG Yard's Pier 1 and Pier 3 (**Figure 2**). The Syncrolift is used to transport vessels for repair and maintenance work. Dredging would occur up to 34.5 feet, the historic depth, around the Syncrolift Facility. The area between Bascule Bridge and Pier 3 would be dredged up to 27.5 feet to support a new class of cutters (Offshore Patrol Cutter [OPC] and National Security Cutter [NSC]). The total dredging amount is estimated to be approximately 400,000 cubic yards (excluding any over-dredge volume).

The purpose of the Proposed Action is to provide the necessary in-water improvements to allow the new OPC and NSC access to the shipyard for maintenance and repair work, maintain the viability of the Syncrolift Facility, and meet USCG mission requirements at the CG Yard. The Proposed Action is needed to address insufficient water depths within the navigation channel from the I-695 Bridge,

the turning basin in front of the CG Yard within Curtis Creek, and the vessel berth area between Piers 1, 2, and 3 to accommodate the new USCG cutters and their associated draft (25 feet). The Proposed Action is also needed to remove accumulated sediment in the vicinity of the Syncrolift, so that water depths are consistent with its historic depth (34.5 feet) and original construction in 1997. This facility, which connects to the CG Yard's upland rail system, is used currently for the majority of dry dock repair and maintenance work performed at the CG Yard. As the only USCG shipyard, the Yard needs to be accessible by USCG vessels and have the appropriate facilities to conduct maintenance of these USCG vessels to meet USCG mission requirements.

The maintenance dredging of an estimated 10,000 cubic yards of material would likely be performed using hydraulic dredging. Slurry from hydraulic dredging would be transported to a dewatering area on Gove Point located on CG Yard property via a pipeline. Slurry would be dewatered so that consolidated material is dry and can be loaded onto trucks for off-site disposal in accordance with all required permits and approvals.

The improvement dredging which would generate an estimated 390,000 cubic yards of material would likely be performed using mechanical dredging methods. Dredging equipment would include a floating crane barge and a scow/barge. A clamshell bucket attached to a crane on the crane barge would be used to scoop sediment from the floor of Curtis Creek, and transfer the dredged material to the scow/barge until the desired depth is achieved. All dredged material would be transported and disposed of appropriately and in accordance with all required permits and approvals.

We are seeking input from your agency regarding any information or potential environmental concerns associated with the Proposed Action. Please provide any comments, concerns, information, studies, or other data you may have regarding the Proposed Action within **thirty (30) days** of receipt of this letter to enable us to complete this phase of the project within the scheduled timeframe. All responses will be considered for incorporation in the EA. We look forward to and welcome your participation in this analysis.

The USCG has contracted AECOM to facilitate the NEPA process. If you have comments or information relevant to the development of the EA, please direct your correspondence to Ms. Jennifer Warf at AECOM, 12420 Milestone Center Drive, Suite 150, Germantown, MD 20876 or via (202) 740-5948 or Jennifer.warf@aecom.com.

Sincerely,

WESTON.AVERY.LOUIS.1152330487

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Date: 2021.12.02 20:58:46 -05'00'

LCDR Avery Weston, PE, PMP

Enclosures: Figure 1 - Site Location Map
Figure 2 - Proposed Action Area

Figure 1. Site Location Map

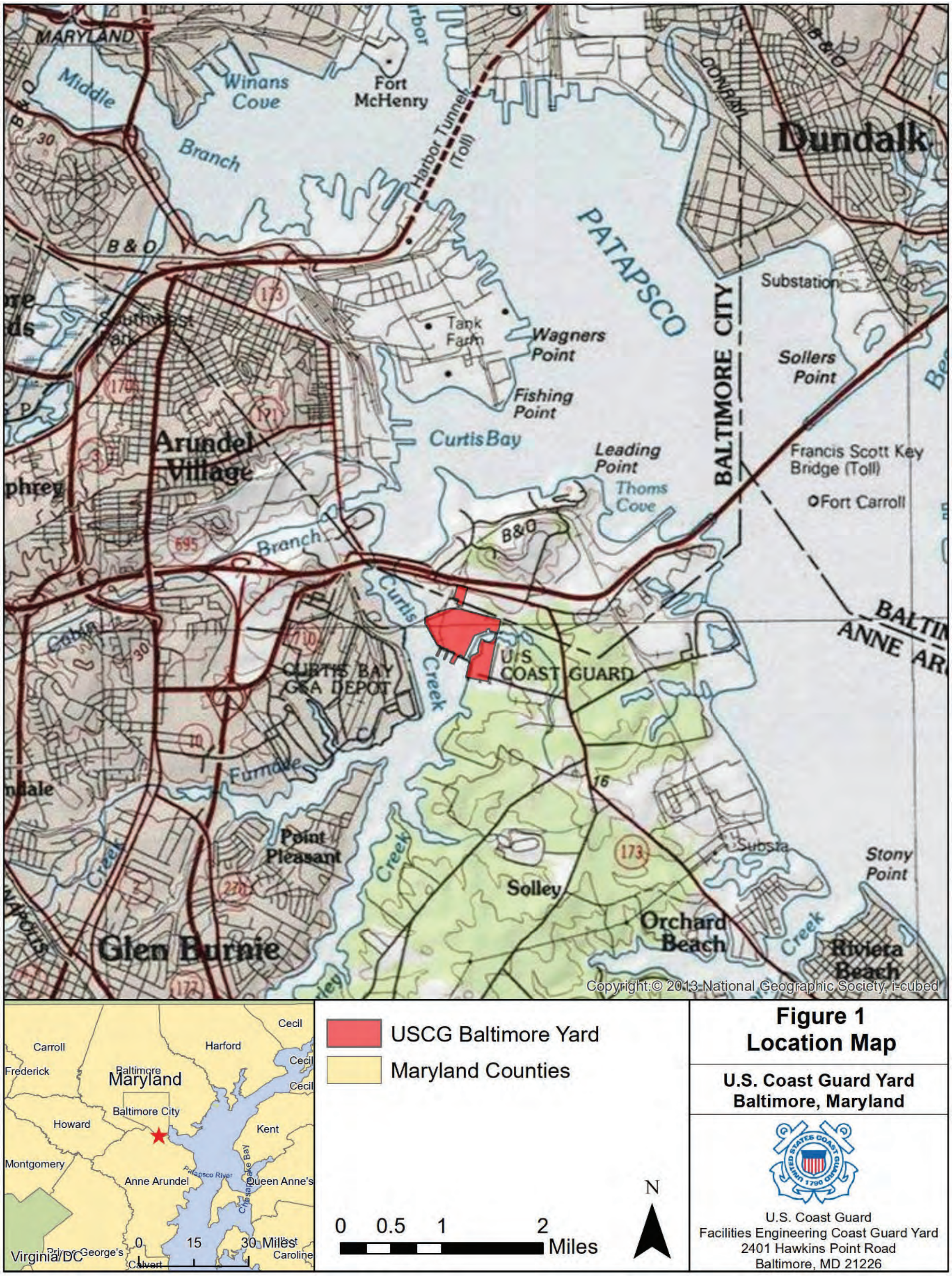

Figure 2. Proposed Action Area

Kisak, Natalie

From: Dominic Scurti <dscurti@marylandports.com>
Sent: Tuesday, December 28, 2021 7:58 AM
To: Kisak, Natalie
Cc: Warf, Jen; Wu, Charlene; Kristen Fidler; Amanda Peñafiel
Subject: [EXTERNAL] RE: Project Review Request -- MPA

Good Morning,

MPA does not have any comments or concerns as it relates to the Environmental Assessment for the Proposed Dredging Project at the U.S. Coast Guard Yard in Baltimore.

Sincerely,

Dominic Scurti
Deputy Director of Planning
Maryland Port Administration

Office: (410) 385-4439
Mobile: (443) 710-5207
Email: dscurti@marylandports.com

MDOT MARYLAND DEPARTMENT OF TRANSPORTATION
MARYLAND PORT ADMINISTRATION

From: Kisak, Natalie <natalie.kisak@aecom.com>
Sent: Thursday, December 9, 2021 2:36 PM
To: Dominic Scurti <dscurti@marylandports.com>
Cc: Warf, Jen <Jennifer.Warf@aecom.com>; Wu, Charlene <Charlene.Wu@aecom.com>
Subject: Project Review Request -- MPA

Good afternoon,

The US Coast Guard is preparing an Environmental Assessment in support of the Proposed Dredging Project at the US Coast Guard Yard in Baltimore, Maryland. On behalf of the US Coast Guard, we are seeking input from your agency regarding any information or potential environmental concerns associated with this project. Please see the attached letter for additional information. We would appreciate any comments, concerns, information, studies, or other data you may have regarding this project within thirty (30) days of receipt of this correspondence.

We look forward to and welcome your participation in this analysis. Thank you!

Natalie Kisak

Natalie A. Kisak
Environmental Planner
D +1-301-944-1516
M +1-410-446-5545
natalie.kisak@aecom.com

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Germantown, MD 20876
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aecom.com

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U.S. Department of Homeland Security
United States Coast Guard

Commanding Officer
United States Coast Guard
Facilities Engineering Coast
Guard Yard

2401 Hawkins Point Road
Baltimore, MD 21226
Phone: (410) 636-4098
Email: Avery.L.Weston@uscg.mil

November 30, 2021

Ms. Karen Green
Mid-Atlantic Field Office Supervisor/EFH Coordinator
Karen.Greene@noaa.gov

Dear Ms. Greene,

The purpose of this letter is to solicit comments regarding the United States Coast Guard's (USCG) intent to conduct dredging activities at USCG Yard (herein referred to as CG Yard) in Baltimore, Anne Arundel County, Maryland (Proposed Action). The USCG is preparing an Environmental Assessment (EA) to evaluate the potential impacts associated with the Proposed Action pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 United States Code §4321 et seq.), the Council on Environmental Quality Regulations (40 Code of Federal Regulations [CFR] Parts 1500-1508), and USCG Commandment Instruction (COMDTINST) M16475.1D, *Implementing Procedures and Policy for Considering Environmental Impacts*.

The CG Yard is comprised of approximately 113 acres along the eastern shoreline of Curtis Creek, a tributary of the Patapsco River, and is approximately 6 miles south of downtown Baltimore (see **Figure 1**). The Chesapeake Bay is approximately 6 miles east of the CG Yard via the Patapsco River. The CG Yard is located in an extensively developed and industrialized area of Baltimore. The CG Yard has operated continuously since 1899 and is the sole USCG-operated shipyard in the U.S. All major vessel repairs, maintenance, and overhauls for the USCG fleet are conducted at the CG Yard.

The Proposed Action includes two main components: 1) maintenance dredging in and around the CG Yard's Syncrolift Facility, and 2) improvement dredging in an area extending from the Interstate-695 bridge (otherwise known as Bascule Bridge) to CG Yard's Pier 1 and Pier 3 (**Figure 2**). The Syncrolift is used to transport vessels for repair and maintenance work. Dredging would occur up to 34.5 feet, the historic depth, around the Syncrolift Facility. The area between Bascule Bridge and Pier 3 would be dredged up to 27.5 feet to support a new class of cutters (Offshore Patrol Cutter [OPC] and National Security Cutter [NSC]). The total dredging amount is estimated to be approximately 400,000 cubic yards (excluding any over-dredge volume).

The purpose of the Proposed Action is to provide the necessary in-water improvements to allow the new OPC and NSC access to the shipyard for maintenance and repair work, maintain the viability of the Syncrolift Facility, and meet USCG mission requirements at the CG Yard. The Proposed Action is needed to address insufficient water depths within the navigation channel from the I-695 Bridge, the turning basin in front of the CG Yard within Curtis Creek, and the vessel berth area between Piers 1, 2, and 3 to accommodate the new USCG cutters and their associated draft (27.5

feet). The Proposed Action is also needed to remove accumulated sediment in the vicinity of the Syncrolift, so that water depths are consistent with its historic depth (34.5 feet) and original construction in 1997. This facility, which connects to the CG Yard's upland rail system, is used currently for the majority of dry dock repair and maintenance work performed at the CG Yard. As the only USCG shipyard, the Yard needs to be accessible by USCG vessels and have the appropriate facilities to conduct maintenance of these USCG vessels to meet USCG mission requirements.

The maintenance dredging of an estimated 10,000 cubic yards of material would likely be performed using hydraulic dredging. Slurry from hydraulic dredging would be transported to a dewatering area on Grove Point located on CG Yard property via a pipeline. Slurry would be dewatered so that all consolidated material would be dry and able to be loaded onto trucks for off-site disposal in accordance with all required permits and approvals.

The improvement dredging, which would generate an estimated 390,000 cubic yards of material, would likely be performed using mechanical dredging methods. Dredging equipment would include a floating crane barge and a scow/barge. A clamshell bucket attached to a crane on the crane barge would be used to scoop sediment from the floor of Curtis Creek, and transfer the dredged material to the scow/barge until the desired depth is achieved. All dredged material would be transported and disposed of appropriately and in accordance with all required permits and approvals.

Essential Fish Habitat

The Magnuson-Stevens Fishery Conservation and Management Act requires Federal agencies to consult with NOAA NMFS to address activities that may adversely affect Essential Fish Habitat (EFH), which is defined as "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." Based on a query of the NOAA EFH Mapper, within Curtis Creek, designated EFH has been mapped for 11 species as listed in the table below. In addition, the Proposed Action occurs within a Habitat Area of Particular Concern (HAPC) for summer flounder. No EFH Areas Protected from Fishing (EFHA) were identified in the Proposed Action area.

EFH Species and Life Stages Potentially Found in the Project Area

Species	Egg	Larvae	Juvenile	Adult
Atlantic Butterfish	✓	✓	--	✓
Atlantic Herring	--	--	✓	✓
Black Sea Bass	--	--	✓	✓
Bluefish	--	--	✓	✓
Clearnose Skate	--	--	✓	✓
Little Skate	--	--	--	✓
Red Hake	✓	✓	✓	✓
Scup	--	--	✓	✓
Summer Flounder	--	✓	✓	✓
Windowpane Flounder	--	--	✓	✓
Winter Skate	--	--	--	✓

As discussed above, the Proposed Action would occur in a previously disturbed marine porting area that is heavily used for industrial and docking activities. Waters surrounding the CG Yard would likely provide low quality habitat, if any, given the frequent vessel activities and human disturbance.

If any adult and juvenile EFH species occur in the area it would be in low densities, and dredging would not cause permanent or long-term harm. Any turbidity and total suspended sediment (TSS) from dredging would dissipate to background levels within 600 feet (183 meters) of the source in the upper water column and 2,400 feet (732 meters) in the lower water column (NOAA, 2020). In addition, the TSS levels expected for mechanical dredging (up to 445.0 mg/L) are below those shown to have adverse effect on fish (typically up to 1,000.0 mg/L (NOAA, 2020). Further, adult and juvenile EFH species would be highly mobile and capable of moving out of affected areas, occupying more favorable habitats nearby.

Eggs and larvae of Atlantic butterfish, red hake, and summer flounder are not expected to occur in the Proposed Action area. Suitable habitat includes pelagic environments within the outer continental shelf of the Mid-Atlantic Bight, which extends from the coastline out to the limits of the exclusive economic zone (NOAA, 2021a; NOAA, 2021b; NOAA, 2021c).

Conclusion

Given that EFH species and their habitat are not likely to occur in the Proposed Action area, the USCG has determined that the Proposed Action ***may affect, but is unlikely to adversely affect*** EFH. The USCG would implement best management practices during dredging activities as appropriate to minimize turbidity impacts. All work would be conducted in accordance with permit conditions to further avoid or minimize impacts to aquatic species and habitat. The USCG requests NMFS review and concurrence with the effects determination stated in this letter. Please advise if there are any further actions needed to facilitate the implementation of the Proposed Action in a manner that avoids or minimizes adverse effects to EFH species or habitat.

The USCG has contracted AECOM to facilitate the NEPA process. If you have information relevant to the development of the EA, please direct your correspondence to Ms. Jennifer Warf at AECOM, 12420 Milestone Center Drive, Suite 150, Germantown, MD 20876 or via (202) 740-5948 or Jennifer.warf@aecom.com.

Sincerely,

WESTON.AVERY.
LOUIS.11523304
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LCDR Avery Weston, PE, PMP

Enclosures: Figure 1: Site Location Map
Figure 2: Proposed Action Area

References:

National Oceanic and Atmospheric Administration (NOAA). 2020. Section 7 Effect Analysis: Turbidity in the Greater Atlantic Region. Accessed on 4 June 2021 at: https://www.fisheries.noaa.gov/new-england-mid-atlantic/consultations/section-7-effect-analysis-turbidity-greater-atlantic-region

NOAA. 2021a. Essential Fish Habitat Description for Red Hake (*Urophycis chuss*). Accessed on 4 June 2021 at: https://www.greateratlantic.fisheries.noaa.gov/hcd/red-hake.pdf.

NOAA. 2021b. Essential Fish Habitat Text Description for Summer Flounder (*Paralichthys dentatus*). Accessed on 4 June 2021 at: https://www.habitat.noaa.gov/application/efhinventory/docs/summer_flounder_efh.pdf.

NOAA. 2021c. Essential Fish Habitat Text Description for Atlantic butterfish (*Peprilus triacanthus).* Accessed on 4 June 2021 at: https://www.habitat.noaa.gov/application/efhinventory/docs/butterfish_efh.pdf

Figure 1. Site Location Map

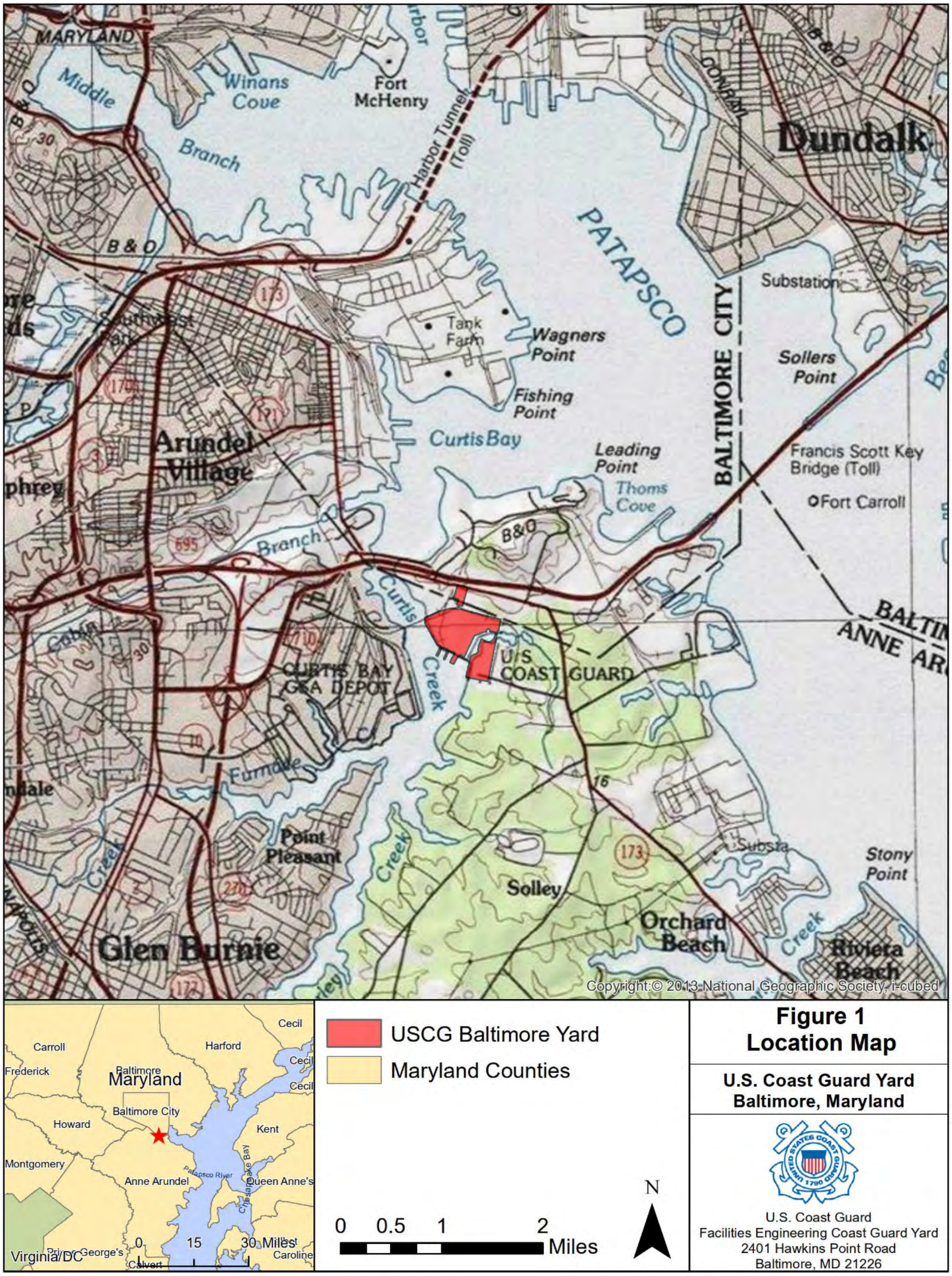

Figure 2. Proposed Action Area

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
GREATER ATLANTIC REGIONAL FISHERIES OFFICE
55 Great Republic Drive
Gloucester, MA 01930-2276

January 11, 2022

Avery Weston, Commanding Officer
Facilities Engineering Coast Guard Yard
United States Coast Guard
2401 Hawkins Point Road
Baltimore, MD 21226

Re: U.S. Coast Guard Yard Dredging in Curtis Creek, Anne Arundel County, Maryland

Dear Commander Weston:

We have reviewed the information provided in your November 30, 2021, letter concerning proposed maintenance dredging in Curtis Creek navigation channel which provides access to the U.S. Coast Guard Yard in Curtis Creek, Anne Arundel County, Maryland. The U.S. Coast Guard (USCG) proposes to perform mechanical enhancement dredging along approximately one (1) mile of existing navigation channel to a depth of 27.5 feet MLW and hydraulic maintenance dredging of an existing Syncrolift Facility to a depth of 34.5 feet. The USCG proposes to place the approximately 400,000 cy of the resulting dredged sediment into an on-site containment facility for dewatering and eventual off-site disposal. The USCG is the lead federal agency for this action and has contracted AECOM to facilitate the development of an environmental assessment (EA), which is currently being produced pursuant to the National Environmental Policy Act of 1996 (NEPA).

The Fish and Wildlife Coordination Act (FWCA) and the Magnuson-Stevens Fishery Conservation and Management Act (MSA) require federal agencies to us on projects such as this that may affect essential fish habitat (EFH) and other aquatic resources. Because this project affects EFH, this process is guided by the requirements of our EFH regulation at 50 CFR 600.905, which mandates the preparation of EFH assessments, lists the required contents of EFH assessments, and generally outlines each agency's obligations in this consultation procedure. Currently, USCG has requested our review of the project based on the preliminary information available, which was presented in your November 30, 2021, letter. Because this draft EFH assessment did not contain a substantive description of the proposed action and does not fully evaluate all of the direct, indirect, individual, and cumulative effects on EFH and federally managed species, it cannot be considered complete and consultation has not yet been initiated. We anticipate that a complete EFH assessment will be sent to us in concert with the NEPA documentation. Once we have received and reviewed the complete EFH assessment we will issue any EFH conservation recommendations (CRs) required to fulfill our mandates under the MSA. We offer the following comments for your consideration and are available to work with you to address our concerns prior to the initiation of our EFH consultation.

Magnuson Stevens Fishery Conservation and Management Act (MSA)

Curtis Creek provides habitat for a variety of federally managed fish species, including bluefish (*Pomatomus saltatrix*) and summer flounder (*Paralichthys dentatus*), as well as and several prey species such as bay anchovy (*Anchoa mitchilli*) and spot (*Leiostomus xanthurus*). These species use the waters in the navigation channel as feeding, resting, and ranging habitat. The benthic habitats likely support a variety of invertebrate prey species, such as polychaete worms. Furthermore, Curtis Creek supports designated spawning habitat for white perch (*Morone americana*).

The MSA requires federal agencies, such as the USCG, to consult with us on any action or proposed action authorized, funded, or undertaken by such agency that may adversely affect EFH identified under the MSA. As stated above, this process is guided by the requirements of our EFH regulation at 50 CFR 600.905, which mandates the preparation of EFH assessments. The level of detail in an EFH assessment should be commensurate with the complexity and magnitude of the potential adverse effects of the action. A complete description of the proposed action is a critical piece of this assessment and necessary for us to determine the potential impacts to federally managed fish, their habitats, prevalent prey species, and other NOAA trust resources.

Essential fish habitat is defined as, “those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity.” For the purpose of interpreting the definition of EFH:

- “waters” include aquatic areas and their associated physical, chemical, and biological properties that are used by fish and may include aquatic areas historically used by fish where appropriate;
- “substrate” includes sediment, hard bottom, structures underlying the waters, and associated biological communities;
- “necessary” means the habitat required to support a sustainable fishery and the managed species' contribution to a healthy ecosystem;
- “spawning, breeding, feeding, or growth to maturity” covers a species' full life cycle.

The EFH final rule published in the Federal Register on January 17, 2002 defines an adverse effect as: "any impact which reduces the quality and/or quantity of EFH." The rule further states that:

> An adverse effect may include direct or indirect physical, chemical or biological alterations of the waters or substrate and loss of, or injury to, benthic organisms, prey species and their habitat and other ecosystems components, if such modifications reduce the quality and/or quantity of EFH. Adverse effects to EFH may result from action occurring within EFH or outside EFH and may include site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions.

The EFH final rule also states that the loss of prey may be an adverse effect on EFH and managed species. As a result, actions that reduce the availability of prey species, either through direct harm or capture, or through adverse impacts to the prey species' habitat may also be considered adverse effects on EFH.

Your November 30, 2021, letter also indicated that the project area contained Habitat Areas of Particular Concern (HAPC) for summer flounder, which is likely not accurate. Areas colonized by submerged aquatic vegetation (SAV) are the sole areas considered HAPC for summer flounder in the project vicinity. We typically rely on annual mapping efforts undertaken by the Virginia Institute of Marine Sciences (VIMS) to delineate these habitats. No SAV has been delineated in the immediate project area in the last 30+ years of surveys. This should be clarified in your final EFH assessment.

Based on the information provided, the dredging of approximately one (1) mile of navigation channel and an associated travel left well will adversely affect EFH through the direct loss of benthic substrates used by federally managed fish and their prey. According to the preliminary project description, approximately 400,000 cy of benthic substrate will be excavated for the enhancement of navigational access. While we acknowledge the legacy of anthropogenic impacts in this project location, the substrates to be impacted continue to provide spawning, nursery, and foraging habitat for a variety of fish and small forage species. Furthermore, we are concerned that dredging and subsequent material dewatering could potentially result in temporarily elevated turbidity and the introduction of various contaminants into existing habitats. Dredging may also present indirect impacts to adjacent subaqueous habitats resulting from induced geomorphological instability (i.e., slumping). Finally, increasing channel depths may subject the resulting benthic habitats to more pronounced hypoxic conditions and these long-term impacts should be evaluated.

Technical Assistance

While your letter did include initial information regarding the proposed action, several fundamental aspects of the project remain unclear. We offer the following technical assistance to help guide the development of your EFH assessment and minimize the need for EFH conservation recommendations following our review.

Remaining information to be provided

- The existing bathymetric contours in the proposed action area and the depths proposed throughout the dredged footprint, including anticipated sidewall slopes.
- The results of any benthic sediment evaluations, including information regarding potential soil contamination, its sources, and measures to contain contaminant-laden sediments.
- The location of the Grove Point disposal site and details regarding dewatering standards to be met and associated monitoring protocols.
- The proposed alignment of the pipeline to transport material from the hydraulic dredging operations to the disposal site, including information regarding BMPs to avoid/minimize impacts to existing wetland habitats (e.g., marshes, tidal creeks).
- Information regarding the historical depths of the Synchrolift facility and Curtis Creek Channel, including the result of bathymetric surveys documenting previously attained

depths and controlling depths in the project vicinity. Information regarding previous dredging efforts in these areas should also be provided.

The intent of the EFH consultation is to evaluate the direct, indirect, individual and cumulative effects of a particular federal action on the habitat used by federally managed species, and to identify options to avoid, minimize or offset the adverse effects of that action. As a result, stating that a species is mobile and will move from the project area is not an adequate evaluation of the impacts to the habitat. The analysis of effects in your EFH assessment should focus on the elements of the proposed action that may reduce the quality and/or quantity of the habitat for all life stages of species with designated EFH within the action area. These impacts can include decreases in water quality, loss of prey species, alteration of the sediment characteristics. They may be temporary or permanent. In addition, the habitat characteristics of a site (salinity, depth, sediment types, etc.) determine if a site is EFH for a particular species or life stage of a species. If a particular site is consistent with the habitat characteristics used by the Mid-Atlantic Fishery Management Council and the New England Fishery Management Council in their EFH designations for federally managed fish species, the site is EFH for that species regardless of density of species using the site or the longevity of the impacts. Additional information on EFH assessments and the EFH consultation process can be found on the Habitat and Ecosystem Services Division’s consultation website.

Based on their EFH designations, the following federally managed species and corresponding life stages should be further considered in your assessment:

- Windowpane flounder (*Scophthalmus aquosus*) - juveniles, adults
- Summer flounder (*Paralichthys dentatus*) - larvae, juveniles, adults
- Bluefish (*Pomatomus saltatrix*) - juveniles, adults
- Atlantic butterfish (*Peprilus triacanthus*) - eggs, larvae, juveniles, adults
- Black sea bass (*Centropristis striata*) - juveniles, adults
- Clearnose skate (*Raja eglanteria*)- juveniles, adults

Initial recommendations

Because we have not yet received a complete EFH assessment, including a full description of the proposed action, we offer the following comments to help you with project planning and scheduling, as well as the development of a complete EFH assessment:

- Provide us with a complete description of the proposed action, as including the information requested above.
- Incorporate the following best management practices (BMPs) into your work plan to limit adverse impacts to aquatic habitats
    - Limit the proposed depths in the Synchrolift Facility to match controlling depths (i.e., 27.5 feet) or provide information regarding the need to dredge beyond controlling depths.
    - Limit allowable overdepth of dredging to one (1) foot.
    - If mechanical dredging is proposed, use environmental bucket dredging and operational protocols that limit the suspension of dredged sediments.

    - Develop a working plan that avoids in-water work during the period in which white perch spawn in the project area (March 1 - June 15, in any year)
- To facilitate the Clean Water Act Section 404 permitting process, consider presenting this project at the Maryland Joint Evaluation meeting, which is held monthly and coordinated by Maryland Department of the Environment. This forum offers an excellent opportunity to receive regulatory feedback from various state and federal agencies.

Endangered Species Act (ESA)

Endangered species under the jurisdiction of NOAA Fisheries may be present in the project area. The federal action agency is responsible for determining whether the proposed action may affect these species. If you determine that the proposed action may affect a listed species, your determination of effects along with justification and a request for concurrence should be submitted to the Section 7 Program email account at nmfs.gar.esa.section7@noaa.gov. Guidance and tools to assist you in your effects determination are available on our website at: https://www.fisheries.noaa.gov/new-england-mid-atlantic/consultations/section-7-consultations-greater-atlantic-region. Please contact Brian Hopper of our Protected Resources Division (brian.d.hopper@noaa.gov) if you have any questions or to discuss your project and obligations under Section 7 of the Endangered Species Act (ESA).

Conclusion

We look forward to working with you and your staff as the project moves forward. If you have any questions regarding EFH in the project area or would like to request a presentation summarizing our mandates and associated procedures, please contact Jonathan Watson in our Annapolis, MD field office (jonathan.watson@noaa.gov).

Sincerely,

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Karen M. Greene
Mid-Atlantic Branch Chief
Habitat and Ecosystem Services Division

cc: J. Warf, N. Kisak (AECOM)
B. Hopper (NMFS - PRD)
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March 28, 2022

Mr. Jonathan Watson
Marine Habitat Resource Specialist
Jonathan.Watson@noaa.gov

Dear Mr. Watson,

The purpose of this letter is to solicit comments regarding the United States Coast Guard's (USCG) intent to conduct dredging activities at USCG Yard (herein referred to as CG Yard) in Baltimore, Anne Arundel County, Maryland (Proposed Action). The USCG is preparing an Environmental Assessment (EA) to evaluate the potential impacts associated with the Proposed Action pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 United States Code §4321 et seq.), the Council on Environmental Quality Regulations (40 Code of Federal Regulations [CFR] Parts 1500-1508), and USCG Commandment Instruction (COMDTINST) M16475.1D, *Implementing Procedures and Policy for Considering Environmental Impacts*.

Proposed Action

The CG Yard is comprised of approximately 113 acres along the eastern shoreline of Curtis Creek, a tributary of the Patapsco River, and is approximately 6 miles south of downtown Baltimore (see **Figure 1**). The Chesapeake Bay is approximately 6 miles east of the CG Yard via the Patapsco River. The CG Yard is located in an extensively developed and industrialized area of Baltimore. The CG Yard has operated continuously since 1899 and is the sole USCG-operated shipyard in the U.S. All major vessel repairs, maintenance, and overhauls for the USCG fleet are conducted at the CG Yard.

The Proposed Action includes two main components: 1) maintenance dredging in and around the CG Yard's Syncrolift Facility located in the Shiplift area next to Pier 3, and 2) improvement dredging in an area extending from the Interstate-695 bridge (otherwise known as Bascule Bridge) to CG Yard's Pier 1 and Pier 3 (**Figure 2**). The Syncrolift is used to transport vessels for repair and maintenance work. Dredging would occur up to 34.5 feet, the historic depth, around the Syncrolift Facility to support its continued operation. The area between Bascule Bridge and Pier 3 would be dredged up to 27.5 feet to support a new class of cutters (Offshore Patrol Cutter [OPC] and National Security Cutter [NSC]). The total dredging amount is estimated to be approximately 400,000 cubic yards (CY; excluding any over-dredge volume). Proposed dredging activities would begin in 2022, and are anticipated to last a total of six months over the course of two years.

The purpose of the Proposed Action is to provide the necessary in-water improvements to allow the new OPC and NSC access to the shipyard for maintenance and repair work, maintain the viability of the Syncrolift Facility, and meet USCG mission requirements at the CG Yard. The Proposed Action

is needed to address insufficient water depths within the navigation channel from the I-695 Bridge, the turning basin in front of the CG Yard within Curtis Creek, and the vessel berth area between Piers 1, 2, and 3 to accommodate the new USCG cutters and their associated draft (27.5 feet). Current average water depths in the channel, turning basin, and vessel berth area are 23 feet, 22 feet, and 26.5 feet respectively. The Proposed Action is also needed to remove accumulated sediment in the vicinity of the Syncrolift, so that water depths are consistent with its historic depth (34.5 feet) and original construction in 1997. The current average water depth surrounding the Shiplift area is 23 feet. This facility, which connects to the CG Yard's upland rail system, is used currently for the majority of dry dock repair and maintenance work performed at the CG Yard. As the only USCG shipyard, the Yard needs to be accessible by USCG vessels and have the appropriate facilities to conduct maintenance of these USCG vessels to meet USCG mission requirements.

The maintenance dredging of an estimated 10,000 CY of material would likely be performed using hydraulic dredging. Slurry from hydraulic dredging would be transported to a dewatering area on Grove Point located on CG Yard property via a conveyance pipeline. This pipeline would be located adjacent to the dredge barge, and would be submerged and anchored to the bottom where it crosses Arundel Cove, for approximately 550 linear feet. Upon exiting Arundel Cove, it would be placed upon 30 linear feet of wetland until reaching the upland dewatering site. Slurry would be dewatered using geo-synthetic tubes, which allow water to drain while the remaining sediment solidifies. The dewatering process could take several months. Berms and impermeable liners would be installed surrounding the dewatering area to contain water, which would likely need to be treated prior to discharge in Curtis Creek. Uncontaminated water would be returned to the Baltimore Harbor.

Remaining consolidated material would be loaded onto trucks for off-site disposal at either Cox Creek or Masonville Dredge Materials Containment Facility (DMCF) in accordance with all required permits and approvals, including the Maryland Department of Transportation (MDOT), Maryland Port Authority (MPA) Right of Entry permit. In anticipation of this permit, USCG has submitted, and MPA approved, a Sampling and Analysis Plan to obtain physical and chemical data of the sediment proposed for dredging. The MPA, which operates the Cox Creek DMCF, did not have any comments or concerns in a response to scoping provided on 28 December 2021.

The improvement dredging, which would generate an estimated 390,000 CY of material, would likely be performed using mechanical dredging methods. Dredging equipment would include a floating crane barge and a scow/barge. A clamshell bucket attached to a crane on the crane barge would be used to scoop sediment from the floor of Curtis Creek, and transfer the dredged material to the scow/barge until the desired depth is achieved. A minimum of two scow/barges would be required; one to collect dredged material, and one to transport the dredged material for proper disposal at the selected DMCF. In addition to obtaining the necessary permits and approvals to dispose of dredge material, USCG would coordinate with the Maryland Waste Diversion and Utilization Program to ensure proper treatment and disposal of wastes generated. Disposal would be in accordance with all required permits and approvals.

The USCG has submitted a Joint Permit Application to the US Army Corps of Engineers (USACE) in order to obtain an Individual Permit pursuant to Section 404 of the Clean Water Act (CWA) to perform the proposed hydraulic and mechanical dredging in waters of the US. The USCG is also seeking permission from USACE under Section 408 for the proposed dredging and temporary placement of the conveyance pipeline within the federal navigation channel. In addition to the necessary permissions issued by USCAE, the USCG would obtain a Water Quality Certification (WQC) under Section 401 of the CWA from the Maryland Department of the Environment (MDE). This WQC would be required for the entire proposed project, in accordance with issuance of the Individual Permit. The USCG would also require a Tidal Wetlands License from MDE to place the conveyance pipeline structure across a portion of wetland at Arundel Cove; this license would not be required for proposed dredge excavation activities, as Navigation Servitude would apply for the entirety of the dredging activities.

Proposed Action Area

As discussed above, the Proposed Action would occur in a previously disturbed marine porting area that is heavily used for industrial and docking activities. Recent and historic dredging within Curtis Creek and the nearby Baltimore Harbor have further disturbed the aquatic environment. Dredging in and around Curtis Creek has occurred since at least 1917, and a 20-year dredging plan for Baltimore Harbor was completed in 2005, which proposed dredging of approximately 51,000 CY in Curtis Creek every five years until 2025. The most recent dredge project exclusive to CG Yard was completed in 2012, which permitted excavation of 7,500 CY of material. Even with extensive disturbances, however, the impacted substrates may still continue to provide habitat for selected fish species.

Curtis Creek surrounding the CG Yard is comprised of estuarine and deepwater habitats, with tidal influence. These tidal habitats have an unconsolidated bottom with a substrate of sand with clay or clay minerals, and a vegetative cover of less than 30 percent. It lacks stable surfaces for plant and animal attachment, and is also inappropriate for egg attachment. No submerged aquatic vegetation (SAV) or shellfish beds are present, also due to the unconsolidated bottom and frequent disturbances. In December 2021, Baltimore Harbor was measured to have a salinity of 7.3 parts per thousand (ppt) (Maryland DNR, 2021).

Essential Fish Habitat

The Magnuson-Stevens Fishery Conservation and Management Act requires Federal agencies to consult with NOAA NMFS to address activities that may adversely affect Essential Fish Habitat (EFH), which is defined as "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." Based on a query of the NOAA EFH mapper and earlier coordination with NOAA NMFS, the Proposed Action area does not contain any Habitat Areas of Particular Concern (HAPC) or EFH Areas Protected from Fishing (EFHA). Designated EFH for six federally managed species has been identified in Curtis Creek, as listed in the table and described further below.

EFH Species and Life Stages Potentially Found in the Project Area

Species	Egg	Larvae	Juvenile	Adult
Atlantic Butterfish	√	√	√	√
Black Sea Bass	--	--	√	√
Bluefish	--	--	√	√
Clearnose Skate	--	--	√	√
Summer Flounder	--	√	√	√
Windowpane Flounder	--	--	√	√

Atlantic Butterfish

Atlantic butterfish (*Peprilus triacanthus*) is known to occur along most of the Atlantic coast, from Massachusetts Bay to Cape Hatteras, and all four life stages of this species have designated EFH in Curtis Creek. This species is predominantly pelagic, favoring depths between 32.8 and 1,150 feet (10 to 350 meters), while eggs may be found up to depths of 6,500 feet (2,000 meters). They prefer waters with salinities above 5 ppt, and can tolerate temperatures between approximately 40.1 and 81.5 degrees (°) Fahrenheit (F). Atlantic butterfish feed on planktonic prey, which can include squid and other small fish (NOAA Fisheries, 2011).

Black Sea Bass

Black sea bass (*Centropristis striata*) has designated EFH for juvenile and adult life stages in the Proposed Action area. This species prefers structured habitats such as those with rough bottoms, offshore shellfish beds, sand and shell substrates, and typically lives in waters that have a salinity of 18 ppt or higher (NOAA Fisheries, 1998b). Black sea bass prey on species commonly found in their habitats, particularly crabs, shrimp, worms, and clams (NOAA Fisheries, 2022a). Juveniles and adults are unlikely to be present in substantial numbers in Curtis Creek, as the Proposed Action area consists of a soft, unconsolidated bottom, and has a salinity lower than what is preferred by this species.

Bluefish

EFH for juvenile and adult life stages of bluefish (*Pomatomus saltatrix*) has been identified within the Proposed Action area in Curtis Creek. This species lives in pelagic waters and is highly migratory, and occupies most of the Atlantic coast. Juvenile and adults are found in Mid-Atlantic estuaries from April through October, although they also occur in North Atlantic estuaries during this time period (NOAA Fisheries, 1998a). This species preys on other fish indiscriminately, and will generally consume any squid or fish (NOAA Fisheries, 2022b).

Clearnose Skate

Clearnose skate (*Raja eglanteria*) has designated EFH for juvenile and adult life stages along most of the Atlantic coast. While the Chesapeake Bay and its tributaries, including Curtis Creek, are considered EFH for this species, it prefers offshore waters with salinities greater than 22 ppt. Few clearnose skate have been documented in tributaries of the Chesapeake Bay, instead typically appearing in the mainstem where salinity levels are higher. This species preys on a variety of other species, preferring decapods, smaller fish, mollusks, and shrimp (NMFS, 2003).

Summer Flounder

EFH for larvae, juvenile, and adult life stages for summer flounder (*Paralichthys dentatus*) has been designated in Curtis Creek. Juvenile and adults migrate out of the Chesapeake Bay during winter, while larvae migrate inshore to coastal nurseries during this time. Although the Chesapeake Bay and its tributaries would provide suitable habitat for this species, polluted environments limit the availability of prey species and can preclude the presence of summer flounder. In addition, this species prefers waters with a high salinity of at least 10 ppt, and also utilizes bottoms with SAV to wait for prey (NMFS, 1999).

Windowpane Flounder

Windowpane flounder (*Scophthalmus aquosus*) has designated EFH for juvenile and adult life stages in the Proposed Action area. This species prefers deep, offshore water with mud and sand substrates in its later life stages. It occupies high salinity waters, including the Chesapeake Bay, although its presence in inland waters and tributaries is unknown (NEFMC, 2017). This species preys on bottom-dwelling species such as shrimp, lobsters, and crabs (NOAA Fisheries, 2022c).

Effects Determination

Waters surrounding the CG Yard would likely provide low quality habitat given the frequent vessel activities and human disturbance. Due to the high levels of existing disturbance, it is unlikely that mobile prey species are present in Curtis Creek in high densities; such disturbances also limit the potential for benthic organisms providing forage for EFH species. Additionally, Curtis Creek and surrounding waters have a relatively low salinity in comparison to the levels preferred by most of the EFH species, and the unconsolidated bottom does not provide structured habitat, SAV, or shellfish beds that could contain prey species. Although EFH has been designated within Curtis Creek, the potential for these species to occupy it is low, due to disturbance, the likely absence of prey species, and differences between habitat preferences and the actual physical characteristics of Curtis Creek.

If any adult and juvenile EFH species occur in the area, however, it would be in low densities, and dredging would not cause permanent or long-term harm. Proposed dredging activities would remove approximately 400,000 CY of benthic material, in order to return water surrounding the Syncrolift facility to its historic depth, and to provide sufficient depth in the navigation channel and turning basin for new classes of cutters acquired by the USCG. Allowable over-dredging would be limited to 2 feet. Dredging is not anticipated to disturb more than 30 acres of benthic substrate. Loss of benthic substrate may result in the temporary loss of benthic organisms, although such species are not anticipated to be present in large densities due to existing disturbance. In addition, any benthic communities located outside the Proposed Action area would not be affected by substrate removal, and would still provide forage for EFH species.

Proposed dredging activities would result in a temporary increase in turbidity and total suspended sediment (TSS) in the Proposed Action area. TSS concentrations associated with hydraulic dredging, and which would be expected for the proposed maintenance dredging for the Syncrolift, typically range from 11.5 mg/L up to 500 mg/L, adjacent to the dredge barge. Elevated sediment levels would be present in the lower water column up to a distance of 1,000 feet (NOAA, 2020). TSS concentrations associated with mechanical clamshell dredging, and which would be expected for the proposed improvement dredging, range from 105 mg/L up to 445 mg/L. Sediment plumes associated with mechanical dredging would dissipate to background levels within 600 feet in the upper water column and 2,400 feet in the lower water column (NOAA, 2020). These anticipated TSS levels for both maintenance and improvement dredging would be below those shown to have an adverse effect on fish (typically up to 1,000 mg/L) (NOAA, 2020).

There is a low potential for entrapment of EFH species during the proposed dredge activities. Most species are able to escape from hydraulic dredges due to the slow speed of advancement, and juvenile and adult EFH species that may be potentially present would be able to avoid the suction of the hydraulic draghead. Entrapment in mechanical dredge equipment would not be anticipated to occur for similar reasons; the dredge bucket moves slowly through the water and fish species would have to be stationary in order to be captured. There is also a limited potential for increased vessel strikes from the presence of dredge equipment. The addition of a few vessels would not meaningfully increase the risk of vessel strikes during implementation of the Proposed Action, as Curtis Creek and the CG Yard are already highly active marine sites with frequent vessel traffic. In addition, the completion of the proposed dredge activities would maintain the navigation channel and enable safer operation of vessels in the proposed action area, reducing potential impacts to EFH and EFH species in the long term.

Conclusion

EFH species are not likely to occur in substantial numbers in the Proposed Action area; however, the Proposed Action may ***adversely affect*** EFH due to physical changes to the surrounding waters and their bottom substrates. Proposed dredging activities are not anticipated to significantly disturb benthic communities or result in permanent elevated TSS levels and any such disturbances or elevated TSS concentrations would be temporary and unlikely to significantly impact EFH species. The USCG would implement best management practices during dredging activities as appropriate to minimize turbidity impacts, such as limiting over-dredge and using silt curtains and turbidity barriers around the dredge sites. Ensuring that the hydraulic dredge draghead is properly situated on the bottom sediment before beginning dredge suction would minimize potential entrapment of EFH species. The installation of berms and impermeable liners in the upland dewatering site would contain potentially contaminated water from draining into Curtis Creek prior to being treated to meet applicable quality standards, and would not result in elevated contaminant levels that could impact EFH species. Impacted wetlands from placement of the conveyance pipeline would be restored to pre-dredge conditions. To minimize the potential for spills or discharges, the USCG would comply with the *USCG Marine Environmental Response and Preparedness Manual* (COMDTINST M16000.14A). All work would be conducted by qualified personnel and in accordance with permit conditions, including the MDOT MPA Right of Entry permit, the Individual Permit from USACE, permission under Section 408, the Section 401 WQC from MDE, and the Maryland Tidal Wetland License to further avoid or minimize impacts to aquatic species and habitat.

The USCG requests NMFS review and concurrence with the effects determination stated in this letter. Please advise if there are any further actions needed to facilitate the implementation of the Proposed Action in a manner that avoids or minimizes adverse effects to EFH species or habitat.

The USCG has contracted AECOM to facilitate the NEPA process. If you have information relevant to the development of the EA, please direct your correspondence to Ms. Jennifer Warf at AECOM, 12420 Milestone Center Drive, Suite 150, Germantown, MD 20876 or via (202) 740-5948 or Jennifer.warf@aecom.com.

Sincerely,

WESTON.AVERY.LOUIS.1152330487
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LCDR Avery Weston, PE, PMP

Enclosures:
Figure 1: Site Location Map
Figure 2: Proposed Action Area
Curtis Creek Dredging Project Permitting Drawings

References:

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UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
GREATER ATLANTIC REGIONAL FISHERIES OFFICE
55 Great Republic Drive
Gloucester, MA 01930-2276

April 28, 2022

Avery Weston, Commanding Officer
Facilities Engineering Coast Guard Yard
United States Coast Guard
2401 Hawkins Point Road
Baltimore, MD 21226

Re: EFH Assessment for U.S. Coast Guard Yard Dredging in Curtis Creek, Anne Arundel County, Maryland

Dear Commander Weston:

We have reviewed the information provided in your March 28, 2022, letter and corresponding essential fish habitat (EFH) assessment, which describes proposed maintenance and enhancement dredging in the Curtis Creek navigation channel and in the U.S. Coast Guard (USCG) Yard facility in Anne Arundel County, Maryland. The USCG prepared this EFH assessment in accordance with the Magnuson-Stevens Fishery Conservation and Management Act (MSA) to assess the potential impacts to federally-managed fisheries from performing navigational dredging and placement of the resulting material in upland containment facilities. The USCG is also preparing an Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA) (42 U.S.C. § 4321 et seq.) to assess the potential environmental impacts from the proposed maintenance and enhancement dredging activities. The USCG is the lead federal agency for this action and has contracted AECOM to facilitate the development of the EA and the EFH assessment.

The proposed activity includes mechanical enhancement dredging along approximately one mile of existing navigation channel to a depth of -27.5 feet MLW for the purpose of establishing access for a new class of USCG cutter vessels to the shipyard. This will entail the removal of approximately 390,000 cy of material from the existing navigation channel and areas of subaqueous bottom immediately adjacent to the channel. The dredged material will be delivered directly to an approved upland containment facility operated by the Maryland Port Administration (MPA). In addition, USCG also proposes to perform hydraulic maintenance dredging of the existing Syncrolift Facility to its historical depth of -34.5 feet MLW. The USCG proposes to place the 10,000 cy of resulting dredged sediment into an on-site containment facility for dewatering and eventual off-site disposal. Overdredging will be limited to two feet below the proposed depth, for both activities. The purpose of the proposed actions is to ensure that the USCG Yard is fully capable of accommodating the fleet of USCG vessels that are serviced at that facility.

Consultation Authorities

The Fish and Wildlife Coordination Act (FWCA) requires that all federal agencies consult with us when proposed actions might result in modifications to a natural stream or body of water. It also requires that they consider the effects that these projects would have on fish and wildlife and must also provide for improvement of these resources. Under this authority, we work to protect, conserve and enhance species and habitats for a wide range of aquatic resources such as shellfish, diadromous species, and other commercially and recreationally valuable species that are not managed by the federal fishery management councils and do not have designated EFH.

The MSA requires federal agencies to consult with us on projects that may adversely affect EFH. This process is guided by the requirements of our EFH regulation at 50 CFR 600.905, which mandates the preparation of EFH assessments, lists the required contents of EFH assessments, and generally outlines each agency's obligations in this consultation procedure. In accordance with the EFH provisions of the MSA, we are mandated to provide federal agencies with recommendations to avoid, minimize, mitigate, or otherwise offset adverse effects to EFH.

To assist in the preparation of your EFH assessment, we previously provided technical guidance to the USCG's contractor. This included a letter dated January 11, 2022, as well as several phone conversations with the USCG's designated contractor. While several of the comments and concerns described in our previous letter were addressed, several suggested measures to avoid, minimize, mitigate, or otherwise offset impacts of the proposed action were not fully described in your EFH assessment. Therefore, we offer the following comments to further minimize impacts to NOAA trust resources pursuant to the authorities described above.

Aquatic Resources and Anticipated Impacts

The project area presents a wide range of conditions and habitats suitable for a diverse suite of aquatic organisms. Several of these species are federally managed and have designated EFH. Since EFH also includes those waters, their associated qualities (e.g., turbidity, dissolved oxygen), and prevalent prey species, the proposed project will adversely impact EFH through a variety of complex and interacting pathways. Several additional species that are not federally managed but are of concern to our agency due to their ecological, economic, and/or historical value also occur in the project area. We briefly describe these resources and associated considerations in the subsections below.

Federally Managed Fish Species and Prey Species

As you are aware, the project area contains designated EFH for six species of fish, including bluefish (*Pomatomus saltatrix*), summer founder (*Paralichthys dentatus*), black sea bass (*Centropristis striata*), windowpane (*Scophthalmus aqueous*), Atlantic butterfish (*Peprilus triacanthus*), and clearnose skate (*Raja eglanteria*). These species use the waters of Curtis Creek as feeding, resting, and ranging habitat. In addition, the project area also supports prey that is a designated component of EFH. This includes bay anchovy (*Anchoa mitchilli*), spot (*Leiostomus xanthurus*), menhaden (*Brevoortia tyrannus*), and other fish species that are seasonally abundant in the mesohaline portions of the Chesapeake Bay. These prey species provide an important trophic linkage with federally-managed piscivorous fishes, such as bluefish. Furthermore, the benthic habitats in the project area likely support several invertebrate prey species, such as polychaete worms. While the habitats in the project area are likely seasonally hypoxic (i.e., bottom dissolved oxygen concentrations below 2 mg/L) and therefore support only diminished densities of federally-managed fish and their prey (Keister et al. 2000), studies have indicated that the project area is seasonally used by the listed fish species (e.g., Carmichael et al. 1992). The presence of federally-managed fish and their prey is mediated by water quality, which varies annually and seasonally (Carmichael et al. 1992; Woodland et al. 2021).

Curtis Creek also supports habitat for a variety of species that we work to protect under the FWCA, including blue crab (*Callinectes sapidus*) and several species of facultative anadromous fish, such as white perch (*Morone americana*) and striped bass (*Morone saxatilis*). Historically, Curtis Creek provided spawning habitat for several additional anadromous species (O'dell et al. 1975), including alewife (*Alosa pseudoharengus*), blueback herring (*Alosa aestivalis*), and yellow perch (*Perca flavescens*). While spawning activity for these species in the project area may be currently limited due to degraded spawning habitat, Curtis Creek likely still supports spawning white perch and the juvenile offspring of striped bass and several *Alosa* species, which have designated rearing habitat in the project area, according to the Maryland Department of Natural Resources (MDNR; see: https://gisapps.dnr.state.md.us/coastalatlas/WAB2/index.html).

Specifically, alewife and blueback herring (river herring, collectively) have been the focus of decades of restoration efforts in the Patapsco River watershed, with the removal of Bloede Dam being the most recent example of this effort (Harbold et al. 2022). River herring spend most of their lives at sea and migrate great distances to generally return to their natal freshwater rivers to spawn, though some straying does occur (Pess et al. 2014). Spawning habitats vary by species, but generally include large rivers and lakes to moderately-sized streams and ponds. Spawning occurs in the spring (generally, March 1 - June 15 in Maryland waters) and water levels influence the availability of spawning habitat (Greene et al. 2009). Eggs for each species are demersal, meaning they rest on benthic substrates, during the early phases of development and can be later suspended by currents until hatching. Larvae and juveniles are pelagic in freshwater and low-salinity habitats (e.g., freshwater tidally-influenced river reaches) throughout much of their first summer. Young-of-year survival is largely mediated by habitat availability (e.g., well-oxygenated waters; Greene et al. 2009; Devine et al. 2021) and the availability of prey (Kosa and Mather 2001; Yako et al. 2002; Guo et al. 2021). Documented prey items include a number of benthic and pelagic macroinvertebrate species (e.g., cladocerans). Juveniles out-migrate to the nearshore waters of the Middle Atlantic Bight and Gulf of Maine throughout the summer and fall. Emigration is influenced by environmental cues such as elevated river/stream flows (Gahagan et al. 2010) and prey availability (Kosa and Mather 2001).

As juveniles and adults, alosines are important forage for several species managed by the New England Fishery Management Council and the Mid-Atlantic Fishery Management Council. They provide trophic linkages between freshwater/estuarine and marine food webs. Buckel and Conover (1997) in Fahay et al. (1999) report that diet items of juvenile bluefish include *Alosa* species. Juvenile *Alosa* species have also all been identified as prey species for summer flounder (*Paralichthys dentatus*) and windowpane flounder (*Scophthalmus aquosus*) in Steimle et al. (2000). As a result, actions that reduce the availability of prey species (i.e., alosines), either through direct harm or capture, or through adverse impacts to their spawning habitat may adversely impact federally managed fisheries and their EFH.

American shad, blueback herring, and alewife formerly supported the largest and most important commercial and recreational fisheries throughout their range, with fishing activities spanning across rivers (both fresh and saltwater), tributaries, estuaries, and the ocean. Commercial landings for these species have declined dramatically from historic highs. Due to their complex life histories, these species are adversely affected by various anthropogenic stressors, including barriers, diminished water quality and eutrophication, ocean fisheries, and climate change (see: Hare et al. 2021). Notably, poor water quality and the resulting diminished prey availability in freshwater/estuarine habitats have been indicated as a major driver limiting juvenile recruitment (see review: Greene et al. 2009).

Impacts and Recommended Mitigation Measures

Based on the information provided, the dredging of approximately one (1) mile of navigation channel and an associated travel lift well will adversely affect EFH through the temporary degradation of water quality and the direct loss of benthic substrates used by federally managed fish and their prey. While we acknowledge the legacy of anthropogenic impacts in this project location, the substrates to be impacted continue to provide spawning, nursery, and foraging habitat for a variety of fish and small forage species. Furthermore, temporary water quality degradation associated with dredging and dewatering activities as well as permanent alterations of the channel morphology will contribute additional stress to an aquatic system that has historically experienced a broad array of anthropogenic degradation.

The proposed dredging will result in temporary impacts to water quality by increasing total suspended sediment (TSS) loads in the project vicinity. The description of these impacts provided in the EFH assessment are solely based on general guidance provided by our Protected Resources Division and did consider the citing literature presented on that webpage (see: https://www.fisheries.noaa.gov/new-england-mid-atlantic/consultations/section-7-effect-analysis-turbidity-greater-atlantic-region). We are concerned because your conclusion that dredging would not adversely affect fish in the project area is based on an incomplete understanding of the pathways through which dredging affects aquatic ecosystems. The literature cited on that webpage, including a synthesis by Wilber et al. (2001), suggests that we do not have a comprehensive understanding of how dredging affects the range of estuarine fishes found in the project area. Furthermore, it may be inappropriate to base the anticipated TSS levels on those values observed in Boston Harbor (USACE 2001) due to differences in benthic substrate characteristics.

Increased turbidity generated by dredging can result in avoidance, diminished foraging behavior, increased susceptibility to predation, stress, and mortality (Wilber et al. 2001, Wegner et al. 2018). Eggs and larvae of several anadromous and estuarine species that may be seasonally present in the project area, including striped bass, are particularly sensitive to elevated turbidity (Wilber et al. 2001). Conversely, for certain species with preferences for turbid conditions (e.g., spot), increased suspended sediment levels can also increase foraging behavior and subsequent exposure to contaminated sediments that are released through dredging (Wegner et al. 2018). For these reasons, measures should be taken to mitigate impacts of contaminated sediments to fisheries resources and their habitats. This will include operational measures to minimize suspended sediments during dredging as well as avoidance measures to minimize the release of contaminants during periods of elevated biological productivity.

Federally-managed fish species exhibit seasonal migrations which present opportunities for avoidance of direct dredging impacts. These movements generally follow a pattern where fish swim into Chesapeake Bay from the coastal waters of the Atlantic Ocean as water temperatures rise in the spring/summer and return to these deeper coastal waters in the late fall/winter. This behavior is exhibited by species such as bluefish and summer flounder as well as their prey, including menhaden and spot (Able and Fahay 2010). These seasonal movements present a suitable period to complete dredging work when fish species are not present in high relative abundance. We recommend that all dredging occur during this period to minimize the exposure of fish species to contaminated sediments that will be disturbed/suspended by the proposed activity. In your EFH assessment, USCG indicated that dredging would occur in two (2) events, each six (6) months in duration, although the specific months were not described. To avoid/minimize direct and indirect impacts to federally-managed fish and their prey, we recommend that dredging be conducted in the fall and winter, generally from October 15 to March 1, to avoid impacts to federally managed fish and their prey to the maximum extent practicable. These avoidance measures are commonly observed by the U.S. Army Corps of Engineers for Baltimore Harbor navigational dredging activities.

Permanent impacts associated with the proposed project include increasing water depths in Curtis Creek from their current depth (-24 ft MLW, approximately) to -27.5 ft MLW, which also entails widening of the existing channel to accommodate necessary side-slopes and an expansion of the turning basin at the USCG Yard. The maintenance of depths greater than approximately 3-5 m (10-16 ft) facilitates surface water stratification which leads to large areas of hypoxic waters below the pycnocline throughout much of Chesapeake Bay (Hagy et al. 2004; Testa et al. 2017). Furthermore, a recent study by Woodland et al. (2022) indicates that the artificial deepening of the greater Baltimore Harbor area has diminished marine food web complexity which, in turn, causes higher biomagnification of mercury and other toxic compounds at higher trophic levels (e.g., sportfish). While we acknowledge the strategic value of the USCG Yard in Curtis Creek, the permanent expansion of deep waters proposed will further degrade the ecological function in the project vicinity. This effect further underlines the importance of employing avoidance measures to minimize the introduction of contaminant-laden sediments to estuarine food webs.

Magnuson Stevens Act Recommendations

We recommend pursuant to Section 305(b)(4)(A) of the MSA that you adopt the following EFH conservation recommendations to minimize adverse impacts on EFH:

1. Restrict dredging throughout the entirety of the anadromous fish spawning period (March 1 through June 15) to avoid impacts to migratory fish associated with dredging.
2. To the extent practicable, avoid dredging during periods of peak biological productivity in Chesapeake Bay (i.e., generally June 15 through October 15) to minimize transfer of suspended contaminant-laden sediments into aquatic food web. Dredging within this time frame should be conducted behind a turbidity curtain to minimize the spread of contaminated sediments.

3. For mechanical enhancement dredging of the Curtis Creek Channel:
    a. Use an environmental bucket and require slow bucket retrieval speed near the water surface to the maximum extent practicable to minimize the suspension of contaminated sediments.
    b. Employ a water-tight scow to receive and transport dredged sediments and prohibit any overflow of waters from the scow during operations.
    c. Limit overdepth dredging to one (1) foot
4. For hydraulic maintenance dredging of the synchrolift facility:
    a. The dredge intake (cutterhead) on the hydraulic dredge should not be turned on/activated until it is buried in the sediment, or within 1 foot of the bottom, to minimize entrainment of aquatic organisms.
    b. The dredge intake (cutterhead) on the hydraulic dredge should be turned off/deactivated before it is lifted out of the sediment and through the water column to minimize entrainment of organisms.
    c. Ensure that all discharges from the proposed Grove upland containment site are monitored per Maryland State guidelines and meet the criteria specified for upland containment sites operated by the Maryland Port Administration. Provide notification of any non-compliance event to the Maryland Department of the Environment.

Please note that Section 305(b)(4)(B) of the MSA requires you to provide us with a detailed written response to these EFH conservation recommendations, including a description of measures adopted by you for avoiding, mitigating, or offsetting the impact of the project on EFH. In the case of a response that is inconsistent with our recommendations, Section 305(b)(4)(B) of the MSA also indicates that you must explain your reasons for not following the recommendations. Included in such reasoning would be the scientific justification for any disagreements with us over the anticipated effects of the proposed action and the measures needed to avoid, minimize, mitigate, or offset such effects pursuant to 50 CFR 600.920(k). This response must be provided within 30 days after receiving our EFH conservation recommendations and at least 10 days prior to the issuance of a Finding of No Significant Impact (FONSI).

Endangered Species Act (ESA)

Endangered species under the jurisdiction of NOAA Fisheries may be present in the project area. The federal action agency is responsible for determining whether the proposed action may affect these species. If you determine that the proposed action may affect a listed species, your determination of effects along with justification and a request for concurrence should be submitted to the Section 7 Program email account at nmfs.gar.esa.section7@noaa.gov. Guidance and tools to assist you in your effects determination are available on our website at: https://www.fisheries.noaa.gov/new-england-mid-atlantic/consultations/section-7-consultations-greater-atlantic-region. Please contact Brian Hopper of our Protected Resources Division (brian.d.hopper@noaa.gov) if you have any questions or to discuss your project and obligations under Section 7 of the Endangered Species Act (ESA).

Conclusion

We look forward to working with you and your staff as the project moves forward. If you have any questions regarding EFH in the project area or would like to request a presentation summarizing our mandates and associated procedures, please contact Jonathan Watson in our Annapolis, MD field office (jonathan.watson@noaa.gov).

Sincerely,

Louis A. Chiarella
Assistant Regional Administrator
for Habitat Conservation

cc: J. Warf, N. Kisak (AECOM)
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U.S. Department of Homeland Security

United States Coast Guard

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May 26, 2022

Mr. Jonathan Watson
Marine Habitat Resource Specialist
Jonathan.Watson@noaa.gov

Re: EFH Assessment for U.S. Coast Guard Yard Dredging in Curtis Creek, Anne Arundel County, Maryland

Dear Mr. Watson,

This letter is in response to your letter dated 28 April 2022 providing comment and recommendations on a previously submitted consultation letter and essential fish habitat (EFH) assessment, dated 28 March 2022. In accordance with Section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act (MSA), the United States Coast Guard (USCG) is providing a written response to the EFH conservation recommendations contained within your response.

As discussed during a teleconference hosted between NOAA Fisheries, USCG, US Army Corps of Engineers (USACE), and AECOM Technical Services, Inc. (AECOM) on 20 May 2022, the proposed USCG dredging projects that would occur at USCG Baltimore Yard (CG Yard) and within Curtis Creek are still within the conceptual design stage. The USCG is in the process of collecting necessary environmental data, including soil samples and results. An Environmental Assessment (EA) is being prepared and has not yet been released for public comment; following the completion of these planning efforts, the USCG will begin developing the Scope of Work (SOW) and dredge design.

The USCG will include the following EFH conservation recommendations in the future SOW and design drawings for the proposed dredging. These recommendations will also be included in the EA to address and minimize potential impacts to EFH:

- Restrict dredging throughout the entirety of the anadromous fish spawning period (March 1 through June 15) to avoid impacts to migratory fish associated with dredging.
- To the extent practicable, avoid dredging during periods of peak biological productivity in the Chesapeake Bay (i.e., generally June 15 through October 15) to minimize transfer of suspended contaminant-laden sediments into aquatic food web. Dredging within this time frame will be conducted behind a turbidity curtain to minimize the spread of contaminated sediments.
- For mechanical enhancement dredging of the Curtis Creek Channel:
    - Use an environmental bucket and require slow bucket retrieval speed near the water surface to the maximum extent practicable to minimize the suspension of contaminated

sediments.

  - Employ a water-tight scow to receive and transport dredged sediments and prohibit any overflow of waters from the scow during operations.
  - Limit over depth dredging to one (1) foot.

- For hydraulic maintenance dredging of the Syncrolift facility:
  - The dredge intake (cutterhead) on the hydraulic dredge should not be turned on/activated until it is buried in the sediment, or within 1 foot of the bottom, to minimize entrainment of aquatic organisms.
  - The dredge intake (cutterhead) on the hydraulic dredge should be turned off/deactivated before it is lifted out of the sediment and through the water column to minimize entrainment of organisms.
  - Ensure that all discharges from the proposed Grove Point upland containment site are monitored per Maryland State guidelines and meet the criteria specified for upland containment sites operated by the Maryland Port Administration. Provide notification of any non-compliance event to the Maryland Department of the Environment.

The USCG is currently coordinating with USACE to obtain a sample SOW and drawing set of past USACE project(s) that have successfully included these recommendations. The USCG understands that these are standard recommendations for proposed dredge activities occurring in Baltimore Harbor, and plans to implement these recommendations to the extent practicable to avoid, mitigate, or offset potential impacts to EFH resulting from the proposed project.

The USCG looks forward to continuing consultation with NOAA Fisheries as the project moves forward. If you have any additional questions prior to the publication of the Draft EA, please contact Ms. Jennifer Warf at AECOM, via phone at (202) 740-5948, or email at Jennifer.warf@aecom.com.

Sincerely,

WESTON.AVERY.LOUIS.1152330487
Digitally signed by WESTON.AVERY.LOUIS.1152330487
Date: 2022.05.26 12:55:32 -04'00'

LCDR Avery Weston, PE, PMP

cc: K. Greene (NOAA)
J. Lisko (USCG)
M. Teresi (USACE)
J. Warf, R. Damera, N. Kisak (AECOM)

U.S. Department of Homeland Security

United States Coast Guard

Commanding Officer
United States Coast Guard
Facilities Engineering Coast
Guard Yard

2401 Hawkins Point Road
Baltimore, MD 21226
Phone: (410) 636-4098
Email: Avery.L.Weston@uscg.mil

30 November 2021

Section 7 Consultation Request
National Oceanic and Atmospheric Administration
NMFS Greater Atlantic Regional Fisheries Office
nmfs.gar.esa.section7@noaa.gov

To Whom it May Concern:

The purpose of this letter is to solicit comments regarding the United States Coast Guard's (USCG) intent to conduct dredging activities at USCG Yard (herein referred to as CG Yard) in Baltimore, Anne Arundel County, Maryland (Proposed Action). The USCG is preparing an Environmental Assessment (EA) to evaluate the potential impacts associated with the Proposed Action pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 United States Code §4321 et seq.), the Council on Environmental Quality Regulations (40 Code of Federal Regulations [CFR] Parts 1500-1508), and USCG Commandment Instruction (COMDTINST) M16475.1D, Implementing Procedures and Policy for Considering Environmental Impacts.

The CG Yard is comprised of approximately 113 acres along the eastern shoreline of Curtis Creek, a tributary of the Patapsco River, and is approximately 6 miles south of downtown Baltimore (see **Figure 1**). The Chesapeake Bay is approximately 6 miles east of the CG Yard via the Patapsco River. The CG Yard is located in an extensively developed and industrialized area of Baltimore. The CG Yard has operated continuously since 1899 and is the sole USCG-operated shipyard in the U.S. All major vessel repairs, maintenance, and overhauls for the USCG fleet are conducted at the CG Yard.

The Proposed Action includes two main components: 1) maintenance dredging in and around the CG Yard's Syncrolift Facility, and 2) improvement dredging in an area extending from the Interstate-695 bridge (otherwise known as Bascule Bridge) to CG Yard's Pier 1 and Pier 3 (**Figure 2**). The Syncrolift is used to transport vessels for repair and maintenance work. Dredging would occur up to 34.5 feet, the historic depth, around the Syncrolift Facility. The area between Bascule Bridge and Pier 3 would be dredged up to 27.5 feet to support a new class of cutters (Offshore Patrol Cutter [OPC] and National Security Cutter [NSC]). The total dredging amount is estimated to be approximately 400,000 cubic yards (excluding any over-dredge volume).

The purpose of the Proposed Action is to provide the necessary in-water improvements to allow the new OPC and NSC access to the shipyard for maintenance and repair work, maintain the viability of the Syncrolift Facility, and meet USCG mission requirements at the CG Yard. The Proposed Action is needed to address insufficient water depths within the navigation channel from the I-695 Bridge, the turning basin in front of the CG Yard within Curtis Creek, and the vessel berth area between Piers 1, 2, and 3 to accommodate the new USCG cutters and their associated draft (27.5

feet). The Proposed Action is also needed to remove accumulated sediment in the vicinity of the Syncrolift, so that water depths are consistent with its historic depth (34.5 feet) and original construction in 1997. This facility, which connects to the CG Yard's upland rail system, is used currently for the majority of dry dock repair and maintenance work performed at the CG Yard. As the only USCG shipyard, the Yard needs to be accessible by USCG vessels and have the appropriate facilities to conduct maintenance of these USCG vessels to meet USCG mission requirements.

The maintenance dredging of an estimated 10,000 cubic yards of material would likely be performed using hydraulic dredging. Slurry from hydraulic dredging would be transported to a dewatering area on Grove Point located on CG Yard property via a pipeline. Slurry would be dewatered so that all consolidated material would be dry and able to be loaded onto trucks for off-site disposal in accordance with all required permits and approvals.

The improvement dredging, which would generate an estimated 390,000 cubic yards of material, would likely be performed using mechanical dredging methods. Dredging equipment would include a floating crane barge and a scow/barge. A clamshell bucket attached to a crane on the crane barge would be used to scoop sediment from the floor of Curtis Creek, and transfer the dredged material to the scow/barge until the desired depth is achieved. All dredged material would be transported and disposed of appropriately and in accordance with all required permits and approvals.

The Proposed Action would have the potential to affect resources under the jurisdiction of the National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service (NMFS). Based on a query of the NOAA Section 7 Mapper, the endangered Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus*) and shortnose sturgeon (*Acipenser brevirostrum*) have the potential to occur within the project area. No federally designated critical habitat for these species occurs within or near the project area.

Atlantic Sturgeon – Atlantic sturgeons spend most of their lives in nearshore marine and estuarine waters, migrating to freshwater rivers and tributaries to spawn. Atlantic sturgeons prefer deep waterways, and spend most of their time foraging in benthic environments. Adult individuals are expected to be present in the Chesapeake Bay from late March through November. Although suitable habitat is available in the upper Bay, records of Atlantic sturgeon captures suggest that Atlantic sturgeons do not frequent the area and spawning is not expected to occur in the area due to high salinity levels (Exelon, 2012). Mean salinity levels in the Patapsco River range from approximately 5 to 11 ppt, whereas suitable habitat levels for the Atlantic sturgeon range from 0 to 0.5 ppt (Maryland DNR, 2021). In addition, clean, hard substrate for attachment of demersal adhesive eggs is limited within the project area, as Curtis Creek primarily contains sand substrate with clay or clay minerals (Atlantic Sturgeon Status Review Team, 2007; U.S. Coast Guard Yard, 2007). Therefore, suitable spawning habitat is unlikely to occur in the vicinity of the Proposed Action area. Although it is possible for Atlantic sturgeons to occur in the area while migrating or foraging, their presence in Curtis Creek at the CG Yard is likely limited due to the area being heavily used for docking, mooring, and industrial activities.

In addition, turbidity and total suspended sediment (TSS) levels expected for mechanical dredging (up to 445.0 mg/L) are below those shown to have adverse effect on fish (typically up to 1,000.0 mg/L (NOAA, 2020). Any TSS from dredging would dissipate to background levels within 600 feet (183 meters) of the source in the upper water column and 2,400 feet (732 meters) in the lower water column (NOAA, 2020).

Therefore, the USCG anticipates that the Proposed Action ***may affect, but is not likely to adversely affect*** Atlantic sturgeons.

Shortnose Sturgeon – Shortnose sturgeons hatch in freshwater rivers and spend most of their time in the tributaries of these rivers, with relatively little time spent in the ocean. Adult individuals are expected to be present in the Chesapeake Bay year round. Within the Chesapeake Bay area, only the Potomac River and James River have been documented to contain shortnose sturgeon. No shortnose sturgeons have been observed in the Patapsco River or its tributaries, including Curtis Creek (Balazik 2017). Due to the unlikely presence of shortnose sturgeons in Curtis Creek and the Patapsco River, the USCG has determined that the Proposed Action would have ***no effect*** on shortnose sturgeon.

The USCG requests NMFS review and concurrence with the effects determination stated in this letter. If there is anything we need to do to facilitate the Proposed Action without negatively impacting federally listed species or critical habitat that is not mentioned in this letter, please let us know within **thirty (30) days** of receipt of this letter to enable us to complete this phase of the project within the scheduled timeframe.

The USCG has contracted AECOM to facilitate the NEPA process. If you have information relevant to the development of the EA, please direct your correspondence to Ms. Jennifer Warf at AECOM, 12420 Milestone Center Drive, Suite 150, Germantown, MD 20876 or via (202) 740-5948 or Jennifer.warf@aecom.com.

Sincerely,

WESTON.AVERY.LOUIS.1152330487

Digitally signed by WESTON.AVERY.LOUIS.1152330487
Date: 2021.11.30 20:11:06 -05'00'

LCDR Avery Weston, PE, PMP

Enclosures: Figure 1: Site Location Map
Figure 2: Proposed Action Area

References:

Atlantic Sturgeon Status Review Team. 2007. Status Review of Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus*). Report to National Marine Fisheries Service, Northeast Regional Office. February 23, 2007.

Balazik, M. 2017. First verified occurrence of the shortnose sturgeon (*Acipenser brevirostrum*) in the James River, Virginia. National Marine Fisheries Service. Fishery Bulletin, Vol 115: 196-200.

Exelon. 2012. Final Study Report, Shortnose and Atlantic Sturgeon Life History Studies. Prepared by Normandeau Associates, Inc. for the Conowingo Hydroelectric Project.

Maryland Department of Natural Resources (DNR). 2021. Eyes on the Bay. Fixed Station Monthly Monitoring Query of the Patapsco and Back Rivers. Accessed on 4 June 2021 at: http://eyesonthebay.dnr.maryland.gov/eyesonthebay/index_fullsizemap.cfm.

National Oceanic and Atmospheric Administration (NOAA). 2020. Section 7 Effect Analysis: Turbidity in the Greater Atlantic Region. Accessed on 4 June 2021 at: https://www.fisheries.noaa.gov/new-england-mid-atlantic/consultations/section-7-effect-analysis-turbidity-greater-atlantic-region

U.S. Coast Guard Yard. 2007. Land Use Plan Update, U.S. Coast Guard Yard, Curtis Bay. Prepared by Government Services Integrated Process Team LLC.

Figure 1. Site Location Map

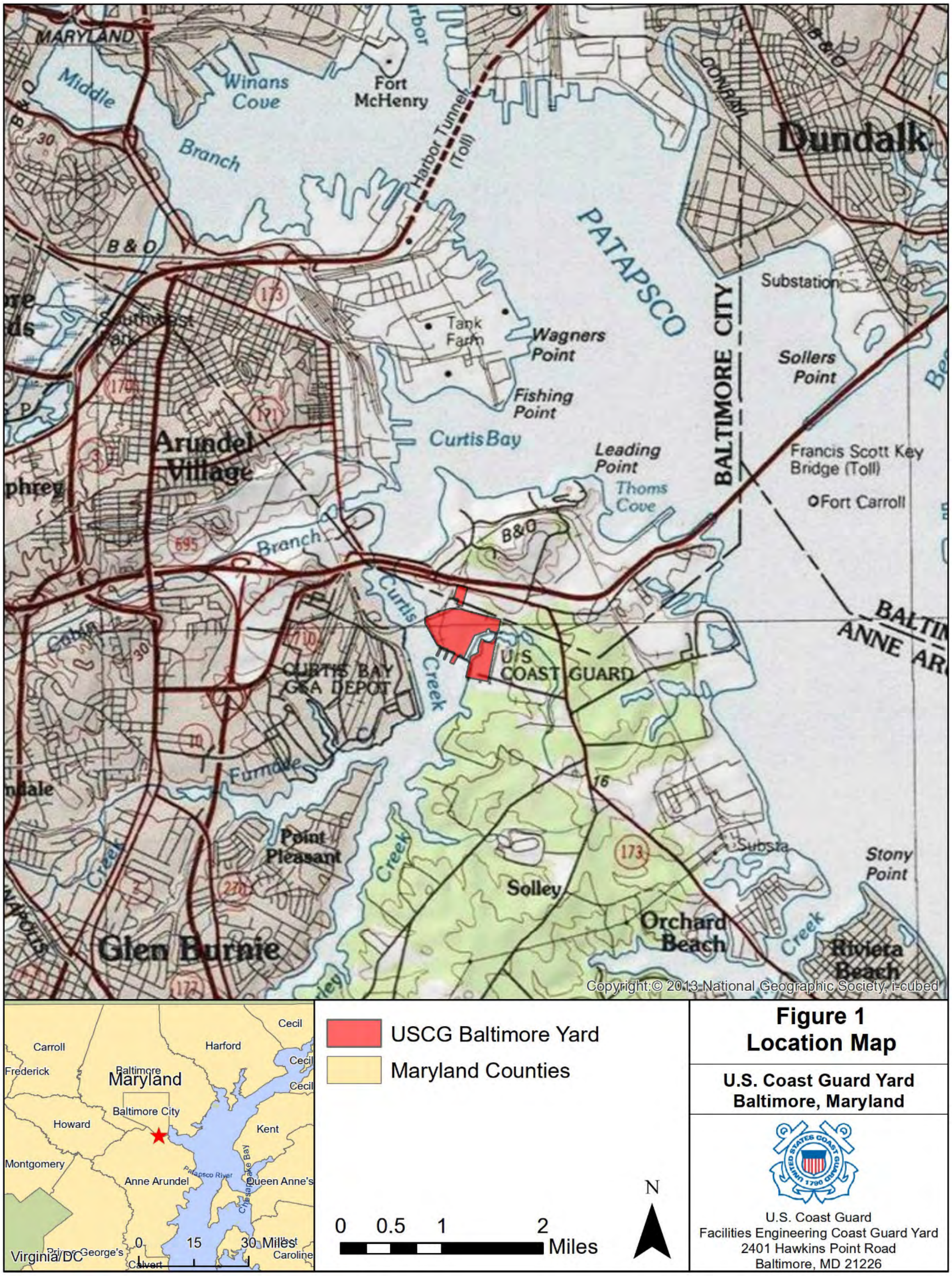

Figure 2. Proposed Action Area

Kisak, Natalie

From: Brian D Hopper - NOAA Federal <brian.d.hopper@noaa.gov>
Sent: Tuesday, January 4, 2022 1:51 PM
To: Kisak, Natalie
Subject: [EXTERNAL] Re: Re: Re: Project Review Request -- NOAA
Attachments: 20211220_Baltimore Yard Dredging_NOAA Ltr_unsigned(bdh comments).docx

Hi Natalie,

Thanks again for providing the MS Word version of your letter. I've made some edits and comments to the attached version that are consistent with the guidance we have on our section 7 webpage at https://www.fisheries.noaa.gov/new-england-mid-atlantic/consultations/section-7-consultation-technical-guidance-greater-atlantic#technical-consultation-guidance. I would be happy to review the revised version after you've had a chance to consider the edits and comments on this draft. Please let me know if you have any questions.

Regards,
-Brian

-Brian

On Mon, Dec 20, 2021 at 8:25 AM Kisak, Natalie <natalie.kisak@aecom.com> wrote:

> Mr. Hopper,
>
> Attached please find the MS Word version of the letter I previously sent. Please note that this version is not signed, but the content exactly matches that of the PDF version.
>
> I hope you enjoy the holidays!
>
> Thanks,
>
> Natalie Kisak
>
> **Natalie A. Kisak**
> Environmental Planner
> D +1-301-944-1516
> M +1-410-446-5545
> natalie.kisak@aecom.com
>
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> T +1-301-250-2934
> aecom.com
>
> **Delivering a better world**
>
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From: Brian D Hopper - NOAA Federal <brian.d.hopper@noaa.gov>
Sent: Friday, December 17, 2021 1:37 PM
To: Kisak, Natalie <natalie.kisak@aecom.com>
Subject: [EXTERNAL] Re: Re: Project Review Request -- NOAA

Hi Natalie,

When you have a minute, could you please send me a version of your letter in MS Word? I'll be on leave for the next couple weeks, but will be in touch with you after the holidays with any comments and questions.

Regards,
-Brian

On Wed, Dec 15, 2021 at 10:34 AM Kisak, Natalie <natalie.kisak@aecom.com> wrote:

> Mr. Hopper,
>
> Thanks for confirming receipt of this letter. We look forward to a response on the completeness of our informal consultation package by January 8th. Please reach out if there is any additional information you need to concur with our determinations of "Not Likely to Adversely Affect" and "No Effect."
>
> A letter regarding EFH was previously sent to Ms. Karen Greene, but I'll forward a copy to Mr. Jonathan Watson, as well.
>
> Thank you!
>
> Natalie Kisak
>
> **Natalie A. Kisak**
> Environmental Planner
> D +1-301-944-1516
> M +1-410-446-5545
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From: Brian D Hopper - NOAA Federal <brian.d.hopper@noaa.gov>
Sent: Tuesday, December 14, 2021 8:10 PM
To: Kisak, Natalie <natalie.kisak@aecom.com>
Cc: Jonathan Watson - NOAA Federal <jonathan.watson@noaa.gov>; Warf, Jen <Jennifer.Warf@aecom.com>; Wu, Charlene <Charlene.Wu@aecom.com>
Subject: [EXTERNAL] Re: Project Review Request -- NOAA

Hi Natalie,

Thank you for contacting the section 7 team at the Greater Atlantic Regional Fisheries Office (GARFO). I have received a copy of the USCG's letter requesting informal section 7 consultation. You will find our consultation guidance and resources located at https://www.fisheries.noaa.gov/new-england-mid-atlantic/consultations/section-7-consultation-technical-guidance-greater-atlantic.

I will review your request and associated materials within 30 days from the receipt date of December 9, 2021, to ensure that your incoming documents are adequate and complete. I will contact you regarding the status of your incoming request for consultation by January 8, 2022 (30 days after receipt date). Please note that at this time, section 7 consultation has not been initiated. Upon review and determination that all information has been received and is adequate, I will notify you, in writing, that consultation has been initiated. If I determine that additional information is required, I will provide detailed guidance to address any issues.

If you have not already done so, you should also contact Jonathan Watson in our Habitat Conservation Division's Annapolis Field Office (jonathan.watson@noaa.gov, 410-295-3152) regarding potential adverse effects to other NOAA trust resources including essential fish habitat (EFH).

Regards,
-Brian

On Thu, Dec 9, 2021 at 4:20 PM NMFS.GAR ESA.Section7 - NOAA Service Account <nmfs.gar.esa.section7@noaa.gov> wrote:

> ---------- Forwarded message ---------
> From: **Kisak, Natalie** <natalie.kisak@aecom.com>
> Date: Thu, Dec 9, 2021 at 2:38 PM
> Subject: Project Review Request -- NOAA
> To: nmfs.gar.esa.section7@noaa.gov <nmfs.gar.esa.section7@noaa.gov>
> Cc: Warf, Jen <Jennifer.Warf@aecom.com>, Wu, Charlene <Charlene.Wu@aecom.com>
>
> Good afternoon,
>
> The US Coast Guard is preparing an Environmental Assessment in support of the Proposed Dredging Project at the US Coast Guard Yard in Baltimore, Maryland. On behalf of the US Coast Guard, we are seeking input from your agency regarding any information or potential environmental concerns associated with this project. Please see the attached letter for additional information. We would appreciate any comments, concerns, information, studies, or other data you may have regarding this project within thirty (30) days of receipt of this correspondence.
>
> We look forward to and welcome your participation in this analysis. Thank you!

Natalie Kisak

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WORLD'S MOST
ADMIRED
COMPANIES 2020

--
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U.S. Department of
Homeland Security

United States
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Commanding Officer
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4 January 2022

NOAA Fisheries
Greater Atlantic Regional Fisheries Office
Protected Resources Division
55 Great Republic Drive
Gloucester, MA 01930

Attn: Ms. Jennifer Anderson
~~Section 7 Consultation Request~~
~~National Oceanic and Atmospheric Administration~~
~~NMFS Greater Atlantic Regional Fisheries Office~~
~~nmfs.gar.esa.section7@noaa.gov~~

Dear Ms. Anderson,

~~To Whom it May Concern:~~

We are carrying out the proposed project as described below. This letter is to request Endangered Species Act (ESA) concurrence from your office for the dredging activities at USCG Yard (herein referred to as CG Yard) in Baltimore, Anne Arundel County, Maryland. We have made the determination that the proposed activity may affect, but is not likely to adversely affect, any species listed as threatened or endangered by NMFS under the ESA of 1973, as amended. Our supporting analysis is provided below.

~~The purpose of this letter is to solicit comments regarding the United States Coast Guard's (USCG) intent to conduct dredging activities at USCG Yard (herein referred to as CG Yard) in Baltimore, Anne Arundel County, Maryland (Proposed Action). The USCG is preparing an Environmental Assessment (EA) to evaluate the potential impacts associated with the Proposed Action pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 United States Code §4321 et seq.), the Council on Environmental Quality Regulations (40 Code of Federal Regulations [CFR] Parts 1500-1508), and USCG Commandment Instruction (COMDTINST) M16475.1D, Implementing Procedures and Policy for Considering Environmental Impacts.~~

~~The CG Yard is comprised of approximately 113 acres along the eastern shoreline of Curtis Creek, a tributary of the Patapsco River, and is approximately 6 miles south of downtown Baltimore (see **Figure 1**). The Chesapeake Bay is approximately 6 miles east of the CG Yard via the Patapsco River. The CG Yard is located in an intensively~~ extensively ~~developed and industrialized area of Baltimore. The CG Yard has operated continuously since 1899 and is the sole USCG-operated shipyard in the U.S. All major vessel repairs, maintenance, and overhauls for the USCG fleet are conducted at the CG Yard.~~

Proposed Action

The Proposed Action includes two main components: 1) maintenance dredging in and around the CG Yard's Syncrolift Facility, and 2) improvement dredging in an area extending from the Interstate-695 bridge (otherwise known as Bascule Bridge) to CG Yard's Pier 1 and Pier 3 (**Figure 2**). The Syncrolift is used to transport vessels for repair and maintenance work. Dredging would occur up to 34.5 feet, the historic depth, around the Syncrolift Facility. The area between Bascule Bridge and Pier 3 would be dredged up to 27.5 feet to support a new class of cutters (Offshore Patrol Cutter [OPC] and National Security Cutter [NSC]). The total dredging amount is estimated to be approximately 400,000 cubic yards (excluding any over-dredge volume).

The purpose of the Proposed Action is to provide the necessary in-water improvements to allow the new OPC and NSC access to the shipyard for maintenance and repair work, maintain the viability of the Syncrolift Facility, and meet USCG mission requirements at the CG Yard. The Proposed Action is needed to address insufficient water depths within the navigation channel from the I-695 Bridge, the turning basin in front of the CG Yard within Curtis Creek, and the vessel berth area between Piers 1, 2, and 3 to accommodate the new USCG cutters and their associated draft (27.5 feet). The Proposed Action is also needed to remove accumulated sediment in the vicinity of the Syncrolift, so that water depths are consistent with its historic depth (34.5 feet) and original construction in 1997. This facility, which connects to the CG Yard's upland rail system, is used currently for the majority of dry dock repair and maintenance work performed at the CG Yard. As the only USCG shipyard, the Yard needs to be accessible by USCG vessels and have the appropriate facilities to conduct maintenance of these USCG vessels to meet USCG mission requirements.

The maintenance dredging of an estimated 10,000 cubic yards of material would likely be performed using hydraulic dredging. Slurry from hydraulic dredging would be transported to a dewatering area on Grove Point located on CG Yard property via a pipeline. Slurry would be dewatered so that all consolidated material would be dry and able to be loaded onto trucks for off-site disposal in accordance with all required permits and approvals.

The improvement dredging, which would generate an estimated 390,000 cubic yards of material, would likely be performed using mechanical dredging methods. Dredging equipment would include a floating crane barge and a scow/barge. A clamshell bucket attached to a crane on the crane barge would be used to scoop sediment from the floor of Curtis Creek, and transfer the dredged material to the scow/barge until the desired depth is achieved. All dredged material would be transported and disposed of appropriately and in accordance with all required permits and approvals.

Action Area

The action area is defined as "all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action" (50CFR§402.02). The CG Yard is comprised of approximately 113 acres along the eastern shoreline of Curtis Creek, a tributary of the Patapsco River, and is approximately 6 miles south of downtown Baltimore (see **Figure 1**). The Chesapeake Bay is approximately 6 miles east of the CG Yard via the Patapsco River. The CG Yard is located in an extensively developed and industrialized area of Baltimore. The CG Yard has operated continuously since 1899 and is the sole USCG-operated shipyard in the U.S. All major vessel repairs, maintenance, and overhauls for the USCG fleet are conducted at the CG Yard.

Commented [B1]: In addition to this, please describe the habitat in the action area (e.g., depth, including tidal range, substrate type, presence of benthic resources including SAV or shellfish beds, salinity and any other relevant physical or biological features of the area).

Area affected by the dredging:

- Dredging area and disposal area
- Transit route to disposal area
- Extent of sediment/turbidity plume during dredging AND disposal

Commented [B2]: Include this information in your description of the action area.

NMFS Listed Species in the Action Area

The Proposed Action would have the potential to affect resources under the jurisdiction of the National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service (NMFS). Based on a query of the NOAA Section 7 Mapper, the endangered Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus*) and shortnose sturgeon (*Acipenser brevirostrum*) have the potential to occur within the project area. No federally designated critical habitat for these species occurs within or near the project area.

Atlantic Sturgeon – There are five DPSs of Atlantic sturgeon (Acipenser oxyrinchus oxyrinchus) listed as threatened or endangered. Atlantic sturgeon originating from the New York Bight, Chesapeake Bay, South Atlantic and Carolina DPSs are listed as endangered; the Gulf of Maine DPS is listed as threatened. The marine range of all five DPSs extends along the Atlantic coast from Canada to Cape Canaveral, Florida and includes the action area.

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Atlantic sturgeon are anadromous, meaning that adults spawn in freshwater portions of large rivers in the spring and early summer and migrate into estuarine and marine waters where they spend most of their lives. In some southern rivers a fall spawning migration may also occur. They spawn in moderately flowing water (46-76 cm/s) in deep parts of large rivers. Sturgeon eggs are highly adhesive and are deposited on bottom substrate, usually on hard surfaces (e.g., cobble). It is likely that cold, clean water is important for proper larval development. Once larvae begin migrating downstream they use benthic structure (especially gravel matrices) as refuges. The closest documented spawning grounds for Atlantic sturgeon outside of the action area. Early life stages are not tolerant of salinity; therefore their eggs and larvae will not occur within Curtis Creek.

Juveniles usually reside in estuarine waters for months to years. Because the dredging sites are not located in a river where sturgeon spawn, no juveniles will be present at either site as this life stage remains in the natal river. Subadults and adults live in coastal waters and estuaries when not spawning, generally in shallow (10-50 m depth) nearshore areas dominated by gravel and sand substrates. Long distance migrations away from spawning rivers are common. Atlantic sturgeon also occur over shallow (8 ft or 2.5 m), tidally influenced flats and mud, sand, and mixed cobble substrates (Savoy and Pacileo, 2003). Occurrence in these shallow waters is thought to be tied to the presence of benthic resources for foraging.

No known estimates of the number of Atlantic sturgeon present in the action area are available. Although suitable habitat is available in the upper Bay, records of Atlantic sturgeon captures suggest that Atlantic sturgeons do not frequent the area and spawning is not expected to occur in the area due to high salinity levels (Exelon, 2012). Mean salinity levels in the Patapsco River range from approximately 5 to 11 ppt, whereas suitable habitat levels for the Atlantic sturgeon range from 0 to 0.5 ppt (Maryland DNR, 2021). In addition, clean, hard substrate for attachment of demersal adhesive eggs is limited within the project area, as Curtis Creek primarily contains sand substrate with clay or clay minerals (Atlantic Sturgeon Status Review Team, 2007; U.S. Coast Guard Yard, 2007). Therefore, suitable spawning habitat is unlikely to occur in the vicinity of the Proposed Action area. The action area (dredge sites and transit routes) is not located within any known overwintering areas; therefore, Atlantic sturgeon are most likely to be present in the action area from April through November, but could be present at any time of the year. Although it is possible for Atlantic sturgeons to occur in the area while migrating or foraging, we expect the presence of Atlantic sturgeon in Curtis Creek at the CG Yard is likely limited to occasional transient sub-adults or adults originating from any of the five DPSs due to the area being heavily used for docking, mooring, and industrial activities.

~~Atlantic sturgeons spend most of their lives in nearshore marine and estuarine waters, migrating to freshwater rivers and tributaries to spawn. Atlantic sturgeons prefer deep waterways, and spend most of their time foraging in benthic environments. Adult individuals are expected to be present in the Chesapeake Bay from late March through November~~. ~~Although suitable habitat is available in the upper Bay, records of Atlantic sturgeon captures suggest that Atlantic sturgeons do not frequent the area and spawning is not expected to occur in the area due to high salinity levels (Exelon, 2012). Mean salinity levels in the Patapsco River range from approximately 5 to 11 ppt, whereas suitable habitat levels for the Atlantic sturgeon range from 0 to 0.5 ppt (Maryland DNR, 2021). In addition, clean, hard substrate for attachment of demersal adhesive eggs is limited within the project area, as Curtis Creek primarily contains sand substrate with clay or clay minerals (Atlantic Sturgeon Status Review Team, 2007; U.S. Coast Guard Yard, 2007). Therefore, suitable spawning habitat is unlikely to occur in the vicinity of the Proposed Action area. Although it is possible for Atlantic sturgeons to occur in the area while migrating or foraging, their presence in Curtis Creek at the CG Yard is likely limited due to the area being heavily used for docking, mooring, and industrial activities~~.

In addition, turbidity and total suspended sediment (TSS) levels expected for mechanical dredging (up to 445.0 mg/L) are below those shown to have adverse effect on fish (typically up to 1,000.0

Commented [B3]: This information should go in the effects section.

Therefore, the USCG anticipates that the Proposed Action ***may affect, but is not likely to adversely affect*** Atlantic sturgeons.

Commented [B4]: Save this for your conclusion (after you've analyzed all the potential stressors).

Shortnose Sturgeon – Shortnose sturgeons hatch in freshwater rivers and spend most of their time in the tributaries of these rivers, with relatively little time spent in the ocean. Adult individuals are expected to be present in the Chesapeake Bay year round. Within the Chesapeake Bay area, only the Potomac River and James River have been documented to contain shortnose sturgeon. No shortnose sturgeons have been observed in the Patapsco River or its tributaries, including Curtis Creek (Balazik 2017). Due to the unlikely presence of shortnose sturgeons in Curtis Creek and the Patapsco River, the USCG has determined that the Proposed Action would have ***no effect*** on shortnose sturgeon.

Commented [B5]: Unlikely presence isn't quite enough to support a "no effect" determination. No effect is the right determination when species are not present where effects are likely to occur.

Effects Determination

Impacts from Dredging

Mechanical dredges include many different bucket designs (e.g., clamshell, closed versus open bucket, level-cut bucket) and backhoe dredges, representing a wide range of bucket sizes. TSS concentrations associated with mechanical clamshell bucket dredging operations have been shown to range from 105 mg/L in the middle of the water column to 445 mg/L near the bottom (210 mg/L, depth-averaged) (ACOE 2001). Furthermore, a study by Burton (1993) measured TSS concentrations at distances of 500, 1,000, 2,000, and 3,300 feet (152, 305, 610, and 1006 meters) from dredge sites in the Delaware River and were able to detect concentrations between 15 mg/L and 191 mg/L up to 2,000 feet (610 meters) from the dredge site. In support of the New York/New Jersey Harbor Deepening Project, the U.S. Army Corps of Engineers conducted extensive monitoring of mechanical dredge plumes (ACOE 2015a). The dredge sites included Arthur Kill, Kill Van Kull, Newark Bay, and Upper New York Bay. Although briefly addressed in the report, the effect of currents and tides on the dispersal of suspended sediment were not thoroughly examined or documented. Independent of bucket type or size, plumes dissipated to background levels within 600 feet (183 meters) of the source in the upper water column and 2,400 feet (732 meters) in the lower water column. Based on these studies, elevated suspended sediment concentrations at several hundreds of mg/L above background may be present in the immediate vicinity of the bucket, but would settle rapidly within a 2,400- foot (732 meter) radius of the dredge location. The TSS levels expected for mechanical dredging (up to 445.0 mg/L) are below those shown to have adverse effect on fish (typically up to 1,000.0 mg/L; see summary of scientific literature in Burton 1993; Wilber and Clarke 2001).

Hydraulic or cutterhead dredges use suction to entrain sediment for pumping through a pipeline to a designated discharge site. Production rates vary greatly based on pump capacities and the type (size and rotational speed) of cutter used, as well as distance between the cutterhead and the substrate. Sediments are re-suspended during lateral swinging of the cutterhead as the dredge progresses forward. Modeling results of cutterhead dredging indicated that TSS concentrations above background levels would be present throughout the bottom six feet (1.8 meters) of the water column for a distance of approximately 1,000 feet (305 meters) (ACOE 1983). Elevated suspended sediment levels are expected to be present only within a 984.3 to 1,640.4 foot (300-500 meters) radius of the cutterhead dredge (ACOE 1983; LaSalle 1990; Hayes et al. 2000, as reported in Wilber and Clarke 2001). TSS concentrations associated with cutterhead dredge sediment plumes typically range from 11.5 to 282.0 mg/L with the highest levels (550.0 mg/L) detected adjacent to the cutterhead dredge and concentrations decreasing with greater distance from the dredge (Nightingale and Simenstad 2001; ACOE 2005, 2010, 2015b). The TSS levels expected for cutterhead dredging (up to 550.0 mg/L) are below those shown to have adverse effect on fish (typically up to 1,000.0 mg/L; see summary of scientific literature in Burton 1993; Wilber and Clarke 2001).

As explained above, we expect few, if any, sturgeon to forage in the action area. As the TSS levels will not reach levels that are toxic to benthic communities, the proposed action is extremely unlikely to result in reductions in the quality or quantity of sturgeon prey currently available. TSS is most likely to affect sturgeon if a plume causes a barrier to normal behaviors. However, the increase in TSS levels expected for dredging is so minor that any effect of sediment plumes caused by the proposed action on sturgeon movements or behavior will be undetectable; we expect sturgeon to either swim through the plume or make small evasive movements to avoid it. Based on the best available information, the effects of re-suspended sediment on sturgeon resulting from dredging when added to baseline conditions will be too small to be meaningfully measured or detected and are, therefore, insignificant.

Dredge Entrapment

Mechanical dredging entails lowering the open bucket or clamshell through the water column, closing the bucket after impact on the bottom, lifting the bucket up through the water column, and emptying the bucket into a barge or truck. The bucket operates without suction or hydraulic intake, moves relatively slowly through the water column and impacts only a small area of the aquatic bottom at any time. In order to be captured in a dredge bucket, an animal must be on the bottom directly below the dredge bucket as it impacts the substrate and remain stationary as the bucket closes. Species captured in dredge buckets can be injured or killed if entrapped in the bucket or buried in sediment during dredging and/or when sediment is deposited into the dredge scow. Species captured and emptied out of the bucket can suffer stress or injury, which can lead to mortality.

In 2012, the Corps provided NMFS with a list of all documented interactions between dredges and sturgeon reported along the U.S. East Coast; reports dated as far back as 1990 (USAGE, 2012). This list included four incidents of sturgeon captured in dredge buckets. These include the capture of a decomposed Atlantic sturgeon in Wilmington Harbor in 2001. The condition of this fish indicated it was not killed during the dredging operation and was likely dead on the bottom or in the water column and merely scooped up by the dredge bucket. Another record was of the capture of an Atlantic sturgeon in Wilmington Harbor in 1998; however, this record is not verified and not considered reliable. The report also listed the live capture of an Atlantic sturgeon at the Bath Iron Works (BIW) facility in the Kennebec River, Maine in 2001 as well as a shortnose sturgeon captured at BIW in 2003 that was observed to have suffered death recently at the time of capture. One report of a live shortnose sturgeon captured in a dredge bucket at BIW in 2009 was not included in the report. Similarly, a shortnose sturgeon fatality at BIW in 2017 was not reported (suspected to be attributable to a cutterhead dredge). Observer coverage at dredging operations at the BIW facility has been 100% for approximately 15 years, with dredging occurring every one to two years. Hundreds of mechanical dredging projects occur along the U.S. Atlantic coast each year and we are not aware of any other captures of sturgeon in mechanical dredges anywhere in the U.S prior to or after 2012.

The risk of interactions between sturgeon and mechanical dredges is thought to be highest in areas where large numbers of sturgeon are known to aggregate. The risk of capture may also be related to the behavior of the sturgeon in the area. While foraging, sturgeon are at the bottom of the river interacting with the sediment. This behavior may increase the susceptibility of capture with a dredge bucket. We also expect the risk of capture to be higher in areas where sturgeon are overwintering and spawning in dense aggregations as overwintering and spawning sturgeon may be less responsive to stimuli which could reduce the potential for a sturgeon to avoid an oncoming dredge bucket.

Based on all available evidence, the risk of sturgeon being captured in a mechanical dredge at the CG Yard is low. This is based on the fact that the action area is not known to support high densities of foraging or migrating sturgeon. Therefore, it is extremely unlikely that any sturgeon will be captured, injured or killed during mechanical dredging activities. Therefore, any effects of entrapment from the proposed dredging activities on sturgeon are discountable.

With the use of hydraulic pipeline dredge, dredged material is raised by dredge pumps through dragarms connected to dragheads or cutterheads in contact with the channel bottom and discharged into hoppers built into the vessel or pumped through a hydraulic pipeline.

Most sturgeon are able to escape from the oncoming draghead or cutterhead due to the slow speed of advancement (up to 3 mph or 4.4 feet/second). Adverse interactions with a hopper dredge result primarily from crushing when the draghead is placed on the bottom, or when an animal is unable to escape from the suction of the dredge and becomes stuck on the draghead (i.e., impingement).

Entrainment occurs when organisms are sucked through the draghead. Mortality most often occurs when animals are sucked into the dredge draghead, pumped through the intake pipe and then killed as they cycle through the centrifugal pump. Interactions with the draghead can also occur if the suction is turned on while the drag head is in the water column (i.e., not seated on the bottom).

The risk of interactions is related to both the amount of time sturgeon spend on the bottom and the behavior the fish are engaged in (i.e., whether the fish are overwintering, foraging, resting or migrating), as well as the intake velocity and swimming abilities of sturgeon in the area (Clarke, 2011). Intake velocities of a typical large self-propelled hopper dredge are 11 feet per second. Exposure to the suction of the draghead intake is minimized by not turning on the suction until the draghead is properly seated on the bottom sediments and by maintaining contact between the draghead and the bottom.

In general, entrainment of large mobile animals, such as sturgeon, is relatively rare. Several factors are thought to contribute to the likelihood of entrainment. One factor influencing potential entrainment is the swimming stamina and size of the individual fish at risk, Swimming stamina is positively correlated with total fish length. Entrainment of larger sturgeon, such as the subadults and adults that may occur in the action area, is less likely due to the increased swimming performance of the fish. The estimated minimum size for sturgeon that out-migrate from their natal river is approximately 30-36 inches (Murawski and Pacheco, 1977; ASSRT, 2007); therefore, that is the size of sturgeon most likely to be in the action area. In areas where animals are present in high density, the risk of an interaction is greater because more animals are exposed to the potential for entrainment. The dredge draghead operates on the bottom and is typically at least partially buried in the sediment. Sturgeon are benthic feeders and are often found at or near the bottom while foraging or while moving within rivers. Sturgeon at or near the bottom could be vulnerable to entrainment if they were unable to swim away from the draghead.

Information suggests that sturgeon migrating in the marine environment do not move along the bottom but move further up in the water column (Sarah Cameron, submission of comments on 75 FR 61872, 2011 in letter from NMFS for Duxbury Harbor September 9, 2011). If sturgeon are up off the bottom while in dynamic flows of the river, which also lacks the preferred habitat conditions for foraging, the potential for interactions with the dredge are further reduced. Given the low numbers of sturgeon in the area and the lack of preferred forage habitat in the dredge site footprints, an interaction of a sturgeon with a dredge in the action area is extremely unlikely.

Habitat Modification

Dredging is likely to temporarily disturb no more than approximately 30 acres of bottom substrate, resulting in a short-term loss of benthic organisms and shellfish that serve as forage. Benthic organisms such as tube worms, arthropods and bivalves associated with the affected sediments would be removed or buried during the dredging and placement process. Mobile organisms living on the surface would be displaced. Increased suspended sediment generated by dredging operations are expected be confined to the main channel of Curtis Creek. TSS levels above 390.0 mg/L may have an adverse effect on benthic communities; however, these concentrations are not expected outside the immediate dredge site (EPA, 1986). Shellfish are well adapted to turbid environments and would be able to cope with periotic elevated suspended sediment concentrations from the dredging operation.

Most of the dredged area is in a high energy system. High energy environments are normally low in epifauna, with infauna limited to a few species that are adapted to stressful and ever-changing conditions (Wilber and Clarke, 2001). Therefore, the number of benthic species which may be affected by dredging activity is likely to be minimal. Removal of the shoaled areas in the navigation channel would temporarily decrease the amount of benthic resources available to fish as forage. However, areas adjacent to the navigation channel would continue to serve as a food source while the impacted area recolonizes, and benthic populations rebuild. The dredged areas are expected to experience recolonization of benthos from adjacent areas within a short timeframe after dredging is completed. Newell et al. (2004) provided a time sequence of recovery of macrofauna in coastal marine deposits in an area of high energy after cessation of dredging activities. Initial colonization of small mobile species and larval recolonization was seen in as little as 7 days, but it took about 100 days for species diversity to be restored to within 70-80% of that occurring in the surrounding areas. At about 175 days, population density is restored to 70-90% of the surrounding area, with full restoration taking 2-3 years.

Therefore, while there may be some temporary loss of foraging opportunities, the unaffected areas within the action area provide alternative foraging sites for listed species. Given the minor and temporary nature of the turbidity and sedimentation, any effects on listed species' fitness from loss of foraging opportunities are too small to be meaningfully evaluated, measured, or detected, and are insignificant. Therefore, we have determined that any effects to habitat modification for sturgeon will be insignificant.

Impacts from Vessels

In our analysis we considered three elements: (1) the existing baseline conditions, (2) the action and what it adds to existing baseline conditions, and (3) new baseline conditions (the existing baseline conditions and the action together). We have determined that vessel traffic added to baseline conditions as a result of the proposed project is not likely to adversely affect ESA-listed species for the following reasons.

Adding project vessels to the existing baseline will not increase the risk that any vessel in the area will strike an individual, or will increase it to such a small extent that the effect of the action (i.e., any increase in risk of a strike caused by the project) cannot be meaningfully measured or detected. The baseline risk of a vessel strike within the Patapsco River and Curtis Creek is unknown. The increase in traffic associated with the proposed project is extremely small. During the project activities, a minimal number of project vessels will be added to the baseline. The addition of project vessels will also be intermittent, temporary, and restricted to a small portion of the overall action area on any given day. As such, any increased risk of a vessel strike caused by the project will be too small to be meaningfully measured or detected. As a result, the effect of the action on the increased risk of a vessel strike in the action area is insignificant.

The dredging itself will maintain the navigation channel and, as a result, it is expected to enable vessels to travel safely in the area. Allowing safe passage in the navigation channel is not expected to change the number of vessels that use the action area; thus, preserving the status quo with regard to vessel routes and vessel numbers will not change the risk of a vessel strike. Any slight increase in risk from altered patterns of use would be too small to be detected or measured, and effects are, therefore, insignificant.

Conclusions

Based on the analysis that all effects of the proposed action will be insignificant and/or discountable, we have determined that the proposed action is not likely to adversely affect any listed species under NOAA Fisheries' jurisdiction. We certify that we have used the best scientific and commercial data available to complete this analysis. We request your concurrence with this determination.

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The USCG requests NMFS review and concurrence with the effects determination stated in this letter. If there is anything we need to do to facilitate the Proposed Action without negatively impacting federally listed species or critical habitat that is not mentioned in this letter, please let us know within **thirty (30) days** of receipt of this letter to enable us to complete this phase of the project within the scheduled timeframe.

The USCG has contracted AECOM to facilitate the NEPA process. If you have information relevant to the development of the EA, please direct your correspondence to Ms. Jennifer Warf at AECOM, 12420 Milestone Center Drive, Suite 150, Germantown, MD 20876 or via (202) 740-5948 or Jennifer.warf@aecom.com.

Sincerely,

LCDR Avery Weston, PE, PMP

Enclosures:
Figure 1: Site Location Map
Figure 2: Proposed Action Area

References:

Atlantic Sturgeon Status Review Team. 2007. Status Review of Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus*). Report to National Marine Fisheries Service, Northeast Regional Office. February 23, 2007.

Balazik, M. 2017. First verified occurrence of the shortnose sturgeon (*Acipenser brevirostrum*) in the James River, Virginia. National Marine Fisheries Service. Fishery Bulletin, Vol 115: 196-200.

Exelon. 2012. Final Study Report, Shortnose and Atlantic Sturgeon Life History Studies. Prepared by Normandeau Associates, Inc. for the Conowingo Hydroelectric Project.

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National Oceanic and Atmospheric Administration (NOAA). 2020. Section 7 Effect Analysis: Turbidity in the Greater Atlantic Region. Accessed on 4 June 2021 at: https://www.fisheries.noaa.gov/new-england-mid-atlantic/consultations/section-7-effect-analysis-turbidity-greater-atlantic-region

U.S. Coast Guard Yard. 2007. Land Use Plan Update, U.S. Coast Guard Yard, Curtis Bay. Prepared by Government Services Integrated Process Team LLC.

Figure 1. Site Location Map

Figure 2. Proposed Action Area

U.S. Department of
Homeland Security

United States
Coast Guard

Commanding Officer
United States Coast Guard
Facilities Engineering Coast
Guard Yard

2401 Hawkins Point Road
Baltimore, MD 21226
Phone: (410) 636-4098
Email: Avery.L.Weston@uscg.mil

28 March 2022

NOAA Fisheries
Greater Atlantic Regional Fisheries Office
Protected Resources Division
55 Great Republic Drive
Gloucester, MA 01930
Attn: Ms. Jennifer Anderson

Dear Ms. Anderson,

We are carrying out the proposed project as described below. This letter is to request Endangered Species Act (ESA) concurrence from your office for the dredging activities at USCG Yard (herein referred to as CG Yard) in Baltimore, Anne Arundel County, Maryland. We have made the determination that the proposed activity ***may affect, but is not likely to adversely affect***, any species listed as threatened or endangered by NMFS under the ESA of 1973, as amended. Our supporting analysis is provided below.

Proposed Action and Action Area

The proposed action area is defined as "all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action" (50CFR§402.02). The Proposed Action would occur in a previously disturbed and extensively developed marine porting area that is heavily used for industrial and docking activities, and which includes the CG Yard. The CG Yard is comprised of approximately 113 acres along the eastern shoreline of Curtis Creek, a tributary of the Patapsco River, and is approximately 6 miles south of downtown Baltimore (see **Figure 1**). The Chesapeake Bay is approximately 6 miles east of the CG Yard via the Patapsco River. The CG Yard is located in an extensively developed and industrialized area of Baltimore. The CG Yard has operated continuously since 1899 and is the sole USCG-operated shipyard in the U.S. All major vessel repairs, maintenance, and overhauls for the USCG fleet are conducted at the CG Yard.

In addition to industrial activities, recent and historic dredging within Curtis Creek and Baltimore Harbor have further disturbed the aquatic environment. These waters surrounding the CG Yard, which constitute the action area, would provide low quality habitat, if any, given the frequent vessel activities and human disturbances.

Curtis Creek surrounding the CG Yard is comprised of estuarine and deepwater habitats, with tidal influence. These tidal habitats have an unconsolidated bottom with a substrate of sand with clay or clay minerals, and a vegetative cover of less than 30 percent. It lacks stable surfaces for plant and animal attachment, and is also inappropriate for egg attachment. No submerged aquatic vegetation or shellfish beds are present, also due to the unconsolidated bottom and frequent disturbances. In December 2021, Baltimore Harbor was measured to have a salinity of 7.3 parts per thousand (ppt), a salinity level that is considered unable to support fish species (Maryland DNR, 2021).

The Proposed Action includes two main components: 1) maintenance dredging in and around the CG Yard's Syncrolift Facility located in the Shiplift area next to Pier 3, and 2) improvement dredging in an area extending from the Interstate-695 bridge (otherwise known as Bascule Bridge) to CG Yard's Pier 1 and Pier 3 (**Figure 2**). The Syncrolift is used to transport vessels for repair and maintenance work. Dredging would occur up to 34.5 feet, the historic depth, around the Syncrolift Facility. The area between Bascule Bridge and Pier 3 would be dredged up to 27.5 feet to support a new class of cutters (Offshore Patrol Cutter [OPC] and National Security Cutter [NSC]). The total dredging amount is estimated to be approximately 400,000 cubic yards (CY; excluding any over-dredge volume). Proposed dredging activities would begin in 2022, and are anticipated to last a total of six months over the course of two years.

The purpose of the Proposed Action is to provide the necessary in-water improvements to allow the new OPC and NSC access to the shipyard for maintenance and repair work, maintain the viability of the Syncrolift Facility, and meet USCG mission requirements at the CG Yard. The Proposed Action is needed to address insufficient water depths within the navigation channel from the I-695 Bridge, the turning basin in front of the CG Yard within Curtis Creek, and the vessel berth area between Piers 1, 2, and 3 to accommodate the new USCG cutters and their associated draft (27.5 feet). Current average water depths in the channel, turning basin, and vessel berth area are 23 feet, 22 feet, and 26.5 feet, respectively. The Proposed Action is also needed to remove accumulated sediment in the vicinity of the Syncrolift, so that water depths are consistent with its historic depth (34.5 feet) and original construction in 1997. The current average water depth surrounding the Shiplift area is 23 feet. This facility, which connects to the CG Yard's upland rail system, is used currently for the majority of dry dock repair and maintenance work performed at the CG Yard. As the only USCG shipyard, the Yard needs to be accessible by USCG vessels and have the appropriate facilities to conduct maintenance of these USCG vessels to meet USCG mission requirements.

The maintenance dredging for the Syncrolift (estimated 10,000 CY of material) would be performed using hydraulic dredging, and elevated sediment levels would be anticipated in the lower water column up to a distance of 1,000 feet from the dredge site. Slurry from hydraulic dredging would be transported to a dewatering area on Grove Point located on CG Yard property via a conveyance pipeline. This pipeline would be located adjacent to the dredge barge, and would be submerged and anchored to the bottom where it crosses Arundel cove, for approximately 550 linear feet. Upon exiting Arundel Cove, it would be placed upon 30 linear feet of wetland until reaching the upland dewatering site. Slurry would be dewatered using geo-synthetic tubes, which allow water to drain while the remaining sediment solidifies. The dewatering process could take several months. Berms and impermeable liners would be installed surrounding the dewatering area to contain water, which would likely need to be treated prior to discharge in Curtis Creek. Uncontaminated water would be returned to the Baltimore Harbor.

Remaining consolidated material would be loaded onto trucks for off-site disposal at either Cox Creek or Masonville Dredge Materials Containment Facility (DMCF) in accordance with all required permits and approvals, including the Maryland Department of Transportation (MDOT), Maryland Port Authority (MPA) Right of Entry permit. In anticipation of this permit, USCG has submitted, and MPA approved, a Sampling and Analysis Plan to obtain physical and chemical data of the sediment proposed for dredging. The MPA, which operates the Cox Creek DMCF, did not have any comments or concerns in a response to scoping provided on 28 December 2021.

The improvement dredging, which would generate an estimated 390,000 CY of material, would be performed using mechanical dredging methods, and associated sediment plumes would dissipate to background levels within 600 feet of the dredge site in the upper water column. Dredging equipment would include a floating crane barge and a scow/barge. A clamshell bucket attached to a crane on the crane barge would be used to scoop sediment from the floor of Curtis Creek, and transfer the dredged material to the scow/barge until the desired depth is achieved. A minimum of two scow/barges would be required; one to collect dredged material, and one to transport the dredged material for proper disposal at the selected DMCF. Disposal would be in accordance with all required permits and approvals.

NMFS Listed Species in the Action Area

The Proposed Action would have the potential to affect resources under the jurisdiction of the National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service (NMFS). Based on a query of the NOAA Section 7 Mapper, the endangered Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus*) and shortnose sturgeon (*Acipenser brevirostrum*) have the potential to occur within the project area. No federally designated critical habitat for these species occurs within or near the project area.

Atlantic Sturgeon – There are five distinct population segments (DPSs) of Atlantic sturgeon listed as threatened or endangered. Atlantic sturgeon originating from the New York Bight, Chesapeake Bay, South Atlantic and Carolina DPSs are listed as endangered; the Gulf of Maine DPS is listed as threatened. The marine range of all five DPSs extends along the Atlantic coast from Canada to Cape Canaveral, Florida and includes the action area.

Atlantic sturgeon are anadromous, meaning that adults spawn in freshwater portions of large rivers in the spring and early summer and migrate into estuarine and marine waters where they spend most of their lives. In some southern rivers a fall spawning migration may also occur. They spawn in moderately flowing water (46-76 cm/s) in deep parts of large rivers. Sturgeon eggs are highly adhesive and are deposited on bottom substrate, usually on hard surfaces (e.g., cobble). It is likely that cold, clean water is important for proper larval development. Once larvae begin migrating downstream they use benthic structure (especially gravel matrices) as refuges. The closest documented spawning grounds for Atlantic sturgeon outside of the action area. Early life stages are not tolerant of salinity; therefore, their eggs and larvae will not occur within Curtis Creek.

Juveniles usually reside in estuarine waters for months to years. Because the dredging sites are not located in a river where sturgeon spawn, no juveniles will be present at either site as this life stage remains in the natal river. Subadults and adults live in coastal waters and estuaries when not spawning, generally in shallow (10-50 m depth) nearshore areas dominated by gravel and sand substrates. Long distance migrations away from spawning rivers are common. Atlantic sturgeon also occur over shallow (8 ft or 2.5 m), tidally influenced flats and mud, sand, and mixed cobble substrates (Savoy and Pacileo, 2003). Occurrence in these shallow waters is thought to be tied to the presence of benthic resources for foraging.

No known estimates of the number of Atlantic sturgeon present in the action area are available. Although suitable habitat is available in the upper Bay, records of Atlantic sturgeon captures suggest that Atlantic sturgeons do not frequent the area and spawning is not expected to occur in the area due to high salinity levels (Exelon, 2012). Mean salinity levels in the Patapsco River range from approximately 5 to 11 ppt, whereas suitable habitat levels for the Atlantic sturgeon range from 0 to 0.5 ppt (Maryland DNR, 2021). In addition, clean, hard substrate for attachment of demersal adhesive eggs is limited within the project area, as Curtis Creek primarily contains sand substrate with clay or clay minerals (Atlantic Sturgeon Status Review Team, 2007; U.S. Coast Guard Yard, 2007). Therefore, suitable spawning habitat is unlikely to occur in the vicinity of the Proposed Action area. The action area (dredge sites and transit routes) is not located within any known overwintering areas; therefore, Atlantic sturgeon are most likely to be present in the action area from April through November, but could be present at any time of the year. Although it is possible for Atlantic sturgeons to occur in the area while migrating or foraging, we expect the presence of Atlantic sturgeon in Curtis Creek at the CG Yard is likely limited to occasional transient sub-adults or adults originating from any of the five DPSs due to the area being heavily used for docking, mooring, and industrial activities.

Shortnose Sturgeon – Shortnose sturgeons hatch in freshwater rivers and spend most of their time in the tributaries of these rivers, with relatively little time spent in the ocean. Adult individuals are expected to be present in the Chesapeake Bay year-round. Within the Chesapeake Bay area, only the Potomac River and James River have been documented to contain shortnose sturgeon. No shortnose sturgeons have been observed in the Patapsco River or its tributaries, including Curtis Creek (Balazik, 2017).

Effects Determination

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Mechanical dredges include many different bucket designs (e.g., clamshell, closed versus open bucket, level-cut bucket) and backhoe dredges, representing a wide range of bucket sizes. Total suspended sediment (TSS) concentrations associated with mechanical clamshell bucket dredging operations have been shown to range from 105 mg/L in the middle of the water column to 445 mg/L near the bottom (210 mg/L, depth-averaged) (USACE, 2001). Furthermore, a study by Burton (1993) measured TSS concentrations at distances of 500, 1,000, 2,000, and 3,300 feet (152, 305, 610, and 1006 meters) from dredge sites in the Delaware River and were able to detect concentrations between 15 mg/L and 191 mg/L up to 2,000 feet (610 meters) from the dredge site. In support of the New York/New Jersey Harbor Deepening Project, the U.S. Army Corps of Engineers (USACE) conducted extensive monitoring of mechanical dredge plumes (USACE, 2015a). The dredge sites included Arthur Kill, Kill Van Kull, Newark Bay, and Upper New York Bay. Although briefly addressed in the report, the effect of currents and tides on the dispersal of suspended sediment were not thoroughly examined or documented. Independent of bucket type or size, plumes dissipated to background levels within 600 feet (183 meters) of the source in the upper water column and 2,400 feet (732 meters) in the lower water column. Based on these studies, elevated suspended sediment concentrations at several hundreds of mg/L above background may be present in the immediate vicinity of the bucket, but would settle rapidly within a 2,400- foot (732 meter) radius of the dredge location. The TSS levels expected for mechanical dredging (up to 445.0 mg/L) are below those shown to have adverse effect on fish (typically up to 1,000.0 mg/L; see summary of scientific literature in Burton, 1993; Wilber and Clarke, 2001).

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Dredge Entrapment

Mechanical dredging entails lowering the open bucket or clamshell through the water column, closing the bucket after impact on the bottom, lifting the bucket up through the water column, and emptying the bucket into a barge or truck. The bucket operates without suction or hydraulic intake, moves relatively slowly through the water column and impacts only a small area of the aquatic bottom at any time. In order to be captured in a dredge bucket, an animal must be on the bottom directly below the dredge bucket as it impacts the substrate and remain stationary as the bucket closes. Species captured in dredge buckets can be injured or killed if entrapped in the bucket or buried in sediment during dredging and/or when sediment is deposited into the dredge scow. Species captured and emptied out of the bucket can suffer stress or injury, which can lead to mortality.

In 2012, the USACE provided NMFS with a list of all documented interactions between dredges and sturgeon reported along the U.S. East Coast; reports dated as far back as 1990 (USACE, 2012). This list included four incidents of sturgeon captured in dredge buckets. These include the capture of a decomposed Atlantic sturgeon in Wilmington Harbor in 2001. The condition of this fish indicated it was not killed during the dredging operation and was likely dead on the bottom or in the water column and merely scooped up by the dredge bucket. Another record was of the capture of an Atlantic sturgeon in Wilmington Harbor in 1998; however, this record is not verified and not considered reliable. The report also listed the live capture of an Atlantic sturgeon at the Bath Iron Works (BIW) facility in the Kennebec River, Maine in 2001 as well as a shortnose sturgeon captured at BIW in 2003 that was observed to have suffered death recently at the time of capture. One report of a live shortnose sturgeon captured in a dredge bucket at BIW in 2009 was not included in the report. Similarly, a shortnose sturgeon fatality at BIW in 2017 was not reported (suspected to be attributable to a cutterhead dredge). Observer coverage at dredging operations at the BIW facility has been 100 percent for approximately

15 years, with dredging occurring every one to two years. Hundreds of mechanical dredging projects occur along the U.S. Atlantic coast each year and we are not aware of any other captures of sturgeon in mechanical dredges anywhere in the U.S prior to or after 2012.

The risk of interactions between sturgeon and mechanical dredges is thought to be highest in areas where large numbers of sturgeon are known to aggregate. The risk of capture may also be related to the behavior of the sturgeon in the area. While foraging, sturgeon are at the bottom of the river interacting with the sediment. This behavior may increase the susceptibility of capture with a dredge bucket. We also expect the risk of capture to be higher in areas where sturgeon are overwintering and spawning in dense aggregations as overwintering and spawning sturgeon may be less responsive to stimuli which could reduce the potential for a sturgeon to avoid an oncoming dredge bucket.

Based on all available evidence, the risk of sturgeon being captured in a mechanical dredge at the CG Yard is low. This is based on the fact that the action area is not known to support high densities of foraging or migrating sturgeon. Therefore, it is extremely unlikely that any sturgeon would be captured, injured or killed during mechanical dredging activities. Therefore, any effects of entrapment from the proposed dredging activities on sturgeon are discountable.

With the use of hydraulic pipeline dredge, dredged material is raised by dredge pumps through dragarms connected to dragheads or cutterheads in contact with the channel bottom and discharged into hoppers built into the vessel or pumped through a hydraulic pipeline.

Most sturgeon are able to escape from the oncoming draghead or cutterhead due to the slow speed of advancement (up to 3 mph or 4.4 feet/second). Adverse interactions with a hopper dredge result primarily from crushing when the draghead is placed on the bottom, or when an animal is unable to escape from the suction of the dredge and becomes stuck on the draghead (i.e., impingement). Entrainment occurs when organisms are sucked through the draghead. Mortality most often occurs when animals are sucked into the dredge draghead, pumped through the intake pipe and then killed as they cycle through the centrifugal pump. Interactions with the draghead can also occur if the suction is turned on while the drag head is in the water column (i.e., not seated on the bottom).

The risk of interactions is related to both the amount of time sturgeon spend on the bottom and the behavior the fish are engaged in (i.e., whether the fish are overwintering, foraging, resting or migrating), as well as the intake velocity and swimming abilities of sturgeon in the area (Clarke, 2011). Intake velocities of a typical large self-propelled hopper dredge are 11 feet per second. Exposure to the suction of the draghead intake is minimized by not turning on the suction until the draghead is properly seated on the bottom sediments and by maintaining contact between the draghead and the bottom.

In general, entrainment of large mobile animals, such as sturgeon, is relatively rare. Several factors are thought to contribute to the likelihood of entrainment. One factor influencing potential entrainment is the swimming stamina and size of the individual fish at risk, Swimming stamina is positively correlated with total fish length. Entrainment of larger sturgeon, such as the subadults and adults that may occur in the action area, is less likely due to the increased swimming performance of the fish. The estimated minimum size for sturgeon that out-migrate from their natal river is approximately 30-36 inches (Murawski and Pacheco, 1977; ASSRT, 2007); therefore, that is the size of sturgeon most likely to be in the action area. In areas where animals are present in high density, the risk of an interaction is greater because more animals are exposed to the potential for entrainment. The dredge draghead operates on the bottom and is typically at least partially buried in the sediment. Sturgeon are benthic feeders and are often found at or near the bottom while foraging or while moving within rivers. Sturgeon at or near the bottom could be vulnerable to entrainment if they were unable to swim away from the draghead.

Information suggests that sturgeon migrating in the marine environment do not move along the bottom but move further up in the water column (Sarah Cameron, submission of comments on 75 FR 61872, 2011 in letter from NMFS for Duxbury Harbor September 9, 2011). If sturgeon are up off the bottom while in dynamic flows of the river, which also lacks the preferred habitat conditions for foraging, the potential for interactions with the dredge are further reduced. Given the low numbers of sturgeon in the area and the lack of preferred forage habitat in the dredge site footprints, an interaction of a sturgeon with a dredge in the action area is extremely unlikely.

Habitat Modification

Dredging would temporarily disturb no more than approximately 30 acres of bottom substrate, resulting in a short-term loss of benthic organisms and shellfish that serve as forage. Benthic organisms such as tube worms, arthropods and bivalves associated with the affected sediments would be removed or buried during the dredging and placement process. Mobile organisms living on the surface would be displaced. Increased suspended sediment generated by dredging operations are expected be confined to the main channel of Curtis Creek. TSS levels above 390.0 mg/L may have an adverse effect on benthic communities; however, these concentrations are not expected outside the immediate dredge site (EPA, 1986). Shellfish are well adapted to turbid environments and would be able to cope with periotic elevated suspended sediment concentrations from the dredging operation.

Most of the dredged area is in a high energy system. High energy environments are normally low in epifauna, with infauna limited to a few species that are adapted to stressful and ever-changing conditions (Wilber and Clarke, 2001). Therefore, the number of benthic species which may be affected by dredging activity is likely to be minimal. Removal of the shoaled areas in the navigation channel would temporarily decrease the amount of benthic resources available to fish as forage. However, areas adjacent to the navigation channel would continue to serve as a food source while the impacted area recolonizes, and benthic populations rebuild. The dredged areas are expected to experience recolonization of benthos from adjacent areas within a short timeframe after dredging is completed. Newell et al. (2004) provided a time sequence of recovery of macrofauna in coastal marine deposits in an area of high energy after cessation of dredging activities. Initial colonization of small mobile species and larval recolonization was seen in as little as 7 days, but it took about 100 days for species diversity to be restored to within 70-80 percent of that occurring in the surrounding areas. At about 175 days, population density is restored to 70-90 percent of the surrounding area, with full restoration taking 2-3 years.

Therefore, while there may be some temporary loss of foraging opportunities, the unaffected areas within the action area provide alternative foraging sites for listed species. Given the minor and temporary nature of the turbidity and sedimentation, any effects on listed species' fitness from loss of foraging opportunities would be too small to be meaningfully evaluated, measured, or detected, and are insignificant. Therefore, we have determined that any effects to habitat modification for sturgeon would be insignificant.

Impacts from Vessels

In our analysis we considered three elements: (1) the existing baseline conditions, (2) the action and what it adds to existing baseline conditions, and (3) new baseline conditions (the existing baseline conditions and the action together). We have determined that vessel traffic added to baseline conditions as a result of the proposed project is not likely to adversely affect ESA-listed species for the following reasons.

Adding project vessels to the existing baseline will not increase the risk that any vessel in the area will strike an individual, or will increase it to such a small extent that the effect of the action (i.e., any increase in risk of a strike caused by the project) cannot be meaningfully measured or detected. The baseline risk of a vessel strike within the Patapsco River and Curtis Creek is unknown. The increase in traffic associated with the proposed project is extremely small. During the project activities, a minimal number of project vessels would be added to the baseline. The addition of project vessels will also be intermittent, temporary, and restricted to a small portion of the overall action area on any given day. As such, any increased risk of a vessel strike caused by the project would be too small to be meaningfully measured or detected. As a result, the effect of the action on the increased risk of a vessel strike in the action area would be insignificant.

The dredging itself would maintain the navigation channel and, as a result, it is expected to enable vessels to travel safely in the area. Allowing safe passage in the navigation channel is not expected to change the number of vessels that use the action area; thus, preserving the status quo with regard to vessel routes and vessel numbers would not change the risk of a vessel strike. Any slight increase in risk from altered patterns of use would be too small to be detected or measured, and effects would be, therefore, insignificant.

Conclusions

Based on the analysis that all effects of the Proposed Action would be insignificant and/or discountable, we have determined that the Proposed Action ***may affect, but is not likely to adversely affect*** the Atlantic sturgeon, shortnose sturgeon, or any listed species under NOAA Fisheries' jurisdiction. We certify that we have used the best scientific and commercial data available to complete this analysis. We request your concurrence with this determination.

The USCG requests NMFS review and concurrence with the effects determination stated in this letter. If there is anything we need to do to facilitate the Proposed Action without negatively impacting federally listed species or critical habitat that is not mentioned in this letter, please let us know within **thirty (30) days** of receipt of this letter to enable us to complete this phase of the project within the scheduled timeframe.

The USCG has contracted AECOM to facilitate the NEPA process. If you have information relevant to the development of the EA, please direct your correspondence to Ms. Jennifer Warf at AECOM, 12420 Milestone Center Drive, Suite 150, Germantown, MD 20876 or via (202) 740-5948 or Jennifer.warf@aecom.com.

Sincerely,

WESTON.AVERY.LOUIS.1152330487

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LCDR Avery Weston, PE, PMP

Enclosures: Figure 1: Site Location Map
Figure 2: Proposed Action Area
Curtis Creek Dredging Project Permitting Drawings

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U.S. Department of Homeland Security

United States Coast Guard

Commanding Officer
United States Coast Guard
Facilities Engineering Coast
Guard Yard

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1 December 2021

Mr. Nicholas A. Redding
Executive Director
Preservation Maryland
3600 Clipper Mill Road, Suite 248
Baltimore, MD 21211
nredding@presmd.org

Dear Mr. Redding,

The purpose of this letter is to solicit comments regarding the United States Coast Guard's (USCG) intent to conduct dredging activities at USCG Yard (herein referred to as CG Yard) in Baltimore, Anne Arundel County, Maryland (Proposed Action). The USCG is preparing an Environmental Assessment (EA) to evaluate the potential impacts associated with the Proposed Action pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 United States Code §4321 et seq.), the Council on Environmental Quality Regulations (40 Code of Federal Regulations [CFR] Parts 1500-1508), and USCG Commandment Instruction (COMDTINST) M16475.1D*, Implementing Procedures and Policy for Considering Environmental Impacts*.

The CG Yard is comprised of approximately 113 acres along the eastern shoreline of Curtis Creek, a tributary of the Patapsco River, and is approximately 6 miles south of downtown Baltimore (see **Figure 1**). The Chesapeake Bay is approximately 6 miles east of the CG Yard via the Patapsco River. The CG Yard is located in an extensively developed and industrialized area of Baltimore. The CG Yard has operated continuously since 1899 and is the sole USCG-operated shipyard in the U.S. All major vessel repairs, maintenance, and overhauls for the USCG fleet are conducted at the CG Yard.

The Proposed Action includes two main components: 1) maintenance dredging in and around the CG Yard's Syncrolift Facility, and 2) improvement dredging in an area extending from the Interstate-695 bridge (otherwise known as Bascule Bridge) to CG Yard's Pier 1 and Pier 3 (**Figure 2**). The Syncrolift is used to transport vessels for repair and maintenance work. Dredging would occur up to 34.5 feet, the historic depth, around the Syncrolift Facility. The area between Bascule Bridge and Pier 3 would be dredged up to 27.5 feet to support a new class of cutters (Offshore Patrol Cutter [OPC] and National Security Cutter [NSC]). The total dredging amount is estimated to be approximately 400,000 cubic yards (excluding any over-dredge volume).

The purpose of the Proposed Action is to provide the necessary in-water improvements to allow the new OPC and NSC access to the shipyard for maintenance and repair work, maintain the viability of the Syncrolift Facility, and meet USCG mission requirements at the CG Yard. The Proposed Action is needed to address insufficient water depths within the navigation channel from the I-695 Bridge,

the turning basin in front of the CG Yard within Curtis Creek, and the vessel berth area between Piers 1, 2, and 3 to accommodate the new USCG cutters and their associated draft (25 feet). The Proposed Action is also needed to remove accumulated sediment in the vicinity of the Syncrolift, so that water depths are consistent with its historic depth (34.5 feet) and original construction in 1997. This facility, which connects to the CG Yard's upland rail system, is used currently for the majority of dry dock repair and maintenance work performed at the CG Yard. As the only USCG shipyard, the Yard needs to be accessible by USCG vessels and have the appropriate facilities to conduct maintenance of these USCG vessels to meet USCG mission requirements.

The maintenance dredging of an estimated 10,000 cubic yards of material would likely be performed using hydraulic dredging. Slurry from hydraulic dredging would be transported to a dewatering area on Gove Point located on CG Yard property via a pipeline. Slurry would be dewatered so that consolidated material is dry and can be loaded onto trucks for off-site disposal in accordance with all required permits and approvals.

The improvement dredging which would generate an estimated 390,000 cubic yards of material would likely be performed using mechanical dredging methods. Dredging equipment would include a floating crane barge and a scow/barge. A clamshell bucket attached to a crane on the crane barge would be used to scoop sediment from the floor of Curtis Creek, and transfer the dredged material to the scow/barge until the desired depth is achieved. All dredged material would be transported and disposed of appropriately and in accordance with all required permits and approvals.

We are seeking input from your agency regarding any information or potential environmental concerns associated with the Proposed Action. Please provide any comments, concerns, information, studies, or other data you may have regarding the Proposed Action within **thirty (30) days** of receipt of this letter to enable us to complete this phase of the project within the scheduled timeframe. All responses will be considered for incorporation in the EA. We look forward to and welcome your participation in this analysis.

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Sincerely,

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LCDR Avery Weston, PE, PMP

Enclosures: Figure 1 - Site Location Map

Figure 2 - Proposed Action Area

Figure 1. Site Location Map

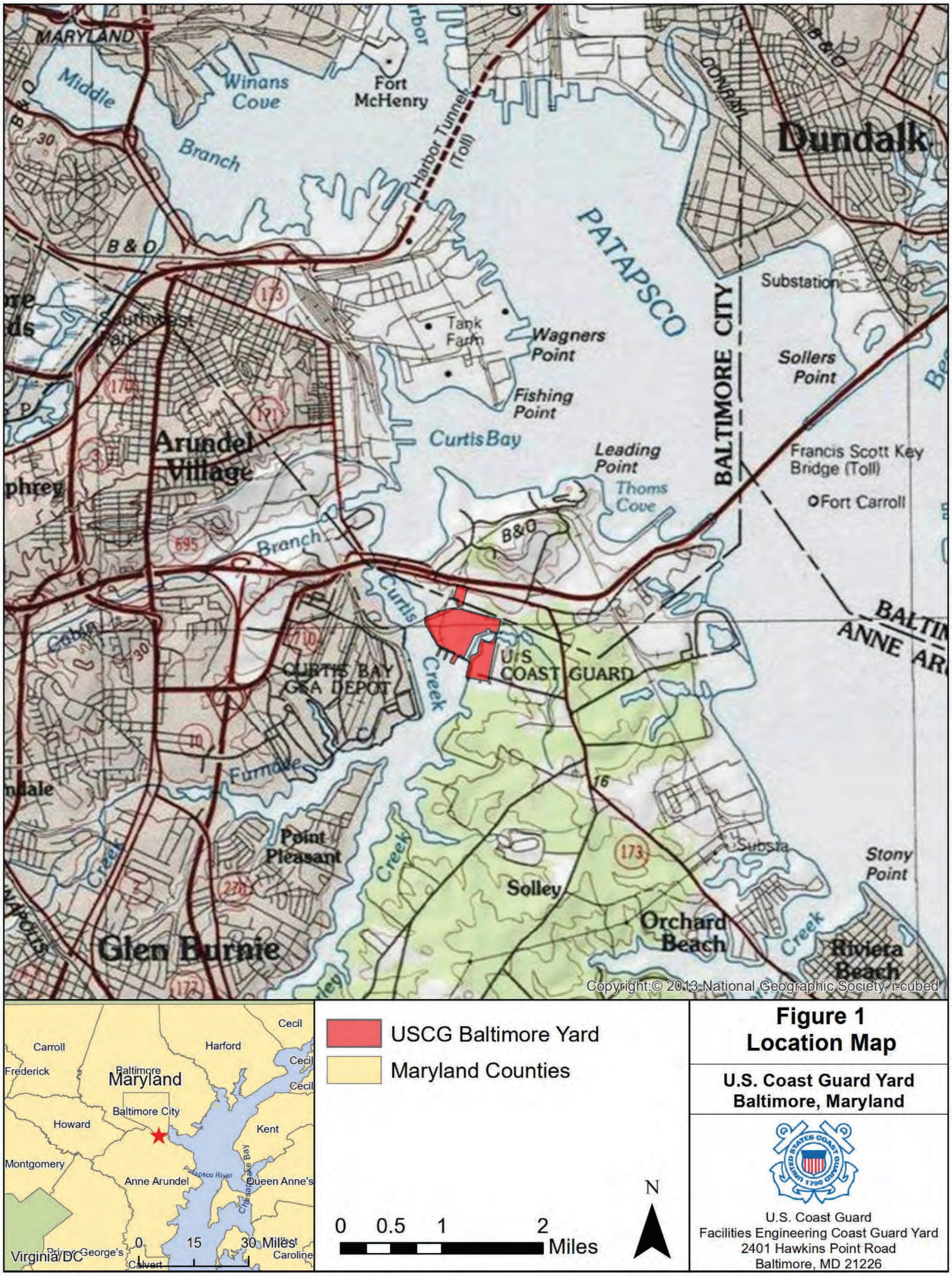

Figure 2. Proposed Action Area

U.S. Department of Homeland Security
United States Coast Guard

Commanding Officer
United States Coast Guard
Facilities Engineering Coast Guard Yard

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Baltimore, MD 21226
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1 December 2021

Mr. Dan Swenson
Regulatory Branch Chief
US Army Corps of Engineers, Baltimore District
2 Hopkins Plaza
Baltimore, MD 21201
daniel.p.swenson@usace.army.mil

Dear Mr. Swenson,

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The CG Yard is comprised of approximately 113 acres along the eastern shoreline of Curtis Creek, a tributary of the Patapsco River, and is approximately 6 miles south of downtown Baltimore (see **Figure 1**). The Chesapeake Bay is approximately 6 miles east of the CG Yard via the Patapsco River. The CG Yard is located in an extensively developed and industrialized area of Baltimore. The CG Yard has operated continuously since 1899 and is the sole USCG-operated shipyard in the U.S. All major vessel repairs, maintenance, and overhauls for the USCG fleet are conducted at the CG Yard.

The Proposed Action includes two main components: 1) maintenance dredging in and around the CG Yard's Syncrolift Facility, and 2) improvement dredging in an area extending from the Interstate-695 bridge (otherwise known as Bascule Bridge) to CG Yard's Pier 1 and Pier 3 (**Figure 2**). The Syncrolift is used to transport vessels for repair and maintenance work. Dredging would occur up to 34.5 feet, the historic depth, around the Syncrolift Facility. The area between Bascule Bridge and Pier 3 would be dredged up to 27.5 feet to support a new class of cutters (Offshore Patrol Cutter [OPC] and National Security Cutter [NSC]). The total dredging amount is estimated to be approximately 400,000 cubic yards (excluding any over-dredge volume).

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LCDR Avery Weston, PE, PMP

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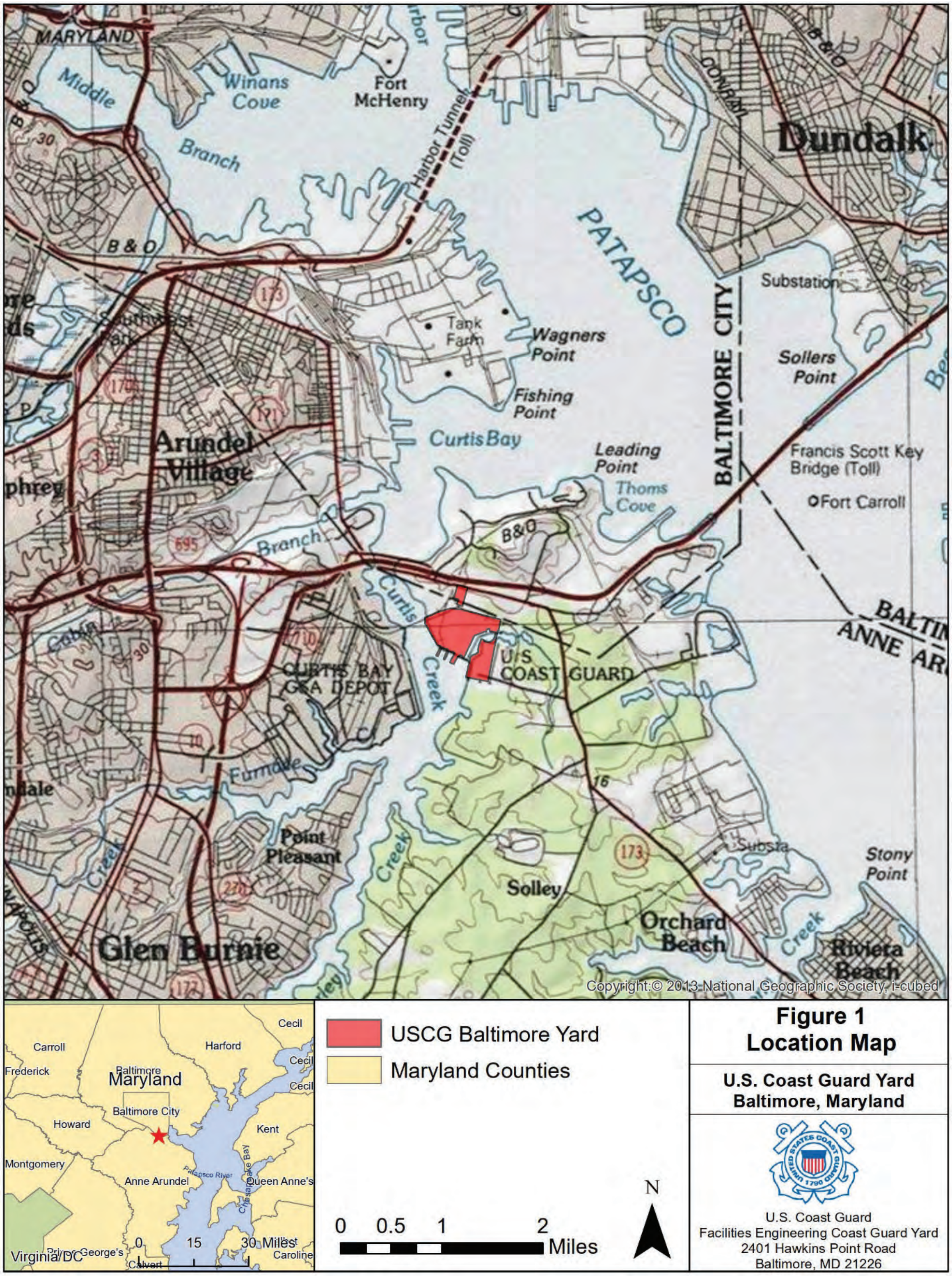

Figure 2. Proposed Action Area

U.S. Department of Homeland Security

United States Coast Guard

Commanding Officer
United States Coast Guard
Facilities Engineering Coast
Guard Yard

2401 Hawkins Point Road
Baltimore, MD 21226
Phone: (410) 636-4098
Email: Avery.L.Weston@uscg.mil

1 December 2021

Ms. Amanda Rutherford
Director
US Department of Transportation
Maritime Administration, Mid-Atlantic Gateway Office
1200 New Jersey Avenue SE, Room W23-323
Washington, DC 20590
amanda.rutherford@dot.gov

Dear Ms. Rutherford,

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The USCG has contracted AECOM to facilitate the NEPA process. If you have comments or information relevant to the development of the EA, please direct your correspondence to Ms. Jennifer Warf at AECOM, 12420 Milestone Center Drive, Suite 150, Germantown, MD 20876 or via (202) 740-5948 or Jennifer.warf@aecom.com.

Sincerely,

WESTON.AVERY.LOUIS.1152330487
Digitally signed by WESTON.AVERY.LOUIS.1152330487
Date: 2021.12.02 20:57:16 -05'00'

LCDR Avery Weston, PE, PMP

Enclosures: Figure 1 - Site Location Map
Figure 2 - Proposed Action Area

Figure 1. Site Location Map

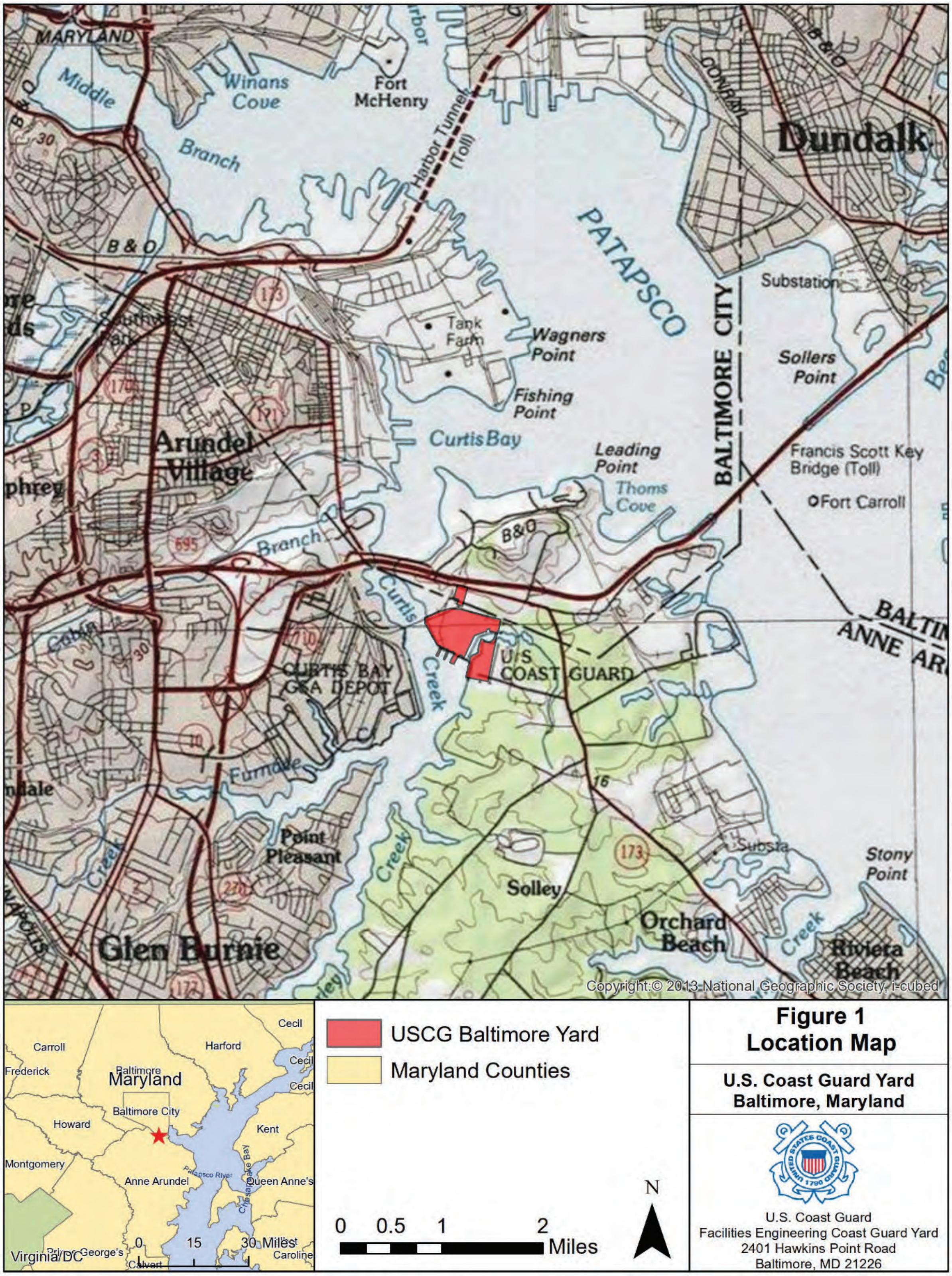

Figure 2. Proposed Action Area

U.S. Department of
Homeland Security

United States
Coast Guard

Commanding Officer
United States Coast Guard
Facilities Engineering Coast
Guard Yard

2401 Hawkins Point Road
Baltimore, MD 21226
Phone: (410) 636-4098
Email: Avery.L.Weston@uscg.mil

1 December 2021

Ms. Barbara Rudnick
NEPA Team Leader
US Environmental Protection Agency, Region 3
Office of Environmental Programs
1650 Arch Street
Philadelphia, PA 19103
rudnick.barbara@epa.gov

Dear Ms. Rudnick,

The purpose of this letter is to solicit comments regarding the United States Coast Guard's (USCG) intent to conduct dredging activities at USCG Yard (herein referred to as CG Yard) in Baltimore, Anne Arundel County, Maryland (Proposed Action). The USCG is preparing an Environmental Assessment (EA) to evaluate the potential impacts associated with the Proposed Action pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 United States Code §4321 et seq.), the Council on Environmental Quality Regulations (40 Code of Federal Regulations [CFR] Parts 1500-1508), and USCG Commandment Instruction (COMDTINST) M16475.1D*, Implementing Procedures and Policy for Considering Environmental Impacts*.

The CG Yard is comprised of approximately 113 acres along the eastern shoreline of Curtis Creek, a tributary of the Patapsco River, and is approximately 6 miles south of downtown Baltimore (see **Figure 1**). The Chesapeake Bay is approximately 6 miles east of the CG Yard via the Patapsco River. The CG Yard is located in an extensively developed and industrialized area of Baltimore. The CG Yard has operated continuously since 1899 and is the sole USCG-operated shipyard in the U.S. All major vessel repairs, maintenance, and overhauls for the USCG fleet are conducted at the CG Yard.

The Proposed Action includes two main components: 1) maintenance dredging in and around the CG Yard's Syncrolift Facility, and 2) improvement dredging in an area extending from the Interstate-695 bridge (otherwise known as Bascule Bridge) to CG Yard's Pier 1 and Pier 3 (**Figure 2**). The Syncrolift is used to transport vessels for repair and maintenance work. Dredging would occur up to 34.5 feet, the historic depth, around the Syncrolift Facility. The area between Bascule Bridge and Pier 3 would be dredged up to 27.5 feet to support a new class of cutters (Offshore Patrol Cutter [OPC] and National Security Cutter [NSC]). The total dredging amount is estimated to be approximately 400,000 cubic yards (excluding any over-dredge volume).

The purpose of the Proposed Action is to provide the necessary in-water improvements to allow the new OPC and NSC access to the shipyard for maintenance and repair work, maintain the viability of the Syncrolift Facility, and meet USCG mission requirements at the CG Yard. The Proposed Action

is needed to address insufficient water depths within the navigation channel from the I-695 Bridge, the turning basin in front of the CG Yard within Curtis Creek, and the vessel berth area between Piers 1, 2, and 3 to accommodate the new USCG cutters and their associated draft (25 feet). The Proposed Action is also needed to remove accumulated sediment in the vicinity of the Syncrolift, so that water depths are consistent with its historic depth (34.5 feet) and original construction in 1997. This facility, which connects to the CG Yard's upland rail system, is used currently for the majority of dry dock repair and maintenance work performed at the CG Yard. As the only USCG shipyard, the Yard needs to be accessible by USCG vessels and have the appropriate facilities to conduct maintenance of these USCG vessels to meet USCG mission requirements.

The maintenance dredging of an estimated 10,000 cubic yards of material would likely be performed using hydraulic dredging. Slurry from hydraulic dredging would be transported to a dewatering area on Gove Point located on CG Yard property via a pipeline. Slurry would be dewatered so that consolidated material is dry and can be loaded onto trucks for off-site disposal in accordance with all required permits and approvals.

The improvement dredging which would generate an estimated 390,000 cubic yards of material would likely be performed using mechanical dredging methods. Dredging equipment would include a floating crane barge and a scow/barge. A clamshell bucket attached to a crane on the crane barge would be used to scoop sediment from the floor of Curtis Creek, and transfer the dredged material to the scow/barge until the desired depth is achieved. All dredged material would be transported and disposed of appropriately and in accordance with all required permits and approvals.

We are seeking input from your agency regarding any information or potential environmental concerns associated with the Proposed Action. Please provide any comments, concerns, information, studies, or other data you may have regarding the Proposed Action within **thirty (30) days** of receipt of this letter to enable us to complete this phase of the project within the scheduled timeframe. All responses will be considered for incorporation in the EA. We look forward to and welcome your participation in this analysis.

The USCG has contracted AECOM to facilitate the NEPA process. If you have comments or information relevant to the development of the EA, please direct your correspondence to Ms. Jennifer Warf at AECOM, 12420 Milestone Center Drive, Suite 150, Germantown, MD 20876 or via (202) 740-5948 or Jennifer.warf@aecom.com.

Sincerely,

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Date: 2021.12.02 20:56:44 -05'00'

LCDR Avery Weston, PE, PMP

Enclosures: Figure 1 - Site Location Map
Figure 2 - Proposed Action Area

Figure 1. Site Location Map

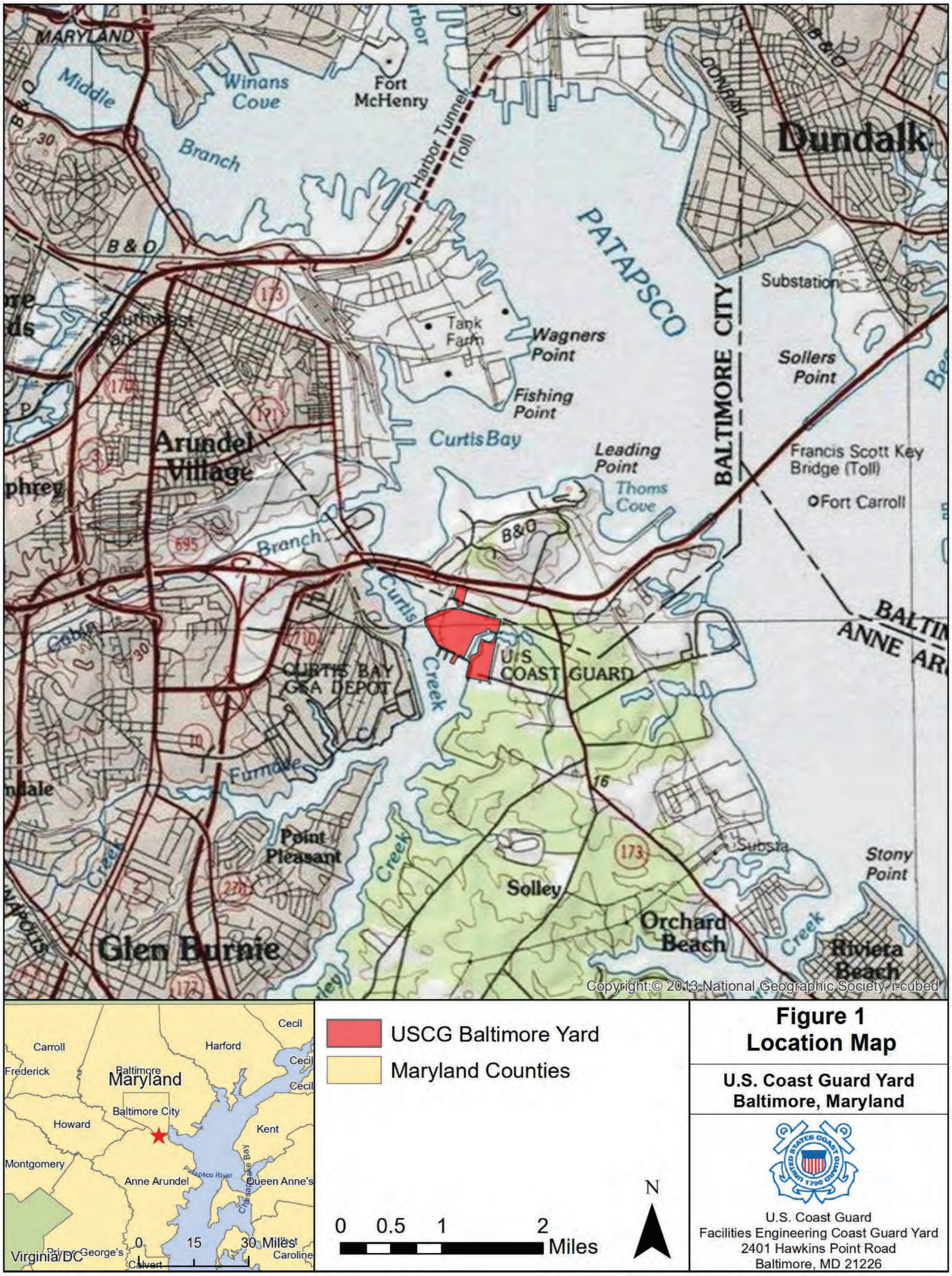

Figure 2. Proposed Action Area

Kisak, Natalie

From: Witman, Timothy <witman.timothy@epa.gov>
Sent: Monday, January 10, 2022 1:49 PM
To: Warf, Jen
Cc: Nevshehirlian, Stepan
Subject: [EXTERNAL] EPA Comments - Environmental Assessment USCG Yard Dredging

Ms. Warf,

The Environmental Protection Agency (EPA) is responding to your letter dated December 1, 2021 to solicit comments regarding the proposed United States Coast Guard's (USCG) intent to conduct dredging activities at USCG Yard in Baltimore, Maryland. The USCG is preparing an Environmental Assessment (EA) to evaluate the potential impacts associated with the Proposed Action pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 United States Code §4321 et seq.), the Council on Environmental Quality Regulations (40 Code of Federal Regulations [CFR] Parts 1500-1508), and USCG Commandment Instruction (COMDTINST) M16475.1D*, Implementing Procedures and Policy for Considering Environmental Impacts*.

The Proposed Action includes two main components: 1) maintenance dredging in and around the USCG Yard's Syncrolift Facility, and 2) improvement dredging in an area extending from the Interstate-695 bridge (otherwise known as Bascule Bridge) to USCG Yard's Pier 1 and Pier 3.

EPA has the following recommendations for consideration in the development of the EA:

Environmental Justice

- EPA recommends that the Project conduct EJ-focused analyses to avoid, minimize, and/or mitigate disparate impacts among local communities. To support these efforts, EPA recommends the use of the EJSCREEN tool. EJSCREEN is a publicly accessible online mapping system that combines environmental and demographic data to enable analyses of populations who may experience adverse environmental impacts. In addition to data concerning communities of color and low-income populations, the tool provides demographic data regarding linguistic isolation, education, and age, all of which may enhance EJ-related analyses and outreach. For projects situated in the water it is important to consider any potential landside effects and an appropriate buffer around the in-water work. The EJSCREEN tool is available at https://www.epa.gov/ejscreen.

Construction and Operation Impacts

- We recommend evaluating the potential for increases in shipping and land-based traffic during construction and that the EA include an evaluation of impacts to nearby communities, such as noise, emissions, and safety impacts during construction.
- Potential impacts to properties and communities along the Curtis Creek should be evaluated, including changes in shipping traffic and land-based changes at other facilities. Such impacts could include land-based transportation impacts (e.g. road closures from modification of bridges), increased noise, lighting impacts, increased wave action, and other impacts.
- We recommend identifying best management practices and minimization measures that may be employed and suggest targeted outreach to those that may be impacted by the project.

Air Quality

- A general conformity rule analysis should be conducted according to the guidance provided in 40 CFR Part 93 (Determining Conformity of General Federal Actions to State or Federal Implementation

Plans). Under the general conformity rule, reasonably foreseeable emissions associated with all operational and construction activities, both direct and indirect, must be quantified and compared to the annual de minimis levels for those pollutants in nonattainment or maintenance for that area.

- Baltimore City and County are listed in nonattainment or maintenance for a number of standards, including the Ozone 2008 and 2015 standards. For clarity, we recommend listing applicable attainment classifications and years in a table.
- EPA recommends that the EA include a conformity applicability analysis or determination in line with conformity requirements, including an estimate of annual emissions of precursors for the action. If the project is determined to be de minimis, the EA should contain annual estimated emissions for the related NAAQS/precursors, along with the de minimis thresholds.
- We recommend that greenhouse gas emissions (GHG) associated with the proposal and its alternatives be estimated and this information be used to help assess the potential effects on climate change. Use of the 2016 Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews may be helpful.

Aquatic Resources and Wildlife

- The Study should include the estimated area of deepening, an estimate of any additional areas to be dredged, and an evaluation of potential aquatic resource impacts.
- We recommend that the EA provide a detailed characterization of the habitat resources in the study area, including nearby wildlife refuges, nesting areas, migratory stopover areas, essential fish habitat and other habitat that may support sensitive life stages. The Study should assess whether impacts may occur from construction, increased shipping traffic, increased frequency of maintenance dredging, or other impacts associated with the project.
- State and federal threatened and endangered species that may be directly or indirectly impacted should be identified. We recommend that impacts to species of special concern from larger vessels or increased traffic (including mortality and noise) be evaluated.
- Mitigation measures for any adverse environmental impacts should be described. Impacts to aquatic resources may require compensatory mitigation. Where disturbance is indicated to be temporary, restoration of aquatic resources should be discussed.
- We recommend that coordination with the applicable agencies be documented in the EA.

Dredging and Disposal

- We suggest that the EA include a discussion of the current permits for the project and any permit modifications or additional permits that may be needed.
- Potential construction impacts should be assessed in detail, including dredging method(s), and transportation to disposal sites (pipeline, barge, etc.). Best management practices should be described, including measures taken to limit turbidity, noise impacts, and the potential spread of invasive species. Time of year restrictions may be appropriate to minimize impacts on species.
- As discussed, contaminated sediments may occur in the dredge material. We recommend indicating the results of the most current dredge material characterization and indicate any planned testing.
- We recommend that the EA describe the potential disposal locations and their capacity for contaminated or uncontaminated dredge material, along with relevant considerations or restrictions such as state laws related to management of sediments.

Utilities

- The Study would benefit from a discussion of impacts to utilities from the project including the need for avoidance, protection, or relocation measures for existing utilities and any additional utilities or upgrades that will be required.

EPA appreciates the opportunity to provide scoping comments on this proposed project and we look forward to reviewing the EA. If you have any questions, please contact me.

Thank you,
Tim

Timothy Witman
Environmental Assessment Branch
Office of Communities, Tribes and Environmental Assessment
Phone: (215) 814-2775
Email: Witman.Timothy@EPA.GOV

USEPA - Mid-Atlantic Region
1650 Arch Street (3RA12)
Philadelphia, PA 19103-2029

U.S. Department of Homeland Security
United States Coast Guard

Commanding Officer
United States Coast Guard
Facilities Engineering Coast
Guard Yard

2401 Hawkins Point Road
Baltimore, MD 21226
Phone: (410) 636-4098
Email: Avery.L.Weston@uscg.mil

30 November 2021

Project Review
US Fish & Wildlife Service
Chesapeake Bay Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401

To Whom it May Concern:

The purpose of this letter is to solicit comments regarding the United States Coast Guard's (USCG) intent to conduct dredging activities at USCG Yard (herein referred to as CG Yard) in Baltimore, Anne Arundel County, Maryland (Proposed Action). The USCG is preparing an Environmental Assessment (EA) to evaluate the potential impacts associated with the Proposed Action pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 United States Code §4321 et seq.), the Council on Environmental Quality Regulations (40 Code of Federal Regulations [CFR] Parts 1500-1508), and USCG Commandment Instruction (COMDTINST) M16475.1D, Implementing Procedures and Policy for Considering Environmental Impacts.

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The purpose of the Proposed Action is to provide the necessary in-water improvements to allow the new OPC and NSC access to the shipyard for maintenance and repair work, maintain the viability of the Syncrolift Facility, and meet USCG mission requirements at the CG Yard. The Proposed Action is needed to address insufficient water depths within the navigation channel from the I-695 Bridge, the turning basin in front of the CG Yard within Curtis Creek, and the vessel berth area between Piers 1, 2, and 3 to accommodate the new USCG cutters and their associated draft (27.5 feet). The Proposed Action is also needed to remove accumulated sediment in the vicinity of the Syncrolift, so that water depths are consistent with its historic depth (34.5 feet) and original construction in 1997. This facility, which connects to the CG Yard's upland rail system, is used currently for the majority of dry dock repair and maintenance work performed at the CG Yard. As the only USCG shipyard, the Yard needs to be accessible by USCG vessels and have the appropriate facilities to conduct maintenance of these USCG vessels to meet USCG mission requirements.

The maintenance dredging of an estimated 10,000 cubic yards of material would likely be performed using hydraulic dredging. Slurry from hydraulic dredging would be transported to a dewatering area on Grove Point located on CG Yard property via a pipeline. Slurry would be dewatered so that all consolidated material would be dry and able to be loaded onto trucks for off-site disposal in accordance with all required permits and approvals.

The improvement dredging, which would generate an estimated 390,000 cubic yards of material, would likely be performed using mechanical dredging methods. Dredging equipment would include a floating crane barge and a scow/barge. A clamshell bucket attached to a crane on the crane barge would be used to scoop sediment from the floor of Curtis Creek, and transfer the dredged material to the scow/barge until the desired depth is achieved. All dredged material would be transported and disposed of appropriately and in accordance with all required permits and approvals.

We have reviewed the Proposed Action using the USFWS Chesapeake Bay Field Office's online project review process and have followed all guidance and instructions in completing the review. According to USFWS's online Information for Planning and Consultation (IPaC) system, the northern long-eared bat (NLEB) (*Myotis septentrionalis*) is the only federally listed species under USFWS jurisdiction that may occur within or near the Proposed Action area. The monarch butterfly (*Danaus plexippus*) is a candidate species that is potentially present; however, there are no requirements for candidate species. No critical habitat is designated in or near the Proposed Action area.

The NLEB hibernates in caves and mines, swarming in surrounding wooded areas in autumn. During late spring and summer, the species roosts and forages in upland forests. No suitable habitat occurs at CG Yard, as the area is highly developed with sparse landscaped trees. Forested parcels occur to the east of the CG Yard among residential and industrial areas. In Maryland, the only counties with documented hibernacula and/or maternity roosts are Allegany, Garrett, and Washington Counties (USFWS, 2019). Further, no tree removal is proposed for this project. In accordance with the NLEB Final 4(d) Rule, consultation regarding potential impacts to this species is not required if less than 5 acres of trees would be cleared. Therefore, the Proposed Action would have ***no effect*** on the northern long eared bat. The IPaC Official Species List is enclosed as **Attachment 1**.

The USCG requests USFWS review and concurrence with the effects determination stated in this letter. If there is anything we need to do to facilitate the Proposed Action without negatively impacting federally listed species or critical habitat that is not mentioned in this letter, please let us know within **thirty (30) days** of receipt of this letter to enable us to complete this phase of the project within the scheduled timeframe.

The USCG has contracted AECOM to facilitate the NEPA process. If you have information relevant to the development of the EA, please direct your correspondence to Ms. Jennifer Warf at AECOM, 12420 Milestone Center Drive, Suite 150, Germantown, MD 20876 or via (202) 740-5948 or Jennifer.warf@aecom.com.

Sincerely,

WESTON.AVERY.LOUIS.1152330487 Digitally signed by WESTON.AVERY.LOUIS.1152330487 Date: 2021.11.30 20:02:16 -05'00'

LCDR Avery Weston, PE, PMP

Enclosures: Figure 1: Site Location Map
Figure 2: Proposed Action Area
Attachment 1: IPaC Project Review Package

References:

USFWS. (2019). Project Review. Retrieved from US Fish & Wildlife Service Chesapeake Bay Field Office: https://www.fws.gov/chesapeakebay/saving-wildlife/project-review/step-1.html

Figure 1. Site Location Map

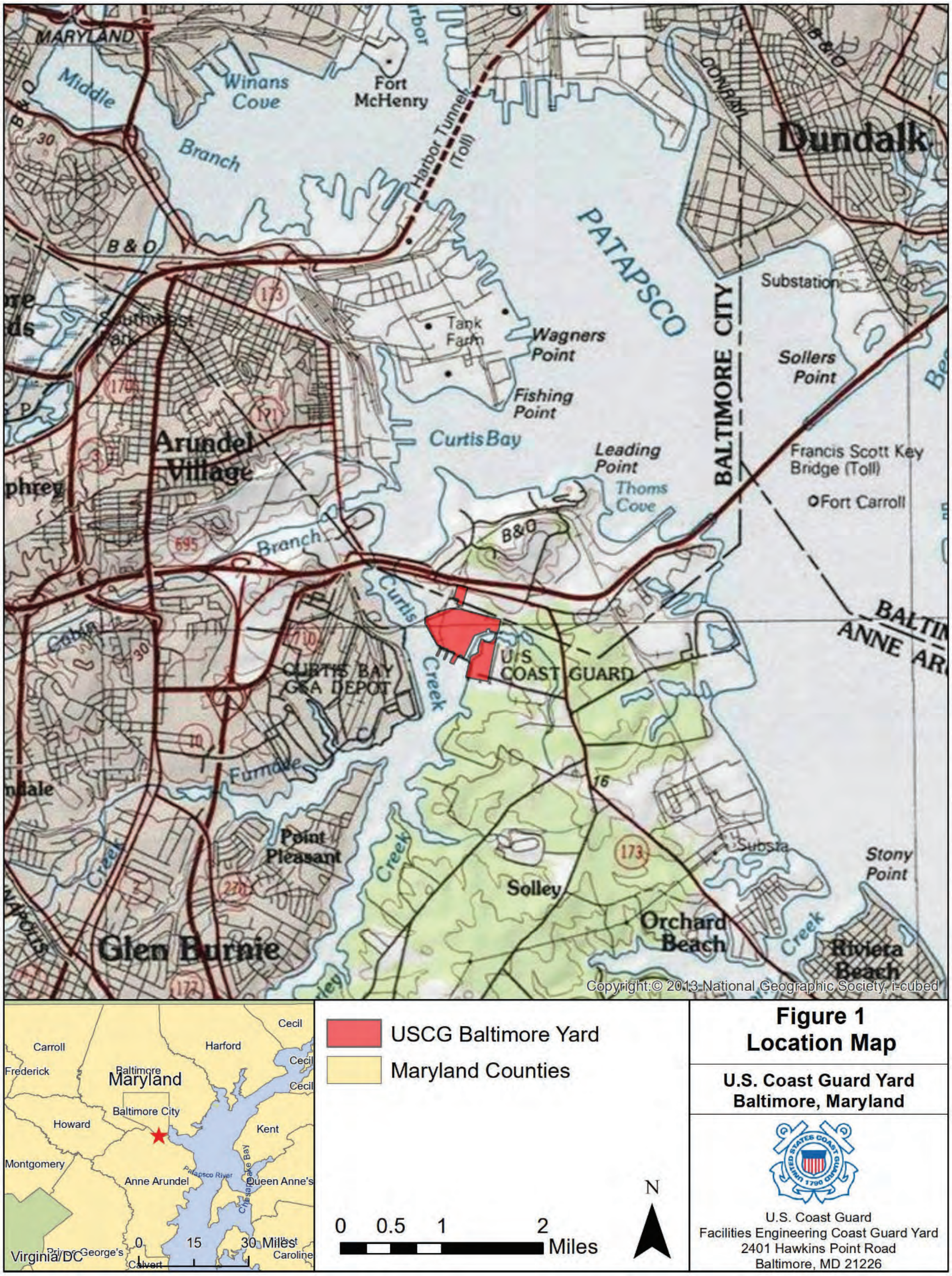

Figure 2. Proposed Action Area

Attachment 1: IPaC Project Review Package

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Chesapeake Bay Ecological Services Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
Phone: (410) 573-4599 Fax: (410) 266-9127
http://www.fws.gov/chesapeakebay/
http://www.fws.gov/chesapeakebay/endsppweb/ProjectReview/Index.html

In Reply Refer To: October 19, 2021
Consultation Code: 05E2CB00-2022-SLI-0140
Event Code: 05E2CB00-2022-E-00354
Project Name: USCG Baltimore Yard Dredging

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. This species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Wetlands

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Chesapeake Bay Ecological Services Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
(410) 573-4599

Project Summary

Consultation Code: 05E2CB00-2022-SLI-0140
Event Code: Some(05E2CB00-2022-E-00354)
Project Name: USCG Baltimore Yard Dredging
Project Type: DREDGE / EXCAVATION
Project Description: The Proposed Action includes two main components: 1) maintenance dredging in and around the CG Yard's Syncrolift Facility, and 2) improvement dredging in an area extending from the Interstate-695 bridge (otherwise known as Bascule Bridge) to CG Yard's Pier 1 and Pier 3. The Syncrolift is used to transport vessels for repair and maintenance work. Dredging would occur up to 34.5 feet, the historic depth, around the Syncrolift Facility. The area between Bascule Bridge and Pier 3 would be dredged up to 25 feet to support a new class of cutters (Offshore Patrol Cutter [OPC] and National Security Cutter [NSC]). The total dredging amount is estimated to be 285,000 cubic yards.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@39.20064385,-76.57665682760424,14z

Counties: Anne Arundel and Baltimore counties, Maryland

Endangered Species Act Species

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 2 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

[1] NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis*	Threatened

No critical habitat has been designated for this species.

This species only needs to be considered under the following conditions:

- Projects with a federal nexus that have tree clearing = to or > 15 acres: 1. REQUEST A SPECIES LIST 2. NEXT STEP: EVALUATE DETERMINATION KEYS 3. SELECT EVALUATE under the Northern Long-Eared Bat (NLEB) Consultation and 4(d) Rule Consistency key

Species profile: https://ecos.fws.gov/ecp/species/9045

Insects

NAME	STATUS
Monarch Butterfly *Danaus plexippus*	Candidate

No critical habitat has been designated for this species.

This species only needs to be considered under the following conditions:

- The monarch is a candidate species and not yet listed or proposed for listing. There are generally no section 7 requirements for candidate species (FAQ found here: https://www.fws.gov/savethemonarch/FAQ-Section7.html).

Species profile: https://ecos.fws.gov/ecp/species/9743

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

Wetlands

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

ESTUARINE AND MARINE DEEPWATER

- E1UBL

Kisak, Natalie

From: CBFO Project Review, FW5 <cbfoprojectreview@fws.gov>
Sent: Thursday, January 13, 2022 2:24 PM
To: Kisak, Natalie
Cc: Warf, Jen; Wu, Charlene
Subject: [EXTERNAL] Re: Project Review Request -- USFWS

Hi Natalie-

Thank you for sending this project information. We concur with the "no effect" determination for this project.

Thank you,
Kathleen

From: Kisak, Natalie <natalie.kisak@aecom.com>
Sent: Thursday, December 9, 2021 8:01 PM
To: CBFO Project Review, FW5 <cbfoprojectreview@fws.gov>
Cc: Warf, Jen <Jennifer.Warf@aecom.com>; Wu, Charlene <Charlene.Wu@aecom.com>
Subject: [EXTERNAL] Project Review Request -- USFWS

Good afternoon,

The US Coast Guard is preparing an Environmental Assessment in support of the Proposed Dredging Project at the US Coast Guard Yard in Baltimore, Maryland. On behalf of the US Coast Guard, we are seeking input from your agency regarding any information or potential environmental concerns associated with this project. Please see the attached letter for additional information. We would appreciate any comments, concerns, information, studies, or other data you may have regarding this project within thirty (30) days of receipt of this correspondence.

We look forward to and welcome your participation in this analysis. Thank you!

Natalie Kisak

Natalie A. Kisak
Environmental Planner
D +1-301-944-1516
M +1-410-446-5545
natalie.kisak@aecom.com

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Appendix B – Section 106 Consultation and Native American Consultation

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U.S. Department of
Homeland Security

United States
Coast Guard

Commanding Officer
United States Coast Guard
Facilities Engineering Coast
Guard Yard

2401 Hawkins Point Road
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Phone: (410) 636-4098
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30 November 2021

Ms. Elizabeth Hughes
State Historic Preservation Officer
Maryland Historical Trust
Maryland Department of Planning
100 Community Place
Crownsville, MD 21032
elizabeth.hughes@maryland.gov

Dear Ms. Hughes:

The purpose of this letter is to solicit comments regarding the United States Coast Guard’s (USCG) intent to conduct dredging activities at USCG Yard (herein referred to as CG Yard) in Baltimore, Anne Arundel County, Maryland (Proposed Action). The USCG is preparing an Environmental Assessment (EA) to evaluate the potential impacts associated with the Proposed Action pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 United States Code §4321 et seq.), the Council on Environmental Quality Regulations (40 Code of Federal Regulations [CFR] Parts 1500-1508), and USCG Commandment Instruction (COMDTINST) M16475.1D, *Implementing Procedures and Policy for Considering Environmental Impacts*. By this letter, the USCG is initiating consultation with your office pursuant to Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulations (36 Code of Federal Regulations [CFR] Part 800) “Protection of Historic Properties” (Section 106).

Project Background

The CG Yard is comprised of approximately 113 acres along the eastern shoreline of Curtis Creek, a tributary of the Patapsco River, and is approximately 6 miles south of downtown Baltimore (**Attachment 1**). The Chesapeake Bay is approximately six miles east of the CG Yard via the Patapsco River. The CG Yard is located in an extensively developed and industrialized area of Baltimore. The CG Yard has operated continuously since 1899 and is the sole USCG-operated shipyard in the U.S. All major vessel repairs, maintenance, and overhauls for the USCG fleet are conducted at the CG Yard.

Description of Undertaking

The Undertaking, as defined by Section 106, includes two main components: 1) maintenance dredging in and around the CG Yard’s Syncrolift Facility, and 2) improvement dredging in an area extending from the Interstate-695 bridge (otherwise known as Bascule Bridge) to CG Yard’s Pier 1 and Pier 3. The Syncrolift is used to transport vessels for repair and maintenance work. Dredging would occur up to 34.5 feet, the historic depth, around the Syncrolift Facility. The area between Bascule Bridge and Pier 3 would be dredged up to 27.5 feet to support a new class of cutters (Offshore Patrol Cutter [OPC] and National Security Cutter [NSC]). The total dredging amount is estimated to be approximately 400,000 cubic yards (excluding any over-dredge volume). Prior to the dredging, sediment samples will be taken from 18 locations using a 4-inch vibracore system; all sediment samples will be confined to the area proposed for dredging and no sediment sampling will occur outside previously dredged areas.

The purpose of the Undertaking is to provide the necessary in-water improvements to allow the new OPC and NSC access to the shipyard for maintenance and repair work, maintain the viability of the Syncrolift Facility, and meet USCG mission requirements at the CG Yard. The Proposed Action is needed to address insufficient water depths within the navigation channel from the I-695 Bridge, the turning basin in front of the CG Yard within Curtis Creek, and the vessel berth area between Piers 1, 2, and 3 to accommodate the new USCG cutters and their associated draft (27.5 feet). The Proposed Action is also needed to remove accumulated sediment in the vicinity of the Syncrolift, so that water depths are consistent with its historic depth (34.5 feet) and original construction in 1997. This facility, which connects to the CG Yard's upland rail system, is used currently for the majority of dry dock repair and maintenance work performed at the CG Yard. As the only USCG shipyard, the Yard needs to be accessible by USCG vessels and have the appropriate facilities to conduct maintenance of these USCG vessels to meet USCG mission requirements.

The maintenance dredging of an estimated 10,000 cubic yards of material would likely be performed using hydraulic dredging. Slurry from hydraulic dredging would be transported to a dewatering area on Grove Point located on CG Yard property via a pipeline. Slurry would be dewatered so that all consolidated material would be dry and able to be loaded onto trucks for off-site disposal in accordance with all required permits and approvals.

The improvement dredging, which would generate an estimated 390,000 cubic yards of material, would likely be performed using mechanical dredging methods. Dredging equipment would include a floating crane barge and a scow/barge. A clamshell bucket attached to a crane on the crane barge would be used to scoop sediment from the floor of Curtis Creek, and transfer the dredged material to the scow/barge until the desired depth is achieved. All dredged material would be transported and disposed of appropriately and in accordance with all required permits and approvals.

Area of Potential Effects

The Area of Potential Effects (APE), as defined in 36 CFR 800.16(d), is "the geographic area or areas within which an undertaking may directly or indirectly cause alteration in the character or use of historic properties, if such properties exist. The APE is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking." The APE for archaeological resources includes the limits of proposed dredging. As the dredging will be temporary and there will be no temporary or permanent above-ground structures or buildings built as a result of this Undertaking, the APE for above-ground resources corresponds to the APE for archaeological resources (**Attachment 2**).

Identification of Historic Properties

To identify historic properties in the APE, USCG's Secretary of the Interior-qualified consultants conducted a review of available information, including data provided by USCG; National Register of Historic Places (NRHP) listings; the Medusa Cultural Resource Information System; historic maps and images (e.g., historic aerials and topographic maps), and information derived from online research at various agencies, historical societies, and other sources. A map showing the location of known above-ground resources within the APE is in **Attachment 3**.

Above-Ground Resources

The APE intersects with the USCG Yard Curtis Bay Historic District (MIHP AA-783), the USS Oak Ridge Floating Dry Dock (MIHP AA-2526), and the USCG Cutter Matinicus, which was determined Not Eligible for the NRHP on 30 August 2017. This resource is no longer extant at this location.

Descriptions of the USCG Yard Curtis Bay Historic District and the USS Oak Ridge Floating Dry Dock follow.

USCG Yard Curtis Bay Historic District (AA-783)

On 5 August 1983, an area of CG Yard was listed as a historic district in the NRHP (AA-783). The USCG Yard Curtis Bay Historic District (AA-783) is listed in the NRHP and includes the northeast quadrant of CG Yard, a southeastern section along the western shore of Arundel Cove, and a large square center portion (Moore 1981). The historic district is an industrial complex that occupies 115 acres surrounding Arundel Cove on the southeast shore of Curtis Creek, in northern Anne Arundel County and southern Baltimore City. The USCG Yard Curtis Bay Historic District is composed of 28 contributing resources and 13 non-contributing resources and is primarily a collection of utilitarian structures, metal and/or brick, that have been modified, expanded, or otherwise altered to meet changing demands of production and technology (Maryland Historical Trust [MHT] 2016). The largest modern industrial plant in the USCG, Baltimore Yard has been building and servicing vessels of the USCG, and its predecessor, the Revenue Cutter Service, since 1899. CG Yard is associated with changes and developments in the military shipbuilding industry. Established as the result of the Spanish-American War, CG Yard experienced its most significant periods of expansion during the subsequent two World Wars (MHT 2016).

The USCG Yard Curtis Bay Historic District is significant at the local, state, and national levels under Criterion A for its association with trends in naval preparedness, and changes and developments in the military shipbuilding industry. Shipbuilding has traditionally been a key industry in the southeast Baltimore area, and CG Yard was part of this important industry that defined the region (Moore 1981). The historic district is also significant at the national level under Criterion C for its design and construction in that the contributing historic resources embody the distinctive characteristic of industrial and military/government buildings of the World War II period. Although the period of significance (POS) for the USCG Yard Curtis Bay Historic District was not defined in the 1981 NRHP evaluation, the POS is interpreted to begin at 1899, the initial year CG Yard began building and servicing the vessels for the USCG, and 1945, by which time the majority of the historic buildings at CG Yard were constructed (Moore 1981). The boundaries of the USCG Yard Curtis Bay Historic District are shown on **Attachment 3**.

USS Oak Ridge Floating Dry Dock (MIHP AA-2526)

The USS Oak Ridge Floating Dry Dock (MIHP AA-2526) was determined eligible for listing in the NRHP on 14 March 2018. It is a closed basin floating dry dock located along Pier 3. It was originally commissioned in 1944 and was recommissioned in 1963 as the USS Oak Ridge; it was renovated between 2011 and 2013. Built of welded steel, the floating dry dock measures 536 feet in length with a breadth of 81 feet and a displacement of 9,700 tons. It is eligible for the NRHP under Criterion A for its association with events relating to World War II and the Cold War, and Criterion C for exemplifying engineering design, construction methods, and materials characteristic of middle to late twentieth century naval floating docks for overseas deployment. Its period of historical significance spans 1944 through 1968. This resource is no longer extant at the CG Yard as it was removed in 2018; its historical location is shown on **Attachment 3.**

Archaeological Resources

MEDUSA does not show any previously recorded archaeological sites or marine archaeological remote sensing surveys within the APE, thought the APE does intersect with the polygon for the Phase I terrestrial archaeological survey of the CG Yard conducted in 1981 by Dennis J. Pogue, Wayne E. Clark, and Louis E Akerson.

The current depths of the navigation channel and boat basin are shown in **Attachment 4: Figures 1 - 2**. A review of historic and modern navigational charts produced by NOAA reveal that the bulk of the APE was previously dredged to a depth of 22 feet during two dredging campaigns starting in 1940 and again in 1945; smaller portions of the APE were dredged to a depth of 35 to 37 feet (**Table 1**). Depth data within the proposed dredging prism (i.e., APE) indicates that portions of the existing prism currently exceed the proposed 27.5-feet depth limit. Those areas of the proposed dredging prism above the 27.5-feet target depth were previously dredged to a depth of 22 feet in the 1940s, likely using bucket dredges that regularly dig deeper than the minimum dredge target depth based on the time period during which the dredging occurred. Use of a bucket dredge would have disturbed 1 to 2 feet of sediment below the 22-feet target depth of the 1940s-era dredging. Historic charts of Curtis Creek dating from the 1930s through 1960s show the development of the USCG facility and the establishment of the dredged navigation channels and subsequent land development along Curtis Creek Channel and Arundel Channel (**Attachment 4: Figures 3 - 5**).

Table 1. Dredging Chronology

Date	Depth	Location	Comments
Jul. 3, 1930	37-foot depth	Portion of channel to Baltimore lying between 37-foot 1930 depth curve near Baltimore Light to Sparrows Point entrance channel; widen angle between Fort McHenry and Ferry Bar section; and for width of 400 feet in Curtis Bay section.	REPORT OF THE SECRETARY OF THE ARMY ON CIVIL WORKS ACTIVITIES FOR FY 1989; Annual report fiscal year1989 of the Secretary of the Army on Civil Works activities (1 October1988 - 30 September1989) V2 PT 0 (oclc.org)
Oct. 17,1940	22-foot depth	For 22-, 18-, and 15-foot channels in Curtis Creek from 22-foot depth below 1940 Pennington Avenue Bridge to upper end of marginal wharf of U.S. Ordnance Depot.	REPORT OF THE SECRETARY OF THE ARMY ON CIVIL WORKS ACTIVITIES FOR FY 1989; Annual report fiscal year1989 of the Secretary of the Army on Civil Works activities (1 October1988 - 30 September1989) V2 PT 0 (oclc.org)
Mar. 2, 1945	35-foot depth	Curtis Creek 200 feet wide and 35 feet deep from head of existing 35-foot project channel in Curtis Bay to a point in the creek about 750 feet below Pennington Avenue Bridge.	REPORT OF THE SECRETARY OF THE ARMY ON CIVIL WORKS ACTIVITIES FOR FY 1989; Annual report fiscal year1989 of the Secretary of the Army on Civil Works activities (1 October1988 - 30 September1989) V2 PT 0 (oclc.org)
Mar. 2, 1945	22-feet deep	A channel 22 feet deep and 200 feet wide from 22-foot depth curve south of 1945 Baltimore & Ohio R.R. bridge about 2,800 feet to vicinity of Arundel Cove, thence 100 feet wide in Arundel Cove for about 2,100 feet; with an anchorage basin about 700 feet square	REPORT OF THE SECRETARY OF THE ARMY ON CIVIL WORKS ACTIVITIES FOR FY 1989; Annual report fiscal year1989 of the Secretary of the Army on Civil Works activities (1 October1988 - 30 September1989) V2 PT 0 (oclc.org)

		adjacent to channel southwesterly of Coast Guard wharf.	

The proposed enlargement of the USCG turning basin and docks from the existing footprint includes a small triangular region measuring approximately 700 feet long by 200 feet wide along the southeastern corner of the APE at the intersection of the Arundel Channel and the Curtis Creek Channel that has not been previously subjected to an archaeological remote sensing survey (**Attachment 4: Figure 2**). This area has been substantially dredged to 17 feet, allowing construction barges and support vessels to dock at a large concrete pier and bulkhead presently owned by Cianbro Marine (605 Pittman Rd., Baltimore, MD), but which appears on navigation charts dating to the 1930s. A review of aerial photographs showed large barges and tugboats traversing this corner during the 1980s.

Based on the development of the navigation channels, shoreline alterations, and associated dredging, there is a low potential for the APE to contain intact, significant submerged cultural resources.

Assessment of Effects

Based on the proposed scope of work, the USCG has determined that the Undertaking has the potential to affect historic properties. After applying the criteria of adverse effect as found in 36 CFR 800.5(a)(1), USCG has further determined that the Proposed Action would have ***No Adverse Effect*** on the NRHP-listed USCG Yard Curtis Bay Historic District and the NRHP-eligible USS Oak Ridge Floating Dry Dock. No significant archaeological resources are known within the APE, and the APE has a low potential to contain significant archaeological resources. As such, the USCG has determined that there will be ***No Effect*** to archaeological historic properties by the Undertaking.

Conclusions

We are seeking input from your Agency regarding any information or potential environmental concerns associated with the Proposed Action, in accordance with Section 106 of the National Historic Preservation Act (36 CFR Part 800). Please provide any comments, concerns, information, studies, or other data you may have regarding the Proposed Action within **thirty (30) days** of receipt of this letter to enable us to complete this phase of the project within the scheduled timeframe. All responses will be considered for incorporation in the EA. We look forward to and welcome your participation in this analysis.

The USCG has contracted AECOM to facilitate the Section 106 process. If you have comments or information relevant to the development of the EA, please direct your correspondence to Mr. Scott Seibel at AECOM, 12420 Milestone Center Drive, Suite 150, Germantown, MD 20876 or via (301) 213-7819 or scott.seibel@aecom.com.

Sincerely,

WESTON.AVERY.LOUIS.1152330487

Digitally signed by WESTON.AVERY.LOUIS.1152330487
Date: 2021.11.30 20:04:20 -05'00'

LCDR Avery Weston, PE, PMP

Enclosures:

Attachment 1 – Site Location Map
Attachment 2 – Area of Potential Effects Map
Attachment 3 – Cultural Resources Map
Attachment 4 – NOAA Navigational Charts

References

2016 U.S. Coast Guard Yard Curtis Bay. Electronic Document, https://mht.maryland.gov/secure/medusa/mapintermediate.aspx?ID=1920&ID1=1920&ID2=undefined&Section=archInv&PropertyID=1920&selRec=archInv, accessed June 17, 2021.

2017 Determination of Eligibility: Architectural Inventory. United States Coast Guard Cutter MANTINICUS. Electronic Document, https://mht.maryland.gov/secure/medusa/mapintermediate.aspx?ID=undefined&ID1=undefined&ID2=undefined&Section=doeArchInv&PropertyID=62619&selRec=doeArchInv, accessed June 17, 2021.

2018 USS OAK RIDGE, Floating Dry Dock, U.S. Coast Guard Yard, Curtis Bay. Electronic Document, https://mht.maryland.gov/secure/medusa/mapintermediate.aspx?ID=45169&ID1=45169&ID2=undefined&Section=archInv&PropertyID=63099&selRec=archInv, accessed June 17, 2021.

Attachments

Attachment 1 - Site Location Map

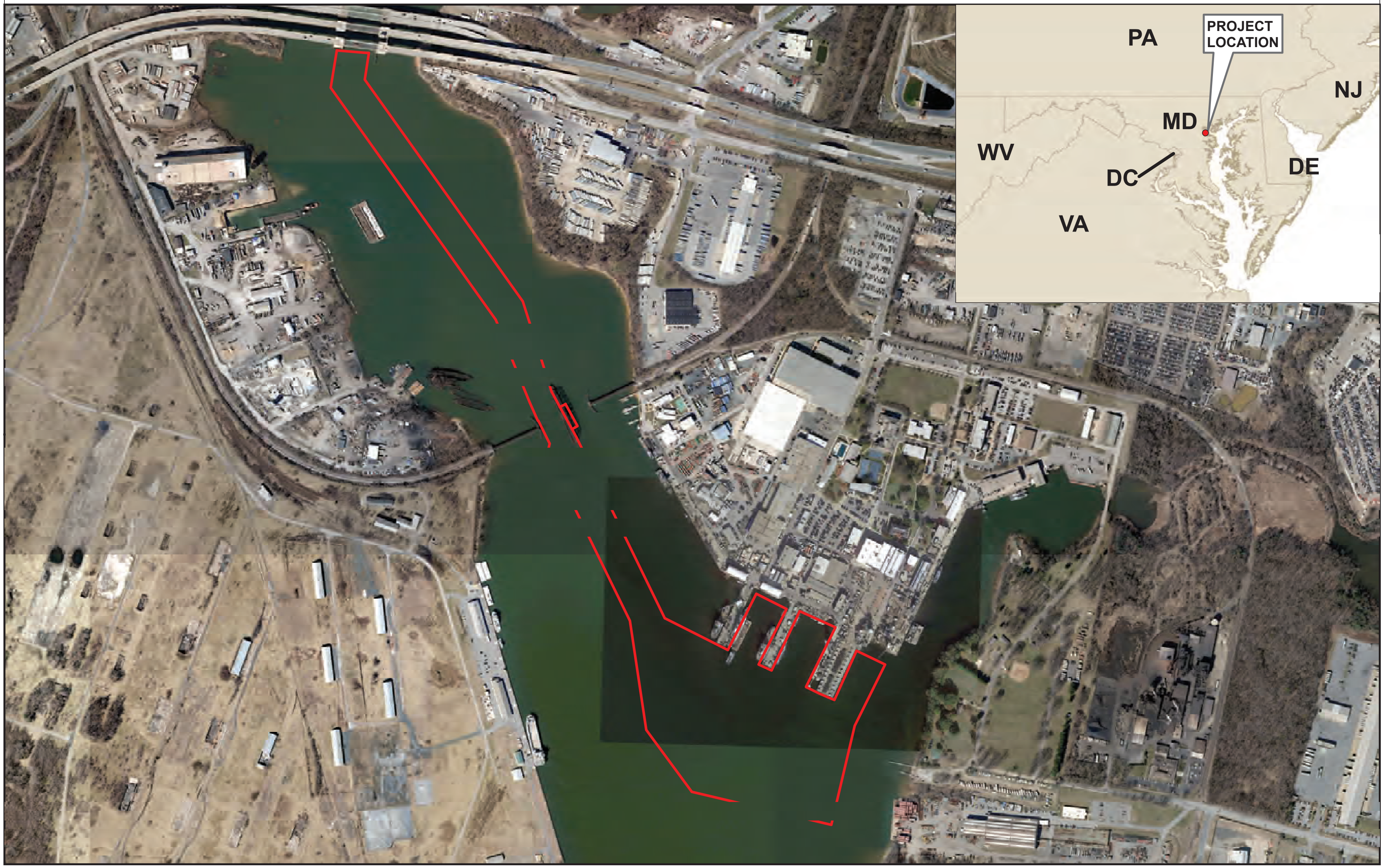
Prepared in Arch D (36" x 24") Landscape Layout

Legend

🟥 Limits of Proposed Dredging

Data Sources:

Six-inch resolution orthoimagery accessed from the Maryland Statewide Imagery Download Tool. Orthoimagery dated 2017. Supplemental imagery referenced from Google Earth.



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SHEET TITLE
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Aerial Locus Map

FIGURE NUMBER
Attachment 1

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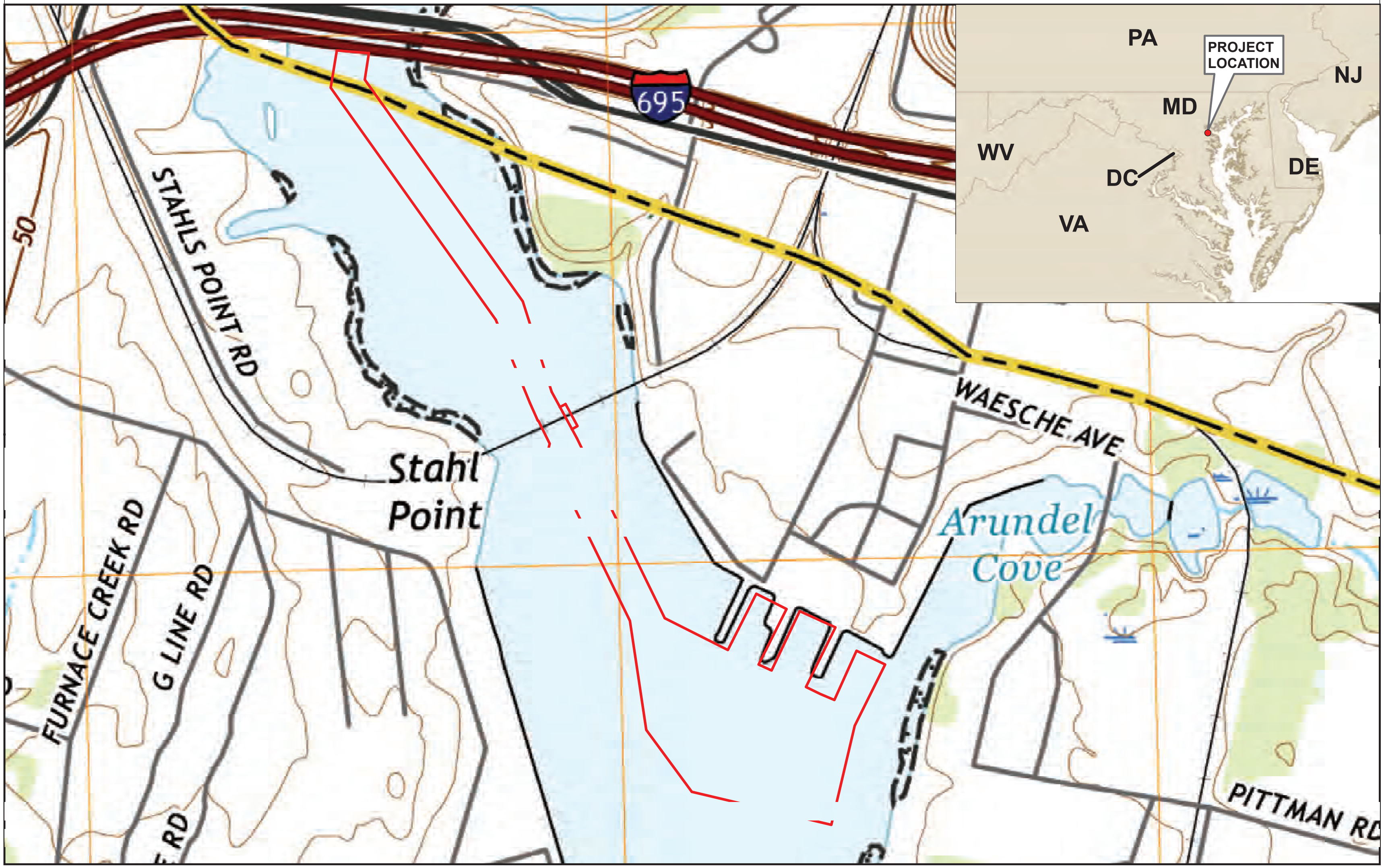
Attachment 2 - Area of Potential Effects Map

Prepared in Arch D (36" x 24") Landscape Layout

Legend

🟥 Limits of Proposed Dredging

Data Sources:
USGS Topo 7.5-minute map for Curtis Bay, MD, dated 2019, contour interval 10 feet.



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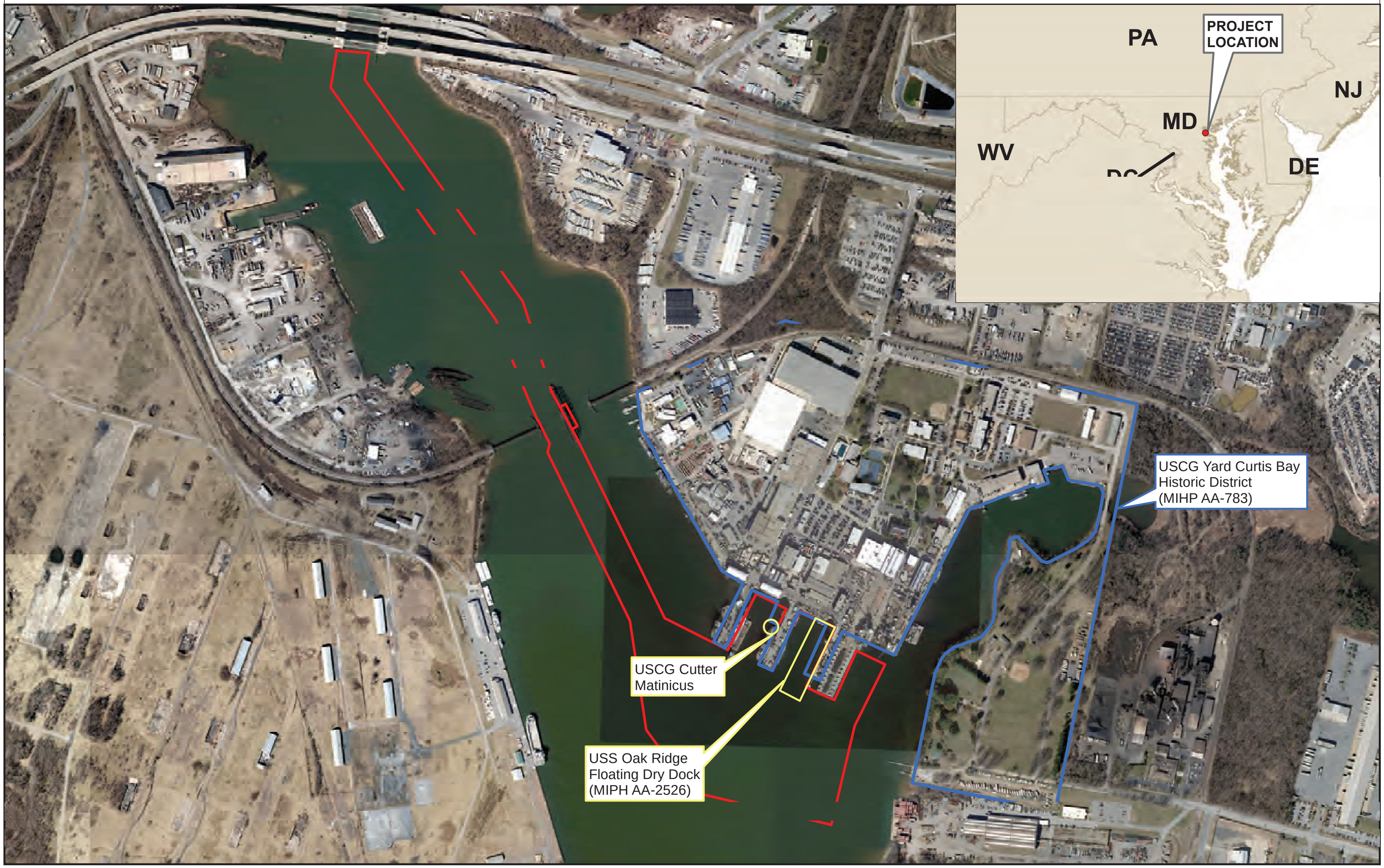
Attachment 3 - Cultural Resources Map

Prepared in Arch D (36" x 24") Landscape Layout

Legend

🟥 Limits of Proposed Dredging

Data Sources:
Six-inch resolution orthoimagery accessed from the Maryland Statewide Imagery Download Tool. Orthoimagery dated 2017. Supplemental imagery referenced from Google Earth. Cultural Resources accesed from Maryland s Cultural Resources Information System, MEDUSA 2021.



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Cultural Resources Locus Map

FIGURE NUMBER
Attachment 3

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Attachment 4 - NOAA
Navigational Charts

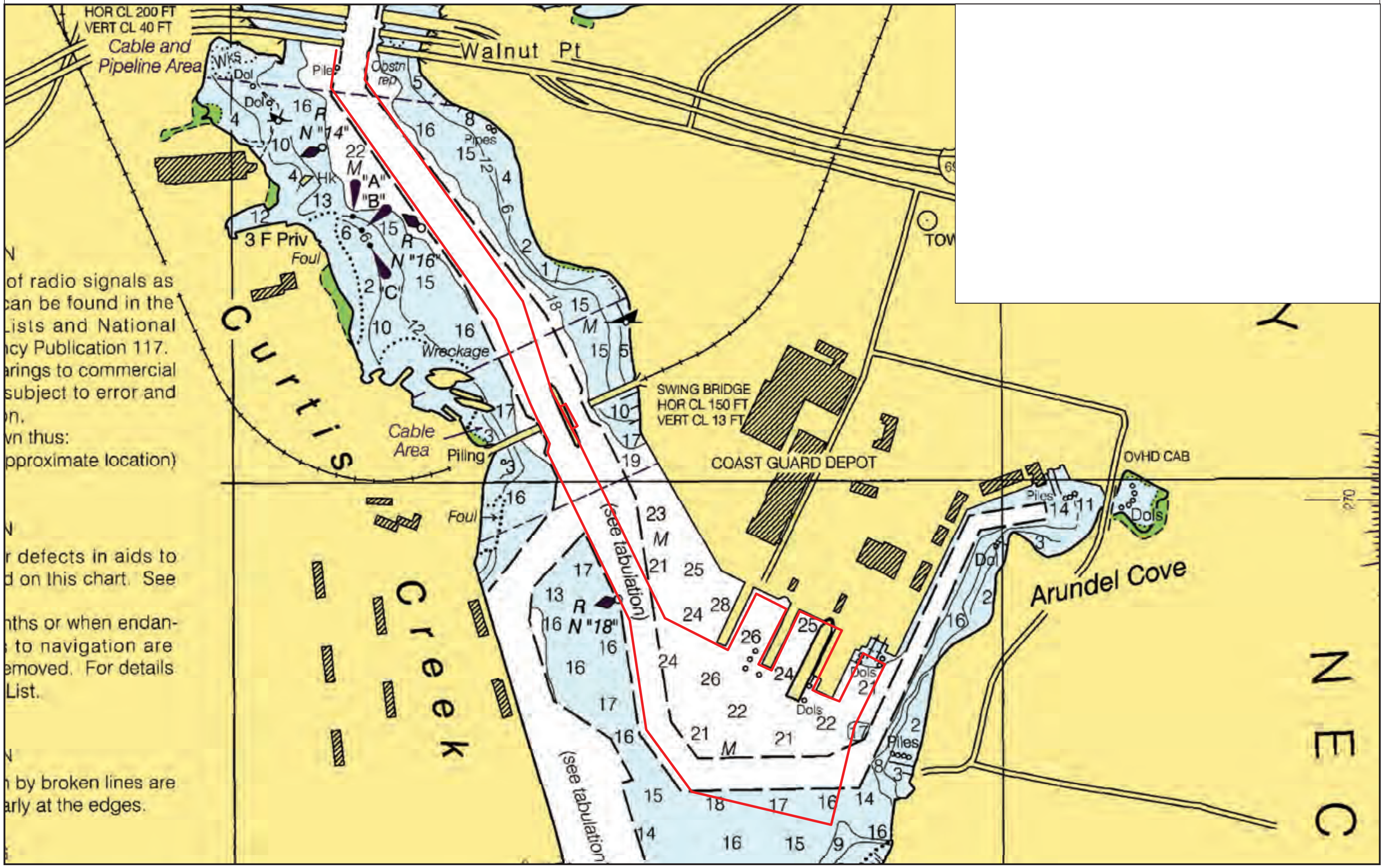
Prepared in Arch D (36" x 24") Landscape Layout

Legend

🟥 Limits of Proposed Dredging

Data Sources:

NOAA Navigational Chart No. 12281, dated 2018, accessed from the NOAA Office of Coast Survey. Soundings shown in feet Mean Lower-Low Water.



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Prepared in Arch D (36" x 24") Landscape Layout

Legend

- Limits of Pr. Syncrolift Dredge (Depth 34.5)
- Limits of Pr. Channel Dredge (Depth 25)

2010 Bathymetric Survey

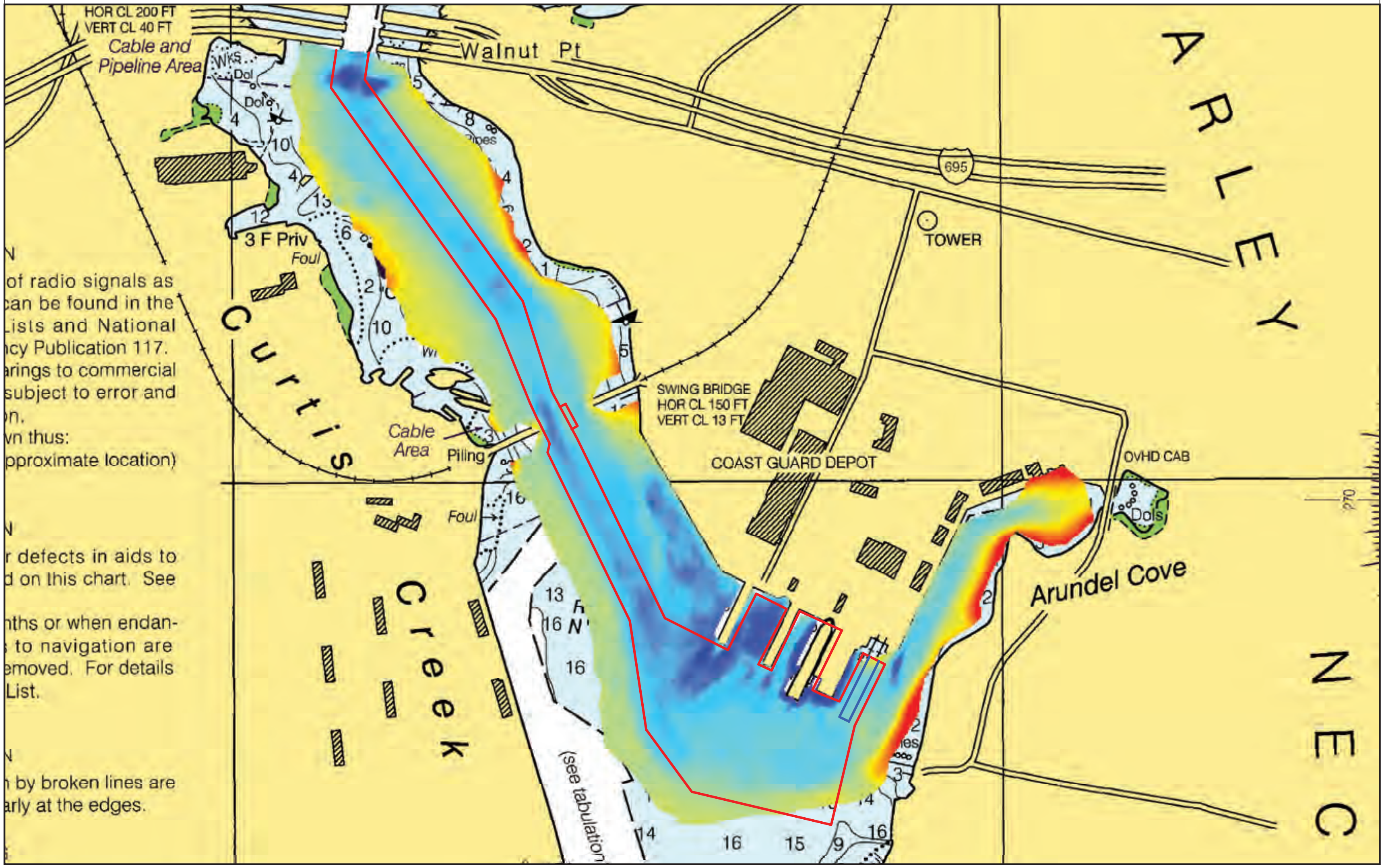
Depth ft NAVD

High : -2 ft NAVD88

Low : -36 ft NAVD88

Data Sources:

NOAA Navigational Chart No. 12281, dated 2018, accessed from the NOAA Office of Coast Survey. Soundings shown in feet Mean Lower-Low Water. Bathymetric survey conducted in 2010 for the United States Coast Guard by Waterway Services and Engineering, Ltd. Bathymetric survey shown in feet NAVD88.



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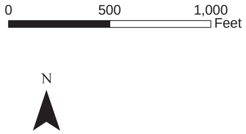

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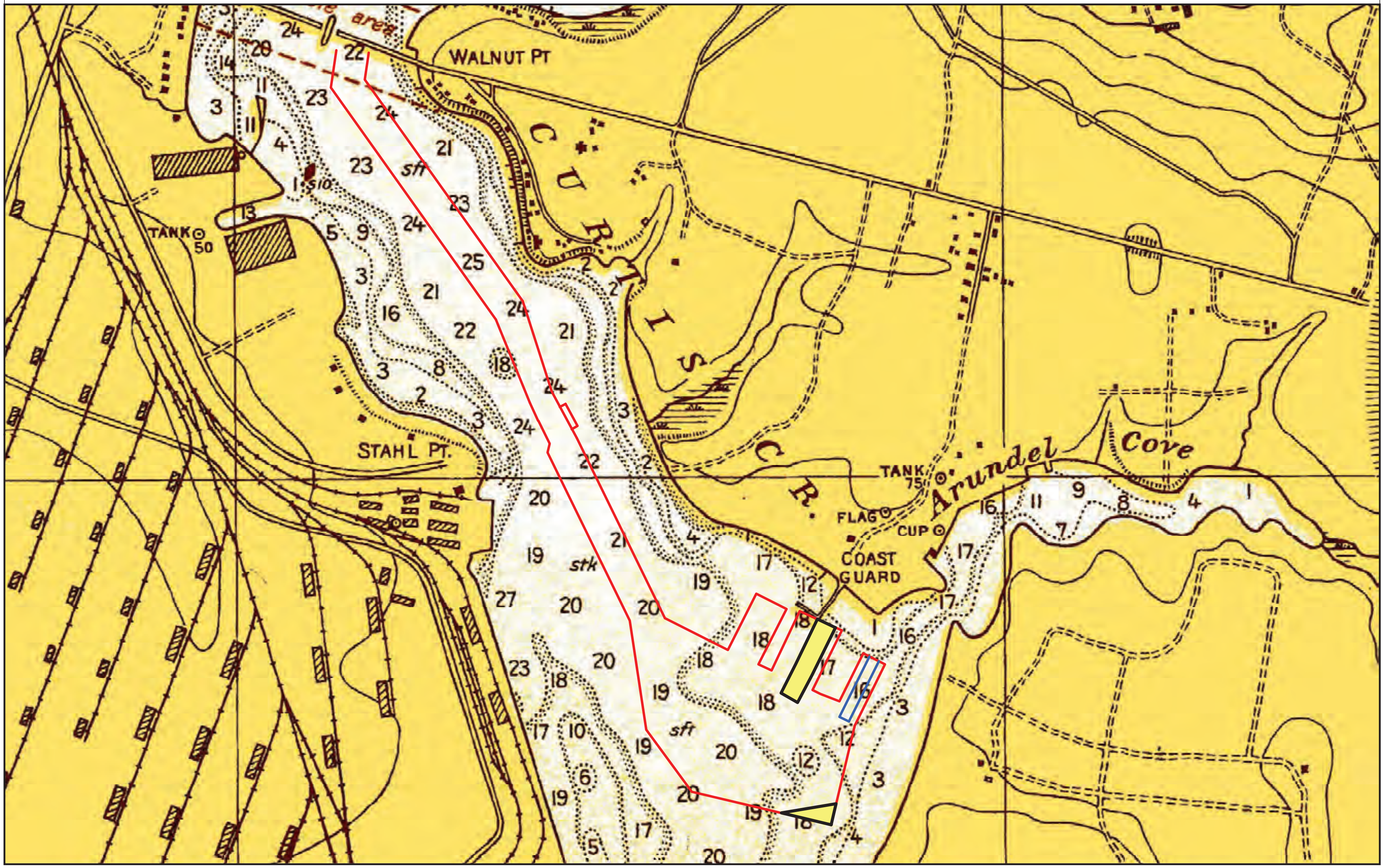
🟨 Region Not Surveyed in 2010

— Limits of Pr. Syncrolift Dredge (Depth 34.5)

— Limits of Pr. Channel Dredge (Depth 25)

Data Sources:

Historical NOAA Navigational Chart No. 545-6-19311, dated July 1931, accessed from the NOAA Office of Coast Survey Historical Map Chart Collection. Soundings shown in feet Mean Lower-Low Water.



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▨ Region Not Surveyed in 2010

— Limits of Pr. Syncrolift Dredge (Depth 34.5)

— Limits of Pr. Channel Dredge (Depth 25)

Data Sources:

Historical NOAA Navigational Chart No. 549-11-1945, dated June 1945, accessed from the NOAA Office of Coast Survey Historical Map Chart Collection. Soundings shown in feet Mean Lower-Low Water.

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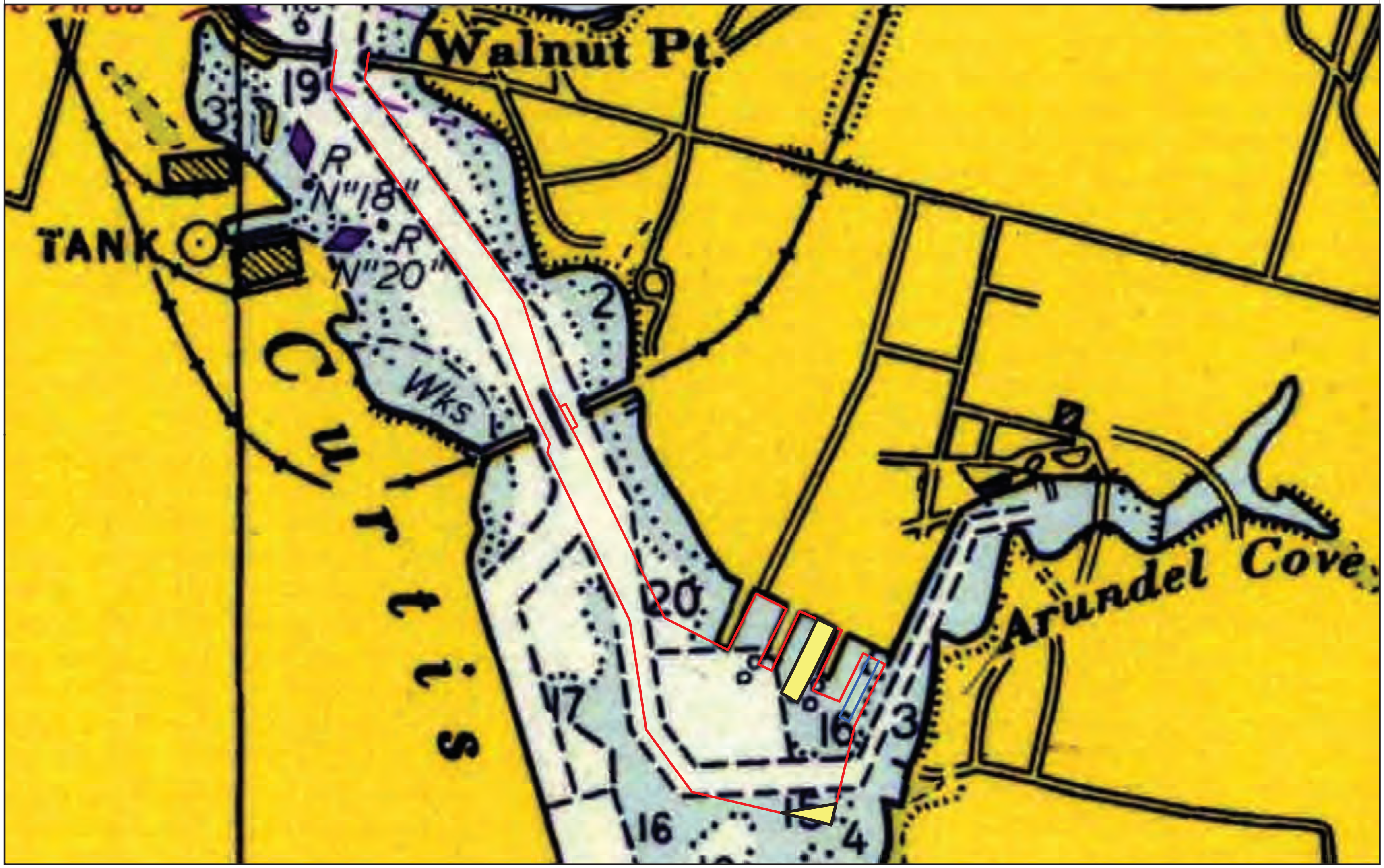
— Limits of Pr. Syncrolift Dredge (Depth 34.5)

— Limits of Pr. Channel Dredge (Depth 25)

Data Sources:

Historical NOAA Navigational Chart No. 549-7-1966, dated July 1966, accessed from the NOAA Office of Coast Survey Historical Map   Chart Collection. Soundings shown in feet Mean Lower-Low Water.



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DEC 10 2021
By

30 November 2021

Ms. Elizabeth Hughes
State Historic Preservation Officer
Maryland Historical Trust
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The Maryland Historical Trust has determined that this undertaking will have no adverse effect on historic properties.
Date 12/15/21

Dear Ms. Hughes:

The purpose of this letter is to solicit comments regarding the United States Coast Guard's (USCG) intent to conduct dredging activities at USCG Yard (herein referred to as CG Yard) in Baltimore, Anne Arundel County, Maryland (Proposed Action). The USCG is preparing an Environmental Assessment (EA) to evaluate the potential impacts associated with the Proposed Action pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 United States Code §4321 et seq.), the Council on Environmental Quality Regulations (40 Code of Federal Regulations [CFR] Parts 1500-1508), and USCG Commandment Instruction (COMDTINST) M16475.1D, *Implementing Procedures and Policy for Considering Environmental Impacts*. By this letter, the USCG is initiating consultation with your office pursuant to Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulations (36 Code of Federal Regulations [CFR] Part 800) "Protection of Historic Properties" (Section 106).

Project Background

The CG Yard is comprised of approximately 113 acres along the eastern shoreline of Curtis Creek, a tributary of the Patapsco River, and is approximately 6 miles south of downtown Baltimore (**Attachment 1**). The Chesapeake Bay is approximately six miles east of the CG Yard via the Patapsco River. The CG Yard is located in an extensively developed and industrialized area of Baltimore. The CG Yard has operated continuously since 1899 and is the sole USCG-operated shipyard in the U.S. All major vessel repairs, maintenance, and overhauls for the USCG fleet are conducted at the CG Yard.

Description of Undertaking

The Undertaking, as defined by Section 106, includes two main components: 1) maintenance dredging in and around the CG Yard's Syncrolift Facility, and 2) improvement dredging in an area extending from the Interstate-695 bridge (otherwise known as Bascule Bridge) to CG Yard's Pier 1 and Pier 3. The Syncrolift is used to transport vessels for repair and maintenance work. Dredging would occur up to 34.5 feet, the historic depth, around the Syncrolift Facility. The area between Bascule Bridge and Pier 3 would be dredged up to 27.5 feet to support a new class of cutters (Offshore Patrol Cutter [OPC] and National Security Cutter [NSC]). The total dredging amount is estimated to be approximately 400,000 cubic yards (excluding any over-dredge volume). Prior to the dredging,

Above-Ground Resources

The APE intersects with the USCG Yard Curtis Bay Historic District (MIHP AA-783), the USS Oak Ridge Floating Dry Dock (MIHP AA-2526), and the USCG Cutter Matinicus, which was determined Not Eligible for the NRHP on 30 August 2017. This resource is no longer extant at this location.

Descriptions of the USCG Yard Curtis Bay Historic District and the USS Oak Ridge Floating Dry Dock follow.

USCG Yard Curtis Bay Historic District (AA-783)

On 5 August 1983, an area of CG Yard was listed as a historic district in the NRHP (AA-783). The USCG Yard Curtis Bay Historic District (AA-783) is listed in the NRHP and includes the northeast quadrant of CG Yard, a southeastern section along the western shore of Arundel Cove, and a large square center portion (Moore 1981). The historic district is an industrial complex that occupies 115 acres surrounding Arundel Cove on the southeast shore of Curtis Creek, in northern Anne Arundel County and southern Baltimore City. The USCG Yard Curtis Bay Historic District is composed of 28 contributing resources and 13 non-contributing resources and is primarily a collection of utilitarian structures, metal and/or brick, that have been modified, expanded, or otherwise altered to meet changing demands of production and technology (Maryland Historical Trust [MHT] 2016). The largest modern industrial plant in the USCG, Baltimore Yard has been building and servicing vessels of the USCG, and its predecessor, the Revenue Cutter Service, since 1899. CG Yard is associated with changes and developments in the military shipbuilding industry. Established as the result of the Spanish-American War, CG Yard experienced its most significant periods of expansion during the subsequent two World Wars (MHT 2016).

The USCG Yard Curtis Bay Historic District is significant at the local, state, and national levels under Criterion A for its association with trends in naval preparedness, and changes and developments in the military shipbuilding industry. Shipbuilding has traditionally been a key industry in the southeast Baltimore area, and CG Yard was part of this important industry that defined the region (Moore 1981). The historic district is also significant at the national level under Criterion C for its design and construction in that the contributing historic resources embody the distinctive characteristic of industrial and military/government buildings of the World War II period. Although the period of significance (POS) for the USCG Yard Curtis Bay Historic District was not defined in the 1981 NRHP evaluation, the POS is interpreted to begin at 1899, the initial year CG Yard began building and servicing the vessels for the USCG, and 1945, by which time the majority of the historic buildings at CG Yard were constructed (Moore 1981). The boundaries of the USCG Yard Curtis Bay Historic District are shown on **Attachment 3.**

USS Oak Ridge Floating Dry Dock (MIHP AA-2526)

The USS Oak Ridge Floating Dry Dock (MIHP AA-2526) was determined eligible for listing in the NRHP on 14 March 2018. It is a closed basin floating dry dock located along Pier 3. It was originally commissioned in 1944 and was recommissioned in 1963 as the USS Oak Ridge; it was renovated between 2011 and 2013. Built of welded steel, the floating dry dock measures 536 feet in length with a breadth of 81 feet and a displacement of 9,700 tons. It is eligible for the NRHP under Criterion A for its association with events relating to World War II and the Cold War, and Criterion C for exemplifying engineering design, construction methods, and materials characteristic of middle to late twentieth century naval floating docks for overseas deployment. Its period of historical significance spans 1944 through 1968. This resource is no longer extant at the CG Yard as it was removed in 2018; its historical location is shown on **Attachment 3.**

Archaeological Resources

MEDUSA does not show any previously recorded archaeological sites or marine archaeological remote sensing surveys within the APE, thought the APE does intersect with the polygon for the Phase I terrestrial archaeological survey of the CG Yard conducted in 1981 by Dennis J. Pogue, Wayne E. Clark, and Louis E Akerson.

The current depths of the navigation channel and boat basin are shown in **Attachment 4: Figures 1 - 2**. A review of historic and modern navigational charts produced by NOAA reveal that the bulk of the APE was previously dredged to a depth of 22 feet during two dredging campaigns starting in 1940 and again in 1945; smaller portions of the APE were dredged to a depth of 35 to 37 feet (**Table 1**). Depth data within the proposed dredging prism (i.e., APE) indicates that portions of the existing prism currently exceed the proposed 27.5-feet depth limit. Those areas of the proposed dredging prism above the 27.5-feet target depth were previously dredged to a depth of 22 feet in the 1940s, likely using bucket dredges that regularly dig deeper than the minimum dredge target depth based on the time period during which the dredging occurred. Use of a bucket dredge would have disturbed 1 to 2 feet of sediment below the 22-feet target depth of the 1940s-era dredging. Historic charts of Curtis Creek dating from the 1930s through 1960s show theo development of the USCG facility and the establishment of the dredged navigation channels and subsequento land development along Curtis Creek Channel and Arundel Channel (**Attachment 4: Figures 3 - 5**).

Table 1. Dredging Chronology

Date	Depth	Location	Comments
Jul. 3, 1930	37-foot depth	Portion of channel to Baltimore lying between 37-foot 1930 depth curve near Baltimore Light to Sparrows Point entrance channel; widen angle between Fort McHenry and Ferry Bar section; and for width of 400 feet in Curtis Bay section.	REPORT OF THE SECRETARY OFe THE ARMY ON CIVIL WORKS ACTIVITIES FOR FY 1989; Annual report fiscal year1989 of the Secretary of the Army on Civil Works activities (1 October1988 - 30 September1989) V2 PT 0 (oclc.org)
Oct. 17,1940	22-foot depth	For 22-, 18-, and 15-foot channels ine Curtis Creek from 22-foot depth below 1940 Pennington Avenue Bridge to upper end of marginal wharf of U.S. Ordnance Depot.	REPORT OF THE SECRETARY OF THE ARMY ON CIVIL WORKS ACTIVITIES FOR FY 1989; Annual report fiscal year1989 of the Secretary of the Army on Civil Works activities (1 October1988 - 30 September1989) V2 PT 0 (oclc.org)
Mar. 2, 1945	35-foot depthe	Curtis Creek 200 feet wide and 35 feet deep from head of existing 35-foot project channel in Curtis Bay to a point in the creek about 750 feet below Pennington Avenue Bridge.	REPORT OF THE SECRETARY OF THE ARMY ON CIVIL WORKS ACTIVITIES FOR FY 1989; Annual report fiscal year1989 of the Secretary of the Army on Civil Works activities (1 October1988 - 30 September1989) V2 PT 0 (oclc.org)
Mar. 2, 1945	22-feet deepe	A channel 22 feet deep and 200 feet wide from 22-foot depth curve south of 1945 Baltimore & Ohio R.R. bridge about 2,800 feet to vicinity of Arundel Cove, thence 100 feet wide in Arundel Cove for about 2,100 feet; with an anchorage basin about 700 feet square	REPORT OF THE SECRETARY OF THE ARMY ON CIVIL WORKS ACTIVITIES FOR FY 1989; Annual report fiscal year1989 of the Secretary of the Army on Civil Works activities (1 October1988 - 30 September1989) V2 PT 0 (oclc.org)

adjacent to channel southwesterly of
Coast Guard wharf.

The proposed enlargement of the USCG turning basin and docks from the existing footprint includes a small triangular region measuring approximately 700 feet long by 200 feet wide along the southeastern corner of the APE at the intersection of the Arundel Channel and the Curtis Creek Channel that has not been previously subjected to an archaeological remote sensing survey **(Attachment** 4: **Figure 2).** This area has been substantially dredged to 17 feet, allowing construction barges and support vessels to dock at a large concrete pier and bulkhead presently owned by Cianbro Marine (605 Pittman Rd., Baltimore, MD), but which appears on navigation charts dating to the 1930s. A review of aerial photographs showed large barges and tugboats traversing this corner during the 1980s.

Based on the development of the navigation channels, shoreline alterations, and associated dredging, there is a low potential for the APE to contain intact, significant submerged cultural resources.

Assessment of Effects

Based on the proposed scope of work, the USCG has determined that the Undertaking has the potential to affect historic properties. After applying the criteria of adverse effect as found in 36 CFR 800.S(a)(I), USCG has further determined that the Proposed Action would have ***No Adverse Effect*** on the NRHP-listed USCG Yard Curtis Bay Historic District and the NRHP-eligible USS Oak Ridge Floating Dry Dock. No significant archaeological resources are known within the APE, and the APE has a low potential to contain significant archaeological resources. As such, the USCG has determined that there will be ***No Effect*** to archaeological historic properties by the Undertaking.

Conclusions

We are seeking input from your Agency regarding any information or potential environmental concerns associated with the Proposed Action, in accordance with Section 106 of the National Historic Preservation Act (36 CFR Part 800). Please provide any comments, concerns, information, studies, or other data you may have regarding the Proposed Action within thirty {30} days of receipt of this letter to enable us to complete this phase of the project within the scheduled timeframe. All responses will be considered for incorporation in the EA. We look forward to and welcome your participation in this analysis.

The USCG has contracted AECOM to facilitate the Section 106 process. If you have comments or information relevant to the development of the EA, please direct your correspondence to Mr. Scott Seibel at AECOM, 12420 Milestone Center Drive. Suite 150, Germantown, MD 20876 or via (30 l) 213-7819 or scott.seibel@aecom.com.

Sincerely,

WESTON.AVERY.LOUIS.1152330487
Digitally signed by WESTON.AVERY.LOUIS.1152330487
Date: 2021.11.30 20:04:20 -05'00'

LCDR Avery Weston, PE, PMP

Enclosures:

Attachment 1 – Site Location Map
Attachment 2 – Area of Potential Effects Map
Attachment 3 – Cultural Resources Map
Attachment 4 – NOAA Navigational Charts

References

2016 U.S. Coast Guard Yard Curtis Bay. Electronic Document, https://mht.maryland.gov/secure/medusa/mapintermediate.aspx?ID=1920&ID1=1920&ID2=undefined&Section=archInv&PropertyID=1920&selRec=archInv, accessed June 17, 2021.

2017 Determination of Eligibility: Architectural Inventory. United States Coast Guard Cutter MANTINICUS. Electronic Document, https://mht.maryland.gov/secure/medusa/mapintermediate.aspx?ID=undefined&ID1=undefined&ID2=undefined&Section=docArchInv&PropertyID=62619&selRec=docArchInv, accessed June 17, 2021.

2018 USS OAK RIDGE, Floating Dry Dock, U.S. Coast Guard Yard, Curtis Bay. Electronic Document, https://mht.maryland.gov/secure/medusa/mapintermediate.aspx?ID=45169&ID1=45169&ID2=undefined&Section=archInv&PropertyID=63099&selRec=archInv, accessed June 17, 2021.

Attachments

Attachment 1 - Site Location Map

Legend

🟥 Limits of Proposed Dredging

Data Sources:

Six-inch resolution orthoimagery accessed from the Maryland Statewide Imagery Download Tool. Orthoimagery dated 2017. Supplemental imagery referenced from Google Earth.

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PROJECT NUMBER
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SHEET TITLE
USCG Arundel Project
Aerial Locus Map

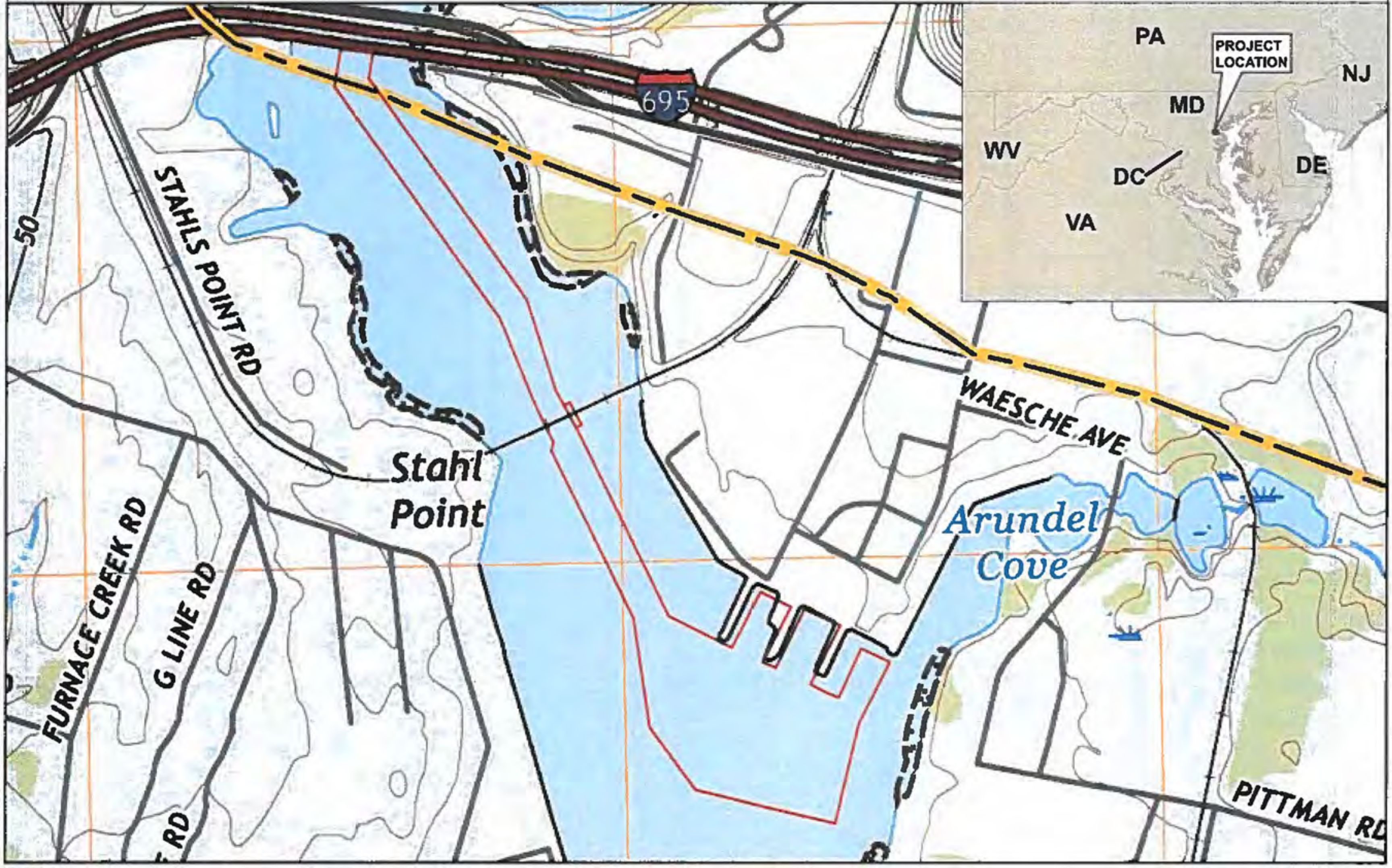
FIGURE NUMBER
Attachment 1

Attachment 2 - Area of Potential Effects Map

Legend

🟥 Limits of Proposed Dredging

Data Sources:
USGS Topo 7.5-minute map for Curtis Bay, MD,
dated 2019, contour interval 10 feet.



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USCG Arundel Project
Topo Locus Map

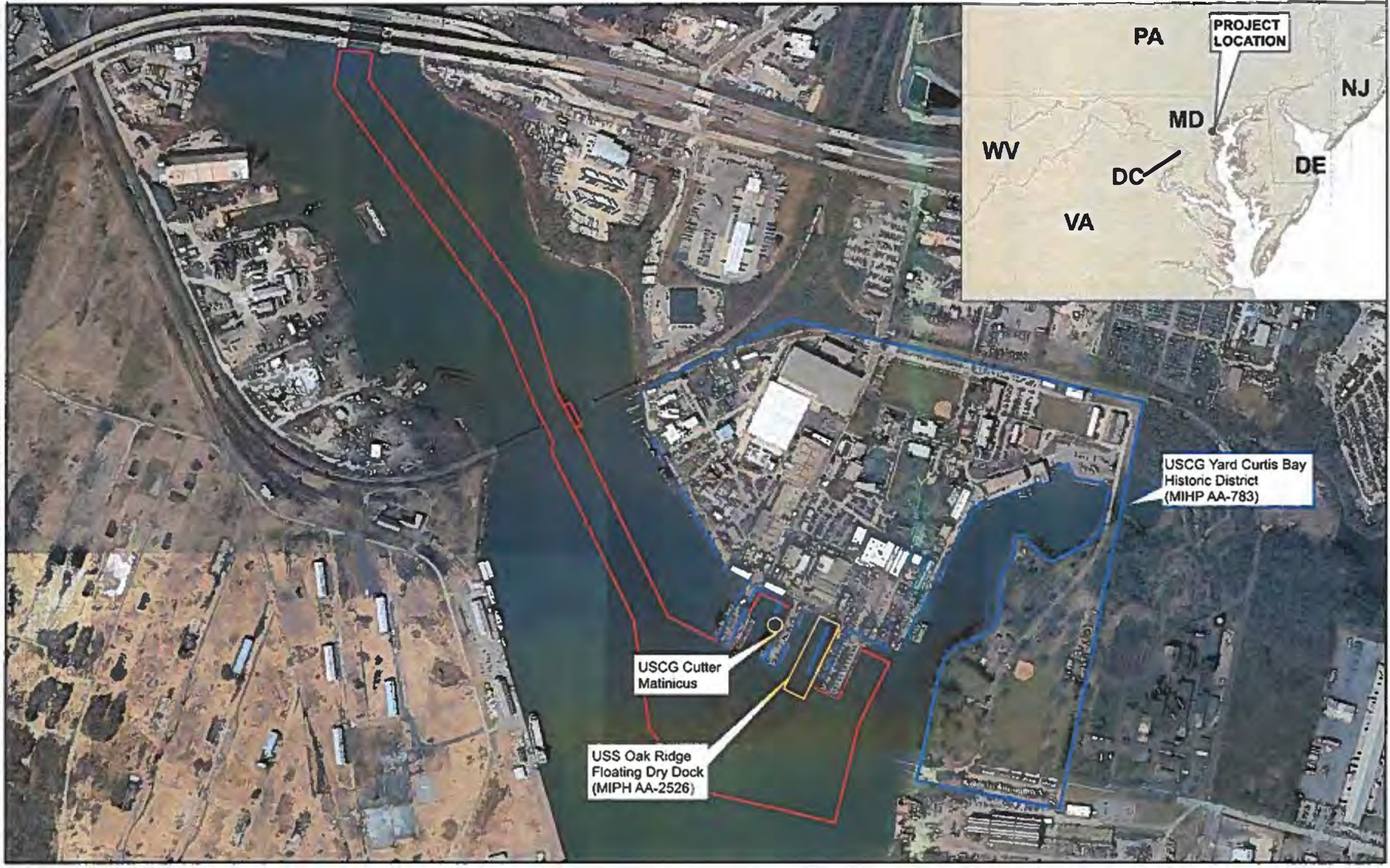
FIGURE NUMBER
Attachment 2

Attachment 3 - Cultural Resources Map

Legend

Limits of Proposed Dredging

Data Sources:
Six-Inch resolution ortholmagery accessed from the Maryland Statewide Imagery Download Tool. Orthoimagery dated 2017. Supplemental imagery referenced from Google Earth. Cultural Resources accesed from Maryland's Cultural Resources Information System, MEDUSA 2021



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SHEET TITLE
USCG Arundel Project
Cultural Resources Locus Map

FIGURE NUMBER
Attachment 3

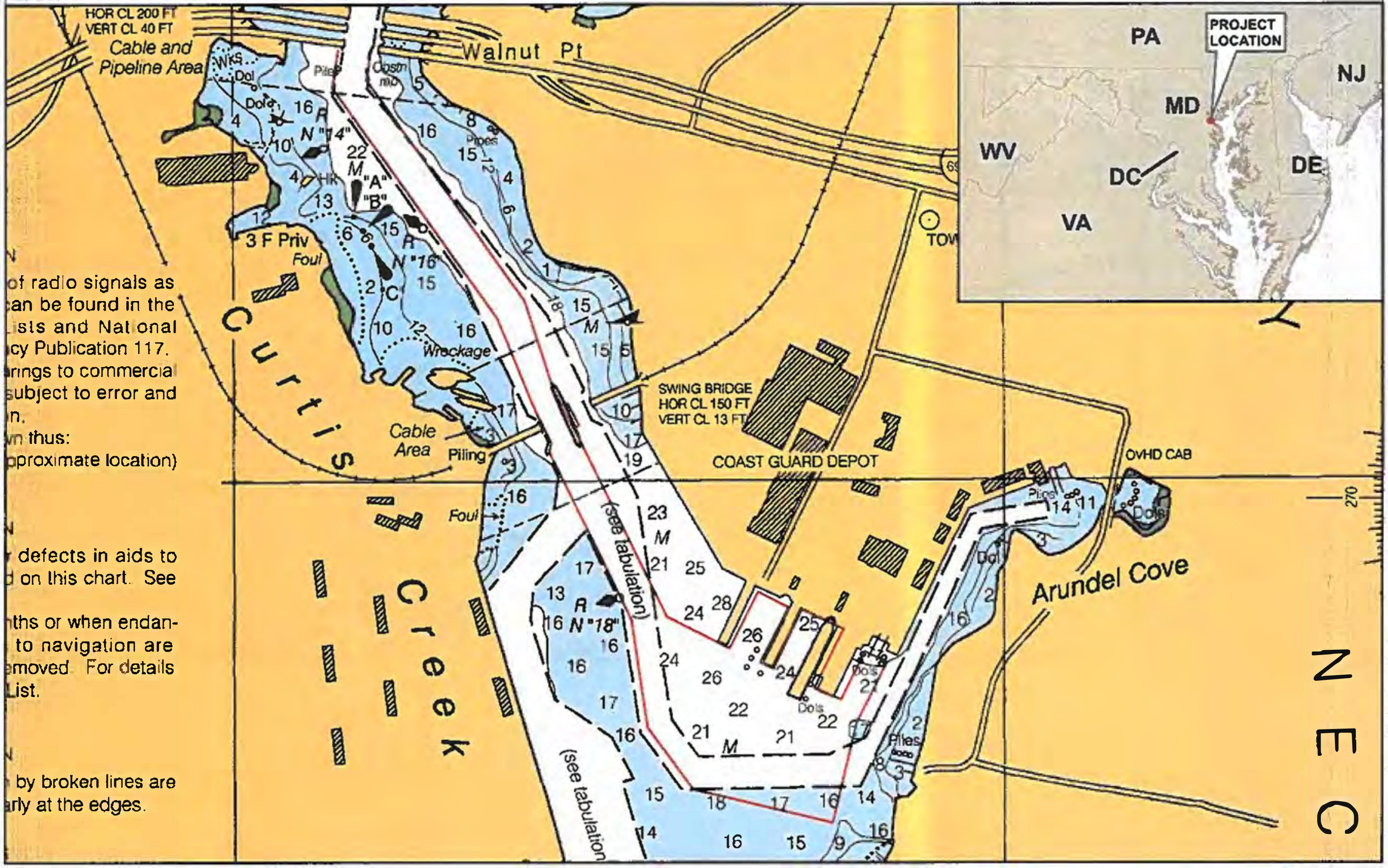
Attachment 4 - NOAA Navigational Charts

Legend

▬ Limits of Proposed Dredging

Data Sources:

NOAA Navigational Chart No. 12281, dated 2018, accessed from the NOAA Office of Coast Survey. Soundings shown in feet Mean Lower-Low Water.



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SHEET TITLE

USCG Arundel
Project Locus Map

FIGURE NUMBER

1

Legend

- Limits of Pr. Syncrolift Dredge (Depth 34.5')
- Limits of Pr. Channel Dredge (Depth 25')

2010 Bathymetric Survey

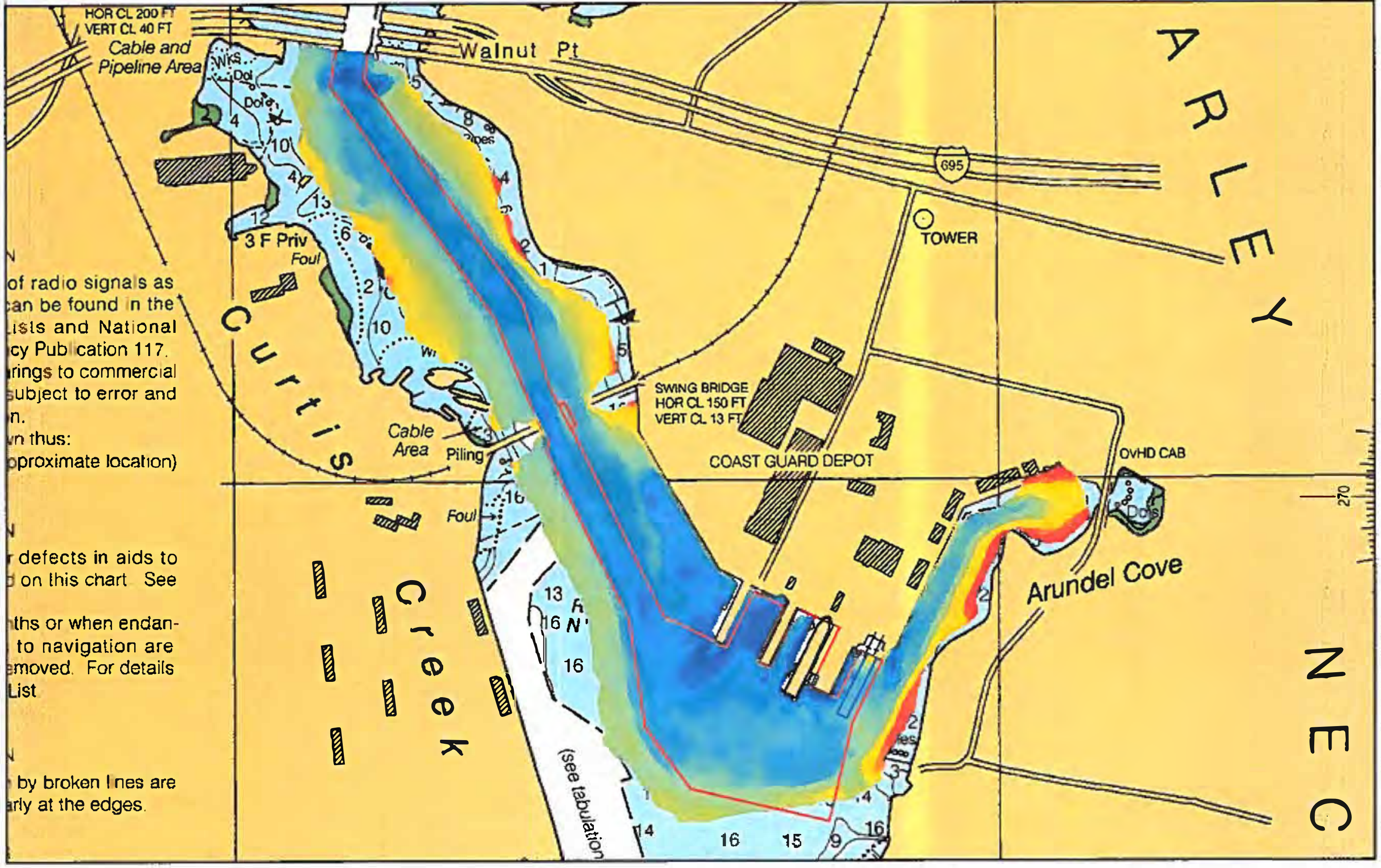
Depth, ft NAVD88

High : -2 ft NAVD88

Low : -36 ft NAVD88

Data Sources:

NOAA Navigational Chart No. 12281, dated 2018, accessed from the NOAA Office of Coast Survey Soundings shown in feet Mean Lower-Low Water Bathymetric survey conducted in 2010 for the United States Coast Guard by Waterway Services and Engineering, Ltd. Bathymetric survey shown in feet NAVD88.



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SHEET TITLE

USCG Arundel
2010 Surveyed Bathymetry

FIGURE NUMBER

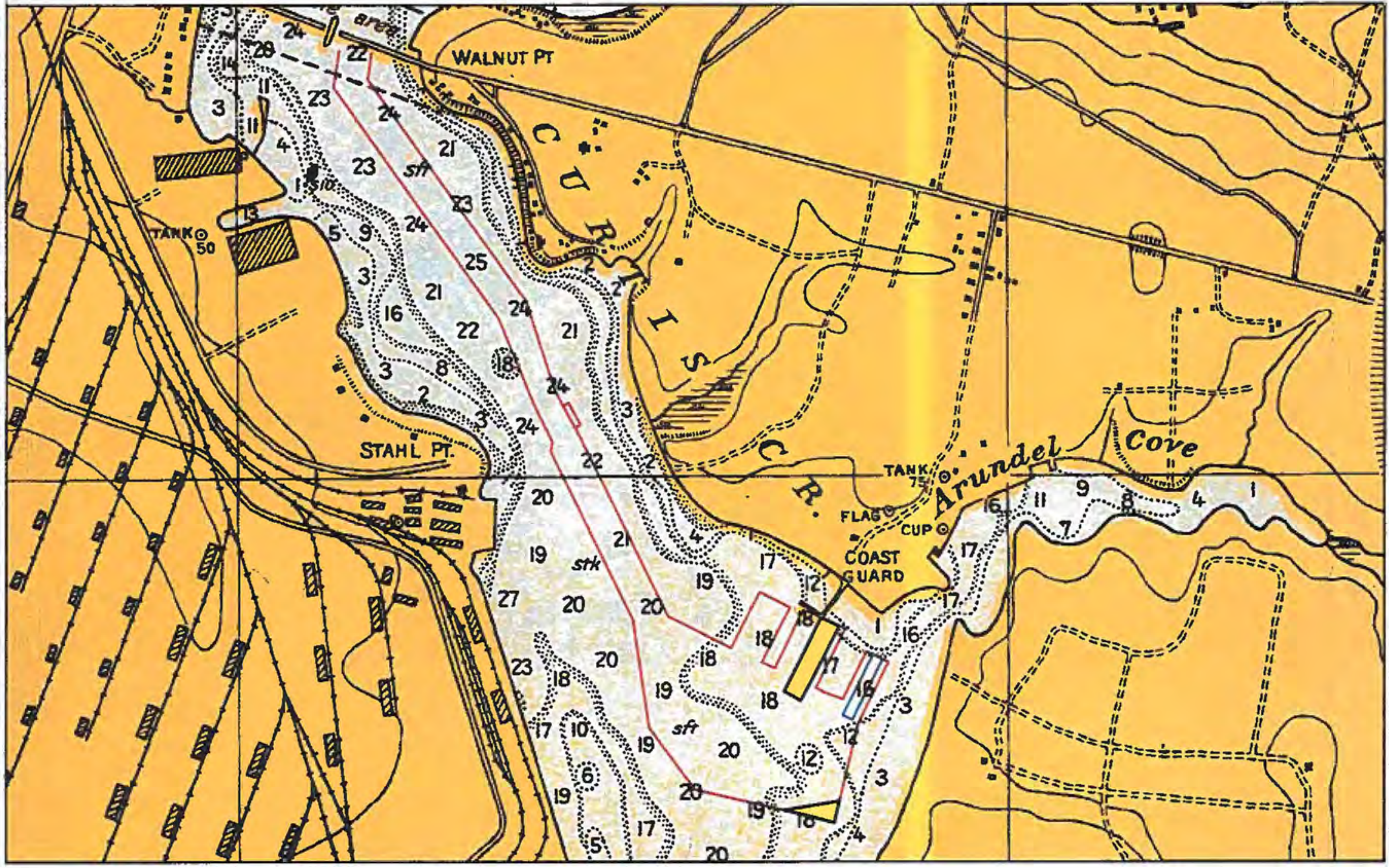
2

Legend

- 🟧 Region Not Surveyed in 2010
- Limits of Pr. Syncrolift Dredge (Depth 34.5')
- Limits of Pr. Channel Dredge (Depth 25')

Data Sources:

Historical NOAA Navigational Chart No. 545-6-19311, dated July 1931, accessed from the NOAA Office of Coast Survey Historical Map & Chart Collection. Soundings shown in feet Mean Lower-Low Water.



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SHEET TITLE

USCG Arundel
1931 Historical Chart

FIGURE NUMBER

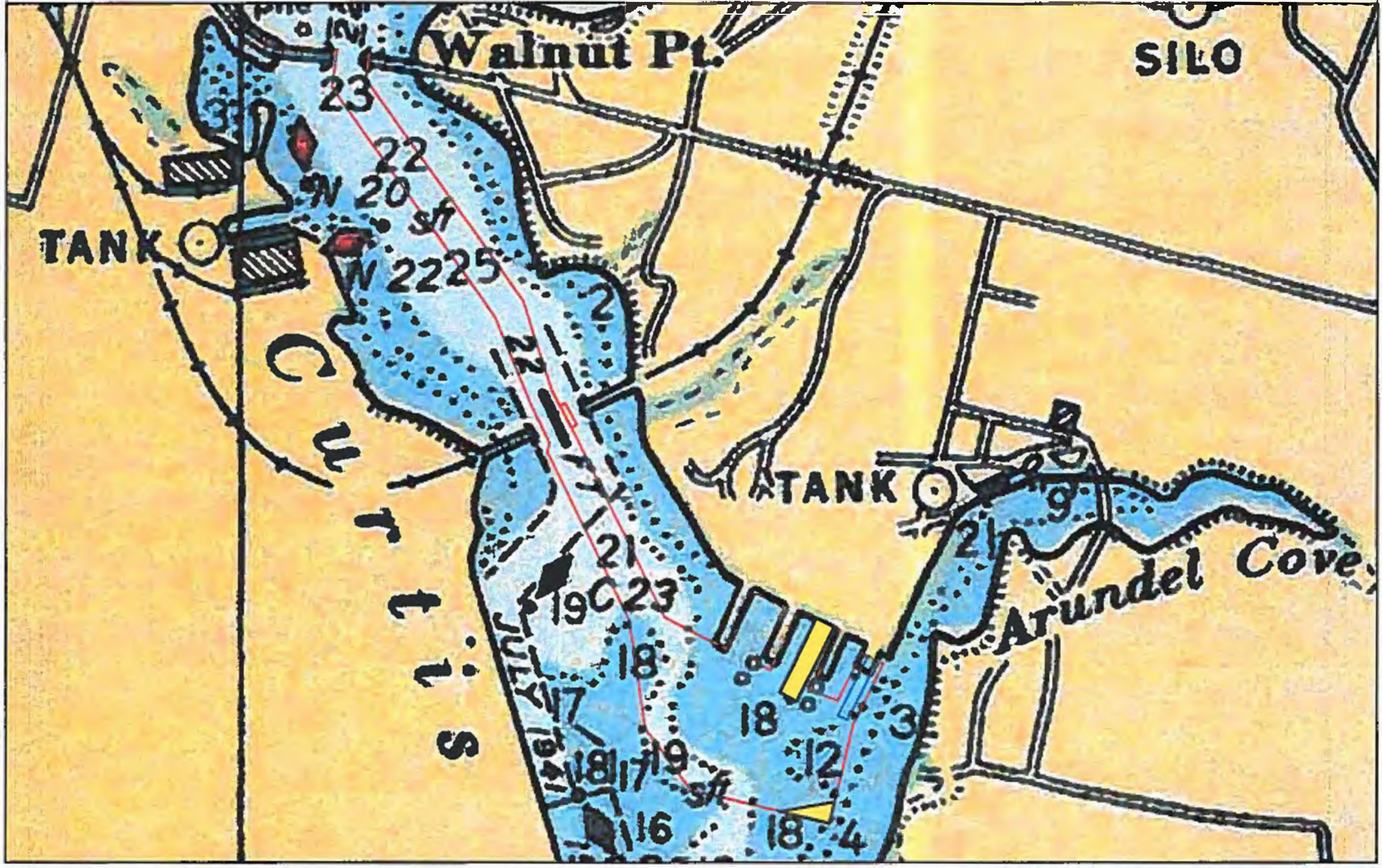
3

Legend

- 🟨 Region Not Surveyed in 2010
- — Limits of Pr. Syncrolift Dredge (Depth 34.5')
- — Limits of Pr. Channel Dredge (Depth 25')

Data Sources:

Historical NOAA Navigational Chart No. 549-11-1945, dated June 1945, accessed from the NOAA Office of Coast Survey Historical Map & Chart Collection. Soundings shown in feet Mean Lower-Low Water.



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PROJECT NUMBER
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SHEET TITLE
USCG Arundel
1945 Historical Chart

FIGURE NUMBER
4

Document Path: F:\60660293_USCG\GIS\MXD\USCG_Arundel_Historical2.mxd

Legend

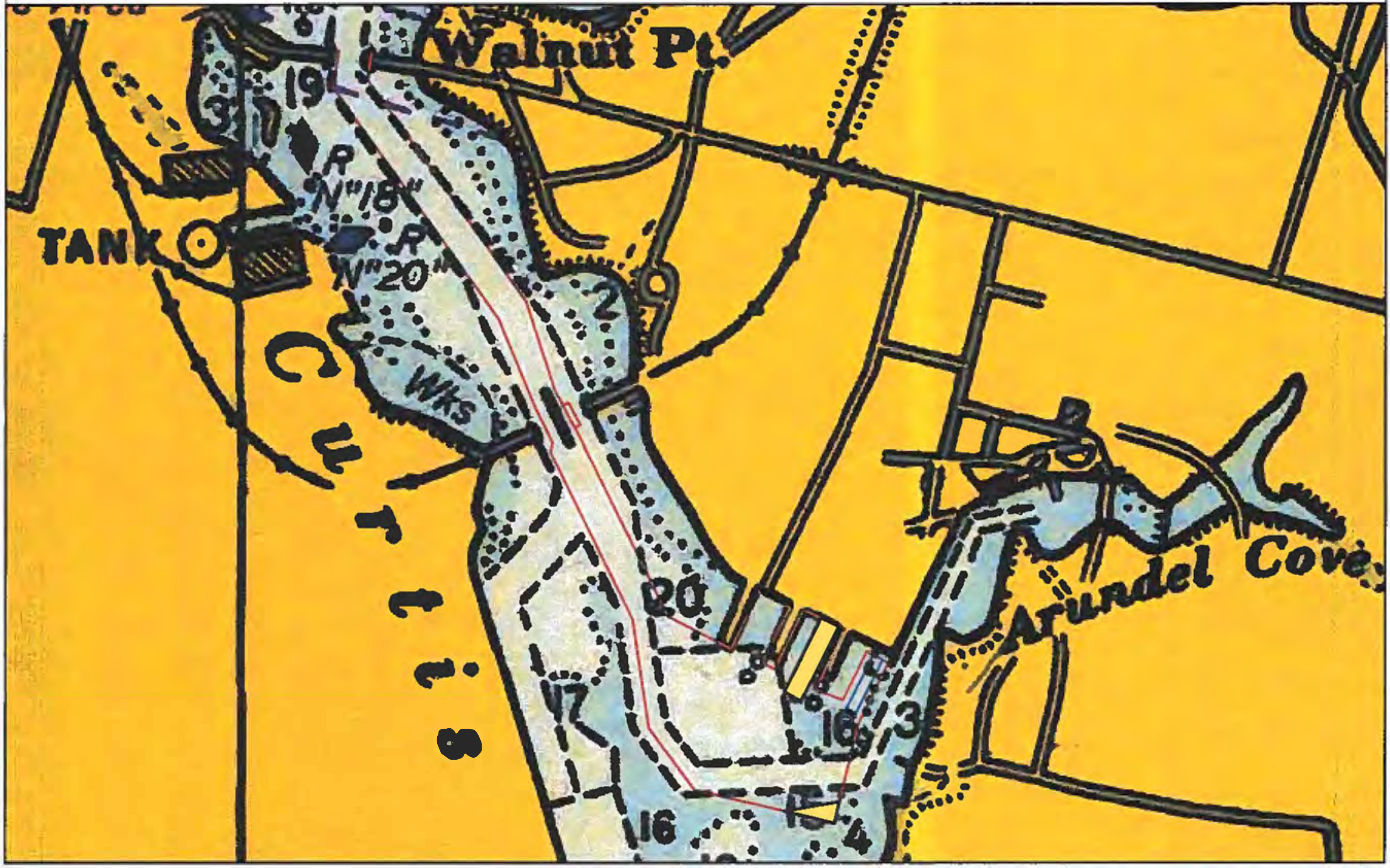
🟨 Region Not Surveyed in 2010

— Limits of Pr. Syncrolift Dredge (Depth 34.5')

— Limits of Pr. Channel Dredge (Depth 25')

Data Sources:

Historical NOAA Navigational Chart No. 549-7-1966, dated July 1966, accessed from the NOAA Office of Coast Survey Historical Map & Chart Collection. Soundings shown in feet Mean Lower-Low Water.



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PROJECT NUMBER

60680293

SHEET TITLE

USCG Arundel
1966 Historical Chart

FIGURE NUMBER

5

Maryland

Beth Cole -MDP- <beth.cole@maryland.gov>

Fwd: Project Review Request -- MHT

1 message

Elizabeth Hughes -MDP- <elizabeth.hughes@maryland.gov> Fri, Dec 10, 2021 at 8:36 AM
To: Beth Cole -MDP- <beth.cole@maryland.gov>, Troy Nowak -MDP- <troy.nowak@maryland.gov>

---------- Forwarded message ----------
From: **Kisak, Natalie** <natalie.kisak@aecom.com>
Date: Thursday, December 9, 2021
Subject: Project Review Request -- MHT
To: "elizabeth.hughes@maryland.gov" <elizabeth.hughes@maryland.gov>
Cc: "Warf, Jen" <Jennifer.Warf@aecom.com>, "Seibel, Scott" <scott.seibel@aecom.com>, "Wu, Charlene" <Charlene.Wu@aecom.com>

Good afternoon,

The US Coast Guard is preparing an Environmental Assessment in support of the Proposed Dredging Project at the US Coast Guard Yard in Baltimore, Maryland. On behalf of the US Coast Guard, we are seeking input from your agency regarding any information or potential environmental concerns associated with this project. Please see the attached letter for additional information. We would appreciate any comments, concerns, information, studies, or other data you may have regarding this project within thirty (30) days of receipt of this correspondence.

We look forward to and welcome your participation in this analysis. Thank you!

Natalie Kisak

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Elizabeth Hughes
Director and State Historic Preservation Officer
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U.S. Department of
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United States
Coast Guard

Commanding Officer
United States Coast Guard
Facilities Engineering Coast
Guard Yard

2401 Hawkins Point Road
Baltimore, MD 21226
Phone: (410) 636-4098
Email: Avery.L.Weston@uscg.mil

30 November 2021

Delaware Nation, Oklahoma
P.O. Box 825
Anadarko, OK 73005
POC: Nekole Alligood, Director of Cultural Resources & Section 106
Nalligood@delawarenation.com

Dear Delaware Nation:

The purpose of this letter is to solicit comments regarding the United States Coast Guard's (USCG) intent to conduct dredging activities at USCG Yard (herein referred to as CG Yard) in Baltimore, Anne Arundel County, Maryland (Proposed Action). The USCG is preparing an Environmental Assessment (EA) to evaluate the potential impacts associated with the Proposed Action pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 United States Code §4321 et seq.), the Council on Environmental Quality Regulations (40 Code of Federal Regulations [CFR] Parts 1500-1508), and USCG Commandment Instruction (COMDTINST) M16475.1D, *Implementing Procedures and Policy for Considering Environmental Impacts*. By this letter, the USCG is initiating consultation with your office pursuant to Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulations (36 Code of Federal Regulations [CFR] Part 800) "Protection of Historic Properties" (Section 106).

Project Background

The CG Yard is comprised of approximately 113 acres along the eastern shoreline of Curtis Creek, a tributary of the Patapsco River, and is approximately 6 miles south of downtown Baltimore (**Attachment 1**). The Chesapeake Bay is approximately six miles east of the CG Yard via the Patapsco River. The CG Yard is located in an extensively developed and industrialized area of Baltimore. The CG Yard has operated continuously since 1899 and is the sole USCG-operated shipyard in the U.S. All major vessel repairs, maintenance, and overhauls for the USCG fleet are conducted at the CG Yard.

Description of Undertaking

The Undertaking, as defined by Section 106, includes two main components: 1) maintenance dredging in and around the CG Yard's Syncrolift Facility, and 2) improvement dredging in an area extending from the Interstate-695 bridge (otherwise known as Bascule Bridge) to CG Yard's Pier 1 and Pier 3. The Syncrolift is used to transport vessels for repair and maintenance work. Dredging would occur up to 34.5 feet, the historic depth, around the Syncrolift Facility. The area between Bascule Bridge and Pier 3 would be dredged up to 27.5 feet to support a new class of cutters (Offshore Patrol Cutter [OPC] and National Security Cutter [NSC]). The total dredging amount is estimated to be approximately 400,000 cubic yards (excluding any over-dredge volume). Prior to the dredging, sediment samples will be taken from 18 locations using a 4-inch vibracore system; all sediment samples will be confined to the area proposed for dredging and no sediment sampling will occur outside previously dredged areas.

The purpose of the Undertaking is to provide the necessary in-water improvements to allow the new OPC and NSC access to the shipyard for maintenance and repair work, maintain the viability of the Syncrolift Facility, and meet USCG mission requirements at the CG Yard. The Proposed Action is needed to address insufficient water depths within the navigation channel from the I-695 Bridge, the turning basin in front of the CG Yard within Curtis Creek, and the vessel berth area between Piers 1, 2, and 3 to accommodate the new USCG cutters and their associated draft (27.5 feet). The Proposed Action is also needed to remove accumulated sediment in the vicinity of the Syncrolift, so that water depths are consistent with its historic depth (34.5 feet) and original construction in 1997. This facility, which connects to the CG Yard's upland rail system, is used currently for the majority of dry dock repair and maintenance work performed at the CG Yard. As the only USCG shipyard, the Yard needs to be accessible by USCG vessels and have the appropriate facilities to conduct maintenance of these USCG vessels to meet USCG mission requirements.

The maintenance dredging of an estimated 10,000 cubic yards of material would likely be performed using hydraulic dredging. Slurry from hydraulic dredging would be transported to a dewatering area on Grove Point located on CG Yard property via a pipeline. Slurry would be dewatered so that all consolidated material would be dry and able to be loaded onto trucks for off-site disposal in accordance with all required permits and approvals.

The improvement dredging, which would generate an estimated 390,000 cubic yards of material, would likely be performed using mechanical dredging methods. Dredging equipment would include a floating crane barge and a scow/barge. A clamshell bucket attached to a crane on the crane barge would be used to scoop sediment from the floor of Curtis Creek, and transfer the dredged material to the scow/barge until the desired depth is achieved. All dredged material would be transported and disposed of appropriately and in accordance with all required permits and approvals.

Area of Potential Effects

The Area of Potential Effects (APE), as defined in 36 CFR 800.16(d), is "the geographic area or areas within which an undertaking may directly or indirectly cause alteration in the character or use of historic properties, if such properties exist. The APE is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking." The APE for archaeological resources includes the limits of proposed dredging. As the dredging will be temporary and there will be no temporary or permanent above-ground structures or buildings built as a result of this Undertaking, the APE for above-ground resources corresponds to the APE for archaeological resources (**Attachment 2**).

Identification of Historic Properties

To identify historic properties in the APE, USCG's Secretary of the Interior-qualified consultants conducted a review of available information, including data provided by USCG; National Register of Historic Places (NRHP) listings; the Medusa Cultural Resource Information System; historic maps and images (e.g., historic aerials and topographic maps), and information derived from online research at various agencies, historical societies, and other sources. A map showing the location of known above-ground resources within the APE is in **Attachment 3**.

Above-Ground Resources

The APE intersects with the USCG Yard Curtis Bay Historic District (MIHP AA-783), the USS Oak Ridge Floating Dry Dock (MIHP AA-2526), and the USCG Cutter Matinicus, which was determined Not Eligible for the NRHP on 30 August 2017. This resource is no longer extant at this location.

Descriptions of the USCG Yard Curtis Bay Historic District and the USS Oak Ridge Floating Dry Dock follow.

USCG Yard Curtis Bay Historic District (AA-783)

On 5 August 1983, an area of CG Yard was listed as a historic district in the NRHP (AA-783). The USCG Yard Curtis Bay Historic District (AA-783) is listed in the NRHP and includes the northeast quadrant of CG Yard, a southeastern section along the western shore of Arundel Cove, and a large square center portion (Moore 1981). The historic district is an industrial complex that occupies 115 acres surrounding Arundel Cove on the southeast shore of Curtis Creek, in northern Anne Arundel County and southern Baltimore City. The USCG Yard Curtis Bay Historic District is composed of 28 contributing resources and 13 non-contributing resources and is primarily a collection of utilitarian structures, metal and/or brick, that have been modified, expanded, or otherwise altered to meet changing demands of production and technology (Maryland Historical Trust [MHT] 2016). The largest modern industrial plant in the USCG, Baltimore Yard has been building and servicing vessels of the USCG, and its predecessor, the Revenue Cutter Service, since 1899. CG Yard is associated with changes and developments in the military shipbuilding industry. Established as the result of the Spanish-American War, CG Yard experienced its most significant periods of expansion during the subsequent two World Wars (MHT 2016).

The USCG Yard Curtis Bay Historic District is significant at the local, state, and national levels under Criterion A for its association with trends in naval preparedness, and changes and developments in the military shipbuilding industry. Shipbuilding has traditionally been a key industry in the southeast Baltimore area, and CG Yard was part of this important industry that defined the region (Moore 1981). The historic district is also significant at the national level under Criterion C for its design and construction in that the contributing historic resources embody the distinctive characteristic of industrial and military/government buildings of the World War II period. Although the period of significance (POS) for the USCG Yard Curtis Bay Historic District was not defined in the 1981 NRHP evaluation, the POS is interpreted to begin at 1899, the initial year CG Yard began building and servicing the vessels for the USCG, and 1945, by which time the majority of the historic buildings at CG Yard were constructed (Moore 1981). The boundaries of the USCG Yard Curtis Bay Historic District are shown on **Attachment 3**.

USS Oak Ridge Floating Dry Dock (MIHP AA-2526)

The USS Oak Ridge Floating Dry Dock (MIHP AA-2526) was determined eligible for listing in the NRHP on 14 March 2018. It is a closed basin floating dry dock located along Pier 3. It was originally commissioned in 1944 and was recommissioned in 1963 as the USS Oak Ridge; it was renovated between 2011 and 2013. Built of welded steel, the floating dry dock measures 536 feet in length with a breadth of 81 feet and a displacement of 9,700 tons. It is eligible for the NRHP under Criterion A for its association with events relating to World War II and the Cold War, and Criterion C for exemplifying engineering design, construction methods, and materials characteristic of middle to late twentieth century naval floating docks for overseas deployment. Its period of historical significance spans 1944 through 1968. This resource is no longer extant at the CG Yard as it was removed in 2018; its historical location is shown on **Attachment 3.**

Archaeological Resources

MEDUSA does not show any previously recorded archaeological sites or marine archaeological remote sensing surveys within the APE, thought the APE does intersect with the polygon for the Phase I terrestrial archaeological survey of the CG Yard conducted in 1981 by Dennis J. Pogue, Wayne E. Clark, and Louis E Akerson.

The current depths of the navigation channel and boat basin are shown in **Attachment 4: Figures 1 - 2**. A review of historic and modern navigational charts produced by NOAA reveal that the bulk of the APE was previously dredged to a depth of 22 feet during two dredging campaigns starting in 1940 and again in 1945; smaller portions of the APE were dredged to a depth of 35 to 37 feet (**Table 1**). Depth data within the proposed dredging prism (i.e., APE) indicates that portions of the existing prism currently exceed the proposed 27.5-feet depth limit. Those areas of the proposed dredging prism above the 27.5-feet target depth were previously dredged to a depth of 22 feet in the 1940s, likely using bucket dredges that regularly dig deeper than the minimum dredge target depth based on the time period during which the dredging occurred. Use of a bucket dredge would have disturbed 1 to 2 feet of sediment below the 22-feet target depth of the 1940s-era dredging. Historic charts of Curtis Creek dating from the 1930s through 1960s show the development of the USCG facility and the establishment of the dredged navigation channels and subsequent land development along Curtis Creek Channel and Arundel Channel (**Attachment 4: Figures 3 - 5**).

Table 1. Dredging Chronology

Date	Depth	Location	Comments
Jul. 3, 1930	37-foot depth	Portion of channel to Baltimore lying between 37-foot 1930 depth curve near Baltimore Light to Sparrows Point entrance channel; widen angle between Fort McHenry and Ferry Bar section; and for width of 400 feet in Curtis Bay section.	REPORT OF THE SECRETARY OF THE ARMY ON CIVIL WORKS ACTIVITIES FOR FY 1989; Annual report fiscal year1989 of the Secretary of the Army on Civil Works activities (1 October1988 - 30 September1989) V2 PT 0 (oclc.org)
Oct. 17,1940	22-foot depth	For 22-, 18-, and 15-foot channels in Curtis Creek from 22-foot depth below 1940 Pennington Avenue Bridge to upper end of marginal wharf of U.S. Ordnance Depot.	REPORT OF THE SECRETARY OF THE ARMY ON CIVIL WORKS ACTIVITIES FOR FY 1989; Annual report fiscal year1989 of the Secretary of the Army on Civil Works activities (1 October1988 - 30 September1989) V2 PT 0 (oclc.org)
Mar. 2, 1945	35-foot depth	Curtis Creek 200 feet wide and 35 feet deep from head of existing 35-foot project channel in Curtis Bay to a point in the creek about 750 feet below Pennington Avenue Bridge.	REPORT OF THE SECRETARY OF THE ARMY ON CIVIL WORKS ACTIVITIES FOR FY 1989; Annual report fiscal year1989 of the Secretary of the Army on Civil Works activities (1 October1988 - 30 September1989) V2 PT 0 (oclc.org)
Mar. 2, 1945	22-feet deep	A channel 22 feet deep and 200 feet wide from 22-foot depth curve south of 1945 Baltimore & Ohio R.R. bridge about 2,800 feet to vicinity of Arundel Cove, thence 100 feet wide in Arundel Cove for about 2,100 feet; with an anchorage basin about 700 feet square adjacent to channel southwesterly of Coast Guard wharf.	REPORT OF THE SECRETARY OF THE ARMY ON CIVIL WORKS ACTIVITIES FOR FY 1989; Annual report fiscal year1989 of the Secretary of the Army on Civil Works activities (1 October1988 - 30 September1989) V2 PT 0 (oclc.org)

The proposed enlargement of the USCG turning basin and docks from the existing footprint includes a small triangular region measuring approximately 700 feet long by 200 feet wide along the southeastern corner of the APE at the intersection of the Arundel Channel and the Curtis Creek Channel that has not been previously subjected to an archaeological remote sensing survey (**Attachment 4: Figure 2**). This area has been substantially dredged to 17 feet, allowing construction barges and support vessels to dock at a large concrete pier and bulkhead presently owned by Cianbro Marine (605 Pittman Rd., Baltimore, MD), but which appears on navigation charts dating to the 1930s. A review of aerial photographs showed large barges and tugboats traversing this corner during the 1980s.

Based on the development of the navigation channels, shoreline alterations, and associated dredging, there is a low potential for the APE to contain intact, significant submerged cultural resources.

Assessment of Effects

Based on the proposed scope of work, the USCG has determined that the Undertaking has the potential to affect historic properties. After applying the criteria of adverse effect as found in 36 CFR 800.5(a)(1), USCG has further determined that the Proposed Action would have ***No Adverse Effect*** on the NRHP-listed USCG Yard Curtis Bay Historic District and the NRHP-eligible USS Oak Ridge Floating Dry Dock. No significant archaeological resources are known within the APE, and the APE has a low potential to contain significant archaeological resources. As such, the USCG has determined that there will be ***No Effect*** to archaeological historic properties by the Undertaking.

Conclusions

We are seeking input from your Tribe regarding any information or potential environmental concerns associated with the Proposed Action in accordance with 36 CFR Part 800.2, Executive Order 13175, and Section 106. Please provide any comments, concerns, information, studies, or other data you may have regarding the Proposed Action within **thirty (30) days** of receipt of this letter to enable us to complete this phase of the project within the scheduled timeframe. All responses will be considered for incorporation in the EA. We look forward to and welcome your participation in this analysis.

The USCG has contracted AECOM to facilitate the Section 106 process. If you have comments or information relevant to the development of the EA, please direct your correspondence to Mr. Scott Seibel at AECOM, 12420 Milestone Center Drive, Suite 150, Germantown, MD 20876 or via (301) 213-7819 or scott.seibel@aecom.com.

Sincerely,

WESTON.AVERY.LOUIS.1152330487

Digitally signed by WESTON.AVERY.LOUIS.1152330487
Date: 2021.11.30 20:01:17 -05'00'

LCDR Avery Weston, PE, PMP

Enclosures:

Attachment 1 – Site Location Map
Attachment 2 – Area of Potential Effects Map
Attachment 3 – Cultural Resources Map
Attachment 4 – NOAA Navigational Charts

References

2016 U.S. Coast Guard Yard Curtis Bay. Electronic Document, https://mht.maryland.gov/secure/medusa/mapintermediate.aspx?ID=1920&ID1=1920&ID2=undefined&Section=archInv&PropertyID=1920&selRec=archInv, accessed June 17, 2021.

2017 Determination of Eligibility: Architectural Inventory. United States Coast Guard Cutter MANTINICUS. Electronic Document, https://mht.maryland.gov/secure/medusa/mapintermediate.aspx?ID=undefined&ID1=undefined&ID2=undefined&Section=doeArchInv&PropertyID=62619&selRec=doeArchInv, accessed June 17, 2021.

2018 USS OAK RIDGE, Floating Dry Dock, U.S. Coast Guard Yard, Curtis Bay. Electronic Document, https://mht.maryland.gov/secure/medusa/mapintermediate.aspx?ID=45169&ID1=45169&ID2=undefined&Section=archInv&PropertyID=63099&selRec=archInv, accessed June 17, 2021.

Attachments

Attachment 1 - Site Location Map

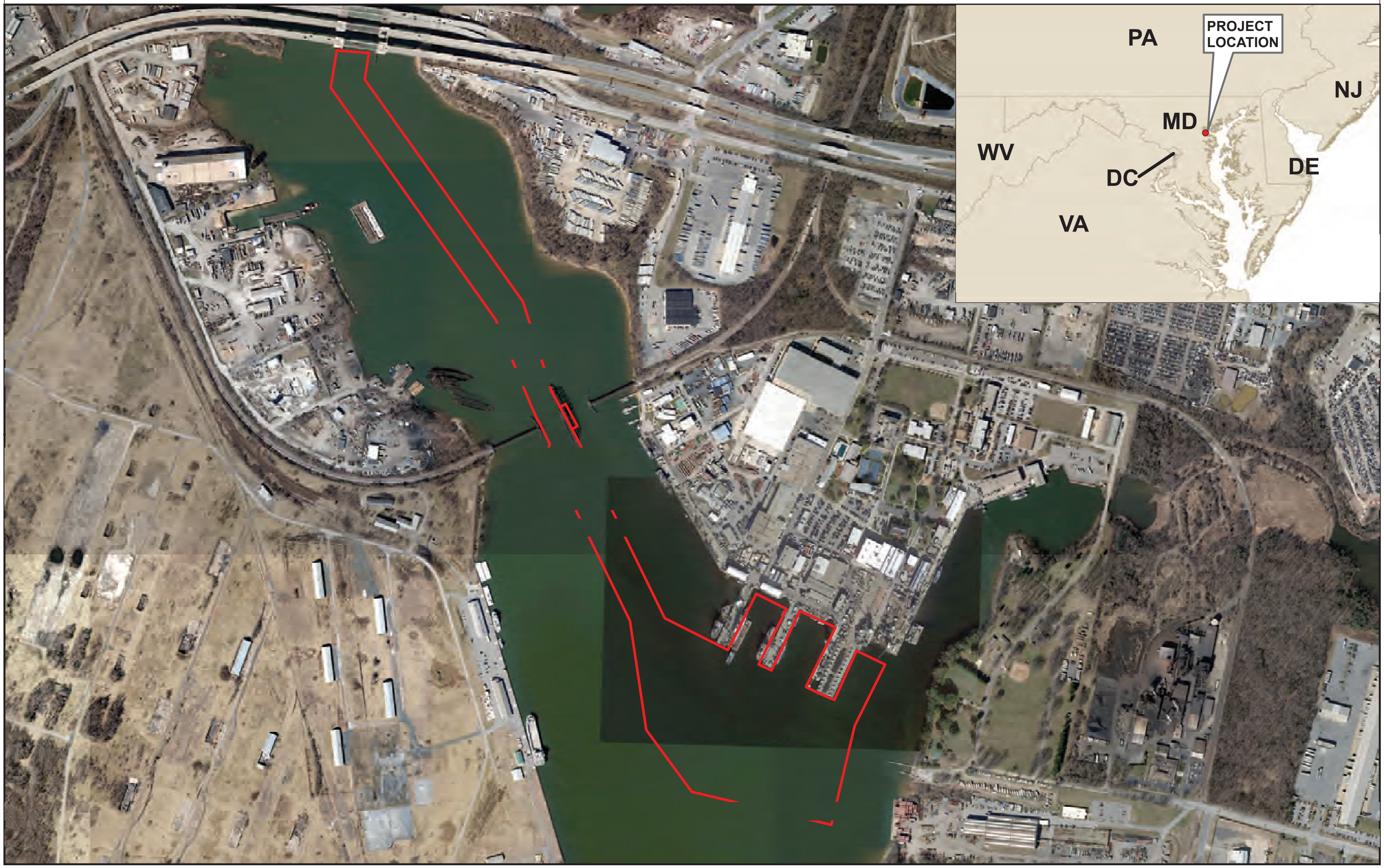
Prepared in Arch D (36" x 24") Landscape Layout

Legend

🟥 Limits of Proposed Dredging

Data Sources:

Six-inch resolution orthoimagery accessed from the Maryland Statewide Imagery Download Tool. Orthoimagery dated 2017. Supplemental imagery referenced from Google Earth.



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1	KMT	6/21/2021

PROJECT NUMBER
60660293

SHEET TITLE
USCG Arundel Project
Aerial Locus Map

FIGURE NUMBER
Attachment 1

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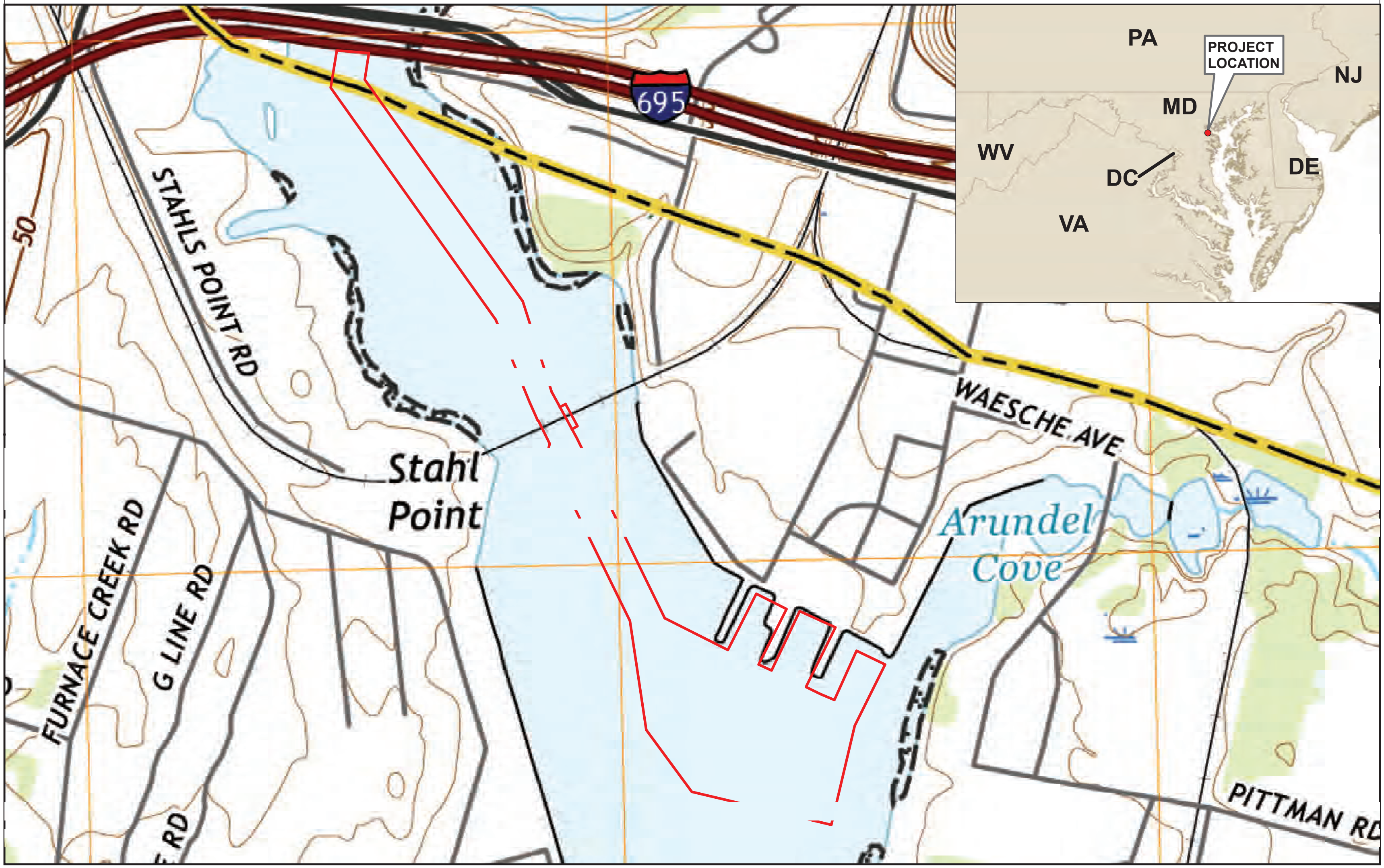
Attachment 2 - Area of Potential Effects Map

Prepared in Arch D (36" x 24") Landscape Layout

Legend

🟥 Limits of Proposed Dredging

Data Sources:
USGS Topo 7.5-minute map for Curtis Bay, MD,
dated 2019, contour interval 10 feet.



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SHEET TITLE
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Topo Locus Map

FIGURE NUMBER
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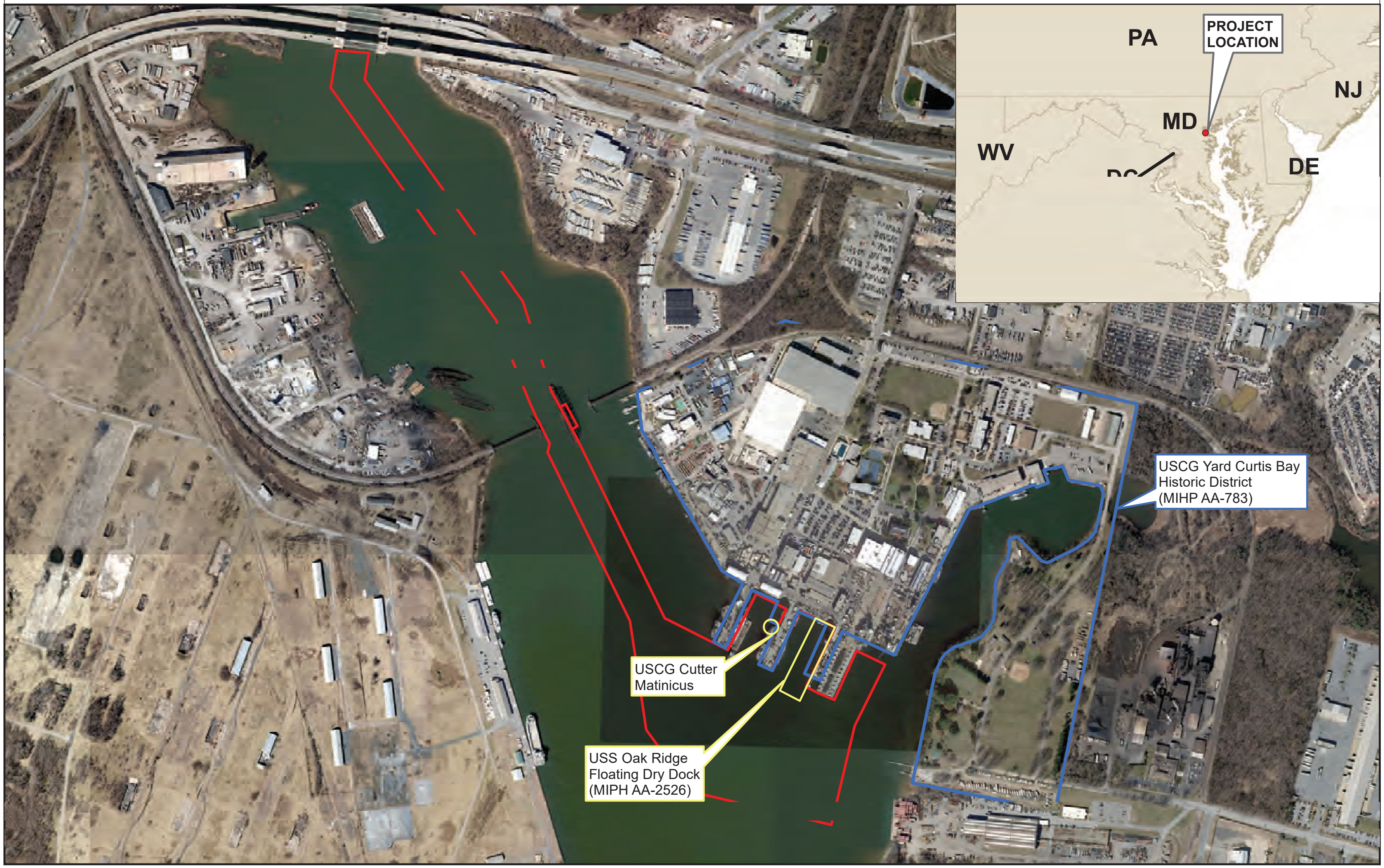
Attachment 3 - Cultural Resources Map

Prepared in Arch D (36" x 24") Landscape Layout

Legend

🟥 Limits of Proposed Dredging

Data Sources:
Six-inch resolution orthoimagery accessed from the Maryland Statewide Imagery Download Tool. Orthoimagery dated 2017. Supplemental imagery referenced from Google Earth. Cultural Resources accesed from Maryland s Cultural Resources Information System, MEDUSA 2021.



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SHEET TITLE
USCG Arundel Project
Cultural Resources Locus Map

FIGURE NUMBER
Attachment 3

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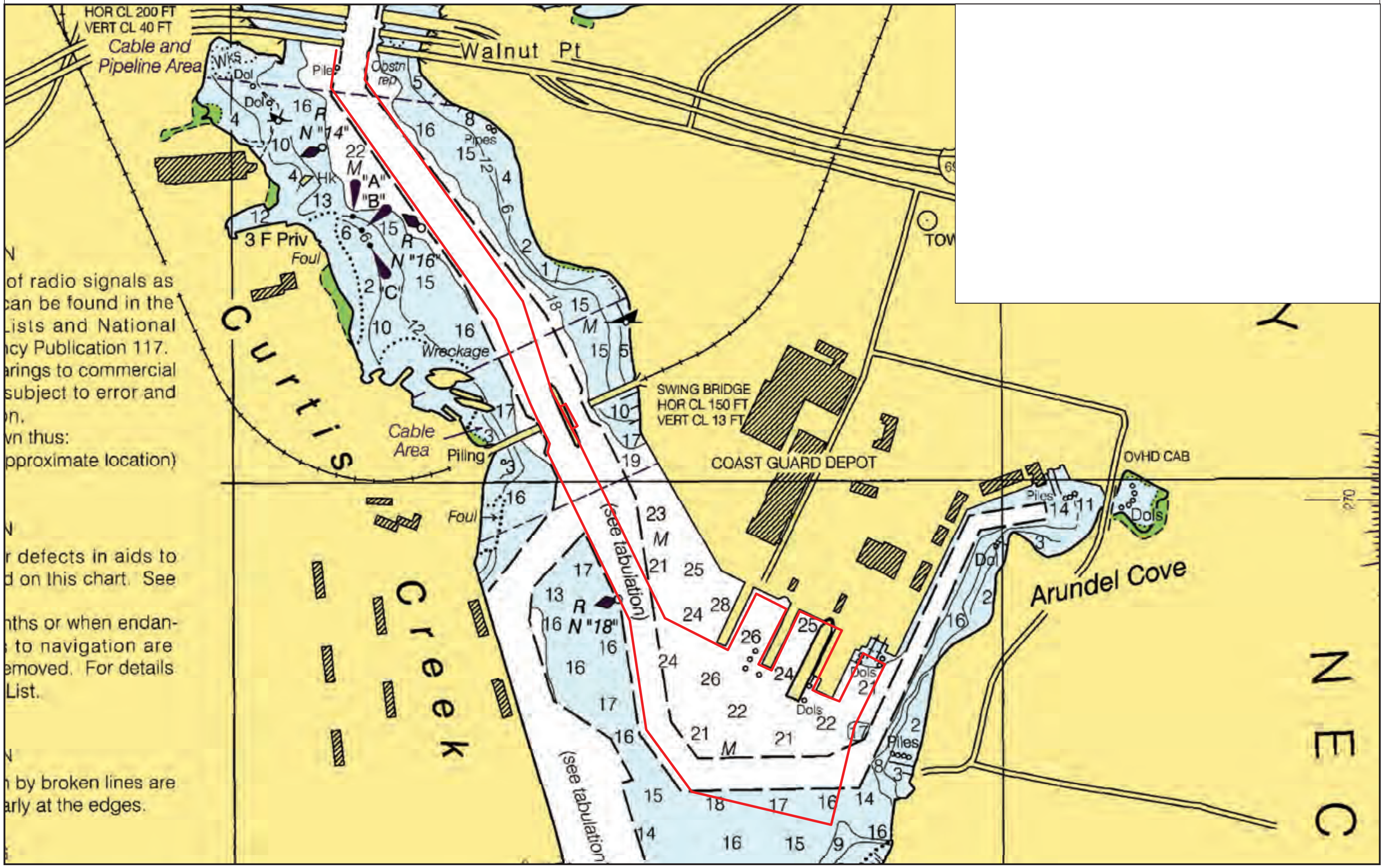
Attachment 4 - NOAA
Navigational Charts

Legend

🟥 Limits of Proposed Dredging

Data Sources:

NOAA Navigational Chart No. 12281, dated 2018, accessed from the NOAA Office of Coast Survey. Soundings shown in feet Mean Lower-Low Water.



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USCG Arundel
Project Locus Map

FIGURE NUMBER

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Legend

Limits of Pr. Syncrolift Dredge (Depth 34.5)

Limits of Pr. Channel Dredge (Depth 25)

2010 ath metr c Sur e

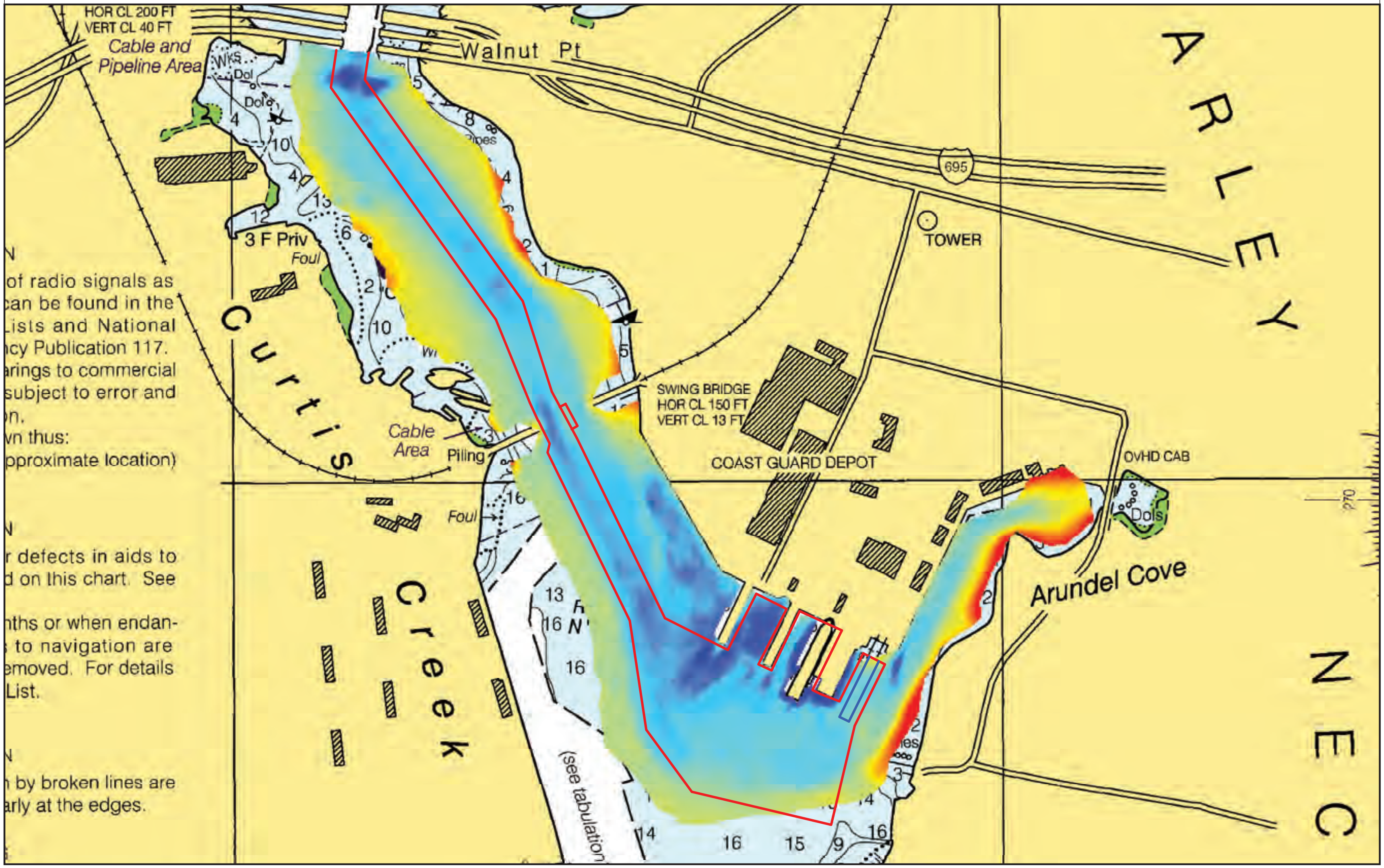
Depth t NAVD

High : -2 ft NAVD88

Low : -36 ft NAVD88

Data Sources:

NOAA Navigational Chart No. 12281, dated 2018, accessed from the NOAA Office of Coast Survey. Soundings shown in feet Mean Lower-Low Water. Bathymetric survey conducted in 2010 for the United States Coast Guard by Waterway Services and Engineering, Ltd. Bathymetric survey shown in feet NAVD88.



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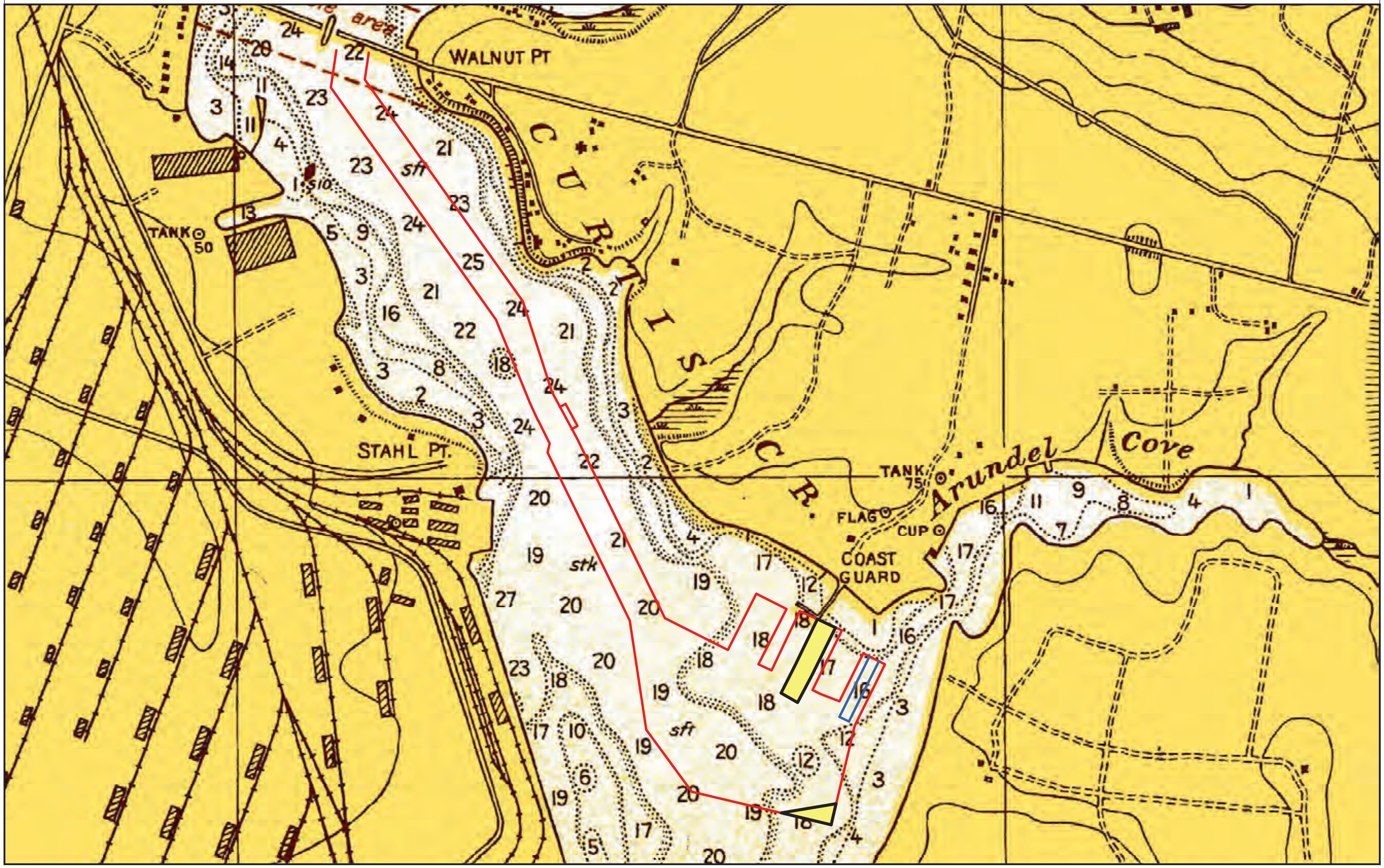
▭ Region Not Surveyed in 2010

— Limits of Pr. Syncrolift Dredge (Depth 34.5)

— Limits of Pr. Channel Dredge (Depth 25)

Data Sources:

Historical NOAA Navigational Chart No. 545-6-19311, dated July 1931, accessed from the NOAA Office of Coast Survey Historical Map Chart Collection. Soundings shown in feet Mean Lower-Low Water.



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Prepared in Arch D (36" x 24") Landscape Layout

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🟨 Region Not Surveyed in 2010

— Limits of Pr. Syncrolift Dredge (Depth 34.5)

— Limits of Pr. Channel Dredge (Depth 25)

Data Sources:

Historical NOAA Navigational Chart No. 549-11-1945, dated June 1945, accessed from the NOAA Office of Coast Survey Historical Map Chart Collection. Soundings shown in feet Mean Lower-Low Water.

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Prepared in Arch D (36" x 24") Landscape Layout

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🟨 Region Not Surveyed in 2010

— Limits of Pr. Syncrolift Dredge (Depth 34.5)

— Limits of Pr. Channel Dredge (Depth 25)

Data Sources:

Historical NOAA Navigational Chart No. 549-7-1966, dated July 1966, accessed from the NOAA Office of Coast Survey Historical Map   Chart Collection. Soundings shown in feet Mean Lower-Low Water.

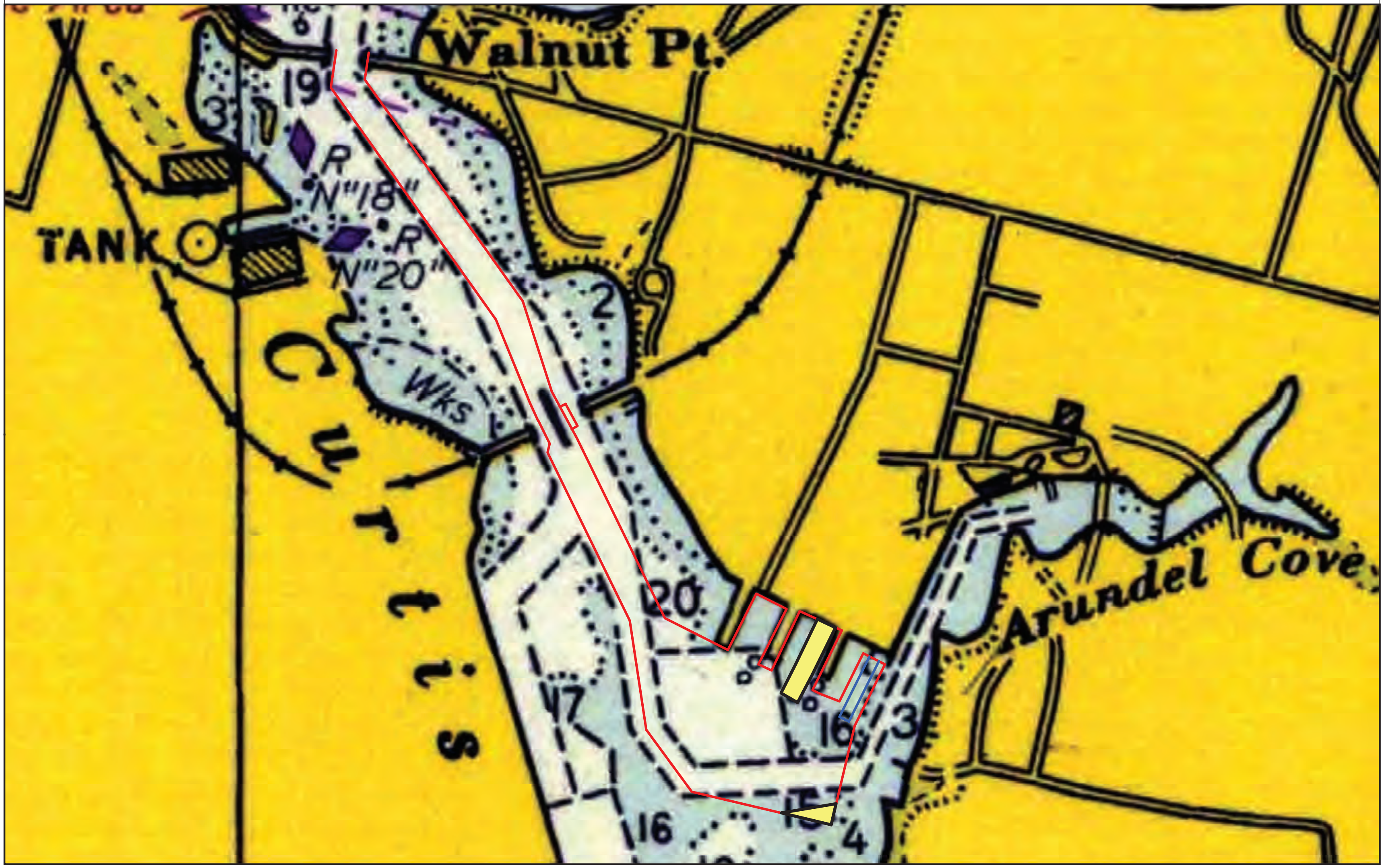

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FIGURE NUMBER

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U.S. Department of Homeland Security

United States Coast Guard

Commanding Officer
United States Coast Guard
Facilities Engineering Coast
Guard Yard

2401 Hawkins Point Road
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Phone: (410) 636-4098
Email: Avery.L.Weston@uscg.mil

30 November 2021

Delaware Tribe of Indians
P.O. Box 64
Pocono Lake, PA 18347
POC: Susan Bachor, Preservation Representative (East Coast)
sbachor@delawaretribe.org

Dear Delaware Tribe of Indians:

The purpose of this letter is to solicit comments regarding the United States Coast Guard’s (USCG) intent to conduct dredging activities at USCG Yard (herein referred to as CG Yard) in Baltimore, Anne Arundel County, Maryland (Proposed Action). The USCG is preparing an Environmental Assessment (EA) to evaluate the potential impacts associated with the Proposed Action pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 United States Code §4321 et seq.), the Council on Environmental Quality Regulations (40 Code of Federal Regulations [CFR] Parts 1500-1508), and USCG Commandment Instruction (COMDTINST) M16475.1D, *Implementing Procedures and Policy for Considering Environmental Impacts*. By this letter, the USCG is initiating consultation with your office pursuant to Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulations (36 Code of Federal Regulations [CFR] Part 800) “Protection of Historic Properties” (Section 106).

Project Background

The CG Yard is comprised of approximately 113 acres along the eastern shoreline of Curtis Creek, a tributary of the Patapsco River, and is approximately 6 miles south of downtown Baltimore (**Attachment 1**). The Chesapeake Bay is approximately six miles east of the CG Yard via the Patapsco River. The CG Yard is located in an extensively developed and industrialized area of Baltimore. The CG Yard has operated continuously since 1899 and is the sole USCG-operated shipyard in the U.S. All major vessel repairs, maintenance, and overhauls for the USCG fleet are conducted at the CG Yard.

Description of Undertaking

The Undertaking, as defined by Section 106, includes two main components: 1) maintenance dredging in and around the CG Yard’s Syncrolift Facility, and 2) improvement dredging in an area extending from the Interstate-695 bridge (otherwise known as Bascule Bridge) to CG Yard’s Pier 1 and Pier 3. The Syncrolift is used to transport vessels for repair and maintenance work. Dredging would occur up to 34.5 feet, the historic depth, around the Syncrolift Facility. The area between Bascule Bridge and Pier 3 would be dredged up to 27.5 feet to support a new class of cutters (Offshore Patrol Cutter [OPC] and National Security Cutter [NSC]). The total dredging amount is estimated to be approximately 400,000 cubic yards (excluding any over-dredge volume). Prior to the dredging, sediment samples will be taken from 18 locations using a 4-inch vibracore system; all sediment samples will be confined to the area proposed for dredging and no sediment sampling will occur outside previously dredged areas.

The purpose of the Undertaking is to provide the necessary in-water improvements to allow the new OPC and NSC access to the shipyard for maintenance and repair work, maintain the viability of the Syncrolift Facility, and meet USCG mission requirements at the CG Yard. The Proposed Action is needed to address insufficient water depths within the navigation channel from the I-695 Bridge, the turning basin in front of the CG Yard within Curtis Creek, and the vessel berth area between Piers 1, 2, and 3 to accommodate the new USCG cutters and their associated draft (27.5 feet). The Proposed Action is also needed to remove accumulated sediment in the vicinity of the Syncrolift, so that water depths are consistent with its historic depth (34.5 feet) and original construction in 1997. This facility, which connects to the CG Yard's upland rail system, is used currently for the majority of dry dock repair and maintenance work performed at the CG Yard. As the only USCG shipyard, the Yard needs to be accessible by USCG vessels and have the appropriate facilities to conduct maintenance of these USCG vessels to meet USCG mission requirements.

The maintenance dredging of an estimated 10,000 cubic yards of material would likely be performed using hydraulic dredging. Slurry from hydraulic dredging would be transported to a dewatering area on Grove Point located on CG Yard property via a pipeline. Slurry would be dewatered so that all consolidated material would be dry and able to be loaded onto trucks for off-site disposal in accordance with all required permits and approvals.

The improvement dredging, which would generate an estimated 390,000 cubic yards of material, would likely be performed using mechanical dredging methods. Dredging equipment would include a floating crane barge and a scow/barge. A clamshell bucket attached to a crane on the crane barge would be used to scoop sediment from the floor of Curtis Creek, and transfer the dredged material to the scow/barge until the desired depth is achieved. All dredged material would be transported and disposed of appropriately and in accordance with all required permits and approvals.

Area of Potential Effects

The Area of Potential Effects (APE), as defined in 36 CFR 800.16(d), is "the geographic area or areas within which an undertaking may directly or indirectly cause alteration in the character or use of historic properties, if such properties exist. The APE is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking." The APE for archaeological resources includes the limits of proposed dredging. As the dredging will be temporary and there will be no temporary or permanent above-ground structures or buildings built as a result of this Undertaking, the APE for above-ground resources corresponds to the APE for archaeological resources (**Attachment 2**).

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Descriptions of the USCG Yard Curtis Bay Historic District and the USS Oak Ridge Floating Dry Dock follow.

USCG Yard Curtis Bay Historic District (AA-783)

On 5 August 1983, an area of CG Yard was listed as a historic district in the NRHP (AA-783). The USCG Yard Curtis Bay Historic District (AA-783) is listed in the NRHP and includes the northeast quadrant of CG Yard, a southeastern section along the western shore of Arundel Cove, and a large square center portion (Moore 1981). The historic district is an industrial complex that occupies 115 acres surrounding Arundel Cove on the southeast shore of Curtis Creek, in northern Anne Arundel County and southern Baltimore City. The USCG Yard Curtis Bay Historic District is composed of 28 contributing resources and 13 non-contributing resources and is primarily a collection of utilitarian structures, metal and/or brick, that have been modified, expanded, or otherwise altered to meet changing demands of production and technology (Maryland Historical Trust [MHT] 2016). The largest modern industrial plant in the USCG, Baltimore Yard has been building and servicing vessels of the USCG, and its predecessor, the Revenue Cutter Service, since 1899. CG Yard is associated with changes and developments in the military shipbuilding industry. Established as the result of the Spanish-American War, CG Yard experienced its most significant periods of expansion during the subsequent two World Wars (MHT 2016).

The USCG Yard Curtis Bay Historic District is significant at the local, state, and national levels under Criterion A for its association with trends in naval preparedness, and changes and developments in the military shipbuilding industry. Shipbuilding has traditionally been a key industry in the southeast Baltimore area, and CG Yard was part of this important industry that defined the region (Moore 1981). The historic district is also significant at the national level under Criterion C for its design and construction in that the contributing historic resources embody the distinctive characteristic of industrial and military/government buildings of the World War II period. Although the period of significance (POS) for the USCG Yard Curtis Bay Historic District was not defined in the 1981 NRHP evaluation, the POS is interpreted to begin at 1899, the initial year CG Yard began building and servicing the vessels for the USCG, and 1945, by which time the majority of the historic buildings at CG Yard were constructed (Moore 1981). The boundaries of the USCG Yard Curtis Bay Historic District are shown on **Attachment 3**.

USS Oak Ridge Floating Dry Dock (MIHP AA-2526)

The USS Oak Ridge Floating Dry Dock (MIHP AA-2526) was determined eligible for listing in the NRHP on 14 March 2018. It is a closed basin floating dry dock located along Pier 3. It was originally commissioned in 1944 and was recommissioned in 1963 as the USS Oak Ridge; it was renovated between 2011 and 2013. Built of welded steel, the floating dry dock measures 536 feet in length with a breadth of 81 feet and a displacement of 9,700 tons. It is eligible for the NRHP under Criterion A for its association with events relating to World War II and the Cold War, and Criterion C for exemplifying engineering design, construction methods, and materials characteristic of middle to late twentieth century naval floating docks for overseas deployment. Its period of historical significance spans 1944 through 1968. This resource is no longer extant at the CG Yard as it was removed in 2018; its historical location is shown on **Attachment 3.**

Archaeological Resources

MEDUSA does not show any previously recorded archaeological sites or marine archaeological remote sensing surveys within the APE, thought the APE does intersect with the polygon for the Phase I terrestrial archaeological survey of the CG Yard conducted in 1981 by Dennis J. Pogue, Wayne E. Clark, and Louis E Akerson.

The current depths of the navigation channel and boat basin are shown in **Attachment 4: Figures 1 - 2**. A review of historic and modern navigational charts produced by NOAA reveal that the bulk of the APE was previously dredged to a depth of 22 feet during two dredging campaigns starting in 1940 and again in 1945; smaller portions of the APE were dredged to a depth of 35 to 37 feet (**Table 1**). Depth data within the proposed dredging prism (i.e., APE) indicates that portions of the existing prism currently exceed the proposed 27.5-feet depth limit. Those areas of the proposed dredging prism above the 27.5-feet target depth were previously dredged to a depth of 22 feet in the 1940s, likely using bucket dredges that regularly dig deeper than the minimum dredge target depth based on the time period during which the dredging occurred. Use of a bucket dredge would have disturbed 1 to 2 feet of sediment below the 22-feet target depth of the 1940s-era dredging. Historic charts of Curtis Creek dating from the 1930s through 1960s show the development of the USCG facility and the establishment of the dredged navigation channels and subsequent land development along Curtis Creek Channel and Arundel Channel (**Attachment 4: Figures 3 - 5**).

Table 1. Dredging Chronology

Date	Depth	Location	Comments
Jul. 3, 1930	37-foot depth	Portion of channel to Baltimore lying between 37-foot 1930 depth curve near Baltimore Light to Sparrows Point entrance channel; widen angle between Fort McHenry and Ferry Bar section; and for width of 400 feet in Curtis Bay section.	REPORT OF THE SECRETARY OF THE ARMY ON CIVIL WORKS ACTIVITIES FOR FY 1989; Annual report fiscal year1989 of the Secretary of the Army on Civil Works activities (1 October1988 - 30 September1989) V2 PT 0 (oclc.org)
Oct. 17,1940	22-foot depth	For 22-, 18-, and 15-foot channels in Curtis Creek from 22-foot depth below 1940 Pennington Avenue Bridge to upper end of marginal wharf of U.S. Ordnance Depot.	REPORT OF THE SECRETARY OF THE ARMY ON CIVIL WORKS ACTIVITIES FOR FY 1989; Annual report fiscal year1989 of the Secretary of the Army on Civil Works activities (1 October1988 - 30 September1989) V2 PT 0 (oclc.org)
Mar. 2, 1945	35-foot depth	Curtis Creek 200 feet wide and 35 feet deep from head of existing 35-foot project channel in Curtis Bay to a point in the creek about 750 feet below Pennington Avenue Bridge.	REPORT OF THE SECRETARY OF THE ARMY ON CIVIL WORKS ACTIVITIES FOR FY 1989; Annual report fiscal year1989 of the Secretary of the Army on Civil Works activities (1 October1988 - 30 September1989) V2 PT 0 (oclc.org)
Mar. 2, 1945	22-feet deep	A channel 22 feet deep and 200 feet wide from 22-foot depth curve south of 1945 Baltimore & Ohio R.R. bridge about 2,800 feet to vicinity of Arundel Cove, thence 100 feet wide in Arundel Cove for about 2,100 feet; with an anchorage basin about 700 feet square adjacent to channel southwesterly of Coast Guard wharf.	REPORT OF THE SECRETARY OF THE ARMY ON CIVIL WORKS ACTIVITIES FOR FY 1989; Annual report fiscal year1989 of the Secretary of the Army on Civil Works activities (1 October1988 - 30 September1989) V2 PT 0 (oclc.org)

The proposed enlargement of the USCG turning basin and docks from the existing footprint includes a small triangular region measuring approximately 700 feet long by 200 feet wide along the southeastern corner of the APE at the intersection of the Arundel Channel and the Curtis Creek Channel that has not been previously subjected to an archaeological remote sensing survey (**Attachment 4: Figure 2**). This area has been substantially dredged to 17 feet, allowing construction barges and support vessels to dock at a large concrete pier and bulkhead presently owned by Cianbro Marine (605 Pittman Rd., Baltimore, MD), but which appears on navigation charts dating to the 1930s. A review of aerial photographs showed large barges and tugboats traversing this corner during the 1980s.

Based on the development of the navigation channels, shoreline alterations, and associated dredging, there is a low potential for the APE to contain intact, significant submerged cultural resources.

Assessment of Effects

Based on the proposed scope of work, the USCG has determined that the Undertaking has the potential to affect historic properties. After applying the criteria of adverse effect as found in 36 CFR 800.5(a)(1), USCG has further determined that the Proposed Action would have ***No Adverse Effect*** on the NRHP-listed USCG Yard Curtis Bay Historic District and the NRHP-eligible USS Oak Ridge Floating Dry Dock. No significant archaeological resources are known within the APE, and the APE has a low potential to contain significant archaeological resources. As such, the USCG has determined that there will be ***No Effect*** to archaeological historic properties by the Undertaking.

Conclusions

We are seeking input from your Tribe regarding any information or potential environmental concerns associated with the Proposed Action in accordance with 36 CFR Part 800.2, Executive Order 13175, and Section 106. Please provide any comments, concerns, information, studies, or other data you may have regarding the Proposed Action within **thirty (30) days** of receipt of this letter to enable us to complete this phase of the project within the scheduled timeframe. All responses will be considered for incorporation in the EA. We look forward to and welcome your participation in this analysis.

The USCG has contracted AECOM to facilitate the Section 106 process. If you have comments or information relevant to the development of the EA, please direct your correspondence to Mr. Scott Seibel at AECOM, 12420 Milestone Center Drive, Suite 150, Germantown, MD 20876 or via (301) 213-7819 or scott.seibel@aecom.com.

Sincerely,

WESTON.AVERY.LOUIS.1152330487

Digitally signed by WESTON.AVERY.LOUIS.1152330487
Date: 2021.11.30 19:56:23 -05'00'

LCDR Avery Weston, PE, PMP

Enclosures:

Attachment 1 – Site Location Map
Attachment 2 – Area of Potential Effects Map
Attachment 3 – Cultural Resources Map
Attachment 4 – NOAA Navigational Charts

References

2016 U.S. Coast Guard Yard Curtis Bay. Electronic Document, https://mht.maryland.gov/secure/medusa/mapintermediate.aspx?ID=1920&ID1=1920&ID2=undefined&Section=archInv&PropertyID=1920&selRec=archInv, accessed June 17, 2021.

2017 Determination of Eligibility: Architectural Inventory. United States Coast Guard Cutter MANTINICUS. Electronic Document, https://mht.maryland.gov/secure/medusa/mapintermediate.aspx?ID=undefined&ID1=undefined&ID2=undefined&Section=doeArchInv&PropertyID=62619&selRec=doeArchInv, accessed June 17, 2021.

2018 USS OAK RIDGE, Floating Dry Dock, U.S. Coast Guard Yard, Curtis Bay. Electronic Document, https://mht.maryland.gov/secure/medusa/mapintermediate.aspx?ID=45169&ID1=45169&ID2=undefined&Section=archInv&PropertyID=63099&selRec=archInv, accessed June 17, 2021.

Attachments

Attachment 1 - Site Location Map

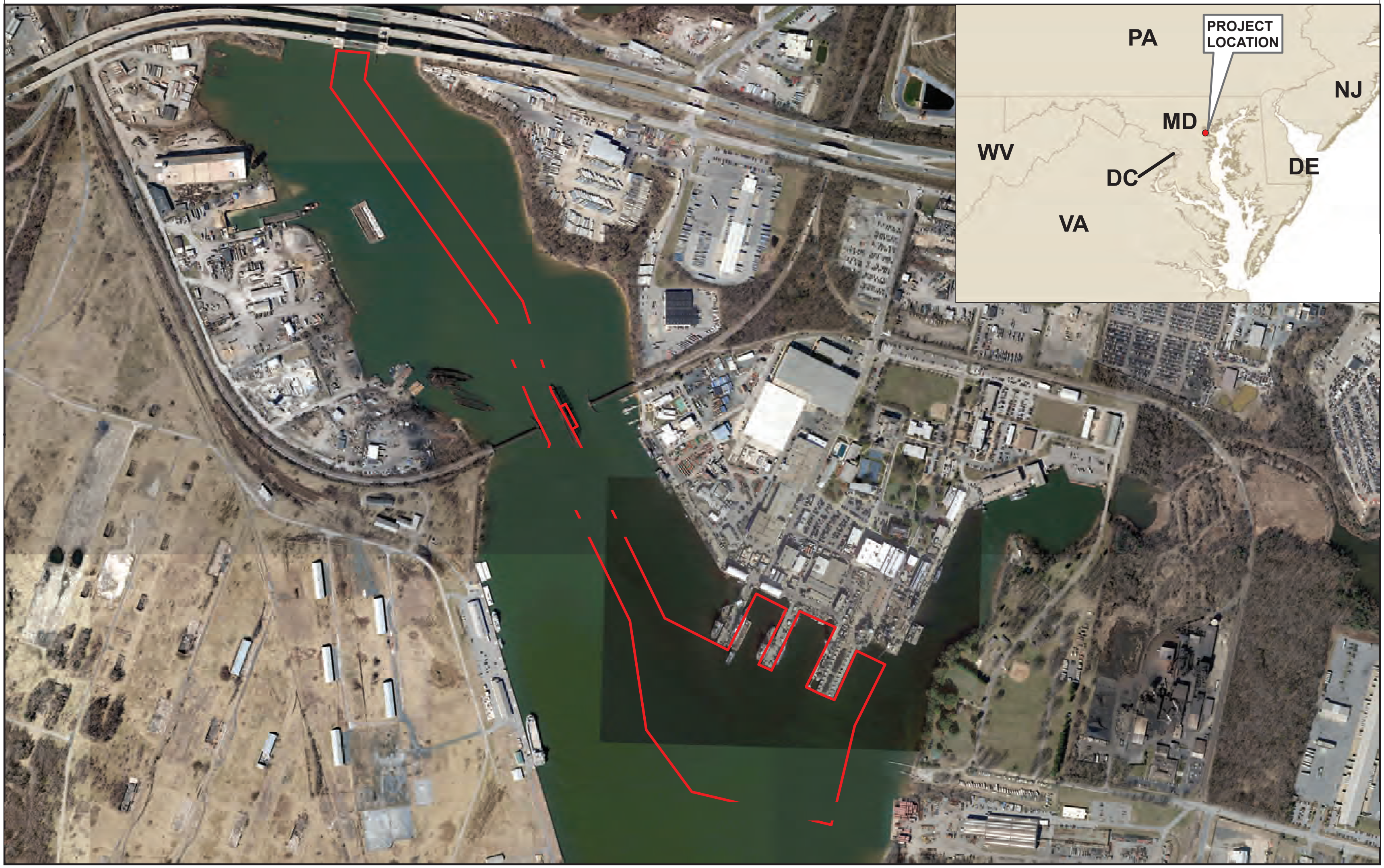
Prepared in Arch D (36" x 24") Landscape Layout

Legend

🟥 Limits of Proposed Dredging

Data Sources:

Six-inch resolution orthoimagery accessed from the Maryland Statewide Imagery Download Tool. Orthoimagery dated 2017. Supplemental imagery referenced from Google Earth.



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Aerial Locus Map

FIGURE NUMBER
Attachment 1

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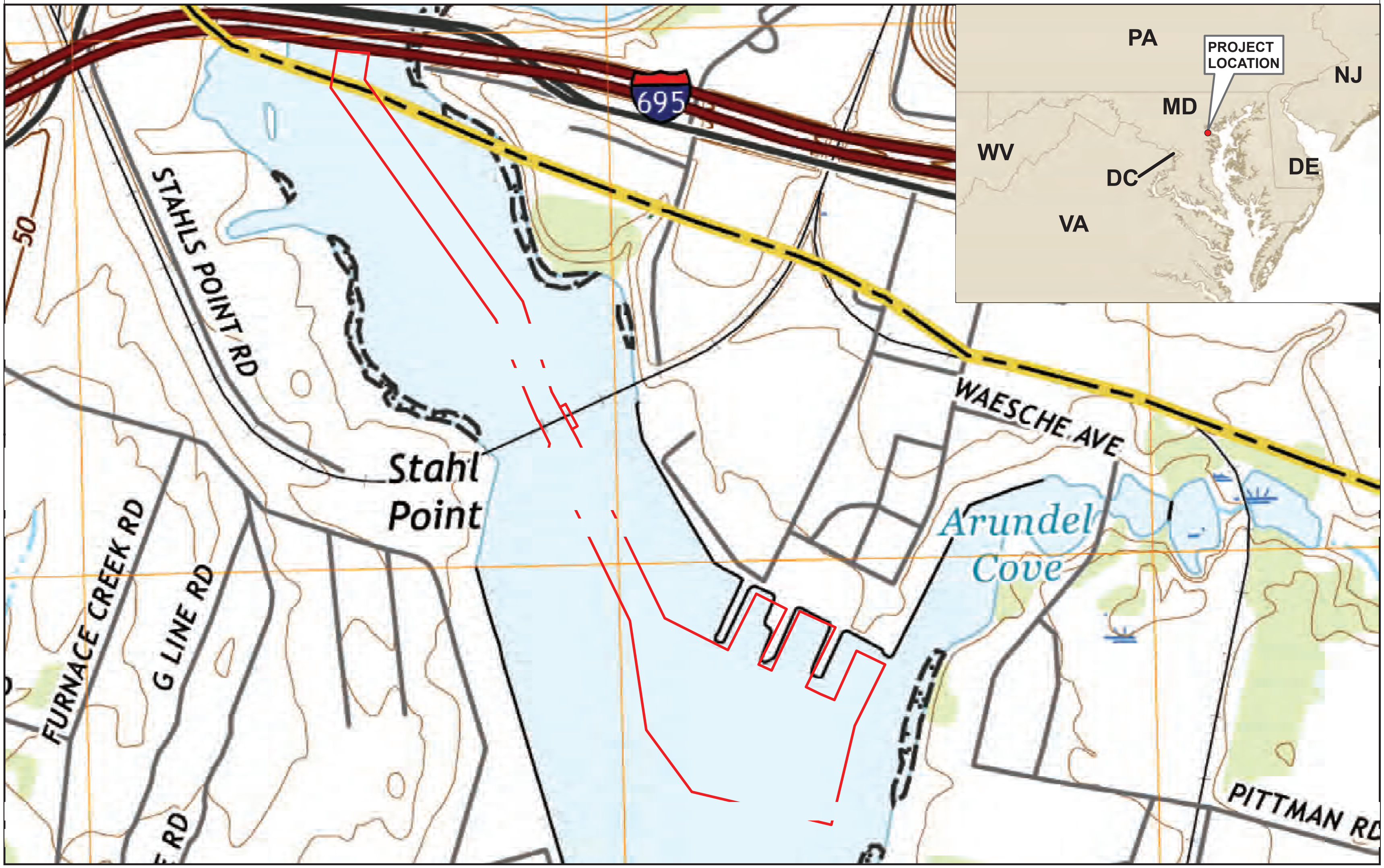
Attachment 2 - Area of Potential Effects Map

Prepared in Arch D (36" x 24") Landscape Layout

Legend

— Limits of Proposed Dredging

Data Sources:
USGS Topo 7.5-minute map for Curtis Bay, MD, dated 2019, contour interval 10 feet.



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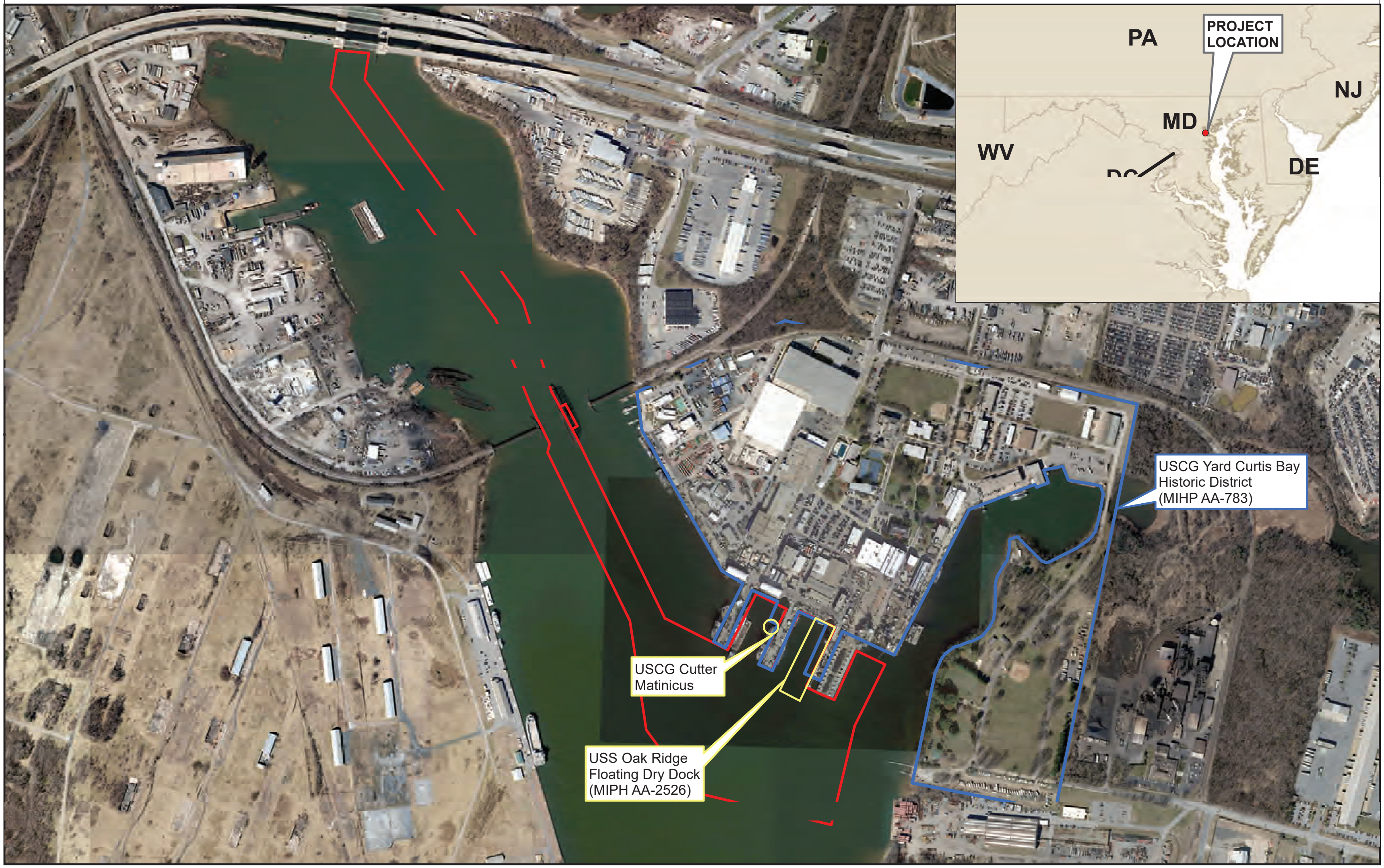
Attachment 3 - Cultural Resources Map

Prepared in Arch D (36" x 24") Landscape Layout

Legend

— Limits of Proposed Dredging

Data Sources:
Six-inch resolution orthoimagery accessed from the Maryland Statewide Imagery Download Tool. Orthoimagery dated 2017. Supplemental imagery referenced from Google Earth. Cultural Resources accesed from Maryland s Cultural Resources Information System, MEDUSA 2021.



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Cultural Resources Locus Map

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Attachment 4 - NOAA Navigational Charts

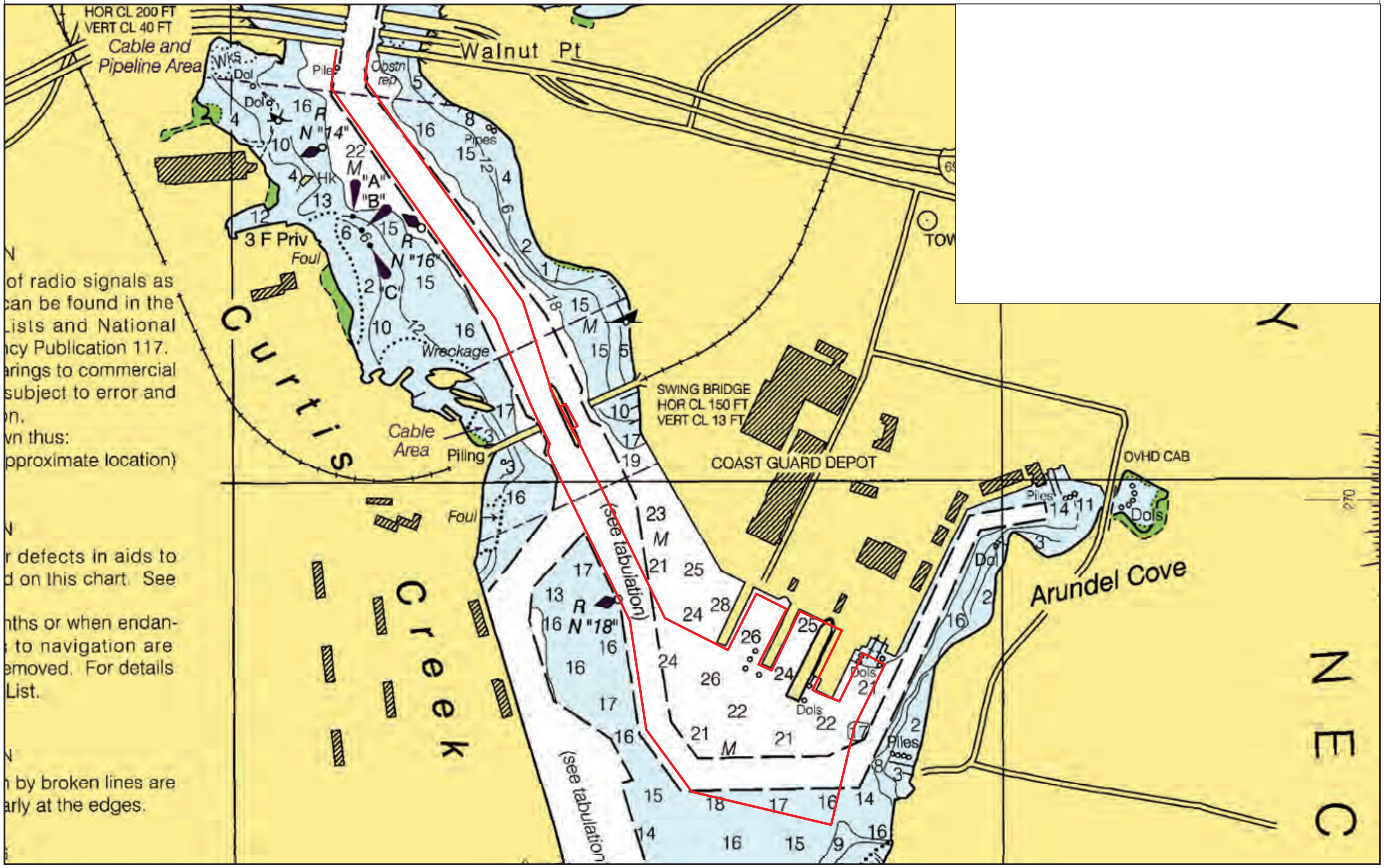
Prepared in Arch D (36" x 24") Landscape Layout

Legend

🟥 Limits of Proposed Dredging

Data Sources:

NOAA Navigational Chart No. 12281, dated 2018, accessed from the NOAA Office of Coast Survey. Soundings shown in feet Mean Lower-Low Water.



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- Limits of Pr. Syncrolift Dredge (Depth 34.5)
- Limits of Pr. Channel Dredge (Depth 25)

2010 ath metr c Sur e

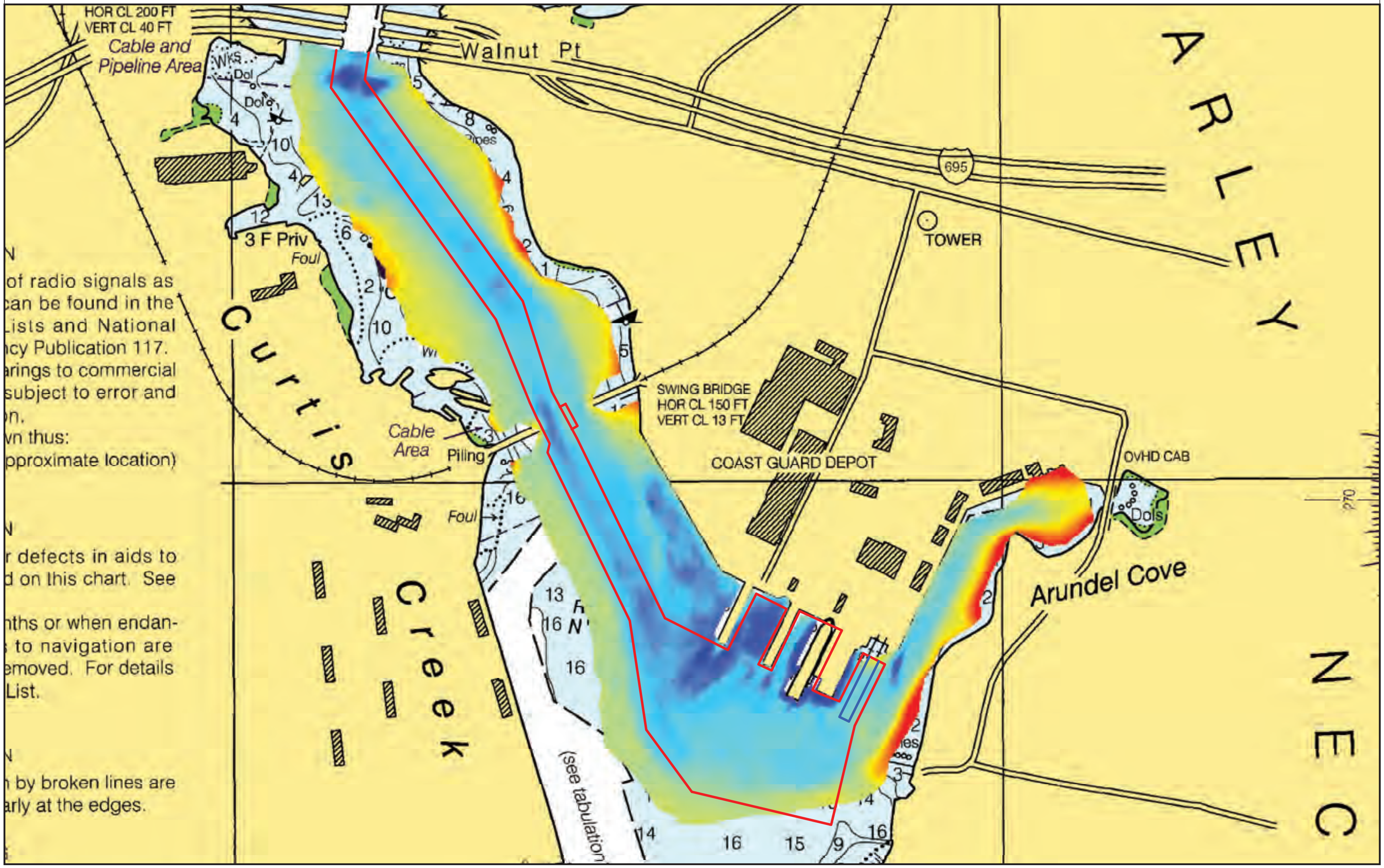
Depth t NAVD

High : -2 ft NAVD88

Low : -36 ft NAVD88

Data Sources:

NOAA Navigational Chart No. 12281, dated 2018, accessed from the NOAA Office of Coast Survey. Soundings shown in feet Mean Lower-Low Water. Bathymetric survey conducted in 2010 for the United States Coast Guard by Waterway Services and Engineering, Ltd. Bathymetric survey shown in feet NAVD88.



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🟨 Region Not Surveyed in 2010

— Limits of Pr. Syncrolift Dredge (Depth 34.5)

— Limits of Pr. Channel Dredge (Depth 25)

Data Sources:

Historical NOAA Navigational Chart No. 545-6-19311,
dated July 1931, accessed from the NOAA Office of
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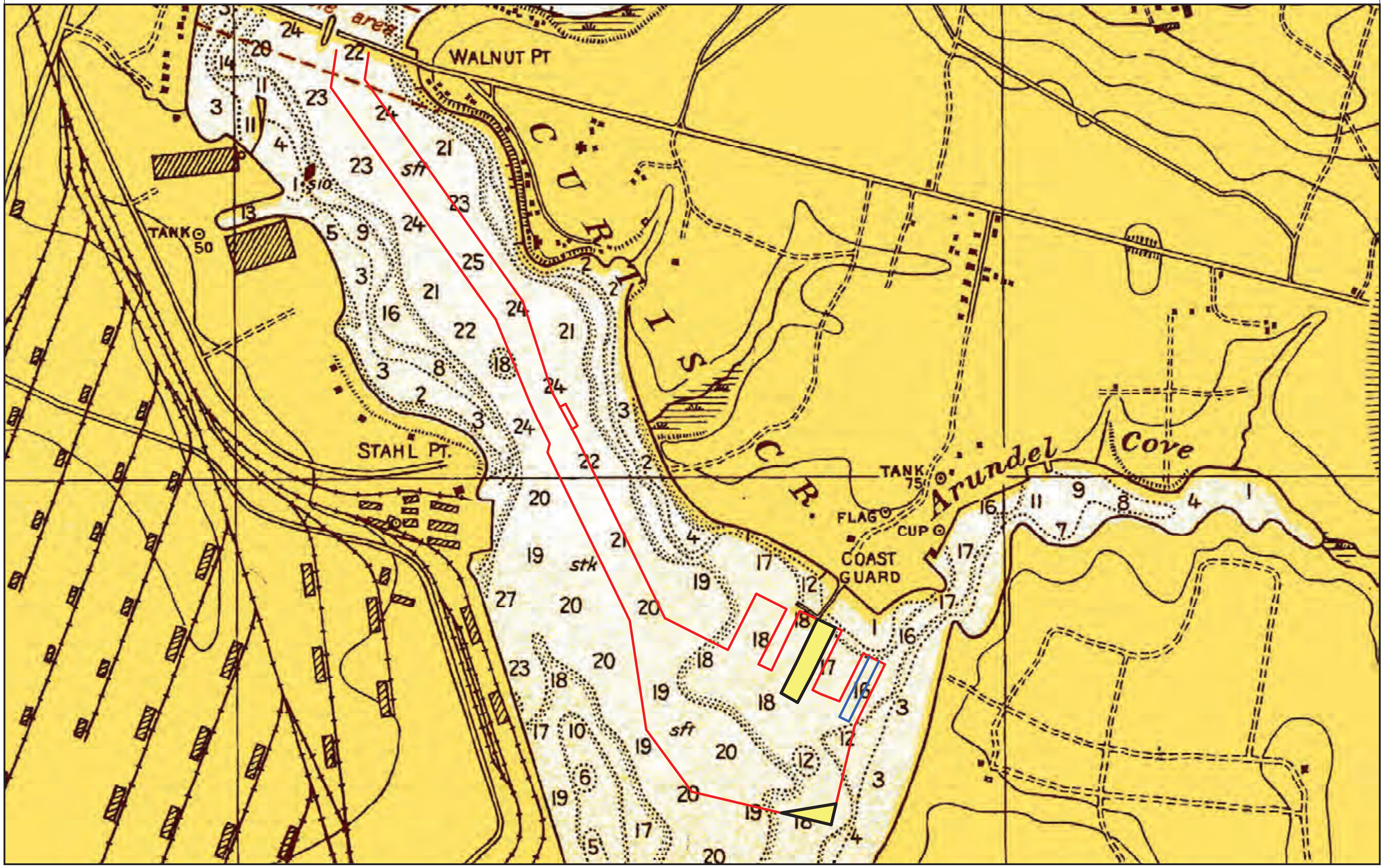
Soundings shown in feet Mean Lower-Low Water.



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Prepared in Arch D (36" x 24") Landscape Layout

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🟨 Region Not Surveyed in 2010

— Limits of Pr. Syncrolift Dredge (Depth 34.5)

— Limits of Pr. Channel Dredge (Depth 25)

Data Sources:

Historical NOAA Navigational Chart No. 549-11-1945, dated June 1945, accessed from the NOAA Office of Coast Survey Historical Map Chart Collection. Soundings shown in feet Mean Lower-Low Water.

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Prepared in Arch D (36" x 24") Landscape Layout

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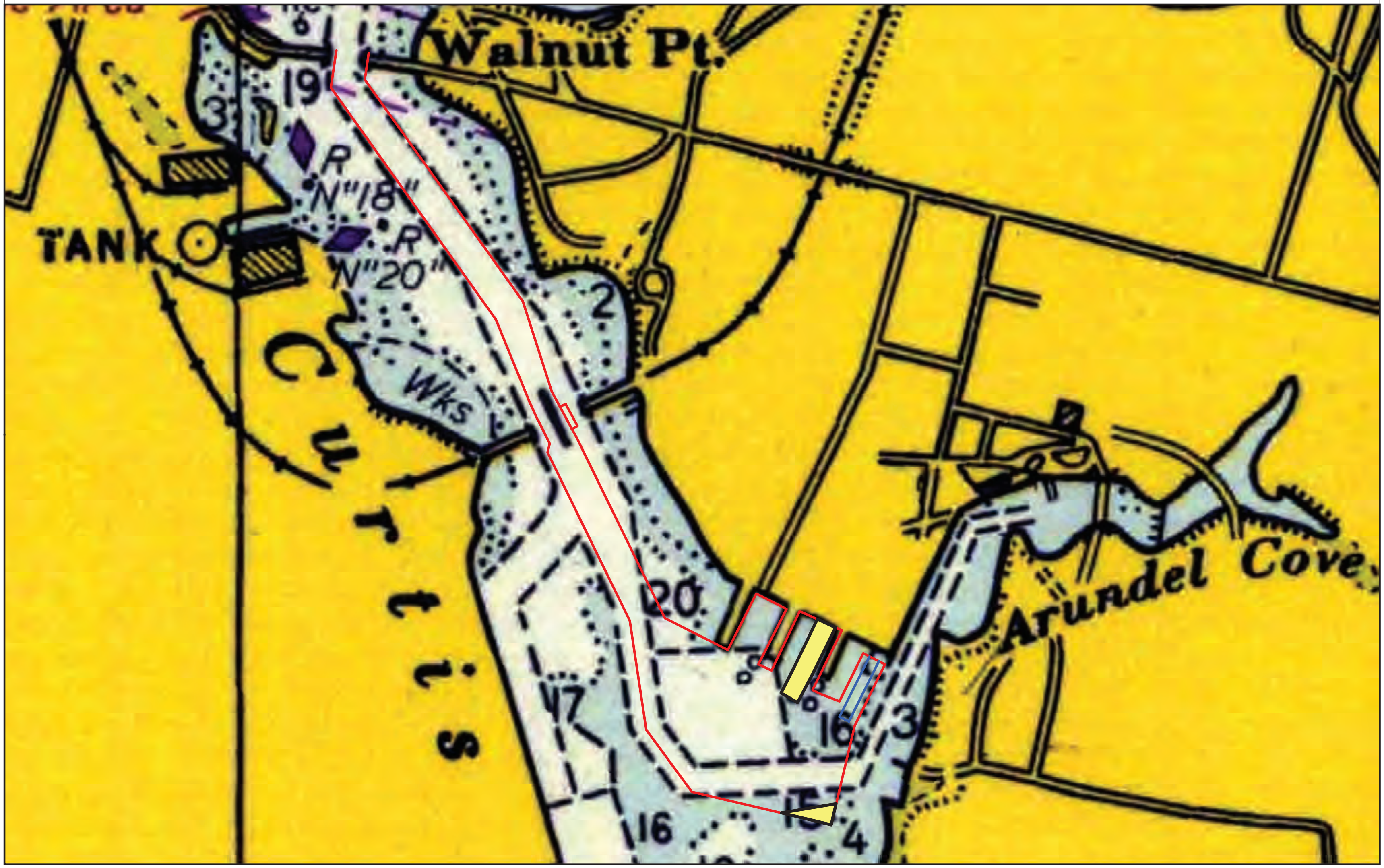
🟨 Region Not Surveyed in 2010

━ Limits of Pr. Syncrolift Dredge (Depth 34.5)

━ Limits of Pr. Channel Dredge (Depth 25)

Data Sources:

Historical NOAA Navigational Chart No. 549-7-1966, dated July 1966, accessed from the NOAA Office of Coast Survey Historical Map   Chart Collection. Soundings shown in feet Mean Lower-Low Water.



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Appendix C – Soil Sampling Survey Results

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AECOM

United States Coast Guard Yard Dredge Planning and Permitting Sampling and Analysis Report

U.S. Coast Guard Yard
2401 Hawkins Point Road
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August 2022

Delivering a better world

United States Coast Guard Yard
Dredge Planning and Permitting
Sampling and Analysis Report

Prepared for:

U.S. Coast Guard Yard
LT Holly Moore
Facilities Engineering
2401 Hawkins Point Road
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Appendices*

Appendix A USCS Coring Logs

Appendix B Normandeau Field Sampling Sheets

Appendix C Eurofins/Environment Testing America Analytical Reports

*The detailed appendices for this Soil Sampling and Analysis Report are located in the Administrative Record for the EA.

Acronyms and Abbreviations

ASTM	ASTM International
CAB	Cellulose acetate butyrate
DGPS	Differential Global Positioning System
DRO	Diesel Range Organics
ft	Feet
GPS	Global Positioning System
MDOT	Maryland Department of Transportation
mg/kg	Milligrams per kilogram
MLLW	Mean Lower Low Water
MPA	Maryland Port Administration
MS/MSD	Matrix spike / matrix spike duplicate
ORO	Oil Range Organics
PAHs	Polycyclic Aromatic Hydrocarbons
PCB	Polychlorinated Biphenyl
PID	Photoionization detector
RCRA	Resource Conservation and Recovery Act
SVOC	Semivolatile organic compound
TCLP	Toxicity Characteristic Leaching Procedure
TDL	Target Detection Limit
TPH	Total Petroleum Hydrocarbons
ug/kg	Micrograms per kilogram
USACE	U.S. Army Corps of Engineers
USCG	United States Coast Guard
USCS	Unified Soil Classification System
USEPA	United States Environmental Protection Agency
VOC	Volatile organic compound

1 Introduction

The United States Coast Guard (USCG) Yard in Curtis Bay, Maryland is planning for the maintenance and repair of a new class of cutters (Offshore Patrol Cutter and National Security Cutter) at the Yard. Maintenance dredging of the ship lift area and improvement dredging of the channels extending from the I-695 bridge (otherwise known as Bascule Bridges) to the Yard's Pier 1 and Pier 3 is required to accomplish this. **Figure 1** and **Figure 2** present the project location and site plan, respectively. The intent of this work is to dredge to a depth of 34.5 feet (ft) (via hydraulic dredging) in the Shiplift area and to a depth of 27.5 ft (via mechanical dredging) in all other areas to ensure operation of the Shiplift to its full depth and improvement of navigable channels for the new fleet. USCG has contracted AECOM to assist with sediment sampling and dredge permitting.

2 Purpose and Scope of Sediment Sampling

The purpose of this sampling and analysis program is to obtain necessary data to determine the chemical and physical characteristics of the sediment for dredge spoil disposal planning.

The Scope of Work for the sampling and analysis consists of the following:

- Collect a total of six composite sediment samples from 18 core locations within the dredge prism (**Figure 3 – Sediment Sample Locations**).
- Core composites grouped by location as follows:
    - BERTHCOMP = BERTH-1 + BERTH-2 + BERTH-3
    - BASINCOMP1 = BASIN-1 + BASIN-2 + BASIN-3
    - BASINCOMP2 = BASIN-4 + BASIN-5 + BASIN-6
    - CHANNCOMP1 = CHANN-1 + CHANN-2 +CHANN-3
    - CHANNCOMP2 = CHANN-4 + CHANN-5 + CHANN-6
    - CHANNCOMP3 = CHANN-7 + CHANN-8 + CHANN-9
- Perform laboratory chemical and geotechnical analysis of the sediment samples in accordance with Maryland Port Administration (MPA) Dredged Material Placement Right of Entry Application, Appendix D (Analysis of Material to be Dredged) requirements; and
- Prepare a report to document the field activities and results of the chemical and physical analysis of the proposed dredge material.

A sampling plan was prepared documenting sample locations, depths, and analytical program and was submitted to MPA for their approval in September 2021. Upon addressing MPA review comments, the sampling plan was approved by MPA on September 28, 2021. AECOM also received necessary permits for sampling from U.S. Army Corps of Engineers (USACE) on January 24, 2022.

3 Field Activities

AECOM reviewed the updated hydrographic survey completed on June 15-16, 2021, by Gahagan Bryant & Associates, Inc. and sounding depths collected during site reconnaissance activities conducted by AECOM in March 2022. As a result, sample locations and depths were based on the following criteria:

- Sediment depth of -34.5 ft Mean Lower Low Water (MLLW) in the Shiplift area and a depth of -27.55 ft MLLW in all other areas; and
- Sediment sample locations dispersed throughout the dredge prism.

The sediment sampling activities occurred during March 1-4, 2022.

3.1 Sediment Sampling

3.1.1 Sample Methodology

The sediment sampling methodology outlined below conforms with the United States Environmental Protection Agency (USEPA) and ASTM International (ASTM) standard methods where appropriate. All sampling was conducted after receiving appropriate permits/approvals from MPA, Maryland Department of the Environment, and USACE.

AECOM subcontracted Normandeau Associates, Inc. (Normandeau) to collect sediment cores in the Syncrolift, around Piers 1, 2, and 3, and in the waterway from the I-695 Bridge to the USCG Yard mooring area (see **Appendix B**). Sampling locations were accessed using a 21 ft x 12 ft pontoon coring barge equipped with Vibracore™ equipment operated by Normandeau. The sampling barge was positioned at each coring location using a Differential Global Positioning System (DGPS) with sub-meter accuracy. The barge was equipped with adjustable spuds that were used to anchor the barge. Normandeau's coring barge was equipped with an A-frame and submersible vibracore unit to collect sediment cores. Normandeau's primary vibracoring unit, a Rossfelder P-3, facilitated sampling of soft and loosely compacted sediment deposits using clear, semi-rigid cellulose acetate butyrate (CAB) tubes.

Sediment cores were collected by advancing a 4-inch-diameter core barrel lined with a dedicated plastic core liner into the sediment to the target dredge depth (-34.5 ft MLLW in the Shiplift area and -27.5 ft MLLW in all other locations). The sampling was then performed as follows:

- The core sampler, equipped with a plastic liner, was driven to the target dredge depth at each of the proposed sample locations;
- The core liner was extracted from the core barrel and cores were transported in the sleeve to the landside staging area;
- The sediment cores were screened for organic vapors with a photoionization detector (PID) and logged for physical characteristics in accordance with the Unified Soil Classification System (USCS) (see **Appendix A**); and

- Sediment from each core was processed and containerized for laboratory analysis.

3.1.2 Sample Locations

Sediment sample locations were revised as needed following finalization of the June 2021 Hydrographic Survey so that the sampling locations represented areas proposed to be dredged. More specifically, sample locations CHANN-1, CHANN-6, and CHANN-7 were adjusted to avoid cable and pipeline corridors, and as a result, the adjacent locations were adjusted to provide more spatial coverage. All adjustments to sample locations were approved by MPA prior to commencement of sampling activities.

AECOM supplied the Global Positioning System (GPS) coordinates for the sample locations (**Table 1**) to Normandeau to help navigate to the sampling station. Cores were collected from a total of 18 sample locations (**Figure 3**);

- Three samples/cores in the Syncrolift
  - BERTH-1
  - BERTH-2
  - BERTH-3
- Six samples/cores in Piers 1, 2, and 3 area
  - BASIN-1
  - BASIN-2
  - BASIN-3
  - BASIN-4
  - BASIN-5
  - BASIN-6
- Nine samples/cores in the waterway from the I-695 Bridge to the USCG Yard mooring area.
  - CHANN-1
  - CHANN-2
  - CHANN-3
  - CHANN-4
  - CHANN-5
  - CHANN-6
  - CHANN-7
  - CHANN-8
  - CHANN-9

3.1.3 Sample Preparation and Handling

The sediment samples collected from the interval from top of sediment to -34.5 ft MLLW for the Shiplift area and -27.5 ft MLLW for all other locations were homogenized using a dedicated stainless-steel bowl. Representative homogenized sediment from groups of three cores were combined and re-homogenized into a total of six composite samples for laboratory analysis.

Core composites were grouped by location as follows:

- BERTHCOMP = BERTH-1 + BERTH-2 + BERTH-3
- BASINCOMP1 = BASIN-1 + BASIN-2 + BASIN-3
- BASINCOMP2 = BASIN-4 + BASIN-5 + BASIN-6
- CHANNCOMP1 = CHANN-1 + CHANN-2 +CHANN-3
- CHANNCOMP2 = CHANN-4 + CHANN-5 + CHANN-6
- CHANNCOMP3 = CHANN-7 + CHANN-8 + CHANN-9

Using a stainless-steel spoon, each composite sample was then transferred to laboratory-supplied containers, placed on ice, and shipped under proper chain of custody protocol to Eurofins TestAmerica laboratories. Dedicated sampling and mixing equipment were used for each composite; therefore, no equipment blanks were collected.

VOC Sampling

The homogenization procedure for preparing composite samples can result in the loss of volatile organic compounds (VOCs). Therefore, to achieve the Maryland Department of Transportation (MDOT) Target Detection Limits (TDLs) for VOCs, the low-level method of VOC sample collection per USEPA 5035A was used for the collection and analysis of VOC samples. USEPA 5035A requires samples to be collected directly from the sediment cores with a small coring device immediately after the core is split open to minimize the loss of VOCs. The sample interval was determined by screening with a PID and then using a coring device to collect at the position exhibiting the highest PID reading within each of the sample cores. As a result, one VOC sample was collected from each sample/core location for a total of 18 VOC samples: BERTH-1, BERTH-2, BERTH-3, BASIN-1, BASIN-2, BASIN-3, BASIN-4, BASIN-5, BASIN-6, CHANN-1, CHANN-2, CHANN-3, CHANN-4, CHANN-5, CHANN-6, CHANN-7, CHANN-8, and CHANN-9.

Using a coring device, each VOC sample was transferred to laboratory-supplied containers, placed on ice, and shipped under chain of custody protocol to Eurofins TestAmerica laboratories. Dedicated sampling equipment was used for each sample; therefore, no equipment/rinsate blanks were collected.

Quality Control

The following quality control samples were collected to ensure the integrity of the sampling and analytical program:

- One duplicate sample was collected from BERTHCOMP-1;
- Three trip blanks were collected for VOCs only; and
- Two matrix spike / matrix spike duplicate (MS/MSD) samples were collected from BASIN-2 and BASINCOMP1.

4 Analytical Methods and Results

Laboratory chemical and geotechnical analyses of the sediment samples were completed in accordance with MPA Dredged Material Placement Right of Entry Application, Appendix D (Analysis of Material to be Dredged) requirements.

4.1 Chemical Analysis

4.1.1 Chemical Analytical Methods

Samples submitted for chemical laboratory analysis were analyzed for the following:

- Metals via SW846 6010A/6020A
- Mercury via SW846 7471B
- Cyanide via SW846 9012A
- Total Organic Carbon via Lloyd Kahn
- Total Sulfide via SW846 9030B/9034
- Nitrogen, Ammonia via USEPA 350.1
- Nitrogen, Nitrate + Nitrite via USEPA 353.2
- Nitrogen, Total Kjeldahl via USEPA 351.3
- Total Phosphorus via USEPA 365.4 or SM 4500 PE
- pH via USEPA 9045D
- Oil and Grease via SW846 9071B
- Total Petroleum Hydrocarbons (TPH) - Gas Range Organics via SW846 8015
- TPH Diesel Range Organics (DRO)/Oil Range Organics (ORO) via SW846 8015
- Priority Pollutant VOCs via SW846 8260C
- Priority Pollutant Semivolatile Organic Carbons (SVOCs) / Polycyclic Aromatic Hydrocarbons (PAHs) via SW846 8270D LL
- Priority Pollutant Pesticides via SW846 8081B LL
- Polychlorinated Biphenyl (PCB) Congeners via SW846 8082A
- Tributyltin via Unger or Krone Method
- Toxicity Characteristic Leaching Procedure (TCLP) for VOCs, SVOCs, Pesticides, Herbicides, Metals, and Mercury via SW846 8260C, 8270D, 8081B, 8151A, 6010C, 7470A, and 1311

4.1.2 Chemical Analytical Results

Laboratory results are presented in **Table 2** – Chemical and Geotechnical Analytical Results, **Table 3** – VOC Analytical Results, and **Table 4** – TCLP Analytical Results. The analytical laboratory reports are included as **Appendix C**.

One composite sample was collected from three core locations in the Syncrolift and other berth areas (BERTHCOMP), two composite samples were collected from six core locations in the turning basin (BASINCOMP1, BASINCOMP2), and three composite samples were collected from nine core locations in the waterway from the I-695 Bridge to the USCG Yard mooring area (CHANNCOMP1, CHANNCOMP2, CHANNCOMP3). Analytical results of these samples are presented in **Table 2.** This presents results for physical characteristics, inorganic/general chemistry parameters, and organics (except for VOCs, which are summarized separately in **Table 3**) and summarized below.

- Several metals were detected in the sediment samples, with higher levels generally found in the CHANNCOMP samples compared to BASIN/BERTH samples. For example, arsenic was detected in the BASIN and BERTH composites at 7.1 to 18 milligrams per kilogram (mg/kg), whereas CHANN composites exhibited arsenic levels of 53 to 150 mg/kg.
- Similar trends as in metals distribution were observed for ammonia, phosphorus, total organic carbon, and sulfide.
- Petroleum hydrocarbons analysis indicated that the gasoline range organics were not detected in any of the samples above laboratory reporting limits. DRO and ORO were detected in BERTHCOMP1 and CHANNCOMP1, 2, and 3, with the maximum concentrations of 1,000 mg/kg of DRO and 920 mg/kg of ORO detected in CHANNCOMP1 sample collected between the CSX and the I-695 bridges.
- Total PCB results (sum of 26 congeners) in the BASIN and BERTH composites ranged from 25 to 34 micrograms per kilogram (ug/kg). A duplicate of the BERTH composite exhibited a total PCB concentration of 120 ug/kg. Higher PCB concentrations (310 to 470 ug/kg) were detected in the CHANNEL composites.
- Except for 4-4’ dichlorodiphenyldichloroethylene, dieldrin, and endrin at very low concentrations, no other pesticides and herbicides were detected above the reporting limit.
- PAHs were detected at low concentrations at all locations sampled with generally higher concentrations detected in the CHANNEL composites.
- Tributyltin was only detected in BERTH composite field duplicate at 16 ug/kg.

A total of 18 discrete samples were collected, one from each core location, for VOC analysis. A field duplicate sample was collected at the BERTH-1 location. As shown in **Table 3**, VOCs in all samples were non-detect or below the laboratory reporting limits.

Composite samples were also analyzed for TCLP VOCs, TCLP SVOCs, TCLP Pesticides, TCLP Herbicides, and TCLP Metals plus Mercury. As shown in **Table 4**, all TCLP results were non-detect, below laboratory reporting limits, or below the USEPA’s Hazardous Waste Maximum Concentration of Contaminants for the Toxicity Characteristic. The USEPA's hazardous waste characteristics regulations are under the authority of the Resource Conservation and Recovery Act (RCRA) Subtitle C. The results indicate that the dredge spoils would not be classified as hazardous waste based on toxicity characteristics.

4.2 Geotechnical Analysis

4.2.1 Geotechnical Analytical Methods

Samples submitted for geotechnical laboratory analysis were analyzed for the following:

- Grain Size via ASTM D422
- Atterberg Limits via ASTM D423/D424
- Specific Gravity via ASTM D854
- Total Solids / Moisture Content via ASTM D2216

4.2.2 Geotechnical Analytical Results

Based on review of the geotechnical data, the proposed dredge materials predominantly consist of silt with clay and fine sand.

- BASINCOMP1 and CHANNCOMP3 are primarily silt;
- BERTHCOMP1 and BERTHCOMP2 are composed of silt and fine sand;
- CHANNCOMP1 and CHANNCOMP2 are silt and clay; and
- BASINCOMP2 is fine sand, silt, and clay.

Moisture content ranges from 70.6% to 320.4%, and plasticity index ranges from 70 to 133.

A summary of the geotechnical analytical results is presented in **Table 2,** and the complete analytical laboratory report is included as **Appendix C**.

5 Conclusions

Three cores were collected in the berth areas (including Syncrolift) and composited into one sample (BERTHCOMP). Two composite samples were collected from the six core locations in the turning basin (BASINCOMP1, BASINCOMP2), and three composite samples were collected from nine core locations the waterway from the I-695 Bridge to the USCG Yard mooring area (CHANNCOMP1, CHANNCOMP2, CHANNCOMP3).

VOCs were not detected in any of the samples collected above laboratory reporting limits. SVOCs (except for some PAHs), pesticides, and herbicides were largely not detected in any of the samples. Waste characterization testing results indicated that the dredged material can be classified as non-hazardous based on the toxicity characteristics.

Overall, constituents including metals, nutrients, sulfide, PCB congeners, petroleum hydrocarbons, oil and grease, and cyanide were elevated in the samples collected from the channel between the I-695 Bridge and the USCG Yard mooring area compared to berth and basin samples. PCB congeners were detected in all samples except for BASINCOMP2. Although most pesticide and PAH constituents analyzed were non-detect, several were observed but generally at relatively low concentrations. Higher concentrations of certain constituents noticed in the channel samples could be attributed to the higher total organic carbon content found in the channel samples. The dredge material composition and contaminant levels appear to be generally consistent with materials dredged in the vicinity of the project area and its urban nature.

6 References

ASTM Standard D 2487-00, Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System).

Gahagan Bryant & Associates, Inc. 2021. Updated Hydrographic Survey, June 15-16, 2021.

Maryland Port Administration (MPA). 2019. Dredged Material Placement Right of Entry Application, Appendix D (Analysis of Material to be Dredged) requirements.

Figures

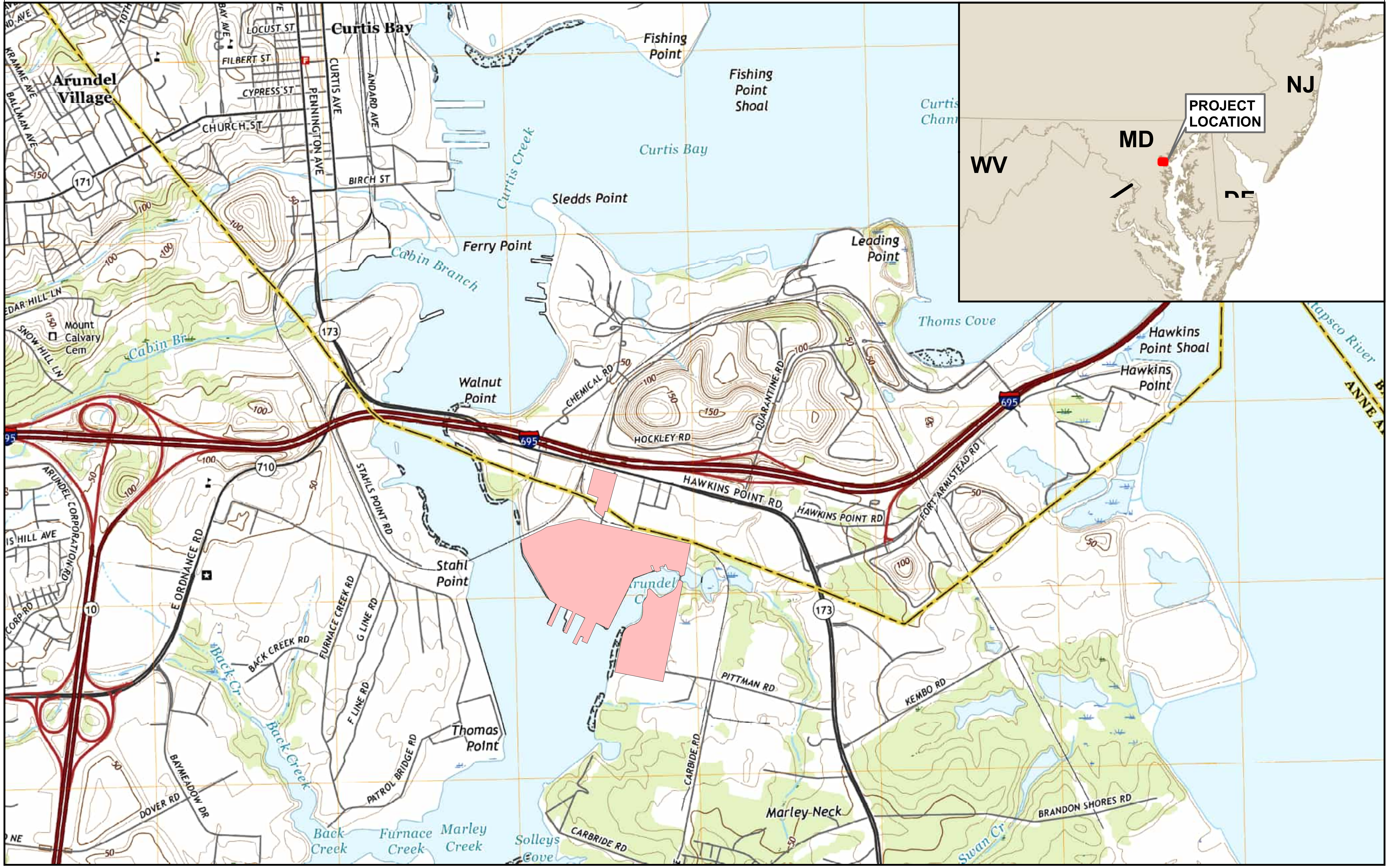
Prepared in Arch D (36" x 24") Landscape Layout

Legend

🟥 USCG Baltimore Yard

Data Sources:

USGS 7.5-minute topographic map for Curtis Bay Quadrangle, Maryland. 2019.



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REFERENCE

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ISSUE/REVISION

1	CMD	5/9/2022

PROJECT NUMBER

60660293

SHEET TITLE

General Site Location

FIGURE NUMBER

1

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Prepared in Arch D (36" x 24") Landscape Layout

Legend

🟥 Proposed Action Area: Channel & Turning Basin

🟨 Proposed Action Area: Syncro-Lift Facility

▨ USCG Baltimore Yard

Data Sources:
Six-inch resolution orthoimagery accessed from the Maryland Statewide Imagery Download Tool. Orthoimagery dated 2017. Supplemental imagery referenced from Google Earth. Property line data set referenced from the Maryland Department of Planning.

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1	CMD	5/9/2022

PROJECT NUMBER
60660293

SHEET TITLE
Site Plan

FIGURE NUMBER
2

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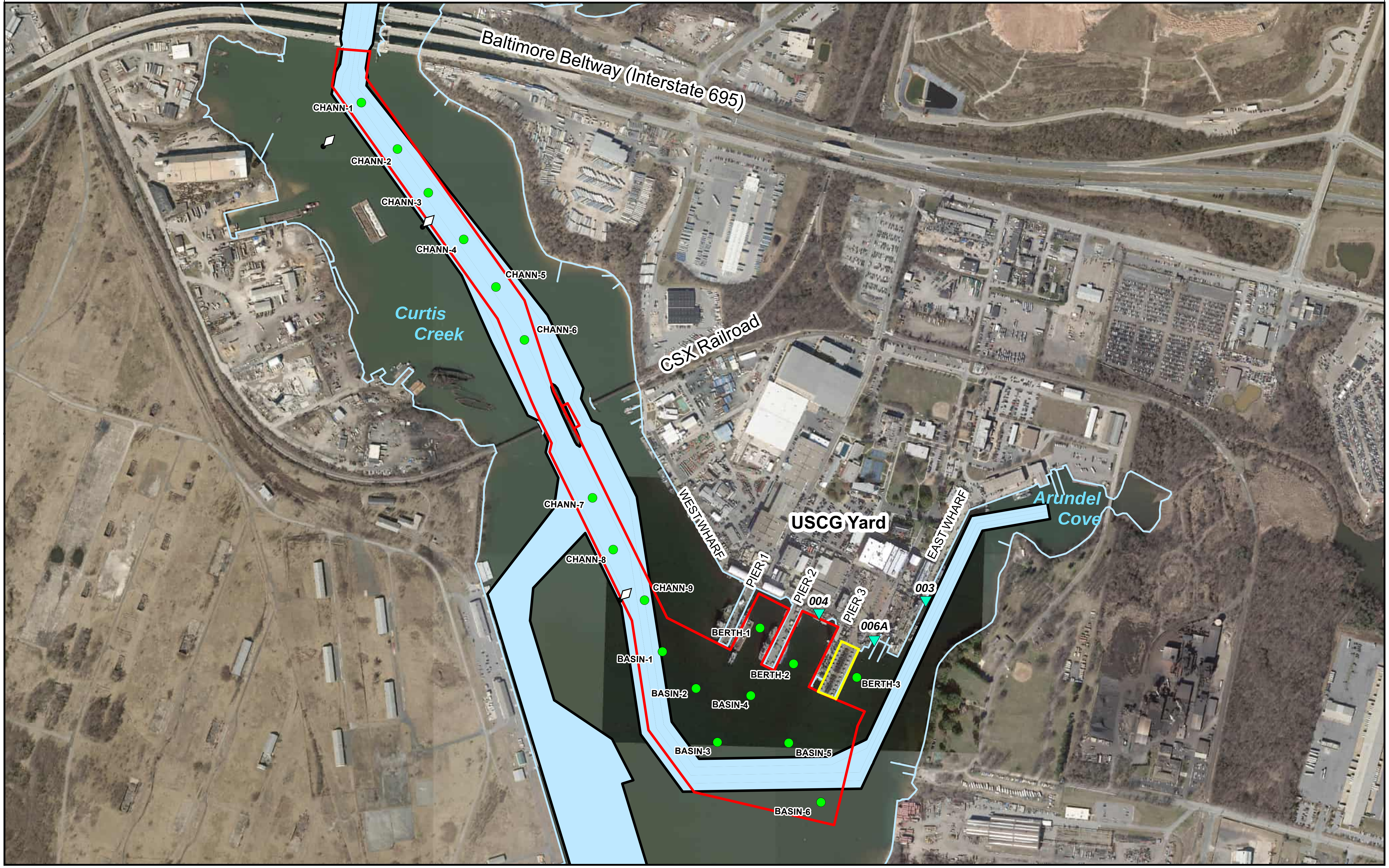
Prepared in Arch D (36" x 24") Landscape Layout

Legend

- Channel Marker Buoy
- 🟨 Limits of Proposed Shiplift Dredge (Depth 34.5')
- 🟥 Limits of Proposed Dredge (Depth 27.5')
- Shoreline
- 🟦 Existing Navigational Channel
- ▼ 003 NPDES Outfalls
- ● Final Sample Locations

Data Sources:

Six-inch resolution orthoimagery accessed from the Maryland Statewide Imagery Download Tool. Orthoimagery dated 2017. Supplemental imagery referenced from Google Earth. Coastal and harbor features accessed from the National Oceanic and Atmospheric Administration (NOAA) Electronic Navigational Chart (ENC) GIS database. ENCs accessed include Baltimore Harbor charts US5BALBA and US5BALBB. Property line data set referenced from the Maryland Department of Planning.



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1	CMD	6/18/2021
2	CMD	9/03/2021
3	CMD	9/21/2021
4	CMD	2/24/2022
4	CMD	5/05/2022

PROJECT NUMBER

60660293

SHEET TITLE

Sediment Sample Locations

FIGURE NUMBER

3

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Tables

Table 1 - Sediment and Sample Locations and Details
Sampling and Analysis Report
USCG Ship Yard, Baltimore, Maryland

Location ID	Total Depth (ft)	Date	MD State Plane Northing (ft)	MD State Plane Easting (ft)	Mudline Elevation (ft MLLW)
BASIN-1	5.5	3/2/2022	557666.99	1433044.1	-24.9
BASIN-2	5.25	3/2/2022	557442.8	1433248.8	-26.2
BASIN-3	6.5	3/2/2022	557112.08	1433380.3	-21.7
BASIN-4	5.5	3/3/2022	557398.42	1433583.9	-23.3
BASIN-5	6	3/3/2022	557108.22	1433816.9	-21.1
BASIN-6	11.25	3/3/2022	556744.62	1434014.3	-16
BERTH-1	6	3/3/2022	557812.12	1433641.3	-29.4
BERTH-2	5	3/3/2022	557592.53	1433846.3	-28.4
BERTH-3	12.25	3/3/2022	557510	1434233.3	-22.6
CHANN-1	5	3/4/2022	561031.36	1431199.8	-23.3
CHANN-2	7	3/4/2022	560745.67	1431421.8	-22.9
CHANN-3	7	3/4/2022	560478.48	1431610.3	-23.1
CHANN-4	7	3/4/2022	560192.3	1431827.4	-23
CHANN-5	6	3/4/2022	555901.45	1432024.5	-24.2
CHANN-6	8	3/4/2022	559577.68	1432198.5	-21.5
CHANN-7	3.5	3/2/2022	558609.4	1432616.2	-24.9
CHANN-8	3.75	3/2/2022	558292.96	1432742.3	-24.3
CHANN-9	6	3/2/2022	557983.34	1432933.2	-25.1

Table 2 - Chemical and Geotechnical Analytical Results
Sampling and Analysis Report
USCG Ship Yard, Baltimore, Maryland

				SYS_LOC_CODE	BASINCOMP1	BASINCOMP2	BERTHCOMP1	BERTHCOMP1	CHANNCOMP1	CHANNCOMP2	CHANNCOMP3
				SYS_SAMPLE_CODE	BASINCOMP1	BASINCOMP2	BERTHCOMP1	FD-030722	CHANNCOMP1	CHANNCOMP2	CHANNCOMP3
				START_DEPTH	NA	NA	NA	NA	NA	NA	NA
				END_DEPTH	NA	NA	NA	NA	NA	NA	NA
				X_COORD	NA	NA	NA	NA	NA	NA	NA
				Y_COORD	NA	NA	NA	NA	NA	NA	NA
				SAMPLE_DATE	3/3/2022	3/3/2022	3/7/2022	3/7/2022	3/7/2022	3/7/2022	3/2/2022
				SAMPLE_TYPE_CODE	N	N	N	FD	N	N	N
	ANALYTIC METHOD	CAS_RN	CHEMICAL_NAME	UNITS							
Physical Chracteristics	D2216	MOIST	Moisture	percent	233.2	70.6	122.8	118.3	308.1	229.5	320.4
	D422	CLAY	Clay	percent	22.5	24.5	16.3	13.5	30.2	34.8	14.6
	D422	COARSE SAND	Coarse Sand	percent	0.0	0.3	0.2	0.2	0	0	0
	D422	FINE SAND	Fine Sand	percent	7.7	39.7	35.1	28.7	8.0	10.6	7.9
	D422	GRAVEL	Gravel	percent	0.0	0	0	0.5	0	0	0
	D422	HYD01	HYDROMETER READING 1 - PERCENT FINER	% passed	75.8	45.2	44.1	41.8	97.4	78.3	87.6
	D422	HYD02	HYDROMETER READING 2 - PERCENT FINER	% passed	64.6	38.7	40.8	36.4	90.7	66.7	79.3
	D422	HYD03	HYDROMETER READING 3 - PERCENT FINER	% passed	36.5	32.3	31.0	28.3	57.1	55.1	64.7
	D422	HYD04	HYDROMETER READING 4 - PERCENT FINER	% passed	28.1	28.4	19.6	14.8	33.6	40.6	43.8
	D422	HYD05	HYDROMETER READING 5 - PERCENT FINER	% passed	22.5	24.5	16.3	13.5	30.2	34.8	14.6
	D422	HYD06	HYDROMETER READING 6 - PERCENT FINER	% passed	19.7	19.4	14.7	10.8	23.5	26.1	6.3
	D422	HYD07	HYDROMETER READING 7 - PERCENT FINER	% passed	16.8	11.6	11.4	9.4	16.8	20.3	6.3
	D422	MED SAND	Medium Sand	percent	2.3	7.3	15.3	8.1	7.1	1.7	2.2
	D422	SAND	Sand	percent	10.00	47.3	50.6	37	15.1	12.3	10.1
	D422	SIEVE10	Sieve, No. 10, % passing	% passed	100	99.7	99.8	99.3	100	100	100
	D422	SIEVE100	Sieve, No. 100, % passing	% passed	91.7	64.5	54.3	67.6	87.5	92.4	92.8
	D422	SIEVE19KU	Sieve, 19000 microns, % passing	% passed	100	100	100	100	100	100	100
	D422	SIEVE20	Sieve, No. 20, % passing	% passed	99.9	98.8	98.1	98.5	98.7	99.9	99.9
	D422	SIEVE200	Sieve, No. 200, % passing	% passed	90.0	52.7	49.4	62.5	84.9	87.7	89.9
	D422	SIEVE25KU	Sieve Size 1 inch, % passing	% passed	100	100	100	100	100	100	100
	D422	SIEVE37.5KU	Sieve Size 1.5 inch, % passing	% passed	100	100	100	100	100	100	100
	D422	SIEVE4	Sieve, No. 4, % passing	% passed	100	100	100	99.5	100	100	100
	D422	SIEVE40	Sieve, No. 40, % passing	% passed	97.7	92.4	84.5	91.2	92.9	98.3	97.8
	D422	SIEVE50KU	Sieve Size 2 inch, % passing	% passed	100	100	100	100	100	100	100
	D422	SIEVE60	Sieve, No. 60, % passing	% passed	94.7	78	64.0	75.9	90.8	95.9	96.1
	D422	SIEVE75KU	Sieve Size 3 inch, % passing	% passed	100	100	100	100	100	100	100
	D422	SIEVE80	Sieve, No. 80, % passing	% passed	94.1	72.7	59.8	70.3	89.5	94.5	94.9
	D422	SIEVE9.5KU	Sieve, 9500 microns, % passing	% passed	100	100	100	100	100	100	100
	D422	SILT	Silt	percent	67.5	28.2	33.1	49	54.7	52.9	75.3
	D4318	LIQLIM	LIQUID LIMIT	none	193	83	70	74	198	172	189
	D4318	PLASIND	PLASTICITY INDEX	none	133	51	42	46	117	112	122
	D4318	PLASLIM	PLASTIC LIMIT	none	60	32	28	28	81	60	67
	D854	SG	SPECIFIC GRAVITY	none	2.59	2.64	2.64	2.64	2.99	2.70	2.74
Inorganics/ General Chemistry	E350.1	7664-41-7	Ammonia	mg/kg	170	140	180	240	340	530	410
	E351.2	KN	NITROGEN, KJELDAHL, TOTAL	mg/kg	2500	1100 J F1	1100	1200	2300	2300	1100
	E353.2	NO3NO2N	Nitrate/Nitrite	mg/kg	< 2.9	< 2.5 F1	< 2.3	< 2.5	< 4.0	< 4.0	< 4.5
	E365.1	7723-14-0	Phosphorus (Total)	mg/kg	410	220 F1	260	250	2800	1400	1100
	LLOYD-KAHN	7440-44-0	TOTAL CARBON	mg/kg	39000	24000	25000	31000	47000	44000	47000
	SW6020B	7429-90-5	Aluminum	mg/kg	8000	4800 F2	3900	7100	9700	9000	8000
	SW6020B	7439-89-6	Iron	mg/kg	19000	12000	19000	21000	99000	48000	61000
	SW6020B	7439-92-1	Lead	mg/kg	22	9.9	50	76	360	180	190
	SW6020B	7439-96-5	Manganese	mg/kg	300	140	260	210	550	770	1100
	SW6020B	7440-02-0	Nickel	mg/kg	15	8.4	12	12	31	32	38
	SW6020B	7440-22-4	Silver	mg/kg	0.11 J	0.039 J	0.2	0.12	0.65	0.56	0.69
	SW6020B	7440-28-0	Thallium	mg/kg	0.14	0.10 J	0.21	0.22	0.82	0.40	0.45
	SW6020B	7440-31-5	Tin	mg/kg	2.4	0.93 J	4.4	3.6	30	19	23
	SW6020B	7440-36-0	Antimony	mg/kg	0.36	0.17 J	0.80	0.68	6.1	2.8	3.3
	SW6020B	7440-38-2	Arsenic	mg/kg	8.9	7.1	15	18	150	68	53
	SW6020B	7440-41-7	Beryllium	mg/kg	0.71	0.46	0.54	0.63	0.61	0.72	0.87
	SW6020B	7440-43-9	Cadmium	mg/kg	0.27	0.17	0.44	0.42	1.7	1.1	1.6
	SW6020B	7440-47-3	Chromium (Total)	mg/kg	30	18	31	32	160	110	130
	SW6020B	7440-48-4	Cobalt	mg/kg	8.8	5.3	6.8	6.8	12	13	15
	SW6020B	7440-50-8	Copper	mg/kg	38	18	78	76	300	210	290
	SW6020B	7440-66-6	Zinc	mg/kg	76	29	130	140	430	340	500
	SW6020B	7782-49-2	Selenium	mg/kg	0.74	0.50 J	1.3	1.4	10	4.2	4.3
	SW7196A	16065-83-1	Chromium (III)	mg/kg	30	18	31	32	160	110	130
	SW7196A	18540-29-9	Chromium (VI)	mg/kg	< 1.2	< 1.0 F1	< 0.90	< 0.97	< 1.6	< 1.6	< 1.8
	SW7471B	7439-97-6	Mercury	mg/kg	0.14	0.21	0.086	1.2	1.6	1.2	0.85
	SW9014	57-12-5	Cyanide	mg/kg	< 0.52	0.41 J	< 0.46	< 0.42	4.4	1.6	3.0
	SW9034	18496-25-8	Sulfide	mg/kg	550	230 F1	520	2000	7500	7700	12000
	SW9045D	PH	pH	pH UNITS	7.1 HF	7.8	7.2	7.5	7.8	7.8	7.2 HF
Organics	SW8015D DRO	C28-C40	Oil Range Organics (C28-C40)	mg/kg	< 35	< 24	110 J	210	920	410	50 J
	SW8015D DRO	DIESELCOMP	Diesel Range Organics (C10-C28)	mg/kg	< 35	< 24 F1	100 J	210	1000	310	33 J
	SW8015D GRO	8006-61-9	Gasoline Range Organics (C6-C10)	mg/kg	< 48	< 31	< 35	< 39	< 70	< 71	< 80
	SW8081B LL	1024-57-3	Heptachlor epoxide	ug/kg	< 0.60	< 0.10	< 0.47	< 0.51	< 0.82	< 0.83	< 0.94
	SW8081B LL	1031-07-8	Endosulfan sulfate	ug/kg	< 0.60	< 0.10	< 0.47	< 0.51	< 0.82	< 0.83	< 0.94
	SW8081B LL	103-17-3	Chlorobenside	ug/kg	< 0.60	< 0.10	< 0.47	< 0.51	< 0.82	< 0.83	< 0.94
	SW8081B LL	12789-03-6	Chlordane(gamma)	ug/kg	< 6.0	< 1.0	< 4.7	< 5.1	< 8.2	< 8.3	< 9.4
	SW8081B LL	1861-32-1	Dacthal	ug/kg	< 0.60	< 0.10	< 0.47	< 0.51	< 0.82	< 0.83	< 0.94
	SW8081B LL	2385-85-5	Mirex	ug/kg	< 0.60	< 0.10	< 0.47	< 0.51	< 0.82	< 0.83	< 0.94
	SW8081B LL	309-00-2	Aldrin	ug/kg	< 0.60	< 0.10	< 0.47	< 0.51	< 0.82	< 0.83	< 0.94
	SW8081B LL	319-84-6	alpha-Hexachlorocyclohexane (BHC)	ug/kg	< 0.60	< 0.10	< 0.47	< 0.51	< 0.82	< 0.83	< 0.94
	SW8081B LL	319-85-7	beta-Hexachlorocyclohexane	ug/kg	< 0.60	< 0.10	< 0.47	< 0.51	< 0.82	< 0.83	< 0.94
	SW8081B LL	319-86-8	delta-Hexachlorocyclohexane (BHC)	ug/kg	< 0.60	< 0.10	< 0.47	< 0.51	< 0.82	< 0.83	< 0.94
	SW8081B LL	33213-65-9	Endosulfan II	ug/kg	< 0.60	< 0.10	< 0.47	< 0.51	< 0.82	< 0.83	< 0.94
	SW8081B LL	3424-82-6	2,4'-DDE	ug/kg	< 0.60	< 0.10	< 0.47	< 0.51	< 0.82	< 0.83	< 0.94
	SW8081B LL	50-29-3	4,4'-DDT	ug/kg	< 0.60	< 0.10	< 0.47	< 0.51	< 0.82	< 0.83	< 0.94
	SW8081B LL	53-19-0	2,4'-DDD	ug/kg	< 0.60	< 0.10	< 0.47	< 0.51	< 0.82	< 0.83	< 0.94
	SW8081B LL	58-89-9	Lindane (gamma BHC)	ug/kg	< 0.60	< 0.10	< 0.47	< 0.51	< 0.82	< 0.83	< 0.94
	SW8081B LL	60-57-1	Dieldrin	ug/kg	0.26 J	< 0.10	< 0.47	< 0.51	< 0.82	< 0.83	1.1 p
	SW8081B LL	72-20-8	Endrin	ug/kg	0.60 p	< 0.10	0.57	0.51	1	2.9	3.5 p
	SW8081B LL	72-43-5	Methoxychlor	ug/kg	< 0.60	< 0.10	< 0.47	< 0.51	< 0.82	< 0.83	< 0.94
	SW8081B LL	72-54-8	4,4'-DDD	ug/kg	< 0.60	< 0.10	< 0.47	< 0.51	< 0.82	< 0.83	1.1 p
	SW8081B LL	72-55-9	4,4'-DDE	ug/kg	0.64	< 0.10	0.6	0.51	1.8	4.3	4.9
	SW8081B LL	7421-93-4	Endrin aldehyde	ug/kg	< 0.60	< 0.10	< 0.47	< 0.51	< 0.82	< 0.83	< 0.94
	SW8081B LL	76-44-8	Heptachlor	ug/kg	< 0.60	< 0.10	< 0.47	< 0.51	< 0.82	< 0.83	< 0.94
	SW8081B LL	789-02-6	2,4'-DDT	ug/kg	< 0.60	< 0.10	< 0.47	< 0.51	< 0.82	< 0.83	< 0.94
	SW8081B LL	8001-35-2	Toxaphene	ug/kg	< 24	< 4.1	< 19	< 20	< 33	< 33	< 38
	SW8081B LL	959-98-8	Endosulfan I	ug/kg	< 0.60	< 0.10	< 0.47	< 0.51	< 0.82	< 0.83	< 0.94
	SW8082A	2051-24-3	PCB-209	ug/kg	< 1.4	< 1.2	1.3	1.9	5.5	3.9	4.6
	SW8082A	31508-00-6	PCB-118	ug/kg	1.1 J p	< 1.2	1.5	5.1	8.3	11	11 p
	SW8082A	32598-10-0	PCB-66	ug/kg	< 1.4	< 1.2	< 1.1	< 1.2	< 2.0	< 2.0	< 2.2
	SW8082A	32598-13-3	PCB-77	ug/kg	< 1.4	< 1.2	< 1.1	< 1.2	< 2.0	< 2.0	< 2.2
	SW8082A	32598-14-4	PCB-105	ug/kg	< 1.4	< 1.2	< 1.1	2	3.2 F2	4.3	4.7
	SW8082A	32774-16-6	PCB-169	ug/kg	< 1.4	< 1.2	< 1.1	< 1.2	3.3 F2	< 2.0	< 2.2
	SW8082A	34883-43-7	PCB-8	ug/kg	< 1.4	< 1.2	< 1.1	< 1.2	< 2.0	< 2.0	< 2.2

				SYS_LOC_CODE	BASINCOMP1	BASINCOMP2	BERTHCOMP1	BERTHCOMP1	CHANNCOMP1	CHANNCOMP2	CHANNCOMP3
				SYS_SAMPLE_CODE	BASINCOMP1	BASINCOMP2	BERTHCOMP1	FD-030722	CHANNCOMP1	CHANNCOMP2	CHANNCOMP3
				START_DEPTH	NA	NA	NA	NA	NA	NA	NA
				END_DEPTH	NA	NA	NA	NA	NA	NA	NA
				X_COORD	NA	NA	NA	NA	NA	NA	NA
				Y_COORD	NA	NA	NA	NA	NA	NA	NA
				SAMPLE_DATE	3/3/2022	3/3/2022	3/7/2022	3/7/2022	3/7/2022	3/7/2022	3/2/2022
				SAMPLE_TYPE_CODE	N	N	N	FD	N	N	N
	ANALYTIC METHOD	CAS_RN	CHEMICAL_NAME	UNITS							
Organics	SW8082A	35065-27-1	PCB-153	ug/kg	6.3	< 1.2	6.9	14	42	73	68
	SW8082A	35065-28-2	PCB-138	ug/kg	3.3	< 1.2	3.9	8.8	26 F2,F1	40	38
	SW8082A	35065-29-3	PCB-180	ug/kg	3.8	< 1.2	3.9	7.7	33 F2,F1	58	47
	SW8082A	35065-30-6	PCB-170	ug/kg	3.1	< 1.2	3.1	6.6	28 F2,F1	46	38
	SW8082A	35693-99-3	PCB-52	ug/kg	2.2	< 1.2	3.6	12	20 F2	25	23
	SW8082A	37680-65-2	PCB-18	ug/kg	< 1.4	< 1.2	1.1	2.4	7.8 F2	8.7	< 2.2
	SW8082A	37680-73-2	PCB-101	ug/kg	4.4	< 1.2	5.7	16	30 F2,F1	45	46
	SW8082A	38380-02-8	PCB-87	ug/kg	< 1.4	< 1.2	< 1.1	2.6	< 2.0 F2	3.4 p	3.0 p
	SW8082A	38380-07-3	PCB-128	ug/kg	2	< 1.2	2.1	4.9	16 F2	28	23
	SW8082A	38380-08-4	PCB-156	ug/kg	< 1.4	< 1.2	< 1.1	< 1.2	< 2.0	< 2.0	< 2.2
	SW8082A	40186-72-9	PCB-206	ug/kg	0.94 J	< 1.2	1.3	2.8	8.6 F2 F1	9	8.9
	SW8082A	41464-39-5	PCB-44	ug/kg	1.2 J	< 1.2	2.2	6.5	12 F2	12	14
	SW8082A	41464-40-8	PCB-49	ug/kg	2.3	< 1.2	3.2	8.9	18 F2	24	24
	SW8082A	52663-68-0	PCB-187	ug/kg	2.5	< 1.2	2.5	7.8	22 F2 F1	42	37
	SW8082A	52663-69-1	PCB-183	ug/kg	1.0 J	< 1.2	1.0 J	2.3	8.8 F2 p	15	13
	SW8082A	52663-78-2	PCB-195	ug/kg	< 1.4	< 1.2	< 1.1	1	3.8 F2 p	7.6	6.3
	SW8082A	57465-28-8	PCB-126	ug/kg	< 1.4	< 1.2	< 1.1	< 1.2	< 2.0	< 2.0	< 2.2
	SW8082A	7012-37-5	PCB-28	ug/kg	1.5	< 1.2	1.8	3.7	12 F2	15	16
	SW8082A	74472-48-3	PCB-184	ug/kg	< 1.4	< 1.2	< 1.1	< 1.2	< 2.0	< 2.0	< 2.2
	SW8082A	CALC	Total PCBs (Sum of 26 Congeners)	ug/kg	25	<1.2	34	120	310	470	430
	SW8141B LL	121-75-5	Malathion	ug/kg	< 24	< 20	< 18	< 20	< 33	< 33	< 37
	SW8141B LL	298-00-0	Methyl parathion	ug/kg	< 24	< 20	< 18	< 20	< 33	< 33	< 37
	SW8141B LL	56-38-2	Parathion, Ethyl	ug/kg	< 24	< 20	< 18	< 20	< 33	< 33	< 37
	SW8141B LL	8065-48-3	Demeton	ug/kg	< 48	< 41	< 37	< 40	< 65	< 67	< 74
	SW8141B LL	86-50-0	Azinphos, Methyl	ug/kg	< 24	< 20	< 18	< 20	< 33	< 33	< 37
	SW9071B	HEM	HEM (Oil&Grease)	mg/kg	< 480	< 410 F1	430	560	790	650 J	330 J
	SW8151A	93-72-1	Silvex (2,4,5-TP)	ug/kg	< 58	< 49	< 43	< 48	< 79	< 79	< 88
	SW8151A	93-76-5	2,4,5-T	ug/kg	< 58	< 49	< 43	< 48	< 79	< 79	< 88
	SW8151A	94-75-7	2,4-Dichlorophenoxyacetic acid	ug/kg	< 230	< 200	< 170	< 190	< 320	< 320	< 350
	SW8270E	100-02-7	4-Nitrophenol	ug/kg	< 980	< 830	< 770	< 830	< 1400	< 1400	< 1500
	SW8270E	100-51-6	Benzyl alcohol	ug/kg	< 190	< 160	< 150	< 160	< 270	< 260	< 300
	SW8270E	101-55-3	4-Bromophenyl phenylether	ug/kg	< 190	< 160	< 150	< 160	< 270	< 260	< 300
	SW8270E	105-67-9	2,4-Dimethylphenol	ug/kg	< 190	< 160	< 150	< 160	< 270	< 260	< 300
	SW8270E	106-44-5	4-Methylphenol	ug/kg	< 190	< 160	< 150	< 160	< 270	< 260	< 300
	SW8270E	108-60-1	Bis(2-chloroisopropyl) ether	ug/kg	< 39	< 33	< 30	< 33	< 54	< 54	< 60
	SW8270E	108-95-2	Phenol	ug/kg	< 190	< 160	< 150	< 160	< 270	< 260	< 300
	SW8270E	111-44-4	Bis(2-chloroethyl)ether	ug/kg	< 39	< 33	< 30	< 33	< 54	< 54	< 60
	SW8270E	111-91-1	Bis(2-chloroethoxy) methane	ug/kg	< 190	< 160	< 150	< 160	< 270	< 260	< 300
	SW8270E	117-81-7	Bis(2-ethylhexyl)phthalate	ug/kg	< 1900	< 1600	< 1500	270	410 J	380 J	< 3000
	SW8270E	117-84-0	Di-n-octyl phthalate	ug/kg	< 190	< 160	< 150	< 160	< 270	< 260	< 300
	SW8270E	118-74-1	Hexachlorobenzene	ug/kg	< 39	< 33	< 30	< 33	< 54	< 54	< 60
	SW8270E	120-12-7	Anthracene	ug/kg	< 39	< 33	200	130	61	90	45 J
	SW8270E	120-82-1	1,2,4-Trichlorobenzene	ug/kg	< 190	< 160	< 150	< 160	< 270	< 260	< 300
	SW8270E	120-83-2	2,4-Dichlorophenol	ug/kg	< 39	< 33	< 30	< 33	< 54	< 54	< 60
	SW8270E	121-14-2	2,4-Dinitrotoluene	ug/kg	< 190	< 160	< 150	< 160	< 270	< 260	< 300
	SW8270E	122-66-7	1,2-DIPHENYLHYDRAZINE	ug/kg	< 190	< 160	< 150	< 160	< 270	< 260	< 300
	SW8270E	129-00-0	Pyrene	ug/kg	46	27 J	830	760	330	390	310
	SW8270E	131-11-3	Dimethyl phthalate	ug/kg	< 190	< 160	< 150	< 160	< 270	< 260	< 300
	SW8270E	132-64-9	Dibenzofuran	ug/kg	< 190	< 160	< 150	< 160	< 270	< 260	< 300
	SW8270E	191-24-2	Benzo(g,h,i)perylene	ug/kg	19 J	11 J	73	120	86	160	110
	SW8270E	193-39-5	Indeno(1,2,3-c,d)pyrene	ug/kg	< 39	< 33	65	110	65	120	87
	SW8270E	205-99-2	Benzo(b)fluoranthene	ug/kg	32 J	14 J	170	220	130	200	160
	SW8270E	206-44-0	Fluoranthene	ug/kg	46	25 J	1200	980	400	470	310
	SW8270E	207-08-9	Benzo(k)fluoranthene	ug/kg	< 39	< 33	73	62	45 J	84	63
	SW8270E	208-96-8	Acenaphthylene	ug/kg	< 39	< 33	< 30	< 33	26 J	37 J	26 J
	SW8270E	218-01-9	Chrysene	ug/kg	23 J	< 33	250	300	180	230	140
	SW8270E	50-32-8	Benzo(a)pyrene	ug/kg	19 J	< 33	110	150	92	140	120
	SW8270E	51-28-5	2,4-Dinitrophenol	ug/kg	< 1900 F1	< 1600	< 1500	< 1600	< 2700	< 2600	< 3000
	SW8270E	534-52-1	4,6-Dinitro-2-Methylphenol	ug/kg	< 980	< 830	< 770	< 830	< 1400	< 1400	< 1500
	SW8270E	53-70-3	Dibenzo(a,h)anthracene	ug/kg	< 39	< 33	19	33	< 54	< 54	< 60
	SW8270E	56-55-3	Benzo(a)anthracene	ug/kg	18 J	< 33	270	280	150	180	120
	SW8270E	59-50-7	4-Chloro-3-methylphenol	ug/kg	< 190	< 160	< 150	< 160	< 270	< 260	< 300
	SW8270E	606-20-2	2,6-Dinitrotoluene	ug/kg	< 190	< 160	< 150	< 160	< 270	< 260	< 300
	SW8270E	621-64-7	n-Nitroso-di-n-propylamine	ug/kg	< 39	< 33	< 30	< 33	< 54	< 54	< 60
	SW8270E	62-75-9	N-Nitrosodimethylamine	ug/kg	< 190	< 160	< 150	< 160	< 270	< 260	< 300
	SW8270E	65-85-0	Benzoic acid	ug/kg	< 980 F1	< 830 F1	< 770	< 830	< 1400	< 1400	< 1500
	SW8270E	67-72-1	Hexachloroethane	ug/kg	< 190	< 160 F1	< 150	< 160	< 270	< 260	< 300
	SW8270E	7005-72-3	4-Chlorophenyl phenylether	ug/kg	< 190	< 160	< 150	< 160	< 270	< 260	< 300
	SW8270E	77-47-4	Hexachlorocyclopentadiene	ug/kg	< 190 F1	< 160 F1 F2	< 150	< 160	< 270	< 260	< 300
	SW8270E	78-59-1	Isophorone	ug/kg	< 190	< 160	< 150	< 160	< 270	< 260	< 300
	SW8270E	83-32-9	Acenaphthene	ug/kg	< 39	< 33	230	96	33 J	26 J	< 60
	SW8270E	84-66-2	Diethyl phthalate	ug/kg	< 190	< 160	< 150	< 160	< 270	< 260	< 300
	SW8270E	84-74-2	Di-n-butyl phthalate	ug/kg	< 190 F1	< 160	< 150	< 160	< 270	< 260	< 300
	SW8270E	85-01-8	Phenanthrene	ug/kg	16 J	9.1 J	970	410	160	150	78
	SW8270E	85-68-7	Butyl benzyl phthalate	ug/kg	< 190	< 160	< 150	< 160	< 270	< 260	< 300
	SW8270E	86-30-6	N-Nitrosodiphenylamine	ug/kg	< 190	< 160	< 150	< 160	< 270	< 260	< 300
	SW8270E	86-73-7	Fluorene	ug/kg	< 39	< 33	230	94	40 J	32 J	17 J
	SW8270E	87-68-3	Hexachlorobutadiene	ug/kg	< 39	< 33	< 30	< 33	< 54	< 54	< 60
	SW8270E	87-86-5	Pentachlorophenol	ug/kg	< 980 F1	< 830 F1 F2	< 770	< 830	< 1400	< 1400	< 1500
	SW8270E	88-06-2	2,4,6-Trichlorophenol	ug/kg	< 190	< 160	< 150	< 160	< 270	< 260	< 300
	SW8270E	88-75-5	2-Nitrophenol	ug/kg	< 190	< 160	< 150	< 160	< 270	< 260	< 300
	SW8270E	90-12-0	1-Methylnaphthalene	ug/kg	< 39	< 33	34	57	29 J	28 J	< 60
	SW8270E	91-20-3	Naphthalene	ug/kg	9.4 J	< 33	46	50	77	82	42 J
	SW8270E	91-57-6	2-Methylnaphthalene	ug/kg	< 39	< 33	30	43	40 J	59	26 J
	SW8270E	91-58-7	2-Chloronaphthalene	ug/kg	< 39	< 33	< 30	< 33	< 54	< 54	< 60
	SW8270E	91-94-1	3,3'-Dichlorobenzidine	ug/kg	< 190 F1	< 160	< 150	< 160	< 270	< 260	< 300
	SW8270E	92-87-5	Benzidine	ug/kg	< 3900	< 3300	< 3000	< 3300	< 5400	< 5400	< 6000
	SW8270E	95-48-7	O-Cresol	ug/kg	< 190	< 160	< 150	< 160	< 270	< 260	< 300
	SW8270E	95-57-8	2-Chlorophenol	ug/kg	< 190	< 160	< 150	< 160	< 270	< 260	< 300
	SW8270E	98-95-3	Nitrobenzene	ug/kg	< 380	< 330	< 300	< 330	< 540	< 540	< 600
Other	ORGANOTINS	688-73-3	TRIBUTYLIN	ug/kg	< 4.3	< 3.7	< 3.5	16	< 6.1	< 6.2	< 6.8

Notes:
FD - field duplicate
mg/kg - milligrams per kilogram
ug/kg - micrograms per kilogram
< - Detection is at or below the Method Detection Limt
p - The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.
HF - Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
J - estimated value below the reporting limit but above the method detection limit
F1 - MS and/or MSD recovery exceeds control limits
F2 - MS/MSD RPD exceeds control limits
B - compound was found in the blank and sample
* - LCS and/or LCSD is outside acceptance limits, low biased

Table 3 - VOC Analytical Results
Sampling and Analysis Report
USCG Ship Yard, Baltimore, Maryland

			SYS_LOC_CODE	BASIN-1	BASIN-1	BASIN-2	BASIN-3	BASIN-4	BASIN-5	BASIN-6	BERTH-1	BERTH-2	BERTH-3
			SYS_SAMPLE_CODE	BASIN-1	FD-030322	BASIN-2	BASIN-3	BASIN-4	BASIN-5	BASIN-6	BERTH-1	BERTH-2	BERTH-3
			X_COORD	1433044.1	1433044.1	1433248.8	1433380.3	1433583.9	1433816.9	1434014.3	1433641.3	1433846.3	1434233.3
			Y_COORD	557666.99	557666.99	557442.8	557112.08	557398.42	557108.22	556744.62	557812.12	557592.53	557510
			START_DEPTH (FEET)	0	0	0	0	0	0	0	0	0	0
			END_DEPTH (FEET)	5.5	5.5	5.25	6.5	5.5	3.75	11.25	6	5	12.25
			SAMPLE_DATE	3/3/2022	3/3/2022	3/3/2022	3/3/2022	3/3/2022	3/3/2022	3/3/2022	3/4/2022	3/4/2022	3/4/2022
			SAMPLE_TYPE_CODE	N	FD	N	N	N	N	N	N	N	N
ANALYTIC_ METHOD	CAS_RN	CHEMICAL_NAME	UNITS										
SW8260D	71-55-6	1,1,1-Trichloroethane	ug/kg	< 32	< 33	< 10	< 13	< 12	< 5.8	< 12	< 19	< 15	< 12
SW8260D	79-34-5	1,1,2,2-Tetrachloroethane	ug/kg	< 32	< 33	< 10	< 13	< 12	< 5.8	< 12	< 19	< 15	< 12
SW8260D	79-00-5	1,1,2-Trichloroethane	ug/kg	< 32	< 33	< 10	< 13	< 12	< 5.8	< 12	< 19	< 15	< 12
SW8260D	75-34-3	1,1-Dichloroethane	ug/kg	< 32	< 33	< 10	< 13	< 12	< 5.8	< 12	< 19	< 15	< 12
SW8260D	75-35-4	1,1-Dichloroethylene	ug/kg	< 32	< 33	< 10	< 13	< 12	< 5.8	< 12	< 19	< 15	< 12
SW8260D	120-82-1	1,2,4-Trichlorobenzene	ug/kg	< 32	< 33	< 10	< 13	< 12	< 5.8	< 12	< 19	< 15	< 12
SW8260D	106-93-4	1,2-Dibromoethane	ug/kg	< 32	< 33	< 10	< 13	< 12	< 5.8	< 12	< 19	< 15	< 12
SW8260D	95-50-1	1,2-Dichlorobenzene	ug/kg	< 32	< 33	< 10	< 13	< 12	< 5.8	< 12	< 19	< 15	< 12
SW8260D	107-06-2	1,2-Dichloroethane	ug/kg	< 32	< 33	< 10	< 13	< 12	< 5.8	< 12	< 19	< 15	< 12
SW8260D	78-87-5	1,2-Dichloropropane	ug/kg	< 32	< 33	< 10	< 13	< 12	< 5.8	< 12	< 19	< 15	< 12
SW8260D	541-73-1	1,3-Dichlorobenzene	ug/kg	< 32	< 33	< 10	< 13	< 12	< 5.8	< 12	< 19	< 15	< 12
SW8260D	106-46-7	1,4-Dichlorobenzene	ug/kg	< 32	< 33	< 10	< 13	< 12	< 5.8	< 12	< 19	< 15	< 12
SW8260D	78-93-3	2-Butanone (MEK)	ug/kg	< 32	<32	< 10	< 13	< 12	< 5.8	< 12	< 19	< 15	< 12
SW8260D	71-43-2	Benzene	ug/kg	< 32	< 33	< 10	< 13	< 12	< 5.8	< 12	< 19	< 15	< 12
SW8260D	75-27-4	Bromodichloromethane	ug/kg	< 32	< 33	< 10	< 13	< 12	< 5.8	< 12	< 19	< 15	< 12
SW8260D	75-25-2	Bromoform	ug/kg	< 32	< 33	< 10	< 13	< 12	< 5.8	< 12	< 19	< 15	< 12
SW8260D	74-83-9	Bromomethane	ug/kg	< 32	< 33	< 10	< 13	< 12	< 5.8	< 12	< 19	< 15	< 12
SW8260D	56-23-5	Carbon tetrachloride	ug/kg	< 32	< 33	< 10	< 13	< 12	< 5.8	< 12	< 19	< 15	< 12
SW8260D	124-48-1	Chlorodibromomethane	ug/kg	< 32	< 33	< 10	< 13	< 12	< 5.8	< 12	< 19	< 15	< 12
SW8260D	75-00-3	Chloroethane	ug/kg	< 32	< 33	< 10	< 13	< 12	< 5.8	< 12	< 19	< 15	< 12
SW8260D	67-66-3	Chloroform	ug/kg	< 32	< 33	< 10	< 13	< 12	< 5.8	< 12	< 19	< 15	< 12
SW8260D	74-87-3	Chloromethane	ug/kg	< 32	< 33	< 10	< 13	< 12	< 5.8	< 12	< 19	< 15	< 12
SW8260D	10061-01-5	cis-1,3-Dichloropropene	ug/kg	< 32	< 33	< 10	< 13	< 12	< 5.8	< 12	< 19	< 15	< 12
SW8260D	75-71-8	Dichlorodifluoromethane	ug/kg	< 32	< 33	< 10	< 13	< 12	< 5.8	< 12	< 19	< 15	< 12
SW8260D	100-41-4	Ethylbenzene	ug/kg	< 32	< 33	< 10	< 13	< 12	< 5.8	< 12	< 19	< 15	< 12
SW8260D	79-20-9	Methyl acetate	ug/kg	< 160	< 170	< 50	< 63	< 61	< 29	< 60	< 96	< 73	< 59
SW8260D	75-09-2	Methylene chloride	ug/kg	< 32	< 33	< 10	< 13	< 12	< 5.8	< 12	< 19	< 15	< 12
SW8260D	1634-04-4	Methyl-tert-butyl ether (MTBE)	ug/kg	< 32	< 33	< 10	< 13	< 12	< 5.8	< 12	< 19	< 15	< 12
SW8260D	127-18-4	Tetrachloroethene	ug/kg	< 32	< 33	< 10	< 13	< 12	< 5.8	< 12	< 19	< 15	< 12
SW8260D	108-88-3	Toluene	ug/kg	< 32	< 33	< 10	< 13	< 12	< 5.8	< 12	< 19	< 15	< 12
SW8260D	156-60-5	trans-1,2-Dichloroethene	ug/kg	< 32	< 33	< 10	< 13	< 12	< 5.8	< 12	< 19	< 15	< 12
SW8260D	10061-02-6	Trans-1,3-Dichloropropene	ug/kg	< 32	< 33	< 10	< 13	< 12	< 5.8	< 12	< 19	< 15	< 12
SW8260D	79-01-6	Trichloroethene	ug/kg	< 32	< 33	< 10	< 13	< 12	< 5.8	< 12	< 19	< 15	< 12
SW8260D	75-69-4	Trichlorofluoromethane	ug/kg	< 32	< 33	< 10	< 13	< 12	< 5.8	< 12	< 19	< 15	< 12
SW8260D	75-01-4	Vinyl chloride	ug/kg	< 32	< 33	< 10	< 13	< 12	< 5.8	< 12	< 19	< 15	< 12
SW8260D	1330-20-7	Xylenes	ug/kg	< 65	< 67	< 20	< 25	< 24	< 12	< 24	< 39	< 29	< 24

Notes:
FD - field duplicate
mg/kg - milligrams per kilogram
ug/kg - micrograms per kilogram
< - Detection is at or below the Method Detection Limt
p - The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.
HF - Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
J - estimated value below the reporting limit but above the method detection limit
F1 - MS and/or MSD recovery exceeds control limits
F2 - MS/MSD RPD exceeds control limits
B - compound was found in the blank and sample
* - LCS and/or LCSD is outside acceptance limits, low biased

Table 3 - VOC Analytical Results
Sampling and Analysis Report
USCG Ship Yard, Baltimore, Maryland

			SYS_LOC_CODE	CHANN-1	CHANN-2	CHANN-3	CHANN-4	CHANN-5	CHANN-6	CHANN-7	CHANN-8	CHANN-9
			SYS_SAMPLE_CODE	CHANN-1	CHANN-2	CHANN-3	CHANN-4	CHANN-5	CHANN-6	CHANN-7	CHANN-8	CHANN-9
			X_COORD	1431199.8	1431421.8	1431610.3	1431827.4	1432024.5	1432198.5	1432616.2	1432742.3	1432933.2
			Y_COORD	561031.36	560745.67	560478.48	560192.3	555901.45	559577.68	558609.4	558292.96	557983.34
			START_DEPTH (FEET)	0	0	0	0	0	0	0	0	0
			END_DEPTH (FEET)	5	7	7	7	7	8	3.5	3.75	6
			SAMPLE_DATE	3/4/2022	3/4/2022	3/4/2022	3/4/2022	3/4/2022	3/4/2022	3/2/2022	3/2/2022	3/2/2022
			SAMPLE_TYPE_CODE	N	N	N	N	N	N	N	N	N
ANALYTIC_ METHOD	CAS_RN	CHEMICAL_NAME	UNITS									
SW8260D	71-55-6	1,1,1-Trichloroethane	ug/kg	< 25	< 17	< 19	< 21	< 27	< 16	< 17	< 26	< 22
SW8260D	79-34-5	1,1,2,2-Tetrachloroethane	ug/kg	< 25	< 17	< 19	< 21	< 27	< 16	< 17	< 26	< 22
SW8260D	79-00-5	1,1,2-Trichloroethane	ug/kg	< 25	< 17	< 19	< 21	< 27	< 16	< 17	< 26	< 22
SW8260D	75-34-3	1,1-Dichloroethane	ug/kg	< 25	< 17	< 19	< 21	< 27	< 16	< 17	< 26	< 22
SW8260D	75-35-4	1,1-Dichloroethylene	ug/kg	< 25	< 17	< 19	< 21	< 27	< 16	< 17	< 26	< 22
SW8260D	120-82-1	1,2,4-Trichlorobenzene	ug/kg	< 25	< 17	< 19	< 21	< 27	< 16	< 17	< 26	< 22
SW8260D	106-93-4	1,2-Dibromoethane	ug/kg	< 25	< 17	< 19	< 21	< 27	< 16	< 17	< 26	< 22
SW8260D	95-50-1	1,2-Dichlorobenzene	ug/kg	< 25	< 17	< 19	< 21	< 27	< 16	< 17	< 26	< 22
SW8260D	107-06-2	1,2-Dichloroethane	ug/kg	< 25	< 17	< 19	< 21	< 27	< 16	< 17	< 26	< 22
SW8260D	78-87-5	1,2-Dichloropropane	ug/kg	< 25	< 17	< 19	< 21	< 27	< 16	< 17	< 26	< 22
SW8260D	541-73-1	1,3-Dichlorobenzene	ug/kg	< 25	< 17	< 19	< 21	< 27	< 16	< 17	< 26	< 22
SW8260D	106-46-7	1,4-Dichlorobenzene	ug/kg	< 25	< 17	< 19	< 21	< 27	< 16	< 17	< 26	< 22
SW8260D	78-93-3	2-Butanone (MEK)	ug/kg	< 25	< 17	< 19	< 21	< 27	< 16	< 17	< 26	< 22
SW8260D	71-43-2	Benzene	ug/kg	< 25	< 17	< 19	< 21	< 27	< 16	< 17	< 26	< 22
SW8260D	75-27-4	Bromodichloromethane	ug/kg	< 25	< 17	< 19	< 21	< 27	< 16	< 17	< 26	< 22
SW8260D	75-25-2	Bromoform	ug/kg	< 25	< 17	< 19	< 21	< 27	< 16	< 17	< 26	< 22
SW8260D	74-83-9	Bromomethane	ug/kg	< 25	< 17	< 19	< 21	< 27	< 16	< 17	< 26	< 22
SW8260D	56-23-5	Carbon tetrachloride	ug/kg	< 25	< 17	< 19	< 21	< 27	< 16	< 17	< 26	< 22
SW8260D	124-48-1	Chlorodibromomethane	ug/kg	< 25	< 17	< 19	< 21	< 27	< 16	< 17	< 26	< 22
SW8260D	75-00-3	Chloroethane	ug/kg	< 25	< 17	< 19	< 21	< 27	< 16	< 17	< 26	< 22
SW8260D	67-66-3	Chloroform	ug/kg	< 25	< 17	< 19	< 21	< 27	< 16	7.1 JB	11 JB	9.4 JB
SW8260D	74-87-3	Chloromethane	ug/kg	< 25	< 17	< 19	< 21	< 27	< 16	< 17	< 26	< 22
SW8260D	10061-01-5	cis-1,3-Dichloropropene	ug/kg	< 25	< 17	< 19	< 21	< 27	< 16	< 17	< 26	< 22
SW8260D	75-71-8	Dichlorodifluoromethane	ug/kg	< 25	< 17	< 19	< 21	< 27	< 16	< 17	< 26	< 22
SW8260D	100-41-4	Ethylbenzene	ug/kg	< 25	< 17	< 19	< 21	< 27	< 16	< 17	< 26	< 22
SW8260D	79-20-9	Methyl acetate	ug/kg	< 120	< 85	< 96	< 100	< 140	< 78	< 86	< 130	< 110
SW8260D	75-09-2	Methylene chloride	ug/kg	< 25	< 17	< 19	< 21	< 27	< 16	< 17	< 26	< 22
SW8260D	1634-04-4	Methyl-tert-butyl ether (MTBE)	ug/kg	< 25	< 17	< 19	< 21	< 27	< 16	< 17	< 26	< 22
SW8260D	127-18-4	Tetrachloroethene	ug/kg	< 25	< 17	< 19	< 21	< 27	< 16	< 17	< 26	< 22
SW8260D	108-88-3	Toluene	ug/kg	< 25	< 17	< 19	< 21	< 27	< 16	< 17	< 26	< 22
SW8260D	156-60-5	trans-1,2-Dichloroethene	ug/kg	< 25	< 17	< 19	< 21	< 27	< 16	< 17	< 26	< 22
SW8260D	10061-02-6	Trans-1,3-Dichloropropene	ug/kg	< 25	< 17	< 19	< 21	< 27	< 16	< 17	< 26	< 22
SW8260D	79-01-6	Trichloroethene	ug/kg	< 25	< 17	< 19	< 21	< 27	< 16	< 17	< 26	< 22
SW8260D	75-69-4	Trichlorofluoromethane	ug/kg	< 25	< 17	< 19	< 21	< 27	< 16	< 17	< 26	< 22
SW8260D	75-01-4	Vinyl chloride	ug/kg	< 25	< 17	< 19	< 21	< 27	< 16	< 17 *-	< 26 *-	< 22 *-
SW8260D	1330-20-7	Xylenes	ug/kg	< 50	< 34	< 38	< 41	< 55	< 31	< 34	< 52	< 44

Notes:
FD - field duplicate
mg/kg - milligrams per kilogram
ug/kg - micrograms per kilogram
< - Detection is at or below the Method Detection Limt
p - The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.
HF - Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
J - estimated value below the reporting limit but above the method detection limit
F1 - MS and/or MSD recovery exceeds control limits
F2 - MS/MSD RPD exceeds control limits
B - compound was found in the blank and sample
* - LCS and/or LCSD is outside acceptance limits, low biased

Table 4 - TCLP Analytical Results
Sampling and Analysis Report
USCG Ship Yard, Baltimore, Maryland

						SYS_LOC_CODE	BASINCOMP1	BASINCOMP2	BERTHCOMP1	BERTHCOMP1	CHANNCOMP1	CHANNCOMP2	CHANNCOMP3	FD-030722
						SYS_SAMPLE_CODE	BASINCOMP1	BASINCOMP2	BERTHCOMP1	FD-030722	CHANNCOMP1	CHANNCOMP2	CHANNCOMP3	FD-030722
						START_DEPTH	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
						END_DEPTH	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
						X_COORD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
						Y_COORD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
						SAMPLE_DATE	3/3/2022	3/3/2022	3/7/2022	3/7/2022	3/7/2022	3/7/2022	3/2/2022	3/7/2022
						SAMPLE_TYPE_CODE	N	N	N	FD	N	N	N	FD
ANALYTIC_METHOD	CAS_RN	CHEMICAL_NAME	CLASS	LEACHATE_METHOD	REGULATORY LIMIT[1]	UNITS								
SW8151A	94-75-7	2,4-Dichlorophenoxyacetic acid	Herbicides	SW1311	10	mg/l	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040
SW8151A	93-72-1	Silvex (2,4,5-TP)	Herbicides	SW1311	1	mg/l	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
SW6010D	7440-38-2	Arsenic	Metals	SW1311	5	mg/l	< 0.50	< 0.50	< 0.50	< 0.50	0.096 J	0.15 J	0.086 J	< 0.50
SW6010D	7440-39-3	Barium	Metals	SW1311	100	mg/l	0.88 J	0.76 J	0.64 J	0.62 J	0.84 J	0.86 J	0.81 J	0.62 J
SW6010D	7440-43-9	Cadmium	Metals	SW1311	1	mg/l	0.0031 J	0.003 J	0.0057 J	0.0046 J	< 0.50	< 0.50	< 0.50	0.0046 J
SW6010D	7440-47-3	Chromium (Total)	Metals	SW1311	5	mg/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
SW6010D	7439-92-1	Lead	Metals	SW1311	5	mg/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
SW7470A	7439-97-6	Mercury	Metals	SW1311	0.2	mg/l	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020
SW6010D	7782-49-2	Selenium	Metals	SW1311	1	mg/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
SW6010D	7440-22-4	Silver	Metals	SW1311	5	mg/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
SW8081B	72-20-8	Endrin	Pesticides	SW1311	0.02	mg/l	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050
SW8081B	12789-03-6	Chlordane (gamma)	Pesticides	SW1311	0.03	mg/l	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
SW8081B	76-44-8	Heptachlor	Pesticides	SW1311	0.008	mg/l	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050
SW8081B	1024-57-3	Heptachlor epoxide	Pesticides	SW1311	0.008	mg/l	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050
SW8081B	58-89-9	Lindane (gamma BHC)	Pesticides	SW1311	0.40	mg/l	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050
SW8081B	72-43-5	Methoxychlor	Pesticides	SW1311	10	mg/l	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050
SW8081B	8001-35-2	Toxaphene	Pesticides	SW1311	0.50	mg/l	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040
SW8270E	106-46-7	1,4-Dichlorobenzene	SVOCs	SW1311	7.5	mg/l	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
SW8270E	95-95-4	2,4,5-Trichlorophenol	SVOCs	SW1311	400	mg/l	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
SW8270E	88-06-2	2,4,6-Trichlorophenol	SVOCs	SW1311	2	mg/l	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
SW8270E	121-14-2	2,4-Dinitrotoluene	SVOCs	SW1311	0.13	mg/l	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
SW8270E	106-44-5	4-Methylphenol	SVOCs	SW1311	200	mg/l	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
SW8270E	118-74-1	Hexachlorobenzene	SVOCs	SW1311	0.13	mg/l	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
SW8270E	87-68-3	Hexachlorobutadiene	SVOCs	SW1311	0.5	mg/l	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
SW8270E	67-72-1	Hexachloroethane	SVOCs	SW1311	3	mg/l	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
SW8270E	98-95-3	Nitrobenzene	SVOCs	SW1311	2	mg/l	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
SW8270E	95-48-7	o-Cresol	SVOCs	SW1311	200	mg/l	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
SW8270E	87-86-5	Pentachlorophenol	SVOCs	SW1311	100	mg/l	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
SW8270E	110-86-1	Pyridine	SVOCs	SW1311	5	mg/l	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
SW8260D	75-35-4	1,1-Dichloroethylene	VOCs	SW1311	0.7	mg/l	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
SW8260D	107-06-2	1,2-Dichloroethane	VOCs	SW1311	0.5	mg/l	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
SW8260D	78-93-3	2-Butanone (MEK)	VOCs	SW1311	200	mg/l	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
SW8260D	71-43-2	Benzene	VOCs	SW1311	0.5	mg/l	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
SW8260D	56-23-5	Carbon tetrachloride	VOCs	SW1311	0.5	mg/l	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
SW8260D	108-90-7	Chlorobenzene	VOCs	SW1311	100	mg/l	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
SW8260D	67-66-3	Chloroform	VOCs	SW1311	6.0	mg/l	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
SW8260D	127-18-4	Tetrachloroethene	VOCs	SW1311	0.7	mg/l	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
SW8260D	79-01-6	Trichloroethene	VOCs	SW1311	0.5	mg/l	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
SW8260D	75-01-4	Vinyl chloride	VOCs	SW1311	0.2	mg/l	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20

Notes:
FD - field duplicate
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ug/kg - micrograms per kilogram
< - Detection is at or below the Method Detection Limt
p - The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.
HF - Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
J - estimated value below the reporting limit but above the method detection limit
F1 - MS and/or MSD recovery exceeds control limits
F2 - MS/MSD RPD exceeds control limits
B - compound was found in the blank and sample
* - LCS and/or LCSD is outside acceptance limits, low biased

[1] 40 CFR 261.24, EPA Table 1: Maximum Concentration of Contaminants for Toxicity Characteristic.

MARYLAND DEPARTMENT
OF TRANSPORTATION

MARYLAND PORT
ADMINISTRATION

Larry Hogan
Governor

Boyd K. Rutherford
Lt. Governor

James F. Ports, Jr.
Secretary

William P. Doyle
Executive Director

July 19, 2022

LT Holly Moore
Facilities Engineering
United States Coast Guard Yard
2401 Hawkins Point Rd.
Baltimore, MD 21226

Dear LT Moore,

The Maryland Department of Transportation Maryland Port Administration (MDOT MPA) has received the geotechnical and sediment chemistry testing information for the proposed United States Coast Guard Yard project of approximately 13,000 cy for maintenance dredging under the ship lift and 587,000 cy for improvement dredging in the navigation channel and turning basin. Based on our review of the information provided, the dredged material appears to be similar in nature to other inner harbor dredged material that has previously been placed at the MDOT MPA Dredged Material Containment Facilities (DMCFs). As such, so long as the Site Standards and Procedures for the Placement of Dredged Material are followed as specified in the MDOT MPA Dredged Material Placement Permit Application, handling problems are not anticipated and the MDOT MPA has determined that the material is acceptable to be placed at the Masonville DMCF.

Prior to placement of dredged material in the Masonville DMCF, a Right of Entry Agreement for the site must be fully executed between MDOT MPA and USCG.

Should you have any questions about next steps in the process, please contact Mr. David Bibo at 410-385-4466 or by email at dbibo@marylandports.com.

Sincerely,

Amanda Peñafiel

Amanda Peñafiel
Senior Project Manager
MDOT MPA Office of Harbor Development

Cc: David Bibo - MPA
Ravi Damera - AECOM

Appendix D – Coastal Zone Management Act Federal Consistency Determination

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U.S. Department of Homeland Security
United States Coast Guard

Commanding Officer
United States Coast Guard
Facilities Engineering Coast
Guard Yard

2401 Hawkins Point Road
Baltimore, MD 21226
Phone: (410) 636-4098
Email: Holly.M.Moore@uscg.mil

October 26, 2022

Heather Nelson
Federal Consistency Coordinator
Maryland Department of the Environment
HNelson@maryland.gov

Subject: Federal Consistency Determination
Environmental Assessment for Proposed Dredge Activities at United States Coast Guard Yard, Baltimore, Anne Arundel County, Maryland

Dear Ms. Nelson,

The United States (US) Coast Guard (USCG) is submitting the enclosed Federal Consistency Determination, pursuant to Section 307 of the Coastal Zone Management Act (CZMA) (16 US Code [USC] § 1456, as amended) and 15 Code of Federal Regulations (CFR) Part 930, for proposed dredging activities at USCG Yard (herein referred to as CG Yard) in Baltimore, Anne Arundel County, Maryland (Proposed Action).

The CG Yard is comprised of approximately 113 acres along the eastern shoreline of Curtis Creek, a tributary of the Patapsco River, and is approximately 10 miles south of downtown Baltimore. The Chesapeake Bay is approximately six miles east of the CG Yard via the Patapsco River. The CG Yard is located in an intensively developed and industrialized area of Baltimore. The CG Yard has operated continuously since 1899 and is the sole USCG-operated shipyard in the US. All major vessel repairs, maintenance, and overhauls for the USCG fleet are conducted at the CG Yard. The Proposed Action area would occur offshore in Curtis Creek, and would include the Shiplift area and turning basin in front of the CG Yard, the vessel berth area between Piers 1, 2, and 3, and the navigation channel from the CG Yard's Pier 3 to the Interstate-695 bridge (otherwise known as Bascule Bridge).

The Proposed Action consists of two types of dredging activities: 1) maintenance dredging via hydraulic dredging in support of the Syncrolift facility; and 2) improvement dredging via mechanical dredging in the navigational channel extending from Bascule Bridge to the CG Yard's Pier 3. Maintenance dredging would occur up to 34.5 feet around the Syncrolift Facility, and up to 27.5 feet between Bascule Bridge and Pier 3 to support a new class of cutters. Proposed dredging activities would span a total of 8 months over the course of 3 years and begin in fiscal year 2023. Based on the analysis presented in the enclosed Federal

Consistency Determination, the USCG has determined that the Proposed Action would be consistent to the maximum extent practicable with the enforceable policies of Maryland's Coastal Zone Management Program.

Pursuant to 15 CFR Section 930.41, the Maryland Coastal Zone Management Program has **60 days** from the receipt of this letter in which to concur with or object to this Consistency Determination, or to request an extension under 15 CFR Section 930.41(b). Maryland's concurrence will be presumed if its response is not received by the USCG on the 60th day from receipt of this determination. The USCG has contracted AECOM to facilitate the CZMA process. Please direct your response or requests for additional information to Ms. Jennifer Warf at AECOM by email: Jennifer.Warf@aecom.com.

Sincerely,

MOORE.HOLLY.MICHELLE.1405962531

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Date: 2022.10.27 07:49:35 -04'00'

LT Holly Moore

Enclosure: Federal Consistency Determination

Federal Consistency Determination
United States Coast Guard (USCG)
Proposed Dredge Activities at USCG Yard, Baltimore
Anne Arundel County, Maryland

In accordance with Section 307(d) of the Coastal Zone Management Act (CZMA) of 1972 and 15 Code of Federal Regulations (CFR) Part 930 Subpart F, this document provides the State of Maryland with a Federal Consistency Determination for the Proposed Action described below.

FEDERAL AGENCY ACTION

The United States (US) Coast Guard (USCG) is proposing to conduct dredging activities at the USCG Yard (herein referred to as CG Yard) Baltimore, Anne Arundel County, Maryland (Proposed Action).

The CG Yard is comprised of approximately 113 acres along the eastern shoreline of Curtis Creek, a tributary of the Patapsco River, and is approximately 10 miles south of downtown Baltimore (see **Figure 1**). The surrounding land in the vicinity of the CG Yard is extensively developed and industrialized. The CG Yard has operated continuously since 1899 and is the sole USCG-operated shipyard in the US. All major vessel repairs, maintenance, and overhauls for the USCG fleet are conducted at the CG Yard. The Proposed Action area would occur offshore in Curtis Creek, a previously disturbed marine porting area, and would include the Shiplift area and turning basin in front of CG Yard, the vessel berth areas between Piers 1, 2, and 3, and the navigation channel from the CG Yard's Pier 3 to the Interstate (I)-695 bridge (otherwise known as Bascule Bridge).

Baltimore Harbor, and specifically Curtis Creek, are used heavily for industrial and docking activities. In support of such activities, these waters have been routinely dredged since at least 1917. The U.S. Army Corps of Engineers (USACE) recently proposed a 20-year dredging plan for Baltimore Harbor to conclude in 2025, and the USCG has also completed its own dredging in the water surrounding the CG Yard.

The Syncrolift facility located within the CG Yard's Shiplift area next to Pier 3 provides dry-dock capabilities to support maintenance and renovations on USCG cutters. It is one of the main components of the CG Yard's shiplift system, which raises ships out of the water and transfers them to a land-based area for dry-dock maintenance. The current average water depth surrounding the Shiplift area is approximately 23 feet. Currently, maintenance dredging is needed to return the Shiplift area to its historic depth and to support the continued operation of the Syncrolift facility.

The USCG is currently working to recapitalize its existing fleet, including replacing smaller vessels with newer, larger, more complex ships. The USCG is proposing to acquire the Offshore Patrol Cutter (OPC) to replace the current fleet of Medium Endurance Cutters. The USCG has also recently introduced the National Security Cutter (NSC), and needs to update its infrastructure to be able to support and dry-dock these cutters. Navigable channels for the OPC and NSC are needed to support their future on-site maintenance and repair.

Anne Arundel County is located within Maryland's designated coastal zone. The Proposed Action would have the potential to affect Maryland's coastal uses or resources. Therefore, the USCG is required to determine the Proposed Action's consistency with the enforceable policies of Maryland's federally approved Coastal Zone Management Program (CZMP).

To analyze impacts on the environment potentially resulting from the Proposed Action, the USCG is also preparing an Environmental Assessment (EA) in accordance with the National Environmental Policy Act of 1969 (NEPA; 42 US Code §§ 4321 *et seq*.), the President's Council on Environmental Quality (CEQ) Regulations Implementing the Procedural Provisions of NEPA (40 CFR Parts 1500-1508), and the Coast Guard Commandant Instruction (COMDTINST) M16475.1D, National Environmental Policy Act Implementing Procedures and Policy for Considering Environmental Impacts.

Concurrent with or upon completion of the NEPA process, the USCG would obtain the necessary permits and approvals to implement the Proposed Action.

PURPOSE AND NEED

The purpose of the Proposed Action is to 1) maintain the viability of the Syncrolift facility; 2) support the long-term operation and service of new OPCs and NSCs; and 3) meet USCG mission requirements at the CG Yard.

The Proposed Action is needed to provide the necessary in-water improvements in support of the Syncrolift. Currently, accumulated sediment in the vicinity of the Syncrolift facility inhibits successful operation of the mechanism. Water depths need to be dredged to levels consistent with its historic depth (34.5 feet) and original construction in 1996. The Syncrolift facility, which connects to the CG Yard's upland rail system, is used currently for the majority of dry dock repair and maintenance work performed at the CG Yard. As the only USCG shipyard, the CG Yard needs to be accessible by USCG vessels and have the appropriate facilities to conduct maintenance of these vessels to meet USCG mission requirements.

The Proposed Action is also needed to address insufficient water depths within the navigation channel to accommodate the new OPCs and NSCs. Water depths in the channel from the Bascule Bridge to the turning basin in front of the CG Yard within Curtis Creek, and the vessel berth area between Piers 1, 2, and 3 do not currently allow for effective navigation of the new USCG cutters and their associated draft (up to approximately 27.5 feet). Current average water depths in the channel, turning basin, and vessel berth area are 23 feet, 22 feet, and 26.5 feet, respectively. If the Proposed Action is not implemented, the OPCs and NSCs would not be able to access the CG Yard for maintenance and repair work. The CG Yard not having sufficient capacity or infrastructure to service its own fleet would jeopardize the ability of the USCG to meet mission requirements.

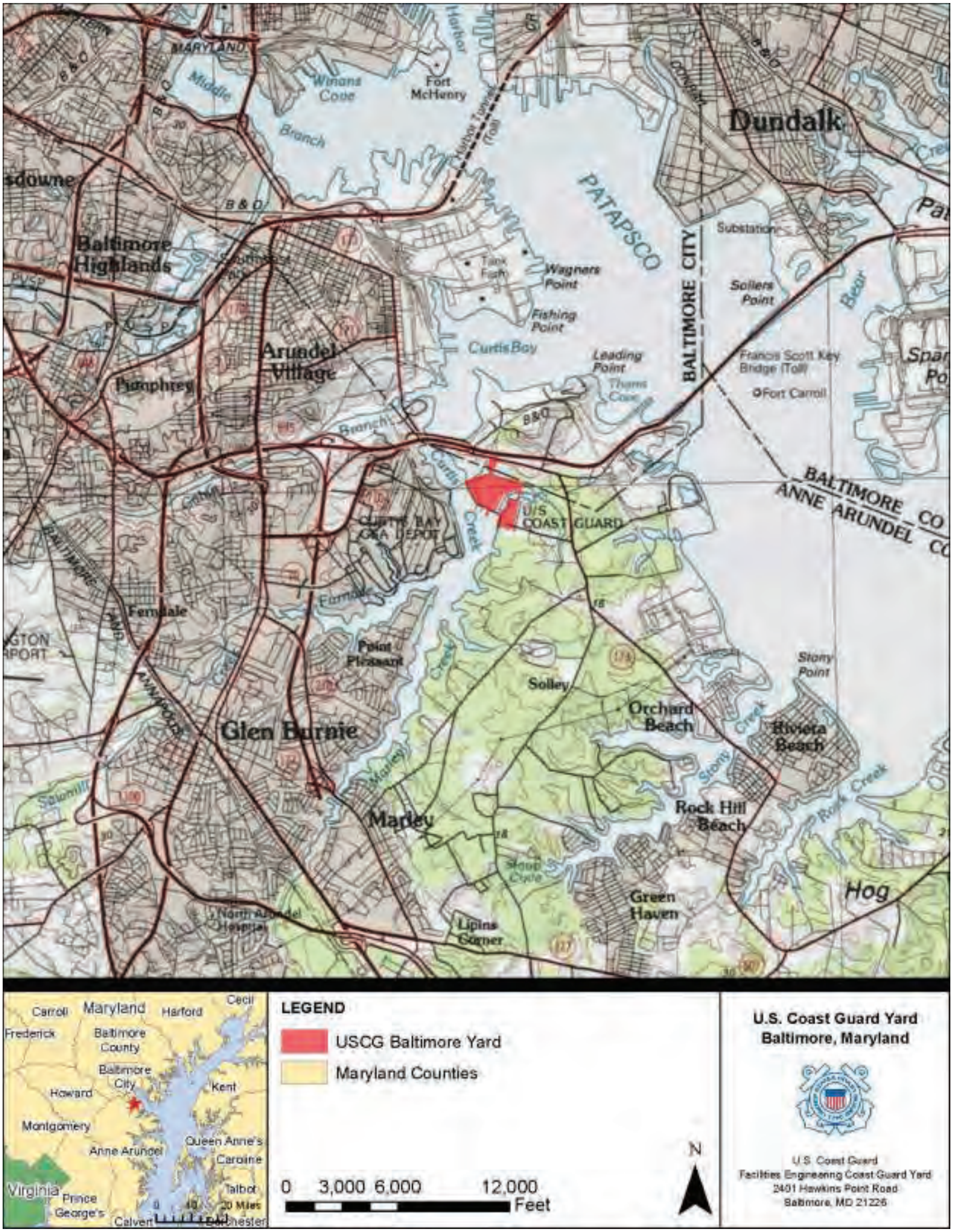

Figure 1. Project Location

SUMMARY OF PROPOSED ACTION AND ANTICIPATED EFFECTS

The Proposed Action consists of two types of dredging activities: 1) maintenance dredging via hydraulic dredging in support of the Syncrolift Facility; and 2) improvement dredging via mechanical dredging in navigational channels that would be used by the OPC and NSC. Dredging activities would span approximately 8 months over the course of 3 years given capacity restrictions of the dredge material containment facility (DMCF) used for disposal, and would begin in fiscal year 2023.

Proposed maintenance dredging would occur in the CG Yard's Shiplift area next to Pier 3 to dredge the area to its historic depth of 34.5 feet, and ensure that the Syncrolift facility could continue to operate as intended (**Figure 2**). Approximately 7,449 cubic yards (CY) of material would be dredged from the Shiplift area. Maintenance dredging would be performed via hydraulic dredging, which uses a pump to bring sediments into a pipeline for transport. The dredged slurry would then either be transported through the conveyance pipeline to an upland site for dewatering, or would be immediately transferred to a barge for transport and disposal.

The upland sediment dewatering site would be at Grove Point within the CG Yard, an available green space located to the east of Arundel Cove. The conveyance pipeline would be located adjacent to the dredge barge, and would be submerged and anchored where it crosses Arundel Cove. Upon exiting Arundel Cove, it would be placed upon 30 linear feet of wetland until reaching the upland dewatering site.

The slurry material would be dewatered through use of a geo-synthetic tube, which allows water to drain while the remaining sediment solidifies. Berms and impermeable liners would be installed to collect water during dewatering, so it can be treated prior to discharge into Curtis Creek. Once the dredge material is dry and consolidated, the solid dredge spoils would be tested for contaminants and transported from the CG Yard via truck to the Masonville DMCF, a licensed facility operated by the Maryland Environmental Service (MES), for proper storage and disposal. Off-site disposal would occur in compliance with all required permits and approvals. Dredge spoils may also be hydraulically pumped through a conveyance pipeline directly onto a barge for immediate transport to Masonville DMCF. The disposal method would be determined prior to the start of the dredging activities.

Proposed improvement dredging would occur in an area extending from the Bascule Bridge to the CG Yard's Pier 3, including the ship berth areas between Piers 1, 2, and 3, and the turning basin in front of the shipyard within Curtis Creek (**Figure 2**). Approximately 390,000 CY of material would be dredged during improvement dredging. This would be accomplished via mechanical dredging, which uses a floating crane barge, scow/barge, and a clamshell dredger to excavate material from the bay floor. Excavated dredge material would be transferred from the clamshell bucket to a scour barge located next to the crane barge, allowing water to drain out and leaving behind only solid dredge material. The remaining solids would then be transported to the Masonville DMCF for disposal.

The Proposed Action would occur in previously disturbed marine porting waters of Curtis Creek leading up to and adjacent to the CG Yard. The USCG is evaluating one alternative for implementation of the Proposed Action (**Figure 2**) in addition to the No Action Alternative.

Potential dredge-related impacts on natural resources resulting from the Proposed Action are expected to be negligible or less-than-significant. Proposed dredging activities would result in temporary disturbances, such as air emissions, noise, and increased turbidity. Sediment removal from Curtis Creek would also temporarily impact water quality and alter its physical characteristics. However, the USCG would obtain and comply with all required permits and approvals, including an Individual Permit and Section 408 Permission from USACE, and a Water Quality Certification (WQC) and Tidal Wetland License from the Maryland Department of the Environment (MDE). In addition, dredge personnel would adhere to applicable best management practices (BMPs) and conservation recommendations provided by the National Marine Fisheries Service (NMFS) to avoid or minimize adverse impacts on aquatic resources, including essential fish habitat (EFH), and impacts to water quality.

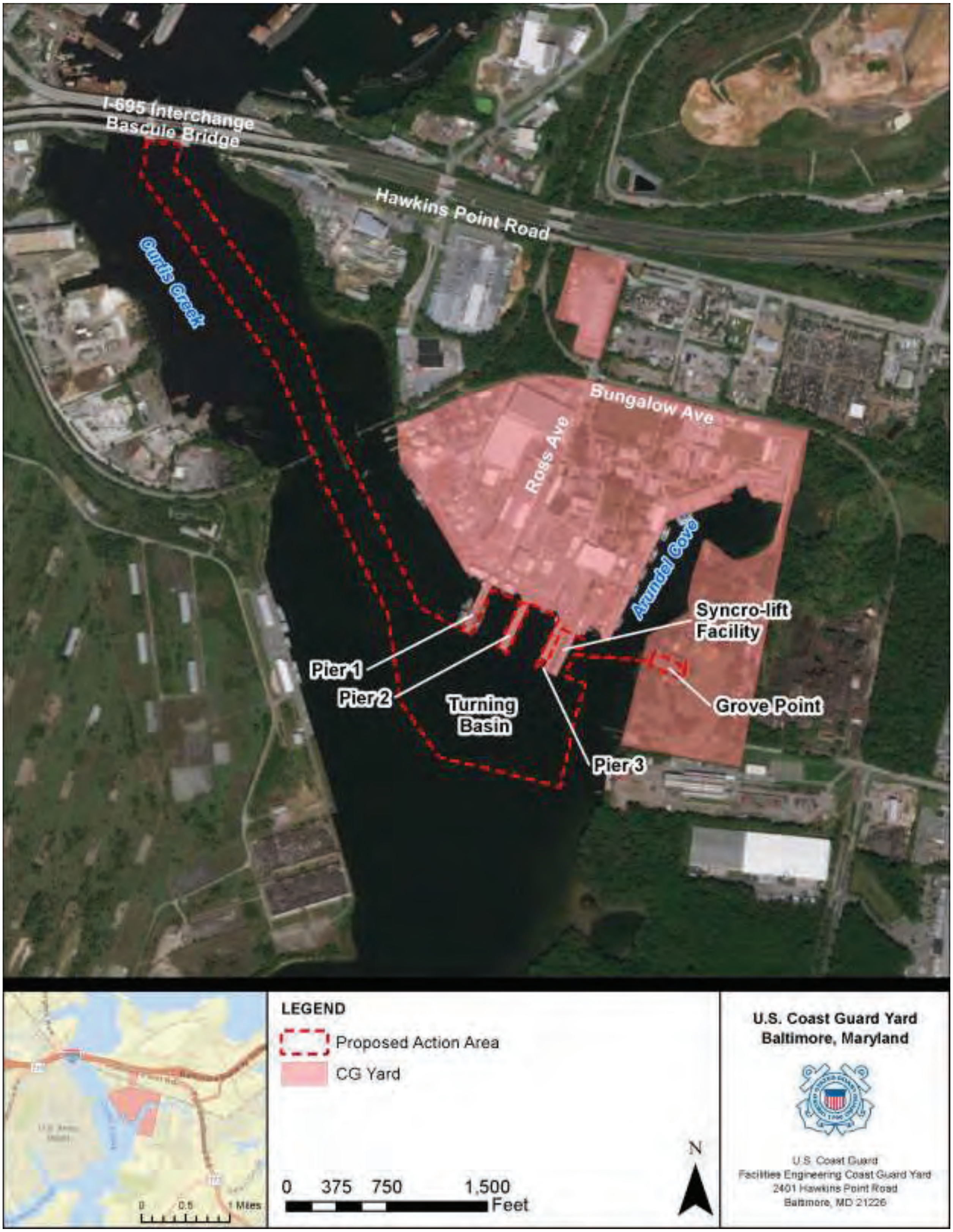

Figure 2. Proposed Action

ENFORCEABLE POLICIES

The State of Maryland has developed and implemented a federally approved CZMP, encompassing enforceable policies for the coastal area pertaining to:

Core Policies

- Quality of life
- Waste and debris management
- Water resources protection and management
- Flood hazards and community resilience

Coastal Resources

- The Chesapeake and Atlantic Coastal Bays Critical Area
- Tidal wetlands
- Non-tidal wetlands
- Forests
- Historical and archaeological sites
- Living aquatic resources

Coastal Uses

- Mineral extraction
- Electrical generation and transmission
- Tidal shore erosion control
- Oil and natural gas facilities
- Dredging and disposal of dredged material
- Navigation
- Transportation
- Agriculture
- Development
- Sewage treatment

The Proposed Action would have the potential to affect the coastal area in Anne Arundel County, which is located in Maryland's designated coastal zone. **Table 1** summarizes the applicability of Maryland's enforceable policies and the Proposed Action's consistency with the applicable policies. A summary analysis of how the Proposed Action would affect the applicable enforceable policies is presented below.

5.1. Core Policies

5.1.1 Quality of Life

Policy 5.1.1.1 – *Air Quality*

Operation of dredge and disposal equipment, including barges, tugboats, pumps, cranes, and dump trucks, would generate emissions from exhaust fumes. This would have air quality effects typical of average dredge projects; however, emissions would be highly localized around the Proposed Action area. Dredge and disposal related emissions would also be short-term and temporary, occurring for approximately four months per year over a two-year period, and ceasing upon the completion of dredge and dredge material transport activities. No permanent new emissions source would be created. Moreover, emissions from marine vessels and trucks already exist at the CG Yard, so the Proposed Action would not introduce or create novel sources of emissions during implementation. Therefore, the Proposed Action is consistent to the maximum extent practicable with this enforceable policy.

Policy 5.1.1.2 – *Noise*

Noise generated during proposed dredging activities would affect the immediate area surrounding the dredge sites, but would not be significant compared to existing noise conditions in the Proposed Action area that are typical of an urban, industrial waterfront environment. Increased noise levels would be intermittent and temporary, and equipment and machinery used at the dredge site is not anticipated to exceed 80 decibels (dB) at the surface. Due to the occurrence of dredging in an offshore environment, no residences or sensitive receptors are located immediately adjacent to the Proposed Action area, and noise levels would be expected to attenuate to insignificant levels at 0.25 mile outside of the site. No sensitive receptors are located within a 1-mile radius of the Proposed Action area. Upon completion of the project, noise levels would return to pre-project levels and no long-term sources of noise would be created. Therefore, the Proposed Action is consistent to the maximum extent practicable with this enforceable policy.

Policy 5.1.1.10 – *Erosion and Sediment Control*

The Proposed Action would result in the disturbance of bottom substrates in Curtis Creek which would lead to an increase in turbidity in the surrounding water. Turbidity plumes resulting from proposed dredging activities would be expected to dissipate to background levels within 1,000 feet of the maintenance dredging site, and within 600 feet of the improvement dredging site. Following the completing of dredging activities, disturbed sediments would settle back to the creek floor and would not remain suspended in the water column. In addition, turbidity curtains would be installed around the dredge area between June 15 and October 15 to prevent sediment migration outside of the work area.

No terrestrial land disturbance would occur under the Proposed Action that would have the potential to result in sediment runoff and erosion, but hydraulically removed dredge spoils may be dewatered at the upland Grove Point site at the CG Yard. These soils would remain contained within geo-synthetic tubes, and would not have the potential to runoff and cause sedimentation in Curtis Creek. All dredge materials would ultimately be disposed of at Masonville DMCF, operated by the MES, which would then be responsible for ensuring proper storage of dredge materials. Therefore, the Proposed Action is consistent to the maximum extent practicable with this enforceable policy.

5.1.2 Waste and Debris Management

Policy 5.1.2.1 – *Hazardous Waste Management*

No hazardous substances would be stored, treated, dumped, discharged, or abandoned during implementation of the Proposed Action. Soil samples taken from the bottom sediment in the Proposed Action area were analyzed for a variety of contaminants using the toxicity characteristic leaching procedure, and no exceedances were noted, indicating that the bottom sediment is not hazardous. No volatile organic compounds were identified, and while some elements and heavy metals have detectable, low concentrations, no levels exceeded the regulated thresholds. The Maryland Department of Transportation (MDOT) Maryland Port Administration (MPA) has reviewed the results of the soil sampling, and has confirmed that the dredge material would be acceptable to place at Masonville DMCF for disposal.

In addition, Curtis Creek has previously been listed as impaired due to traces of polychlorinated biphenyls (PCBs) in sediment and fish tissue, although the soil sampling did not identify concentrations of PCBs that exceed regulated thresholds. Although the soil analysis indicates these soils are not hazardous, they still would be tested for potential contaminants following the dewatering process and would then be transported to Masonville DMCF for offsite storage and disposal. The USCG would coordinate with the Maryland Waste Diversion and Utilization Program to ensure proper treatment and disposal of wastes generated. Therefore, the Proposed Action is consistent to the maximum extent practicable with this enforceable policy.

5.1.3 Water Resources Protection and Management

Policy 5.1.3.2 – *Protection of Designated Uses*

Adherence to turbidity control measures, and testing of dewatered dredge spoils and collected water during the Proposed Action would ensure that impacts to the quality of Curtis Creek do not occur or are minimal. Berms and impermeable liners would be installed around Grove Point at the CG Yard to contain water collected during the dewatering process, which would be tested and treated to meet applicable water quality standards prior to discharge in Curtis Creek. The USCG would obtain a Section 401 WQC from MDE to ensure compliance with those standards for any discharge. Adherence to these practices and permits would minimize potential impacts of dredging on water quality, and would thus protect surrounding waters for their designated uses. Therefore, the Proposed Action is consistent to the maximum extent practicable with this enforceable policy.

5.2 Coastal Resources

5.2.1 The Chesapeake and Atlantic Coastal Bays Critical Area

Policy 5.2.1.5 – *Restrictions on Stream Alterations*

Dredging occurring under the Proposed Action would result in physical alterations to the bottom substrate of Curtis Creek within the Proposed Action area. The presence of dredge equipment during implementation of the Proposed Action would not pose a barrier to the movement of fish, nor is likely to result in entrapment as individuals would be able to avoid the equipment. Increased turbidity as a result of the Proposed Action is also not expected to affect the movement of fish species, as increased levels would dissipate in the surrounding areas. No permanent structures would be built during the Proposed Action that could serve as a barrier to fish, and the alteration of benthic habitat would not restrict movement. Therefore, the Proposed Action is consistent to the maximum extent practicable with this enforceable policy.

Policy 5.2.1.11 – *Intensely Developed Areas*

The Proposed Action is located within the Chesapeake Bay Critical Area. There are three classifications for land within the Critical Area, and the CG Yard is designated as an Intensely Developed Area (IDA). However, since the Proposed Action consists primarily of in-water work and does not propose new development, requirements for IDAs under the Critical Area program would not apply to the dredging activities. Regardless, the USCG would implement sediment control practices to minimize turbidity while performing the proposed dredging, and would obtain and comply with a WQC from MDE. Such efforts would minimize potential impacts to water quality within the Critical Area. Therefore, the Proposed Action is consistent to the maximum extent practicable with this enforceable policy.

5.2.2 Tidal Wetlands

Policy 5.2.2.1 – *Projects that Alter Natural Character Shall Avoid Dredging and Filling, be Water-Dependent and Provide Appropriate Mitigation*

The Proposed Action is water-dependent and consists of dredging activities which would occur in tidal waters. Due to the purpose of and need for the Proposed Action to support the overall USCG mission, there is no practicable alternative to conducting dredging within tidal waters. No dredging or fill, however, would occur within tidal wetlands surrounding the Proposed Action area. A portion of the hydraulic dredge conveyance pipeline would be placed across approximately 30 linear feet of tidal wetland in Arundel Cove to transport dredge material to Grove Point, but this structure would be temporary and would not place any dredge material within this wetland. The USCG would obtain an MDE Tidal Wetland License for the laydown of this pipeline, and would restore the impacted wetlands to their pre-construction conditions following removal of the pipeline.

Proposed dredging would alter the bottom substrate characteristics of approximately 55.3 acres of Curtis Creek. This habitat has an unconsolidated bottom and minimal vegetative cover. No submerged aquatic vegetation or shellfish beds are present given the unconsolidated bottom and the industrial and frequently disturbed nature of Curtis Creek. However, Curtis Creek has been designated as EFH for juvenile and adult life stages, and proposed dredging could result in the loss of benthic substrate and organisms used as forage, as well as an increase in turbidity, which may affect the behavior of EFH species. Although Curtis Creek contains low-quality habitat, due to the potential for physical changes within the habitat and potential impacts to EFH species, the Proposed Action would result in an adverse effect to EFH. USCG would adhere to the conservation recommendations set forth by NMFS in a letter dated 28 April 2022 to minimize adverse effects, such as adhering to time-of-year restrictions, limiting over-dredge, using turbidity barriers, ensuring the hydraulic dredge drag head is properly situated on bottom sediment, using an environmental dredge bucket, and installing berms and impermeable liners at the upland dewatering site to protect water quality.

The USCG has determined that the Proposed Action would have no effect on historic properties. In a letter dated 15 December 2021, the Maryland Historical Trust concurred with the USCG's determination of No Adverse Effect on historic properties.

The Proposed Action would occur within an established industrial port with existing vessel traffic, and would temporarily introduce additional vessels into Curtis Creek and Baltimore Harbor to be used for dredging. During maintenance dredging, a dredge barge would be present adjacent to the CG Yard and removed from the main path of vessel traffic. The conveyance pipeline would be placed adjacent to this barge and would be anchored to Arundel Cove and would not pose an obstacle to vessel traffic and navigational safety. During improvement dredging, a minimum of three barges would be required. Two barges would remain in Curtis Creek, while one would be used to transport excavated dredge material to Masonville DMCF for disposal. Given the high volume of vessel traffic in Baltimore Harbor, this additional vessel is not likely to interfere with navigation; moreover, due to the low annual vessel traffic in Curtis Creek, the dredge barges are not anticipated to pose an impediment to navigational safety.

There are no recreational areas, State wild or scenic rivers, beaches, historic waterfowl staging areas, or colonial bird nesting sites within the Proposed Action area; therefore, there would be no effect on these resources. As the Proposed Action would occur within an established industrial port, the Proposed Action would not affect marine commerce or local, regional, and State economic conditions. Natural water flow, disposal of sanitary waste, and sea level rise would not be affected by the Proposed Action. Proposed dredging would occur entirely within the 100-year floodplain associated with Curtis Creek, but no incompatible development would occur that would interfere with its flow or function. Therefore, the Proposed Action is consistent to the maximum extent practicable with this enforceable policy.

5.3 Coastal Uses

5.3.5 Dredging and Disposal of Dredged Material

Policy 5.3.5.2 – *Dredging Requires an Environmental Analysis and is Generally Discouraged*

The USCG has prepared an EA in accordance with the requirements of NEPA and its implementing regulations in order to determine the potential impacts of proposed dredging activities on the environment. The USCG has determined that no significant adverse impacts would occur under the Proposed Action, and that there is no reasonable alternative to completing the proposed dredge activities. Dredging would not be performed with the intent to obtain sand, gravel, or fill material. Therefore, the Proposed Action is consistent to the maximum extent practicable with this enforceable policy.

Policy 5.3.5.5 – *Dredging Time-of-Year Restrictions*

Yellow perch and other finfish species have not been documented to spawn in Curtis Creek. However, Curtis Creek contains designated EFH and also supports habitat for other fish species managed under the Fish and Wildlife Coordination Act. Given the presence of such habitat, there is the potential for such species to be present. The USCG would comply with the time-of-year restrictions in place from March 1 to June 15, and no dredging would occur during this time period. Any dredging between June 15 and October 15 would occur behind turbidity curtains. Therefore, the Proposed Action is consistent to the maximum extent practicable with this enforceable policy.

Policy 5.3.5.10 – *Sediment and Erosion Control Plan Shall Be Developed and Approved Prior to Upland Dredge Disposal*

Material dredged during the Proposed Action would ultimately be disposed of at Masonville DMCF, a licensed facility operated by the MES. In a letter dated 19 July 2022, the MDOT MPA indicated that the dredge material would be acceptable to place at Masonville DMCF, provided that the USCG adhere to standards and procedures specified in the MDOT MPA Dredged Material Placement Permit. Additionally, the USCG has applied for an MDOT MPA Right of Entry Permit to obtain access to Masonville DMCF. Dredge spoils removed during improvement dredging would immediately be transported to Masonville DMCF for disposal. Soils from hydraulic dredging may first be dewatered at Grove Point within the CG Yard, or may also be immediately transported for disposal. Dredged sediment at Grove Point would not have the potential to runoff, as it would be contained within geo-synthetic tubes at the site. Following dewatering, this material would also be transported to Masonville DMCF for appropriate storage and disposal. As the USCG would not dispose of or retain dredged materials on-site, it would not need to prepare a sediment and erosion control plan, but would still comply with the requirements of the MDOT MPA for disposal at Masonville DMCF. Therefore, the Proposed Action is consistent to the maximum extent practicable with this enforceable policy.

Policy 5.3.5.13 – *Restrictions on Open Water Disposal of Dredge Material from Baltimore Harbor*

All material dredged from Curtis Creek under the Proposed Action from maintenance and improvement dredging would be disposed of at Masonville DMCF. No dredge material would be disposed of in open water, including the Chesapeake Bay and its tributaries. Therefore, the Proposed Action is consistent to the maximum extent practicable with this enforceable policy.

CONCLUSION

Due to the intensively developed character of the CG Yard and its surrounding area, the USCG has determined that the Proposed Action would result in no or minimal adverse impacts on coastal zone resources of Maryland. All activities would be conducted in compliance with local, state, and Federal requirements and all applicable permits and approvals would be obtained. Therefore, the Proposed Action is consistent to the maximum extent practicable with the enforceable policies of Maryland's CZMP.

Table 1: Maryland Enforceable Policies

Code	Policy	Policy References[1]	Applicability or Consistency[2]
5.1	CORE POLICIES		
5.1.1	Quality of Life		
5.1.1.1	Air Quality – It is State policy to maintain that degree of purity of air resources which will protect the health, general welfare, and property of the people of the State.	MDE (C9) Md. Code Ann., Envir. §§ 2-102 to -103	**Consistent**
5.1.1.2	Noise – The environment shall be free from noise which may jeopardize health, general welfare, or property, or which degrades the quality of life.	MDE (C9) COMAR 26.02.03.02	**Consistent**
5.1.1.3	Protection of State Wild Lands – The unique ecological, geological, scenic, and contemplative aspects of State wild lands shall not be affected in a manner that would jeopardize the future use and enjoyment of those lands as wild.	DNR (C7) Md. Code Ann., Nat. Res. §§ 5-1201, -1203	Not Applicable (NA)
5.1.1.4	Protection of State Lands & Cultural Resources -- The safety, order, and natural beauty of State parks and forests, State reserves, scenic preserves, parkways, historical monuments and recreational areas shall be preserved.	DNR (B1) Md. Code. Ann., Nat. Res. § 5-209	NA
5.1.1.5	Natural Character & Scenic Value of Rivers & Waterways – The natural character and scenic value of a river or waterway must be given full consideration before the development of any water or related land resources including construction of improvements, diversions, roadways, crossings, or channelization.	MDE/DNR (C7) Md. Code Ann., Nat. Res. § 8-405 COMAR 26.17.04.11	NA
5.1.1.6	Natural Flow of Scenic & Wild Rivers – A dam or other structure that impedes the natural flow of a scenic or wild river may not be constructed, operated, or maintained, and channelization may not be undertaken, until the applicant considers alternatives less harmful to the scenic and wild resource. Construction of an impoundment upon a scenic or wild river is contrary to the public interest, if that project floods an area of unusual beauty, blocks the access to the public of a view previously enjoyed, or alters the stream's wild qualities.	MDE/DNR (C7) Md. Code Ann., Nat. Res. § 8-406 COMAR 26.17.04.11	NA
5.1.1.7	Atlantic Coast Development – Any land clearing, construction activity, or the construction or placement of permanent structures is prohibited within the Beach Erosion Control District except the construction and installation of a qualified submerged renewable energy line, if the project does not result in any significant permanent environmental damage to the Beach Erosion Control District and is not constructed or installed within the Assateague State Park, and any project or activity specifically for storm control, beach erosion and sediment control, or maintenance projects designed to benefit the Beach Erosion Control District.	MDE/DNR (B1) Md. Code Ann., Nat. Res. § 8-1102	NA

Code	Policy	Policy References[1]	Applicability or Consistency[2]
5.1.1.8	Integrity & Natural Character of Assateague Island – Activities which will adversely affect the integrity and natural character of Assateague Island will be inconsistent with the State's Coastal Management Program, and will be prohibited.	MDE/DNR (B1) Md. Code. Ann., Nat. Res. §§ 5-209, 8-1102	NA
5.1.1.9	Public Outreach – An opportunity for a public hearing shall be provided for projects in non-tidal waters that dredge, fill, bulkhead, or change the shoreline; construct or reconstruct a dam; or create a waterway, except in emergency situations.	MDE (A3) COMAR 26.17.04.13A	NA
5.1.1.10	Erosion & Sediment Control – Soil erosion shall be prevented to preserve natural resources and wildlife; control floods; prevent impairment of dams and reservoirs; maintain the navigability of rivers and harbors; protect the tax base, the public lands, and the health, safety and general welfare of the people of the State, and to enhance their living environment.	MDA (C4) Md. Code Ann., Agric. § 8-102(d)	**Consistent**
5.1.1.11	Safeguards for Outer Continental Shelf Development – Operations on the Outer Continental Shelf must be conducted in a safe manner by well-trained personnel using technology, precautions, and techniques sufficient to prevent or minimize the likelihood of blowouts, loss of well control, fires, spillages, physical obstruction to other users of the waters or subsoil and seabed, or other occurrences which may cause damage to the environment or property, or which may endanger life or health.	(B2) Md. Code Ann., Envir. §§ 17-101 to -403 COMAR 26.24.01.01 COMAR 26.24.02.01, .03 COMAR 26.24.05.01	NA
5.1.2	Waste and Debris Management		
5.1.2.1	Hazardous Waste Management – Controlled hazardous substances may not be stored, treated, dumped, discharged, abandoned, or otherwise disposed anywhere other than a permitted controlled hazardous substance facility or a facility that provides an equivalent level of environmental protection.	MDE (D4) Md. Code Ann., Envir. § 7-265(a)	**Consistent**
5.1.2.2	Hazardous Waste Management in Port of Baltimore – A person may not introduce in the Port of Baltimore any hazardous materials, unless the cargo is properly classed, described, packaged, marked, labeled, placarded, and approved for highway, rail, or water transportation.	MDOT (D3) COMAR 11.05.02.04A	NA
5.1.3	Water Resources Protection and Management		
5.1.3.1	Pollution Discharge Permit – No one may add, introduce, leak, spill, or emit any liquid, gaseous, solid, or other substance that will pollute any waters of the State without State authorization.	MDE (A5) Md. Code Ann., Envir. §§ 4-402, 9-101, 9-322	NA

Code	Policy	Policy References[1]	Applicability or Consistency[2]
5.1.3.2	Protection of Designated Uses – All waters of the State shall be protected for water contact recreation, fish, and other aquatic life and wildlife. Shellfish harvesting and recreational trout waters and waters worthy of protection because of their unspoiled character shall receive additional protection.	MDE (A1) COMAR 26.08.02.02	**Consistent**
5.1.3.3	Prohibition of Harmful Toxic Impacts – The discharge of any pollutant which will accumulate to toxic amounts during the expected life of aquatic organisms or produce deleterious behavioral effects on aquatic organisms is prohibited.	MDE (A4) COMAR 26.08.03.01	NA
5.1.3.4	Pre-Development Discharge Permit Requirement – Before constructing, installing, modifying, extending, or altering an outlet or establishment that could cause or increase the discharge of pollutants into the waters of the State, the proponent must hold a discharge permit issued by the Department of the Environment or provide an equivalent level of water quality protection.	MDE (D6) Md. Code Ann., Envir. § 9-323(a)	NA
5.1.3.5	Use of Best Available Technology or Treat to Meet Standards – The use of best available technology is required for all permitted discharges into State waters, but if this is insufficient to comply with the established water quality standards, additional treatment shall be required and based on waste load allocation.	MDE (D4) COMAR 26.08.03.01C	NA
5.1.3.6	Control of Thermal Discharges – Thermal discharges shall be controlled so that the temperature outside the mixing zone (50 feet radially from the point of discharge) meets the applicable water quality criteria or discharges comply with the thermal mixing zone criteria.	MDE (D4) COMAR 26.08.03.03C	NA
5.1.3.7	Pesticide Storage – Pesticides shall be stored in an area located at least 50 feet from any water well or stored in secondary containment approved by the Department of the Environment.	MDA (C4) COMAR 15.05.01.06	NA
5.1.3.8	Stormwater Management – Any development or redevelopment of land for residential, commercial, industrial, or institutional purposes shall use small-scale non-structural stormwater management practices and site planning that mimics natural hydrologic conditions, to the maximum extent practicable. Development or redevelopment will be consistent with this policy when channel stability and 100 percent of the average annual predevelopment groundwater recharge are maintained, nonpoint source pollution is minimized, and structural stormwater management practices are used only if determined to be absolutely necessary.	MDE (C9) Md. Code Ann., Envir. § 4-203 COMAR 26.17.02.01, .06	NA
5.1.3.9	Unpermitted Dumping of Used Oil – Unless otherwise permitted, used oil may not be dumped into sewers, drainage systems, or any waters of the State or onto any public or private land.	MDE (D4) Md. Code Ann., Envir. § 5-1001(f)	NA

Code	Policy	Policy References[1]	Applicability or Consistency[2]
5.1.3.10	Toxicity Monitoring – If material being dumped into Maryland waters or waters off Maryland's coastline has demonstrated actual toxicity or potential for being toxic, the discharger must perform biological or chemical monitoring to test for toxicity in the water.	MDE (A5) COMAR 26.08.03.07(D) COMAR 26.08.04.01	NA
5.1.3.11	Public Outreach – Public meetings and citizen education shall be encouraged as a necessary function of water quality regulation.	MDE (A2) COMAR 26.08.01.02E(3)	**Consistent**
5.1.3.12	No Adverse Impact from Water Appropriation – Any water appropriation must be reasonable in relation to the anticipated level of use and may not have an unreasonable adverse impact on water resources or other users of the waters of the State.	MDE (C9) COMAR 26.17.06.02	NA
5.1.4	Flood Hazards and Community Resilience		
5.1.4.1	No Adverse Impact – Projects in coastal tidal and non-tidal flood plains which would create additional flooding upstream or downstream, or which would have an adverse impact upon water quality or other environmental factors, are contrary to State policy.	MDE (C2) Md. Code Ann., Envir. § 5-803 COMAR 26.17.05.04A	NA

Code	Policy	Policy References[1]	Applicability or Consistency[2]
5.1.4.2	Non-Tidal Waters and Non-Tidal Floodplains – The following policies apply to projects in non-tidal waters and non-tidal floodplains, but not non-tidal wetlands. a. Proposed floodplain encroachments, except for roadways, culverts, and bridges, shall be designed to provide a minimum of 1 foot of freeboard above the elevation of the 100-year frequency flood event. In addition, the elevation of the lowest floor of all new or substantially improved residential, commercial, or industrial structures shall also be at least 1 foot above the elevation of the 100-year frequency flood event. b. Proposed unlined earth channels may not change the tractive force associated with the 2-year and the 10-year frequency flood events, by more than 10 percent, throughout their length unless it can be demonstrated that the stream channel will remain stable. c. Proposed lined channels may not change the tractive force associated with the 2-year and the 10-year frequency flood events, by more than 10 percent, at their downstream terminus unless it can be demonstrated that the stream channel will remain stable. d. Category II, III, or IV dams may not be built or allowed to impound water in any location where a failure is likely to result in the loss of human life or severe damage to streets, major roads, public utilities, or other high value property. e. Projects that increase the risk of flooding to other property owners are generally prohibited, unless the area subject to additional risk of flooding is purchased, placed in designated flood easement, or protected by other means acceptable to the Maryland Department of the Environment. f. The construction or substantial improvement of any residential, commercial, or industrial structures in the 100-year frequency floodplain and below the water surface elevation of the 100-year frequency flood may not be permitted. Minor maintenance and repair may be permitted. The modifications of existing structures for flood-proofing purposes may be permitted. Flood-proofing modifications shall be designed and constructed in accordance with specifications approved by the Maryland Department of the Environment. g. Channelization shall be the least favored flood control technique. h. Multiple purpose use shall be preferred over single purpose use, the proposed project shall achieve the purposes intended, and, at a minimum, project shall provide for a 50 percent reduction of the average annual flood damages.	MDE (C2) COMAR 26.17.04.01, .07, .11	NA
5.1.4.3	Development-Related Runoff Restrictions for the Gwynne Falls and Jones Falls Watersheds – Development may not increase the downstream peak discharge for the 100-year frequency storm event in the following watersheds and all their tributaries: ▪ Gwynns Falls in Baltimore City and Baltimore County; and Jones Falls in Baltimore City and Baltimore County.	MDE (C2) COMAR 26.17.02.07	NA

Code	Policy	Policy References[1]	Applicability or Consistency[2]
5.2	COASTAL RESOURCES		
5.2.1	The Chesapeake and Atlantic Coastal Bays Critical Area		
5.2.1.1	Scope of the Buffer – In the Critical Area, a minimum 100-foot vegetated buffer shall be maintained landward from the mean high water line of tidal waters, the edge of each bank of tributary streams, and the landward edge of tidal wetlands. The buffer shall be expanded in sensitive areas in accordance with standards adopted by the Critical Area Commission. The buffer is not required for agricultural drainage ditches if the adjacent agricultural land has in place best management practices that protect water quality. Mitigation or other measures for achieving water quality and habitat protection objectives may be necessary in buffer areas for which the Critical Area Commission has modified the minimum applicable requirements due to the existing pattern of development.	CAC (C9) COMAR 27.01.09.01, .01-6, .01-8	NA
5.2.1.2	Buffer Disturbance – Disturbance to a buffer in the Critical Area is only authorized for a shore erosion control measure or for new development or redevelopment that is water-dependent; meets a recognized private right or public need; minimizes the adverse effects on water quality and fish, plant, and wildlife habitat; and, insofar as possible, locates nonwater-dependent structures or operations associated with water-dependent projects or activities outside the buffer. Disturbance to a buffer may only be authorized in conjunction with mitigation performed in accordance with an approved buffer management plan.	CAC (C9) COMAR 27.01.09.01, .01-2, .01-3	NA
5.2.1.3	Protection of Bird Nesting Areas – Colonial water bird nesting sites in the Critical Area may not be disturbed during breeding season.	CAC (C9) COMAR 27.01.09.04	NA
5.2.1.4	Protection of Waterfowl – New facilities in the Critical Area shall not interfere with historic waterfowl concentration and staging areas.	CAC (C9) COMAR 27.01.09.04	NA
5.2.1.5	Restrictions on Stream Alterations – Physical alterations to streams in the Critical Area shall not affect the movement of fish.	CAC (C9) COMAR 27.01.09.05	**Consistent**
5.2.1.6	Prohibition of Riprap and Artificial Structures – The installation or introduction of concrete riprap or other artificial surfaces onto the bottom of natural streams in the Critical Area is prohibited unless water quality and fisheries habitat will be improved.	CAC (C9) COMAR 27.01.09.05	NA
5.2.1.7	Prohibition of Dams and Structures – The construction or placement of dams or other structures in the Critical Area that would interfere with or prevent the movement of spawning fish or larval forms in streams is prohibited.	CAC (C9) COMAR 27.01.09.05	NA

Code	Policy	Policy References[1]	Applicability or Consistency[2]
5.2.1.8	Restrictions on Stream Crossings and Impacts – Development may not cross or affect a stream in the Critical Area, unless there is no feasible alternative and the design and construction of the development prevents increases in flood frequency and severity that are attributable to development; retains tree canopy and maintains stream water temperature within normal variation; provides a natural substrate for affected streambeds; and minimizes adverse water quality and quantity impacts of stormwater.	CAC (C9) COMAR 27.01.02.04	NA
5.2.1.9	Time of Year Restrictions for Construction in Streams – The construction, repair, or maintenance activities associated with bridges or other stream crossings or with utilities and roads, which involve disturbance within the buffer or which occur in stream are prohibited between March 1 and May 15.	CAC (C9) COMAR 27.01.09.05	NA
5.2.1.10	Avoid & Minimize Construction Impacts in Habitat Areas – Roads, bridges, or utilities may not be constructed in any areas designated to protect habitat, including buffers, in the Critical Area, unless there is no feasible alternative and the road, bridge, or utility is located, designed, constructed, and maintained in a manner that maximizes erosion protection; minimizes negative impacts to wildlife, aquatic life, and their habitats; and maintains hydrologic processes and water quality.	CAC (C9) COMAR 27.01.02.03C, .04C, .05C	NA

Code	Policy	Policy References[1]	Applicability or Consistency[2]
5.2.1.11	Intensely Developed Areas – The following policies apply in those areas of the Critical Area that are determined to be areas of intense development. ▪ To the extent possible, fish, wildlife, and plant habitats, should be conserved. ▪ Development and redevelopment shall improve the quality of runoff from developed areas that enters the Chesapeake or Atlantic Coastal Bays or their tributary streams. ▪ At the time of development or redevelopment, appropriate actions must be taken to reduce stormwater pollution by 10%. Retrofitting measures are encouraged to address existing water quality and water quantity problems from stormwater. ▪ Development activities may cross or affect a stream only if there is no feasible alternative, and those activities must be constructed to prevent increases in flood frequency and severity attributable to development, retain tree canopy, maintain stream water temperatures within normal variation, and provide a natural substrate for affected streambeds. ▪ Areas of public access to the shoreline, such as foot paths, scenic drives, and other public recreational facilities, shall be maintained and, if possible, are encouraged to be established. ▪ Ports and industries which use water for transportation and derive economic benefits from shore access, shall be located near existing port facilities or in areas identified by local jurisdictions for planned future port facility development and use if this use will provide significant economic benefit to the State or local jurisdiction. ▪ Development shall be clustered to reduce lot coverage and maximize areas of natural vegetation. ▪ Development shall minimize the destruction of forest and woodland vegetation.	CAC (C9) COMAR 27.01.02.03	**Consistent**

Code	Policy	Policy References[1]	Applicability or Consistency[2]
5.2.1.12	Limited Development Areas & Resource Conservation Areas – The following policies apply in those portions of the Critical Area that are not areas of intense development. ▪ Development shall maintain, and if possible, improve the quality of runoff and ground water entering the Chesapeake and Coastal Bays. ▪ To the extent practicable, development shall maintain existing levels of natural habitat. ▪ All development sites shall incorporate a wildlife corridor system that connects undeveloped vegetated tracts onsite with undeveloped vegetated tracts offsite. ▪ All forests and developed woodlands that are cleared or developed shall be replaced on not less than an equal area basis. ▪ If there are no forests on a proposed development site, the stie shall be planted to provide a forest or developed woodland cover of at least 15 percent. ▪ Development on slopes equal to or greater than 15 percent, as measured before development, shall be prohibited unless the project is the only effective way to maintain the slope and is consistent with other policies. ▪ To the extent practicable, development shall be clustered to reduce lot coverage and maximize areas of natural vegetation. ▪ Lot coverage is limited to 15 percent of the site.	CAC (C9) COMAR 27.01.02.04	NA
5.2.1.13	Public Facilities Allowed with Restrictions in a Buffer – Public beaches or other public water-oriented recreation or education areas including, but not limited to, publicly owned boat launching and docking facilities and fishing piers may be permitted in the buffer in portions of the Critical Area not designated as intensely developed areas only if adequate sanitary facilities exist; service facilities are, to the extent possible, located outside the Buffer; permeable surfaces are used to the extent practicable, if no degradation of ground water would result; and disturbance to natural vegetation is minimized.	CAC (C9) COMAR 27.01.03.08	NA
5.2.1.14	Water-Dependent Research Facilities – Water-dependent research facilities or activities may be permitted in the buffer, if nonwater-dependent structures or facilities associated with these projects are, to the extent possible, located outside the buffer.	CAC (C9) COMAR 27.01.03.09	NA
5.2.1.15	Siting Industrial & Port-Related Facilities – Water-dependent industrial and port-related facilities may only be located in the portions of areas of intense development designated as modified buffer areas.	CAC (C9) COMAR 27.01.03.05	NA
5.2.1.16	Restrictions on Waste Facilities – Solid or hazardous waste collection or disposal facilities and sanitary landfills are not permitted in the Critical Area unless no environmentally acceptable alternative exists outside the Critical Area, and these facilities are needed in order to correct an existing water quality or wastewater management problem.	CAC (C9) COMAR 27.01.02.02	NA

Code	Policy	Policy References[1]	Applicability or Consistency[2]
5.2.1.17	Buffer Management Plan – If a development or redevelopment activity occurs on a lot or parcel that includes a buffer or if issuance of a permit, variance, or approval would disturb the buffer, the proponents of that activity must develop a buffer management plan that clearly indicates that all applicable planting standards developed by the Critical Area Commission will be met and that appropriate measures are in place for the long-term protection and maintenance of the buffer.	CAC (C9) COMAR 27.01.09.01-1, .01-3	NA
5.2.1.18	Protection of Critical Area from Surface Mining Pollution – All available measures must be taken to protect the Critical Area from all sources of pollution from surface mining operations, including but not limited to sedimentation and siltation, chemical and petrochemical use and spillage, and storage or disposal of wastes, dusts, and spoils.	CAC (D5) COMAR 27.01.07.02A	NA
5.2.1.19	Reclamation Requirements for Mining – In the Critical Area, mining must be conducted in a way that allows the reclamation of the site as soon as possible and to the extent possible.	CAC (D5) COMAR 27.01.07.02B	NA
5.2.1.20	Restrictions on Sand & Gravel Operations – Sand and gravel operations shall not occur within 100 feet of the mean high water line of tidal waters or the edge of streams or in areas with scientific value, important natural resources such as threatened and endangered species, rare assemblages of species, or highly erodible soils. Sand and gravel operations also may not occur where the use of renewable resource lands would result in the substantial loss of forest and agricultural productivity for 25 years or more or would result in a degrading of water quality or a loss of vital habitat.	CAC (D5) COMAR 27.01.07.03D	NA
5.2.1.21	Prohibition of Wash Plants in Buffer – Wash plants including ponds, spoil piles, and equipment may not be located in the 100-foot buffer.	CAC (D5) COMAR 27.01.07.03E	NA
5.2.1.22	Requirements for Agriculture in the Buffer – Agricultural activities are permitted in the buffer, if, as a minimum best management practice, a 25-foot vegetated filter strip measured landward from the mean high water line of tidal waters or tributary streams (excluding drainage ditches), or from the edge of tidal wetlands, whichever is further inland, is established in trees with a dense ground cover or a thick sod of grass.	CAC (C4) COMAR 27.01.09.01-5	NA
5.2.1.23	Geographical Limits for Feeding or Watering Livestock – The feeding or watering of livestock is not permitted within 50 feet of the mean high water line of tidal waters and tributaries.	CAC (C4) COMAR 27.01.09.01-5	NA

Code	Policy	Policy References[1]	Applicability or Consistency[2]
5.2.1.24	Creating New Agricultural Lands – In the Critical Area, the creation of new agricultural lands shall not be accomplished by diking, draining, or filling of nontidal wetlands; by clearing of forests or woodland on soils with a slope greater than 15 percent or on soils with a "K" value greater than 0.35 and slope greater than 5 percent; by clearing that will adversely affect water quality or will destroy plant and wildlife habitat; or by clearing existing natural vegetation within the 100-foot buffer.	CAC (C4) COMAR 27.01.06.02C	NA
5.2.1.25	Best Management Practices for Agriculture – Agricultural activity permitted within the Critical Area shall use best management practices in accordance with a soil conservation and water quality plan approved or reviewed by the local soil conservation district.	CAC (C4) COMAR 27.01.06.02G	NA
5.2.1.26	Cutting or Clearing Trees in the Buffer – Cutting or clearing of trees within the buffer is prohibited except that commercial harvesting of trees by selection or by the clearcutting of loblolly pine and tulip poplar may be permitted to within 50 feet of the landward edge of the mean high water line of tidal waters and perennial tributary streams, or the edge of tidal wetlands if the buffer is not subject to additional habitat protection. Commercial harvests must be in compliance with a buffer management plan that is prepared by a registered professional forester and is approved by the Department of Natural Resources.	CAC (C5) Md. Code Ann., Nat. Res. § 8-1808.7 COMAR 27.01.09.01-6	NA
5.2.1.27	Requirements for Commercial Tree Harvesting in the Buffer – Commercial tree harvesting in the buffer may not involve the creation of logging roads and skid trails within the buffer and must avoid disturbing stream banks and shorelines as well as include replanting or allowing regeneration of the areas disturbed or cut in a manner that assures the availability of cover and breeding sites for wildlife and reestablishes the wildlife corridor function of the buffer.	CAC (C5) Md. Code Ann., Nat. Res. § 8-1808.7 COMAR 27.01.09.01-6	NA
5.2.1.28	General Restrictions to Intense Development – Intense development should be directed outside the Critical Area. Future intense development activities, when proposed in the Critical Area, shall be directed towards the intensely developed areas.	CAC (D1) Md. Code Ann., Natural Res. § 8-1807(b) COMAR 27.01.02.02B	NA

Code	Policy	Policy References[1]	Applicability or Consistency[2]
5.2.1.29	Development Restrictions in Critical Areas – The following development activities and facilities are not permitted in the Critical Area except in intensely developed areas and only after the activity or facility has demonstrated that there will be a net improvement in water quality to the adjacent body of water. ▪ Nonmaritime heavy industry ▪ Transportation facilities and utility transmission facilities, except those necessary to serve permitted uses, or where regional or interstate facilities must cross tidal waters ▪ Permanent sludge handling, storage, and disposal facilities, other than those associated with wastewater treatment facilities. However, agricultural or horticultural use of sludge when applied by an approved method at approved application rates may be permitted in the Critical Area, but not in the 100-foot Buffer	CAC (C9) COMAR 27.01.02.02	NA
5.2.2	Tidal Wetlands		
5.2.2.1	Projects that Alter Natural Character Shall Avoid Dredging & Filling, Be Water-Dependent and Provide Appropriate Mitigation – Any action which alters the natural character in, on, or over tidal wetlands; tidal marshes; and tidal waters of Chesapeake Bay and its tributaries, the coastal bays adjacent to Maryland's coastal barrier islands, and the Atlantic Ocean shall avoid dredging and filling, be water-dependent, and provide appropriate mitigation for any necessary and unavoidable adverse impacts on these areas or the resources associated with these areas. A proponent of an action described above shall explain the actions impact on: habitat for finfish, crustaceans, mollusks, and wildlife of significant economic or ecologic value; potential habitat areas such as historic spawning and nursery grounds for anadromous and semi-anadromous fisheries species and shallow water areas suitable to support populations of submerged aquatic vegetation; marine commerce, recreation, and aesthetic enjoyment; flooding; siltation; natural water flow, water temperature, water quality, and natural tidal circulation; littoral drift; local, regional, and State economic conditions; historic property; storm water runoff; disposal of sanitary waste; sea level rise and other determinable and periodically recurring natural hazards; navigational safety; shore erosion; access to beaches and waters of the State; scenic and wild qualities of a designated State scenic or wild river; and historic waterfowl staging areas and colonial bird-nesting sites.	MDE (B2) COMAR 26.24.01.01 COMAR 26.24.02.01, .03 COMAR 26.24.05.01.	**Consistent**

Code	Policy	Policy References[1]	Applicability or Consistency[2]
5.2.3	Non-Tidal Wetlands **– Enforceable Policies pertaining to Non-Tidal Wetlands have no applicability to the Proposed Action and are not addressed in this table.**		
5.2.4	Forests **– Enforceable Policies pertaining to Forests have no applicability to the Proposed Action and are not addressed in this table.**		
5.2.5	Historical and Archaeological Sites **– Enforceable Policies pertaining to Historical and Archaeological Sites have no applicability to the Proposed Action and are not addressed in this table.**		
5.2.6	Living Aquatic Resources – **Enforceable Policies pertaining to Living Aquatic Resources have no applicability to the Proposed Action and are not addressed in this table.**		
5.3	COASTAL USES		
5.3.1	Mineral Extraction **– Enforceable Policies pertaining to Mineral Extraction have no applicability to the Proposed Action and are not addressed in this table.**		
5.3.2	Electrical Generation and Transmission **– Enforceable Policies pertaining to Electrical Generation and Transmission have no applicability to the Proposed Action and are not addressed in this table.**		
5.3.3	Tidal Shore Erosion Control **– Enforceable Policies pertaining to Tidal Shore Erosion Control have no applicability to the Proposed Action and are not addressed in this table.**		
5.3.4	Oil and Natural Gas Facilities **– Enforceable Policies pertaining to Oil and Natural Gas Facilities have no applicability to the Proposed Action and are not addressed in this table.**		
5.3.5	Dredging and Disposal of Dredged Material		
5.3.5.1	Dredging for Non-Water Dependent Projects is Discourage – A person may not dredge for projects that are non-water-dependent unless there is no practicable alternative.	MDE (A3) Md. Code Ann., Envir. § 5-907(a); COMAR 26.24.03.02D	NA
5.3.5.2	Dredging Requires an Environmental Analysis and is Generally Discouraged – Dredging for sand, gravel, or fill material, including material for beach nourishment, is prohibited unless an environmental analysis determines that there will be no adverse impact on the environment and no alternative material is available.	MDE (A3) COMAR 26.24.03.02C	**Consistent**
5.3.5.3	Dredging Shall Allow Flushing & Make Maximum Use of Existing Channels – Dredging of channels, canals, and boat basins shall be designed to provide adequate flushing and elimination of stagnant water pockets, and channel alignment shall make maximum use of natural or existing channels and bottom contours.	MDE (B2) COMAR 26.24.03.02	NA

Code	Policy	Policy References[1]	Applicability or Consistency[2]
5.3.5.4	Dredging Shall First Avoid & Then Minimize Habitat Impacts – The alignment of a channel shall first avoid and then minimize impacts to shellfish beds, submerged aquatic vegetation, and vegetated tidal wetlands. When feasible, the alignment shall be located the maximum distance feasible from shellfish beds, submerged aquatic vegetation, and other vegetated tidal wetlands.	MDE (C6) COMAR 26.24.03.02	NA
5.3.5.5	Dredging Time-of-Year Restrictions – Dredging is prohibited from February 15 through June 15 in areas where yellow perch have been documented to spawn and from March 1 through June 15 in areas where other important finfish species have been documented to spawn.	MDE (A3) COMAR 26.24.02.06G	**Consistent**
5.3.5.6	500-Yard Setback Restriction for Dredging Near Submerged Aquatic Vegetation (SAV) – Dredging is prohibited within 500 yards of submerged aquatic vegetation from April 15 to October 15.	MDE (A3) COMAR 26.24.02.06H	NA
5.3.5.7	Restrictions on Mechanical & Hydraulic Dredging near Shellfish Areas – Within 500 yards of shellfish areas, mechanical and hydraulic dredging is prohibited from June 1 through September 30 and mechanical dredging is also prohibited from December 16 through March 14.	MDE (A3) COMAR 26.24.02.06E	NA
5.3.5.8	Dredge Disposal Site Selection Criteria – New disposal sites for dredged material shall be selected based on the following hierarchy of criteria: (i) beneficial use and innovative reuse of dredged material; (ii) upland sites and other environmentally sound confined capacity; (iii) expansion of existing dredged material disposal capacity other than the Hart-Miller Island Dredged Material Containment Facility and areas collectively known as Pooles Island.	MDE (A3) Md. Code Ann., Envir. § 5-1104.2(d)	NA
5.3.5.9	Dredge Material Disposal Facilities Shall Minimize Impacts – Disposal facilities for dredged material shall be designed to have the least impact on public safety, adjacent properties, and the environment.	MDE (A3) COMAR 26.24.03.04A	NA
5.3.5.10	Sediment & Erosion Control Plan Shall Be Developed & Approved Prior to Upland Dredge Disposal – Prior to disposing of dredged material on upland areas, a sediment and erosion control plan must be developed and approved by the local soil conservation district of the Department of the Environment and the methods for protecting water quality and quantity must be identified in detail.	MDE (Ae) COMAR 26.24.03.03B	**Consistent**

Code	Policy	Policy References[1]	Applicability or Consistency[2]
5.3.5.11	Restrictions on Open Water Disposal of Dredge Material in Chesapeake Bay and its Tributaries – A person may not redeposit in an unconfined manner dredged material into or onto any portion of the water or bottomland of the Chesapeake Bay or of the tidewater portion of any of the Chesapeake Bay's tributaries except when the project is undertaken to restore islands or underwater grasses, stabilize eroding shorelines, or create or restore wetlands or fish and shellfish habitats.	MDE (A3) Md. Code Ann., Envir. § 5-1101(a), 5-1102	NA
5.3.5.12	No Open Water Disposal of Dredge Material in Deep Trough of Chesapeake Bay – A person may not redeposit in an unconfined manner dredged material into or onto any portion of the bottomlands or waters of the Chesapeake Bay known as the deep trough.	MDE (A3) Md. Code Ann., Envir. §§ 5-1101(a), -1102	NA
5.3.5.13	Restrictions on Open Water Disposal of Dredge Material from Baltimore Harbor – No material dredged from Baltimore Harbor shall be disposed of in an unconfined manner in the open water portion of Chesapeake Bay, or the tidal portions of its tributaries outside of Baltimore Harbor.	MDE (A3) Md. Code Ann., Envir. § 5-1102(a)	**Consistent**
5.3.6	Navigation **– Enforceable Policies pertaining to Navigation have no applicability to the Proposed Action and are not addressed in this table.**		
5.3.7	Transportation **– Enforceable Policies pertaining to Transportation have no applicability to the Proposed Action and are not addressed in this table.**		
5.3.8	Agriculture **– Enforceable Policies pertaining to Agriculture have no applicability to the Proposed Action and are not addressed in this table.**		
5.3.9	Development **– Enforceable Policies pertaining to Development have no applicability to the Proposed Action and are not addressed in this table.**		
5.3.10	Sewage Treatment **– Enforceable Policies pertaining to Sewage Treatment have no applicability to the Proposed Action and are not addressed in this table.**		

Source: State of Maryland. 2020. *Maryland Coastal Zone Management Program Enforceable Policies*. Effective July 6, 2020.

Notes:

1. Implementing agency is followed by a parenthetical citation to the section where the policy can be found in the Chart of Proposed Changes included in the original Maryland Coastal Management Program document, *Routine Program Change, Update and Clarification of Maryland Coastal Management Program Enforceable Policies, Request for Concurrence* (Maryland DNR, November 2010). Additional statutory or regulatory references follow.
2. "Consistent" indicates consistent, to the maximum extent practicable.

<table>
<tr><th>Code</th><th>Policy</th><th>Policy References[1]</th><th>Applicability or Consistency[2]</th></tr>
<tr><td colspan="2">**Implementing Agency:**
CAC – Critical Area Commission for the Chesapeake and Atlantic Coastal Bays
DNR – Maryland Department of Natural Resources.
MDA – Maryland Department of Agriculture.
MDE – Maryland Department of the Environment.
MDOT – Maryland Department of Transportation.
MDP– Maryland Department of Planning.
PSC – Public Service Commission.</td><td colspan="2">**Regulatory and Statutory Reference:**
§ – Section.
§ § – Sections.
Agric. – Agriculture Article.
COMAR – Code of Maryland Regulations.
Crim. Law – Criminal Law Article.
Envir. – Environment Article.
Fin. & Proc. – Finance and Procurement Article.
Md. Code Ann. – Maryland Code Annotated.
Nat. Res. – Natural Resources Article.
Pub. Util. Cos. – Public Utilities Article. Transp.
-Transportation Article.</td></tr>
</table>

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Appendix E – Hydrographic Survey Figures and Proposed Dredge Plans and Cross-Sections

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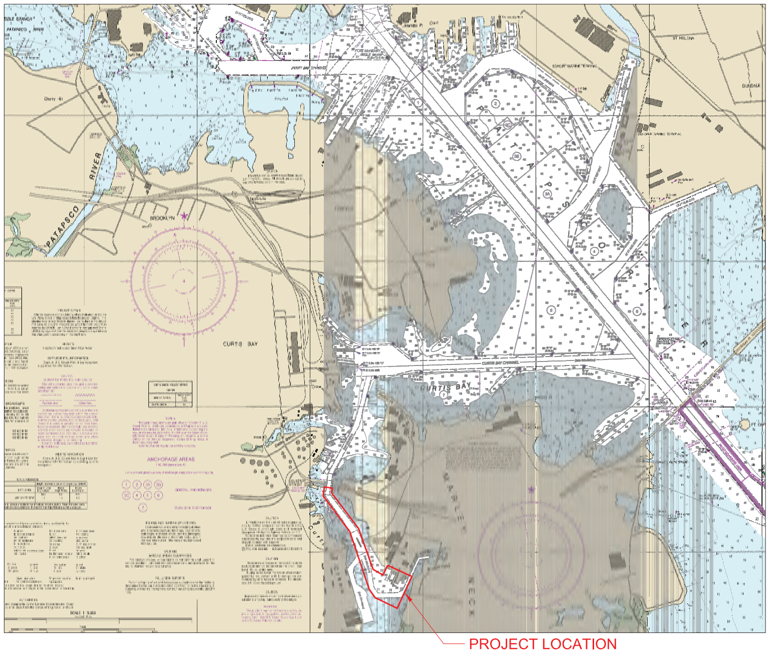
CURTIS CREEK DREDGING PROJECT PERMITTING DRAWINGS

UNITED STATES COAST GUARD YARD
BALTIMORE, MARYLAND

NOVEMBER 24, 2021



SHEET	SHEET TITLE
G/01	COVER
V/01	HYDROGRAPHIC SURVEY SHEET 1
V/02	HYDROGRAPHIC SURVEY SHEET 2
V/03	HYDROGRAPHIC SURVEY SHEET 3
V/04	HYDROGRAPHIC SURVEY SHEET 4
V/05	HYDROGRAPHIC SURVEY SHEET 5
V/06	HYDROGRAPHIC SURVEY SHEET 6
V/07	HYDROGRAPHIC SURVEY SHEET 7
V/08	SURVEY & HYDRAULIC DREDGE PLAN
X/01	PROPOSED DREDGE SECTIONS SHEET 1
X/02	PROPOSED DREDGE SECTIONS SHEET 2
X/03	PROPOSED DREDGE SECTIONS SHEET 3

NOT FOR CONSTRUCTION

CONSULTANTS

AECOM
430 NATIONAL BUSINESS PARKWAY
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TEL: 410.379.6835
WWW.AECOM.COM

U. S. COAST GUARD YARD
FACILITIES ENGINEERING
BALTIMORE, MARYLAND

US COAST GUARD YARD
2401 HAWKINS POINT ROAD, MS 10
BALTIMORE, MARYLAND 21226

ISSUE

MARK	DATE	DESCRIPTION
	11/24/21	ISSUED FOR PERMITTING
	09/21/21	ISSUED FOR PERMITTING
	09/03/21	ISSUED FOR PERMITTING

A/E PROJECT NO:
CAD FILE NAME:
DESIGNED BY: FACILITY ENGINEERING
DRAWN BY: GBA
EDITED BY: C.M.D.
CHECKED BY: R.D.

SCALE: AS NOTED PLOT SCALE: 1:1

SHEET TITLE

HYDROGRAPHIC SURVEY OF
CURTIS CREEK & USCG PIERS
BALTIMORE MARYLAND
G/01
COVER

REVIEWED BY:	REVIEWED BY:	REVIEWED BY:
DA	ALW	JML
PROJECT MGR	DESIGN SUPV.	ELECT. ENG.

CDR JOHN M. LISKO
APPROVING OFFICER

8/27/21
DATE

PROJECT NUMBER: 11884246
DRAWING NUMBER:
DISCIPLINE/SHT NO: G/01
SHEET 01 OF 12

F:\60660293_USCG\CAD\20211124_50-SC_PLANSET.dwg, 11/24/2021 4:33:14 PM, Adobe PDF

NOTES:
1. THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES SHOWN AND CAN ONLY INDICATE THE GENERAL CONDITION EXISTING AT THAT TIME.
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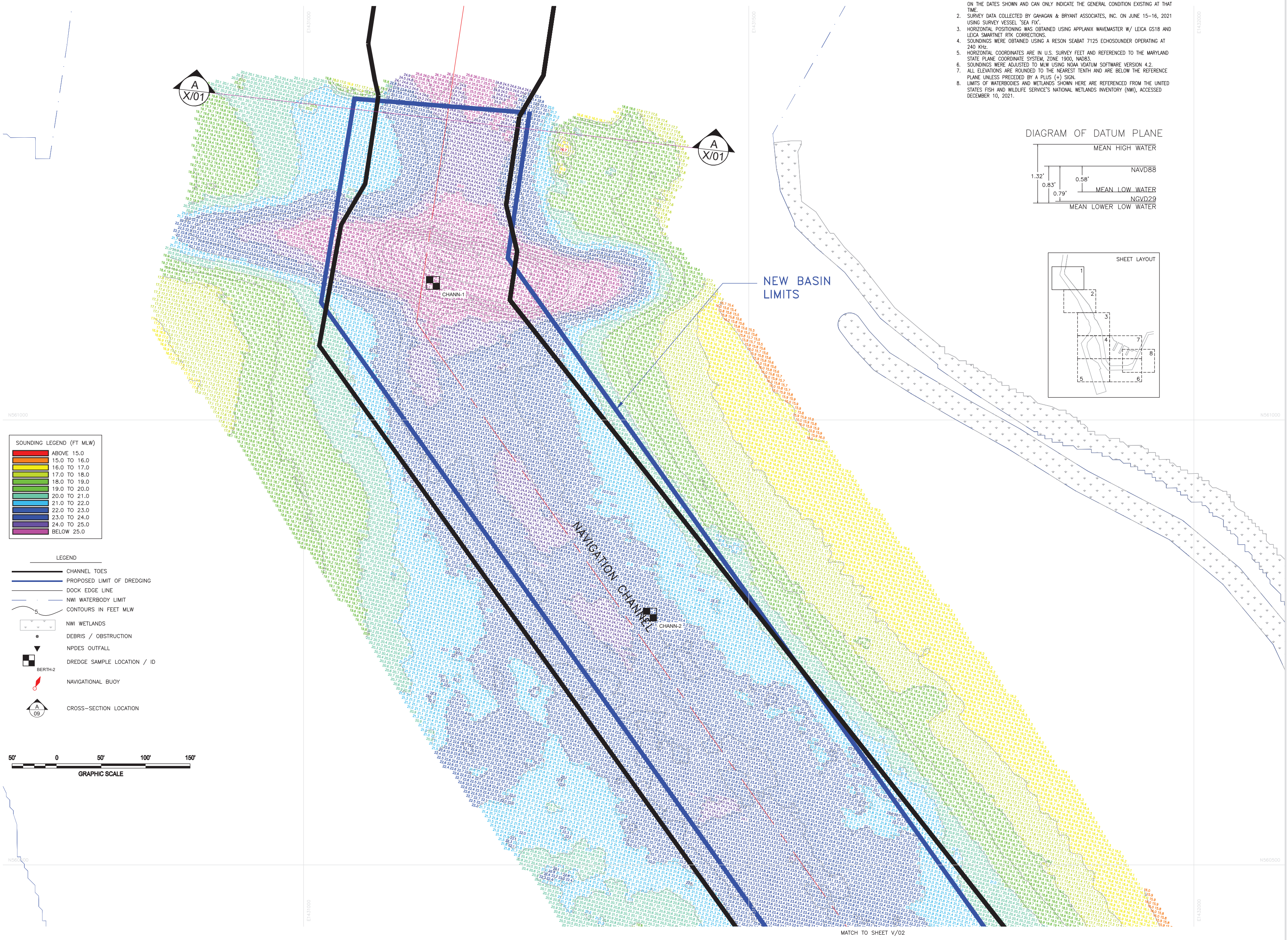

SOUNDING LEGEND (FT MLW)	
🟥	ABOVE 15.0
🟧	15.0 TO 16.0
🟨	16.0 TO 17.0
🟩	17.0 TO 18.0
🟩	18.0 TO 19.0
🟩	19.0 TO 20.0
🟩	20.0 TO 21.0
🟦	21.0 TO 22.0
🟦	22.0 TO 23.0
🟦	23.0 TO 24.0
🟪	24.0 TO 25.0
🟪	BELOW 25.0

LEGEND

CHANNEL TOES
PROPOSED LIMIT OF DREDGING
DOCK EDGE LINE
NWI WATERBODY LIMIT
5 CONTOURS IN FEET MLW
NWI WETLANDS
DEBRIS / OBSTRUCTION
NPDES OUTFALL
BERTH-2 DREDGE SAMPLE LOCATION / ID
NAVIGATIONAL BUOY
A 09 CROSS–SECTION LOCATION

50' 0 50' 100' 150'
GRAPHIC SCALE

CONSULTANTS

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BALTIMORE, MARYLAND 21226

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	09/03/21	ISSUED FOR PERMITTING

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DRAWN BY: GBA
EDITED BY: C.M.D.
CHECKED BY: R.D.

SCALE: AS NOTED PLOT SCALE: 1:1

SHEET TITLE

HYDROGRAPHIC SURVEY OF
CURTIS CREEK & USCG PIERS
BALTIMORE MARYLAND
V/01
HYDROGRAPHIC SURVEY
SHEET 1

REVIEWED BY:	REVIEWED BY:	REVIEWED BY:
DA	ALW	JML
PROJECT MGR	DESIGN SUPV.	ELECT. ENG.

CDR JOHN M. LISKO — APPROVING OFFICER
8/27/21 — DATE

PROJECT NUMBER: 11884246
DRAWING NUMBER:
DISCIPLINE/SHT NO: V/01
SHEET 02 OF 12

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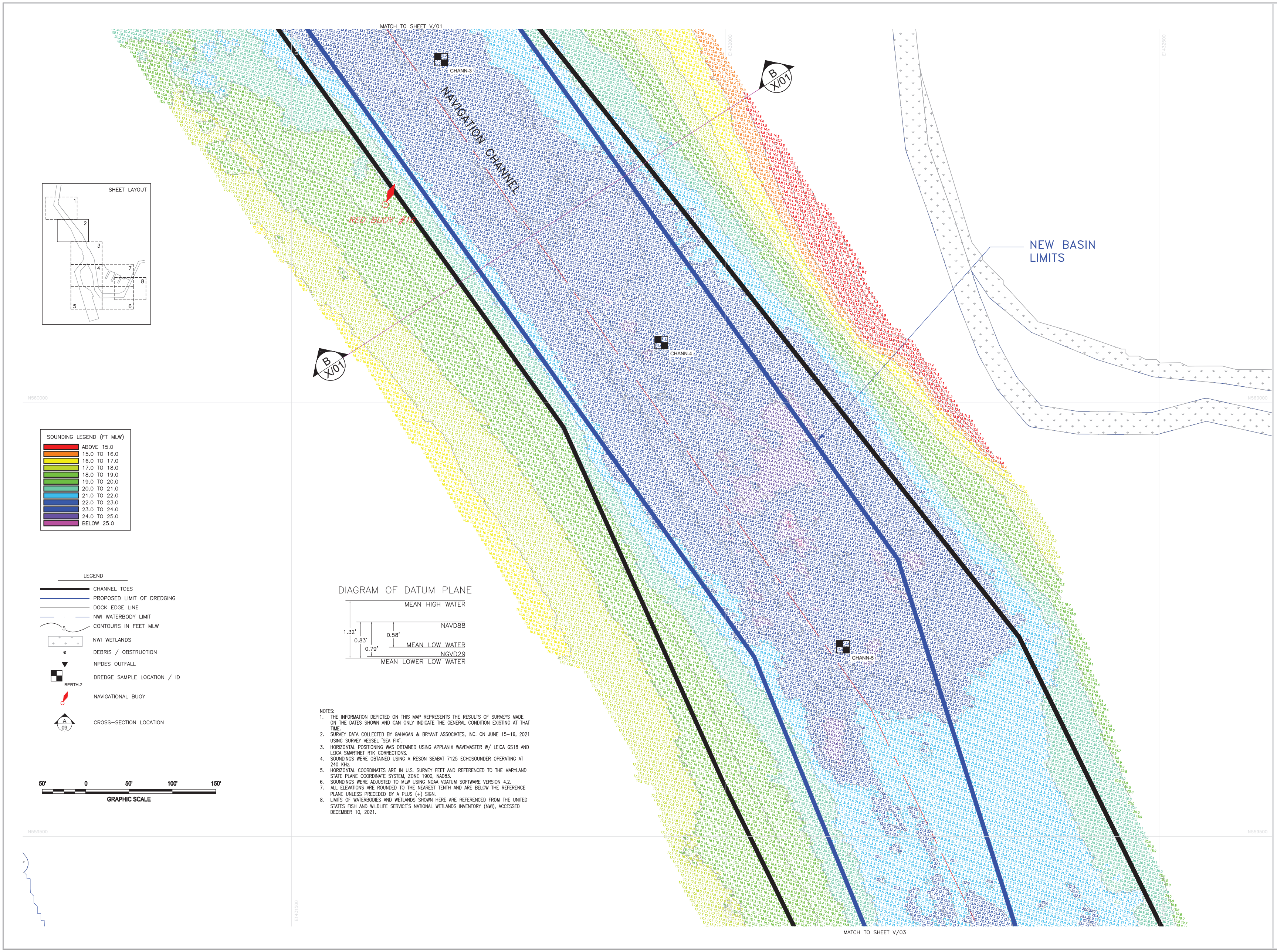

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🟦	22.0 TO 23.0
🟦	23.0 TO 24.0
🟪	24.0 TO 25.0
🟪	BELOW 25.0

LEGEND

━	CHANNEL TOES
━	PROPOSED LIMIT OF DREDGING
─	DOCK EDGE LINE
— · —	NWI WATERBODY LIMIT
5	CONTOURS IN FEET MLW
▭	NWI WETLANDS
⊗	DEBRIS / OBSTRUCTION
▼	NPDES OUTFALL
▩ BERTH-2	DREDGE SAMPLE LOCATION / ID
◆	NAVIGATIONAL BUOY
A 09	CROSS–SECTION LOCATION

NOTES:

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BALTIMORE, MARYLAND

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	09/03/21	ISSUED FOR PERMITTING

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DRAWN BY: GBA
EDITED BY: C.M.D.
CHECKED BY: R.D.

SCALE: AS NOTED
PLOT SCALE: 1:1

SHEET TITLE

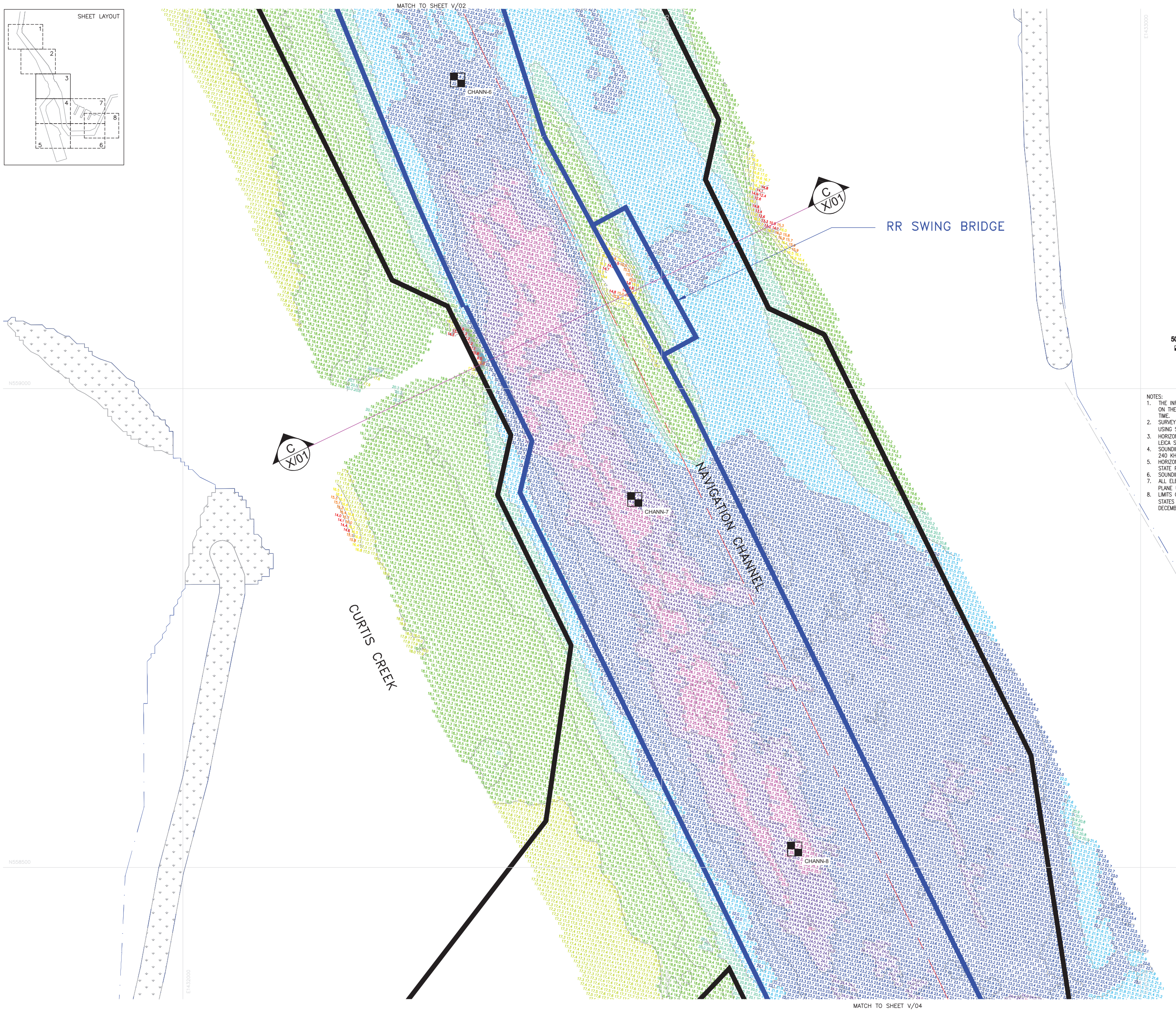
HYDROGRAPHIC SURVEY OF
CURTIS CREEK & USCG PIERS
BALTIMORE MARYLAND
V/02
HYDROGRAPHIC SURVEY
SHEET 2

REVIEWED BY:	REVIEWED BY:	REVIEWED BY:
DA	ALW	JML
PROJECT MGR	DESIGN SUPV.	ELECT. ENG.

CDR JOHN M. LISKO
APPROVING OFFICER

8/27/21
DATE

PROJECT NUMBER: 11884246
DRAWING NUMBER:
DISCIPLINE/SHT NO: V/02
SHEET 03 OF 12



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🟥	ABOVE 15.0
🟧	15.0 TO 16.0
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🟦	22.0 TO 23.0
🟦	23.0 TO 24.0
🟪	24.0 TO 25.0
🟪	BELOW 25.0

LEGEND

━	CHANNEL TOES
━	PROPOSED LIMIT OF DREDGING
—	DOCK EDGE LINE
— · —	NWI WATERBODY LIMIT
～5～	CONTOURS IN FEET MLW
▨	NWI WETLANDS
⊗	DEBRIS / OBSTRUCTION
▼	NPDES OUTFALL
▚ BERTH-2	DREDGE SAMPLE LOCATION / ID
●	NAVIGATIONAL BUOY
A 09	CROSS–SECTION LOCATION

50' 0 50' 100' 150'

GRAPHIC SCALE

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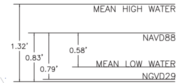
DIAGRAM OF DATUM PLANE



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DRAWN BY: GBA
EDITED BY: C.M.D.
CHECKED BY: R.D.

SCALE: AS NOTED PLOT SCALE: 1:1

SHEET TITLE

HYDROGRAPHIC SURVEY OF
CURTIS CREEK & USCG PIERS
BALTIMORE MARYLAND
V/03
HYDROGRAPHIC SURVEY
SHEET 3

REVIEWED BY:	REVIEWED BY:	REVIEWED BY:
DA	ALW	JML
PROJECT MGR	DESIGN SUPV.	ELECT. ENG.

CDR JOHN M. LISKO — APPROVING OFFICER
8/27/21 — DATE

PROJECT NUMBER: 11884246
DRAWING NUMBER:
DISCIPLINE/SHT NO: V/03
SHEET 04 OF 12

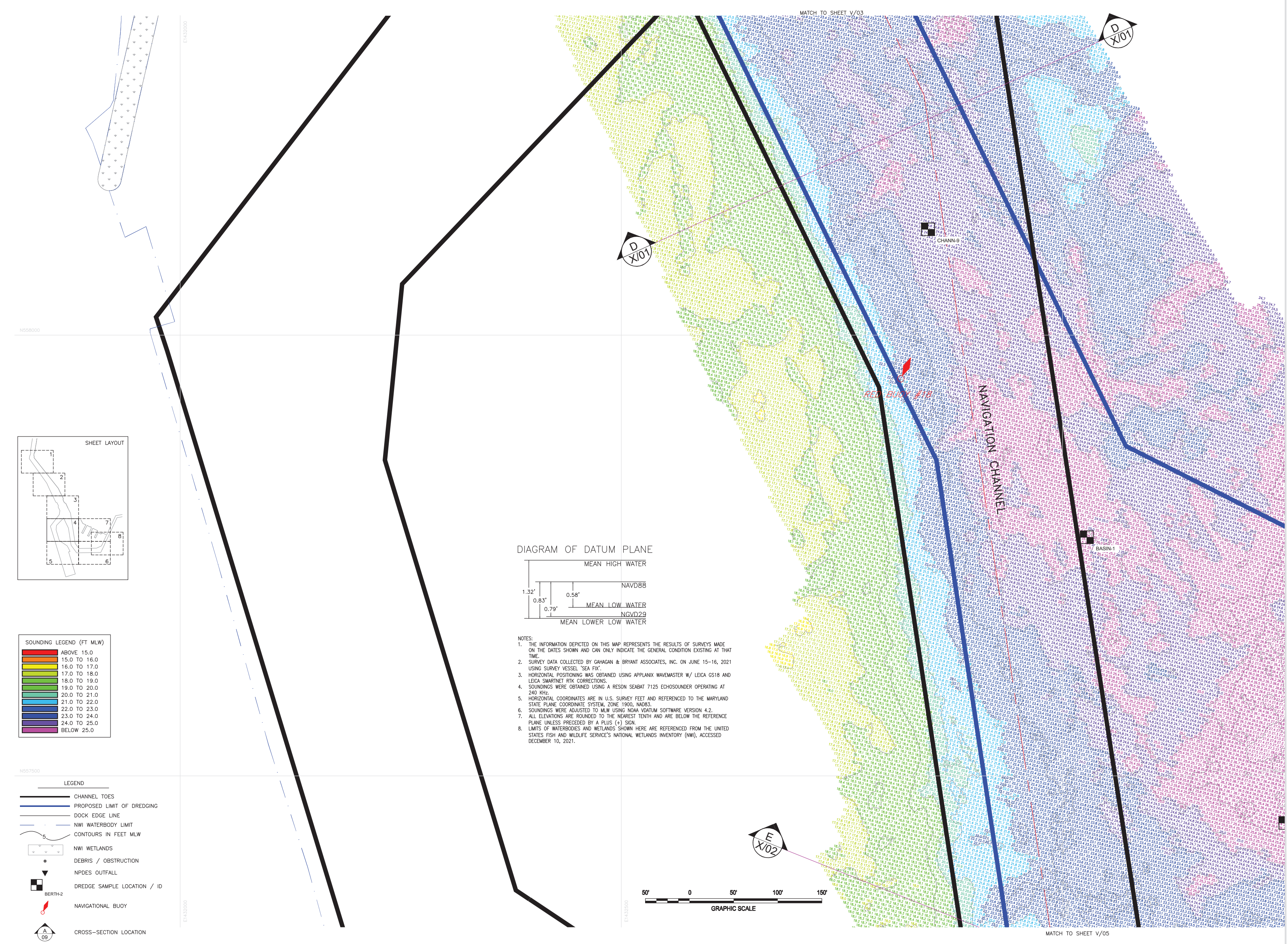

DIAGRAM OF DATUM PLANE

MEAN HIGH WATER
NAVD88
1.32'
0.83'
0.58'
0.79'
MEAN LOW WATER
NGVD29
MEAN LOWER LOW WATER

NOTES:

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🟦	22.0 TO 23.0
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🟪	24.0 TO 25.0
🟪	BELOW 25.0

LEGEND

━	CHANNEL TOES
━	PROPOSED LIMIT OF DREDGING
─	DOCK EDGE LINE
— · —	NWI WATERBODY LIMIT
~5~	CONTOURS IN FEET MLW
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▚ BERTH-2	DREDGE SAMPLE LOCATION / ID
◆	NAVIGATIONAL BUOY
A 09	CROSS–SECTION LOCATION

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DRAWN BY: GBA
EDITED BY: C.M.D.
CHECKED BY: R.D.

SCALE: AS NOTED PLOT SCALE: 1:1

SHEET TITLE

HYDROGRAPHIC SURVEY OF
CURTIS CREEK & USCG PIERS
BALTIMORE MARYLAND
V/04
HYDROGRAPHIC SURVEY
SHEET 4

REVIEWED BY:	REVIEWED BY:	REVIEWED BY:
DA	ALW	JML
PROJECT MGR	DESIGN SUPV.	ELECT. ENG.

CDR JOHN M. LISKO
APPROVING OFFICER
8/27/21
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PROJECT NUMBER: 11884246
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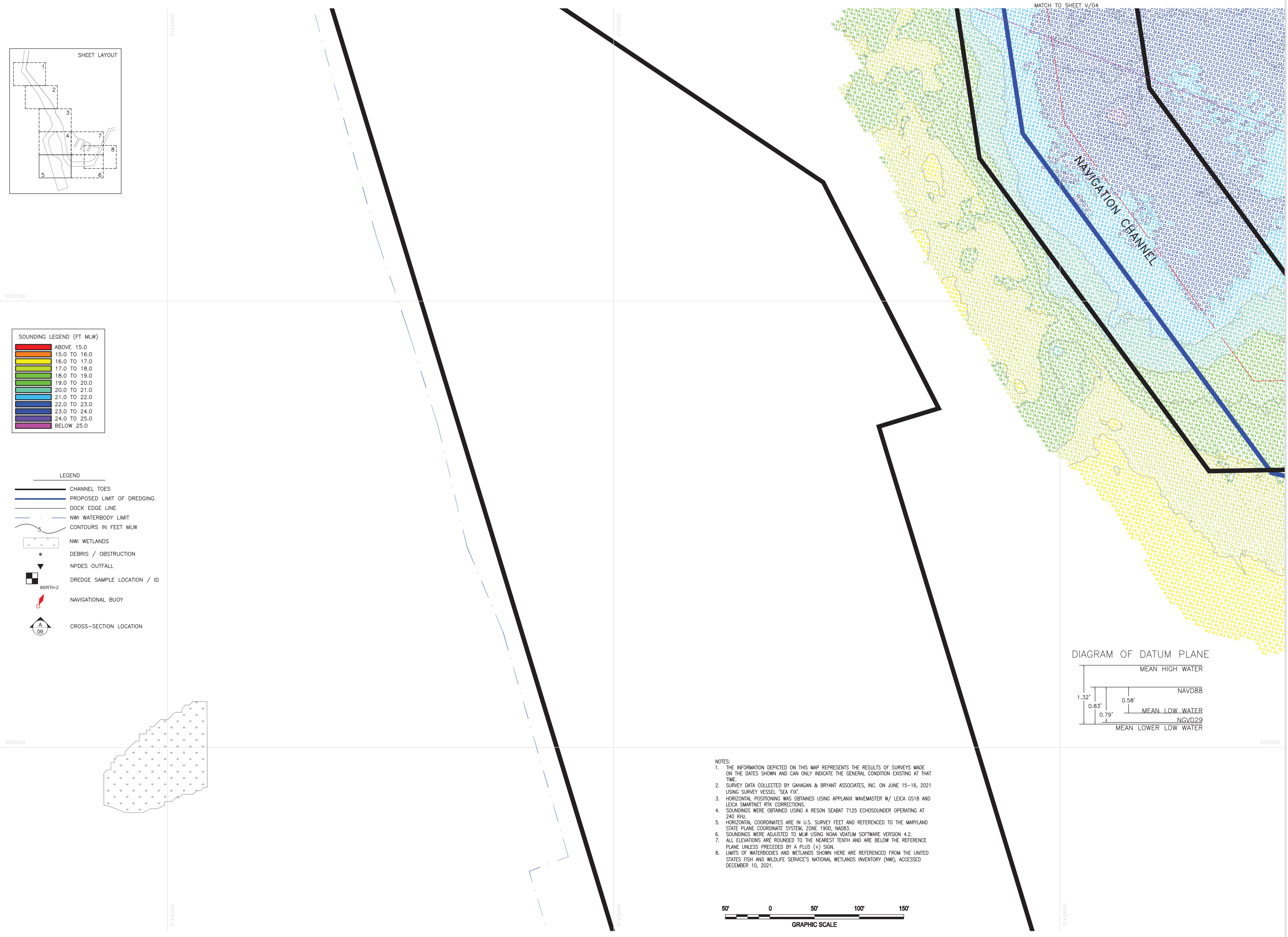
DISCIPLINE/SHT NO: V/04
SHEET 05 OF 12



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LEGEND

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━	PROPOSED LIMIT OF DREDGING
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SHEET TITLE

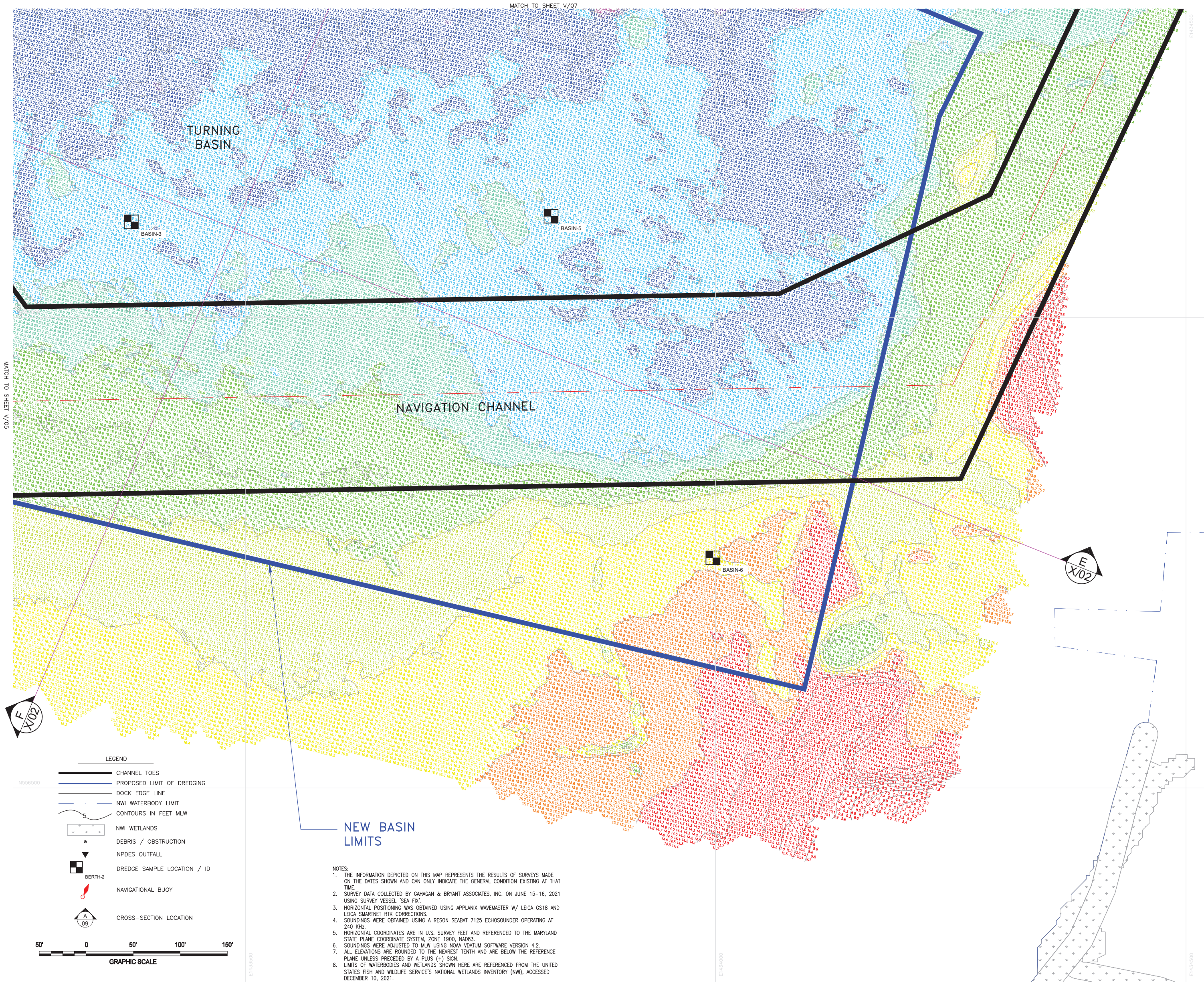
HYDROGRAPHIC SURVEY OF
CURTIS CREEK & USCG PIERS
BALTIMORE MARYLAND
V/05
HYDROGRAPHIC SURVEY
SHEET 5

REVIEWED BY:	REVIEWED BY:	REVIEWED BY:
DA	ALW	JML
PROJECT MGR	DESIGN SUPV.	ELECT. ENG.

CDR JOHN M. LISKO
APPROVING OFFICER
8/27/21
DATE

PROJECT NUMBER 11884246
DRAWING NUMBER
DISCIPLINE/SHT NO V/05
SHEET 06 OF 12

F:\60660293_USCG\CAD\20211124_50-SC_PLANSET.dwg, 12/10/2021 11:06:08 AM, PDF-XChange Standard



LEGEND

▬	CHANNEL TOES
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▚ BERTH-2	DREDGE SAMPLE LOCATION / ID
◆	NAVIGATIONAL BUOY
A 09	CROSS–SECTION LOCATION

50' 0 50' 100' 150'
GRAPHIC SCALE

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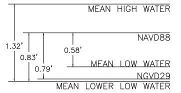
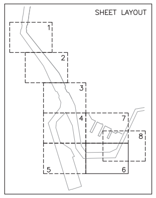
🟪	BELOW 25.0

DIAGRAM OF DATUM PLANE





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BALTIMORE, MARYLAND

US COAST GUARD YARD
2401 HAWKINS POINT ROAD, MS 10
BALTIMORE, MARYLAND 21226

ISSUE

MARK	DATE	DESCRIPTION
	12/10/21	ISSUED FOR PERMITTING
	09/21/21	ISSUED FOR PERMITTING
	09/03/21	ISSUED FOR PERMITTING

A/E PROJECT NO:
CAD FILE NAME:
DESIGNED BY: FACILITY ENGINEERING
DRAWN BY: GBA
EDITED BY: C.M.D.
CHECKED BY: R.D.

SCALE: AS NOTED PLOT SCALE: 1:1

SHEET TITLE

HYDROGRAPHIC SURVEY OF
CURTIS CREEK & USCG PIERS
BALTIMORE MARYLAND
V/06
HYDROGRAPHIC SURVEY
SHEET 6

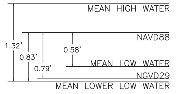
REVIEWED BY:	REVIEWED BY:	REVIEWED BY:
DA	ALW	JML
PROJECT MGR	DESIGN SUPV.	ELECT. ENG.

CDR JOHN M. LISKO
APPROVING OFFICER
8/27/21
DATE

PROJECT NUMBER: 11884246
DRAWING NUMBER:
DISCIPLINE/SHT NO: V/06
SHEET 07 OF 12

SOUNDING LEGEND (FT MLW)	
🟥	ABOVE 15.0
🟧	15.0 TO 16.0
🟨	16.0 TO 17.0
🟩	17.0 TO 18.0
🟩	18.0 TO 19.0
🟩	19.0 TO 20.0
🟩	20.0 TO 21.0
🟦	21.0 TO 22.0
🟦	22.0 TO 23.0
🟦	23.0 TO 24.0
🟪	24.0 TO 25.0
🟪	BELOW 25.0

DIAGRAM OF DATUM PLANE



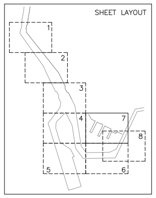
NOTES:
1. THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES SHOWN AND CAN ONLY INDICATE THE GENERAL CONDITION EXISTING AT THAT TIME.
2. SURVEY DATA COLLECTED BY GAHAGAN & BRYANT ASSOCIATES, INC. ON JUNE 15–16, 2021 USING SURVEY VESSEL 'SEA FIX'.
3. HORIZONTAL POSITIONING WAS OBTAINED USING APPLANIX WAVEMASTER W/ LEICA GS18 AND LEICA SMARTNET RTK CORRECTIONS.
4. SOUNDINGS WERE OBTAINED USING A RESON SEABAT 7125 ECHOSOUNDER OPERATING AT 240 KHz.
5. HORIZONTAL COORDINATES ARE IN U.S. SURVEY FEET AND REFERENCED TO THE MARYLAND STATE PLANE COORDINATE SYSTEM, ZONE 1900, NAD83.
6. SOUNDINGS WERE ADJUSTED TO MLW USING NOAA VDATUM SOFTWARE VERSION 4.2.
7. ALL ELEVATIONS ARE ROUNDED TO THE NEAREST TENTH AND ARE BELOW THE REFERENCE PLANE UNLESS PRECEDED BY A PLUS (+) SIGN.
8. LIMITS OF WATERBODIES AND WETLANDS SHOWN HERE ARE REFERENCED FROM THE UNITED STATES FISH AND WILDLIFE SERVICE'S NATIONAL WETLANDS INVENTORY (NWI), ACCESSED DECEMBER 10, 2021.

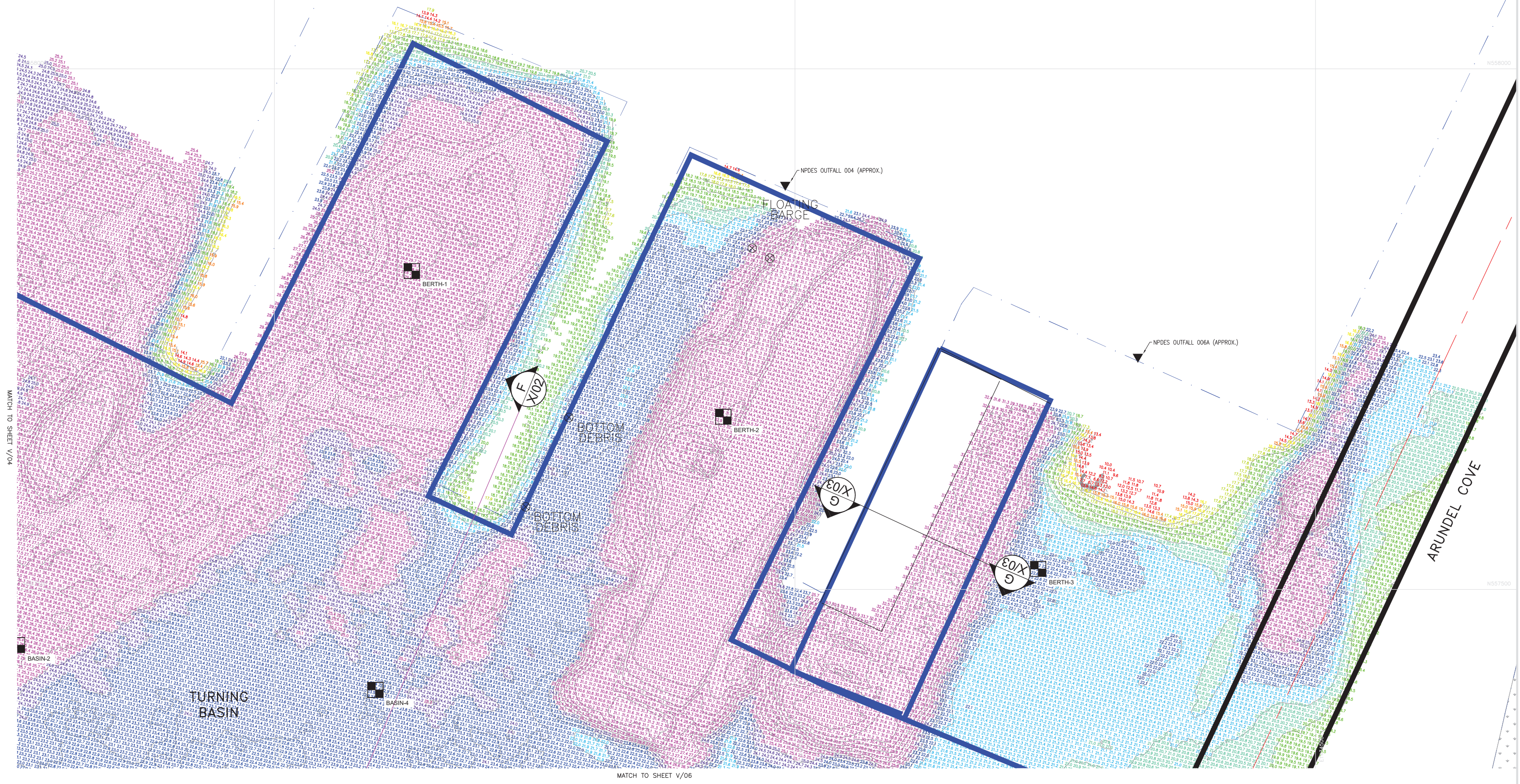
50' 0 50' 100' 150'

GRAPHIC SCALE

LEGEND	
━	CHANNEL TOES
━	PROPOSED LIMIT OF DREDGING
─	DOCK EDGE LINE
— · —	NWI WATERBODY LIMIT
～5～	CONTOURS IN FEET MLW
▭	NWI WETLANDS
⊗	DEBRIS / OBSTRUCTION
▼	NPDES OUTFALL
▚ BERTH-2	DREDGE SAMPLE LOCATION / ID
◆	NAVIGATIONAL BUOY
A 09	CROSS–SECTION LOCATION

SHEET LAYOUT





CONSULTANTS

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ISSUE

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	12/10/21	ISSUED FOR PERMITTING
	09/21/21	ISSUED FOR PERMITTING
	09/03/21	ISSUED FOR PERMITTING

A/E PROJECT NO:
CAD FILE NAME:
DESIGNED BY: FACILITY ENGINEERING
DRAWN BY: GBA
EDITED BY: C.M.D.
CHECKED BY: R.D.

SCALE: AS NOTED PLOT SCALE: 1:1

SHEET TITLE

HYDROGRAPHIC SURVEY OF
CURTIS CREEK & USCG PIERS
BALTIMORE MARYLAND
V/07
HYDROGRAPHIC SURVEY
SHEET 7

REVIEWED BY:	REVIEWED BY:	REVIEWED BY:
DA	ALW	JML
PROJECT MGR	DESIGN SUPV.	ELECT. ENG.

CDR JOHN M. LISKO 8/27/21
APPROVING OFFICER DATE

PROJECT NUMBER: 11884246
DRAWING NUMBER:
DISCIPLINE/SHT NO: V/07
SHEET 08 OF 11

F:\60660293_USCG\CAD\20211124_50-SC_PLANSET.dwg, 12/10/2021 11:06:55 AM, PDF-XChange Standard

NOTES:

1. THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES SHOWN AND CAN ONLY INDICATE THE GENERAL CONDITION EXISTING AT THAT TIME.
2. SURVEY DATA COLLECTED BY GAHAGAN & BRYANT ASSOCIATES, INC. ON JUNE 15–16, 2021 USING SURVEY VESSEL 'SEA FIX'.
3. HORIZONTAL POSITIONING WAS OBTAINED USING APPLANIX WAVEMASTER W/ LEICA GS18 AND LEICA SMARTNET RTK CORRECTIONS.
4. SOUNDINGS WERE OBTAINED USING A RESON SEABAT 7125 ECHOSOUNDER OPERATING AT 240 KHz.
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6. SOUNDINGS WERE ADJUSTED TO MLW USING NOAA VDATUM SOFTWARE VERSION 4.2.
7. ALL ELEVATIONS ARE ROUNDED TO THE NEAREST TENTH AND ARE BELOW THE REFERENCE PLANE UNLESS PRECEDED BY A PLUS (+) SIGN.
8. LIMITS OF WATERBODIES AND WETLANDS SHOWN HERE ARE REFERENCED FROM THE UNITED STATES FISH AND WILDLIFE SERVICE'S NATIONAL WETLANDS INVENTORY (NWI), ACCESSED DECEMBER 10, 2021.

GRAPHIC SCALE

DIAGRAM OF DATUM PLANE

SOUNDING LEGEND (FT MLW)

🟥	ABOVE 15.0
🟧	15.0 TO 16.0
🟨	16.0 TO 17.0
🟩	17.0 TO 18.0
🟩	18.0 TO 19.0
🟩	19.0 TO 20.0
🟩	20.0 TO 21.0
🟦	21.0 TO 22.0
🟦	22.0 TO 23.0
🟦	23.0 TO 24.0
🟪	24.0 TO 25.0
🟪	BELOW 25.0

LEGEND

━	CHANNEL TOES
━	PROPOSED LIMIT OF DREDGING
─	DOCK EDGE LINE
·····	TREELINE
— — —	SHORELINE
═	HYDRAULIC DREDGE LINE
— · —	NWI WATERBODY LIMIT
═	DREDGE MATERIALS MANAGEMENT AREA DIKE
▨	CONSTRUCTION ENTRANCE
▨	NWI WETLANDS
▨	EXISTING PAVEMENT
▨	EXISTING STRUCTURES
5	CONTOURS IN FEET MLW
⊗	DEBRIS / OBSTRUCTION
▼	NPDES OUTFALL
▚ BERTH-2	DREDGE SAMPLE LOCATION / ID
◆	NAVIGATIONAL BUOY

SHEET LAYOUT

CONSULTANTS

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ISSUE

MARK	DATE	DESCRIPTION
	12/10/21	ISSUED FOR PERMITTING

A/E PROJECT NO:
CAD FILE NAME:
DESIGNED BY: FACILITY ENGINEERING
DRAWN BY: GBA
EDITED BY: C.M.D.
CHECKED BY: R.D.
SCALE: AS NOTED PLOT SCALE: 1:1

SHEET TITLE

HYDROGRAPHIC SURVEY OF
CURTIS CREEK & USCG PIERS
BALTIMORE MARYLAND
V/08
SURVEY & HYDRAULIC DREDGE PLAN
SHEET 8

REVIEWED BY:	REVIEWED BY:	REVIEWED BY:
DA	ALW	JML
PROJECT MGR	DESIGN SUPV.	ELECT. ENG.

CDR JOHN M. LISKO 8/27/21
APPROVING OFFICER DATE

PROJECT NUMBER: 11884246
DRAWING NUMBER:
DISCIPLINE/SHT NO: V/08
SHEET 09 OF 12

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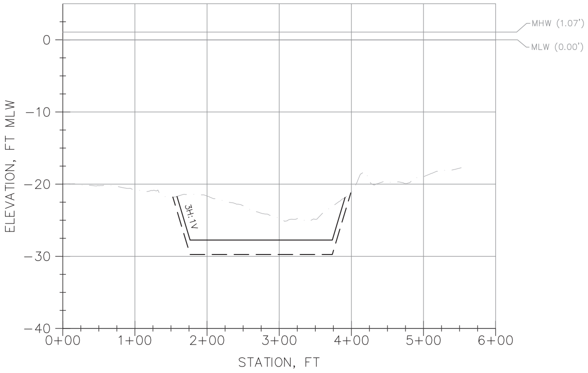
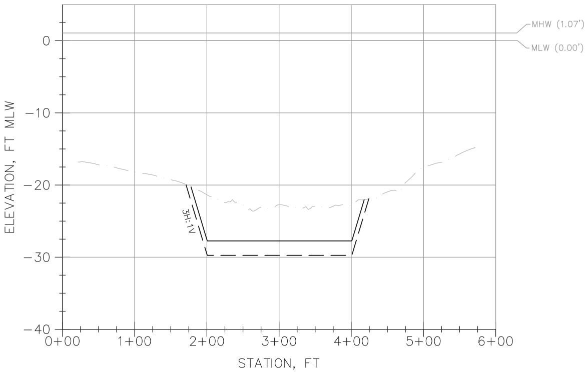
SECTION A: HIGHWAY BRIDGE



SECTION B: CHANNEL



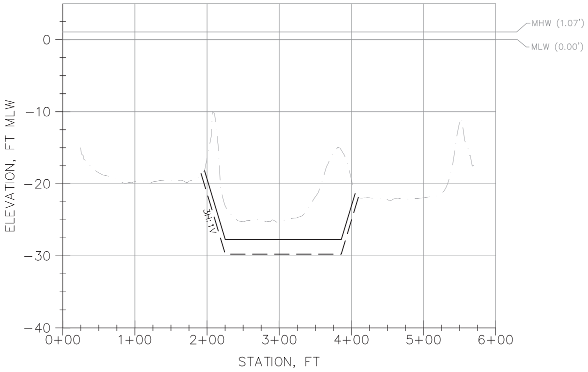
LEGEND

— · —	EXISTING CHANNEL BOTTOM
———	PROPOSED DREDGE DEPTH (STANDARD): −27.50' MLLW (−27.75' MLW)
— —	2–FOOT OVERDREDGE: −29.50' MLLW (−29.75' MLW)

NOTES:

1. THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES SHOWN AND CAN ONLY INDICATE THE GENERAL CONDITION EXISTING AT THAT TIME.
2. SURVEY DATA COLLECTED BY GAHAGAN & BRYANT ASSOCIATES, INC. ON JUNE 15–16, 2021 USING SURVEY VESSEL 'SEA FIX'.
3. DESIGN DREDGE PRISMS REFLECT TARGET DREDGE ELEVATIONS OF −27.5 AND OVERDREDGE ELEVATIONS OF −29.5 FEET IN THE MLLW DATUM.
4. INFORMATION SHOWN HERE IS FOR PERMITTING PURPOSES ONLY, AND MAY NOT BE USED FOR CONSTRUCTION.

SECTION C: CSX BRIDGE



SECTION D: CHANNEL

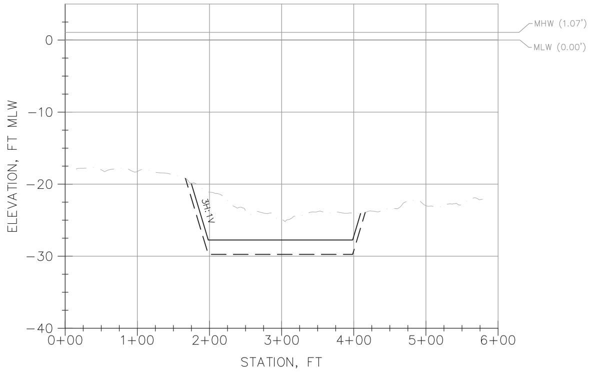
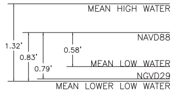


DIAGRAM OF DATUM PLANE



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MARK	DATE	DESCRIPTION
	12/02/21	ISSUED FOR PERMITTING
	09/21/21	ISSUED FOR PERMITTING
	09/03/21	ISSUED FOR PERMITTING

A/E PROJECT NO:
CAD FILE NAME:
DESIGNED BY: FACILITY ENGINEERING
DRAWN BY: GBA
EDITED BY: C.M.D.
CHECKED BY: R.D.

SCALE: AS NOTED PLOT SCALE: 1:1

SHEET TITLE

HYDROGRAPHIC SURVEY OF
CURTIS CREEK & USCG PIERS
BALTIMORE MARYLAND
X/01
PROPOSED DREDGE SECTIONS
SHEET 1

REVIEWED BY:	REVIEWED BY:	REVIEWED BY:
DA	ALW	JML
PROJECT MGR	DESIGN SUPV.	ELECT. ENG.

CDR JOHN M. LISKO
APPROVING OFFICER

8/27/21
DATE

PROJECT NUMBER
11884246

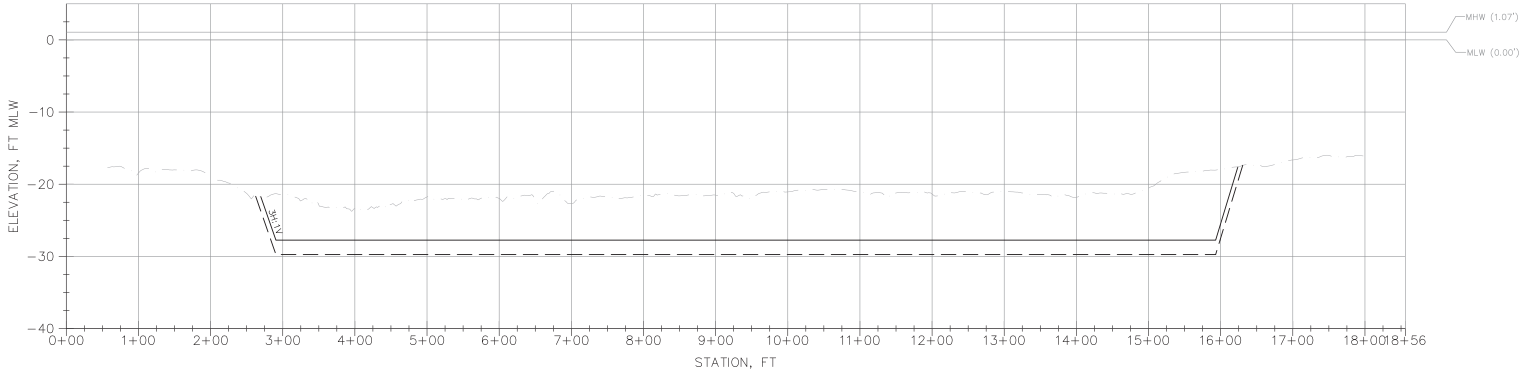
DRAWING NUMBER

DISCIPLINE/SHT NO
X/01

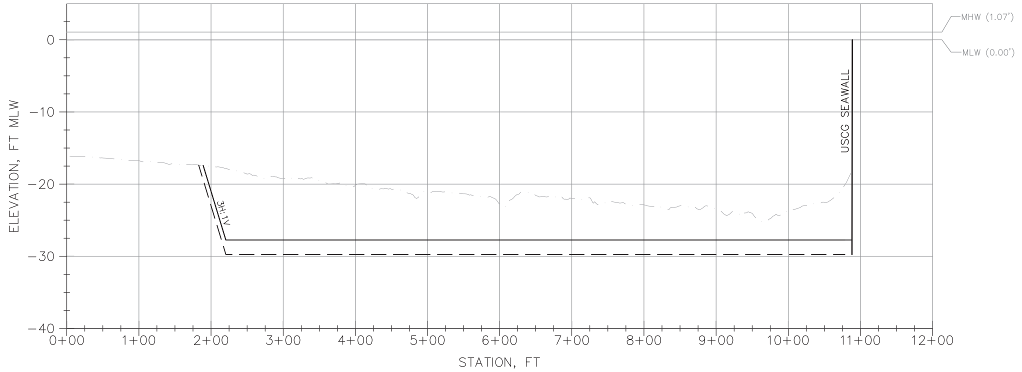
SHEET 10 OF 12

F:\60660293_USCG\CAD\20211124_50-SC_PLANSET.dwg, 12/2/2021 4:47:27 PM, Adobe PDF

SECTION E: TURNING BASIN



SECTION F: TURNING BASIN



LEGEND

— · —	EXISTING CHANNEL BOTTOM
———	PROPOSED DREDGE DEPTH (STANDARD): −27.50' MLLW (−27.75' MLW)
— —	2−FOOT OVERDREDGE: −29.50' MLLW (−29.75' MLW)

NOTES:

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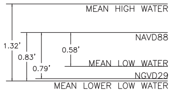
3. DESIGN DREDGE PRISMS REFLECT TARGET DREDGE ELEVATIONS OF −27.5 AND OVERDREDGE ELEVATIONS OF −29.5 FEET IN THE MLLW DATUM.
4. INFORMATION SHOWN HERE IS FOR PERMITTING PURPOSES ONLY, AND MAY NOT BE USED FOR CONSTRUCTION.

DIAGRAM OF DATUM PLANE



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BALTIMORE, MARYLAND

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BALTIMORE, MARYLAND 21226

ISSUE

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	09/03/21	ISSUED FOR PERMITTING

A/E PROJECT NO:
CAD FILE NAME:
DESIGNED BY: FACILITY ENGINEERING
DRAWN BY: GBA
EDITED BY: C.M.D.
CHECKED BY: R.D.

SCALE: AS NOTED PLOT SCALE: 1:1

SHEET TITLE

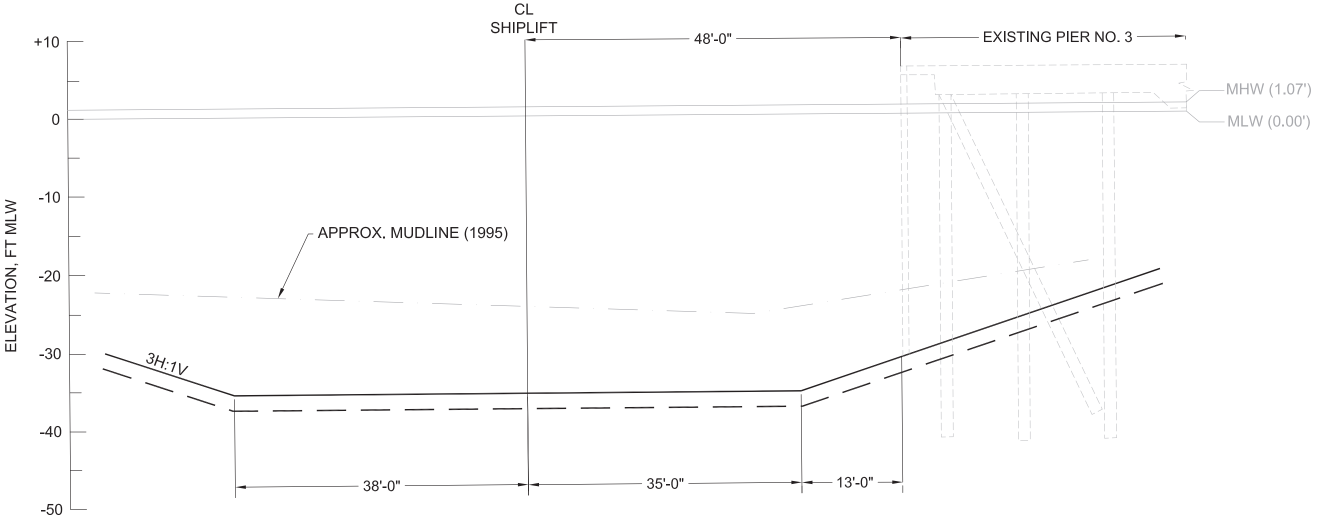
HYDROGRAPHIC SURVEY OF
CURTIS CREEK & USCG PIERS
BALTIMORE MARYLAND
X/02
PROPOSED DREDGE SECTIONS
SHEET 2

REVIEWED BY:	REVIEWED BY:	REVIEWED BY:
DA	ALW	JML
PROJECT MGR	DESIGN SUPV.	ELECT. ENG.

CDR JOHN M. LISKO
APPROVING OFFICER
8/27/21
DATE

PROJECT NUMBER
11884246
DRAWING NUMBER
DISCIPLINE/SHT NO
X/02
SHEET 11 OF 12

SECTION G: SHIPLIFT



LEGEND

— · —	EXISTING CHANNEL BOTTOM
———	PROPOSED DREDGE DEPTH (STANDARD): –27.50' MLLW (–27.75' MLW)
— —	2–FOOT OVERDREDGE: –29.50' MLLW (–29.75' MLW)

NOTES:

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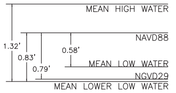
DIAGRAM OF DATUM PLANE



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CONSULTANTS

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US COAST GUARD YARD
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BALTIMORE, MARYLAND 21226

ISSUE

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	09/03/21	ISSUED FOR PERMITTING

A/E PROJECT NO:
CAD FILE NAME:
DESIGNED BY: FACILITY ENGINEERING
DRAWN BY: GBA
EDITED BY: C.M.D.
CHECKED BY: R.D.

SCALE: AS NOTED PLOT SCALE: 1:1

SHEET TITLE

HYDROGRAPHIC SURVEY OF
CURTIS CREEK & USCG PIERS
BALTIMORE MARYLAND
X/03
PROPOSED DREDGE SECTIONS
SHEET 3

REVIEWED BY:	REVIEWED BY:	REVIEWED BY:
DA	ALW	JML
PROJECT MGR	DESIGN SUPV.	ELECT. ENG.

CDR JOHN M. LISKO
APPROVING OFFICER

8/27/21
DATE

PROJECT NUMBER
11884246

DRAWING NUMBER

DISCIPLINE/SHT NO
X/03

SHEET 12 OF 12