DREDGE MATERIAL DISPOSAL AND BEST MANAGEMENT PRACTICE PLAN

DREDGING YEAR 1

SPARROWS POINT CONTAINER TERMINAL PATAPSCO RIVER, BALTIMORE COUNTY, MARYLAND

DRAFT

Prepared for:
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OCTOBER 2025

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BMP	Best Management Practice
CFR	Code of Federal Regulations
cy	cubic yards
DMCF	Dredged Material Containment Facility
DU	dredging unit
FEIS	Final Environmental Impact Statement
FY	fiscal year
ft	foot (feet)
mcy	million cubic yards
MDE	Maryland Department of the Environment
MHW	mean high water
MLLW	mean lower low water
MPA	Maryland Port Administration
MPRSA	Marine Protection, Research, and Sanctuaries Act
NODS	Norfolk Ocean Disposal Site
NPDES	National Pollutant Discharge Elimination System
RCRA	Resource Conservation and Recovery Act
SAP	Sampling and Analysis Plan
SPCT	Sparrows Point Container Terminal
TCLP	Toxicity Characteristic Leaching Procedure
TiL	Terminal Investment Limited
TOY	time-of-year
TPA	Tradepoint Atlantic
TTT	Tradepoint TiL Terminals, LLC
USACE	U.S. Army Corps of Engineers
USEPA	U.S. Environmental Protection Agency
WQC	Water Quality Certification

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1. PROJECT OVERVIEW

The Sparrows Point Container Terminal (SPCT) project includes the construction of a new terminal on the east side of the Coke Point peninsula in the Patapsco River, Baltimore County, Maryland. The completed facility will consist of a ±3,000-foot (ft) wharf with cranes, a container yard, gate complex, Intermodal/Rail Yard, and various support structures. To provide container vessel access to the wharf, the project also includes dredging and placement of an anticipated 4.2 million cubic yards (mcy) of dredged material for the required widening and deepening of the existing Sparrows Point access channel and turning basin to a depth of -50 ft mean lower low water (MLLW) with 2 ft of allowable overdepth. The dredged material placement plan includes three primary components: (1) placement of a maximum of 1.25 mcy of material at an existing offsite Maryland Port Administration (MPA) Dredged Material Containment Facility (DMCF), (2) placement of up to 1.7 mcy of material at a newly constructed DMCF at the High Head Industrial Basin on Tradepoint Point Atlantic property; and (3) placement of a maximum of 1.57 mcy of material at the Norfolk Ocean Disposal Site (NODS). In addition, approximately 330,000 cubic yards (cy) of slag will be excavated for the wharf construction and will be re-used on the project site.

Tradepoint TiL Terminals, LLC (TTT), a joint venture between Tradepoint Atlantic (TPA) and Terminal Investment Limited (TiL), has received a Wetlands License (No. 23-0762; effective date 10 September 2025) from the State of Maryland Board of Public Works and a Water Quality Certification (WQC) (24-WQC-0045); dated 10 July 2025) from the Maryland Department of the Environment (MDE) for the SPCT project. Preparation, approval, and implementation of a Dredge Material Disposal and Best Management Practice (BMP) Plan is a requirement under Special Condition B of the Wetlands License and under Special Condition 5 of the WQC. These Special Conditions state the following: (1) no dredging activity can commence prior to the Tidal Wetlands Division's approval of the Dredge Material Disposal and BMP Plan; (2) the Dredge Material Disposal and BMP Plan shall be submitted for review and approval at least 30 days prior to the commencement of any dredging authorized in the License/Certification; (3) the Licensee/ Certificate Holder shall implement and comply with the Dredge Material Disposal and BMP Plan which will detail support for the implementation of appropriate practices to protect water quality, marine life, and estuarine habitat and will include the criteria for when an environmental bucket for dredging and water-tight trucks and scows for transport will be used; (4) the Dredge Material Disposal and BMP Plan shall also detail the sequence of dredging activity that includes DMCF construction, dredging schedule, placement approval letters from accepting facilities, and dredge transportation activities; and (5) the Dredge Material Disposal and BMP Plan can only be modified upon approval by the Tidal Wetlands Division.

1.1 SCOPE OF DREDGE MATERIAL DISPOSAL AND BEST MANAGEMENT PRACTICE PLAN

To comply with the Special Conditions of the State of Maryland Wetlands License (23-0762) and the Clean Water Act Section 401 WQC (24-WQC-0045), this Dredge Material Disposal and BMP Plan details the areas to be dredged, the locations where dredged material will be placed, the dredging schedule, and practices to be performed during dredging, dredged material

handling/transport, and dredged material placement to protect water quality, marine life, and estuarine habitat in the areas in which these activities will occur.

This Dredge Material Disposal and BMP Plan:

- Describes the areas for dredging, in-water slag reclamation, and in-water demolition activities (Section 1)
- Describes the placement areas/options for the dredged material (Section 1)
- Provides the in-water construction and dredging schedule and sequence (Section 1)
- Describes the dredging units (DUs), dredged material volume, and proposed placement location(s) for material from each DU (Section 2)
- Describes the methods and equipment to be used for dredging, in-water slag reclamation, and in-water demolition (Section 3)
- Describes the equipment and procedures to be used for the handling and transport of in-water demolition debris and dredged material to designated offsite placement location(s) (Section 3)
- Details handling, transport, and management of material to be placed onsite at Sparrows Point, including slag designated for re-use and dredged material designated for placement at the High Head Industrial Basin DMCF (Section 3)
- Describes proposed BMPs to be used during dredging, in-water slag reclamation, and in-water demolition activities and during the handling, transport, and offloading of dredged material (Section 4)
- Provides copies of material acceptance letters for the offsite dredged material placement locations (Attachments)

This Dredge Material Disposal and BMP Plan will be applied to Dredging Year 1 activities at the SPCT project and will be amended or modified for subsequent construction years (Dredging Years 2 and 3) based on the proposed dredging areas, placement locations to be used each year, and any changes to the construction schedule or sequence. The Dredge Material Disposal and BMP Plans for Dredging Year 2 and for Dredging Year 3 will be submitted to MDE for approval a minimum of 30 days prior to the start of dredging or other applicable in-water activities each year. For the purposes of this plan, the Dredging Years are defined as follows:

- Dredging Year 1 = 01 December 2025 through 31 September 2026
- Dredging Year 2 = 01 October 2026 through 31 September 2027
- Dredging Year 3 = 01 October 2027 through 31 September 2028

Multiple in-water activities are required for the SPCT project construction (Figure 1). The in-water activities that are the subject of this plan include the following:

1) Mechanical dredging to widen and deepen the existing access channel extending from the north turning basin southward to the Brewerton Channel to a depth of -50 ft MLLW with 2 ft of allowable overdepth;

2) Mechanical excavation for reclamation of in-water near shore slag using landside long-reach excavators and barge-mounted long-reach excavators as needed along the eastern shoreline of Coke Point within the north turning basin; and

3) Demolition and mechanical removal of an in-water pier structure in the north turning basin.

1.2 DREDGING AND IN-WATER CONSTRUCTION AREAS

Three dredging and in-water construction areas have been defined for the purposes of this Dredge Material Disposal and BMP Plan: the north turning basin and channel, the south channel, and a mid-channel transition area between the turning basin and the south channel (Figure 2). Dredging will occur in each of these three areas; the in-water slag reclamation and the in-water demolition activities are both located in the north turning basin area. The equipment and BMPs applied to in-water activities within each of these three areas are based on the physical and chemical quality of the material to be dredged/removed. Highest concentrations of chemical constituents in the sediments proposed for dredging were identified in the north channel/turning basin, with concentration generally decreasing with distance from the Coke Point peninsula (EA 2024 and 2025).

1.3 CONSTRUCTION SEQUENCE AND DURATION

The duration of construction for the terminal is anticipated to be approximately 3 years. The dredging equipment used, the areas dredged, and the areas of other in-water activities will vary based on the time of year and the overall sequence of project construction.

Mechanical dredging, in-water slag reclamation, and in-water demolition activities are anticipated to be completed over three Dredging Years (1, 2, and 3) which will each be limited to a 6-month period extending from 01 October through 31 March, unless a time-of-year (TOY) restriction waiver is requested and approved by appropriate regulatory agencies. This 6-month period is specified in the Wetlands License and the WQC for the project. Dredging, in-water slag reclamation, and in-water demolition will occur simultaneously with other in-water construction activities (such as pile driving, stormwater outfall installation, and temporary diffuser installation) and multiple dredging operations may be ongoing concurrently during each yearly 6-month dredging period.

The location and approximate duration of the dredging, in-water slag reclamation, and in-water demolition is summarized in Table 1.

Table 1. Dredging Activities, Location, and Approximate Duration for Sparrows Point Container Terminal

Activity	Location	Approximate Duration	Year 1	Year 2	Year 3
Mechanical Dredging	Channel – North Turning Basin	6 months each year (01 October through 31 March)	X	X	X
	Channel – Transition Area	6 months each year (01 October through 31 March)		X	X
	Channel – South	6 months each year (01 October through 31 March)	X	X	X
Near Shore Slag Reclamation	North Turning Basin – West Shoreline	Approximately 10 months	X		
In-Water Demolition	North Turning Basin	Approximately 3-4 months	X		

The Year 1 dredging plan includes in-water slag reclamation, dredging in the north channel, and dredging in the south channel. The sequence of construction and the approximate schedule for the dredging, in-water slag reclamation, and in-water demolition activities during Dredging Year 1 are provided in the schedule below.

Activity	Location	Dredging Year 1											
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept
Mechanical Dredging	Channel - North Turning Basin												
	Channel - Mid Channel Transition Area												
	Channel - South												
Near Shore Slag Reclamation*	North Turning Basin - West Shoreline												
In-Water Demolition (pier structure)	North Turning Basin												

* schedule assumes approval of a TOY restriction waiver for this activity with use of appropriate Best Management Practices (BMPs)

1.4 DREDGED MATERIAL PLACEMENT AREAS

The Final Environmental Impact Statement (FEIS) for the SPCT project (U.S. Army Corps of Engineers [USACE] 2025) evaluated multiple dredged material placement options. The options identified in the FEIS preferred alternative include: offsite placement of a maximum of 1.25 mcy at MPA DMCFs (Masonville and Cox Creek), offsite placement of a maximum of 1.57 mcy at the NODS, and onsite placement of a maximum of 1.7 mcy at the High Head Industrial Basin DMCF. In addition, approximately 330,000 cy of slag will be removed from the eastern shoreline of Coke Point and will be reused on upland areas within the project site. The offsite and onsite placement locations for the dredged material are depicted on Figure 3 and are described below.

1.4.1 Masonville and Cox Creek DMCFs

The Cox Creek and Masonville DMCFs are two existing nearshore upland confined placement facilities owned, operated, and maintained by MPA (Figure 3). The Cox Creek and Masonville DMCFs (with planned expansions and innovative reuse) are two primary components of the State of Maryland's Dredged Material Management Program for long-term management of Baltimore Harbor maintenance dredged material.

The Cox Creek DMCF is located in northern Anne Arundel County, Maryland, and the current capacity (with the recently completed dike expansion to +60 ft) is estimated to be 14.7 mcy.

The Cox Creek DMCF is also located adjacent to the Cox Creek Sediment Technology and Reuse Facility where MPA will be drying and stockpiling dredged material to be used for opportunities to further MPA's Innovative Reuse and Beneficial Use program. This facility is located approximately 2.3 miles across the Patapsco River from Sparrows Point.

The Masonville DMCF is located in South Baltimore with a current capacity of approximately 6.0 mcy. Construction has been approved to raise the dike to +30 ft, with an expected completion date of Fall 2025, increasing the capacity of the site to an estimated 8.2 mcy. Pending the availability of funding, this would be followed by design and permitting for dike raising to +42 ft with anticipated completion in 2029, providing increased total capacity to approximately 10.3 mcy. The Masonville DMCF is located approximately 7.5 miles upstream from Sparrows Point.

Placement of material at the MPA's DMCFs is typically limited to maintenance dredged material; however, acceptance of material from new work projects has been considered on a case-by-case basis. MPA has agreed to accept a maximum of 1.25 mcy of dredged material from the SPCT project over a 4-year period as follows: fiscal year (FY) 26 = 350,000 cy, FY27 = 200,000 cy, FY28 = 400,000 cy, and FY29 – 300,000 cy. The capacity agreement letter from the MPA is provided in Attachment A. TTT has submitted the results for testing of the dredged material and has received approval for Dredging Year 1 for placement of a maximum of 350,000 cy at the Masonville DMCF; the MPA letter of agreement for Year 1 is provided in Attachment A.

For the MPA DMCF placement option, the dredged material will be mechanically dredged, placed in a sealed, hopper barge or hopper, and transported by waterway to the DMCF, where it will be hydraulically unloaded into a designated placement cell(s).

1.4.2 Norfolk Ocean Disposal Site

The NODS is located in the Atlantic Ocean approximately 17 miles east of Cape Henry and is approximately 50 square nautical miles in size (40 Code of Federal Regulations [CFR] Part 228) (Figure 3). The site has unlimited capacity and was designated to accept materials that meet the requirements for Section 103 of the Marine Protection, Research, and Sanctuaries Act (MPRSA) (U.S. Environmental Protection Agency [USEPA] 1992).

The MPRSA "regulates the disposition of material into the ocean and prohibits the dumping of material into the ocean that would unreasonably degrade or endanger human health, welfare, or amenities, or the marine environment, ecological systems, or economic potentialities (33 U.S.C. 1401 et seq)." Section 103 of MPRSA authorizes USACE to issue permits for the placement of dredged materials into the ocean, such as the NODS, an approved site for ocean placement of dredged material. TTT conducted a comprehensive tiered dredged material testing program in accordance with 40 CFR 220-228 (Ocean Dumping Regulations) and submitted the results to USACE and USEPA to provide a suitability determination for transport to and placement at the NODS. TTT developed and executed a tiered testing program to evaluate the proposed dredged material, identified DUs that meet the limiting permissible concentration, and prepared a report documenting the sediment testing results for each DU for review and consideration by USACE and USEPA (EA 2024). USACE requested USEPA concurrence by letter dated 9 June 2025, and

USEPA issued a letter on 16 July 2025 indicating their concurrence for placement of material, with required conditions. The USEPA concurrence letter is provided in Attachment B.

For the NODS placement option, the dredged material will be mechanically dredged, placed in a split-hull barge or bottom-dump scow, and transported south through the Chesapeake Bay waterway and offshore to the NODS, where it will be discharged in compliance with the MPRSA Section 103 concurrence and permit conditions.

1.4.3 High Head Industrial Basin DMCF

The existing High Head Industrial Basin is located approximately 2.5 miles northeast of the project area within the TPA property (Figure 3). The impounded area of the industrial basin currently covers 38.7 acres and no longer receives Back River Wastewater Treatment Plant industrial water. Ground elevations around the periphery of the reservoir range from +8 to +12 ft. The High Head Industrial Basin DMCF constructed at this location will have the capacity to hold 1.7 mcy of dredged material with an exterior dike elevation of approximately +40 ft, or approximately 30 ft above existing grade. A portion of the material for the dike construction will be excavated from within the SPCT project area and will consist of common borrow material sourced from existing land and stockpiles from elsewhere on TPA property. The remainder of the material will be sourced from offsite facilities and approved by MDE. The outboard dike slopes will be seeded with native plant species after construction to prevent erosion.

To accommodate effluent discharge from dredged material dewatering at the High Head Industrial Basin DMCF, a new temporary outfall with a multiport diffuser will be installed offshore of the west side of the Sparrows Point peninsula in the vicinity of the shipyard and the mouth of Bear Creek. The leader pipe to the new temporary outfall will be routed over land to the west side of the shipyard, and the feeder line will extend offshore/channelward approximately 300 to 500 ft from the shoreline. The effluent from the dredged material dewatering will flow to the new temporary outfall through a pipe and feeder line to a multiport diffuser head aligned perpendicular to the current. The temporary diffuser system will be located south of and outside the footprint of the Bear Creek Superfund Site. The diffuser system will only be operational for the duration of active dewatering and consolidation of dredged material at the High Head Industrial Basin DMCF.

An alternative treatment option that will treat the effluent from the dredged material dewatering in the onsite Humphreys Creek Wastewater Treatment Plant in lieu of the offshore diffuser option has been developed as a separate operating scenario.

The existing Sparrows Point National Pollution Discharge Elimination System (NPDES) permit will be modified through the MDE Wastewater Pollution Prevention and Reclamation Program and will include discharge requirements related to the dredged material effluent. The NPDES permit modification process is currently underway and will address both operating scenarios.

For the High Head Industrial Basin DMCF placement option, dredged material will be mechanically dredged and placed in a scow and transported to the west side of Sparrows Point. It will then be hydraulically pumped from the scow through a flexible pipeline into the High Head Industrial Basin DMCF. Water will be added to the dredged material to facilitate hydraulic

pumping. This water will be recycled back from the DMCF to the unloader, limiting the overall volume of surface water withdrawal needed to facilitate pumping. The recycling of water for pumping will also reduce the total volume of water discharged from the DMCF to the permitted outfall. After placement is complete, the DMCF will be managed to dewater, dry, and consolidate the placed material.

It is anticipated that dredging and placement of material in the High Head Industrial Basin DMCF will be performed in two phases, with each phase approximately 1 year in duration to allow for optimal dewatering and consolidation of the placed material. The volume of dredged material placed into the DMCF for each phase will be appropriate for the DMCF capacity at the time of placement. Material placement will not exceed the allowable elevation of the DMCF and will maintain a minimum of 2 ft of freeboard. After the two phases of dredging and placement are complete, drying and consolidation of the material is expected to require approximately 5 to 10 years. The DMCF will then be capped (approximate 2-year period) and managed for industrial use.

Construction of the High Head DMCF to an elevation of +30 ft above existing grade will require approximately 7 months; therefore, this placement option will not be utilized for material from Dredging Year 1. Details related to the dredged material placement and management at the High Head Industrial Basin DMCF will be provided in the Dredge Material Disposal and BMP Plan for Dredging Year 2.

1.4.4 Onsite Slag Reclamation and Reuse

TPA stockpiles slag and other demolition debris on the Coke Point peninsula for onsite reuse (Figure 3). Materials are stockpiled based on type and size and reused as upland fill material. The shoreline excavation activities will consist almost entirely of in-water slag reclamation. The slag material is granular, coarse, and heavy; the slag material is expected to settle out of the water column quickly and is not expected to generate substantial turbidity plumes.

TPA anticipates approximately 330,000 cy of slag will be recovered during the construction of the revetment (from along the full length of the wharf). Staging areas will be established adjacent to, and proximate to, the excavation activities. The staging areas will be moved along the wharf front as the revetment progresses. The slag is porous and will not hold water and will be allowed to drain as it is excavated.

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2. DREDGING UNITS, DREDGED MATERIAL VOLUME, AND PLACEMENT PLAN

A comprehensive dredged material sampling and testing program was conducted in the proposed dredging areas in accordance with Sampling and Analysis Plans (SAPs) that were approved by regulatory agencies prior to the start of the investigations. The ocean placement SAP was approved by USEPA and included 15 DUs in the southern portion of the channel that were tested in accordance with requirements under Section 103 of the MPRSA (Figure 4). The upland placement SAP was approved by MDE and MPA and included a total of 28 DUs (15 in the southern portion of the channel [Figure 4] and 13 in the northern portion of the channel [Figure 5]). A total of 97 locations (sample cores) throughout the channel dredging footprint were sampled. For each location, the entire core/column of material proposed for dredging (to a maximum elevation of -52 ft MLLW) was characterized with respect to physical and chemical attributes; ecotoxicological tests (water column toxicity, sediment toxicity, and bioaccumulation exposures) were also conducted for ocean placement for the 15 southern DUs.

Results of the ocean placement evaluation indicated that material from 14 of the 15 southern DUs meets the requirements for ocean placement under Section 103 of the MPRSA (EA 2024). Results of the upland placement evaluation indicated that 5 DUs were classified as MDE Reuse Category 1 (Residential – Unrestricted Use), 21 DUs were classified as Category 2 (Nonresidential – Restricted Use), and 2 DUs were classified as Category 3 (Restricted Use – Cap Required) (EA 2025). A human health risk evaluation was used to determine the MDE reuse classification for each DU; this evaluation considered the dose, exposure pathway, and duration of exposures for chemicals that were present in the sediments in each DU. Each of the 28 DUs was also tested to determine if the materials exceeded the Toxicity Characteristic Leaching Procedure (TCLP) thresholds that are used to categorize material as Resource Conservation and Recovery Act (RCRA) hazardous waste as defined in 40 CFR 261.24. None of the material exceeded TCLP threshold concentrations (i.e., none of the DUs are considered RCRA hazardous waste).

Additional comparisons of the channel sediment chemical data to MPA's Baseline Control Limits (numerical screening values that have been established for MPA's DMCFs) indicated that the chemical concentrations in the two DUs classified as MDE Reuse Category 3 were dissimilar to material previously placed at the MPA DMCFs; therefore, material from these two DUs will not be placed at an MPA DMCF but will be placed in the High Head Industrial Basin DMCF on TPA property and will be capped by Category 1 or 2 materials within the DMCF.

The MDE re-use category, the placement option(s) based on the results of the sediment characterization studies, and the approximate volume of material from each DU is provided in Table 2. The placement options for the north channel and transition area DUs are depicted on Figure 6. The placement options for the south channel DUs are depicted on Figure 7.

Table 2. Material Depth Profile, MDE Innovative Reuse Categories, Approximate Placement Volume, and Placement Options for Each Dredging Unit

Dredging Unit	Location / Dredging Area [1]	Sediment Characterization Depth [2]	MDE Innovative Reuse Category [3]	Placement Options			Approximate Material Volume (cy)
				MPA DMCF	High Head Industrial Basin DMCF	Norfolk Ocean Disposal Site (NODS)	
DU1	South Channel	-52 ft MLLW	2	✓	✓	✓	100,000
DU2	South Channel	-52 ft MLLW	2	✓	✓	✓	100,000
DU3	Transition	-52 ft MLLW	2	✓	✓		80,000
DU4	South Channel	surface to 7 ft bss	2	✓	✓	✓	80,000
DU5	South Channel	surface to 7 ft bss	2	✓	✓	✓	80,000
DU6	South Channel	surface to 7 ft bss	2	✓	✓	✓	80,000
DU7	South Channel	7 ft bss to -52 ft MLLW	1	✓	✓	✓	185,000
DU8	South Channel	7 ft bss to -52 ft MLLW	2	✓	✓	✓	185,000
DU9	South Channel	surface to 10 ft bss	2	✓	✓	✓	90,000
DU10	South Channel	surface to 10 ft bss	2	✓	✓	✓	90,000
DU11	South Channel	surface to 10 ft bss	2	✓	✓	✓	90,000
DU12	South Channel	10 ft bss to -52 ft MLLW	2	✓	✓	✓	185,000
DU13	South Channel	10 ft bss to -52 ft MLLW	2	✓	✓	✓	185,000
DU14*	South Channel	10 ft bss to -52 ft MLLW	2	✓	✓	✓	60,000
DU15*	South Channel	10 ft bss to -52 ft MLLW	1	✓	✓	✓	60,000
DU16	North/Transition	-52 ft MLLW	2	✓	✓		220,000
DU17	North Channel	-52 ft MLLW	3		✓		230,000
DU18	North Channel	-52 ft MLLW	3		✓		250,000
DU19	North Channel	-52 ft MLLW	2	✓	✓		230,000
DU20*	North/Transition	-52 ft MLLW	2	✓	✓		140,000
DU21	North/Transition	-52 ft MLLW	1	✓	✓		220,000
DU22	North Channel	-52 ft MLLW	2	✓	✓		215,000
DU23	North Channel	-52 ft MLLW	2	✓	✓		215,000
DU24	North Channel	-52 ft MLLW	1	✓	✓		185,000
DU25	North Channel	-52 ft MLLW	2	✓	✓		185,000
DU26	North Channel	-52 ft MLLW	2	✓	✓		185,000
DU27	North Channel	-52 ft MLLW	1	✓	✓		150,000
DU28	North Channel	-52 ft MLLW	2	✓	✓		125,000

Notes:

*DU14 and DU15 are bottom dredging units within the DU20 footprint

1 – Dredging Areas as defined for the purposes of the Dredge Material Disposal and BMP Plan.

2 – Maximum dredging depth = -50 ft MLLW + 2 ft allowable overdepth

3 – MDE 2019. *Innovative Reuse and Beneficial Use of Dredged Material Guidance Document.*

Category 1 = Residential Unrestricted Use Soil and Fill Material

Category 2 = Non-Residential Restricted Use Soil and Fill Material

Category 3 = Restricted Use Soil and Fill Material, Cap Required

bss = below sediment surface

The areas proposed for dredging, in-water slag reclamation, and in-water demolition for Dredging Year 1 are depicted on Figure 8. For Dredging Year 1, approximately 330,000 cy of slag is anticipated to be removed via mechanical excavation and stockpiled onsite; approximately 350,000 cy of material from DUs 19, 22, 23, 24, 25, 26, 27, and 28 will be mechanically dredged in the north channel/turning basin and placed at the Masonville DMCF; and approximately

300,000 cy of material from DUs 1, 2, and 4 will be mechanically dredged in the south channel and transported to the NODS for placement. For Dredging Year 1, it is anticipated that one dredge will be operating in the project area either in the north channel/turning basin or south channel area.

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3. EQUIPMENT AND METHODS

The methods and equipment types to be used for dredging, for in-water slag reclamation, and in-water demolition are described in this section.

3.1 DREDGING, SLAG RECLAMATION, AND REVETMENT WORK

3.1.1 Mechanical Dredging – Clamshell Bucket

A clamshell bucket will be used for the removal of sediment in the south channel DUs. The DUs will not require the use of an environmental bucket, as the quality of the material is consistent with material that is maintenance dredged in the adjacent federal navigation channel (Brewerton Channel) and the material to be dredged has passed the requirements for placement at the NODS. The Contractor will use an anvil open bucket operated from a dredge barge with a crane. Following retrieval from the river bottom, the material will be placed directly into split-hull bottom-dump scows ranging from 4,000 to 5,000 cy in size for transport to the NODS. Dredging will be conducted 24 hours per day, 7 days per week.

3.1.2 Mechanical Dredging – Environmental-Type Bucket

Mechanical dredging in the north channel and in the mid-channel transition area will be conducted using an environmental-type bucket. Design details of the environmental bucket are provided in Section 4. It should be noted that environmental buckets work most effectively for the removal of soft sediments and do not work well in areas with native or hard packed clays or sand and in areas with underwater debris. The environmental bucket will be used to the maximum extent possible for removal of sediments in the north channel/turning basin and mid-channel/transition area. Following retrieval from the river bottom, the material will be placed directly into sealed hopper barges ranging from 5,000 to 6,000 cy in size for transport to MPA DMCFs. Dredging with the environmental bucket will be conducted 24 hours per day, 7 days per week.

3.1.3 Slag Reclamation – Long-Reach Excavator (Open Bucket)

Approximately 330,000 cy of slag will be excavated and dredged along the east side of Coke Point to construct the wharf. The majority of this material will be removed by a backhoe, conventional excavator, or hydraulic excavator that is positioned on land (on the shoreline). Any material that cannot be reached by a backhoe or hydraulic excavator would be removed by way of dredging with either a hydraulic excavator on a barge, or a clamshell bucket on a barge. Staging areas will be established adjacent and proximate to the excavation activities. The staging areas will be moved along the wharf front as the revetment progresses. The slag is porous and will not hold water and will be allowed to drain as it is excavated. This process is consistent with ongoing slag reclamation practices on Sparrows Point. The material will be mechanically transferred to a dump truck following drying and will then be taken directly to the High Head Industrial Basin DMCF for dike construction or, if necessary, to a stockpile area within the project's upland limit of disturbance for future reuse. If necessary, the stockpiled material will be processed (crushed to specified sizing) for reuse as onsite fill or for High Head Industrial Basin DMCF dike construction. Slag reclamation will start from the north end of the wharf/turning basin and progress south. The first phase of slag removal will be completed to an approximate elevation of +2 ft mean high water (MHW), and then

a second phase for in-water slag removal will be conducted progressing from north to south to elevation -30 ft MLLW. The production rate for slag reclamation is estimated to be between 1,200 and 3,000 cy per day. It is anticipated that the slag reclamation work will be conducted 10 hours per day, 6 days per week, for an approximate 10-month period.

3.1.4 Revetment Grading and Fill – Excavator Bucket

Grading of the revetment area under the wharf will be conducted using an excavator bucket. The grading will be conducted following completion of the nearshore in-water slag reclamation and will provide shoreline (under wharf) stabilization with an upper slope elevation of approximately +9 ft MLLW and a lower slope elevation of -52.84 ft MLLW. A small cove area along the northern area of the revetment will be filled with recycled slag and capped. Fill will be mechanically placed using clamshell buckets on barge-mounted cranes, and land-based hydraulic excavators. Armor stone capped with concrete slabs will be placed to cover the entire revetment and stabilize the shoreline under the wharf.

3.2 SUPPORT VESSELS

Support vessels will include crew boats, survey vessels, hydraulic loaders, and tugs to support the dredging operations and material transport. These vessels will be berthed at TPA and MPA facilities during the construction period. Dredge barges and unloaders will be spudded down with hopper and spilt-hull barges secured alongside or secured to the pier on the north side of the Sparrows Point shipyard when hydraulic offloading is underway for placement of material at the High Head Industrial Basin DMCF. Tugs will refuel at local fuel docks and will transfer fuel to the dredge and unloaders, as required. Routine maintenance for the vessels and equipment will be performed on the project site; any major repair or maintenance work for in-water construction-related vessels will be performed at Smith Shipyard in Curtis Bay.

3.3 DEMOLITION

In-water demolition and debris removal of deteriorated pier structures located in the northern turning basin will be required. The pier structures are anticipated to include a combination of wood timber piles and sheet piles. The materials will be mechanically removed either using a barge-mounted excavator or using a crane to either grab and pull or vibrate out the piles. Given the nature of the work, the means and methods may change based on the size and condition of the submerged structure. Following removal, the debris materials will be placed on a barge and transported and unloaded on TPA property. The material will be sorted on the landside for disposal. Disposal will be in accordance with federal, state, and local codes. It is anticipated that the in-water demolition / debris removal will be conducted 10 hours per day, 6 days per week, for an approximate 3- to 4-month period.

3.4 MATERIAL TRANSPORT AND PLACEMENT

3.4.1 MPA Dredged Material Containment Facilities

Sealed watertight hopper barges, ranging in size from 5,000 to 6,000 cy, will be used to transport the dredged material from the Sparrows Point Channel to the Cox Creek or Masonville DMCF.

Cox Creek is located approximately 2.3 miles south and across the Patapsco River from the SPCT. Barges pushed by tugs will transit across the river to the Cox Creek unloading location (Figure 8) and the material will be hydraulically pumped in the designated placement cell(s). The Masonville DMCF is located approximately 7.7 miles upstream on the south side of the Patapsco River. Barges pushed by tugs will transit upriver through the Brewerton Channel, Brewerton Angle, Fort McHenry Channel, and Ferry Bar Channel to the Masonville DMCF unloading location (Figure 9) and the material will be hydraulically pumped into the designated placement cell(s). The return transit to SPCT will follow the reverse course. Water from the DMCF placement cells will be recycled and used to slurry the dredged material for hydraulic offloading. The offloading process at the DMCFs will comply with requirements of the MPA Right-of-Entry. For Dredging Year 1, it is estimated that approximately 6,000 cy will be transported to the designated MPA DMCF each day for offloading (approximately 1 to 1.5 barges each day).

3.4.2 Norfolk Ocean Disposal Site

Split-hull bottom dumps scows, ranging in size from 4,000 to 5,000 cy, will be used to transport the dredged material from the southern portion of the Sparrows Point Channel to the NODS. One-way transport distance from the project site to the NODS is approximately 175 miles. Each barge will be pushed by a tugboat south through the Chesapeake Bay to the NODS, approximately 17 miles offshore in the Atlantic Ocean (Figure 10). The material will be released/discharged in the area of the NODS that has been designated for the SPCT project (Figure 11). The return transit to SPCT will follow the reverse course. Pre- and post-bathymetric surveys will be performed by the Contractor for the placement zone within the NODS. The material shall be evenly dispersed to avoid mounding. The scows will be equipped with an electronic tracking system that is compliant with the USACE Dredging Quality Management program to record the location and volume of material for each discrete discharge. Placement activities will be conducted in compliance with the Site Management and Monitoring Plan (USACE/USEPA 2019). Vessel traffic to and from the NODS will be conducted in compliance with the NOAA Fisheries Right Whale Ship Strike Reduction Rule (50 CFR 24.105), which limits vessels greater than 65 ft to speeds of less than 10 knots during migration and calving periods. For Dredging Year 1, it is estimated that approximately 4,300 to 5,700 cy will be transported to the NODS each day for discharge (approximately 1 to 1.5 barges each day).

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4. BEST MANAGEMENT PRACTICES

BMPs to protect water quality and aquatic resources are described in this section. The BMPs will vary based on the activity to be conducted (dredging, in-water slag excavation, or in-water demolition), dredging area (north channel and turning basin, mid-channel/transition area, or south channel), and the anticipated quality of the sediment (physical and chemical attributes) where the activity will occur.

4.1 ENVIRONMENTAL BUCKET

Environmental-type buckets are closed buckets with special seals and enclosures to minimize and restrict release of sediment within the water column as the bucket is lifted to the surface. Mechanical dredging with use of an environmental bucket has shown to be effective for controlling turbidity and is commonly used within the dredging industry in areas with known contaminants. The Contractor intends to use a 56-cy Cable Arm environmental bucket for mechanical dredging within the north channel/turning basin and within the mid-channel dredging area. It should be noted that environmental buckets work most effectively for the removal of soft sediments and do not work well in areas with native or hard packed clays or sand and in areas with underwater debris. The environmental bucket will be used to the maximum extent practicable for removal of sediments in the north channel/turning basin and mid-channel/transition area. A normal clamshell bucket may be required to remove harder materials in the deeper portion of the sediment column where native clays will be most prevalent.

4.2 OPERATIONAL CONTROLS

Operational controls used during dredging, handling, and transport will be implemented to the extent practicable to reduce resuspension and incidental release of sediment into surface waters.

Operational controls during dredging may include:

1. Avoiding overfill of the dredge bucket on each deployment to reduce release of sediment during ascent.

2. Control of the ascent of the bucket in the water column to minimize incidental release while moving through the water column.

3. Control of the descent of the bucket to minimize hard contact with the bottom and resuspension of sediment upon bucket contact.

4. Prohibit dragging of the dredge bucket along the sediment surface.

Operational controls and other controls used during dredged material handling and transport may include:

1. The clamshell bucket will be lowered to be close to the barge or within the barge and the material will be placed in a manner that reduces the risk of splashing/release of material into surface waters outside of the receiving barge.

2. The receiving barges will be water-tight and will have sufficient freeboard to contain the dredged material and entrained water without incidental release into surface waters. Fully loaded hopper barges have several feet of freeboard inside of the hopper to minimize release or spillage during transport.

3. Hopper barge transport will be conducted at speeds that ensure safe navigation on the river.

4. Spilt-hull scow barges used for transport to the NODS will be equipped with an electronic tracking system that is compliant with and certified by the USACE Dredging Quality Management program. The Contractor intends to use Advanced Dredging & Industrial Solutions, Inc. (ADISS) to satisfy these monitoring requirements.

4.3 TURBIDITY CURTAINS

Turbidity curtains will be onsite for use in specific areas during specific activities, or if results of turbidity monitoring indicate the need for additional turbidity minimization measures. Oil containment booms will be maintained onsite for oil sheen containment, if necessary. Full-depth, reefable turbidity curtains may be deployed to contain the shoreline areas where in-water slag reclamation will be conducted or may be deployed to surround dredge barges and receiving barges, if needed based on turbidity monitoring data. A reefable curtain will allow for adjustments to the base of the curtain during changes in tidally influenced water level, such that the base of the curtain will remain in close proximity to the sediment surface without contacting it. The turbidity curtain will be used to contain resuspension of sediment due to in-water slag reclamation, dredging, or in-water demolition activities.

The turbidity curtain will be resistant to weathering, hydrocarbons, fresh and salt water, and temperature extremes. The turbidity curtain will be a continuous curtain or will be overlapped for the entire width and length required to encompass turbidity from the in-water activity. The turbidity curtain will have an anchoring system with tension to stabilize lateral movement due to tides, currents, and wind. In addition to the anchoring system, the curtain skirt will have chain weighting or equivalent to reduce billowing and movement in wind and currents.

Deployed curtains will be inspected daily to ensure that they are maintaining the required position and turbidity outside the curtain will be monitored to verify performance of the curtain.

4.4 OIL CONTAINMENT BOOMS

Oil containment booms shall be installed along the west shoreline of the north turning basin in the vicinity of the in-water slag reclamation as a proactive measure to contain sheens (if any). These booms will be moved southward along the shoreline as the reclamation progresses from north to south.

In addition to use in the slag reclamation area, oil booms will be available onsite for deployment around dredge barges if any sheens are observed during mechanical dredging operations in the north turning basin or mid-channel transition area.

The Contractor's Environmental Compliance Manager (or equivalent) and the TTT Construction Manager will visually observe the work areas daily for the presence of sheens during in-water construction activities. If a sheen is observed, the Contractor will notify TTT's Construction Manager and will implement necessary procedures (such as use of booms) to contain and remove the oil or sheen substance and will adjust operations as practicable to reduce sheens. If an uncontained sheen is observed within the north turning basin area, a boom will be deployed or adjusted as necessary to contain the sheen. Observed sheens and containment and cleanup actions will be documented in the Contractor(s) daily operations records. In the event of sheens or spills, the MDE will be notified in accordance with COMAR 26.10.08.01 and 26.10.08.04; the U.S. Coast Guard and the National Response Center will be notified in accordance with 40 CFR 110.6 and 40 CFR 110.3. If any sheens are identified during dredging in the mid-channel transition area, dredging will be immediately stopped and the sheen will be contained using a containment boom. A boom will be deployed around the dredge barge and receiving hopper barge prior to re-initiation of operations.

The Contractor will be responsible for active mopping with the sorbent pads to immediately and proactively remove the sheen and oil from the inside of the boom. Spent sorbent boom shall be replaced after cleanup events and disposed of in accordance with federal, state, and local codes. Extra spill kit sorbent pads and sorbent booms will be available onsite in the event that sheens are observed.

4.5 SUMMARY OF EQUIPMENT AND BMPS BY DREDGING AREA

A summary of the equipment and BMPs to be used in each dredging area during Dredging Year 1 is provided in Table 3.

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Table 3. Summary of Equipment and Best Management Practices to be Used for Dredging, In-Water Slag Reclamation, and In-Water Pier Demolition Activities*

	North Channel Dredging	Mid-Channel/ Transition Area Dredging	South Channel Dredging	In-Water Slag Reclamation	In-Water Pier Demolition
Equipment					
Clamshell Bucket	Secondary	Secondary	Primary		
Environmental Bucket	Primary	Primary			
Excavator (Long-Reach or Other)				Primary	Secondary
Support Equipment (Barges/Scows/Tugs/Trucks)	Dredge barge, tugs, hopper barges, hydraulic unloader	Dredge barge, tugs, hopper barges, hydraulic unloader	Dredge barge, tugs, split-hull/bottom dump scows	Landside dump trucks	Crane barge, debris barge, grapple, vibratory grab
BMPs					
Environmental Bucket	To be used for all dredging unless debris precludes use	To be used for all dredging unless debris precludes use			
Operational Controls	To extent practicable	To extent practicable		To extent practicable	To extent practicable
Turbidity Curtain	If needed, based on turbidity monitoring or based on TOY restriction waiver	If needed, based on turbidity monitoring or based on TOY restriction waiver		To be used during in-water slag reclamation if needed based on turbidity monitoring or if required by TOY restriction waiver	If needed, based on turbidity monitoring
Oil Boom	To be deployed if sheen is observed at point of dredging	To be deployed if sheen is observed at point of dredging		To be deployed if sheen is observed at point of dredging	To be deployed if sheen is observed at point of demolition
Watertight/sealed barges and scows with sufficient freeboard to prevent overtopping or spillage	To be used for offsite transport	To be used for offsite transport	To be used for offsite transport		To be used for on-water transport of demolition debris/materials

	North Channel Dredging	Mid-Channel/ Transition Area Dredging	South Channel Dredging	In-Water Slag Reclamation	In-Water Pier Demolition
Other conditions/BMPs	Compliance with TOY restrictions; compliance with MPA right-of-entry requirements for offloading/placement at Masonville and Cox Creek DMCFs	Compliance with TOY restrictions; compliance with MPA right-of-entry requirements for offloading/placement at Masonville and Cox Creek DMCFs	Compliance with TOY restrictions; Conditions for placement at NODS as stated in MPRSA Section 103 USEPA concurrence and USACE permit	Request for TOY restriction waiver based on use of BMPs; Landside transport handling of slag to be conducted in accordance with existing slag reclamation procedures	

Note:
*Equipment and BMPs for dredged material transport/handling/offloading for placement at High Head Industrial Basin DMCF will be detailed in the Dredge Material Disposal and BMP Plan for Year 2.

5. REFERENCES

EA Engineering, Science, and Technology, Inc., PBC (EA). 2024. *Evaluation of Dredged Material for Ocean Placement. Sparrows Point Container Terminal, South and Mid-Channel, Patapsco River, Baltimore County, Maryland.* September.

———. 2025. *Evaluation of Dredged Material for Upland Placement. Sparrows Point Container Terminal, Patapsco River, Baltimore County, Maryland.* June.

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U.S. Army Corps of Engineers (USACE). 2025. *Sparrows Point Container Terminal Final Environmental Impact Statement.* September 2025. EISX-202-00-E1R-1731946234.

U.S. Environmental Protection Agency (USEPA). 1992. *Final Environmental Impact Statement (FEIS). The Designation of an Ocean Dredged Material Site Offshore, Norfolk, Virginia.* November.

U.S. Environmental Protection Agency and U.S. Army Corps of Engineers (USEPA/USACE). 2019. *Site Management and Monitoring Plan for the Norfolk Ocean Disposal Site (NODS).* February.

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Figures

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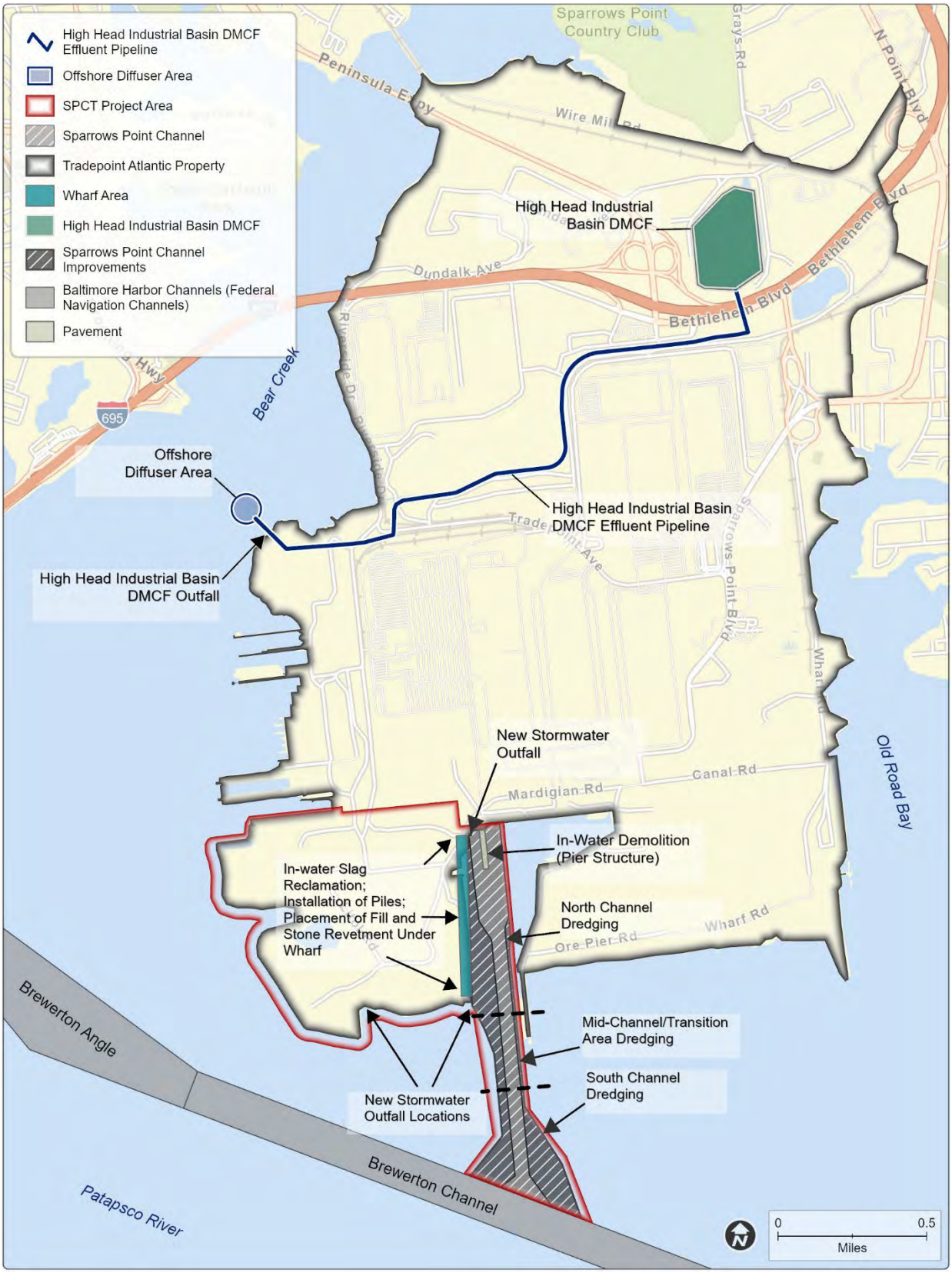

Figure 1. Sparrows Point Container Terminal: Dredging and In-Water Construction Areas and Activities

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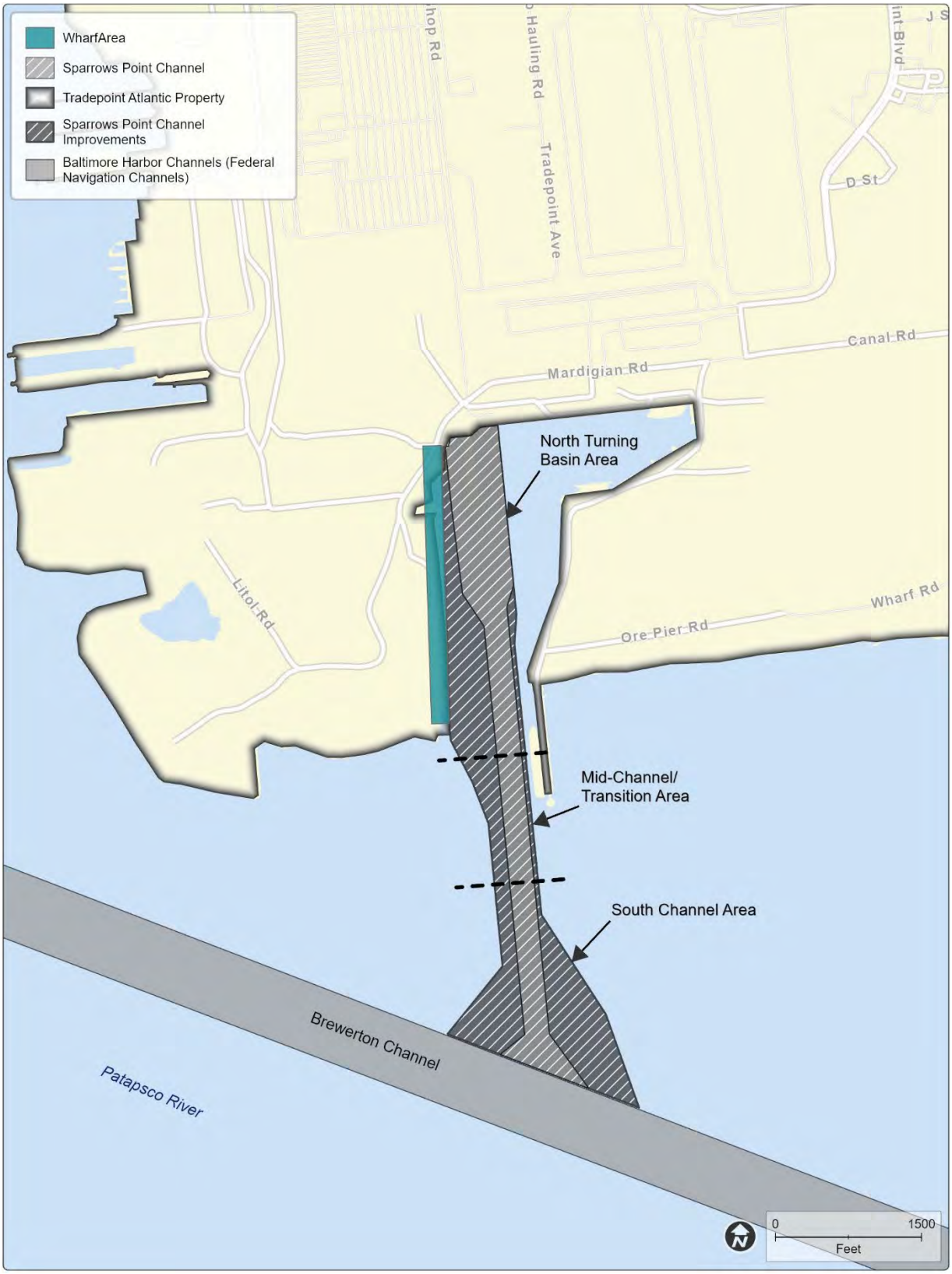

Figure 2. Sparrows Point Container Terminal: Dredging Areas

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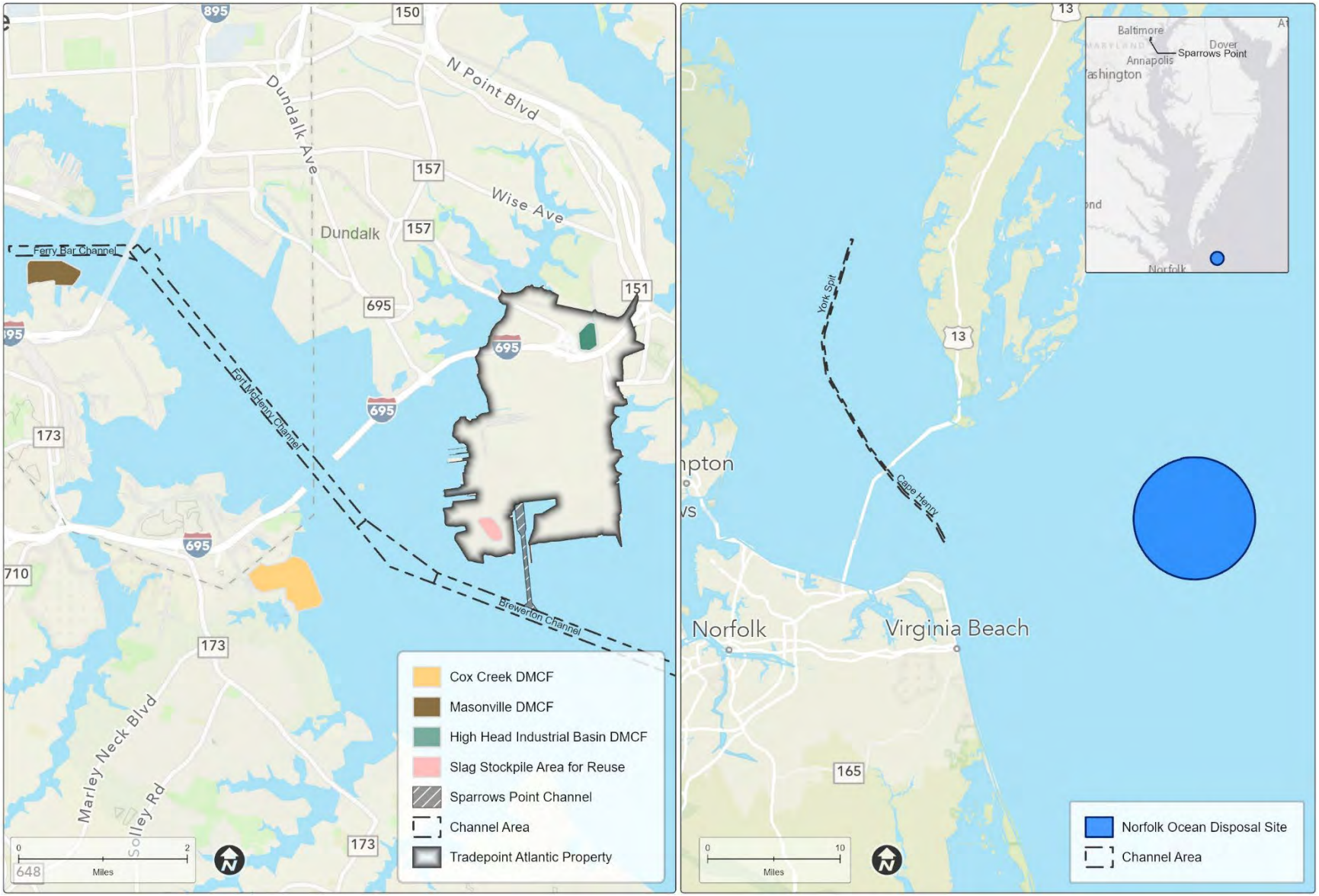

Figure 3. Sparrows Point Container Terminal:
Offsite and Onsite Dredged Material Placement Locations and Slag Stockpile Area at Coke Point

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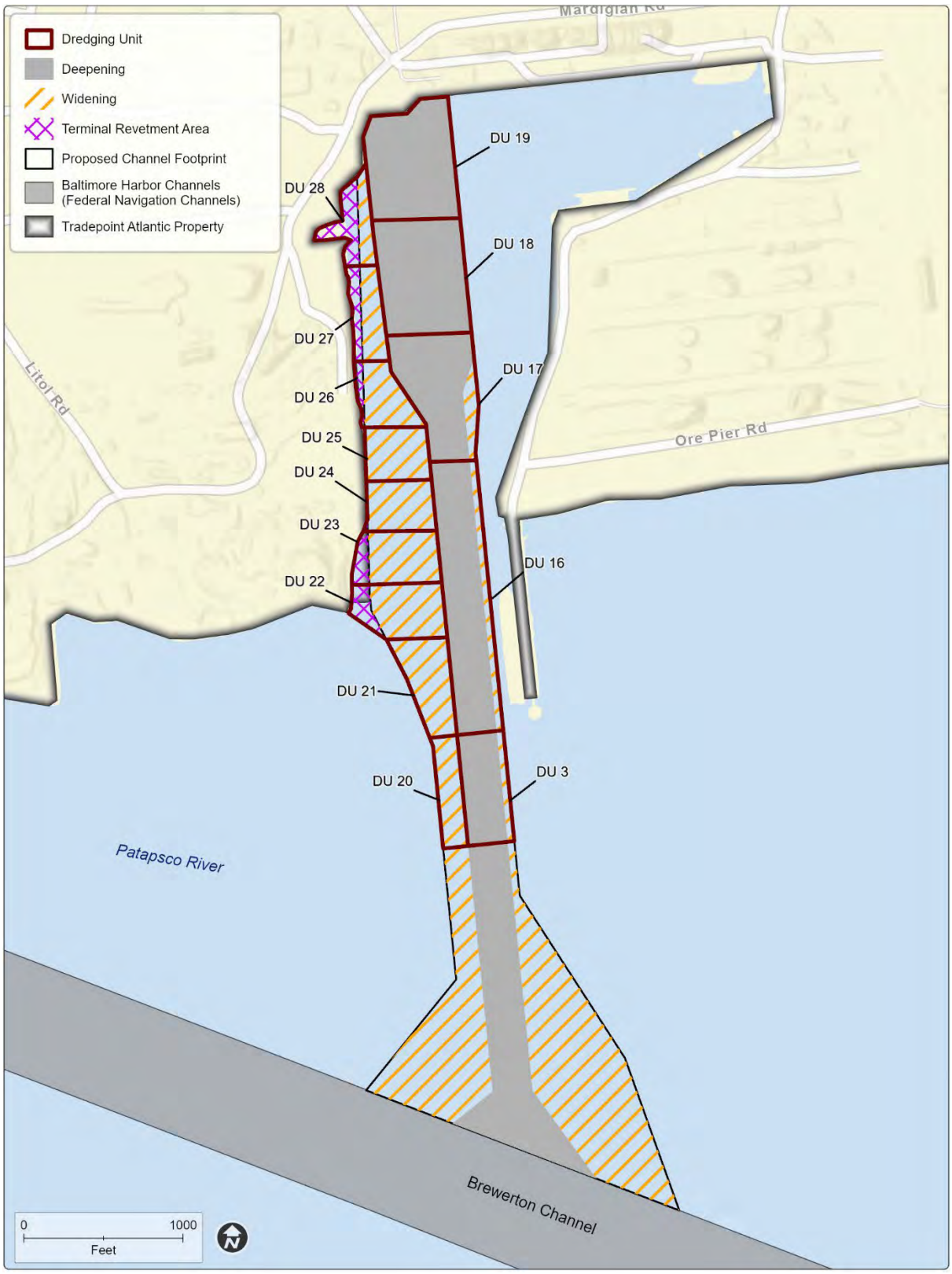

Figure 4. Sparrows Point Container Terminal: North Channel/Turning Basin and Transition Area Dredging Units

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Figure 5. Sparrows Point Container Terminal: South Channel – Top and Bottom Dredging Units

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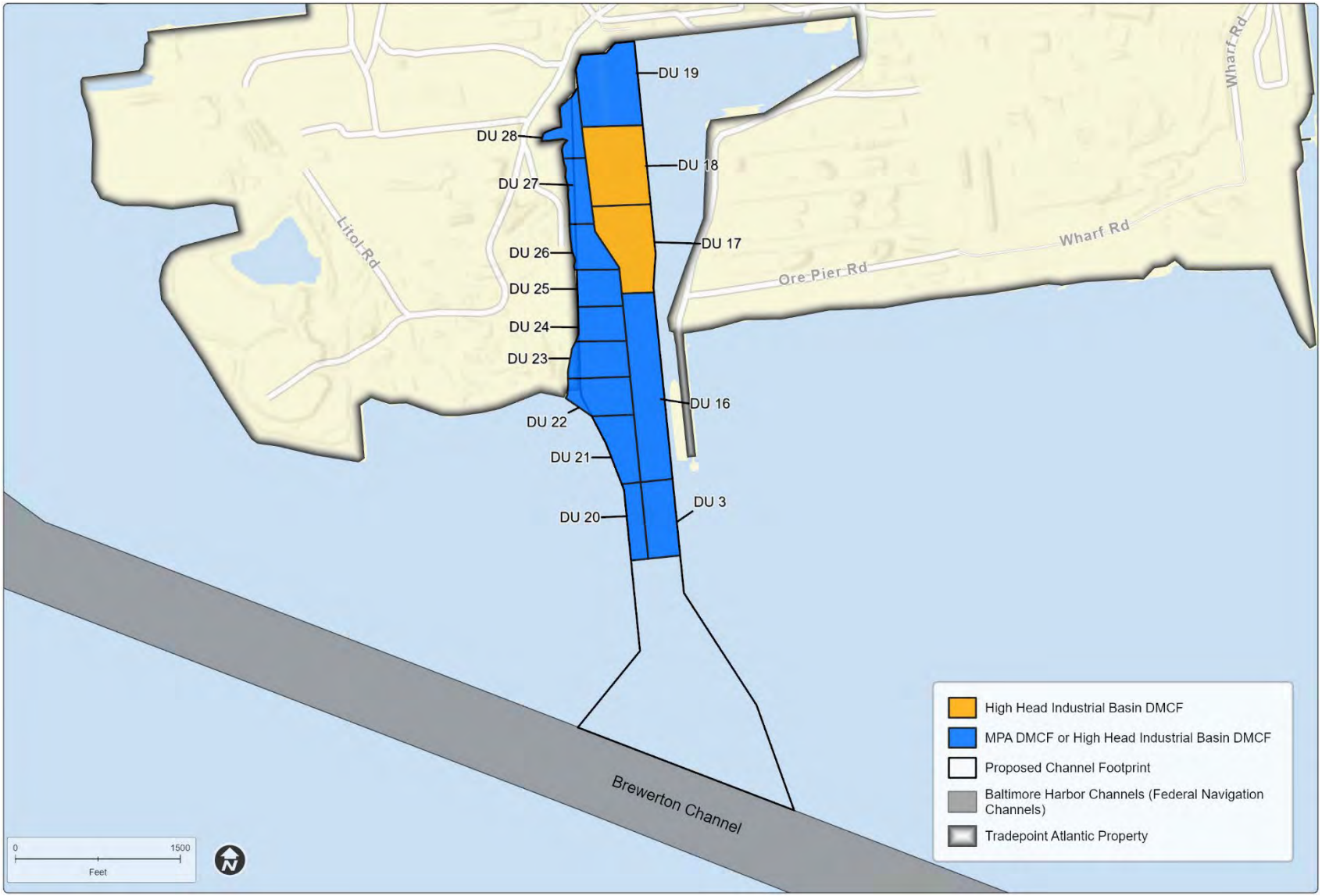

Figure 6. Sparrows Point Container Terminal: North Channel/Turning Basin and Transition Area – Placement Options for Each Dredging Unit

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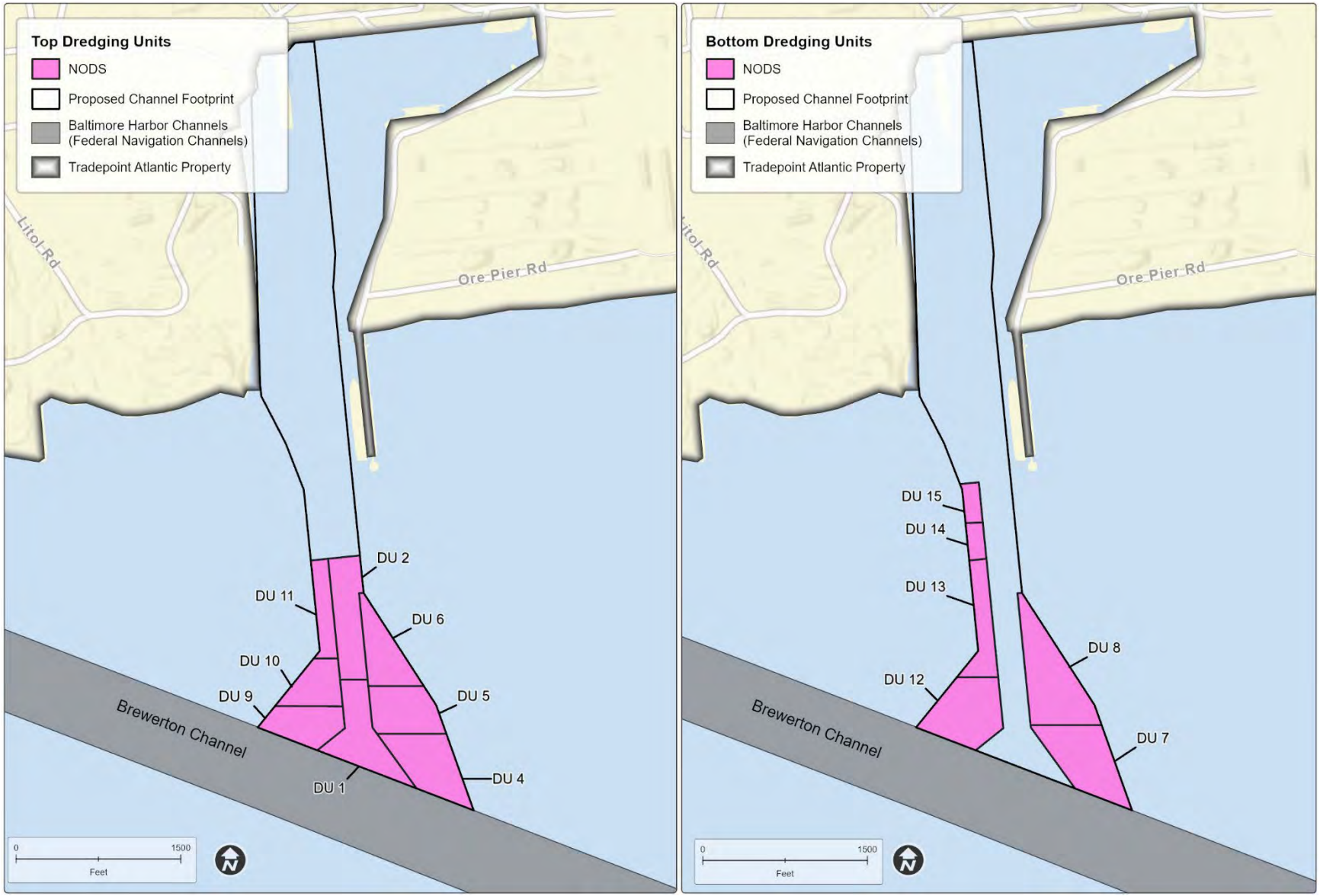

Figure 7. Sparrows Point Container Terminal: South Channel – Placement Options for Each Dredging Unit

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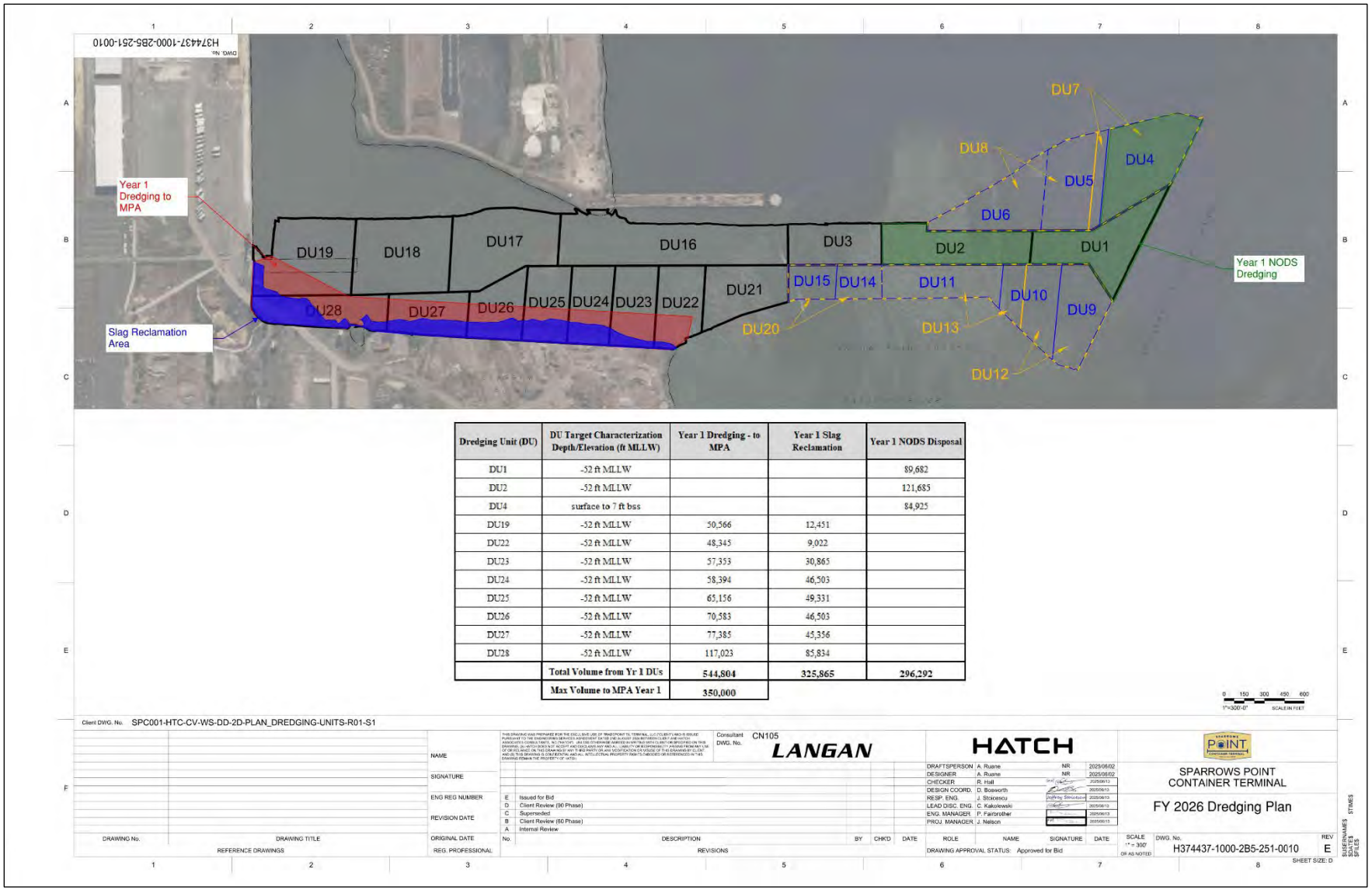

Dredging Unit (DU)	DU Target Characterization Depth/Elevation (ft MLLW)	Year 1 Dredging - to MPA	Year 1 Slag Reclamation	Year 1 NODS Disposal
DU1	-52 ft MLLW			89,682
DU2	-52 ft MLLW			121,685
DU4	surface to 7 ft bss			84,925
DU19	-52 ft MLLW	50,566	12,451	
DU22	-52 ft MLLW	48,345	9,022	
DU23	-52 ft MLLW	57,353	30,865	
DU24	-52 ft MLLW	58,394	46,503	
DU25	-52 ft MLLW	65,156	49,331	
DU26	-52 ft MLLW	70,583	46,503	
DU27	-52 ft MLLW	77,385	45,356	
DU28	-52 ft MLLW	117,023	85,834	
	Total Volume from Yr 1 DUs	**544,804**	**325,865**	**296,292**
	Max Volume to MPA Year 1	**350,000**		

Figure 8. Sparrows Pont Container Terminal: Year 1 Dredging Areas and In-Water Slag Reclamation Area

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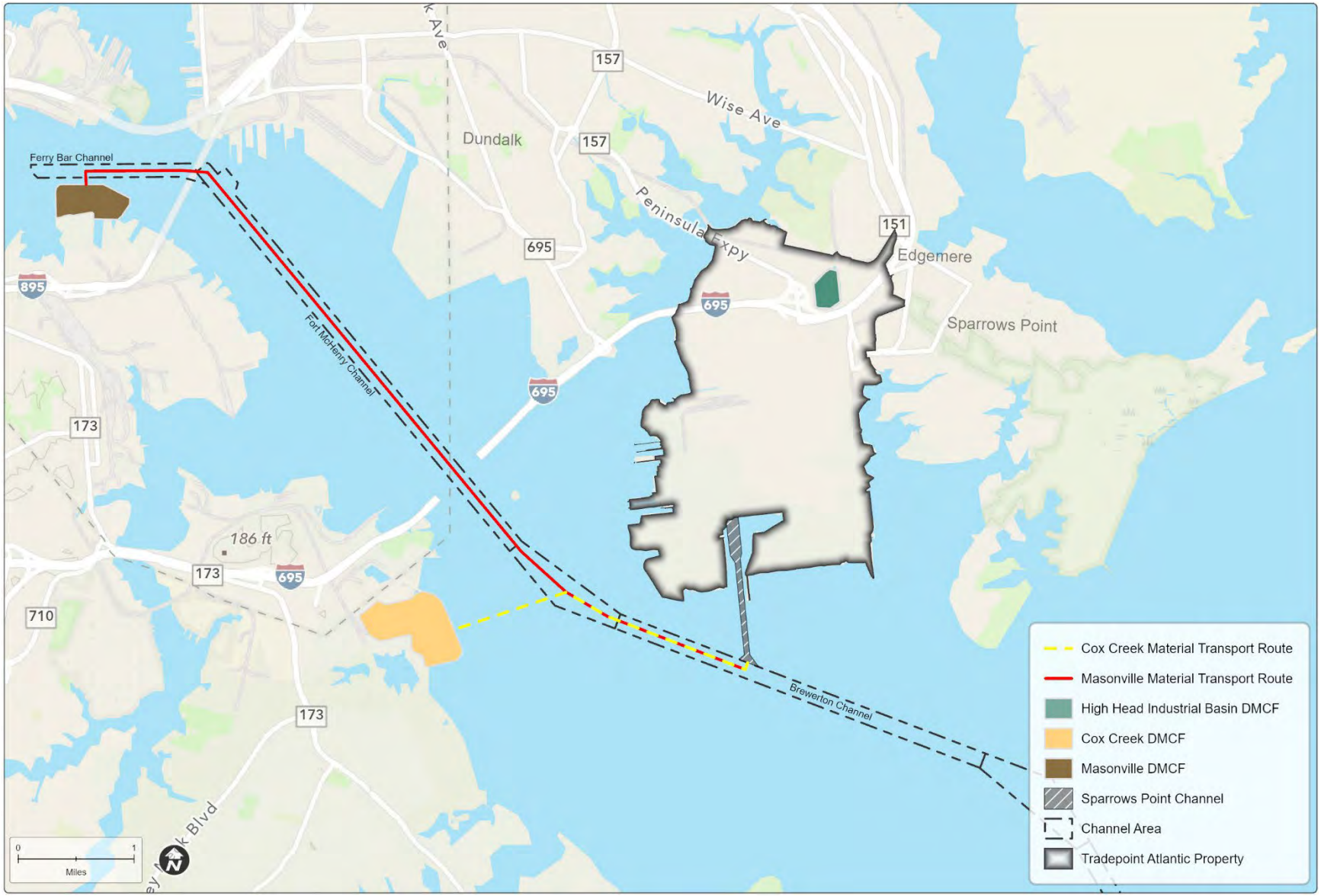

Figure 9. Cox Creek and Masonville DMCFs: Material Transport Routes

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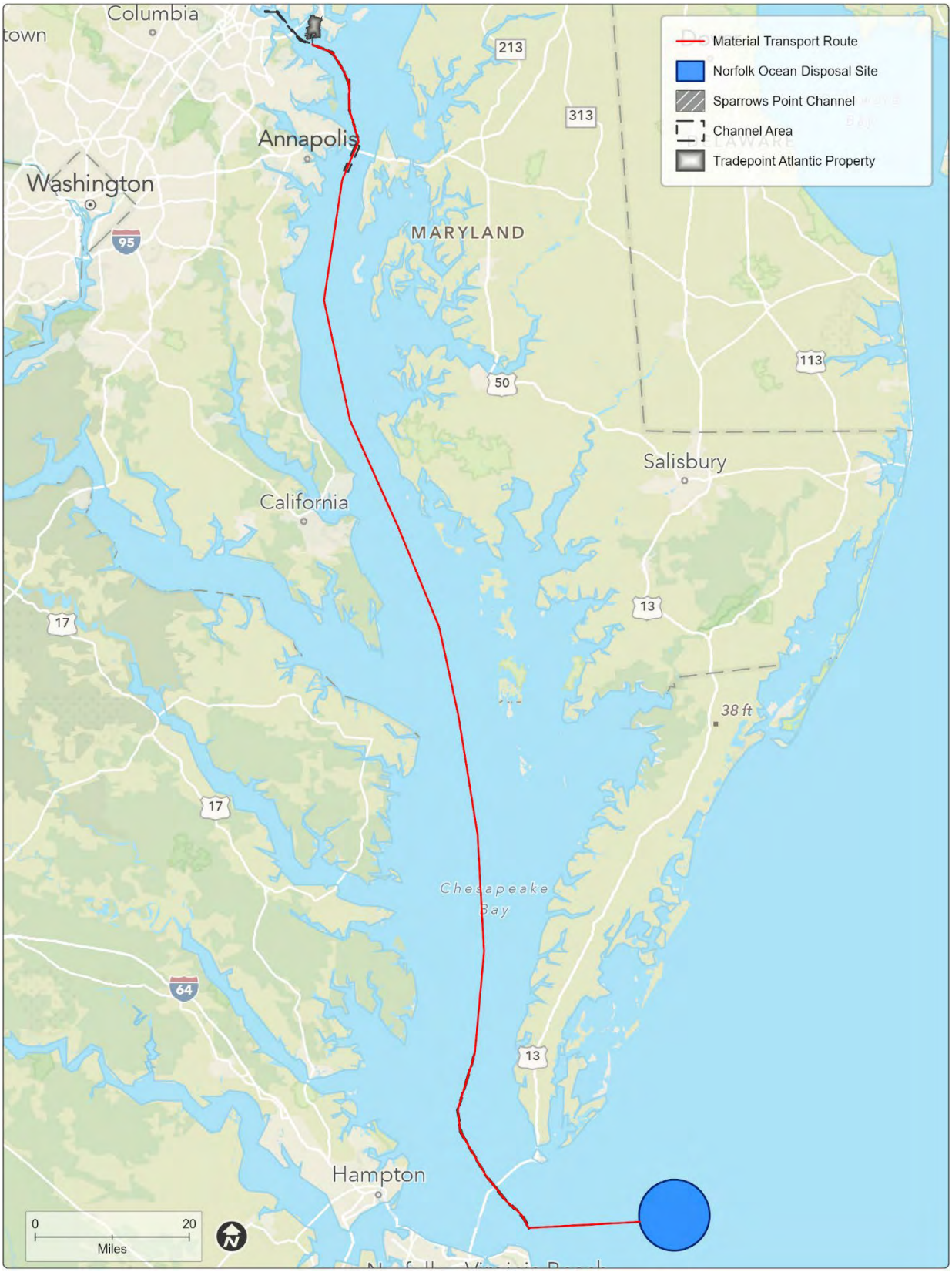

Figure 10. Norfolk Ocean Disposal Site: Material Transport Route

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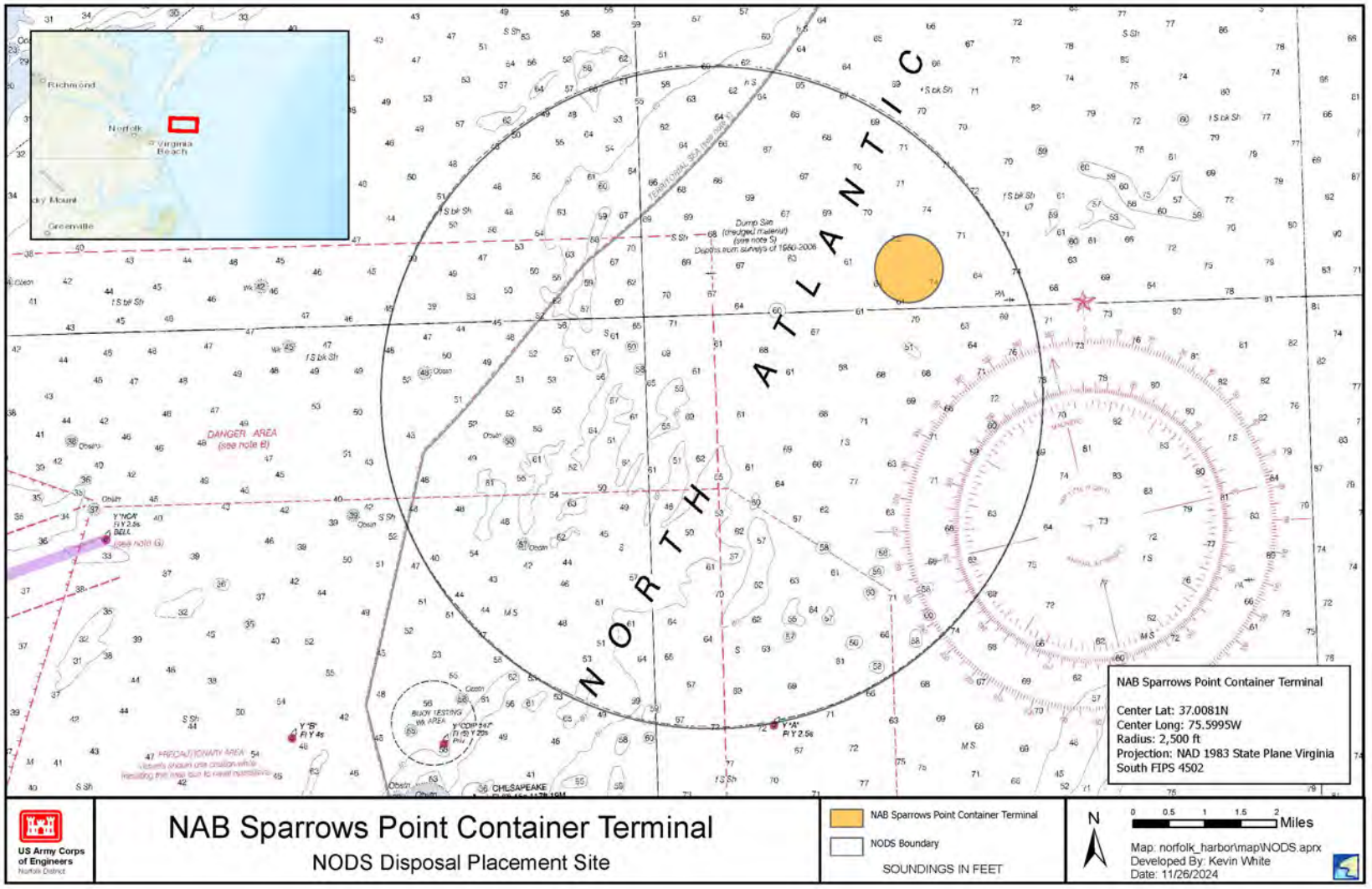

Figure 11. Norfolk Ocean Disposal Site: Designated Placement Zone for SPCT Dredged Material

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ATTACHMENT A:

MPA Dredged Material Placement Acceptance Letters

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MARYLAND DEPARTMENT OF TRANSPORTATION
MARYLAND PORT ADMINISTRATION

Wes Moore
Governor
Aruna Miller
Lieutenant Governor
Paul J. Wiedefeld
Secretary
Jonathan T. Daniels
Executive Director

August 12, 2024

Kerry Doyle
Managing Director
Tradepoint Atlantic
1600 Sparrows Point Blvd.
Baltimore, MD 21219

Dear Mr. Doyle,

This letter concerns Tradepoint TiL Terminal, LLC's ("Tradepoint's") request to the Maryland Port Administration (MPA) for the ability to place dredged material at MPA's Cox Creek and/or Masonville Dredged Material Facilities (DMCFs) associated with its application to the U.S. Army Corps of Engineers for a permit to construct the Sparrows Point Container Terminal (SPCT Project). It is MPA's understanding that Tradepoint anticipates that it will need placement capacity for approximately 4.2 million cubic yards of dredged material removed to widen and deepen the existing access channel and turning basin that will serve the SPCT Project.

As we have discussed, in Maryland, dredged material is managed through the State of Maryland's Dredged Material Management Program (the "State's Dredged Material Program") which is rooted in the Dredged Material Management Act of 2001 codified at Md. Code Ann., Envir. ("Envir.") § 5-1101, *et seq.* The State's Dredged Material Program is a comprehensive process used to establish short-term and long-term placement capacity requirements, develop long-term dredging placement plans, and to identify potential new placement sites. The State's Dredged Material Program relies on, and incorporates, input from a variety of stakeholders, including citizens, environmental groups, and State and Federal agencies.

Due to the limited available placement capacity at MPA's Cox Creek and Masonville DMCFs, and the fact that the Cox Creek DMCF is identified as the federal standard for dredged material that North Atlantic Branch of the U.S. Army Corps of Engineers dredges from the Baltimore Harbor Channel segments of the Baltimore Harbor and Channel federal project, the State must prioritize conserving capacity at the Masonville and Cox Creek DMCFs for maintenance dredging of the Federal 50-foot navigation channel that serves all the private and public marine terminals in the Port of Baltimore. Based upon a careful evaluation of dredging projects already scheduled for placement at Cox Creek and Masonville, and after conserving 560,000 cubic yards of capacity per year for the U.S Army Corps' Federal 50-foot maintenance project, MPA has determined that it could accept a total of 1.25 million cubic yards of dredged material from the SPCT Project phased over four years in the amounts as follows:

- Fiscal Year 2026 – 350,000 cy
- Fiscal Year 2027 – 200,000 cy
- Fiscal Year 2028 – 400,000 cy
- Fiscal Year 2029 – 300,000 cy

Finally, please note that notwithstanding MPA's commitment to reserving this capacity, any placement of dredged material from the SPCT Project is subject to Tradepoint's submission of an application for each phase of dredging and placement, MPA's approval of the application, execution of MPA's Right of Entry Agreement for Placement at the DMCF, and all other applicable law and permitting, including, but not limited to, physical and chemical characterization of the dredged material complying with MPA required specifications.

MPA greatly appreciates the strong partnership we have developed with TPA, and it looks forward to continuing to work together to deliver a strong, resilient and competitive Port of Baltimore.

Sincerely,

Robert Munroe
Deputy Executive Director

Cc: Jonathan T. Daniels
Holly Miller

August 14, 2025

Mr. Peter Haid
Tradepoint Atlantic
1600 Sparrows Point Blvd.
Baltimore, MD 21219

Dear Mr. Haid,

The Maryland Port Administration (MPA) has received the geotechnical and sediment chemistry testing information for the Year 1 (Fiscal Year 26) proposed dredging project of approximately 350,000 cubic yards of material from the Sparrows Point Container Terminal project originating from Dredging Units 19 and 22 through 28 as depicted in the attached figure. Based on our review of the information provided, the dredged material indicated on the attached figure to be dredged in Year 1, appears to be similar in nature to other harbor dredged material that has previously been placed at the 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 MPA Dredged Material Placement Permit Application, handling problems are not anticipated and the MPA has determined that the material is acceptable to be placed at the Masonville Dredged Material Containment Facility (DMCF).

Prior to placement of dredged material in the Masonville DMCF, a Right of Entry Agreement for the site must be fully executed between MPA and Tradepoint Atlantic.

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
MPA - Office of Navigation, Innovation, and Stewardship

Attachment

Cc: Peggy Derrick – EA
David Bibo – MPA

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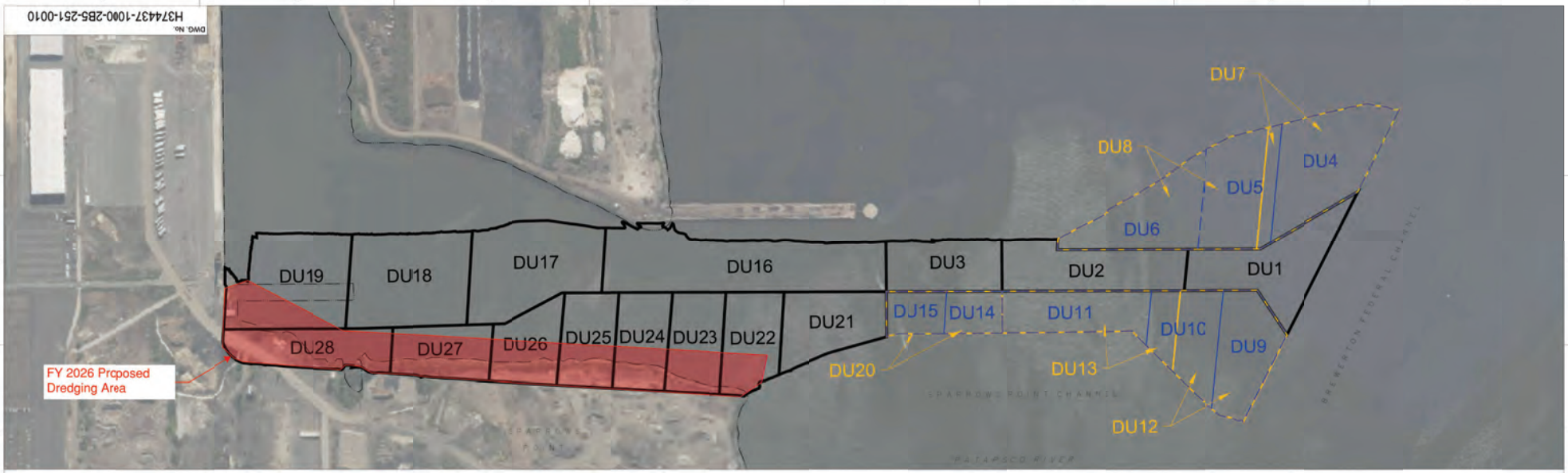

Dredging Unit (DU)	DU Target Characterization Depth/Elevation (ft MLLW)	Ph1B Total Volume (Dredging)
DU19	-52 ft MLLW	50,566
DU22	-52 ft MLLW	48,345
DU23	-52 ft MLLW	57,353
DU24	-52 ft MLLW	58,394
DU25	-52 ft MLLW	65,156
DU26	-52 ft MLLW	70,583
DU27	-52 ft MLLW	77,385
DU28	-52 ft MLLW	117,023
	Total Volume from Yr 1 DUs	**545,264**
	Max Volume to MPA Year1	**350,000**

0 150 300 450 600
1"=300'-0" SCALE IN FEET

Client DWG. No. SPC001-HTC-CV-WS-DD-2D-PLAN_DREDGING-UNITS-R01-S1

DRAWING No.	DRAWING TITLE
REFERENCE DRAWINGS	

NAME
SIGNATURE
ENG REG NUMBER
REVISION DATE
ORIGINAL DATE
REG. PROFESSIONAL

Consultant DWG. No. CN105

LANGAN

HATCH

No.	DESCRIPTION	BY	CHKD	DATE
E	Issued for Bid			
D	Client Review (90 Phase)			
C	Superseded			
B	Client Review (60 Phase)			
A	Internal Review			

REVISIONS

ROLE	NAME	SIGNATURE	DATE
DRAFTSPERSON	A. Ruane	NR	2025/06/02
DESIGNER	A. Ruane	NR	2025/06/02
CHECKER	R. Hall		2025/06/13
DESIGN COORD.	D. Bosworth		2025/06/13
RESP. ENG.	J. Stoicescu		2025/06/13
LEAD DISC. ENG.	C. Kakolewski		2025/06/13
ENG. MANAGER	P. Fairbrother		2025/06/13
PROJ. MANAGER	J. Nelson		2025/06/13

DRAWING APPROVAL STATUS: Approved for Bid

SPARROWS POINT CONTAINER TERMINAL

FY 2026 Dredging Plan

SCALE 1" = 300' OR AS SHOWN

DWG. No. H374437-1000-2B5-251-0010

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ATTACHMENT B:

USEPA MPRSA Section 103 Concurrence Letter for Placement of Material at the Norfolk Ocean Disposal Site

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REGION 3
PHILADELPHIA, PA 19103

July 16, 2025

Mr. Joseph DaVia, Chief
Maryland North Section
Baltimore District,
U.S. Army Corps of Engineers
2 Hopkins Plaza
Baltimore, Maryland 21201

Dear Mr. DaVia:

Thank you for your June 9, 2025 request for concurrence on the suitability for ocean disposal of dredged material from the Sparrows Point Channel (SPC) pursuant to Section 103 of the Marine Protection Research and Sanctuaries Act (MPRSA). Section 103 of the MPRSA specifies that all proposed operations involving transportation and dumping of dredged material into ocean waters be evaluated for potential environmental impacts. The Secretary of the Army has the responsibility for this evaluation using criteria developed by the Administrator of the U.S. Environmental Protection Agency (EPA).

The EPA has completed its review of the draft final Evaluation of Dredged Material for Ocean Placement, Sparrows Point Channel South and Mid Channel, dated September 2024, and contingent upon the conditions included in this letter, concurs that the proposed dredged material meets the Ocean Disposal Criteria found in 40 Code of Federal Regulations (CFR) Part 227. An overview of the project and the conditions are described below.

Project Overview

The U.S. Army Corps of Engineers (USACE) is evaluating dredging within SPC to support construction of a container terminal. The project proponent is Tradepoint TIL Terminal, LLC (TTT). The existing SPC is 1.2 statute miles long in the Patapsco River in Baltimore, Maryland and is currently permitted to -42 feet (ft) mean low water (MLW) across the west side approach, turning basin, and existing terminal and to -47 ft MLW across the eastern features, including the east side approach and berthing area. The existing channel is proposed to be deepened and widened for container vessel access. TTT is proposing to dredge a total of approximately 1.65 million cubic yards (mcy) material to a maximum depth of -52 ft mean lower low water (-50 ft MLLW with 2 ft of overdepth). The total volume of material requested for ocean placement is approximately 1.57 mcy. The dredged material is proposed to be placed at the Norfolk Ocean Dredged Material Disposal Site (NODS).

The EPA conducted an independent determination of compliance with the Ocean Disposal Criteria based on the following:

Exclusionary Criteria

In accordance with 40 CFR § 227.13(b), dredge material that meets the criteria set forth in the following paragraphs (b)(1), (2), or (3) of this section is environmentally acceptable for ocean dumping without further testing under this section:

1. Dredged material is composed predominantly of sand, gravel, rock, or any other naturally occurring bottom material with particle sizes larger than silt, **and** the material is found in areas of high current or wave energy such as streams with large bed loads or coastal areas with shifting bars and channels; or

2. Dredged material is for beach nourishment or restoration and is composed predominantly of sand, gravel or shell with particle sizes compatible with material on the receiving beaches; or

3. When the material proposed for dumping is substantially the same as the substrate at the proposed disposal site; **and** the site from which the material would be dredged is far removed from known existing and historical sources of pollution to provide reasonable assurance that such material has not been contaminated by such pollution.

The material in the SPC does not meet the exclusionary criteria set forth under 40 CFR § 227.13(b).

Evaluation of Bulk Sediment and Water Quality Criteria (WQC)

Sediments from 45 locations within the project area were collected and used to create 15 dredging unit (DU) composites: three from the existing channel (proposed maintenance dredging area) and 12 from the widening areas (proposed new work area). The dredging units from both the existing channel and the widening areas characterized sediment from the surface to -52 ft MLLW. Sediment from DU3 did not meet the Limiting Permissible Concentration (LPC) for benthic bioaccumulation; therefore, sediment from the corresponding area is not being requested for ocean placement, and only 14 DUs were fully tested for MPRSA Section 103 compliance and subject to this evaluation.

Sediment from SPC consisted primarily of silt and clay ranging from 93.9% to 99.1%. The grain size of the DUs was most similar to the subsurface material collected from the Willoughby Bank Reference Area. Per sediment sampling, polychlorinated biphenyl (PCB) congeners, polyaromatic hydrocarbons, chlorinated pesticides, dioxin/furan congeners, and several metals were detected at sample sites. Nine of the detected metals (arsenic, cadmium, chromium, copper, lead, mercury, nickel, silver and zinc) had concentrations between the threshold effect level (TEL) and probable effect level (PEL) values, and in five DUs, three metals exceeded their respective PEL values (lead, nickel, and zinc).

Dioxin and furan congeners were detected in all of the DUs, and in four DUs, the concentration of one compound (2,3,7,8-TCDD) exceeded the interim Sediment Quality Guidelines (SQG). The dioxin toxic equivalents ranged from 7.38 to 20.1 ng/kg, and all of the DUs exceeded the interim SQG. Five chlorinated pesticides were detected within the DUs, though none of the concentrations exceeded TEL

values. Thirteen different PAHs had concentrations between their respective TEL and PEL values; however, in one DU, one PAH exceeded its PEL value by a factor of 1.56. The total PAH concentration for the same DU exceeded the TEL by a factor of 1.96. PCBs in all DUs exceeded the TEL by factors ranging from 1.83 to 2.89.

The standard elutriates, site water, and receiving water were analyzed and compared to the EPA saltwater acute water quality criteria (WQC) for aquatic life. Ammonia exceeded the acute WQC by factors ranging from 1.09 to 2.93. The laboratory reporting limit (RL) for cyanide exceeded the USEPA acute saltwater criterion by a factor of ten in each of the elutriates. As cyanide is the most restrictive constituent, its dilution factor was used to determine WQC LPC compliance with the Tier II Short-Term Fate (STFATE) model for elutriates. STFATE modeling showed that total cyanide required a dilution factor of 9 to comply with the acute cyanide criteria inside the boundary of NODS. Model results indicated a dilution ranging from 118-fold to 136-fold would be achieved within the boundaries of the site within 4 hours following placement of dredged material and the elutriate would travel a maximum distance of 4,101 feet from the location of the discharge. Barge volumes up to 20,000 cy of dredged material could be placed at NODS based on the STFATE model and rate of dilution.

Based on information above, the standard elutriates from SPC meet the LPC for WQC for placement at the NODS.

Acute Water Column Toxicity

Acute water column bioassays were conducted using the following three species: *Mytilus* sp. (blue mussel), *Americamysis bahia* (opossum shrimp), and *Menidia beryllina* (inland silverside) to evaluate development and survival of test organisms when exposed to project sediment elutriate. The *A. bahia* and *M. beryllina* tests measured effects to organism survival (LC_{50}), and the *Mytilus* sp. tests measured developmental effects to embryos (EC_{50}).

For *Mytilus* sp., using untreated sediment, the 48-hour EC_{50} value was >100% elutriate. Normal development in the 100% untreated elutriates ranged from 69 to 80%. In eight of the 14 elutriates, normal development was at least 10% less than the laboratory control, which was a statistically significant difference. Using ammonia-purged sediment, the 48-hour EC_{50} value was >100% elutriate and normal development in the 100% elutriates ranged from 76 to 84%. Laboratory controls had normal embryo development ranging from 74 to 84%. Seven of the 14 DU elutriates were at least 10% less than the laboratory control and statistically different.

A. bahia and *M. beryllina* both had a 96-hr LC_{50} of >100% elutriate for each sample, and survival after 96 hours of exposure ranged from 98 to 100% and 96 to 100%, respectively. Survival was not significantly different from the laboratory control for either *A. bahia* and *M. beryllina,* indicating that the elutriates were not acutely toxic to these species.

For the SPC water column bioassays, *A. bahia* and *M. beryllina* had an EC_{50}/LC_{50} that was greater than 100% elutriate for each DU and none of the samples had significantly lower survival than the laboratory controls. However, survival for *Mytilus* sp. in eight of the DU elutriates was statistically different (lower) than the laboratory control. The results of the untreated and ammonia-purged elutriates indicated that ammonia was not the primary constituent contributing to water column

toxicity. STFATE modeling was conducted to determine if the results of the water column bioassays would meet the water column toxicity LPC for ocean placement. Results indicated that the required dilution would be achieved at distances ranging from 3,677 to 3,960 ft from the point of discharge. During the 4-hour mixing period, dilutions ranging from 118- to 135-fold would be achieved, and the elutriate would travel a maximum distance of 4,101 ft from the point of discharge.

Based on the results of the water column bioassays and STFATE modeling, the SPC elutriates meet the LPC for water column toxicity for maximum discrete discharge volumes of 20,000 cubic yards at NODS; the material complies with 40 CFR § 227.6(c)(2) and 227.27(b).

Whole Sediment Bioassay Evaluation

For the 10-day whole sediment bioassay, *Ampelisca abdita* (marine amphipod) and *Leptocheirus plumulosus* (estuarine amphipod) were exposed to the SPC sediment and overlying water to determine survival outcomes as statistically compared to survival in the Willoughby Bank Reference Site subsurface sediments.

A. abdita and *L. plumulosus* survival in SPC sediments ranged from 90-93% and 96-100%, respectively. None of the survival results were significantly different from the reference site survival for either *A. abdita* or *L. plumulosus*. Exposure to SPC sediments did not exceed the allowable percent difference (20%) of mortality in the reference sediment; therefore, SPC sediments meet the LPC for benthic toxicity for placement at the NODS.

Bioaccumulation Evaluation

To evaluate chronic exposure to SPC sediments, a 28-day benthic bioaccumulation exposure study with *Nereis virens* (sand worm) and *Macoma nasuta* (blunt-nose clam) was performed to determine survival and the potential uptake of contaminants in organism tissue. Per the bulk sediment chemistry results, tissue samples were analyzed for metals, dioxin/furan congeners, PCB congeners, PAHs, pesticides (DDT series and alpha-BHC only), SVOCs (bis-2[ethylhexyl]phthalate only), lipids, and percent moisture and were statistically compared to the reference site.

The results of the bioaccumulation study demonstrated that metals, one pesticide (4,4'-DDT), and total PCBs did not exceed the USFDA Action/Guidance/Tolerance Values. While mean concentrations of 4,4'-DDD in clam tissue statistically exceeded mean reference tissues in DU1 and 4,4'-DDE in clam tissue statistically exceeded mean reference tissues in DU1 and DU11, they did not exceed South Atlantic Bight background tissue concentrations. Mean concentrations of OCDD in clam tissue for DU1, DU6, and DU9 statistically exceeded mean reference tissue concentrations, but did not statistically exceed mean pre-test tissue concentrations. In addition, the mean dioxin TEQ (ND=0) for clam tissue at DU1, DU6, and DU9 did not statistically exceed mean reference tissue concentrations. Lead exceeded the reference site tissue concentrations in clam tissue for DU1, DU2, DU10, and DU11, but they did not exceed South Atlantic Bight background tissue concentrations.

Based on the assessment of chemical analyses performed, it is not anticipated that ocean placement of the dredged material from SPC at the NODS will result in ecologically significant bioaccumulation of

contaminants. Therefore, the dredged material meets the LPC for bioaccumulation and complies with the benthic criteria of 40 CFR Part 227.13 (c)(3).

Conclusion

In conclusion, SPC sediments meet the criteria for the LPC for WQC, water column toxicity, benthic toxicity, and benthic bioaccumulation, indicating that ocean placement of the dredged material at the NODS is a viable placement option.

Therefore, the EPA concurs with disposal at the NODS for up to approximately 1.57 mcy of suitable material to be dredged by TTT from the SPC in the Patapsco River, Baltimore, Maryland subject to meeting all the conditions in this letter. Disposal of a quantity greater than 1.57 mcy and/or material from a depth greater than **-52 ft MLLW** shall require a new concurrence.

The following conditions are consistent with, but updated from, the most recent Site Management and Monitoring Plan (SMMP, 2019) for the NODS. Disposal will occur within boundaries of the site and at least 100 meters (330 ft.) from the perimeter of the disposal site.

1. Material placed at NODS disposal site from SPC shall not exceed 20,000 cy of material at any given time.
2. TTT will conduct a bathymetric survey of the disposal site before and after the project activities and provided to the EPA within 15 days of completion of survey to ensure proper placement of materials and compliance with the disposal site conditions.
3. The USACE Baltimore District shall provide the EPA with a copy of the final authorization documents/permit within 5 days of signature by USACE Baltimore District.
4. Each disposal vessel will have an Electronic Tracking System and the USACE Baltimore District will maintain all vessel tracking data associated with the project.
5. Dredged material disposal shall be conducted in a manner to maximize NODS capacity and minimize mounding of material. The dumps shall be scattered throughout designated disposal zones and not placed repeatedly at one location. Depths at the time of disposal will be monitored to determine if adjustment of disposal methods is needed to prevent unacceptable mounding.
6. All disposal activities shall be completed, and vessel disposal doors closed prior to leaving the area within the 100-meter NODS buffer zone and site boundaries. Should the doors not close properly, the barge must circle the site disposal zone (inside the 100-meter buffer) three times before leaving the site. All such incidents of equipment malfunction must be reported to the EPA within 24 hours along with a declaration that the problem has been resolved, and the barge is back in working order.
7. TTT shall report via email or telephone any anticipated, potential, or actual variances from compliance with these conditions, to the District Engineer and the Regional Administrator within 24 hours of discovering such a situation.
8. TTT will provide the EPA with a disposal summary report within 15 days after completion of the project.

This concurrence is conditioned upon implementation of the above requirements and is valid for a term of three years from **July 16, 2025**. Use of the NODS after **July 16, 2028** will require further evaluation of the proposed dredged material. Should you have any questions regarding this concurrence or use of the NODS, please contact me at 215-814-3397 or Emily French, Life Scientist, 701 Mapes Rd, Fort Meade, MD 20755, or french.emily@epa.gov.

Sincerely,

Michelle H. Price-Fay, Director
Water Division